AEG
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PACIFICORP DEMAND-SIDE RESOURCE POTENTIAL ASSESSMENT FOR 2019-2038

Volume 4: Class 2 DSM Analysis Appendices A through H

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MARKET CHARACTERIZATION AND ENERGY MARKET PROFILES

In this section, we describe how customers in the PacifiCorp service territory use electricity in the base year of the study, 2016. It begins with a high-level summary of energy use by state and sector and then provides more detail on each sector.

Base-Year Energy Use Summary

Total electricity use for the residential, commercial, industrial, irrigation, and street lighting sectors for PacifiCorp in 2016, excluding sales to special contract customers from the industrial sectors, is 37,526 GWh. A tabular breakdown of consumption among state territories and sectors is given below in Table A-1. This comprises the energy use control totals to which all modeling activities are calibrated in the base year. PacifiCorp's Oregon service territory is not considered in this study, as the statewide energy efficiency planning is conducted by the Energy Trust of Oregon.

Table A-1   PacifiCorp State and Sector Control Totals in Base Year 2016 (MWh)

State	Residential	Commercial	Industrial	Irrigation	Street Lighting	Total
California	371,032	240,455	52,383	89,866	1,894	755,630
Washington	1,593,977	1,508,371	767,694	159,431	10,217	4,039,689
Idaho	691,028	480,261	296,420	673,789	2,691	2,144,189
Utah	6,705,077	8,677,403	5,706,313	232,446	76,391	21,397,631
Wyoming	1,020,668	1,393,220	6,736,944	26,516	11,954	9,189,301
Total	10,381,781	12,299,709	13,559,755	1,182,048	103,147	37,526,440

Market Profile Framework

As described in the Analysis Approach in Volume 2, Chapter 2, the market for each state, sector, and market segment is characterized by a market profile that allocates energy consumption to the available end-use and technology categories. These market profiles are calibrated to PacifiCorp equipment saturation surveys, technology and measure databases, and finally to the energy control totals listed above. A list of the end uses and technologies for each sector is provided below, and each detailed market profile is available in the section that follows.

Residential Sector

A list of the end uses and technologies assessed in the residential sector is given in Table A-2. The unique market profile for each market segment in each state is available in the section that follows.

Table A-2   End Uses and Technologies in Market Profile for the Residential Sector

End Use	Technology
Cooling	Central AC
Cooling	Room AC
Cooling	Air-Source Heat Pump
Cooling	Geothermal Heat Pump
Cooling	Evaporative AC
Space Heating	Electric Room Heat
Space Heating	Electric Furnace
Space Heating	Air-Source Heat Pump
Space Heating	Geothermal Heat Pump
Space Heating	Secondary Heating
Water Heating	Water Heater (<= 55 Gal)
Water Heating	Water Heater (> 55 Gal)
Interior Lighting	General Service Screw-in
Interior Lighting	Linear Lighting
Interior Lighting	Exempted Lighting
Exterior Lighting	Screw-in
Appliances	Clothes Washer
Appliances	Clothes Dryer
Appliances	Dishwasher
Appliances	Refrigerator
Appliances	Freezer
Appliances	Second Refrigerator
Appliances	Stove/Oven
Appliances	Microwave
Electronics	Personal Computers
Electronics	Monitor
Electronics	Laptops
Electronics	TVs
Electronics	Printer/Fax/Copier
Electronics	Set-top Boxes/DVRs
Electronics	Devices and Gadgets
Miscellaneous	Electric Vehicles
Miscellaneous	Pool Pump
Miscellaneous	Pool Heater
Miscellaneous	Hot Tub/Spa
Miscellaneous	Furnace Fan
Miscellaneous	Well pump
Miscellaneous	Miscellaneous

Commercial Sector

A list of the end uses and technologies for the commercial sector analysis is given in Table A-3. The unique market profile for each market segment in each state is available in the section that follows.

Table A-3   End Uses and Technologies in Market Profile for the Commercial Sector

End Use	Technology
Cooling	Air-Cooled Chiller
Cooling	Water-Cooled Chiller
Cooling	RTU
Cooling	PTAC
Cooling	PTHP
Cooling	Evaporative Central AC
Cooling	Air-Source Heat Pump
Cooling	Geothermal Heat Pump
Heating	Electric Furnace
Heating	Electric Room Heat
Heating	PTHP
Heating	Air-Source Heat Pump
Heating	Geothermal Heat Pump
Ventilation	Ventilation
Water Heating	Water Heater
Interior Lighting	General Service Lighting
Interior Lighting	Exempted Lighting
Interior Lighting	Linear Lighting
Interior Lighting	High-Bay Lighting
Exterior Lighting	General Service Lighting
Exterior Lighting	Linear Lighting
Exterior Lighting	Area Lighting
Refrigeration	Walk-in Refrigerator/Freezer
Refrigeration	Reach-in Refrigerator/Freezer
Refrigeration	Glass Door Display
Refrigeration	Open Display Case
Refrigeration	Icemaker
Refrigeration	Vending Machine
Food Preparation	Oven
Food Preparation	Fryer
Food Preparation	Dishwasher
Food Preparation	Hot Food Container
Food Preparation	Steamer
Office Equipment	Desktop Computer
Office Equipment	Laptop
Office Equipment	Monitor
Office Equipment	Server
Office Equipment	Printer/Copier/Fax
Office Equipment	POS Terminal
Miscellaneous	Non-HVAC Motors
Miscellaneous	Pool Pump
Miscellaneous	Pool Heater
Miscellaneous	Clothes Washer
Miscellaneous	Clothes Dryer
Miscellaneous	Miscellaneous

Industrial Sector

A list of the end uses and technologies for the industrial sector analysis is given in Table A-4. The unique market profile for each market segment in each state is available in the section that follows.

Table A-4   End Uses and Technologies in Market Profile for the Industrial Sector

End Use	Technology
Cooling	Water-Cooled Chiller
Cooling	RTU
Cooling	Air-Source Heat Pump
Cooling	Geothermal Heat Pump
Heating	Electric Furnace
Heating	Electric Room Heat
Heating	Air-Source Heat Pump
Heating	Geothermal Heat Pump
Ventilation	Ventilation
Interior Lighting	Screw-in
Interior Lighting	High-Bay Fixtures
Interior Lighting	Linear Lighting
Exterior Lighting	Screw-in
Exterior Lighting	Area Lighting
Exterior Lighting	Linear Lighting
Motors	Pumps
Motors	Fans & Blowers
Motors	Compressed Air
Motors	Material Handling
Motors	Other Motors
Process	Process Heating
Process	Process Cooling
Process	Process Refrigeration
Process	Process Electrochemical
Process	Process Other
Miscellaneous	Miscellaneous

Irrigation Sector

A list of the end uses and technologies for the irrigation sector analysis is given in Table A-5. The unique market profile for each market segment in each state is available in the section that follows.

Table A-5   End Uses and Technologies in Market Profile for the Irrigation Sector

End Use	Technology
Motors	Pumps (< 100 HP)
Motors	Pumps (100 HP+)
Motors	Other Motors

Street Lighting Sector

A list of the end uses and technologies for the industrial sector analysis is given in Table A-6. The unique market profile for each market segment in each state is available in the section that follows.

Table A-6   End Uses and Technologies in Market Profile for the Street Lighting Sector

End Use	Technology
Street Lighting	100 Watt Fixture
Street Lighting	150 Watt Fixture
Street Lighting	250 Watt Fixture
Street Lighting	400 Watt Fixture
Street Lighting	1000 Watt Fixture

Detailed Market Profiles by Sector, State, and Segment

Market profiles describe estimated electricity use by sector, segment, end use and technology in the base year of the study (2016). A market profile includes the following elements:

- **Market size** is a representation of the number of customers in the segment. For the residential sector, it is number of households. In the commercial sector, it is floor space measured in square feet. For the industrial sector, it is number of employees. For irrigation, it is number of service points. For street lighting, it is number of fixtures.

- **Saturations** define the fraction of buildings with the various technologies. (e.g., homes with electric space heating)

- **UEC (unit energy consumption) or EUI (energy-use index)** describes the average energy consumed in 2016 by a specific technology in buildings that have the technology. UECs are expressed in kWh/household for the residential sector, and EUIs are expressed in kWh/square foot or kWh/employee for the commercial and industrial sectors, respectively.

- **Intensity** for the residential sector represents the average energy use for the technology across all homes in 2016 and is computed as the product of the saturation and the UEC. For the commercial and industrial sectors, intensity, computed as the product of the saturation and the EUI, represents the average use for the technology per square foot or per employees in 2016.

- **Usage** is the estimated 2016 energy use by a technology/end use in the segment. It is the product of the market size and intensity and is quantified in MWh for electricity.

The tables below present the following market profiles for each state:

- Residential market profiles
- Commercial market profiles
- Industrial market profiles
- Irrigation market profiles
- Street Lighting market profiles

These market profiles are given in the base year for average, existing customers as well as new construction customers that will be built in years beyond the base year. This means there is not yet any usage or consumption associated with new construction market profiles shown below. Please note that this information is provided at the meter level in order for UEC and consumption values to be more easily comparable. To assess measure potential, data was converted to usage at the generator using the line loss factors in Table 3-7 of Volume 2 of this report.

Residential Market Profiles

Table A-7   California Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	8.4%	1,636	137	3,495
Cooling	Room AC	17.6%	771	136	3,462
Cooling	Air-Source Heat Pump	19.8%	1,691	335	8,525
Cooling	Geothermal Heat Pump	0.4%	1,489	6	159
Cooling	Evaporative AC	7.2%	647	47	1,184
Space Heating	Electric Room Heat	8.8%	7,036	617	15,706
Space Heating	Electric Furnace	11.6%	7,929	920	23,411
Space Heating	Air-Source Heat Pump	19.8%	3,562	706	17,961
Space Heating	Geothermal Heat Pump	0.4%	2,294	10	245
Space Heating	Secondary Heating	33.9%	392	133	3,382
Water Heating	Water Heater (<= 55 Gal)	72.1%	3,042	2,193	55,782
Water Heating	Water Heater (> 55 Gal)	5.9%	3,216	189	4,799
Interior Lighting	General Service Screw-in	100.0%	605	605	15,399
Interior Lighting	Linear Lighting	100.0%	152	152	3,868
Interior Lighting	Exempted Lighting	100.0%	232	232	5,889
Exterior Lighting	Screw-in	100.0%	272	272	6,923
Appliances	Clothes Washer	96.1%	77	74	1,885
Appliances	Clothes Dryer	88.8%	741	658	16,738
Appliances	Dishwasher	91.7%	120	110	2,803
Appliances	Refrigerator	99.7%	599	598	15,203
Appliances	Freezer	58.2%	511	298	7,574
Appliances	Second Refrigerator	37.1%	829	308	7,824
Appliances	Stove/Oven	82.3%	443	365	9,272
Appliances	Microwave	93.0%	124	116	2,944
Electronics	Personal Computers	54.7%	161	88	2,241
Electronics	Monitor	65.8%	61	40	1,028
Electronics	Laptops	198.7%	42	84	2,129
Electronics	TVs	189.9%	114	216	5,485
Electronics	Printer/Fax/Copier	54.7%	42	23	586
Electronics	Set-top Boxes/DVRs	187.8%	99	185	4,713
Electronics	Devices and Gadgets	100.0%	108	108	2,740
Miscellaneous	Electric Vehicles	0.2%	4,324	8	212
Miscellaneous	Pool Pump	2.5%	3,500	88	2,233
Miscellaneous	Pool Heater	0.1%	3,517	4	109
Miscellaneous	Hot Tub/Spa	8.6%	950	82	2,082
Miscellaneous	Furnace Fan	13.8%	205	28	720
Miscellaneous	Well pump	28.6%	561	161	4,088
Miscellaneous	Miscellaneous	100.0%	421	421	10,707
Total				10,753	273,505

Table A-8   *California Single Family New Construction Market Profile*

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	8.4%	1,366	115
Cooling	Room AC	17.6%	761	134
Cooling	Air-Source Heat Pump	19.8%	1,690	335
Cooling	Geothermal Heat Pump	0.4%	1,442	6
Cooling	Evaporative AC	7.2%	549	39
Space Heating	Electric Room Heat	8.8%	4,638	407
Space Heating	Electric Furnace	11.6%	5,227	607
Space Heating	Air-Source Heat Pump	19.8%	3,559	706
Space Heating	Geothermal Heat Pump	0.4%	2,222	9
Space Heating	Secondary Heating	33.9%	258	88
Water Heating	Water Heater (<= 55 Gal)	72.1%	2,733	1,970
Water Heating	Water Heater (> 55 Gal)	5.9%	2,558	150
Interior Lighting	General Service Screw-in	100.0%	688	688
Interior Lighting	Linear Lighting	100.0%	173	173
Interior Lighting	Exempted Lighting	100.0%	263	263
Exterior Lighting	Screw-in	100.0%	309	309
Appliances	Clothes Washer	96.1%	73	70
Appliances	Clothes Dryer	88.8%	704	625
Appliances	Dishwasher	91.7%	114	105
Appliances	Refrigerator	99.7%	539	538
Appliances	Freezer	58.2%	486	283
Appliances	Second Refrigerator	37.1%	599	222
Appliances	Stove/Oven	82.3%	421	346
Appliances	Microwave	93.0%	118	110
Electronics	Personal Computers	54.7%	153	84
Electronics	Monitor	65.8%	58	38
Electronics	Laptops	198.7%	40	80
Electronics	TVs	189.9%	108	205
Electronics	Printer/Fax/Copier	54.7%	40	22
Electronics	Set-top Boxes/DVRs	187.8%	94	176
Electronics	Devices and Gadgets	100.0%	102	102
Miscellaneous	Electric Vehicles	0.2%	4,324	8
Miscellaneous	Pool Pump	2.5%	3,325	83
Miscellaneous	Pool Heater	0.1%	3,341	4
Miscellaneous	Hot Tub/Spa	8.6%	903	78
Miscellaneous	Furnace Fan	13.8%	195	27
Miscellaneous	Well pump	28.6%	533	153
Miscellaneous	Miscellaneous	100.0%	400	400
Total				9,759

Table A-9   *California Multi Family Existing Market Profile*

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	3.7%	1,104	41	193
Cooling	Room AC	28.7%	865	248	1,166
Cooling	Air-Source Heat Pump	6.6%	1,104	73	342
Cooling	Geothermal Heat Pump	0.0%	972	0	0
Cooling	Evaporative AC	0.0%	267	0	0
Space Heating	Electric Room Heat	47.6%	2,254	1,072	5,041
Space Heating	Electric Furnace	17.3%	2,413	418	1,968
Space Heating	Air-Source Heat Pump	6.6%	1,470	97	456
Space Heating	Geothermal Heat Pump	0.0%	946	0	0
Space Heating	Secondary Heating	35.8%	370	132	623
Water Heating	Water Heater (<= 55 Gal)	78.2%	2,534	1,982	9,322
Water Heating	Water Heater (> 55 Gal)	6.1%	2,679	164	774
Interior Lighting	General Service Screw-in	100.0%	402	402	1,889
Interior Lighting	Linear Lighting	100.0%	22	22	105
Interior Lighting	Exempted Lighting	100.0%	22	22	105
Exterior Lighting	Screw-in	100.0%	91	91	426
Appliances	Clothes Washer	42.6%	75	32	150
Appliances	Clothes Dryer	44.4%	586	260	1,224
Appliances	Dishwasher	80.3%	120	97	454
Appliances	Refrigerator	99.6%	599	597	2,806
Appliances	Freezer	1.9%	511	10	45
Appliances	Second Refrigerator	2.4%	660	16	74
Appliances	Stove/Oven	89.5%	357	319	1,501
Appliances	Microwave	90.5%	124	113	530
Electronics	Personal Computers	27.5%	161	44	208
Electronics	Monitor	33.1%	61	20	96
Electronics	Laptops	169.6%	42	71	336
Electronics	TVs	119.5%	114	136	638
Electronics	Printer/Fax/Copier	27.5%	42	12	54
Electronics	Set-top Boxes/DVRs	145.7%	99	144	676
Electronics	Devices and Gadgets	100.0%	108	108	507
Miscellaneous	Electric Vehicles	0.0%	4,324	0	0
Miscellaneous	Pool Pump	0.0%	3,500	0	0
Miscellaneous	Pool Heater	0.0%	3,517	0	0
Miscellaneous	Hot Tub/Spa	0.0%	950	0	0
Miscellaneous	Furnace Fan	17.5%	73	13	60
Miscellaneous	Well pump	0.0%	556	0	0
Miscellaneous	Miscellaneous	100.0%	579	579	2,724
Total				7,335	34,494

Table A-10   *California Multi Family New Construction Market Profile*

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	3.7%	786	29
Cooling	Room AC	28.7%	680	195
Cooling	Air-Source Heat Pump	6.6%	1,104	73
Cooling	Geothermal Heat Pump	0.0%	972	0
Cooling	Evaporative AC	0.0%	131	0
Space Heating	Electric Room Heat	47.6%	1,370	652
Space Heating	Electric Furnace	17.3%	2,413	418
Space Heating	Air-Source Heat Pump	6.6%	1,469	97
Space Heating	Geothermal Heat Pump	0.0%	946	0
Space Heating	Secondary Heating	35.8%	225	81
Water Heating	Water Heater (<= 55 Gal)	78.2%	2,275	1,780
Water Heating	Water Heater (> 55 Gal)	6.1%	2,178	134
Interior Lighting	General Service Screw-in	100.0%	513	513
Interior Lighting	Linear Lighting	100.0%	28	28
Interior Lighting	Exempted Lighting	100.0%	28	28
Exterior Lighting	Screw-in	100.0%	116	116
Appliances	Clothes Washer	42.6%	71	30
Appliances	Clothes Dryer	44.4%	557	247
Appliances	Dishwasher	80.3%	114	92
Appliances	Refrigerator	99.6%	539	537
Appliances	Freezer	1.9%	486	9
Appliances	Second Refrigerator	2.4%	599	14
Appliances	Stove/Oven	89.5%	339	303
Appliances	Microwave	90.5%	118	107
Electronics	Personal Computers	27.5%	153	42
Electronics	Monitor	33.1%	58	19
Electronics	Laptops	169.6%	40	68
Electronics	TVs	119.5%	108	129
Electronics	Printer/Fax/Copier	27.5%	40	11
Electronics	Set-top Boxes/DVRs	145.7%	94	137
Electronics	Devices and Gadgets	100.0%	102	102
Miscellaneous	Electric Vehicles	0.0%	4,324	0
Miscellaneous	Pool Pump	0.0%	3,325	0
Miscellaneous	Pool Heater	0.0%	3,341	0
Miscellaneous	Hot Tub/Spa	0.0%	903	0
Miscellaneous	Furnace Fan	17.5%	70	12
Miscellaneous	Well pump	0.0%	528	0
Miscellaneous	Miscellaneous	100.0%	550	550
Total				6,555

Table A-11   California Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	8.0%	1,678	134	781
Cooling	Room AC	20.8%	818	170	994
Cooling	Air-Source Heat Pump	11.9%	1,678	200	1,170
Cooling	Geothermal Heat Pump	0.0%	1,477	0	0
Cooling	Evaporative AC	9.7%	554	54	315
Space Heating	Electric Room Heat	19.3%	5,700	1,097	6,410
Space Heating	Electric Furnace	26.9%	6,101	1,638	9,571
Space Heating	Air-Source Heat Pump	11.9%	3,920	468	2,733
Space Heating	Geothermal Heat Pump	0.0%	2,201	0	0
Space Heating	Secondary Heating	31.7%	392	124	725
Water Heating	Water Heater (<= 55 Gal)	74.4%	2,525	1,879	10,977
Water Heating	Water Heater (> 55 Gal)	6.1%	2,669	162	944
Interior Lighting	General Service Screw-in	100.0%	492	492	2,876
Interior Lighting	Linear Lighting	100.0%	68	68	396
Interior Lighting	Exempted Lighting	100.0%	93	93	542
Exterior Lighting	Screw-in	100.0%	102	102	599
Appliances	Clothes Washer	93.4%	77	72	420
Appliances	Clothes Dryer	90.1%	924	833	4,866
Appliances	Dishwasher	79.3%	120	95	557
Appliances	Refrigerator	99.7%	599	598	3,492
Appliances	Freezer	58.0%	511	297	1,734
Appliances	Second Refrigerator	34.3%	742	254	1,485
Appliances	Stove/Oven	73.1%	537	392	2,293
Appliances	Microwave	96.8%	124	120	704
Electronics	Personal Computers	60.2%	161	97	566
Electronics	Monitor	72.4%	61	44	260
Electronics	Laptops	196.6%	42	83	484
Electronics	TVs	200.6%	114	228	1,331
Electronics	Printer/Fax/Copier	60.2%	42	25	148
Electronics	Set-top Boxes/DVRs	177.4%	99	175	1,022
Electronics	Devices and Gadgets	100.0%	108	108	629
Miscellaneous	Electric Vehicles	0.0%	4,324	0	0
Miscellaneous	Pool Pump	1.9%	3,500	65	379
Miscellaneous	Pool Heater	0.0%	3,517	0	0
Miscellaneous	Hot Tub/Spa	3.2%	950	30	178
Miscellaneous	Furnace Fan	35.6%	157	56	326
Miscellaneous	Well pump	23.4%	451	106	618
Miscellaneous	Miscellaneous	100.0%	429	429	2,509
Total				10,789	63,032

Table A-12   California Manufactured Home New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	8.0%	1,210	96
Cooling	Room AC	20.8%	752	156
Cooling	Air-Source Heat Pump	11.9%	1,573	188
Cooling	Geothermal Heat Pump	0.0%	1,477	0
Cooling	Evaporative AC	9.7%	450	44
Space Heating	Electric Room Heat	19.3%	4,109	791
Space Heating	Electric Furnace	26.9%	4,398	1,181
Space Heating	Air-Source Heat Pump	11.9%	3,491	417
Space Heating	Geothermal Heat Pump	0.0%	2,201	0
Space Heating	Secondary Heating	31.7%	283	89
Water Heating	Water Heater (<= 55 Gal)	74.4%	2,268	1,688
Water Heating	Water Heater (> 55 Gal)	6.1%	2,118	128
Interior Lighting	General Service Screw-in	100.0%	557	557
Interior Lighting	Linear Lighting	100.0%	77	77
Interior Lighting	Exempted Lighting	100.0%	105	105
Exterior Lighting	Screw-in	100.0%	116	116
Appliances	Clothes Washer	93.4%	73	68
Appliances	Clothes Dryer	90.1%	878	791
Appliances	Dishwasher	79.3%	114	91
Appliances	Refrigerator	99.7%	539	538
Appliances	Freezer	58.0%	486	282
Appliances	Second Refrigerator	34.3%	599	205
Appliances	Stove/Oven	73.1%	510	373
Appliances	Microwave	96.8%	118	114
Electronics	Personal Computers	60.2%	153	92
Electronics	Monitor	72.4%	58	42
Electronics	Laptops	196.6%	40	79
Electronics	TVs	200.6%	108	216
Electronics	Printer/Fax/Copier	60.2%	40	24
Electronics	Set-top Boxes/DVRs	177.4%	94	166
Electronics	Devices and Gadgets	100.0%	102	102
Miscellaneous	Electric Vehicles	0.0%	4,324	0
Miscellaneous	Pool Pump	1.9%	3,325	62
Miscellaneous	Pool Heater	0.0%	3,341	0
Miscellaneous	Hot Tub/Spa	3.2%	903	29
Miscellaneous	Furnace Fan	35.6%	149	53
Miscellaneous	Well pump	23.4%	428	100
Miscellaneous	Miscellaneous	100.0%	408	408
Total				9,469

Table A-13   Idaho Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	34.5%	1,525	526	25,202
Cooling	Room AC	19.9%	836	167	7,991
Cooling	Air-Source Heat Pump	3.7%	1,588	59	2,829
Cooling	Geothermal Heat Pump	0.4%	1,398	6	281
Cooling	Evaporative AC	3.7%	647	24	1,134
Space Heating	Electric Room Heat	12.2%	15,623	1,910	91,594
Space Heating	Electric Furnace	7.5%	17,607	1,329	63,727
Space Heating	Air-Source Heat Pump	3.7%	12,707	472	22,640
Space Heating	Geothermal Heat Pump	0.4%	5,096	21	1,026
Space Heating	Secondary Heating	37.2%	392	146	6,991
Water Heating	Water Heater (<= 55 Gal)	36.4%	3,299	1,200	57,554
Water Heating	Water Heater (> 55 Gal)	3.0%	3,488	103	4,951
Interior Lighting	General Service Screw-in	100.0%	698	698	33,445
Interior Lighting	Linear Lighting	100.0%	124	124	5,947
Interior Lighting	Exempted Lighting	100.0%	266	266	12,748
Exterior Lighting	Screw-in	100.0%	284	284	13,627
Appliances	Clothes Washer	98.2%	77	76	3,630
Appliances	Clothes Dryer	84.2%	741	624	29,942
Appliances	Dishwasher	91.7%	120	110	5,283
Appliances	Refrigerator	99.9%	599	599	28,701
Appliances	Freezer	98.9%	511	506	24,257
Appliances	Second Refrigerator	42.6%	829	353	16,922
Appliances	Stove/Oven	77.8%	443	345	16,524
Appliances	Microwave	98.7%	124	123	5,891
Electronics	Personal Computers	73.7%	161	119	5,692
Electronics	Monitor	88.7%	61	54	2,612
Electronics	Laptops	246.6%	42	104	4,982
Electronics	TVs	216.0%	114	245	11,759
Electronics	Printer/Fax/Copier	73.7%	42	31	1,487
Electronics	Set-top Boxes/DVRs	248.9%	99	245	11,770
Electronics	Devices and Gadgets	100.0%	108	108	5,165
Miscellaneous	Electric Vehicles	0.2%	4,324	9	441
Miscellaneous	Pool Pump	1.5%	3,500	54	2,584
Miscellaneous	Pool Heater	0.1%	3,517	5	246
Miscellaneous	Hot Tub/Spa	6.2%	950	59	2,806
Miscellaneous	Furnace Fan	67.0%	205	138	6,594
Miscellaneous	Well pump	28.6%	561	161	7,706
Miscellaneous	Miscellaneous	100.0%	345	345	16,559
Total				11,747	563,241

Table A-14   Idaho Single Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	34.5%	1,359	468
Cooling	Room AC	19.9%	870	173
Cooling	Air-Source Heat Pump	3.7%	1,588	59
Cooling	Geothermal Heat Pump	0.4%	1,326	6
Cooling	Evaporative AC	3.7%	592	22
Space Heating	Electric Room Heat	12.2%	11,579	1,416
Space Heating	Electric Furnace	7.5%	13,050	985
Space Heating	Air-Source Heat Pump	3.7%	12,702	472
Space Heating	Geothermal Heat Pump	0.4%	8,116	34
Space Heating	Secondary Heating	37.2%	291	108
Water Heating	Water Heater (<= 55 Gal)	36.4%	2,994	1,089
Water Heating	Water Heater (> 55 Gal)	3.0%	2,871	85
Interior Lighting	General Service Screw-in	100.0%	792	792
Interior Lighting	Linear Lighting	100.0%	141	141
Interior Lighting	Exempted Lighting	100.0%	302	302
Exterior Lighting	Screw-in	100.0%	323	323
Appliances	Clothes Washer	98.2%	73	72
Appliances	Clothes Dryer	84.2%	704	593
Appliances	Dishwasher	91.7%	114	105
Appliances	Refrigerator	99.9%	539	539
Appliances	Freezer	98.9%	486	481
Appliances	Second Refrigerator	42.6%	599	255
Appliances	Stove/Oven	77.8%	421	327
Appliances	Microwave	98.7%	118	117
Electronics	Personal Computers	73.7%	153	113
Electronics	Monitor	88.7%	58	52
Electronics	Laptops	246.6%	40	99
Electronics	TVs	216.0%	108	233
Electronics	Printer/Fax/Copier	73.7%	40	29
Electronics	Set-top Boxes/DVRs	248.9%	94	233
Electronics	Devices and Gadgets	100.0%	102	102
Miscellaneous	Electric Vehicles	0.2%	4,324	9
Miscellaneous	Pool Pump	1.5%	3,325	51
Miscellaneous	Pool Heater	0.1%	3,341	5
Miscellaneous	Hot Tub/Spa	6.2%	903	56
Miscellaneous	Furnace Fan	67.0%	195	131
Miscellaneous	Well pump	28.6%	533	153
Miscellaneous	Miscellaneous	100.0%	328	328
Total				10,558

Table A-15   Idaho Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	27.5%	462	127	1,174
Cooling	Room AC	30.0%	294	88	814
Cooling	Air-Source Heat Pump	3.3%	462	15	142
Cooling	Geothermal Heat Pump	0.0%	406	0	0
Cooling	Evaporative AC	0.7%	267	2	16
Space Heating	Electric Room Heat	40.1%	2,307	925	8,554
Space Heating	Electric Furnace	16.4%	2,470	404	3,738
Space Heating	Air-Source Heat Pump	3.3%	1,926	64	591
Space Heating	Geothermal Heat Pump	0.0%	773	0	0
Space Heating	Secondary Heating	29.0%	370	107	990
Water Heating	Water Heater (<= 55 Gal)	44.9%	2,198	988	9,138
Water Heating	Water Heater (> 55 Gal)	3.5%	2,324	82	758
Interior Lighting	General Service Screw-in	100.0%	485	485	4,488
Interior Lighting	Linear Lighting	100.0%	33	33	303
Interior Lighting	Exempted Lighting	100.0%	33	33	303
Exterior Lighting	Screw-in	100.0%	130	130	1,202
Appliances	Clothes Washer	67.3%	75	51	468
Appliances	Clothes Dryer	65.5%	586	384	3,552
Appliances	Dishwasher	80.3%	120	97	893
Appliances	Refrigerator	99.4%	599	596	5,511
Appliances	Freezer	15.3%	511	78	723
Appliances	Second Refrigerator	3.6%	660	24	222
Appliances	Stove/Oven	97.2%	357	347	3,205
Appliances	Microwave	97.4%	124	121	1,121
Electronics	Personal Computers	33.8%	161	54	504
Electronics	Monitor	40.7%	61	25	231
Electronics	Laptops	228.3%	42	96	890
Electronics	TVs	124.5%	114	141	1,308
Electronics	Printer/Fax/Copier	33.8%	42	14	132
Electronics	Set-top Boxes/DVRs	160.4%	99	158	1,463
Electronics	Devices and Gadgets	100.0%	108	108	996
Miscellaneous	Electric Vehicles	0.0%	4,324	0	0
Miscellaneous	Pool Pump	0.2%	3,500	9	80
Miscellaneous	Pool Heater	0.0%	3,517	0	0
Miscellaneous	Hot Tub/Spa	0.5%	950	4	40
Miscellaneous	Furnace Fan	39.2%	73	29	266
Miscellaneous	Well pump	0.0%	556	0	0
Miscellaneous	Miscellaneous	100.0%	214	214	1,982
Total				6,033	55,799

Table A-16   Idaho Multi Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	27.5%	331	91
Cooling	Room AC	30.0%	237	71
Cooling	Air-Source Heat Pump	3.3%	444	15
Cooling	Geothermal Heat Pump	0.0%	406	0
Cooling	Evaporative AC	0.7%	140	1
Space Heating	Electric Room Heat	40.1%	1,320	529
Space Heating	Electric Furnace	16.4%	2,470	404
Space Heating	Air-Source Heat Pump	3.3%	1,882	62
Space Heating	Geothermal Heat Pump	0.0%	773	0
Space Heating	Secondary Heating	29.0%	211	61
Water Heating	Water Heater (<= 55 Gal)	44.9%	1,995	897
Water Heating	Water Heater (> 55 Gal)	3.5%	1,936	68
Interior Lighting	General Service Screw-in	100.0%	620	620
Interior Lighting	Linear Lighting	100.0%	42	42
Interior Lighting	Exempted Lighting	100.0%	42	42
Exterior Lighting	Screw-in	100.0%	166	166
Appliances	Clothes Washer	67.3%	71	48
Appliances	Clothes Dryer	65.5%	557	365
Appliances	Dishwasher	80.3%	114	92
Appliances	Refrigerator	99.4%	539	536
Appliances	Freezer	15.3%	486	74
Appliances	Second Refrigerator	3.6%	599	22
Appliances	Stove/Oven	97.2%	339	329
Appliances	Microwave	97.4%	118	115
Electronics	Personal Computers	33.8%	153	52
Electronics	Monitor	40.7%	58	24
Electronics	Laptops	228.3%	40	91
Electronics	TVs	124.5%	108	134
Electronics	Printer/Fax/Copier	33.8%	40	14
Electronics	Set-top Boxes/DVRs	160.4%	94	150
Electronics	Devices and Gadgets	100.0%	102	102
Miscellaneous	Electric Vehicles	0.0%	4,324	0
Miscellaneous	Pool Pump	0.2%	3,325	8
Miscellaneous	Pool Heater	0.0%	3,341	0
Miscellaneous	Hot Tub/Spa	0.5%	903	4
Miscellaneous	Furnace Fan	39.2%	70	27
Miscellaneous	Well pump	0.0%	528	0
Miscellaneous	Miscellaneous	100.0%	204	204
Total				5,461

Table A-17   Idaho Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	12.9%	1,476	190	1,199
Cooling	Room AC	38.4%	779	299	1,886
Cooling	Air-Source Heat Pump	2.3%	1,476	34	214
Cooling	Geothermal Heat Pump	0.0%	1,299	0	0
Cooling	Evaporative AC	16.9%	554	93	590
Space Heating	Electric Room Heat	16.2%	8,946	1,453	9,173
Space Heating	Electric Furnace	24.9%	9,575	2,380	15,026
Space Heating	Air-Source Heat Pump	2.3%	8,021	185	1,165
Space Heating	Geothermal Heat Pump	0.0%	3,233	0	0
Space Heating	Secondary Heating	36.3%	392	142	898
Water Heating	Water Heater (<= 55 Gal)	54.7%	3,299	1,803	11,385
Water Heating	Water Heater (> 55 Gal)	4.4%	3,488	155	979
Interior Lighting	General Service Screw-in	100.0%	463	463	2,925
Interior Lighting	Linear Lighting	100.0%	62	62	390
Interior Lighting	Exempted Lighting	100.0%	87	87	552
Exterior Lighting	Screw-in	100.0%	109	109	687
Appliances	Clothes Washer	98.3%	77	76	477
Appliances	Clothes Dryer	88.9%	924	821	5,187
Appliances	Dishwasher	79.3%	120	95	602
Appliances	Refrigerator	99.6%	599	597	3,770
Appliances	Freezer	82.1%	511	420	2,650
Appliances	Second Refrigerator	22.5%	742	167	1,054
Appliances	Stove/Oven	70.7%	537	380	2,398
Appliances	Microwave	98.1%	124	122	771
Electronics	Personal Computers	57.0%	161	92	579
Electronics	Monitor	68.5%	61	42	266
Electronics	Laptops	202.9%	42	86	540
Electronics	TVs	205.5%	114	233	1,473
Electronics	Printer/Fax/Copier	57.0%	42	24	151
Electronics	Set-top Boxes/DVRs	215.4%	99	212	1,342
Electronics	Devices and Gadgets	100.0%	108	108	680
Miscellaneous	Electric Vehicles	0.0%	4,324	0	0
Miscellaneous	Pool Pump	1.2%	3,500	42	265
Miscellaneous	Pool Heater	0.0%	3,517	0	0
Miscellaneous	Hot Tub/Spa	3.2%	950	30	191
Miscellaneous	Furnace Fan	62.3%	157	97	616
Miscellaneous	Well pump	23.4%	451	106	667
Miscellaneous	Miscellaneous	100.0%	196	196	1,237
Total				11,401	71,988

Table A-18   Idaho Manufactured Home New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	12.9%	1,131	146
Cooling	Room AC	38.4%	702	269
Cooling	Air-Source Heat Pump	2.3%	1,476	34
Cooling	Geothermal Heat Pump	0.0%	1,273	0
Cooling	Evaporative AC	16.9%	465	78
Space Heating	Electric Room Heat	16.2%	6,433	1,045
Space Heating	Electric Furnace	24.9%	6,886	1,711
Space Heating	Air-Source Heat Pump	2.3%	7,987	184
Space Heating	Geothermal Heat Pump	0.0%	5,597	0
Space Heating	Secondary Heating	36.3%	282	102
Water Heating	Water Heater (<= 55 Gal)	54.7%	2,994	1,637
Water Heating	Water Heater (> 55 Gal)	4.4%	2,866	127
Interior Lighting	General Service Screw-in	100.0%	524	524
Interior Lighting	Linear Lighting	100.0%	70	70
Interior Lighting	Exempted Lighting	100.0%	99	99
Exterior Lighting	Screw-in	100.0%	123	123
Appliances	Clothes Washer	98.3%	73	72
Appliances	Clothes Dryer	88.9%	878	780
Appliances	Dishwasher	79.3%	114	91
Appliances	Refrigerator	99.6%	539	537
Appliances	Freezer	82.1%	486	399
Appliances	Second Refrigerator	22.5%	599	135
Appliances	Stove/Oven	70.7%	510	361
Appliances	Microwave	98.1%	118	116
Electronics	Personal Computers	57.0%	153	87
Electronics	Monitor	68.5%	58	40
Electronics	Laptops	202.9%	40	81
Electronics	TVs	205.5%	108	222
Electronics	Printer/Fax/Copier	57.0%	40	23
Electronics	Set-top Boxes/DVRs	215.4%	94	202
Electronics	Devices and Gadgets	100.0%	102	102
Miscellaneous	Electric Vehicles	0.0%	4,324	0
Miscellaneous	Pool Pump	1.2%	3,325	40
Miscellaneous	Pool Heater	0.0%	3,341	0
Miscellaneous	Hot Tub/Spa	3.2%	903	29
Miscellaneous	Furnace Fan	62.3%	149	93
Miscellaneous	Well pump	23.4%	428	100
Miscellaneous	Miscellaneous	100.0%	186	186
Total				9,844

Table A-19   Utah Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	76.2%	2,870	2,186	1,249,634
Cooling	Room AC	3.9%	1,285	50	28,665
Cooling	Air-Source Heat Pump	1.6%	3,018	47	27,048
Cooling	Geothermal Heat Pump	0.4%	2,657	11	6,375
Cooling	Evaporative AC	12.6%	647	81	46,555
Space Heating	Electric Room Heat	1.5%	13,422	201	114,685
Space Heating	Electric Furnace	6.2%	15,127	944	539,860
Space Heating	Air-Source Heat Pump	1.6%	8,329	131	74,646
Space Heating	Geothermal Heat Pump	0.4%	4,360	18	10,463
Space Heating	Secondary Heating	31.0%	392	122	69,461
Water Heating	Water Heater (<= 55 Gal)	8.8%	3,050	270	154,233
Water Heating	Water Heater (> 55 Gal)	0.7%	3,225	23	13,268
Interior Lighting	General Service Screw-in	100.0%	543	543	310,253
Interior Lighting	Linear Lighting	100.0%	79	79	44,931
Interior Lighting	Exempted Lighting	100.0%	208	208	118,920
Exterior Lighting	Screw-in	100.0%	301	301	172,079
Appliances	Clothes Washer	98.3%	77	76	43,343
Appliances	Clothes Dryer	76.0%	741	563	322,131
Appliances	Dishwasher	91.7%	120	110	62,991
Appliances	Refrigerator	99.9%	602	601	343,570
Appliances	Freezer	61.2%	515	315	180,149
Appliances	Second Refrigerator	42.8%	829	355	202,684
Appliances	Stove/Oven	68.6%	443	304	173,550
Appliances	Microwave	98.5%	124	123	70,077
Electronics	Personal Computers	80.9%	161	130	74,477
Electronics	Monitor	97.3%	61	60	34,177
Electronics	Laptops	267.4%	42	113	64,421
Electronics	TVs	230.3%	114	261	149,467
Electronics	Printer/Fax/Copier	80.9%	42	34	19,462
Electronics	Set-top Boxes/DVRs	267.2%	99	264	150,657
Electronics	Devices and Gadgets	100.0%	84	84	48,107
Miscellaneous	Electric Vehicles	0.4%	4,324	18	10,343
Miscellaneous	Pool Pump	2.5%	3,500	89	50,778
Miscellaneous	Pool Heater	1.0%	3,517	35	19,845
Miscellaneous	Hot Tub/Spa	6.0%	2,032	121	69,400
Miscellaneous	Furnace Fan	89.7%	205	184	105,253
Miscellaneous	Well pump	4.8%	561	27	15,419
Miscellaneous	Miscellaneous	100.0%	811	811	463,728
Total				9,892	5,655,105

Table A-20   Utah Single Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	76.2%	2,296	1,749
Cooling	Room AC	3.9%	1,142	45
Cooling	Air-Source Heat Pump	1.6%	3,018	47
Cooling	Geothermal Heat Pump	0.4%	2,572	11
Cooling	Evaporative AC	12.6%	544	69
Space Heating	Electric Room Heat	1.5%	8,957	134
Space Heating	Electric Furnace	6.2%	10,095	630
Space Heating	Air-Source Heat Pump	1.6%	8,323	130
Space Heating	Geothermal Heat Pump	0.4%	4,221	18
Space Heating	Secondary Heating	31.0%	262	81
Water Heating	Water Heater (<= 55 Gal)	8.8%	2,737	242
Water Heating	Water Heater (> 55 Gal)	0.7%	2,625	19
Interior Lighting	General Service Screw-in	100.0%	617	617
Interior Lighting	Linear Lighting	100.0%	89	89
Interior Lighting	Exempted Lighting	100.0%	236	236
Exterior Lighting	Screw-in	100.0%	342	342
Appliances	Clothes Washer	98.3%	73	72
Appliances	Clothes Dryer	76.0%	704	535
Appliances	Dishwasher	91.7%	114	105
Appliances	Refrigerator	99.9%	541	541
Appliances	Freezer	61.2%	489	299
Appliances	Second Refrigerator	42.8%	602	257
Appliances	Stove/Oven	68.6%	421	288
Appliances	Microwave	98.5%	118	116
Electronics	Personal Computers	80.9%	153	124
Electronics	Monitor	97.3%	58	57
Electronics	Laptops	267.4%	40	107
Electronics	TVs	230.3%	108	248
Electronics	Printer/Fax/Copier	80.9%	40	32
Electronics	Set-top Boxes/DVRs	267.2%	94	250
Electronics	Devices and Gadgets	100.0%	80	80
Miscellaneous	Electric Vehicles	0.4%	4,324	18
Miscellaneous	Pool Pump	2.5%	3,325	84
Miscellaneous	Pool Heater	1.0%	3,341	33
Miscellaneous	Hot Tub/Spa	6.0%	1,930	115
Miscellaneous	Furnace Fan	89.7%	195	175
Miscellaneous	Well pump	4.8%	533	26
Miscellaneous	Miscellaneous	100.0%	771	771
Total				8,794

Table A-21   Utah Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	61.7%	694	428	72,584
Cooling	Room AC	17.0%	347	59	9,979
Cooling	Air-Source Heat Pump	2.6%	694	18	3,021
Cooling	Geothermal Heat Pump	0.0%	611	0	0
Cooling	Evaporative AC	8.6%	267	23	3,893
Space Heating	Electric Room Heat	7.6%	2,217	168	28,537
Space Heating	Electric Furnace	21.9%	2,499	546	92,524
Space Heating	Air-Source Heat Pump	2.6%	1,884	48	8,199
Space Heating	Geothermal Heat Pump	0.0%	986	0	0
Space Heating	Secondary Heating	23.7%	370	87	14,810
Water Heating	Water Heater (<= 55 Gal)	23.9%	2,541	606	102,684
Water Heating	Water Heater (> 55 Gal)	1.9%	2,686	50	8,522
Interior Lighting	General Service Screw-in	100.0%	522	522	88,484
Interior Lighting	Linear Lighting	100.0%	47	47	7,950
Interior Lighting	Exempted Lighting	100.0%	30	30	5,151
Exterior Lighting	Screw-in	100.0%	162	162	27,436
Appliances	Clothes Washer	73.2%	75	55	9,312
Appliances	Clothes Dryer	67.6%	586	396	67,084
Appliances	Dishwasher	80.3%	120	97	16,363
Appliances	Refrigerator	99.8%	602	600	101,716
Appliances	Freezer	12.5%	515	64	10,874
Appliances	Second Refrigerator	6.9%	660	45	7,677
Appliances	Stove/Oven	85.2%	357	304	51,501
Appliances	Microwave	94.2%	124	117	19,864
Electronics	Personal Computers	46.3%	161	75	12,640
Electronics	Monitor	55.7%	61	34	5,800
Electronics	Laptops	190.3%	42	80	13,590
Electronics	TVs	150.3%	114	171	28,911
Electronics	Printer/Fax/Copier	46.3%	42	19	3,303
Electronics	Set-top Boxes/DVRs	177.4%	99	175	29,651
Electronics	Devices and Gadgets	100.0%	83	83	14,090
Miscellaneous	Electric Vehicles	0.0%	4,324	0	0
Miscellaneous	Pool Pump	0.3%	3,500	10	1,619
Miscellaneous	Pool Heater	0.5%	3,517	16	2,773
Miscellaneous	Hot Tub/Spa	0.8%	2,032	16	2,634
Miscellaneous	Furnace Fan	66.7%	73	49	8,301
Miscellaneous	Well pump	0.0%	556	0	0
Miscellaneous	Miscellaneous	100.0%	210	210	35,612
Total				5,412	917,087

Table A-22   Utah Multi Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	61.7%	583	360
Cooling	Room AC	17.0%	320	54
Cooling	Air-Source Heat Pump	2.6%	677	17
Cooling	Geothermal Heat Pump	0.0%	611	0
Cooling	Evaporative AC	8.6%	215	19
Space Heating	Electric Room Heat	7.6%	1,410	107
Space Heating	Electric Furnace	21.9%	2,499	546
Space Heating	Air-Source Heat Pump	2.6%	1,808	46
Space Heating	Geothermal Heat Pump	0.0%	986	0
Space Heating	Secondary Heating	23.7%	235	56
Water Heating	Water Heater (<= 55 Gal)	23.9%	2,280	544
Water Heating	Water Heater (> 55 Gal)	1.9%	2,213	41
Interior Lighting	General Service Screw-in	100.0%	667	667
Interior Lighting	Linear Lighting	100.0%	60	60
Interior Lighting	Exempted Lighting	100.0%	39	39
Exterior Lighting	Screw-in	100.0%	207	207
Appliances	Clothes Washer	73.2%	71	52
Appliances	Clothes Dryer	67.6%	557	376
Appliances	Dishwasher	80.3%	114	92
Appliances	Refrigerator	99.8%	541	540
Appliances	Freezer	12.5%	489	61
Appliances	Second Refrigerator	6.9%	602	41
Appliances	Stove/Oven	85.2%	339	289
Appliances	Microwave	94.2%	118	111
Electronics	Personal Computers	46.3%	153	71
Electronics	Monitor	55.7%	58	33
Electronics	Laptops	190.3%	40	76
Electronics	TVs	150.3%	108	162
Electronics	Printer/Fax/Copier	46.3%	40	19
Electronics	Set-top Boxes/DVRs	177.4%	94	166
Electronics	Devices and Gadgets	100.0%	79	79
Miscellaneous	Electric Vehicles	0.0%	4,324	0
Miscellaneous	Pool Pump	0.3%	3,325	9
Miscellaneous	Pool Heater	0.5%	3,341	16
Miscellaneous	Hot Tub/Spa	0.8%	1,930	15
Miscellaneous	Furnace Fan	66.7%	70	47
Miscellaneous	Well pump	0.0%	528	0
Miscellaneous	Miscellaneous	100.0%	200	200
Total				5,217

Table A-23   Utah Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	36.9%	2,100	776	14,652
Cooling	Room AC	14.9%	1,031	153	2,895
Cooling	Air-Source Heat Pump	2.0%	2,100	42	794
Cooling	Geothermal Heat Pump	0.0%	1,849	0	0
Cooling	Evaporative AC	38.6%	554	214	4,037
Space Heating	Electric Room Heat	4.2%	7,565	318	6,017
Space Heating	Electric Furnace	9.7%	8,098	782	14,771
Space Heating	Air-Source Heat Pump	2.0%	6,287	126	2,379
Space Heating	Geothermal Heat Pump	0.0%	2,940	0	0
Space Heating	Secondary Heating	31.5%	392	124	2,336
Water Heating	Water Heater (<= 55 Gal)	19.7%	2,529	497	9,392
Water Heating	Water Heater (> 55 Gal)	1.6%	2,674	43	808
Interior Lighting	General Service Screw-in	100.0%	349	349	6,601
Interior Lighting	Linear Lighting	100.0%	43	43	814
Interior Lighting	Exempted Lighting	100.0%	66	66	1,246
Exterior Lighting	Screw-in	100.0%	169	169	3,192
Appliances	Clothes Washer	95.3%	77	73	1,384
Appliances	Clothes Dryer	78.6%	843	662	12,514
Appliances	Dishwasher	79.3%	120	95	1,801
Appliances	Refrigerator	99.7%	602	600	11,332
Appliances	Freezer	58.6%	515	301	5,696
Appliances	Second Refrigerator	24.8%	742	184	3,479
Appliances	Stove/Oven	40.0%	312	125	2,358
Appliances	Microwave	95.6%	124	119	2,249
Electronics	Personal Computers	63.4%	161	102	1,929
Electronics	Monitor	76.3%	61	47	885
Electronics	Laptops	195.4%	42	82	1,556
Electronics	TVs	219.0%	114	249	4,698
Electronics	Printer/Fax/Copier	63.4%	42	27	504
Electronics	Set-top Boxes/DVRs	225.5%	99	222	4,201
Electronics	Devices and Gadgets	100.0%	86	86	1,634
Miscellaneous	Electric Vehicles	0.0%	4,324	0	0
Miscellaneous	Pool Pump	1.3%	3,500	46	877
Miscellaneous	Pool Heater	0.7%	3,517	25	474
Miscellaneous	Hot Tub/Spa	2.6%	2,032	53	1,005
Miscellaneous	Furnace Fan	69.2%	157	108	2,047
Miscellaneous	Well pump	12.5%	451	56	1,065
Miscellaneous	Miscellaneous	100.0%	67	67	1,263
Total				7,034	132,885

Table A-24   Utah Manufactured Home New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	36.9%	1,588	587
Cooling	Room AC	14.9%	921	137
Cooling	Air-Source Heat Pump	2.0%	2,100	42
Cooling	Geothermal Heat Pump	0.0%	1,849	0
Cooling	Evaporative AC	38.6%	459	177
Space Heating	Electric Room Heat	4.2%	5,314	224
Space Heating	Electric Furnace	9.7%	5,688	549
Space Heating	Air-Source Heat Pump	2.0%	6,242	125
Space Heating	Geothermal Heat Pump	0.0%	2,940	0
Space Heating	Secondary Heating	31.5%	275	87
Water Heating	Water Heater (<= 55 Gal)	19.7%	2,271	446
Water Heating	Water Heater (> 55 Gal)	1.6%	2,173	35
Interior Lighting	General Service Screw-in	100.0%	395	395
Interior Lighting	Linear Lighting	100.0%	49	49
Interior Lighting	Exempted Lighting	100.0%	75	75
Exterior Lighting	Screw-in	100.0%	191	191
Appliances	Clothes Washer	95.3%	73	70
Appliances	Clothes Dryer	78.6%	800	629
Appliances	Dishwasher	79.3%	114	91
Appliances	Refrigerator	99.7%	541	540
Appliances	Freezer	58.6%	489	286
Appliances	Second Refrigerator	24.8%	602	149
Appliances	Stove/Oven	40.0%	296	119
Appliances	Microwave	95.6%	118	113
Electronics	Personal Computers	63.4%	153	97
Electronics	Monitor	76.3%	58	45
Electronics	Laptops	195.4%	40	78
Electronics	TVs	219.0%	108	236
Electronics	Printer/Fax/Copier	63.4%	40	25
Electronics	Set-top Boxes/DVRs	225.5%	94	211
Electronics	Devices and Gadgets	100.0%	82	82
Miscellaneous	Electric Vehicles	0.0%	4,324	0
Miscellaneous	Pool Pump	1.3%	3,325	44
Miscellaneous	Pool Heater	0.7%	3,341	24
Miscellaneous	Hot Tub/Spa	2.6%	1,930	51
Miscellaneous	Furnace Fan	69.2%	149	103
Miscellaneous	Well pump	12.5%	428	54
Miscellaneous	Miscellaneous	100.0%	64	64
Total				6,228

Table A-25   Washington Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	38.7%	1,818	703	52,037
Cooling	Room AC	22.0%	672	148	10,950
Cooling	Air-Source Heat Pump	29.9%	1,900	568	42,051
Cooling	Geothermal Heat Pump	0.4%	1,672	7	519
Cooling	Evaporative AC	1.0%	710	7	551
Space Heating	Electric Room Heat	8.2%	11,862	975	72,109
Space Heating	Electric Furnace	13.8%	13,369	1,849	136,810
Space Heating	Air-Source Heat Pump	29.9%	9,089	2,719	201,165
Space Heating	Geothermal Heat Pump	0.4%	4,295	18	1,334
Space Heating	Secondary Heating	31.2%	430	134	9,910
Water Heating	Water Heater (<= 55 Gal)	62.4%	3,500	2,185	161,680
Water Heating	Water Heater (> 55 Gal)	5.1%	3,700	188	13,909
Interior Lighting	General Service Screw-in	100.0%	744	744	55,027
Interior Lighting	Linear Lighting	100.0%	146	146	10,839
Interior Lighting	Exempted Lighting	100.0%	285	285	21,066
Exterior Lighting	Screw-in	100.0%	294	294	21,762
Appliances	Clothes Washer	96.5%	85	82	6,038
Appliances	Clothes Dryer	92.5%	813	752	55,629
Appliances	Dishwasher	91.7%	132	121	8,941
Appliances	Refrigerator	99.7%	657	655	48,475
Appliances	Freezer	71.7%	591	424	31,344
Appliances	Second Refrigerator	43.9%	909	399	29,497
Appliances	Stove/Oven	88.9%	486	432	31,955
Appliances	Microwave	98.1%	137	134	9,905
Electronics	Personal Computers	63.7%	177	112	8,319
Electronics	Monitor	76.6%	67	52	3,818
Electronics	Laptops	218.6%	46	101	7,472
Electronics	TVs	208.0%	125	259	19,166
Electronics	Printer/Fax/Copier	63.7%	46	29	2,174
Electronics	Set-top Boxes/DVRs	221.3%	108	239	17,715
Electronics	Devices and Gadgets	100.0%	118	118	8,740
Miscellaneous	Electric Vehicles	0.2%	4,742	11	832
Miscellaneous	Pool Pump	5.8%	3,838	224	16,580
Miscellaneous	Pool Heater	0.6%	3,857	25	1,845
Miscellaneous	Hot Tub/Spa	7.9%	2,228	175	12,945
Miscellaneous	Furnace Fan	54.0%	225	122	8,993
Miscellaneous	Well pump	28.6%	615	176	13,041
Miscellaneous	Miscellaneous	100.0%	368	368	27,205
Total				15,981	1,182,345

Table A-26   Washington Single Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	38.7%	1,518	587
Cooling	Room AC	22.0%	663	146
Cooling	Air-Source Heat Pump	29.9%	1,899	568
Cooling	Geothermal Heat Pump	0.4%	1,620	7
Cooling	Evaporative AC	1.0%	602	6
Space Heating	Electric Room Heat	8.2%	7,819	642
Space Heating	Electric Furnace	13.8%	8,813	1,219
Space Heating	Air-Source Heat Pump	29.9%	9,083	2,717
Space Heating	Geothermal Heat Pump	0.4%	4,160	17
Space Heating	Secondary Heating	31.2%	283	88
Water Heating	Water Heater (<= 55 Gal)	62.4%	3,144	1,963
Water Heating	Water Heater (> 55 Gal)	5.1%	2,943	150
Interior Lighting	General Service Screw-in	100.0%	845	845
Interior Lighting	Linear Lighting	100.0%	166	166
Interior Lighting	Exempted Lighting	100.0%	323	323
Exterior Lighting	Screw-in	100.0%	334	334
Appliances	Clothes Washer	96.5%	80	78
Appliances	Clothes Dryer	92.5%	772	714
Appliances	Dishwasher	91.7%	125	115
Appliances	Refrigerator	99.7%	591	590
Appliances	Freezer	71.7%	562	402
Appliances	Second Refrigerator	43.9%	657	288
Appliances	Stove/Oven	88.9%	461	410
Appliances	Microwave	98.1%	130	127
Electronics	Personal Computers	63.7%	168	107
Electronics	Monitor	76.6%	64	49
Electronics	Laptops	218.6%	44	96
Electronics	TVs	208.0%	118	246
Electronics	Printer/Fax/Copier	63.7%	44	28
Electronics	Set-top Boxes/DVRs	221.3%	103	227
Electronics	Devices and Gadgets	100.0%	112	112
Miscellaneous	Electric Vehicles	0.2%	4,742	11
Miscellaneous	Pool Pump	5.8%	3,647	213
Miscellaneous	Pool Heater	0.6%	3,664	24
Miscellaneous	Hot Tub/Spa	7.9%	2,117	166
Miscellaneous	Furnace Fan	54.0%	214	115
Miscellaneous	Well pump	28.6%	584	167
Miscellaneous	Miscellaneous	100.0%	349	349
Total				14,416

Table A-27   Washington Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	18.8%	688	130	2,594
Cooling	Room AC	67.0%	573	384	7,681
Cooling	Air-Source Heat Pump	6.0%	688	41	821
Cooling	Geothermal Heat Pump	0.0%	606	0	0
Cooling	Evaporative AC	0.4%	293	1	22
Space Heating	Electric Room Heat	32.6%	3,086	1,007	20,160
Space Heating	Electric Furnace	47.8%	3,303	1,580	31,612
Space Heating	Air-Source Heat Pump	6.0%	2,191	131	2,615
Space Heating	Geothermal Heat Pump	0.0%	1,035	0	0
Space Heating	Secondary Heating	34.8%	405	141	2,826
Water Heating	Water Heater (<= 55 Gal)	76.9%	2,915	2,241	44,851
Water Heating	Water Heater (> 55 Gal)	6.0%	3,081	186	3,722
Interior Lighting	General Service Screw-in	100.0%	470	470	9,410
Interior Lighting	Linear Lighting	100.0%	39	39	789
Interior Lighting	Exempted Lighting	100.0%	39	39	789
Exterior Lighting	Screw-in	100.0%	112	112	2,241
Appliances	Clothes Washer	52.4%	82	43	863
Appliances	Clothes Dryer	51.9%	643	333	6,670
Appliances	Dishwasher	80.3%	132	106	2,119
Appliances	Refrigerator	99.6%	657	654	13,089
Appliances	Freezer	20.7%	591	122	2,448
Appliances	Second Refrigerator	4.7%	724	34	680
Appliances	Stove/Oven	97.5%	391	381	7,633
Appliances	Microwave	94.6%	137	129	2,586
Electronics	Personal Computers	35.8%	177	63	1,264
Electronics	Monitor	43.0%	67	29	580
Electronics	Laptops	160.5%	46	74	1,484
Electronics	TVs	152.5%	125	190	3,801
Electronics	Printer/Fax/Copier	35.8%	46	16	330
Electronics	Set-top Boxes/DVRs	165.9%	108	179	3,591
Electronics	Devices and Gadgets	100.0%	118	118	2,364
Miscellaneous	Electric Vehicles	0.0%	4,742	0	0
Miscellaneous	Pool Pump	0.0%	3,838	0	0
Miscellaneous	Pool Heater	0.3%	3,857	12	247
Miscellaneous	Hot Tub/Spa	0.0%	2,228	0	0
Miscellaneous	Furnace Fan	20.5%	81	16	330
Miscellaneous	Well pump	0.0%	610	0	0
Miscellaneous	Miscellaneous	100.0%	410	410	8,213
Total				9,416	188,423

Table A-28   Washington Multi Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	18.8%	491	92
Cooling	Room AC	67.0%	450	302
Cooling	Air-Source Heat Pump	6.0%	688	41
Cooling	Geothermal Heat Pump	0.0%	606	0
Cooling	Evaporative AC	0.4%	144	1
Space Heating	Electric Room Heat	32.6%	1,876	612
Space Heating	Electric Furnace	47.8%	3,303	1,580
Space Heating	Air-Source Heat Pump	6.0%	2,191	131
Space Heating	Geothermal Heat Pump	0.0%	1,035	0
Space Heating	Secondary Heating	34.8%	246	86
Water Heating	Water Heater (<= 55 Gal)	76.9%	2,617	2,013
Water Heating	Water Heater (> 55 Gal)	6.0%	2,505	151
Interior Lighting	General Service Screw-in	100.0%	601	601
Interior Lighting	Linear Lighting	100.0%	50	50
Interior Lighting	Exempted Lighting	100.0%	50	50
Exterior Lighting	Screw-in	100.0%	143	143
Appliances	Clothes Washer	52.4%	78	41
Appliances	Clothes Dryer	51.9%	610	317
Appliances	Dishwasher	80.3%	125	101
Appliances	Refrigerator	99.6%	591	589
Appliances	Freezer	20.7%	562	116
Appliances	Second Refrigerator	4.7%	657	31
Appliances	Stove/Oven	97.5%	372	362
Appliances	Microwave	94.6%	130	123
Electronics	Personal Computers	35.8%	168	60
Electronics	Monitor	43.0%	64	28
Electronics	Laptops	160.5%	44	70
Electronics	TVs	152.5%	118	180
Electronics	Printer/Fax/Copier	35.8%	44	16
Electronics	Set-top Boxes/DVRs	165.9%	103	170
Electronics	Devices and Gadgets	100.0%	112	112
Miscellaneous	Electric Vehicles	0.0%	4,742	0
Miscellaneous	Pool Pump	0.0%	3,647	0
Miscellaneous	Pool Heater	0.3%	3,664	12
Miscellaneous	Hot Tub/Spa	0.0%	2,117	0
Miscellaneous	Furnace Fan	20.5%	76	16
Miscellaneous	Well pump	0.0%	579	0
Miscellaneous	Miscellaneous	100.0%	390	390
Total				8,586

Table A-29   *Washington Manufactured Home Existing Market Profile*

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	33.5%	1,574	527	6,722
Cooling	Room AC	21.9%	695	152	1,943
Cooling	Air-Source Heat Pump	34.9%	1,574	549	7,000
Cooling	Geothermal Heat Pump	0.0%	1,386	0	0
Cooling	Evaporative AC	4.2%	608	25	325
Space Heating	Electric Room Heat	5.1%	9,128	463	5,905
Space Heating	Electric Furnace	51.4%	9,771	5,022	64,064
Space Heating	Air-Source Heat Pump	34.9%	6,296	2,194	27,995
Space Heating	Geothermal Heat Pump	0.0%	3,432	0	0
Space Heating	Secondary Heating	32.9%	430	142	1,806
Water Heating	Water Heater (<= 55 Gal)	87.7%	2,905	2,548	32,509
Water Heating	Water Heater (> 55 Gal)	7.1%	3,071	219	2,797
Interior Lighting	General Service Screw-in	100.0%	482	482	6,143
Interior Lighting	Linear Lighting	100.0%	97	97	1,242
Interior Lighting	Exempted Lighting	100.0%	91	91	1,161
Exterior Lighting	Screw-in	100.0%	117	117	1,486
Appliances	Clothes Washer	95.3%	84	80	1,025
Appliances	Clothes Dryer	93.2%	1,014	945	12,056
Appliances	Dishwasher	79.3%	132	105	1,334
Appliances	Refrigerator	99.7%	657	655	8,358
Appliances	Freezer	71.2%	591	421	5,368
Appliances	Second Refrigerator	33.8%	814	275	3,507
Appliances	Stove/Oven	95.1%	589	560	7,144
Appliances	Microwave	97.9%	137	134	1,706
Electronics	Personal Computers	56.6%	177	100	1,274
Electronics	Monitor	68.0%	67	46	585
Electronics	Laptops	192.4%	46	89	1,134
Electronics	TVs	213.5%	125	266	3,392
Electronics	Printer/Fax/Copier	56.6%	46	26	333
Electronics	Set-top Boxes/DVRs	206.1%	108	223	2,844
Electronics	Devices and Gadgets	100.0%	118	118	1,507
Miscellaneous	Electric Vehicles	0.0%	4,742	0	0
Miscellaneous	Pool Pump	4.4%	3,838	170	2,174
Miscellaneous	Pool Heater	0.2%	3,857	6	77
Miscellaneous	Hot Tub/Spa	4.1%	2,228	91	1,162
Miscellaneous	Furnace Fan	58.4%	172	100	1,279
Miscellaneous	Well pump	23.4%	495	116	1,479
Miscellaneous	Miscellaneous	100.0%	343	343	4,375
Total				17,497	223,209

Table A-30   Washington Manufactured Home New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	33.5%	1,135	380
Cooling	Room AC	21.9%	638	140
Cooling	Air-Source Heat Pump	34.9%	1,442	503
Cooling	Geothermal Heat Pump	0.0%	1,386	0
Cooling	Evaporative AC	4.2%	494	21
Space Heating	Electric Room Heat	5.1%	6,580	334
Space Heating	Electric Furnace	51.4%	7,043	3,620
Space Heating	Air-Source Heat Pump	34.9%	5,482	1,911
Space Heating	Geothermal Heat Pump	0.0%	3,432	0
Space Heating	Secondary Heating	32.9%	310	102
Water Heating	Water Heater (<= 55 Gal)	87.7%	2,609	2,289
Water Heating	Water Heater (> 55 Gal)	7.1%	2,437	174
Interior Lighting	General Service Screw-in	100.0%	544	544
Interior Lighting	Linear Lighting	100.0%	110	110
Interior Lighting	Exempted Lighting	100.0%	103	103
Exterior Lighting	Screw-in	100.0%	132	132
Appliances	Clothes Washer	95.3%	80	76
Appliances	Clothes Dryer	93.2%	963	898
Appliances	Dishwasher	79.3%	125	99
Appliances	Refrigerator	99.7%	591	590
Appliances	Freezer	71.2%	562	400
Appliances	Second Refrigerator	33.8%	657	222
Appliances	Stove/Oven	95.1%	559	532
Appliances	Microwave	97.9%	130	127
Electronics	Personal Computers	56.6%	168	95
Electronics	Monitor	68.0%	64	44
Electronics	Laptops	192.4%	44	84
Electronics	TVs	213.5%	118	253
Electronics	Printer/Fax/Copier	56.6%	44	25
Electronics	Set-top Boxes/DVRs	206.1%	103	212
Electronics	Devices and Gadgets	100.0%	112	112
Miscellaneous	Electric Vehicles	0.0%	4,742	0
Miscellaneous	Pool Pump	4.4%	3,647	162
Miscellaneous	Pool Heater	0.2%	3,664	6
Miscellaneous	Hot Tub/Spa	4.1%	2,117	87
Miscellaneous	Furnace Fan	58.4%	163	95
Miscellaneous	Well pump	23.4%	470	110
Miscellaneous	Miscellaneous	100.0%	326	326
Total				14,915

Table A-31   Wyoming Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	38.7%	1,818	703	52,037
Cooling	Room AC	22.0%	672	148	10,950
Cooling	Air-Source Heat Pump	29.9%	1,900	568	42,051
Cooling	Geothermal Heat Pump	0.4%	1,672	7	519
Cooling	Evaporative AC	1.0%	710	7	551
Space Heating	Electric Room Heat	8.2%	11,862	975	72,109
Space Heating	Electric Furnace	13.8%	13,369	1,849	136,810
Space Heating	Air-Source Heat Pump	29.9%	9,089	2,719	201,165
Space Heating	Geothermal Heat Pump	0.4%	4,295	18	1,334
Space Heating	Secondary Heating	31.2%	430	134	9,910
Water Heating	Water Heater (<= 55 Gal)	62.4%	3,500	2,185	161,680
Water Heating	Water Heater (> 55 Gal)	5.1%	3,700	188	13,909
Interior Lighting	General Service Screw-in	100.0%	744	744	55,027
Interior Lighting	Linear Lighting	100.0%	146	146	10,839
Interior Lighting	Exempted Lighting	100.0%	285	285	21,066
Exterior Lighting	Screw-in	100.0%	294	294	21,762
Appliances	Clothes Washer	96.5%	85	82	6,038
Appliances	Clothes Dryer	92.5%	813	752	55,629
Appliances	Dishwasher	91.7%	132	121	8,941
Appliances	Refrigerator	99.7%	657	655	48,475
Appliances	Freezer	71.7%	591	424	31,344
Appliances	Second Refrigerator	43.9%	909	399	29,497
Appliances	Stove/Oven	88.9%	486	432	31,955
Appliances	Microwave	98.1%	137	134	9,905
Electronics	Personal Computers	63.7%	177	112	8,319
Electronics	Monitor	76.6%	67	52	3,818
Electronics	Laptops	218.6%	46	101	7,472
Electronics	TVs	208.0%	125	259	19,166
Electronics	Printer/Fax/Copier	63.7%	46	29	2,174
Electronics	Set-top Boxes/DVRs	221.3%	108	239	17,715
Electronics	Devices and Gadgets	100.0%	118	118	8,740
Miscellaneous	Electric Vehicles	0.2%	4,742	11	832
Miscellaneous	Pool Pump	5.8%	3,838	224	16,580
Miscellaneous	Pool Heater	0.6%	3,857	25	1,845
Miscellaneous	Hot Tub/Spa	7.9%	2,228	175	12,945
Miscellaneous	Furnace Fan	54.0%	225	122	8,993
Miscellaneous	Well pump	28.6%	615	176	13,041
Miscellaneous	Miscellaneous	100.0%	368	368	27,205
Total				15,981	1,182,345

Table A-32   Wyoming Single Family New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	38.7%	1,518	587
Cooling	Room AC	22.0%	663	146
Cooling	Air-Source Heat Pump	29.9%	1,899	568
Cooling	Geothermal Heat Pump	0.4%	1,620	7
Cooling	Evaporative AC	1.0%	602	6
Space Heating	Electric Room Heat	8.2%	7,819	642
Space Heating	Electric Furnace	13.8%	8,813	1,219
Space Heating	Air-Source Heat Pump	29.9%	9,083	2,717
Space Heating	Geothermal Heat Pump	0.4%	4,160	17
Space Heating	Secondary Heating	31.2%	283	88
Water Heating	Water Heater (<= 55 Gal)	62.4%	3,144	1,963
Water Heating	Water Heater (> 55 Gal)	5.1%	2,943	150
Interior Lighting	General Service Screw-in	100.0%	845	845
Interior Lighting	Linear Lighting	100.0%	166	166
Interior Lighting	Exempted Lighting	100.0%	323	323
Exterior Lighting	Screw-in	100.0%	334	334
Appliances	Clothes Washer	96.5%	80	78
Appliances	Clothes Dryer	92.5%	772	714
Appliances	Dishwasher	91.7%	125	115
Appliances	Refrigerator	99.7%	591	590
Appliances	Freezer	71.7%	562	402
Appliances	Second Refrigerator	43.9%	657	288
Appliances	Stove/Oven	88.9%	461	410
Appliances	Microwave	98.1%	130	127
Electronics	Personal Computers	63.7%	168	107
Electronics	Monitor	76.6%	64	49
Electronics	Laptops	218.6%	44	96
Electronics	TVs	208.0%	118	246
Electronics	Printer/Fax/Copier	63.7%	44	28
Electronics	Set-top Boxes/DVRs	221.3%	103	227
Electronics	Devices and Gadgets	100.0%	112	112
Miscellaneous	Electric Vehicles	0.2%	4,742	11
Miscellaneous	Pool Pump	5.8%	3,647	213
Miscellaneous	Pool Heater	0.6%	3,664	24
Miscellaneous	Hot Tub/Spa	7.9%	2,117	166
Miscellaneous	Furnace Fan	54.0%	214	115
Miscellaneous	Well pump	28.6%	584	167
Miscellaneous	Miscellaneous	100.0%	349	349
Total				14,416

Table A-33   *Wyoming Multi Family Existing Market Profile*

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	18.8%	688	130	2,594
Cooling	Room AC	67.0%	573	384	7,681
Cooling	Air-Source Heat Pump	6.0%	688	41	821
Cooling	Geothermal Heat Pump	0.0%	606	0	0
Cooling	Evaporative AC	0.4%	293	1	22
Space Heating	Electric Room Heat	32.6%	3,086	1,007	20,160
Space Heating	Electric Furnace	47.8%	3,303	1,580	31,612
Space Heating	Air-Source Heat Pump	6.0%	2,191	131	2,615
Space Heating	Geothermal Heat Pump	0.0%	1,035	0	0
Space Heating	Secondary Heating	34.8%	405	141	2,826
Water Heating	Water Heater (<= 55 Gal)	76.9%	2,915	2,241	44,851
Water Heating	Water Heater (> 55 Gal)	6.0%	3,081	186	3,722
Interior Lighting	General Service Screw-in	100.0%	470	470	9,410
Interior Lighting	Linear Lighting	100.0%	39	39	789
Interior Lighting	Exempted Lighting	100.0%	39	39	789
Exterior Lighting	Screw-in	100.0%	112	112	2,241
Appliances	Clothes Washer	52.4%	82	43	863
Appliances	Clothes Dryer	51.9%	643	333	6,670
Appliances	Dishwasher	80.3%	132	106	2,119
Appliances	Refrigerator	99.6%	657	654	13,089
Appliances	Freezer	20.7%	591	122	2,448
Appliances	Second Refrigerator	4.7%	724	34	680
Appliances	Stove/Oven	97.5%	391	381	7,633
Appliances	Microwave	94.6%	137	129	2,586
Electronics	Personal Computers	35.8%	177	63	1,264
Electronics	Monitor	43.0%	67	29	580
Electronics	Laptops	160.5%	46	74	1,484
Electronics	TVs	152.5%	125	190	3,801
Electronics	Printer/Fax/Copier	35.8%	46	16	330
Electronics	Set-top Boxes/DVRs	165.9%	108	179	3,591
Electronics	Devices and Gadgets	100.0%	118	118	2,364
Miscellaneous	Electric Vehicles	0.0%	4,742	0	0
Miscellaneous	Pool Pump	0.0%	3,838	0	0
Miscellaneous	Pool Heater	0.3%	3,857	12	247
Miscellaneous	Hot Tub/Spa	0.0%	2,228	0	0
Miscellaneous	Furnace Fan	20.5%	81	16	330
Miscellaneous	Well pump	0.0%	610	0	0
Miscellaneous	Miscellaneous	100.0%	410	410	8,213
Total				9,416	188,423

Table A-34   *Wyoming Multi Family New Construction Market Profile*

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	18.8%	491	92
Cooling	Room AC	67.0%	450	302
Cooling	Air-Source Heat Pump	6.0%	688	41
Cooling	Geothermal Heat Pump	0.0%	606	0
Cooling	Evaporative AC	0.4%	144	1
Space Heating	Electric Room Heat	32.6%	1,876	612
Space Heating	Electric Furnace	47.8%	3,303	1,580
Space Heating	Air-Source Heat Pump	6.0%	2,191	131
Space Heating	Geothermal Heat Pump	0.0%	1,035	0
Space Heating	Secondary Heating	34.8%	246	86
Water Heating	Water Heater (<= 55 Gal)	76.9%	2,617	2,013
Water Heating	Water Heater (> 55 Gal)	6.0%	2,505	151
Interior Lighting	General Service Screw-in	100.0%	601	601
Interior Lighting	Linear Lighting	100.0%	50	50
Interior Lighting	Exempted Lighting	100.0%	50	50
Exterior Lighting	Screw-in	100.0%	143	143
Appliances	Clothes Washer	52.4%	78	41
Appliances	Clothes Dryer	51.9%	610	317
Appliances	Dishwasher	80.3%	125	101
Appliances	Refrigerator	99.6%	591	589
Appliances	Freezer	20.7%	562	116
Appliances	Second Refrigerator	4.7%	657	31
Appliances	Stove/Oven	97.5%	372	362
Appliances	Microwave	94.6%	130	123
Electronics	Personal Computers	35.8%	168	60
Electronics	Monitor	43.0%	64	28
Electronics	Laptops	160.5%	44	70
Electronics	TVs	152.5%	118	180
Electronics	Printer/Fax/Copier	35.8%	44	16
Electronics	Set-top Boxes/DVRs	165.9%	103	170
Electronics	Devices and Gadgets	100.0%	112	112
Miscellaneous	Electric Vehicles	0.0%	4,742	0
Miscellaneous	Pool Pump	0.0%	3,647	0
Miscellaneous	Pool Heater	0.3%	3,664	12
Miscellaneous	Hot Tub/Spa	0.0%	2,117	0
Miscellaneous	Furnace Fan	20.5%	76	16
Miscellaneous	Well pump	0.0%	579	0
Miscellaneous	Miscellaneous	100.0%	390	390
Total				8,586

Table A-35   Wyoming Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	33.5%	1,574	527	6,722
Cooling	Room AC	21.9%	695	152	1,943
Cooling	Air-Source Heat Pump	34.9%	1,574	549	7,000
Cooling	Geothermal Heat Pump	0.0%	1,386	0	0
Cooling	Evaporative AC	4.2%	608	25	325
Space Heating	Electric Room Heat	5.1%	9,128	463	5,905
Space Heating	Electric Furnace	51.4%	9,771	5,022	64,064
Space Heating	Air-Source Heat Pump	34.9%	6,296	2,194	27,995
Space Heating	Geothermal Heat Pump	0.0%	3,432	0	0
Space Heating	Secondary Heating	32.9%	430	142	1,806
Water Heating	Water Heater (<= 55 Gal)	87.7%	2,905	2,548	32,509
Water Heating	Water Heater (> 55 Gal)	7.1%	3,071	219	2,797
Interior Lighting	General Service Screw-in	100.0%	482	482	6,143
Interior Lighting	Linear Lighting	100.0%	97	97	1,242
Interior Lighting	Exempted Lighting	100.0%	91	91	1,161
Exterior Lighting	Screw-in	100.0%	117	117	1,486
Appliances	Clothes Washer	95.3%	84	80	1,025
Appliances	Clothes Dryer	93.2%	1,014	945	12,056
Appliances	Dishwasher	79.3%	132	105	1,334
Appliances	Refrigerator	99.7%	657	655	8,358
Appliances	Freezer	71.2%	591	421	5,368
Appliances	Second Refrigerator	33.8%	814	275	3,507
Appliances	Stove/Oven	95.1%	589	560	7,144
Appliances	Microwave	97.9%	137	134	1,706
Electronics	Personal Computers	56.6%	177	100	1,274
Electronics	Monitor	68.0%	67	46	585
Electronics	Laptops	192.4%	46	89	1,134
Electronics	TVs	213.5%	125	266	3,392
Electronics	Printer/Fax/Copier	56.6%	46	26	333
Electronics	Set-top Boxes/DVRs	206.1%	108	223	2,844
Electronics	Devices and Gadgets	100.0%	118	118	1,507
Miscellaneous	Electric Vehicles	0.0%	4,742	0	0
Miscellaneous	Pool Pump	4.4%	3,838	170	2,174
Miscellaneous	Pool Heater	0.2%	3,857	6	77
Miscellaneous	Hot Tub/Spa	4.1%	2,228	91	1,162
Miscellaneous	Furnace Fan	58.4%	172	100	1,279
Miscellaneous	Well pump	23.4%	495	116	1,479
Miscellaneous	Miscellaneous	100.0%	343	343	4,375
Total				17,497	223,209

Table A-36   Wyoming Manufactured Home New Construction Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	33.5%	1,135	380
Cooling	Room AC	21.9%	638	140
Cooling	Air-Source Heat Pump	34.9%	1,442	503
Cooling	Geothermal Heat Pump	0.0%	1,386	0
Cooling	Evaporative AC	4.2%	494	21
Space Heating	Electric Room Heat	5.1%	6,580	334
Space Heating	Electric Furnace	51.4%	7,043	3,620
Space Heating	Air-Source Heat Pump	34.9%	5,482	1,911
Space Heating	Geothermal Heat Pump	0.0%	3,432	0
Space Heating	Secondary Heating	32.9%	310	102
Water Heating	Water Heater (<= 55 Gal)	87.7%	2,609	2,289
Water Heating	Water Heater (> 55 Gal)	7.1%	2,437	174
Interior Lighting	General Service Screw-in	100.0%	544	544
Interior Lighting	Linear Lighting	100.0%	110	110
Interior Lighting	Exempted Lighting	100.0%	103	103
Exterior Lighting	Screw-in	100.0%	132	132
Appliances	Clothes Washer	95.3%	80	76
Appliances	Clothes Dryer	93.2%	963	898
Appliances	Dishwasher	79.3%	125	99
Appliances	Refrigerator	99.7%	591	590
Appliances	Freezer	71.2%	562	400
Appliances	Second Refrigerator	33.8%	657	222
Appliances	Stove/Oven	95.1%	559	532
Appliances	Microwave	97.9%	130	127
Electronics	Personal Computers	56.6%	168	95
Electronics	Monitor	68.0%	64	44
Electronics	Laptops	192.4%	44	84
Electronics	TVs	213.5%	118	253
Electronics	Printer/Fax/Copier	56.6%	44	25
Electronics	Set-top Boxes/DVRs	206.1%	103	212
Electronics	Devices and Gadgets	100.0%	112	112
Miscellaneous	Electric Vehicles	0.0%	4,742	0
Miscellaneous	Pool Pump	4.4%	3,647	162
Miscellaneous	Pool Heater	0.2%	3,664	6
Miscellaneous	Hot Tub/Spa	4.1%	2,117	87
Miscellaneous	Furnace Fan	58.4%	163	95
Miscellaneous	Well pump	23.4%	470	110
Miscellaneous	Miscellaneous	100.0%	326	326
Total				14,915

Commercial Market Profiles

The average size of the prototypical commercial building is assumed to be the same across all states, as shown in the table below.

Table A-37   Commercial Building Assumed Average Square Feet by Segment

Segments	Average Square Feet (all states)
Large Office	50,000
Small Office	10,000
Large Retail	100,000
Small Retail	15,000
Restaurant	5,500
Grocery	20,000
Health	30,000
College	30,000
School	30,000
Lodging	55,000
Warehouse	100,000
Warehouse, Controlled Atm.	100,000
Data Center	50,000
Miscellaneous	100,000

Table A-38   California Large Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.7%	3.04	0.42	41.8
Cooling	Water-Cooled Chiller	8.5%	3.11	0.26	26.3
Cooling	RTU	44.5%	3.28	1.46	145.9
Cooling	PTAC	2.4%	3.49	0.08	8.2
Cooling	PTHP	0.7%	3.28	0.02	2.4
Cooling	Evaporative Central AC	0.0%	1.31	0.00	0.1
Cooling	Air-Source Heat Pump	14.2%	3.28	0.47	46.7
Cooling	Geothermal Heat Pump	7.6%	2.00	0.15	15.2
Heating	Electric Furnace	1.2%	5.42	0.07	6.7
Heating	Electric Room Heat	23.8%	5.16	1.23	122.9
Heating	PTHP	0.7%	4.35	0.03	3.2
Heating	Air-Source Heat Pump	14.2%	4.84	0.69	68.8
Heating	Geothermal Heat Pump	7.6%	4.39	0.33	33.5
Ventilation	Ventilation	100.0%	3.11	3.11	311.6
Water Heating	Water Heater	45.2%	1.04	0.47	47.0
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	24.9
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10	10.3
Interior Lighting	Linear Lighting	100.0%	1.72	1.72	172.6
Interior Lighting	High-Bay Lighting	100.0%	1.01	1.01	101.1
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10	9.6
Exterior Lighting	Linear Lighting	100.0%	0.18	0.18	18.0
Exterior Lighting	Area Lighting	100.0%	1.28	1.28	127.9
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.14	0.00	0.3
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00	0.4
Refrigeration	Glass Door Display	77.4%	0.03	0.03	2.5
Refrigeration	Open Display Case	77.4%	0.19	0.15	15.0
Refrigeration	Icemaker	44.9%	0.05	0.02	2.4
Refrigeration	Vending Machine	44.9%	0.05	0.02	2.3
Food Preparation	Oven	66.0%	0.09	0.06	5.8
Food Preparation	Fryer	76.4%	0.13	0.10	9.8
Food Preparation	Dishwasher	43.1%	0.18	0.08	7.6
Food Preparation	Hot Food Container	43.1%	0.02	0.01	1.0
Food Preparation	Steamer	43.1%	0.13	0.06	5.6
Office Equipment	Desktop Computer	100.0%	2.35	2.35	234.9
Office Equipment	Laptop	100.0%	0.36	0.36	36.3
Office Equipment	Monitor	100.0%	0.41	0.41	41.5
Office Equipment	Server	100.0%	0.23	0.23	23.0
Office Equipment	Printer/Copier/Fax	100.0%	0.21	0.21	21.4
Office Equipment	POS Terminal	40.0%	0.03	0.01	1.2
Miscellaneous	Non-HVAC Motors	89.6%	0.35	0.31	31.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.42	1.42	141.8
Total				19.27	1,928.9

Table A-39   *California Large Office New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	13.7%	2.65	0.36
Cooling	Water-Cooled Chiller	8.5%	2.30	0.19
Cooling	RTU	44.5%	2.17	0.96
Cooling	PTAC	2.4%	2.69	0.06
Cooling	PTHP	0.7%	2.53	0.02
Cooling	Evaporative Central AC	0.0%	1.13	0.00
Cooling	Air-Source Heat Pump	14.2%	2.25	0.32
Cooling	Geothermal Heat Pump	7.6%	1.47	0.11
Heating	Electric Furnace	1.2%	6.21	0.08
Heating	Electric Room Heat	23.8%	5.92	1.41
Heating	PTHP	0.7%	4.17	0.03
Heating	Air-Source Heat Pump	14.2%	4.22	0.60
Heating	Geothermal Heat Pump	7.6%	4.14	0.32
Ventilation	Ventilation	100.0%	2.65	2.65
Water Heating	Water Heater	45.2%	0.98	0.44
Interior Lighting	General Service Lighting	100.0%	0.24	0.24
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10
Interior Lighting	Linear Lighting	100.0%	1.14	1.14
Interior Lighting	High-Bay Lighting	100.0%	0.91	0.91
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09
Exterior Lighting	Linear Lighting	100.0%	0.12	0.12
Exterior Lighting	Area Lighting	100.0%	1.15	1.15
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.13	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00
Refrigeration	Glass Door Display	77.4%	0.03	0.02
Refrigeration	Open Display Case	77.4%	0.17	0.14
Refrigeration	Icemaker	44.9%	0.05	0.02
Refrigeration	Vending Machine	44.9%	0.05	0.02
Food Preparation	Oven	66.0%	0.08	0.05
Food Preparation	Fryer	76.4%	0.11	0.09
Food Preparation	Dishwasher	43.1%	0.16	0.07
Food Preparation	Hot Food Container	43.1%	0.02	0.01
Food Preparation	Steamer	43.1%	0.12	0.05
Office Equipment	Desktop Computer	100.0%	2.23	2.23
Office Equipment	Laptop	100.0%	0.34	0.34
Office Equipment	Monitor	100.0%	0.39	0.39
Office Equipment	Server	100.0%	0.22	0.22
Office Equipment	Printer/Copier/Fax	100.0%	0.20	0.20
Office Equipment	POS Terminal	40.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	89.6%	0.31	0.28
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.42	1.42
Total				16.87

Table A-40   California Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.14	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	3.31	0.00	0.0
Cooling	RTU	65.6%	3.62	2.37	9,905.0
Cooling	PTAC	2.3%	3.85	0.09	372.2
Cooling	PTHP	0.7%	3.62	0.03	110.8
Cooling	Evaporative Central AC	0.0%	1.45	0.00	2.8
Cooling	Air-Source Heat Pump	14.0%	3.62	0.51	2,113.2
Cooling	Geothermal Heat Pump	7.5%	2.21	0.17	690.4
Heating	Electric Furnace	1.1%	6.58	0.07	312.1
Heating	Electric Room Heat	21.9%	6.27	1.37	5,727.3
Heating	PTHP	0.7%	5.21	0.04	159.7
Heating	Air-Source Heat Pump	14.0%	5.79	0.81	3,382.7
Heating	Geothermal Heat Pump	7.5%	5.02	0.38	1,570.8
Ventilation	Ventilation	100.0%	1.25	1.25	5,200.9
Water Heating	Water Heater	60.0%	0.94	0.56	2,344.2
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	1,029.3
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13	554.2
Interior Lighting	Linear Lighting	100.0%	1.54	1.54	6,436.6
Interior Lighting	High-Bay Lighting	100.0%	1.51	1.51	6,303.7
Exterior Lighting	General Service Lighting	100.0%	0.16	0.16	678.2
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07	303.6
Exterior Lighting	Area Lighting	100.0%	1.58	1.58	6,586.0
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.66	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.15	0.01	54.5
Refrigeration	Glass Door Display	0.0%	0.15	0.00	0.0
Refrigeration	Open Display Case	0.0%	0.90	0.00	0.0
Refrigeration	Icemaker	5.1%	0.25	0.01	53.2
Refrigeration	Vending Machine	5.1%	0.12	0.01	25.0
Food Preparation	Oven	3.6%	0.19	0.01	28.5
Food Preparation	Fryer	3.6%	0.27	0.01	41.2
Food Preparation	Dishwasher	3.6%	0.37	0.01	56.7
Food Preparation	Hot Food Container	3.6%	0.05	0.00	7.8
Food Preparation	Steamer	3.6%	0.27	0.01	41.6
Office Equipment	Desktop Computer	100.0%	1.24	1.24	5,181.3
Office Equipment	Laptop	100.0%	0.19	0.19	800.1
Office Equipment	Monitor	100.0%	0.22	0.22	914.4
Office Equipment	Server	100.0%	0.36	0.36	1,523.9
Office Equipment	Printer/Copier/Fax	100.0%	0.17	0.17	709.1
Office Equipment	POS Terminal	20.0%	0.10	0.02	81.4
Miscellaneous	Non-HVAC Motors	22.0%	0.28	0.06	254.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.19	1.19	4,949.2
Total				16.41	68,506.1

Table A-41   California Small Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	2.73	0.00
Cooling	Water-Cooled Chiller	0.0%	2.96	0.00
Cooling	RTU	65.6%	2.23	1.46
Cooling	PTAC	2.3%	2.64	0.06
Cooling	PTHP	0.7%	2.48	0.02
Cooling	Evaporative Central AC	0.0%	1.25	0.00
Cooling	Air-Source Heat Pump	14.0%	2.36	0.33
Cooling	Geothermal Heat Pump	7.5%	1.62	0.12
Heating	Electric Furnace	1.1%	6.15	0.07
Heating	Electric Room Heat	21.9%	5.86	1.28
Heating	PTHP	0.7%	4.56	0.03
Heating	Air-Source Heat Pump	14.0%	3.95	0.55
Heating	Geothermal Heat Pump	7.5%	4.73	0.35
Ventilation	Ventilation	100.0%	1.07	1.07
Water Heating	Water Heater	60.0%	0.88	0.53
Interior Lighting	General Service Lighting	100.0%	0.23	0.23
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13
Interior Lighting	Linear Lighting	100.0%	0.96	0.96
Interior Lighting	High-Bay Lighting	100.0%	1.36	1.36
Exterior Lighting	General Service Lighting	100.0%	0.15	0.15
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	1.42	1.42
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.60	0.00
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.13	0.01
Refrigeration	Glass Door Display	0.0%	0.14	0.00
Refrigeration	Open Display Case	0.0%	0.81	0.00
Refrigeration	Icemaker	5.1%	0.23	0.01
Refrigeration	Vending Machine	5.1%	0.11	0.01
Food Preparation	Oven	3.6%	0.17	0.01
Food Preparation	Fryer	3.6%	0.24	0.01
Food Preparation	Dishwasher	3.6%	0.33	0.01
Food Preparation	Hot Food Container	3.6%	0.05	0.00
Food Preparation	Steamer	3.6%	0.25	0.01
Office Equipment	Desktop Computer	100.0%	1.18	1.18
Office Equipment	Laptop	100.0%	0.18	0.18
Office Equipment	Monitor	100.0%	0.21	0.21
Office Equipment	Server	100.0%	0.35	0.35
Office Equipment	Printer/Copier/Fax	100.0%	0.16	0.16
Office Equipment	POS Terminal	20.0%	0.09	0.02
Miscellaneous	Non-HVAC Motors	22.0%	0.25	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.19	1.19
Total				13.59

Table A-42   California Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	1.1%	2.79	0.03	12.5
Cooling	Water-Cooled Chiller	0.7%	2.93	0.02	8.1
Cooling	RTU	79.5%	3.21	2.55	1,006.7
Cooling	PTAC	3.5%	3.42	0.12	46.9
Cooling	PTHP	0.7%	3.21	0.02	9.1
Cooling	Evaporative Central AC	4.1%	1.28	0.05	20.6
Cooling	Air-Source Heat Pump	4.2%	3.21	0.14	53.4
Cooling	Geothermal Heat Pump	0.0%	1.95	0.00	0.0
Heating	Electric Furnace	3.4%	5.23	0.18	69.4
Heating	Electric Room Heat	39.3%	4.98	1.96	773.2
Heating	PTHP	0.7%	4.01	0.03	11.4
Heating	Air-Source Heat Pump	4.2%	4.46	0.19	74.2
Heating	Geothermal Heat Pump	0.0%	3.80	0.00	0.0
Ventilation	Ventilation	100.0%	3.11	3.11	1,229.8
Water Heating	Water Heater	65.5%	1.04	0.68	269.0
Interior Lighting	General Service Lighting	100.0%	0.50	0.50	196.6
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47	187.1
Interior Lighting	Linear Lighting	100.0%	3.00	3.00	1,186.4
Interior Lighting	High-Bay Lighting	100.0%	1.99	1.99	786.4
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	94.0
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	31.6
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	333.6
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.34	0.01	2.7
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.08	0.01	4.3
Refrigeration	Glass Door Display	81.7%	0.08	0.06	25.6
Refrigeration	Open Display Case	81.7%	0.47	0.38	151.5
Refrigeration	Icemaker	52.4%	0.26	0.14	53.7
Refrigeration	Vending Machine	52.4%	0.12	0.06	25.2
Food Preparation	Oven	48.9%	0.16	0.08	31.3
Food Preparation	Fryer	45.2%	0.23	0.11	41.8
Food Preparation	Dishwasher	39.6%	0.32	0.13	50.4
Food Preparation	Hot Food Container	39.6%	0.04	0.02	6.9
Food Preparation	Steamer	39.6%	0.24	0.09	36.9
Office Equipment	Desktop Computer	100.0%	0.30	0.30	119.8
Office Equipment	Laptop	100.0%	0.05	0.05	18.5
Office Equipment	Monitor	100.0%	0.05	0.05	21.1
Office Equipment	Server	82.0%	0.04	0.04	14.4
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	16.4
Office Equipment	POS Terminal	100.0%	0.01	0.01	2.8
Miscellaneous	Non-HVAC Motors	40.2%	0.21	0.08	32.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	7.0%	0.00	0.00	0.1
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00	0.1
Miscellaneous	Miscellaneous	100.0%	0.78	0.78	307.9
Total				18.64	7,363.8

Table A-43   *California Large Retail New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	1.1%	2.21	0.03
Cooling	Water-Cooled Chiller	0.7%	1.96	0.01
Cooling	RTU	79.5%	2.69	2.14
Cooling	PTAC	3.5%	2.34	0.08
Cooling	PTHP	0.7%	2.20	0.02
Cooling	Evaporative Central AC	4.1%	1.11	0.05
Cooling	Air-Source Heat Pump	4.2%	2.48	0.10
Cooling	Geothermal Heat Pump	0.0%	1.44	0.00
Heating	Electric Furnace	3.4%	3.69	0.12
Heating	Electric Room Heat	39.3%	3.52	1.38
Heating	PTHP	0.7%	3.51	0.03
Heating	Air-Source Heat Pump	4.2%	2.51	0.11
Heating	Geothermal Heat Pump	0.0%	3.58	0.00
Ventilation	Ventilation	100.0%	2.62	2.62
Water Heating	Water Heater	65.5%	0.98	0.64
Interior Lighting	General Service Lighting	100.0%	0.47	0.47
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47
Interior Lighting	Linear Lighting	100.0%	1.93	1.93
Interior Lighting	High-Bay Lighting	100.0%	1.80	1.80
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.31	0.01
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01
Refrigeration	Glass Door Display	81.7%	0.07	0.06
Refrigeration	Open Display Case	81.7%	0.42	0.35
Refrigeration	Icemaker	52.4%	0.23	0.12
Refrigeration	Vending Machine	52.4%	0.11	0.06
Food Preparation	Oven	48.9%	0.15	0.07
Food Preparation	Fryer	45.2%	0.21	0.10
Food Preparation	Dishwasher	39.6%	0.29	0.11
Food Preparation	Hot Food Container	39.6%	0.04	0.02
Food Preparation	Steamer	39.6%	0.21	0.08
Office Equipment	Desktop Computer	100.0%	0.29	0.29
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	82.0%	0.04	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	40.2%	0.19	0.07
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	7.0%	0.00	0.00
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.78	0.78
Total				15.32

Table A-44   California Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.15	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	3.31	0.00	0.0
Cooling	RTU	67.0%	3.62	2.43	3,351.2
Cooling	PTAC	2.4%	3.73	0.09	121.8
Cooling	PTHP	0.8%	3.62	0.03	37.5
Cooling	Evaporative Central AC	0.0%	1.45	0.00	0.9
Cooling	Air-Source Heat Pump	14.3%	3.62	0.52	714.2
Cooling	Geothermal Heat Pump	7.7%	2.20	0.17	233.2
Heating	Electric Furnace	0.5%	7.88	0.04	54.2
Heating	Electric Room Heat	9.6%	7.51	0.72	995.1
Heating	PTHP	0.8%	5.10	0.04	52.7
Heating	Air-Source Heat Pump	14.3%	5.66	0.81	1,117.4
Heating	Geothermal Heat Pump	7.7%	4.30	0.33	454.9
Ventilation	Ventilation	100.0%	1.25	1.25	1,718.3
Water Heating	Water Heater	61.8%	0.94	0.58	797.3
Interior Lighting	General Service Lighting	100.0%	0.33	0.33	453.2
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31	431.2
Interior Lighting	Linear Lighting	100.0%	1.98	1.98	2,734.4
Interior Lighting	High-Bay Lighting	100.0%	1.31	1.31	1,812.6
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	328.2
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	110.2
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	1,165.0
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.21	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.05	0.00	3.4
Refrigeration	Glass Door Display	5.4%	0.05	0.00	3.5
Refrigeration	Open Display Case	5.4%	0.28	0.02	20.8
Refrigeration	Icemaker	5.1%	0.16	0.01	11.0
Refrigeration	Vending Machine	5.1%	0.07	0.00	5.1
Food Preparation	Oven	3.6%	0.19	0.01	9.4
Food Preparation	Fryer	3.6%	0.27	0.01	13.6
Food Preparation	Dishwasher	3.6%	0.37	0.01	18.7
Food Preparation	Hot Food Container	3.6%	0.05	0.00	2.6
Food Preparation	Steamer	3.6%	0.27	0.01	13.7
Office Equipment	Desktop Computer	100.0%	0.10	0.10	141.8
Office Equipment	Laptop	100.0%	0.02	0.02	21.9
Office Equipment	Monitor	100.0%	0.02	0.02	25.0
Office Equipment	Server	100.0%	0.12	0.12	166.8
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	15.5
Office Equipment	POS Terminal	100.0%	0.03	0.03	44.5
Miscellaneous	Non-HVAC Motors	22.0%	0.13	0.03	40.8
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.00	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.58	0.58	793.7
Total				13.07	18,035.6

Table A-45   *California Small Retail New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	2.50	0.00
Cooling	Water-Cooled Chiller	0.0%	2.22	0.00
Cooling	RTU	67.0%	2.67	1.79
Cooling	PTAC	2.4%	2.52	0.06
Cooling	PTHP	0.8%	2.44	0.02
Cooling	Evaporative Central AC	0.0%	1.25	0.00
Cooling	Air-Source Heat Pump	14.3%	2.83	0.41
Cooling	Geothermal Heat Pump	7.7%	1.62	0.12
Heating	Electric Furnace	0.5%	5.21	0.03
Heating	Electric Room Heat	9.6%	4.96	0.48
Heating	PTHP	0.8%	3.89	0.03
Heating	Air-Source Heat Pump	14.3%	2.76	0.39
Heating	Geothermal Heat Pump	7.7%	4.05	0.31
Ventilation	Ventilation	100.0%	1.07	1.07
Water Heating	Water Heater	61.8%	0.88	0.54
Interior Lighting	General Service Lighting	100.0%	0.31	0.31
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31
Interior Lighting	Linear Lighting	100.0%	1.27	1.27
Interior Lighting	High-Bay Lighting	100.0%	1.19	1.19
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.19	0.00
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00
Refrigeration	Glass Door Display	5.4%	0.04	0.00
Refrigeration	Open Display Case	5.4%	0.25	0.01
Refrigeration	Icemaker	5.1%	0.14	0.01
Refrigeration	Vending Machine	5.1%	0.07	0.00
Food Preparation	Oven	3.6%	0.17	0.01
Food Preparation	Fryer	3.6%	0.24	0.01
Food Preparation	Dishwasher	3.6%	0.33	0.01
Food Preparation	Hot Food Container	3.6%	0.05	0.00
Food Preparation	Steamer	3.6%	0.25	0.01
Office Equipment	Desktop Computer	100.0%	0.10	0.10
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.03	0.03
Miscellaneous	Non-HVAC Motors	22.0%	0.12	0.03
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.00	0.00
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.58	0.58
Total				10.32

Table A-46   California Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.53	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	3.45	0.00	0.0
Cooling	RTU	72.9%	4.00	2.92	1,067.7
Cooling	PTAC	2.7%	4.26	0.11	41.6
Cooling	PTHP	1.9%	4.00	0.08	28.2
Cooling	Evaporative Central AC	3.3%	1.60	0.05	19.3
Cooling	Air-Source Heat Pump	8.2%	4.00	0.33	120.4
Cooling	Geothermal Heat Pump	0.0%	2.44	0.00	0.0
Heating	Electric Furnace	19.1%	4.85	0.92	338.5
Heating	Electric Room Heat	1.7%	4.62	0.08	29.2
Heating	PTHP	1.9%	2.93	0.06	20.6
Heating	Air-Source Heat Pump	8.2%	3.26	0.27	98.0
Heating	Geothermal Heat Pump	0.0%	2.47	0.00	0.0
Ventilation	Ventilation	100.0%	1.98	1.98	725.3
Water Heating	Water Heater	57.9%	7.75	4.49	1,642.8
Interior Lighting	General Service Lighting	100.0%	1.34	1.34	490.8
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94	344.0
Interior Lighting	Linear Lighting	100.0%	1.87	1.87	683.8
Interior Lighting	High-Bay Lighting	100.0%	2.92	2.92	1,068.9
Exterior Lighting	General Service Lighting	100.0%	0.28	0.28	101.1
Exterior Lighting	Linear Lighting	100.0%	0.40	0.40	147.8
Exterior Lighting	Area Lighting	100.0%	2.14	2.14	784.0
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.59	4.88	1,785.7
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.96	0.21	75.8
Refrigeration	Glass Door Display	5.2%	1.52	0.08	28.9
Refrigeration	Open Display Case	5.2%	9.00	0.47	171.3
Refrigeration	Icemaker	97.3%	2.49	2.42	885.9
Refrigeration	Vending Machine	97.3%	1.17	1.14	416.0
Food Preparation	Oven	21.0%	3.95	0.83	303.5
Food Preparation	Fryer	82.0%	5.71	4.68	1,714.0
Food Preparation	Dishwasher	52.5%	3.93	2.06	755.3
Food Preparation	Hot Food Container	84.0%	0.54	0.45	165.4
Food Preparation	Steamer	16.0%	2.88	0.46	168.8
Office Equipment	Desktop Computer	100.0%	0.29	0.29	107.0
Office Equipment	Laptop	100.0%	0.04	0.04	13.2
Office Equipment	Monitor	100.0%	0.05	0.05	18.9
Office Equipment	Server	50.0%	0.34	0.17	62.9
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	23.4
Office Equipment	POS Terminal	100.0%	0.09	0.09	33.6
Miscellaneous	Non-HVAC Motors	20.0%	0.54	0.11	39.3
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	2.15	2.15	786.6
Total				41.80	15,307.5

Table A-47   California Restaurant New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	3.34	0.00
Cooling	Water-Cooled Chiller	0.0%	3.15	0.00
Cooling	RTU	72.9%	2.91	2.12
Cooling	PTAC	2.7%	2.92	0.08
Cooling	PTHP	1.9%	2.74	0.05
Cooling	Evaporative Central AC	3.3%	1.38	0.05
Cooling	Air-Source Heat Pump	8.2%	3.09	0.25
Cooling	Geothermal Heat Pump	0.0%	1.79	0.00
Heating	Electric Furnace	19.1%	4.88	0.93
Heating	Electric Room Heat	1.7%	4.64	0.08
Heating	PTHP	1.9%	2.56	0.05
Heating	Air-Source Heat Pump	8.2%	2.62	0.22
Heating	Geothermal Heat Pump	0.0%	2.33	0.00
Ventilation	Ventilation	100.0%	1.80	1.80
Water Heating	Water Heater	57.9%	7.29	4.22
Interior Lighting	General Service Lighting	100.0%	1.27	1.27
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94
Interior Lighting	Linear Lighting	100.0%	1.22	1.22
Interior Lighting	High-Bay Lighting	100.0%	2.63	2.63
Exterior Lighting	General Service Lighting	100.0%	0.25	0.25
Exterior Lighting	Linear Lighting	100.0%	0.26	0.26
Exterior Lighting	Area Lighting	100.0%	1.93	1.93
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	5.93	4.39
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.66	0.19
Refrigeration	Glass Door Display	5.2%	1.37	0.07
Refrigeration	Open Display Case	5.2%	8.10	0.42
Refrigeration	Icemaker	97.3%	2.24	2.18
Refrigeration	Vending Machine	97.3%	1.05	1.02
Food Preparation	Oven	21.0%	3.55	0.75
Food Preparation	Fryer	82.0%	5.14	4.21
Food Preparation	Dishwasher	52.5%	3.54	1.86
Food Preparation	Hot Food Container	84.0%	0.48	0.41
Food Preparation	Steamer	16.0%	2.59	0.41
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	50.0%	0.33	0.16
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.09	0.09
Miscellaneous	Non-HVAC Motors	20.0%	0.48	0.10
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	2.15	2.15
Total				37.17

Table A-48   California Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.5%	3.95	0.02	8.6
Cooling	Water-Cooled Chiller	0.3%	4.15	0.01	5.5
Cooling	RTU	71.3%	4.55	3.24	1,362.5
Cooling	PTAC	2.1%	4.84	0.10	43.3
Cooling	PTHP	0.6%	4.16	0.03	11.0
Cooling	Evaporative Central AC	1.2%	1.82	0.02	9.0
Cooling	Air-Source Heat Pump	7.2%	4.16	0.30	126.3
Cooling	Geothermal Heat Pump	0.0%	1.50	0.00	0.0
Heating	Electric Furnace	6.4%	7.61	0.49	203.8
Heating	Electric Room Heat	1.2%	7.25	0.09	35.7
Heating	PTHP	0.6%	3.24	0.02	8.6
Heating	Air-Source Heat Pump	7.2%	3.60	0.26	109.4
Heating	Geothermal Heat Pump	0.0%	2.53	0.00	0.0
Ventilation	Ventilation	100.0%	2.18	2.18	915.8
Water Heating	Water Heater	62.5%	2.29	1.43	601.1
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	160.3
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30	124.0
Interior Lighting	Linear Lighting	100.0%	5.01	5.01	2,104.7
Interior Lighting	High-Bay Lighting	100.0%	2.02	2.02	848.6
Exterior Lighting	General Service Lighting	100.0%	0.36	0.36	152.1
Exterior Lighting	Linear Lighting	100.0%	0.38	0.38	160.3
Exterior Lighting	Area Lighting	100.0%	1.78	1.78	749.1
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	5.38	0.86	361.3
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.34	0.29	120.3
Refrigeration	Glass Door Display	94.9%	3.54	3.36	1,410.4
Refrigeration	Open Display Case	94.9%	20.97	19.90	8,360.1
Refrigeration	Icemaker	98.9%	0.29	0.29	120.4
Refrigeration	Vending Machine	98.9%	0.27	0.27	113.1
Food Preparation	Oven	11.0%	0.64	0.07	29.4
Food Preparation	Fryer	87.0%	0.92	0.80	336.5
Food Preparation	Dishwasher	54.9%	1.27	0.70	292.1
Food Preparation	Hot Food Container	73.0%	0.17	0.13	53.2
Food Preparation	Steamer	20.0%	0.93	0.19	78.1
Office Equipment	Desktop Computer	100.0%	0.16	0.16	67.2
Office Equipment	Laptop	64.0%	0.02	0.02	6.6
Office Equipment	Monitor	100.0%	0.03	0.03	11.9
Office Equipment	Server	100.0%	0.09	0.09	39.5
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	7.4
Office Equipment	POS Terminal	100.0%	0.06	0.06	26.4
Miscellaneous	Non-HVAC Motors	34.6%	0.20	0.07	29.0
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.63	0.63	265.8
Total				46.35	19,468.4

Table A-49   *California Grocery New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.5%	3.29	0.02
Cooling	Water-Cooled Chiller	0.3%	3.38	0.01
Cooling	RTU	71.3%	3.82	2.73
Cooling	PTAC	2.1%	3.32	0.07
Cooling	PTHP	0.6%	2.85	0.02
Cooling	Evaporative Central AC	1.2%	1.57	0.02
Cooling	Air-Source Heat Pump	7.2%	3.27	0.24
Cooling	Geothermal Heat Pump	0.0%	1.10	0.00
Heating	Electric Furnace	6.4%	5.38	0.34
Heating	Electric Room Heat	1.2%	5.12	0.06
Heating	PTHP	0.6%	2.83	0.02
Heating	Air-Source Heat Pump	7.2%	4.58	0.33
Heating	Geothermal Heat Pump	0.0%	2.39	0.00
Ventilation	Ventilation	100.0%	3.22	3.22
Water Heating	Water Heater	62.5%	2.15	1.35
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30
Interior Lighting	Linear Lighting	100.0%	3.27	3.27
Interior Lighting	High-Bay Lighting	100.0%	1.82	1.82
Exterior Lighting	General Service Lighting	100.0%	0.33	0.33
Exterior Lighting	Linear Lighting	100.0%	0.25	0.25
Exterior Lighting	Area Lighting	100.0%	1.61	1.61
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	4.84	0.77
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.31	0.26
Refrigeration	Glass Door Display	94.9%	3.18	3.02
Refrigeration	Open Display Case	94.9%	18.87	17.91
Refrigeration	Icemaker	98.9%	0.26	0.26
Refrigeration	Vending Machine	98.9%	0.24	0.24
Food Preparation	Oven	11.0%	0.57	0.06
Food Preparation	Fryer	87.0%	0.83	0.72
Food Preparation	Dishwasher	54.9%	1.14	0.63
Food Preparation	Hot Food Container	73.0%	0.16	0.11
Food Preparation	Steamer	20.0%	0.84	0.17
Office Equipment	Desktop Computer	100.0%	0.15	0.15
Office Equipment	Laptop	64.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.09	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	34.6%	0.18	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.63	0.63
Total				41.56

Table A-50   California Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	16.7%	5.79	0.97	445.3
Cooling	Water-Cooled Chiller	66.7%	6.99	4.67	2,151.9
Cooling	RTU	11.0%	6.05	0.66	306.1
Cooling	PTAC	0.4%	6.45	0.02	11.4
Cooling	PTHP	0.0%	6.04	0.00	0.0
Cooling	Evaporative Central AC	0.0%	2.42	0.00	0.0
Cooling	Air-Source Heat Pump	0.6%	6.04	0.03	16.1
Cooling	Geothermal Heat Pump	0.9%	3.67	0.03	14.7
Heating	Electric Furnace	3.0%	17.45	0.52	237.6
Heating	Electric Room Heat	0.1%	16.62	0.01	4.7
Heating	PTHP	0.0%	9.34	0.00	0.0
Heating	Air-Source Heat Pump	0.6%	10.38	0.06	27.6
Heating	Geothermal Heat Pump	0.9%	7.68	0.07	30.7
Ventilation	Ventilation	100.0%	4.56	4.56	2,104.1
Water Heating	Water Heater	12.6%	4.56	0.57	264.7
Interior Lighting	General Service Lighting	100.0%	0.55	0.55	253.1
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	105.2
Interior Lighting	Linear Lighting	100.0%	4.04	4.04	1,861.7
Interior Lighting	High-Bay Lighting	100.0%	2.59	2.59	1,196.0
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	20.3
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	37.8
Exterior Lighting	Area Lighting	100.0%	0.66	0.66	306.3
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.27	0.09	41.8
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.06	0.03	14.2
Refrigeration	Glass Door Display	90.4%	0.06	0.06	26.4
Refrigeration	Open Display Case	90.4%	0.38	0.34	156.4
Refrigeration	Icemaker	90.4%	0.21	0.19	86.4
Refrigeration	Vending Machine	90.4%	0.10	0.09	40.6
Food Preparation	Oven	69.7%	0.64	0.45	205.9
Food Preparation	Fryer	80.7%	0.93	0.75	344.8
Food Preparation	Dishwasher	53.5%	1.28	0.68	314.4
Food Preparation	Hot Food Container	53.5%	0.17	0.09	43.0
Food Preparation	Steamer	53.5%	0.93	0.50	230.5
Office Equipment	Desktop Computer	100.0%	0.56	0.56	257.0
Office Equipment	Laptop	100.0%	0.03	0.03	15.9
Office Equipment	Monitor	100.0%	0.10	0.10	45.4
Office Equipment	Server	100.0%	0.07	0.07	30.2
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	28.1
Office Equipment	POS Terminal	100.0%	0.04	0.04	20.2
Miscellaneous	Non-HVAC Motors	74.1%	0.63	0.47	214.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	63.0%	0.04	0.02	10.9
Miscellaneous	Clothes Dryer	58.0%	0.12	0.07	32.6
Miscellaneous	Miscellaneous	100.0%	4.89	4.89	2,254.9
Total				29.95	13,809.5

Table A-51   California Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.7%	3.53	0.59
Cooling	Water-Cooled Chiller	66.7%	4.14	2.76
Cooling	RTU	11.0%	5.11	0.56
Cooling	PTAC	0.4%	4.97	0.02
Cooling	PTHP	0.0%	4.65	0.00
Cooling	Evaporative Central AC	0.0%	2.08	0.00
Cooling	Air-Source Heat Pump	0.6%	5.34	0.03
Cooling	Geothermal Heat Pump	0.9%	2.70	0.02
Heating	Electric Furnace	3.0%	14.52	0.43
Heating	Electric Room Heat	0.1%	13.82	0.01
Heating	PTHP	0.0%	8.96	0.00
Heating	Air-Source Heat Pump	0.6%	4.66	0.03
Heating	Geothermal Heat Pump	0.9%	7.24	0.06
Ventilation	Ventilation	100.0%	3.29	3.29
Water Heating	Water Heater	12.6%	4.28	0.54
Interior Lighting	General Service Lighting	100.0%	0.52	0.52
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	2.63	2.63
Interior Lighting	High-Bay Lighting	100.0%	2.34	2.34
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.60	0.60
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.25	0.08
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.06	0.03
Refrigeration	Glass Door Display	90.4%	0.06	0.05
Refrigeration	Open Display Case	90.4%	0.34	0.31
Refrigeration	Icemaker	90.4%	0.19	0.17
Refrigeration	Vending Machine	90.4%	0.09	0.08
Food Preparation	Oven	69.7%	0.58	0.40
Food Preparation	Fryer	80.7%	0.83	0.67
Food Preparation	Dishwasher	53.5%	1.15	0.61
Food Preparation	Hot Food Container	53.5%	0.16	0.08
Food Preparation	Steamer	53.5%	0.84	0.45
Office Equipment	Desktop Computer	100.0%	0.53	0.53
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.09	0.09
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.04	0.04
Miscellaneous	Non-HVAC Motors	74.1%	0.57	0.42
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	63.0%	0.03	0.02
Miscellaneous	Clothes Dryer	58.0%	0.11	0.06
Miscellaneous	Miscellaneous	100.0%	4.89	4.89
Total				23.90

Table A-52   California College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	28.5%	3.92	1.12	361.3
Cooling	Water-Cooled Chiller	0.0%	4.78	0.00	0.0
Cooling	RTU	46.8%	2.65	1.24	400.9
Cooling	PTAC	3.0%	2.82	0.09	27.7
Cooling	PTHP	2.1%	2.65	0.06	18.2
Cooling	Evaporative Central AC	0.0%	1.06	0.00	0.0
Cooling	Air-Source Heat Pump	7.9%	2.65	0.21	67.8
Cooling	Geothermal Heat Pump	5.7%	1.61	0.09	29.9
Heating	Electric Furnace	0.0%	12.24	0.00	0.0
Heating	Electric Room Heat	8.1%	11.66	0.94	304.7
Heating	PTHP	2.1%	6.83	0.15	47.0
Heating	Air-Source Heat Pump	7.9%	7.59	0.60	194.5
Heating	Geothermal Heat Pump	5.7%	6.01	0.34	111.5
Ventilation	Ventilation	100.0%	1.52	1.52	493.5
Water Heating	Water Heater	55.3%	2.08	1.15	372.5
Interior Lighting	General Service Lighting	100.0%	0.09	0.09	30.6
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	13.1
Interior Lighting	Linear Lighting	100.0%	2.19	2.19	707.9
Interior Lighting	High-Bay Lighting	100.0%	1.42	1.42	460.6
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	6.5
Exterior Lighting	Linear Lighting	100.0%	0.75	0.75	242.5
Exterior Lighting	Area Lighting	100.0%	0.29	0.29	93.0
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.16	0.01	4.0
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01	3.2
Refrigeration	Glass Door Display	26.6%	0.04	0.01	3.2
Refrigeration	Open Display Case	26.6%	0.22	0.06	19.1
Refrigeration	Icemaker	26.6%	0.12	0.03	10.6
Refrigeration	Vending Machine	26.6%	0.06	0.02	5.0
Food Preparation	Oven	21.0%	0.24	0.05	16.1
Food Preparation	Fryer	21.0%	0.34	0.07	23.3
Food Preparation	Dishwasher	21.0%	0.47	0.10	32.1
Food Preparation	Hot Food Container	21.0%	0.06	0.01	4.4
Food Preparation	Steamer	21.0%	0.35	0.07	23.5
Office Equipment	Desktop Computer	100.0%	0.47	0.47	153.7
Office Equipment	Laptop	100.0%	0.02	0.02	7.1
Office Equipment	Monitor	100.0%	0.08	0.08	27.1
Office Equipment	Server	100.0%	0.06	0.06	18.1
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	21.0
Office Equipment	POS Terminal	100.0%	0.02	0.02	6.0
Miscellaneous	Non-HVAC Motors	88.8%	0.08	0.07	22.8
Miscellaneous	Pool Pump	90.3%	0.01	0.01	3.5
Miscellaneous	Pool Heater	36.2%	0.02	0.01	1.8
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	0.2
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	0.4
Miscellaneous	Miscellaneous	100.0%	0.35	0.35	112.8
Total				13.91	4,502.8

Table A-53   *California College New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	28.5%	2.18	0.62
Cooling	Water-Cooled Chiller	0.0%	2.44	0.00
Cooling	RTU	46.8%	1.86	0.87
Cooling	PTAC	3.0%	2.17	0.07
Cooling	PTHP	2.1%	2.04	0.04
Cooling	Evaporative Central AC	0.0%	0.92	0.00
Cooling	Air-Source Heat Pump	7.9%	1.93	0.15
Cooling	Geothermal Heat Pump	5.7%	1.19	0.07
Heating	Electric Furnace	0.0%	11.63	0.00
Heating	Electric Room Heat	8.1%	11.08	0.89
Heating	PTHP	2.1%	6.55	0.14
Heating	Air-Source Heat Pump	7.9%	5.77	0.46
Heating	Geothermal Heat Pump	5.7%	5.67	0.32
Ventilation	Ventilation	100.0%	1.49	1.49
Water Heating	Water Heater	55.3%	1.96	1.08
Interior Lighting	General Service Lighting	100.0%	0.09	0.09
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	1.38	1.38
Interior Lighting	High-Bay Lighting	100.0%	1.28	1.28
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.47	0.47
Exterior Lighting	Area Lighting	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.15	0.01
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01
Refrigeration	Glass Door Display	26.6%	0.03	0.01
Refrigeration	Open Display Case	26.6%	0.20	0.05
Refrigeration	Icemaker	26.6%	0.11	0.03
Refrigeration	Vending Machine	26.6%	0.05	0.01
Food Preparation	Oven	21.0%	0.21	0.04
Food Preparation	Fryer	21.0%	0.31	0.06
Food Preparation	Dishwasher	21.0%	0.42	0.09
Food Preparation	Hot Food Container	21.0%	0.06	0.01
Food Preparation	Steamer	21.0%	0.31	0.07
Office Equipment	Desktop Computer	100.0%	0.45	0.45
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.08	0.08
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	88.8%	0.07	0.06
Miscellaneous	Pool Pump	90.3%	0.01	0.01
Miscellaneous	Pool Heater	36.2%	0.01	0.01
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.35	0.35
Total				11.26

Table A-54   California School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	22.1%	1.81	0.40	649.6
Cooling	Water-Cooled Chiller	0.0%	2.21	0.00	0.0
Cooling	RTU	36.2%	1.23	0.44	721.0
Cooling	PTAC	2.4%	1.31	0.03	49.9
Cooling	PTHP	1.6%	1.22	0.02	32.7
Cooling	Evaporative Central AC	0.0%	0.49	0.00	0.0
Cooling	Air-Source Heat Pump	6.1%	1.22	0.08	121.9
Cooling	Geothermal Heat Pump	4.4%	0.75	0.03	53.7
Heating	Electric Furnace	0.0%	6.67	0.00	0.0
Heating	Electric Room Heat	4.4%	6.35	0.28	457.8
Heating	PTHP	1.6%	3.72	0.06	99.5
Heating	Air-Source Heat Pump	6.1%	4.14	0.25	412.0
Heating	Geothermal Heat Pump	4.4%	3.27	0.15	236.1
Ventilation	Ventilation	100.0%	0.71	0.71	1,154.7
Water Heating	Water Heater	50.0%	0.99	0.50	803.9
Interior Lighting	General Service Lighting	100.0%	0.16	0.16	264.1
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18	295.1
Interior Lighting	Linear Lighting	100.0%	1.51	1.51	2,456.7
Interior Lighting	High-Bay Lighting	100.0%	0.81	0.81	1,315.7
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00	6.5
Exterior Lighting	Linear Lighting	100.0%	0.66	0.66	1,067.1
Exterior Lighting	Area Lighting	100.0%	0.12	0.12	195.0
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.17	0.03	51.6
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.08	0.02	40.3
Refrigeration	Glass Door Display	65.7%	0.04	0.03	41.1
Refrigeration	Open Display Case	65.7%	0.23	0.15	243.8
Refrigeration	Icemaker	65.7%	0.13	0.08	134.7
Refrigeration	Vending Machine	65.7%	0.06	0.04	63.3
Food Preparation	Oven	64.8%	0.11	0.07	116.9
Food Preparation	Fryer	58.6%	0.16	0.09	152.9
Food Preparation	Dishwasher	52.3%	0.22	0.12	187.9
Food Preparation	Hot Food Container	52.3%	0.03	0.02	25.7
Food Preparation	Steamer	52.3%	0.16	0.08	137.8
Office Equipment	Desktop Computer	100.0%	0.29	0.29	471.1
Office Equipment	Laptop	100.0%	0.02	0.02	29.1
Office Equipment	Monitor	100.0%	0.05	0.05	83.1
Office Equipment	Server	100.0%	0.07	0.07	110.9
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03	51.6
Office Equipment	POS Terminal	36.0%	0.01	0.00	5.3
Miscellaneous	Non-HVAC Motors	43.7%	0.07	0.03	50.7
Miscellaneous	Pool Pump	6.0%	0.02	0.00	2.1
Miscellaneous	Pool Heater	1.0%	0.01	0.00	0.2
Miscellaneous	Clothes Washer	15.0%	0.01	0.00	1.7
Miscellaneous	Clothes Dryer	11.0%	0.02	0.00	4.0
Miscellaneous	Miscellaneous	100.0%	0.33	0.33	531.0
Total				7.96	12,930.0

Table A-55   California School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.1%	1.01	0.22
Cooling	Water-Cooled Chiller	0.0%	1.13	0.00
Cooling	RTU	36.2%	0.86	0.31
Cooling	PTAC	2.4%	1.01	0.02
Cooling	PTHP	1.6%	0.94	0.02
Cooling	Evaporative Central AC	0.0%	0.42	0.00
Cooling	Air-Source Heat Pump	6.1%	0.89	0.05
Cooling	Geothermal Heat Pump	4.4%	0.55	0.02
Heating	Electric Furnace	0.0%	6.34	0.00
Heating	Electric Room Heat	4.4%	6.03	0.27
Heating	PTHP	1.6%	3.57	0.06
Heating	Air-Source Heat Pump	6.1%	3.14	0.19
Heating	Geothermal Heat Pump	4.4%	3.09	0.14
Ventilation	Ventilation	100.0%	0.70	0.70
Water Heating	Water Heater	50.0%	0.93	0.47
Interior Lighting	General Service Lighting	100.0%	0.15	0.15
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18
Interior Lighting	Linear Lighting	100.0%	0.93	0.93
Interior Lighting	High-Bay Lighting	100.0%	0.73	0.73
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00
Exterior Lighting	Linear Lighting	100.0%	0.41	0.41
Exterior Lighting	Area Lighting	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.15	0.03
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.07	0.02
Refrigeration	Glass Door Display	65.7%	0.03	0.02
Refrigeration	Open Display Case	65.7%	0.21	0.14
Refrigeration	Icemaker	65.7%	0.11	0.07
Refrigeration	Vending Machine	65.7%	0.05	0.04
Food Preparation	Oven	64.8%	0.10	0.06
Food Preparation	Fryer	58.6%	0.14	0.08
Food Preparation	Dishwasher	52.3%	0.20	0.10
Food Preparation	Hot Food Container	52.3%	0.03	0.01
Food Preparation	Steamer	52.3%	0.15	0.08
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	43.7%	0.06	0.03
Miscellaneous	Pool Pump	6.0%	0.02	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.01	0.00
Miscellaneous	Clothes Dryer	11.0%	0.02	0.00
Miscellaneous	Miscellaneous	100.0%	0.33	0.33
Total				6.45

Table A-56   California Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.0%	0.51	0.01	20.2
Cooling	Water-Cooled Chiller	7.3%	0.62	0.05	89.4
Cooling	RTU	15.8%	1.61	0.25	501.9
Cooling	PTAC	38.8%	1.71	0.66	1,314.3
Cooling	PTHP	13.0%	1.61	0.21	415.4
Cooling	Evaporative Central AC	0.5%	0.64	0.00	6.0
Cooling	Air-Source Heat Pump	5.1%	1.61	0.08	162.2
Cooling	Geothermal Heat Pump	5.5%	1.52	0.08	164.1
Heating	Electric Furnace	1.4%	2.99	0.04	85.3
Heating	Electric Room Heat	51.1%	2.85	1.45	2,883.9
Heating	PTHP	13.0%	2.53	0.33	653.4
Heating	Air-Source Heat Pump	5.1%	2.81	0.14	283.5
Heating	Geothermal Heat Pump	5.5%	1.81	0.10	195.4
Ventilation	Ventilation	100.0%	0.94	0.94	1,873.1
Water Heating	Water Heater	50.0%	3.20	1.60	3,175.4
Interior Lighting	General Service Lighting	100.0%	0.81	0.81	1,602.9
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43	848.8
Interior Lighting	Linear Lighting	100.0%	0.46	0.46	903.6
Interior Lighting	High-Bay Lighting	100.0%	1.29	1.29	2,549.9
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	75.5
Exterior Lighting	Linear Lighting	100.0%	0.03	0.03	50.7
Exterior Lighting	Area Lighting	100.0%	1.73	1.73	3,429.8
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.39	0.01	23.4
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.09	0.02	33.3
Refrigeration	Glass Door Display	58.9%	0.09	0.05	105.9
Refrigeration	Open Display Case	58.9%	0.54	0.32	627.6
Refrigeration	Icemaker	58.9%	0.15	0.09	173.4
Refrigeration	Vending Machine	58.9%	0.14	0.08	162.9
Food Preparation	Oven	13.8%	0.26	0.04	70.5
Food Preparation	Fryer	21.0%	0.37	0.08	155.1
Food Preparation	Dishwasher	30.0%	0.51	0.15	305.2
Food Preparation	Hot Food Container	30.0%	0.07	0.02	41.8
Food Preparation	Steamer	30.0%	0.38	0.11	223.8
Office Equipment	Desktop Computer	100.0%	0.08	0.08	165.4
Office Equipment	Laptop	100.0%	0.01	0.01	25.5
Office Equipment	Monitor	100.0%	0.01	0.01	29.2
Office Equipment	Server	100.0%	0.05	0.05	97.3
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	18.1
Office Equipment	POS Terminal	58.0%	0.01	0.01	15.1
Miscellaneous	Non-HVAC Motors	91.3%	0.14	0.12	246.8
Miscellaneous	Pool Pump	76.0%	0.01	0.01	20.7
Miscellaneous	Pool Heater	27.0%	0.02	0.00	9.6
Miscellaneous	Clothes Washer	67.0%	0.02	0.01	28.8
Miscellaneous	Clothes Dryer	26.0%	0.07	0.02	36.3
Miscellaneous	Miscellaneous	100.0%	0.63	0.63	1,251.9
Total				12.69	25,152.4

Table A-57   California Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	2.0%	0.43	0.01
Cooling	Water-Cooled Chiller	7.3%	0.53	0.04
Cooling	RTU	15.8%	1.56	0.25
Cooling	PTAC	38.8%	1.32	0.51
Cooling	PTHP	13.0%	1.24	0.16
Cooling	Evaporative Central AC	0.5%	0.55	0.00
Cooling	Air-Source Heat Pump	5.1%	1.60	0.08
Cooling	Geothermal Heat Pump	5.5%	1.11	0.06
Heating	Electric Furnace	1.4%	2.77	0.04
Heating	Electric Room Heat	51.1%	2.64	1.35
Heating	PTHP	13.0%	2.42	0.32
Heating	Air-Source Heat Pump	5.1%	2.26	0.12
Heating	Geothermal Heat Pump	5.5%	1.70	0.09
Ventilation	Ventilation	100.0%	0.85	0.85
Water Heating	Water Heater	50.0%	3.01	1.51
Interior Lighting	General Service Lighting	100.0%	0.77	0.77
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43
Interior Lighting	Linear Lighting	100.0%	0.28	0.28
Interior Lighting	High-Bay Lighting	100.0%	1.16	1.16
Exterior Lighting	General Service Lighting	100.0%	0.03	0.03
Exterior Lighting	Linear Lighting	100.0%	0.02	0.02
Exterior Lighting	Area Lighting	100.0%	1.56	1.56
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.35	0.01
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.08	0.02
Refrigeration	Glass Door Display	58.9%	0.08	0.05
Refrigeration	Open Display Case	58.9%	0.48	0.28
Refrigeration	Icemaker	58.9%	0.13	0.08
Refrigeration	Vending Machine	58.9%	0.13	0.07
Food Preparation	Oven	13.8%	0.23	0.03
Food Preparation	Fryer	21.0%	0.34	0.07
Food Preparation	Dishwasher	30.0%	0.46	0.14
Food Preparation	Hot Food Container	30.0%	0.06	0.02
Food Preparation	Steamer	30.0%	0.34	0.10
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	58.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	91.3%	0.12	0.11
Miscellaneous	Pool Pump	76.0%	0.01	0.01
Miscellaneous	Pool Heater	27.0%	0.02	0.00
Miscellaneous	Clothes Washer	67.0%	0.02	0.01
Miscellaneous	Clothes Dryer	26.0%	0.06	0.02
Miscellaneous	Miscellaneous	100.0%	0.63	0.63
Total				11.46

Table A-58   California Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	1.61	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	1.52	0.00	0.0
Cooling	RTU	16.0%	1.79	0.29	658.3
Cooling	PTAC	1.1%	1.90	0.02	46.0
Cooling	PTHP	0.3%	1.79	0.01	12.2
Cooling	Evaporative Central AC	0.0%	0.72	0.00	0.0
Cooling	Air-Source Heat Pump	1.7%	1.79	0.03	69.5
Cooling	Geothermal Heat Pump	0.0%	1.09	0.00	0.0
Heating	Electric Furnace	2.3%	7.82	0.18	412.3
Heating	Electric Room Heat	12.4%	7.45	0.92	2,124.0
Heating	PTHP	0.3%	6.31	0.02	42.9
Heating	Air-Source Heat Pump	1.7%	7.01	0.12	272.7
Heating	Geothermal Heat Pump	0.0%	6.13	0.00	0.0
Ventilation	Ventilation	100.0%	0.26	0.26	596.0
Water Heating	Water Heater	55.3%	0.26	0.15	334.6
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	166.5
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	82.3
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	647.2
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	3,893.7
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	45.8
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	177.8
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	868.1
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.49	0.01	12.5
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.11	0.00	5.1
Refrigeration	Glass Door Display	10.1%	0.11	0.01	26.4
Refrigeration	Open Display Case	10.1%	0.67	0.07	156.6
Refrigeration	Icemaker	10.1%	0.19	0.02	43.3
Refrigeration	Vending Machine	10.1%	0.09	0.01	20.3
Food Preparation	Oven	2.3%	0.03	0.00	1.8
Food Preparation	Fryer	2.3%	0.05	0.00	2.6
Food Preparation	Dishwasher	2.3%	0.07	0.00	3.6
Food Preparation	Hot Food Container	2.3%	0.01	0.00	0.5
Food Preparation	Steamer	2.3%	0.05	0.00	2.7
Office Equipment	Desktop Computer	100.0%	0.09	0.09	203.3
Office Equipment	Laptop	100.0%	0.01	0.01	25.1
Office Equipment	Monitor	100.0%	0.02	0.02	35.9
Office Equipment	Server	89.0%	0.10	0.09	212.9
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	22.3
Office Equipment	POS Terminal	77.0%	0.03	0.02	49.2
Miscellaneous	Non-HVAC Motors	49.9%	0.12	0.06	141.8
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.43	0.43	992.8
Total				5.40	12,408.9

Table A-59   *California Warehouse New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	1.00	0.00
Cooling	Water-Cooled Chiller	0.0%	0.97	0.00
Cooling	RTU	16.0%	1.11	0.18
Cooling	PTAC	1.1%	1.45	0.02
Cooling	PTHP	0.3%	1.36	0.00
Cooling	Evaporative Central AC	0.0%	0.62	0.00
Cooling	Air-Source Heat Pump	1.7%	1.05	0.02
Cooling	Geothermal Heat Pump	0.0%	0.80	0.00
Heating	Electric Furnace	2.3%	4.63	0.11
Heating	Electric Room Heat	12.4%	4.41	0.55
Heating	PTHP	0.3%	5.29	0.02
Heating	Air-Source Heat Pump	1.7%	2.93	0.05
Heating	Geothermal Heat Pump	0.0%	5.78	0.00
Ventilation	Ventilation	100.0%	0.19	0.19
Water Heating	Water Heater	55.3%	0.25	0.14
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.18	0.18
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.44	0.00
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.10	0.00
Refrigeration	Glass Door Display	10.1%	0.10	0.01
Refrigeration	Open Display Case	10.1%	0.61	0.06
Refrigeration	Icemaker	10.1%	0.17	0.02
Refrigeration	Vending Machine	10.1%	0.08	0.01
Food Preparation	Oven	2.3%	0.03	0.00
Food Preparation	Fryer	2.3%	0.05	0.00
Food Preparation	Dishwasher	2.3%	0.06	0.00
Food Preparation	Hot Food Container	2.3%	0.01	0.00
Food Preparation	Steamer	2.3%	0.05	0.00
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.10	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.03	0.02
Miscellaneous	Non-HVAC Motors	49.9%	0.11	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.43	0.43
Total				4.30

Table A-60   California Warehouse, Controlled Atmosphere Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	15.0%	1.26	0.19	27.0
Cooling	Water-Cooled Chiller	1.7%	1.19	0.02	2.8
Cooling	RTU	19.7%	1.40	0.28	39.3
Cooling	PTAC	1.2%	1.49	0.02	2.5
Cooling	PTHP	0.1%	1.40	0.00	0.2
Cooling	Evaporative Central AC	0.1%	0.56	0.00	0.1
Cooling	Air-Source Heat Pump	1.9%	1.40	0.03	3.7
Cooling	Geothermal Heat Pump	0.0%	0.85	0.00	0.0
Heating	Electric Furnace	1.8%	6.29	0.12	16.5
Heating	Electric Room Heat	10.0%	5.99	0.60	84.8
Heating	PTHP	0.1%	5.08	0.01	0.9
Heating	Air-Source Heat Pump	1.9%	5.64	0.11	14.9
Heating	Geothermal Heat Pump	0.0%	4.93	0.00	0.0
Ventilation	Ventilation	100.0%	0.73	0.73	103.9
Water Heating	Water Heater	67.5%	0.42	0.28	40.2
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	10.3
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	5.1
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	40.1
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	240.9
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	2.8
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	11.0
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	53.7
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	15.53	14.24	2,026.3
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.70	0.01	2.0
Refrigeration	Glass Door Display	10.1%	0.72	0.07	10.3
Refrigeration	Open Display Case	10.1%	4.24	0.43	60.9
Refrigeration	Icemaker	91.7%	1.17	1.07	152.9
Refrigeration	Vending Machine	91.7%	0.55	0.50	71.8
Food Preparation	Oven	40.8%	0.06	0.02	3.3
Food Preparation	Fryer	40.8%	0.08	0.03	4.8
Food Preparation	Dishwasher	40.8%	0.11	0.05	6.6
Food Preparation	Hot Food Container	40.8%	0.02	0.01	0.9
Food Preparation	Steamer	40.8%	0.08	0.03	4.8
Office Equipment	Desktop Computer	100.0%	0.06	0.06	9.2
Office Equipment	Laptop	100.0%	0.01	0.01	1.1
Office Equipment	Monitor	100.0%	0.01	0.01	1.6
Office Equipment	Server	89.0%	0.08	0.07	9.7
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	1.0
Office Equipment	POS Terminal	77.0%	0.02	0.02	2.2
Miscellaneous	Non-HVAC Motors	79.5%	0.09	0.07	10.2
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.32	0.32	45.3
Total				21.97	3,125.9

Table A-61   California Warehouse, Controlled Atmosphere New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	15.0%	0.78	0.12
Cooling	Water-Cooled Chiller	1.7%	0.76	0.01
Cooling	RTU	19.7%	0.87	0.17
Cooling	PTAC	1.2%	1.13	0.01
Cooling	PTHP	0.1%	1.06	0.00
Cooling	Evaporative Central AC	0.1%	0.48	0.00
Cooling	Air-Source Heat Pump	1.9%	0.82	0.02
Cooling	Geothermal Heat Pump	0.0%	0.63	0.00
Heating	Electric Furnace	1.8%	3.72	0.07
Heating	Electric Room Heat	10.0%	3.55	0.35
Heating	PTHP	0.1%	4.26	0.01
Heating	Air-Source Heat Pump	1.9%	2.36	0.04
Heating	Geothermal Heat Pump	0.0%	4.65	0.00
Ventilation	Ventilation	100.0%	0.53	0.53
Water Heating	Water Heater	67.5%	0.39	0.27
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.18	0.18
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	15.53	14.24
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.70	0.01
Refrigeration	Glass Door Display	10.1%	0.72	0.07
Refrigeration	Open Display Case	10.1%	4.24	0.43
Refrigeration	Icemaker	91.7%	1.17	1.07
Refrigeration	Vending Machine	91.7%	0.55	0.50
Food Preparation	Oven	40.8%	0.05	0.02
Food Preparation	Fryer	40.8%	0.07	0.03
Food Preparation	Dishwasher	40.8%	0.10	0.04
Food Preparation	Hot Food Container	40.8%	0.01	0.01
Food Preparation	Steamer	40.8%	0.07	0.03
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.07	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.02	0.01
Miscellaneous	Non-HVAC Motors	79.5%	0.08	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.32	0.32
Total				20.83

Table A-62   California Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	9.7%	1.63	0.16	573.6
Cooling	Water-Cooled Chiller	5.0%	1.72	0.09	312.3
Cooling	RTU	56.8%	1.88	1.07	3,884.2
Cooling	PTAC	5.1%	2.00	0.10	369.8
Cooling	PTHP	2.6%	1.88	0.05	177.2
Cooling	Evaporative Central AC	0.0%	0.75	0.00	0.2
Cooling	Air-Source Heat Pump	5.5%	1.88	0.10	375.1
Cooling	Geothermal Heat Pump	1.0%	1.15	0.01	43.7
Heating	Electric Furnace	12.5%	4.75	0.59	2,148.7
Heating	Electric Room Heat	14.8%	4.52	0.67	2,429.8
Heating	PTHP	2.6%	3.65	0.09	343.6
Heating	Air-Source Heat Pump	5.5%	4.05	0.22	808.1
Heating	Geothermal Heat Pump	1.0%	3.45	0.04	131.6
Ventilation	Ventilation	100.0%	0.73	0.73	2,657.1
Water Heating	Water Heater	53.0%	1.39	0.74	2,678.6
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	1,368.0
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	831.1
Interior Lighting	Linear Lighting	100.0%	1.46	1.46	5,321.0
Interior Lighting	High-Bay Lighting	100.0%	1.56	1.56	5,668.8
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09	337.5
Exterior Lighting	Linear Lighting	100.0%	0.06	0.06	214.5
Exterior Lighting	Area Lighting	100.0%	0.64	0.64	2,319.6
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.58	0.06	216.2
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.13	0.02	56.6
Refrigeration	Glass Door Display	3.4%	0.13	0.00	16.6
Refrigeration	Open Display Case	3.4%	0.79	0.03	98.4
Refrigeration	Icemaker	21.6%	0.22	0.05	170.3
Refrigeration	Vending Machine	21.6%	0.20	0.04	160.0
Food Preparation	Oven	58.9%	0.08	0.05	178.5
Food Preparation	Fryer	29.9%	0.12	0.04	131.0
Food Preparation	Dishwasher	15.4%	0.17	0.03	92.9
Food Preparation	Hot Food Container	15.4%	0.02	0.00	12.7
Food Preparation	Steamer	15.4%	0.12	0.02	68.1
Office Equipment	Desktop Computer	100.0%	0.20	0.20	717.9
Office Equipment	Laptop	100.0%	0.03	0.03	110.9
Office Equipment	Monitor	100.0%	0.03	0.03	126.7
Office Equipment	Server	66.0%	0.12	0.08	278.7
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	78.6
Office Equipment	POS Terminal	28.0%	0.03	0.01	31.6
Miscellaneous	Non-HVAC Motors	59.9%	0.15	0.09	316.9
Miscellaneous	Pool Pump	4.0%	0.01	0.00	1.6
Miscellaneous	Pool Heater	1.0%	0.01	0.00	0.5
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	0.8
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00	1.6
Miscellaneous	Miscellaneous	100.0%	0.57	0.57	2,053.7
Total				10.43	37,914.7

Table A-63   California Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	9.7%	1.30	0.13
Cooling	Water-Cooled Chiller	5.0%	1.15	0.06
Cooling	RTU	56.8%	1.39	0.79
Cooling	PTAC	5.1%	1.35	0.07
Cooling	PTHP	2.6%	1.27	0.03
Cooling	Evaporative Central AC	0.0%	0.65	0.00
Cooling	Air-Source Heat Pump	5.5%	1.47	0.08
Cooling	Geothermal Heat Pump	1.0%	0.84	0.01
Heating	Electric Furnace	12.5%	3.14	0.39
Heating	Electric Room Heat	14.8%	2.99	0.44
Heating	PTHP	2.6%	2.79	0.07
Heating	Air-Source Heat Pump	5.5%	1.97	0.11
Heating	Geothermal Heat Pump	1.0%	3.25	0.03
Ventilation	Ventilation	100.0%	0.63	0.63
Water Heating	Water Heater	53.0%	1.31	0.69
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	0.93	0.93
Interior Lighting	High-Bay Lighting	100.0%	1.41	1.41
Exterior Lighting	General Service Lighting	100.0%	0.08	0.08
Exterior Lighting	Linear Lighting	100.0%	0.04	0.04
Exterior Lighting	Area Lighting	100.0%	0.58	0.58
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.52	0.05
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.12	0.01
Refrigeration	Glass Door Display	3.4%	0.12	0.00
Refrigeration	Open Display Case	3.4%	0.71	0.02
Refrigeration	Icemaker	21.6%	0.20	0.04
Refrigeration	Vending Machine	21.6%	0.18	0.04
Food Preparation	Oven	58.9%	0.08	0.04
Food Preparation	Fryer	29.9%	0.11	0.03
Food Preparation	Dishwasher	15.4%	0.15	0.02
Food Preparation	Hot Food Container	15.4%	0.02	0.00
Food Preparation	Steamer	15.4%	0.11	0.02
Office Equipment	Desktop Computer	100.0%	0.19	0.19
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	66.0%	0.11	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	28.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	59.9%	0.13	0.08
Miscellaneous	Pool Pump	4.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.57	0.57
Total				8.45

Table A-64   Idaho Large Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.7%	5.57	0.76	883.3
Cooling	Water-Cooled Chiller	8.5%	5.70	0.48	557.4
Cooling	RTU	44.5%	5.80	2.58	2,983.9
Cooling	PTAC	2.4%	6.38	0.15	173.3
Cooling	PTHP	0.7%	6.38	0.05	55.0
Cooling	Evaporative Central AC	0.0%	2.32	0.00	1.3
Cooling	Air-Source Heat Pump	14.2%	5.80	0.83	954.0
Cooling	Geothermal Heat Pump	7.6%	3.54	0.27	311.7
Heating	Electric Furnace	1.2%	4.78	0.06	68.3
Heating	Electric Room Heat	23.8%	4.56	1.08	1,252.5
Heating	PTHP	0.7%	3.78	0.03	32.6
Heating	Air-Source Heat Pump	14.2%	4.20	0.60	689.9
Heating	Geothermal Heat Pump	7.6%	3.17	0.24	279.3
Ventilation	Ventilation	100.0%	2.96	2.96	3,419.2
Water Heating	Water Heater	45.2%	0.98	0.44	513.6
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	287.3
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10	119.0
Interior Lighting	Linear Lighting	100.0%	1.72	1.72	1,993.3
Interior Lighting	High-Bay Lighting	100.0%	1.01	1.01	1,167.1
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10	110.4
Exterior Lighting	Linear Lighting	100.0%	0.18	0.18	208.0
Exterior Lighting	Area Lighting	100.0%	1.28	1.28	1,476.7
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.14	0.00	3.2
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00	5.0
Refrigeration	Glass Door Display	77.4%	0.03	0.02	28.3
Refrigeration	Open Display Case	77.4%	0.19	0.15	167.9
Refrigeration	Icemaker	44.9%	0.05	0.02	26.9
Refrigeration	Vending Machine	44.9%	0.05	0.02	25.3
Food Preparation	Oven	66.0%	0.08	0.06	64.1
Food Preparation	Fryer	76.4%	0.12	0.09	107.2
Food Preparation	Dishwasher	43.1%	0.17	0.07	83.2
Food Preparation	Hot Food Container	43.1%	0.02	0.01	11.4
Food Preparation	Steamer	43.1%	0.12	0.05	61.0
Office Equipment	Desktop Computer	100.0%	2.35	2.35	2,712.7
Office Equipment	Laptop	100.0%	0.36	0.36	418.9
Office Equipment	Monitor	100.0%	0.41	0.41	478.7
Office Equipment	Server	100.0%	0.23	0.23	266.0
Office Equipment	Printer/Copier/Fax	100.0%	0.21	0.21	247.5
Office Equipment	POS Terminal	40.0%	0.03	0.01	14.2
Miscellaneous	Non-HVAC Motors	89.6%	0.32	0.28	329.0
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.29	1.29	1,487.7
Total				20.83	24,075.4

Table A-65   Idaho Large Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	13.7%	5.00	0.69
Cooling	Water-Cooled Chiller	8.5%	4.20	0.35
Cooling	RTU	44.5%	3.84	1.71
Cooling	PTAC	2.4%	4.91	0.12
Cooling	PTHP	0.7%	4.91	0.04
Cooling	Evaporative Central AC	0.0%	2.01	0.00
Cooling	Air-Source Heat Pump	14.2%	3.99	0.57
Cooling	Geothermal Heat Pump	7.6%	2.60	0.20
Heating	Electric Furnace	1.2%	5.48	0.07
Heating	Electric Room Heat	23.8%	5.22	1.24
Heating	PTHP	0.7%	3.62	0.03
Heating	Air-Source Heat Pump	14.2%	3.67	0.52
Heating	Geothermal Heat Pump	7.6%	2.99	0.23
Ventilation	Ventilation	100.0%	2.51	2.51
Water Heating	Water Heater	45.2%	0.92	0.42
Interior Lighting	General Service Lighting	100.0%	0.24	0.24
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10
Interior Lighting	Linear Lighting	100.0%	1.56	1.56
Interior Lighting	High-Bay Lighting	100.0%	0.91	0.91
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09
Exterior Lighting	Linear Lighting	100.0%	0.16	0.16
Exterior Lighting	Area Lighting	100.0%	1.15	1.15
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.12	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00
Refrigeration	Glass Door Display	77.4%	0.03	0.02
Refrigeration	Open Display Case	77.4%	0.17	0.13
Refrigeration	Icemaker	44.9%	0.05	0.02
Refrigeration	Vending Machine	44.9%	0.04	0.02
Food Preparation	Oven	66.0%	0.08	0.05
Food Preparation	Fryer	76.4%	0.11	0.08
Food Preparation	Dishwasher	43.1%	0.15	0.06
Food Preparation	Hot Food Container	43.1%	0.02	0.01
Food Preparation	Steamer	43.1%	0.11	0.05
Office Equipment	Desktop Computer	100.0%	2.23	2.23
Office Equipment	Laptop	100.0%	0.34	0.34
Office Equipment	Monitor	100.0%	0.39	0.39
Office Equipment	Server	100.0%	0.22	0.22
Office Equipment	Printer/Copier/Fax	100.0%	0.20	0.20
Office Equipment	POS Terminal	40.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	89.6%	0.29	0.26
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.29	1.29
Total				18.29

Table A-66   Idaho Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.59	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	5.69	0.00	0.0
Cooling	RTU	65.9%	6.21	4.10	25,423.4
Cooling	PTAC	2.3%	6.82	0.16	985.2
Cooling	PTHP	0.7%	6.82	0.05	312.5
Cooling	Evaporative Central AC	0.0%	2.48	0.00	7.2
Cooling	Air-Source Heat Pump	14.1%	6.21	0.87	5,423.5
Cooling	Geothermal Heat Pump	7.5%	3.78	0.29	1,772.0
Heating	Electric Furnace	0.9%	5.81	0.05	307.1
Heating	Electric Room Heat	16.4%	5.53	0.91	5,635.8
Heating	PTHP	0.7%	4.63	0.03	211.9
Heating	Air-Source Heat Pump	14.1%	5.14	0.72	4,489.9
Heating	Geothermal Heat Pump	7.5%	3.63	0.27	1,701.3
Ventilation	Ventilation	100.0%	1.17	1.17	7,288.7
Water Heating	Water Heater	60.0%	0.87	0.52	3,247.2
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	1,529.7
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13	823.6
Interior Lighting	Linear Lighting	100.0%	1.54	1.54	9,566.0
Interior Lighting	High-Bay Lighting	100.0%	1.51	1.51	9,368.5
Exterior Lighting	General Service Lighting	100.0%	0.16	0.16	1,007.9
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07	451.2
Exterior Lighting	Area Lighting	100.0%	1.58	1.58	9,788.0
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.64	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.14	0.01	78.2
Refrigeration	Glass Door Display	0.0%	0.15	0.00	0.0
Refrigeration	Open Display Case	0.0%	0.87	0.00	0.0
Refrigeration	Icemaker	5.1%	0.24	0.01	76.4
Refrigeration	Vending Machine	5.1%	0.11	0.01	35.9
Food Preparation	Oven	3.6%	0.17	0.01	39.6
Food Preparation	Fryer	3.6%	0.25	0.01	57.2
Food Preparation	Dishwasher	3.6%	0.35	0.01	78.8
Food Preparation	Hot Food Container	3.6%	0.05	0.00	10.8
Food Preparation	Steamer	3.6%	0.26	0.01	57.8
Office Equipment	Desktop Computer	100.0%	1.24	1.24	7,700.4
Office Equipment	Laptop	100.0%	0.19	0.19	1,189.0
Office Equipment	Monitor	100.0%	0.22	0.22	1,358.9
Office Equipment	Server	100.0%	0.36	0.36	2,264.8
Office Equipment	Printer/Copier/Fax	100.0%	0.17	0.17	1,053.9
Office Equipment	POS Terminal	20.0%	0.10	0.02	121.0
Miscellaneous	Non-HVAC Motors	22.0%	0.24	0.05	323.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.01	1.01	6,283.3
Total				17.74	110,069.9

Table A-67   Idaho Small Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	5.08	0.00
Cooling	Water-Cooled Chiller	0.0%	5.09	0.00
Cooling	RTU	65.9%	3.82	2.52
Cooling	PTAC	2.3%	4.67	0.11
Cooling	PTHP	0.7%	4.67	0.03
Cooling	Evaporative Central AC	0.0%	2.15	0.00
Cooling	Air-Source Heat Pump	14.1%	4.06	0.57
Cooling	Geothermal Heat Pump	7.5%	2.78	0.21
Heating	Electric Furnace	0.9%	5.43	0.05
Heating	Electric Room Heat	16.4%	5.18	0.85
Heating	PTHP	0.7%	4.05	0.03
Heating	Air-Source Heat Pump	14.1%	3.50	0.49
Heating	Geothermal Heat Pump	7.5%	3.43	0.26
Ventilation	Ventilation	100.0%	1.01	1.01
Water Heating	Water Heater	60.0%	0.82	0.49
Interior Lighting	General Service Lighting	100.0%	0.23	0.23
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13
Interior Lighting	Linear Lighting	100.0%	1.39	1.39
Interior Lighting	High-Bay Lighting	100.0%	1.36	1.36
Exterior Lighting	General Service Lighting	100.0%	0.15	0.15
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	1.42	1.42
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.58	0.00
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.13	0.01
Refrigeration	Glass Door Display	0.0%	0.13	0.00
Refrigeration	Open Display Case	0.0%	0.79	0.00
Refrigeration	Icemaker	5.1%	0.22	0.01
Refrigeration	Vending Machine	5.1%	0.10	0.01
Food Preparation	Oven	3.6%	0.16	0.01
Food Preparation	Fryer	3.6%	0.23	0.01
Food Preparation	Dishwasher	3.6%	0.31	0.01
Food Preparation	Hot Food Container	3.6%	0.04	0.00
Food Preparation	Steamer	3.6%	0.23	0.01
Office Equipment	Desktop Computer	100.0%	1.18	1.18
Office Equipment	Laptop	100.0%	0.18	0.18
Office Equipment	Monitor	100.0%	0.21	0.21
Office Equipment	Server	100.0%	0.35	0.35
Office Equipment	Printer/Copier/Fax	100.0%	0.16	0.16
Office Equipment	POS Terminal	20.0%	0.09	0.02
Miscellaneous	Non-HVAC Motors	22.0%	0.21	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.01	1.01
Total				14.60

Table A-68   Idaho Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	1.1%	5.15	0.06	43.5
Cooling	Water-Cooled Chiller	0.7%	5.24	0.04	27.3
Cooling	RTU	79.0%	5.72	4.52	3,383.9
Cooling	PTAC	3.5%	6.29	0.22	162.7
Cooling	PTHP	0.7%	6.29	0.04	33.5
Cooling	Evaporative Central AC	4.0%	2.29	0.09	69.2
Cooling	Air-Source Heat Pump	4.2%	5.72	0.24	179.3
Cooling	Geothermal Heat Pump	0.0%	3.49	0.00	0.0
Heating	Electric Furnace	3.4%	4.45	0.15	112.2
Heating	Electric Room Heat	39.3%	4.24	1.67	1,249.9
Heating	PTHP	0.7%	3.55	0.03	18.9
Heating	Air-Source Heat Pump	4.2%	3.95	0.17	123.7
Heating	Geothermal Heat Pump	0.0%	2.83	0.00	0.0
Ventilation	Ventilation	100.0%	2.96	2.96	2,215.3
Water Heating	Water Heater	61.0%	0.98	0.60	449.3
Interior Lighting	General Service Lighting	100.0%	0.50	0.50	372.8
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47	354.7
Interior Lighting	Linear Lighting	100.0%	3.00	3.00	2,249.0
Interior Lighting	High-Bay Lighting	100.0%	1.99	1.99	1,490.8
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	178.2
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	59.8
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	632.4
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.33	0.01	4.9
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01	7.7
Refrigeration	Glass Door Display	81.7%	0.08	0.06	46.0
Refrigeration	Open Display Case	81.7%	0.45	0.36	272.4
Refrigeration	Icemaker	52.4%	0.25	0.13	96.5
Refrigeration	Vending Machine	52.4%	0.12	0.06	45.3
Food Preparation	Oven	48.9%	0.15	0.07	54.4
Food Preparation	Fryer	45.2%	0.21	0.10	72.7
Food Preparation	Dishwasher	39.6%	0.30	0.12	87.5
Food Preparation	Hot Food Container	39.6%	0.04	0.02	12.0
Food Preparation	Steamer	39.6%	0.22	0.09	64.2
Office Equipment	Desktop Computer	100.0%	0.30	0.30	227.1
Office Equipment	Laptop	100.0%	0.05	0.05	35.1
Office Equipment	Monitor	100.0%	0.05	0.05	40.1
Office Equipment	Server	82.0%	0.04	0.04	27.4
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	31.1
Office Equipment	POS Terminal	100.0%	0.01	0.01	5.4
Miscellaneous	Non-HVAC Motors	40.2%	0.18	0.07	52.9
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	7.0%	0.00	0.00	0.1
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00	0.2
Miscellaneous	Miscellaneous	100.0%	0.66	0.66	497.8
Total				20.15	15,086.7

Table A-69   Idaho Large Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	1.1%	4.08	0.05
Cooling	Water-Cooled Chiller	0.7%	3.50	0.02
Cooling	RTU	79.0%	4.79	3.79
Cooling	PTAC	3.5%	4.30	0.15
Cooling	PTHP	0.7%	4.30	0.03
Cooling	Evaporative Central AC	4.0%	1.98	0.08
Cooling	Air-Source Heat Pump	4.2%	4.43	0.19
Cooling	Geothermal Heat Pump	0.0%	2.57	0.00
Heating	Electric Furnace	3.4%	3.15	0.11
Heating	Electric Room Heat	39.3%	3.00	1.18
Heating	PTHP	0.7%	3.11	0.02
Heating	Air-Source Heat Pump	4.2%	2.22	0.09
Heating	Geothermal Heat Pump	0.0%	2.67	0.00
Ventilation	Ventilation	100.0%	2.47	2.47
Water Heating	Water Heater	61.0%	0.92	0.56
Interior Lighting	General Service Lighting	100.0%	0.47	0.47
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47
Interior Lighting	Linear Lighting	100.0%	2.71	2.71
Interior Lighting	High-Bay Lighting	100.0%	1.80	1.80
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.29	0.01
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01
Refrigeration	Glass Door Display	81.7%	0.07	0.06
Refrigeration	Open Display Case	81.7%	0.40	0.33
Refrigeration	Icemaker	52.4%	0.22	0.12
Refrigeration	Vending Machine	52.4%	0.10	0.05
Food Preparation	Oven	48.9%	0.13	0.07
Food Preparation	Fryer	45.2%	0.19	0.09
Food Preparation	Dishwasher	39.6%	0.27	0.11
Food Preparation	Hot Food Container	39.6%	0.04	0.01
Food Preparation	Steamer	39.6%	0.19	0.08
Office Equipment	Desktop Computer	100.0%	0.29	0.29
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	82.0%	0.04	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	40.2%	0.16	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	7.0%	0.00	0.00
Miscellaneous	Clothes Dryer	4.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.66	0.66
Total				17.35

Table A-70   Idaho Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.60	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	5.71	0.00	0.0
Cooling	RTU	67.0%	6.23	4.18	15,055.4
Cooling	PTAC	2.4%	6.44	0.15	549.2
Cooling	PTHP	0.8%	6.44	0.05	174.2
Cooling	Evaporative Central AC	0.0%	2.49	0.00	4.3
Cooling	Air-Source Heat Pump	14.3%	6.22	0.89	3,209.1
Cooling	Geothermal Heat Pump	7.7%	3.79	0.29	1,048.3
Heating	Electric Furnace	0.5%	6.36	0.03	114.4
Heating	Electric Room Heat	9.6%	6.06	0.58	2,098.5
Heating	PTHP	0.8%	4.69	0.04	126.9
Heating	Air-Source Heat Pump	14.3%	5.21	0.75	2,687.9
Heating	Geothermal Heat Pump	7.7%	3.32	0.25	918.2
Ventilation	Ventilation	100.0%	1.17	1.17	4,235.2
Water Heating	Water Heater	61.8%	0.87	0.54	1,942.3
Interior Lighting	General Service Lighting	100.0%	0.33	0.33	1,184.7
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31	1,127.1
Interior Lighting	Linear Lighting	100.0%	1.98	1.98	7,147.2
Interior Lighting	High-Bay Lighting	100.0%	1.31	1.31	4,737.7
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	858.0
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	288.0
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	3,045.0
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.20	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00	8.6
Refrigeration	Glass Door Display	5.4%	0.05	0.00	8.9
Refrigeration	Open Display Case	5.4%	0.27	0.01	52.5
Refrigeration	Icemaker	5.1%	0.15	0.01	27.6
Refrigeration	Vending Machine	5.1%	0.07	0.00	13.0
Food Preparation	Oven	3.6%	0.17	0.01	23.0
Food Preparation	Fryer	3.6%	0.25	0.01	33.3
Food Preparation	Dishwasher	3.6%	0.35	0.01	45.8
Food Preparation	Hot Food Container	3.6%	0.05	0.00	6.3
Food Preparation	Steamer	3.6%	0.26	0.01	33.6
Office Equipment	Desktop Computer	100.0%	0.10	0.10	370.6
Office Equipment	Laptop	100.0%	0.02	0.02	57.2
Office Equipment	Monitor	100.0%	0.02	0.02	65.4
Office Equipment	Server	100.0%	0.12	0.12	436.0
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	40.6
Office Equipment	POS Terminal	100.0%	0.03	0.03	116.4
Miscellaneous	Non-HVAC Motors	22.0%	0.12	0.03	96.3
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.00	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.52	0.52	1,870.5
Total				14.94	53,856.8

Table A-71   Idaho Small Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	4.44	0.00
Cooling	Water-Cooled Chiller	0.0%	3.81	0.00
Cooling	RTU	67.0%	4.59	3.08
Cooling	PTAC	2.4%	4.35	0.10
Cooling	PTHP	0.8%	4.35	0.03
Cooling	Evaporative Central AC	0.0%	2.15	0.00
Cooling	Air-Source Heat Pump	14.3%	4.87	0.70
Cooling	Geothermal Heat Pump	7.7%	2.79	0.21
Heating	Electric Furnace	0.5%	4.21	0.02
Heating	Electric Room Heat	9.6%	4.01	0.38
Heating	PTHP	0.8%	3.58	0.03
Heating	Air-Source Heat Pump	14.3%	2.54	0.36
Heating	Geothermal Heat Pump	7.7%	3.13	0.24
Ventilation	Ventilation	100.0%	1.00	1.00
Water Heating	Water Heater	61.8%	0.82	0.51
Interior Lighting	General Service Lighting	100.0%	0.31	0.31
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31
Interior Lighting	Linear Lighting	100.0%	1.79	1.79
Interior Lighting	High-Bay Lighting	100.0%	1.19	1.19
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.18	0.00
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00
Refrigeration	Glass Door Display	5.4%	0.04	0.00
Refrigeration	Open Display Case	5.4%	0.24	0.01
Refrigeration	Icemaker	5.1%	0.14	0.01
Refrigeration	Vending Machine	5.1%	0.06	0.00
Food Preparation	Oven	3.6%	0.16	0.01
Food Preparation	Fryer	3.6%	0.23	0.01
Food Preparation	Dishwasher	3.6%	0.31	0.01
Food Preparation	Hot Food Container	3.6%	0.04	0.00
Food Preparation	Steamer	3.6%	0.23	0.01
Office Equipment	Desktop Computer	100.0%	0.10	0.10
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.03	0.03
Miscellaneous	Non-HVAC Motors	22.0%	0.11	0.02
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.00	0.00
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.52	0.52
Total				12.21

Table A-72   *Idaho Restaurant Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	6.34	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	6.35	0.00	0.0
Cooling	RTU	72.9%	7.67	5.59	2,773.3
Cooling	PTAC	2.7%	8.42	0.22	111.5
Cooling	PTHP	1.9%	8.42	0.16	80.3
Cooling	Evaporative Central AC	3.3%	3.07	0.10	50.1
Cooling	Air-Source Heat Pump	8.2%	7.66	0.63	312.7
Cooling	Geothermal Heat Pump	0.0%	4.67	0.00	0.0
Heating	Electric Furnace	6.1%	5.04	0.31	152.1
Heating	Electric Room Heat	0.6%	4.80	0.03	13.1
Heating	PTHP	1.9%	3.47	0.07	33.1
Heating	Air-Source Heat Pump	8.2%	3.86	0.32	157.3
Heating	Geothermal Heat Pump	0.0%	2.58	0.00	0.0
Ventilation	Ventilation	100.0%	2.13	2.13	1,055.6
Water Heating	Water Heater	57.9%	8.27	4.79	2,376.3
Interior Lighting	General Service Lighting	100.0%	1.34	1.34	665.1
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94	466.1
Interior Lighting	Linear Lighting	100.0%	1.87	1.87	926.7
Interior Lighting	High-Bay Lighting	100.0%	2.92	2.92	1,448.5
Exterior Lighting	General Service Lighting	100.0%	0.28	0.28	137.1
Exterior Lighting	Linear Lighting	100.0%	0.40	0.40	200.3
Exterior Lighting	Area Lighting	100.0%	2.14	2.14	1,062.5
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.78	5.02	2,489.1
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	3.04	0.21	105.7
Refrigeration	Glass Door Display	5.2%	1.56	0.08	40.3
Refrigeration	Open Display Case	5.2%	9.25	0.48	238.8
Refrigeration	Icemaker	97.3%	2.56	2.49	1,234.8
Refrigeration	Vending Machine	97.3%	1.20	1.17	579.9
Food Preparation	Oven	0.0%	16.94	0.00	0.0
Food Preparation	Fryer	0.0%	24.50	0.00	0.0
Food Preparation	Dishwasher	52.5%	16.86	8.85	4,393.1
Food Preparation	Hot Food Container	0.0%	2.31	0.00	0.0
Food Preparation	Steamer	0.0%	12.36	0.00	0.0
Office Equipment	Desktop Computer	100.0%	0.29	0.29	145.0
Office Equipment	Laptop	100.0%	0.04	0.04	17.9
Office Equipment	Monitor	100.0%	0.05	0.05	25.6
Office Equipment	Server	50.0%	0.34	0.17	85.3
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	31.8
Office Equipment	POS Terminal	100.0%	0.09	0.09	45.6
Miscellaneous	Non-HVAC Motors	20.0%	0.52	0.10	51.3
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	2.07	2.07	1,027.4
Total				45.41	22,533.3

Table A-73   Idaho Restaurant New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	6.01	0.00
Cooling	Water-Cooled Chiller	0.0%	5.80	0.00
Cooling	RTU	72.9%	5.58	4.07
Cooling	PTAC	2.7%	5.77	0.15
Cooling	PTHP	1.9%	5.77	0.11
Cooling	Evaporative Central AC	3.3%	2.65	0.09
Cooling	Air-Source Heat Pump	8.2%	5.92	0.49
Cooling	Geothermal Heat Pump	0.0%	3.44	0.00
Heating	Electric Furnace	6.1%	5.06	0.31
Heating	Electric Room Heat	0.6%	4.82	0.03
Heating	PTHP	1.9%	3.03	0.06
Heating	Air-Source Heat Pump	8.2%	3.10	0.25
Heating	Geothermal Heat Pump	0.0%	2.43	0.00
Ventilation	Ventilation	100.0%	1.91	1.91
Water Heating	Water Heater	57.9%	7.78	4.50
Interior Lighting	General Service Lighting	100.0%	1.27	1.27
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94
Interior Lighting	Linear Lighting	100.0%	1.69	1.69
Interior Lighting	High-Bay Lighting	100.0%	2.63	2.63
Exterior Lighting	General Service Lighting	100.0%	0.25	0.25
Exterior Lighting	Linear Lighting	100.0%	0.36	0.36
Exterior Lighting	Area Lighting	100.0%	1.93	1.93
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.10	4.51
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.74	0.19
Refrigeration	Glass Door Display	5.2%	1.41	0.07
Refrigeration	Open Display Case	5.2%	8.33	0.43
Refrigeration	Icemaker	97.3%	2.30	2.24
Refrigeration	Vending Machine	97.3%	1.08	1.05
Food Preparation	Oven	0.0%	15.25	0.00
Food Preparation	Fryer	0.0%	22.05	0.00
Food Preparation	Dishwasher	52.5%	15.17	7.97
Food Preparation	Hot Food Container	0.0%	2.08	0.00
Food Preparation	Steamer	0.0%	11.13	0.00
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	50.0%	0.33	0.16
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.09	0.09
Miscellaneous	Non-HVAC Motors	20.0%	0.47	0.09
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	2.07	2.07
Total				40.36

Table A-74   Idaho Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.5%	7.02	0.04	22.1
Cooling	Water-Cooled Chiller	0.3%	7.14	0.02	13.9
Cooling	RTU	71.3%	7.80	5.56	3,400.7
Cooling	PTAC	2.1%	8.56	0.18	111.5
Cooling	PTHP	0.6%	8.56	0.05	33.0
Cooling	Evaporative Central AC	1.2%	3.12	0.04	22.4
Cooling	Air-Source Heat Pump	7.2%	7.23	0.52	319.7
Cooling	Geothermal Heat Pump	0.0%	2.59	0.00	0.0
Heating	Electric Furnace	6.4%	5.86	0.37	228.2
Heating	Electric Room Heat	1.2%	5.58	0.07	40.0
Heating	PTHP	0.6%	3.06	0.02	11.8
Heating	Air-Source Heat Pump	7.2%	3.40	0.25	150.4
Heating	Geothermal Heat Pump	0.0%	2.30	0.00	0.0
Ventilation	Ventilation	100.0%	2.01	2.01	1,230.4
Water Heating	Water Heater	62.5%	2.10	1.31	801.8
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	233.3
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30	180.4
Interior Lighting	Linear Lighting	100.0%	5.01	5.01	3,062.9
Interior Lighting	High-Bay Lighting	100.0%	2.02	2.02	1,234.9
Exterior Lighting	General Service Lighting	100.0%	0.36	0.36	221.3
Exterior Lighting	Linear Lighting	100.0%	0.38	0.38	233.2
Exterior Lighting	Area Lighting	100.0%	1.78	1.78	1,090.2
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	5.13	0.82	501.4
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.33	0.27	166.9
Refrigeration	Glass Door Display	94.9%	3.37	3.20	1,957.2
Refrigeration	Open Display Case	94.9%	20.00	18.98	11,601.2
Refrigeration	Icemaker	98.9%	0.28	0.27	167.0
Refrigeration	Vending Machine	98.9%	0.26	0.26	156.9
Food Preparation	Oven	11.0%	0.60	0.07	40.4
Food Preparation	Fryer	87.0%	0.87	0.76	461.7
Food Preparation	Dishwasher	54.9%	1.19	0.66	400.8
Food Preparation	Hot Food Container	73.0%	0.16	0.12	73.0
Food Preparation	Steamer	20.0%	0.88	0.18	107.1
Office Equipment	Desktop Computer	100.0%	0.16	0.16	97.8
Office Equipment	Laptop	64.0%	0.02	0.02	9.7
Office Equipment	Monitor	100.0%	0.03	0.03	17.3
Office Equipment	Server	100.0%	0.09	0.09	57.5
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	10.7
Office Equipment	POS Terminal	100.0%	0.06	0.06	38.4
Miscellaneous	Non-HVAC Motors	34.6%	0.15	0.05	31.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.47	0.47	287.5
Total				47.16	28,826.0

Table A-75   Idaho Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.5%	5.85	0.03
Cooling	Water-Cooled Chiller	0.3%	5.81	0.02
Cooling	RTU	71.3%	6.56	4.68
Cooling	PTAC	2.1%	5.87	0.12
Cooling	PTHP	0.6%	5.87	0.04
Cooling	Evaporative Central AC	1.2%	2.70	0.03
Cooling	Air-Source Heat Pump	7.2%	5.68	0.41
Cooling	Geothermal Heat Pump	0.0%	1.91	0.00
Heating	Electric Furnace	6.4%	4.14	0.26
Heating	Electric Room Heat	1.2%	3.94	0.05
Heating	PTHP	0.6%	2.68	0.02
Heating	Air-Source Heat Pump	7.2%	4.33	0.31
Heating	Geothermal Heat Pump	0.0%	2.17	0.00
Ventilation	Ventilation	100.0%	2.97	2.97
Water Heating	Water Heater	62.5%	1.97	1.23
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30
Interior Lighting	Linear Lighting	100.0%	4.52	4.52
Interior Lighting	High-Bay Lighting	100.0%	1.82	1.82
Exterior Lighting	General Service Lighting	100.0%	0.33	0.33
Exterior Lighting	Linear Lighting	100.0%	0.34	0.34
Exterior Lighting	Area Lighting	100.0%	1.61	1.61
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	4.61	0.74
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.30	0.25
Refrigeration	Glass Door Display	94.9%	3.04	2.88
Refrigeration	Open Display Case	94.9%	18.00	17.08
Refrigeration	Icemaker	98.9%	0.25	0.25
Refrigeration	Vending Machine	98.9%	0.23	0.23
Food Preparation	Oven	11.0%	0.54	0.06
Food Preparation	Fryer	87.0%	0.78	0.68
Food Preparation	Dishwasher	54.9%	1.08	0.59
Food Preparation	Hot Food Container	73.0%	0.15	0.11
Food Preparation	Steamer	20.0%	0.79	0.16
Office Equipment	Desktop Computer	100.0%	0.15	0.15
Office Equipment	Laptop	64.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.09	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	34.6%	0.13	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.47	0.47
Total				43.36

Table A-76   Idaho Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	16.7%	8.50	1.42	930.9
Cooling	Water-Cooled Chiller	66.7%	9.68	6.46	4,240.9
Cooling	RTU	11.0%	8.18	0.90	589.3
Cooling	PTAC	0.4%	8.99	0.03	22.7
Cooling	PTHP	0.0%	8.99	0.00	0.0
Cooling	Evaporative Central AC	0.0%	3.27	0.00	0.0
Cooling	Air-Source Heat Pump	0.6%	8.16	0.05	30.9
Cooling	Geothermal Heat Pump	0.9%	4.97	0.04	28.3
Heating	Electric Furnace	3.0%	12.02	0.35	233.1
Heating	Electric Room Heat	0.1%	11.45	0.01	4.6
Heating	PTHP	0.0%	7.91	0.00	0.0
Heating	Air-Source Heat Pump	0.6%	8.78	0.05	33.3
Heating	Geothermal Heat Pump	0.9%	6.17	0.05	35.1
Ventilation	Ventilation	100.0%	3.46	3.46	2,273.5
Water Heating	Water Heater	4.0%	3.44	0.14	89.3
Interior Lighting	General Service Lighting	100.0%	0.55	0.55	360.5
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	149.9
Interior Lighting	Linear Lighting	100.0%	4.04	4.04	2,651.5
Interior Lighting	High-Bay Lighting	100.0%	2.59	2.59	1,703.3
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	29.0
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	53.8
Exterior Lighting	Area Lighting	100.0%	0.66	0.66	436.3
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.23	0.08	50.9
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.05	0.03	17.3
Refrigeration	Glass Door Display	90.4%	0.05	0.05	32.1
Refrigeration	Open Display Case	90.4%	0.32	0.29	190.3
Refrigeration	Icemaker	90.4%	0.18	0.16	105.2
Refrigeration	Vending Machine	90.4%	0.08	0.08	49.4
Food Preparation	Oven	69.7%	0.49	0.34	224.7
Food Preparation	Fryer	80.7%	0.71	0.57	376.2
Food Preparation	Dishwasher	53.5%	0.98	0.52	343.1
Food Preparation	Hot Food Container	53.5%	0.13	0.07	47.0
Food Preparation	Steamer	53.5%	0.72	0.38	251.6
Office Equipment	Desktop Computer	100.0%	0.56	0.56	366.0
Office Equipment	Laptop	100.0%	0.03	0.03	22.6
Office Equipment	Monitor	100.0%	0.10	0.10	64.6
Office Equipment	Server	100.0%	0.07	0.07	43.1
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	40.1
Office Equipment	POS Terminal	100.0%	0.04	0.04	28.8
Miscellaneous	Non-HVAC Motors	74.1%	0.53	0.39	255.6
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	63.0%	0.03	0.02	13.0
Miscellaneous	Clothes Dryer	58.0%	0.10	0.06	38.8
Miscellaneous	Miscellaneous	100.0%	4.09	4.09	2,684.0
Total				29.15	19,140.1

Table A-77   Idaho Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.7%	5.60	0.93
Cooling	Water-Cooled Chiller	66.7%	5.74	3.83
Cooling	RTU	11.0%	6.93	0.76
Cooling	PTAC	0.4%	6.92	0.03
Cooling	PTHP	0.0%	6.92	0.00
Cooling	Evaporative Central AC	0.0%	2.82	0.00
Cooling	Air-Source Heat Pump	0.6%	7.22	0.04
Cooling	Geothermal Heat Pump	0.9%	3.66	0.03
Heating	Electric Furnace	3.0%	10.00	0.30
Heating	Electric Room Heat	0.1%	9.52	0.01
Heating	PTHP	0.0%	7.58	0.00
Heating	Air-Source Heat Pump	0.6%	3.94	0.02
Heating	Geothermal Heat Pump	0.9%	5.82	0.05
Ventilation	Ventilation	100.0%	2.49	2.49
Water Heating	Water Heater	4.0%	3.23	0.13
Interior Lighting	General Service Lighting	100.0%	0.52	0.52
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	3.64	3.64
Interior Lighting	High-Bay Lighting	100.0%	2.34	2.34
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.60	0.60
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.21	0.07
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.05	0.02
Refrigeration	Glass Door Display	90.4%	0.05	0.04
Refrigeration	Open Display Case	90.4%	0.29	0.26
Refrigeration	Icemaker	90.4%	0.16	0.14
Refrigeration	Vending Machine	90.4%	0.07	0.07
Food Preparation	Oven	69.7%	0.44	0.31
Food Preparation	Fryer	80.7%	0.64	0.52
Food Preparation	Dishwasher	53.5%	0.88	0.47
Food Preparation	Hot Food Container	53.5%	0.12	0.06
Food Preparation	Steamer	53.5%	0.64	0.34
Office Equipment	Desktop Computer	100.0%	0.53	0.53
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.09	0.09
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.04	0.04
Miscellaneous	Non-HVAC Motors	74.1%	0.47	0.35
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	63.0%	0.03	0.02
Miscellaneous	Clothes Dryer	58.0%	0.09	0.05
Miscellaneous	Miscellaneous	100.0%	4.09	4.09
Total				23.70

Table A-78   Idaho College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	27.3%	7.00	1.91	7,586.7
Cooling	Water-Cooled Chiller	0.0%	9.08	0.00	0.0
Cooling	RTU	44.8%	4.40	1.97	7,832.1
Cooling	PTAC	2.9%	4.84	0.14	558.5
Cooling	PTHP	2.0%	4.84	0.10	391.1
Cooling	Evaporative Central AC	0.0%	1.76	0.00	0.3
Cooling	Air-Source Heat Pump	7.6%	4.40	0.33	1,324.4
Cooling	Geothermal Heat Pump	5.5%	2.68	0.15	583.6
Heating	Electric Furnace	0.0%	9.73	0.00	0.0
Heating	Electric Room Heat	16.2%	9.27	1.50	5,951.5
Heating	PTHP	2.0%	6.43	0.13	519.8
Heating	Air-Source Heat Pump	7.6%	7.14	0.54	2,151.4
Heating	Geothermal Heat Pump	5.5%	5.28	0.29	1,151.5
Ventilation	Ventilation	100.0%	1.48	1.48	5,858.7
Water Heating	Water Heater	64.3%	2.00	1.29	5,117.9
Interior Lighting	General Service Lighting	100.0%	0.09	0.09	375.1
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	160.5
Interior Lighting	Linear Lighting	100.0%	2.19	2.19	8,683.0
Interior Lighting	High-Bay Lighting	100.0%	1.42	1.42	5,649.6
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	79.4
Exterior Lighting	Linear Lighting	100.0%	0.75	0.75	2,974.2
Exterior Lighting	Area Lighting	100.0%	0.29	0.29	1,140.6
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.16	0.01	48.7
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01	38.0
Refrigeration	Glass Door Display	26.6%	0.04	0.01	38.8
Refrigeration	Open Display Case	26.6%	0.22	0.06	230.0
Refrigeration	Icemaker	26.6%	0.12	0.03	127.1
Refrigeration	Vending Machine	26.6%	0.06	0.02	59.7
Food Preparation	Oven	21.0%	0.23	0.05	191.3
Food Preparation	Fryer	21.0%	0.33	0.07	276.6
Food Preparation	Dishwasher	21.0%	0.46	0.10	380.7
Food Preparation	Hot Food Container	21.0%	0.06	0.01	52.1
Food Preparation	Steamer	21.0%	0.33	0.07	279.1
Office Equipment	Desktop Computer	100.0%	0.47	0.47	1,884.9
Office Equipment	Laptop	100.0%	0.02	0.02	87.3
Office Equipment	Monitor	100.0%	0.08	0.08	332.6
Office Equipment	Server	100.0%	0.06	0.06	221.7
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	258.0
Office Equipment	POS Terminal	100.0%	0.02	0.02	74.0
Miscellaneous	Non-HVAC Motors	88.8%	0.08	0.07	267.2
Miscellaneous	Pool Pump	90.3%	0.01	0.01	41.1
Miscellaneous	Pool Heater	36.2%	0.01	0.01	21.4
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	2.2
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	5.1
Miscellaneous	Miscellaneous	100.0%	0.33	0.33	1,324.0
Total				16.21	64,331.5

Table A-79   Idaho College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	27.3%	3.98	1.09
Cooling	Water-Cooled Chiller	0.0%	4.63	0.00
Cooling	RTU	44.8%	3.08	1.38
Cooling	PTAC	2.9%	3.73	0.11
Cooling	PTHP	2.0%	3.73	0.08
Cooling	Evaporative Central AC	0.0%	1.52	0.00
Cooling	Air-Source Heat Pump	7.6%	3.20	0.24
Cooling	Geothermal Heat Pump	5.5%	1.97	0.11
Heating	Electric Furnace	0.0%	9.24	0.00
Heating	Electric Room Heat	16.2%	8.80	1.42
Heating	PTHP	2.0%	6.16	0.13
Heating	Air-Source Heat Pump	7.6%	5.42	0.41
Heating	Geothermal Heat Pump	5.5%	4.98	0.27
Ventilation	Ventilation	100.0%	1.45	1.45
Water Heating	Water Heater	64.3%	1.88	1.21
Interior Lighting	General Service Lighting	100.0%	0.09	0.09
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	1.97	1.97
Interior Lighting	High-Bay Lighting	100.0%	1.28	1.28
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.68	0.68
Exterior Lighting	Area Lighting	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.14	0.01
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.06	0.01
Refrigeration	Glass Door Display	26.6%	0.03	0.01
Refrigeration	Open Display Case	26.6%	0.20	0.05
Refrigeration	Icemaker	26.6%	0.11	0.03
Refrigeration	Vending Machine	26.6%	0.05	0.01
Food Preparation	Oven	21.0%	0.21	0.04
Food Preparation	Fryer	21.0%	0.30	0.06
Food Preparation	Dishwasher	21.0%	0.41	0.09
Food Preparation	Hot Food Container	21.0%	0.06	0.01
Food Preparation	Steamer	21.0%	0.30	0.06
Office Equipment	Desktop Computer	100.0%	0.45	0.45
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.08	0.08
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	88.8%	0.07	0.06
Miscellaneous	Pool Pump	90.3%	0.01	0.01
Miscellaneous	Pool Heater	36.2%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.33	0.33
Total				13.73

Table A-80   Idaho School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	22.1%	3.50	0.77	2,176.0
Cooling	Water-Cooled Chiller	0.0%	4.54	0.00	0.0
Cooling	RTU	36.2%	2.20	0.80	2,246.4
Cooling	PTAC	2.4%	2.42	0.06	160.2
Cooling	PTHP	1.6%	2.42	0.04	112.2
Cooling	Evaporative Central AC	0.0%	0.88	0.00	0.1
Cooling	Air-Source Heat Pump	6.1%	2.20	0.13	379.9
Cooling	Geothermal Heat Pump	4.4%	1.34	0.06	167.4
Heating	Electric Furnace	0.0%	5.81	0.00	0.0
Heating	Electric Room Heat	4.4%	5.53	0.25	691.6
Heating	PTHP	1.6%	3.84	0.06	178.0
Heating	Air-Source Heat Pump	6.1%	4.26	0.26	736.6
Heating	Geothermal Heat Pump	4.4%	3.15	0.14	394.3
Ventilation	Ventilation	100.0%	0.72	0.72	2,037.1
Water Heating	Water Heater	50.0%	1.00	0.50	1,413.0
Interior Lighting	General Service Lighting	100.0%	0.16	0.16	458.3
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18	512.1
Interior Lighting	Linear Lighting	100.0%	1.51	1.51	4,262.4
Interior Lighting	High-Bay Lighting	100.0%	0.81	0.81	2,282.8
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00	11.2
Exterior Lighting	Linear Lighting	100.0%	0.66	0.66	1,851.5
Exterior Lighting	Area Lighting	100.0%	0.12	0.12	338.3
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.17	0.03	90.2
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.08	0.02	70.3
Refrigeration	Glass Door Display	65.7%	0.04	0.03	71.8
Refrigeration	Open Display Case	65.7%	0.23	0.15	425.9
Refrigeration	Icemaker	65.7%	0.13	0.08	235.4
Refrigeration	Vending Machine	65.7%	0.06	0.04	110.5
Food Preparation	Oven	64.8%	0.11	0.07	205.2
Food Preparation	Fryer	58.6%	0.16	0.10	268.4
Food Preparation	Dishwasher	52.3%	0.22	0.12	329.8
Food Preparation	Hot Food Container	52.3%	0.03	0.02	45.1
Food Preparation	Steamer	52.3%	0.16	0.09	241.8
Office Equipment	Desktop Computer	100.0%	0.29	0.29	817.4
Office Equipment	Laptop	100.0%	0.02	0.02	50.5
Office Equipment	Monitor	100.0%	0.05	0.05	144.3
Office Equipment	Server	100.0%	0.07	0.07	192.3
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03	89.5
Office Equipment	POS Terminal	36.0%	0.01	0.00	9.2
Miscellaneous	Non-HVAC Motors	43.7%	0.05	0.02	56.7
Miscellaneous	Pool Pump	6.0%	0.01	0.00	2.4
Miscellaneous	Pool Heater	1.0%	0.01	0.00	0.3
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	1.9
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	4.4
Miscellaneous	Miscellaneous	100.0%	0.21	0.21	594.1
Total				8.68	24,466.8

Table A-81   Idaho School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.1%	1.99	0.44
Cooling	Water-Cooled Chiller	0.0%	2.32	0.00
Cooling	RTU	36.2%	1.54	0.56
Cooling	PTAC	2.4%	1.86	0.04
Cooling	PTHP	1.6%	1.86	0.03
Cooling	Evaporative Central AC	0.0%	0.76	0.00
Cooling	Air-Source Heat Pump	6.1%	1.60	0.10
Cooling	Geothermal Heat Pump	4.4%	0.98	0.04
Heating	Electric Furnace	0.0%	5.52	0.00
Heating	Electric Room Heat	4.4%	5.25	0.23
Heating	PTHP	1.6%	3.68	0.06
Heating	Air-Source Heat Pump	6.1%	3.24	0.20
Heating	Geothermal Heat Pump	4.4%	2.97	0.13
Ventilation	Ventilation	100.0%	0.71	0.71
Water Heating	Water Heater	50.0%	0.94	0.47
Interior Lighting	General Service Lighting	100.0%	0.15	0.15
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18
Interior Lighting	Linear Lighting	100.0%	1.37	1.37
Interior Lighting	High-Bay Lighting	100.0%	0.73	0.73
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00
Exterior Lighting	Linear Lighting	100.0%	0.59	0.59
Exterior Lighting	Area Lighting	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.15	0.03
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.07	0.02
Refrigeration	Glass Door Display	65.7%	0.03	0.02
Refrigeration	Open Display Case	65.7%	0.21	0.14
Refrigeration	Icemaker	65.7%	0.11	0.08
Refrigeration	Vending Machine	65.7%	0.05	0.04
Food Preparation	Oven	64.8%	0.10	0.07
Food Preparation	Fryer	58.6%	0.15	0.09
Food Preparation	Dishwasher	52.3%	0.20	0.11
Food Preparation	Hot Food Container	52.3%	0.03	0.01
Food Preparation	Steamer	52.3%	0.15	0.08
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	43.7%	0.04	0.02
Miscellaneous	Pool Pump	6.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.21	0.21
Total				7.50

Table A-82   Idaho Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.0%	1.02	0.02	11.3
Cooling	Water-Cooled Chiller	7.3%	1.29	0.09	51.6
Cooling	RTU	15.8%	3.13	0.49	270.1
Cooling	PTAC	38.8%	3.43	1.33	729.5
Cooling	PTHP	13.0%	3.43	0.45	245.6
Cooling	Evaporative Central AC	0.5%	1.25	0.01	3.3
Cooling	Air-Source Heat Pump	5.1%	3.13	0.16	87.3
Cooling	Geothermal Heat Pump	5.5%	2.94	0.16	88.1
Heating	Electric Furnace	1.4%	2.09	0.03	16.5
Heating	Electric Room Heat	51.1%	1.99	1.02	556.9
Heating	PTHP	13.0%	1.72	0.22	123.2
Heating	Air-Source Heat Pump	5.1%	1.91	0.10	53.5
Heating	Geothermal Heat Pump	5.5%	1.29	0.07	38.6
Ventilation	Ventilation	100.0%	0.89	0.89	486.5
Water Heating	Water Heater	50.0%	2.99	1.49	818.8
Interior Lighting	General Service Lighting	100.0%	0.81	0.81	443.2
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43	234.7
Interior Lighting	Linear Lighting	100.0%	0.46	0.46	249.9
Interior Lighting	High-Bay Lighting	100.0%	1.29	1.29	705.1
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	20.9
Exterior Lighting	Linear Lighting	100.0%	0.03	0.03	14.0
Exterior Lighting	Area Lighting	100.0%	1.73	1.73	948.4
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.38	0.01	6.2
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.09	0.02	8.9
Refrigeration	Glass Door Display	58.9%	0.09	0.05	28.2
Refrigeration	Open Display Case	58.9%	0.52	0.31	167.3
Refrigeration	Icemaker	58.9%	0.14	0.08	46.2
Refrigeration	Vending Machine	58.9%	0.13	0.08	43.4
Food Preparation	Oven	13.8%	0.24	0.03	18.5
Food Preparation	Fryer	21.0%	0.35	0.07	40.8
Food Preparation	Dishwasher	30.0%	0.49	0.15	80.2
Food Preparation	Hot Food Container	30.0%	0.07	0.02	11.0
Food Preparation	Steamer	30.0%	0.36	0.11	58.8
Office Equipment	Desktop Computer	100.0%	0.08	0.08	45.7
Office Equipment	Laptop	100.0%	0.01	0.01	7.1
Office Equipment	Monitor	100.0%	0.01	0.01	8.1
Office Equipment	Server	100.0%	0.05	0.05	26.9
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	5.0
Office Equipment	POS Terminal	58.0%	0.01	0.01	4.2
Miscellaneous	Non-HVAC Motors	91.3%	0.12	0.11	60.0
Miscellaneous	Pool Pump	76.0%	0.01	0.01	5.0
Miscellaneous	Pool Heater	27.0%	0.02	0.00	2.3
Miscellaneous	Clothes Washer	67.0%	0.02	0.01	7.0
Miscellaneous	Clothes Dryer	26.0%	0.06	0.02	8.8
Miscellaneous	Miscellaneous	100.0%	0.56	0.56	304.4
Total				13.12	7,191.2

Table A-83   Idaho Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	2.0%	0.90	0.02
Cooling	Water-Cooled Chiller	7.3%	1.10	0.08
Cooling	RTU	15.8%	3.05	0.48
Cooling	PTAC	38.8%	2.65	1.03
Cooling	PTHP	13.0%	2.65	0.35
Cooling	Evaporative Central AC	0.5%	1.08	0.01
Cooling	Air-Source Heat Pump	5.1%	3.11	0.16
Cooling	Geothermal Heat Pump	5.5%	2.17	0.12
Heating	Electric Furnace	1.4%	1.93	0.03
Heating	Electric Room Heat	51.1%	1.84	0.94
Heating	PTHP	13.0%	1.65	0.22
Heating	Air-Source Heat Pump	5.1%	1.54	0.08
Heating	Geothermal Heat Pump	5.5%	1.21	0.07
Ventilation	Ventilation	100.0%	0.80	0.80
Water Heating	Water Heater	50.0%	2.81	1.40
Interior Lighting	General Service Lighting	100.0%	0.77	0.77
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43
Interior Lighting	Linear Lighting	100.0%	0.41	0.41
Interior Lighting	High-Bay Lighting	100.0%	1.16	1.16
Exterior Lighting	General Service Lighting	100.0%	0.03	0.03
Exterior Lighting	Linear Lighting	100.0%	0.02	0.02
Exterior Lighting	Area Lighting	100.0%	1.56	1.56
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.34	0.01
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.08	0.01
Refrigeration	Glass Door Display	58.9%	0.08	0.05
Refrigeration	Open Display Case	58.9%	0.47	0.27
Refrigeration	Icemaker	58.9%	0.13	0.08
Refrigeration	Vending Machine	58.9%	0.12	0.07
Food Preparation	Oven	13.8%	0.22	0.03
Food Preparation	Fryer	21.0%	0.32	0.07
Food Preparation	Dishwasher	30.0%	0.44	0.13
Food Preparation	Hot Food Container	30.0%	0.06	0.02
Food Preparation	Steamer	30.0%	0.32	0.10
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	58.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	91.3%	0.11	0.10
Miscellaneous	Pool Pump	76.0%	0.01	0.01
Miscellaneous	Pool Heater	27.0%	0.01	0.00
Miscellaneous	Clothes Washer	67.0%	0.02	0.01
Miscellaneous	Clothes Dryer	26.0%	0.06	0.01
Miscellaneous	Miscellaneous	100.0%	0.56	0.56
Total				11.85

Table A-84   Idaho Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	2.62	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	2.65	0.00	0.0
Cooling	RTU	16.0%	2.81	0.45	2,944.9
Cooling	PTAC	1.1%	3.09	0.03	212.3
Cooling	PTHP	0.3%	3.09	0.01	59.7
Cooling	Evaporative Central AC	0.0%	1.12	0.00	0.0
Cooling	Air-Source Heat Pump	1.7%	2.81	0.05	311.0
Cooling	Geothermal Heat Pump	0.0%	1.71	0.00	0.0
Heating	Electric Furnace	0.7%	6.17	0.04	285.5
Heating	Electric Room Heat	3.8%	5.88	0.22	1,470.7
Heating	PTHP	0.3%	5.05	0.01	97.8
Heating	Air-Source Heat Pump	1.7%	5.62	0.09	621.5
Heating	Geothermal Heat Pump	0.0%	4.63	0.00	0.0
Ventilation	Ventilation	100.0%	0.22	0.22	1,455.0
Water Heating	Water Heater	51.9%	0.22	0.12	760.7
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	474.1
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	234.4
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	1,842.6
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	11,084.4
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	130.4
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	506.3
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	2,471.3
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.43	0.00	31.0
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.10	0.00	12.6
Refrigeration	Glass Door Display	10.1%	0.10	0.01	65.5
Refrigeration	Open Display Case	10.1%	0.59	0.06	388.5
Refrigeration	Icemaker	10.1%	0.16	0.02	107.4
Refrigeration	Vending Machine	10.1%	0.08	0.01	50.4
Food Preparation	Oven	2.3%	0.03	0.00	4.5
Food Preparation	Fryer	2.3%	0.04	0.00	6.5
Food Preparation	Dishwasher	2.3%	0.06	0.00	8.9
Food Preparation	Hot Food Container	2.3%	0.01	0.00	1.2
Food Preparation	Steamer	2.3%	0.04	0.00	6.5
Office Equipment	Desktop Computer	100.0%	0.09	0.09	578.8
Office Equipment	Laptop	100.0%	0.01	0.01	71.5
Office Equipment	Monitor	100.0%	0.02	0.02	102.1
Office Equipment	Server	89.0%	0.10	0.09	606.0
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	63.4
Office Equipment	POS Terminal	77.0%	0.03	0.02	140.0
Miscellaneous	Non-HVAC Motors	49.9%	0.10	0.05	322.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.34	0.34	2,257.3
Total				4.55	29,787.1

Table A-85   Idaho Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	1.62	0.00
Cooling	Water-Cooled Chiller	0.0%	1.69	0.00
Cooling	RTU	16.0%	1.74	0.28
Cooling	PTAC	1.1%	2.34	0.02
Cooling	PTHP	0.3%	2.34	0.01
Cooling	Evaporative Central AC	0.0%	0.97	0.00
Cooling	Air-Source Heat Pump	1.7%	1.65	0.03
Cooling	Geothermal Heat Pump	0.0%	1.26	0.00
Heating	Electric Furnace	0.7%	3.65	0.03
Heating	Electric Room Heat	3.8%	3.48	0.13
Heating	PTHP	0.3%	4.24	0.01
Heating	Air-Source Heat Pump	1.7%	2.34	0.04
Heating	Geothermal Heat Pump	0.0%	4.36	0.00
Ventilation	Ventilation	100.0%	0.16	0.16
Water Heating	Water Heater	51.9%	0.21	0.11
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.39	0.00
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Glass Door Display	10.1%	0.09	0.01
Refrigeration	Open Display Case	10.1%	0.53	0.05
Refrigeration	Icemaker	10.1%	0.15	0.01
Refrigeration	Vending Machine	10.1%	0.07	0.01
Food Preparation	Oven	2.3%	0.03	0.00
Food Preparation	Fryer	2.3%	0.04	0.00
Food Preparation	Dishwasher	2.3%	0.05	0.00
Food Preparation	Hot Food Container	2.3%	0.01	0.00
Food Preparation	Steamer	2.3%	0.04	0.00
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.10	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.03	0.02
Miscellaneous	Non-HVAC Motors	49.9%	0.09	0.04
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.34	0.34
Total				3.84

Table A-86   Idaho Warehouse, Controlled Atmosphere Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	15.0%	2.27	0.34	469.2
Cooling	Water-Cooled Chiller	1.7%	2.29	0.04	52.8
Cooling	RTU	19.6%	2.43	0.48	660.9
Cooling	PTAC	1.2%	2.67	0.03	43.7
Cooling	PTHP	0.1%	2.67	0.00	4.4
Cooling	Evaporative Central AC	0.1%	0.97	0.00	1.6
Cooling	Air-Source Heat Pump	1.9%	2.43	0.05	62.4
Cooling	Geothermal Heat Pump	0.0%	1.48	0.00	0.0
Heating	Electric Furnace	0.5%	5.22	0.03	35.3
Heating	Electric Room Heat	2.6%	4.97	0.13	182.0
Heating	PTHP	0.1%	4.28	0.01	7.0
Heating	Air-Source Heat Pump	1.9%	4.75	0.09	121.7
Heating	Geothermal Heat Pump	0.0%	3.92	0.00	0.0
Ventilation	Ventilation	100.0%	0.68	0.68	940.9
Water Heating	Water Heater	52.7%	0.39	0.20	282.9
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	100.2
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	49.5
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	389.4
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	2,342.6
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	27.6
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	107.0
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	522.3
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	14.84	13.61	18,822.9
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.67	0.01	18.4
Refrigeration	Glass Door Display	10.1%	0.68	0.07	95.5
Refrigeration	Open Display Case	10.1%	4.05	0.41	566.1
Refrigeration	Icemaker	91.7%	1.12	1.03	1,420.3
Refrigeration	Vending Machine	91.7%	0.53	0.48	667.0
Food Preparation	Oven	40.8%	0.05	0.02	29.9
Food Preparation	Fryer	40.8%	0.08	0.03	43.3
Food Preparation	Dishwasher	40.8%	0.11	0.04	59.5
Food Preparation	Hot Food Container	40.8%	0.01	0.01	8.1
Food Preparation	Steamer	40.8%	0.08	0.03	43.7
Office Equipment	Desktop Computer	100.0%	0.06	0.06	89.8
Office Equipment	Laptop	100.0%	0.01	0.01	11.1
Office Equipment	Monitor	100.0%	0.01	0.01	15.8
Office Equipment	Server	89.0%	0.08	0.07	94.0
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	9.8
Office Equipment	POS Terminal	77.0%	0.02	0.02	21.7
Miscellaneous	Non-HVAC Motors	79.5%	0.08	0.06	86.9
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.28	0.28	385.1
Total				20.89	28,892.6

Table A-87   Idaho Warehouse, Controlled Atmosphere New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	15.0%	1.41	0.21
Cooling	Water-Cooled Chiller	1.7%	1.46	0.02
Cooling	RTU	19.6%	1.51	0.30
Cooling	PTAC	1.2%	2.03	0.02
Cooling	PTHP	0.1%	2.03	0.00
Cooling	Evaporative Central AC	0.1%	0.84	0.00
Cooling	Air-Source Heat Pump	1.9%	1.43	0.03
Cooling	Geothermal Heat Pump	0.0%	1.09	0.00
Heating	Electric Furnace	0.5%	3.09	0.02
Heating	Electric Room Heat	2.6%	2.94	0.08
Heating	PTHP	0.1%	3.58	0.00
Heating	Air-Source Heat Pump	1.9%	1.98	0.04
Heating	Geothermal Heat Pump	0.0%	3.69	0.00
Ventilation	Ventilation	100.0%	0.48	0.48
Water Heating	Water Heater	52.7%	0.37	0.19
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	14.84	13.61
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.67	0.01
Refrigeration	Glass Door Display	10.1%	0.68	0.07
Refrigeration	Open Display Case	10.1%	4.05	0.41
Refrigeration	Icemaker	91.7%	1.12	1.03
Refrigeration	Vending Machine	91.7%	0.53	0.48
Food Preparation	Oven	40.8%	0.05	0.02
Food Preparation	Fryer	40.8%	0.07	0.03
Food Preparation	Dishwasher	40.8%	0.09	0.04
Food Preparation	Hot Food Container	40.8%	0.01	0.01
Food Preparation	Steamer	40.8%	0.07	0.03
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.07	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.02	0.01
Miscellaneous	Non-HVAC Motors	79.5%	0.07	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.28	0.28
Total				19.94

Table A-88   Idaho Data Center Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	14.7%	36.74	5.39	11.2
Cooling	Water-Cooled Chiller	9.0%	37.65	3.40	7.0
Cooling	RTU	47.6%	38.31	18.22	37.7
Cooling	PTAC	2.5%	42.08	1.06	2.2
Cooling	PTHP	0.8%	42.08	0.34	0.7
Cooling	Evaporative Central AC	0.1%	15.32	0.01	0.0
Cooling	Air-Source Heat Pump	15.2%	38.30	5.82	12.1
Cooling	Geothermal Heat Pump	8.2%	23.34	1.90	3.9
Heating	Electric Furnace	1.2%	3.18	0.04	0.1
Heating	Electric Room Heat	22.3%	3.02	0.67	1.4
Heating	PTHP	0.8%	2.51	0.02	0.0
Heating	Air-Source Heat Pump	15.2%	2.79	0.42	0.9
Heating	Geothermal Heat Pump	8.2%	2.10	0.17	0.4
Ventilation	Ventilation	100.0%	25.38	25.38	52.6
Water Heating	Water Heater	45.2%	0.65	0.29	0.6
Interior Lighting	General Service Lighting	100.0%	0.47	0.47	1.0
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27	0.6
Interior Lighting	Linear Lighting	100.0%	3.91	3.91	8.1
Interior Lighting	High-Bay Lighting	100.0%	2.74	2.74	5.7
Exterior Lighting	General Service Lighting	100.0%	0.11	0.11	0.2
Exterior Lighting	Linear Lighting	100.0%	0.24	0.24	0.5
Exterior Lighting	Area Lighting	100.0%	1.12	1.12	2.3
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.10	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00	0.0
Refrigeration	Glass Door Display	5.1%	0.02	0.00	0.0
Refrigeration	Open Display Case	5.1%	0.14	0.01	0.0
Refrigeration	Icemaker	5.1%	0.04	0.00	0.0
Refrigeration	Vending Machine	5.1%	0.02	0.00	0.0
Food Preparation	Oven	3.6%	0.07	0.00	0.0
Food Preparation	Fryer	3.6%	0.10	0.00	0.0
Food Preparation	Dishwasher	3.6%	0.14	0.01	0.0
Food Preparation	Hot Food Container	3.6%	0.02	0.00	0.0
Food Preparation	Steamer	3.6%	0.10	0.00	0.0
Office Equipment	Desktop Computer	100.0%	5.40	5.40	11.2
Office Equipment	Laptop	100.0%	0.33	0.33	0.7
Office Equipment	Monitor	100.0%	0.95	0.95	2.0
Office Equipment	Server	100.0%	63.54	63.54	131.6
Office Equipment	Printer/Copier/Fax	100.0%	0.59	0.59	1.2
Office Equipment	POS Terminal	40.0%	0.17	0.07	0.1
Miscellaneous	Non-HVAC Motors	89.6%	5.38	4.82	10.0
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	18.39	18.39	38.1
Total				166.13	344.0

Table A-89   Idaho Data Center New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.7%	21.64	3.18
Cooling	Water-Cooled Chiller	9.0%	19.74	1.78
Cooling	RTU	47.6%	23.78	11.31
Cooling	PTAC	2.5%	32.42	0.82
Cooling	PTHP	0.8%	32.42	0.26
Cooling	Evaporative Central AC	0.1%	13.24	0.01
Cooling	Air-Source Heat Pump	15.2%	22.45	3.41
Cooling	Geothermal Heat Pump	8.2%	17.17	1.40
Heating	Electric Furnace	1.2%	1.88	0.02
Heating	Electric Room Heat	22.3%	1.79	0.40
Heating	PTHP	0.8%	2.40	0.02
Heating	Air-Source Heat Pump	15.2%	1.16	0.18
Heating	Geothermal Heat Pump	8.2%	1.98	0.16
Ventilation	Ventilation	100.0%	16.17	16.17
Water Heating	Water Heater	45.2%	0.61	0.28
Interior Lighting	General Service Lighting	100.0%	0.45	0.45
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27
Interior Lighting	Linear Lighting	100.0%	3.53	3.53
Interior Lighting	High-Bay Lighting	100.0%	2.47	2.47
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10
Exterior Lighting	Linear Lighting	100.0%	0.22	0.22
Exterior Lighting	Area Lighting	100.0%	1.01	1.01
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00
Refrigeration	Glass Door Display	5.1%	0.02	0.00
Refrigeration	Open Display Case	5.1%	0.13	0.01
Refrigeration	Icemaker	5.1%	0.04	0.00
Refrigeration	Vending Machine	5.1%	0.02	0.00
Food Preparation	Oven	3.6%	0.06	0.00
Food Preparation	Fryer	3.6%	0.09	0.00
Food Preparation	Dishwasher	3.6%	0.13	0.00
Food Preparation	Hot Food Container	3.6%	0.02	0.00
Food Preparation	Steamer	3.6%	0.09	0.00
Office Equipment	Desktop Computer	100.0%	5.13	5.13
Office Equipment	Laptop	100.0%	0.32	0.32
Office Equipment	Monitor	100.0%	0.91	0.91
Office Equipment	Server	100.0%	60.37	60.37
Office Equipment	Printer/Copier/Fax	100.0%	0.56	0.56
Office Equipment	POS Terminal	40.0%	0.16	0.06
Miscellaneous	Non-HVAC Motors	89.6%	4.84	4.34
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	18.39	18.39
Total				137.52

Table -90A   Idaho Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	9.7%	2.89	0.28	1,299.1
Cooling	Water-Cooled Chiller	5.0%	2.94	0.15	684.6
Cooling	RTU	56.8%	3.21	1.82	8,491.9
Cooling	PTAC	5.1%	3.52	0.18	833.7
Cooling	PTHP	2.6%	3.52	0.09	425.6
Cooling	Evaporative Central AC	0.0%	1.28	0.00	0.5
Cooling	Air-Source Heat Pump	5.5%	3.21	0.18	820.0
Cooling	Geothermal Heat Pump	1.0%	1.95	0.02	95.5
Heating	Electric Furnace	12.5%	3.87	0.48	2,246.6
Heating	Electric Room Heat	14.8%	3.69	0.55	2,540.6
Heating	PTHP	2.6%	3.09	0.08	373.2
Heating	Air-Source Heat Pump	5.5%	3.43	0.19	877.7
Heating	Geothermal Heat Pump	1.0%	2.46	0.03	120.4
Ventilation	Ventilation	100.0%	0.67	0.67	3,121.1
Water Heating	Water Heater	53.0%	1.27	0.67	3,129.7
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	1,753.6
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	1,065.4
Interior Lighting	Linear Lighting	100.0%	1.46	1.46	6,820.8
Interior Lighting	High-Bay Lighting	100.0%	1.56	1.56	7,266.5
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09	432.7
Exterior Lighting	Linear Lighting	100.0%	0.06	0.06	274.9
Exterior Lighting	Area Lighting	100.0%	0.64	0.64	2,973.4
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.55	0.06	265.3
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.12	0.01	69.5
Refrigeration	Glass Door Display	3.4%	0.13	0.00	20.4
Refrigeration	Open Display Case	3.4%	0.75	0.03	120.8
Refrigeration	Icemaker	21.6%	0.21	0.04	209.0
Refrigeration	Vending Machine	21.6%	0.20	0.04	196.3
Food Preparation	Oven	58.9%	0.08	0.05	212.1
Food Preparation	Fryer	29.9%	0.11	0.03	155.7
Food Preparation	Dishwasher	15.4%	0.15	0.02	110.4
Food Preparation	Hot Food Container	15.4%	0.02	0.00	15.1
Food Preparation	Steamer	15.4%	0.11	0.02	81.0
Office Equipment	Desktop Computer	100.0%	0.20	0.20	920.2
Office Equipment	Laptop	100.0%	0.03	0.03	142.1
Office Equipment	Monitor	100.0%	0.03	0.03	162.4
Office Equipment	Server	66.0%	0.12	0.08	357.3
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	100.8
Office Equipment	POS Terminal	28.0%	0.03	0.01	40.5
Miscellaneous	Non-HVAC Motors	59.9%	0.14	0.08	378.0
Miscellaneous	Pool Pump	4.0%	0.01	0.00	1.9
Miscellaneous	Pool Heater	1.0%	0.01	0.00	0.6
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	0.9
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00	2.0
Miscellaneous	Miscellaneous	100.0%	0.53	0.53	2,450.1
Total				11.09	51,659.8

Table A-91   Idaho Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	9.7%	2.29	0.22
Cooling	Water-Cooled Chiller	5.0%	1.96	0.10
Cooling	RTU	56.8%	2.36	1.34
Cooling	PTAC	5.1%	2.38	0.12
Cooling	PTHP	2.6%	2.38	0.06
Cooling	Evaporative Central AC	0.0%	1.11	0.00
Cooling	Air-Source Heat Pump	5.5%	2.51	0.14
Cooling	Geothermal Heat Pump	1.0%	1.44	0.02
Heating	Electric Furnace	12.5%	2.56	0.32
Heating	Electric Room Heat	14.8%	2.44	0.36
Heating	PTHP	2.6%	2.36	0.06
Heating	Air-Source Heat Pump	5.5%	1.67	0.09
Heating	Geothermal Heat Pump	1.0%	2.32	0.02
Ventilation	Ventilation	100.0%	0.57	0.57
Water Heating	Water Heater	53.0%	1.19	0.63
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	1.32	1.32
Interior Lighting	High-Bay Lighting	100.0%	1.41	1.41
Exterior Lighting	General Service Lighting	100.0%	0.08	0.08
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.58	0.58
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.50	0.05
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.11	0.01
Refrigeration	Glass Door Display	3.4%	0.11	0.00
Refrigeration	Open Display Case	3.4%	0.68	0.02
Refrigeration	Icemaker	21.6%	0.19	0.04
Refrigeration	Vending Machine	21.6%	0.18	0.04
Food Preparation	Oven	58.9%	0.07	0.04
Food Preparation	Fryer	29.9%	0.10	0.03
Food Preparation	Dishwasher	15.4%	0.14	0.02
Food Preparation	Hot Food Container	15.4%	0.02	0.00
Food Preparation	Steamer	15.4%	0.10	0.02
Office Equipment	Desktop Computer	100.0%	0.19	0.19
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	66.0%	0.11	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	28.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	59.9%	0.12	0.07
Miscellaneous	Pool Pump	4.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.53	0.53
Total				9.32

Table A-92   Utah Large Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.7%	5.44	0.75	61,656.1
Cooling	Water-Cooled Chiller	8.5%	5.30	0.45	36,942.4
Cooling	RTU	44.5%	5.87	2.61	215,582.9
Cooling	PTAC	2.4%	6.59	0.16	12,790.0
Cooling	PTHP	0.7%	6.59	0.05	4,056.8
Cooling	Evaporative Central AC	0.0%	2.35	0.00	91.5
Cooling	Air-Source Heat Pump	14.2%	5.87	0.84	68,924.5
Cooling	Geothermal Heat Pump	7.6%	3.58	0.27	22,521.0
Heating	Electric Furnace	1.2%	4.70	0.06	4,790.2
Heating	Electric Room Heat	23.8%	4.48	1.07	87,906.3
Heating	PTHP	0.7%	3.71	0.03	2,280.2
Heating	Air-Source Heat Pump	14.2%	4.12	0.59	48,307.9
Heating	Geothermal Heat Pump	7.6%	3.58	0.27	22,502.8
Ventilation	Ventilation	100.0%	2.96	2.96	244,065.0
Water Heating	Water Heater	45.2%	0.98	0.44	36,661.5
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	20,505.2
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10	8,497.0
Interior Lighting	Linear Lighting	100.0%	1.72	1.72	142,285.8
Interior Lighting	High-Bay Lighting	100.0%	1.01	1.01	83,306.2
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10	7,879.9
Exterior Lighting	Linear Lighting	100.0%	0.18	0.18	14,848.6
Exterior Lighting	Area Lighting	100.0%	1.28	1.28	105,409.7
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.14	0.00	226.9
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00	356.4
Refrigeration	Glass Door Display	77.4%	0.03	0.02	2,022.3
Refrigeration	Open Display Case	77.4%	0.19	0.15	11,986.9
Refrigeration	Icemaker	44.9%	0.05	0.02	1,921.5
Refrigeration	Vending Machine	44.9%	0.05	0.02	1,804.8
Food Preparation	Oven	66.0%	0.08	0.06	4,573.1
Food Preparation	Fryer	76.4%	0.12	0.09	7,655.4
Food Preparation	Dishwasher	43.1%	0.17	0.07	5,938.5
Food Preparation	Hot Food Container	43.1%	0.02	0.01	812.8
Food Preparation	Steamer	43.1%	0.12	0.05	4,354.5
Office Equipment	Desktop Computer	100.0%	2.35	2.35	193,638.1
Office Equipment	Laptop	100.0%	0.36	0.36	29,900.0
Office Equipment	Monitor	100.0%	0.41	0.41	34,171.4
Office Equipment	Server	100.0%	0.23	0.23	18,984.1
Office Equipment	Printer/Copier/Fax	100.0%	0.21	0.21	17,668.1
Office Equipment	POS Terminal	40.0%	0.03	0.01	1,014.1
Miscellaneous	Non-HVAC Motors	89.6%	0.32	0.28	23,483.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.29	1.29	106,196.7
Total				20.83	1,718,520.8

Table A-93   Utah Large Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	13.7%	4.32	0.59
Cooling	Water-Cooled Chiller	8.5%	3.56	0.30
Cooling	RTU	44.5%	3.82	1.70
Cooling	PTAC	2.4%	5.12	0.12
Cooling	PTHP	0.7%	5.12	0.04
Cooling	Evaporative Central AC	0.0%	2.03	0.00
Cooling	Air-Source Heat Pump	14.2%	3.96	0.56
Cooling	Geothermal Heat Pump	7.6%	2.63	0.20
Heating	Electric Furnace	1.2%	4.98	0.06
Heating	Electric Room Heat	23.8%	4.75	1.13
Heating	PTHP	0.7%	3.66	0.03
Heating	Air-Source Heat Pump	14.2%	2.96	0.42
Heating	Geothermal Heat Pump	7.6%	3.37	0.26
Ventilation	Ventilation	100.0%	2.50	2.50
Water Heating	Water Heater	45.2%	0.92	0.42
Interior Lighting	General Service Lighting	100.0%	0.24	0.24
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10
Interior Lighting	Linear Lighting	100.0%	1.56	1.56
Interior Lighting	High-Bay Lighting	100.0%	0.91	0.91
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09
Exterior Lighting	Linear Lighting	100.0%	0.16	0.16
Exterior Lighting	Area Lighting	100.0%	1.15	1.15
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.12	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00
Refrigeration	Glass Door Display	77.4%	0.03	0.02
Refrigeration	Open Display Case	77.4%	0.17	0.13
Refrigeration	Icemaker	44.9%	0.05	0.02
Refrigeration	Vending Machine	44.9%	0.04	0.02
Food Preparation	Oven	66.0%	0.08	0.05
Food Preparation	Fryer	76.4%	0.11	0.08
Food Preparation	Dishwasher	43.1%	0.15	0.06
Food Preparation	Hot Food Container	43.1%	0.02	0.01
Food Preparation	Steamer	43.1%	0.11	0.05
Office Equipment	Desktop Computer	100.0%	2.23	2.23
Office Equipment	Laptop	100.0%	0.34	0.34
Office Equipment	Monitor	100.0%	0.39	0.39
Office Equipment	Server	100.0%	0.22	0.22
Office Equipment	Printer/Copier/Fax	100.0%	0.20	0.20
Office Equipment	POS Terminal	40.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	89.6%	0.29	0.26
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.29	1.29
Total				17.94

Table A-94   Utah Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.57	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	5.37	0.00	0.0
Cooling	RTU	65.9%	6.21	4.09	291,018.3
Cooling	PTAC	2.3%	6.97	0.16	11,520.5
Cooling	PTHP	0.7%	6.97	0.05	3,654.1
Cooling	Evaporative Central AC	0.0%	2.48	0.00	82.4
Cooling	Air-Source Heat Pump	14.1%	6.21	0.87	62,084.8
Cooling	Geothermal Heat Pump	7.5%	3.78	0.29	20,285.1
Heating	Electric Furnace	0.9%	5.79	0.05	3,504.3
Heating	Electric Room Heat	16.4%	5.51	0.90	64,308.5
Heating	PTHP	0.7%	4.48	0.03	2,348.9
Heating	Air-Source Heat Pump	14.1%	4.97	0.70	49,764.1
Heating	Geothermal Heat Pump	7.5%	4.01	0.30	21,515.8
Ventilation	Ventilation	100.0%	1.17	1.17	83,502.3
Water Heating	Water Heater	60.0%	0.87	0.52	37,201.4
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	17,524.9
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13	9,435.6
Interior Lighting	Linear Lighting	100.0%	1.54	1.54	109,592.1
Interior Lighting	High-Bay Lighting	100.0%	1.51	1.51	107,329.4
Exterior Lighting	General Service Lighting	100.0%	0.16	0.16	11,547.4
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07	5,169.6
Exterior Lighting	Area Lighting	100.0%	1.58	1.58	112,135.1
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.64	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.14	0.01	895.6
Refrigeration	Glass Door Display	0.0%	0.15	0.00	0.0
Refrigeration	Open Display Case	0.0%	0.87	0.00	0.0
Refrigeration	Icemaker	5.1%	0.24	0.01	875.3
Refrigeration	Vending Machine	5.1%	0.11	0.01	411.1
Food Preparation	Oven	3.6%	0.17	0.01	453.5
Food Preparation	Fryer	3.6%	0.25	0.01	655.8
Food Preparation	Dishwasher	3.6%	0.35	0.01	902.5
Food Preparation	Hot Food Container	3.6%	0.05	0.00	123.5
Food Preparation	Steamer	3.6%	0.26	0.01	661.8
Office Equipment	Desktop Computer	100.0%	1.24	1.24	88,219.2
Office Equipment	Laptop	100.0%	0.19	0.19	13,622.1
Office Equipment	Monitor	100.0%	0.22	0.22	15,568.1
Office Equipment	Server	100.0%	0.36	0.36	25,946.8
Office Equipment	Printer/Copier/Fax	100.0%	0.17	0.17	12,074.1
Office Equipment	POS Terminal	20.0%	0.10	0.02	1,386.0
Miscellaneous	Non-HVAC Motors	22.0%	0.24	0.05	3,704.8
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.01	1.01	71,984.2
Total				17.74	1,261,008.9

Table A-95   Utah Small Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	4.48	0.00
Cooling	Water-Cooled Chiller	0.0%	4.39	0.00
Cooling	RTU	65.9%	3.81	2.51
Cooling	PTAC	2.3%	4.81	0.11
Cooling	PTHP	0.7%	4.81	0.04
Cooling	Evaporative Central AC	0.0%	2.15	0.00
Cooling	Air-Source Heat Pump	14.1%	4.04	0.57
Cooling	Geothermal Heat Pump	7.5%	2.78	0.21
Heating	Electric Furnace	0.9%	6.40	0.05
Heating	Electric Room Heat	16.4%	6.10	1.00
Heating	PTHP	0.7%	4.03	0.03
Heating	Air-Source Heat Pump	14.1%	3.77	0.53
Heating	Geothermal Heat Pump	7.5%	3.78	0.29
Ventilation	Ventilation	100.0%	1.01	1.01
Water Heating	Water Heater	60.0%	0.82	0.49
Interior Lighting	General Service Lighting	100.0%	0.23	0.23
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13
Interior Lighting	Linear Lighting	100.0%	1.39	1.39
Interior Lighting	High-Bay Lighting	100.0%	1.36	1.36
Exterior Lighting	General Service Lighting	100.0%	0.15	0.15
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	1.42	1.42
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.58	0.00
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.13	0.01
Refrigeration	Glass Door Display	0.0%	0.13	0.00
Refrigeration	Open Display Case	0.0%	0.79	0.00
Refrigeration	Icemaker	5.1%	0.22	0.01
Refrigeration	Vending Machine	5.1%	0.10	0.01
Food Preparation	Oven	3.6%	0.16	0.01
Food Preparation	Fryer	3.6%	0.23	0.01
Food Preparation	Dishwasher	3.6%	0.31	0.01
Food Preparation	Hot Food Container	3.6%	0.04	0.00
Food Preparation	Steamer	3.6%	0.23	0.01
Office Equipment	Desktop Computer	100.0%	1.18	1.18
Office Equipment	Laptop	100.0%	0.18	0.18
Office Equipment	Monitor	100.0%	0.21	0.21
Office Equipment	Server	100.0%	0.35	0.35
Office Equipment	Printer/Copier/Fax	100.0%	0.16	0.16
Office Equipment	POS Terminal	20.0%	0.09	0.02
Miscellaneous	Non-HVAC Motors	22.0%	0.21	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.01	1.01
Total				14.81

Table A-96   Utah Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	1.1%	5.13	0.06	1,251.3
Cooling	Water-Cooled Chiller	0.7%	4.95	0.03	742.8
Cooling	RTU	79.0%	5.72	4.52	97,613.8
Cooling	PTAC	3.5%	6.42	0.22	4,794.8
Cooling	PTHP	0.7%	6.42	0.05	987.2
Cooling	Evaporative Central AC	4.0%	2.29	0.09	1,996.7
Cooling	Air-Source Heat Pump	4.2%	5.72	0.24	5,173.4
Cooling	Geothermal Heat Pump	0.0%	3.48	0.00	0.0
Heating	Electric Furnace	3.4%	4.47	0.15	3,247.6
Heating	Electric Room Heat	39.3%	4.25	1.67	36,167.4
Heating	PTHP	0.7%	3.47	0.02	533.8
Heating	Air-Source Heat Pump	4.2%	3.86	0.16	3,488.3
Heating	Geothermal Heat Pump	0.0%	3.14	0.00	0.0
Ventilation	Ventilation	100.0%	2.96	2.96	63,946.3
Water Heating	Water Heater	61.0%	0.98	0.60	12,969.5
Interior Lighting	General Service Lighting	100.0%	0.50	0.50	10,760.4
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47	10,237.7
Interior Lighting	Linear Lighting	100.0%	3.00	3.00	64,919.0
Interior Lighting	High-Bay Lighting	100.0%	1.99	1.99	43,032.6
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	5,143.3
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	1,726.6
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	18,254.0
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.33	0.01	141.0
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01	221.5
Refrigeration	Glass Door Display	81.7%	0.08	0.06	1,326.4
Refrigeration	Open Display Case	81.7%	0.45	0.36	7,862.3
Refrigeration	Icemaker	52.4%	0.25	0.13	2,786.9
Refrigeration	Vending Machine	52.4%	0.12	0.06	1,308.8
Food Preparation	Oven	48.9%	0.15	0.07	1,569.0
Food Preparation	Fryer	45.2%	0.21	0.10	2,097.3
Food Preparation	Dishwasher	39.6%	0.30	0.12	2,527.0
Food Preparation	Hot Food Container	39.6%	0.04	0.02	345.9
Food Preparation	Steamer	39.6%	0.22	0.09	1,852.9
Office Equipment	Desktop Computer	100.0%	0.30	0.30	6,556.4
Office Equipment	Laptop	100.0%	0.05	0.05	1,012.4
Office Equipment	Monitor	100.0%	0.05	0.05	1,157.0
Office Equipment	Server	82.0%	0.04	0.04	790.6
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	897.3
Office Equipment	POS Terminal	100.0%	0.01	0.01	154.5
Miscellaneous	Non-HVAC Motors	40.2%	0.18	0.07	1,526.6
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	7.0%	0.00	0.00	2.5
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00	4.7
Miscellaneous	Miscellaneous	100.0%	0.66	0.66	14,369.8
Total				20.15	435,497.3

Table A-97   Utah Large Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	1.1%	4.00	0.05
Cooling	Water-Cooled Chiller	0.7%	3.24	0.02
Cooling	RTU	79.0%	4.65	3.67
Cooling	PTAC	3.5%	4.43	0.15
Cooling	PTHP	0.7%	4.43	0.03
Cooling	Evaporative Central AC	4.0%	1.98	0.08
Cooling	Air-Source Heat Pump	4.2%	4.30	0.18
Cooling	Geothermal Heat Pump	0.0%	2.56	0.00
Heating	Electric Furnace	3.4%	3.61	0.12
Heating	Electric Room Heat	39.3%	3.44	1.35
Heating	PTHP	0.7%	3.13	0.02
Heating	Air-Source Heat Pump	4.2%	2.53	0.11
Heating	Geothermal Heat Pump	0.0%	2.96	0.00
Ventilation	Ventilation	100.0%	2.48	2.48
Water Heating	Water Heater	61.0%	0.92	0.56
Interior Lighting	General Service Lighting	100.0%	0.47	0.47
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47
Interior Lighting	Linear Lighting	100.0%	2.71	2.71
Interior Lighting	High-Bay Lighting	100.0%	1.80	1.80
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.29	0.01
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01
Refrigeration	Glass Door Display	81.7%	0.07	0.06
Refrigeration	Open Display Case	81.7%	0.40	0.33
Refrigeration	Icemaker	52.4%	0.22	0.12
Refrigeration	Vending Machine	52.4%	0.10	0.05
Food Preparation	Oven	48.9%	0.13	0.07
Food Preparation	Fryer	45.2%	0.19	0.09
Food Preparation	Dishwasher	39.6%	0.27	0.11
Food Preparation	Hot Food Container	39.6%	0.04	0.01
Food Preparation	Steamer	39.6%	0.19	0.08
Office Equipment	Desktop Computer	100.0%	0.29	0.29
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	82.0%	0.04	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	40.2%	0.16	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	7.0%	0.00	0.00
Miscellaneous	Clothes Dryer	4.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.66	0.66
Total				17.45

Table A-98   Utah Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.60	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	5.40	0.00	0.0
Cooling	RTU	67.0%	6.24	4.18	193,907.7
Cooling	PTAC	2.4%	6.16	0.15	6,757.8
Cooling	PTHP	0.8%	6.16	0.05	2,143.4
Cooling	Evaporative Central AC	0.0%	2.49	0.00	54.9
Cooling	Air-Source Heat Pump	14.3%	6.23	0.89	41,355.2
Cooling	Geothermal Heat Pump	7.7%	3.80	0.29	13,507.9
Heating	Electric Furnace	0.5%	6.60	0.03	1,527.6
Heating	Electric Room Heat	9.6%	6.29	0.60	28,034.1
Heating	PTHP	0.8%	4.50	0.03	1,564.6
Heating	Air-Source Heat Pump	14.3%	5.00	0.71	33,147.8
Heating	Geothermal Heat Pump	7.7%	3.43	0.26	12,190.1
Ventilation	Ventilation	100.0%	1.17	1.17	54,465.9
Water Heating	Water Heater	61.8%	0.87	0.54	24,979.0
Interior Lighting	General Service Lighting	100.0%	0.33	0.33	15,235.2
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31	14,495.1
Interior Lighting	Linear Lighting	100.0%	1.98	1.98	91,915.9
Interior Lighting	High-Bay Lighting	100.0%	1.31	1.31	60,928.0
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	11,033.6
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	3,703.9
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	39,159.1
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.20	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00	111.1
Refrigeration	Glass Door Display	5.4%	0.05	0.00	114.0
Refrigeration	Open Display Case	5.4%	0.27	0.01	675.7
Refrigeration	Icemaker	5.1%	0.15	0.01	355.5
Refrigeration	Vending Machine	5.1%	0.07	0.00	167.0
Food Preparation	Oven	3.6%	0.17	0.01	295.8
Food Preparation	Fryer	3.6%	0.25	0.01	427.7
Food Preparation	Dishwasher	3.6%	0.35	0.01	588.7
Food Preparation	Hot Food Container	3.6%	0.05	0.00	80.6
Food Preparation	Steamer	3.6%	0.26	0.01	431.7
Office Equipment	Desktop Computer	100.0%	0.10	0.10	4,765.6
Office Equipment	Laptop	100.0%	0.02	0.02	735.9
Office Equipment	Monitor	100.0%	0.02	0.02	841.0
Office Equipment	Server	100.0%	0.12	0.12	5,606.6
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	521.8
Office Equipment	POS Terminal	100.0%	0.03	0.03	1,497.4
Miscellaneous	Non-HVAC Motors	22.0%	0.12	0.03	1,238.0
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.00	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.52	0.52	24,055.2
Total				14.94	692,616.2

Table A-99   Utah Small Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	4.36	0.00
Cooling	Water-Cooled Chiller	0.0%	3.53	0.00
Cooling	RTU	67.0%	4.41	2.96
Cooling	PTAC	2.4%	4.19	0.10
Cooling	PTHP	0.8%	4.19	0.03
Cooling	Evaporative Central AC	0.0%	2.16	0.00
Cooling	Air-Source Heat Pump	14.3%	4.68	0.67
Cooling	Geothermal Heat Pump	7.7%	2.79	0.21
Heating	Electric Furnace	0.5%	5.20	0.03
Heating	Electric Room Heat	9.6%	4.95	0.48
Heating	PTHP	0.8%	3.82	0.03
Heating	Air-Source Heat Pump	14.3%	2.87	0.41
Heating	Geothermal Heat Pump	7.7%	3.23	0.25
Ventilation	Ventilation	100.0%	1.01	1.01
Water Heating	Water Heater	61.8%	0.82	0.51
Interior Lighting	General Service Lighting	100.0%	0.31	0.31
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31
Interior Lighting	Linear Lighting	100.0%	1.79	1.79
Interior Lighting	High-Bay Lighting	100.0%	1.19	1.19
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.18	0.00
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00
Refrigeration	Glass Door Display	5.4%	0.04	0.00
Refrigeration	Open Display Case	5.4%	0.24	0.01
Refrigeration	Icemaker	5.1%	0.14	0.01
Refrigeration	Vending Machine	5.1%	0.06	0.00
Food Preparation	Oven	3.6%	0.16	0.01
Food Preparation	Fryer	3.6%	0.23	0.01
Food Preparation	Dishwasher	3.6%	0.31	0.01
Food Preparation	Hot Food Container	3.6%	0.04	0.00
Food Preparation	Steamer	3.6%	0.23	0.01
Office Equipment	Desktop Computer	100.0%	0.10	0.10
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.03	0.03
Miscellaneous	Non-HVAC Motors	22.0%	0.11	0.02
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.00	0.00
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.52	0.52
Total				12.22

Table A-100   Utah Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	6.49	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	6.33	0.00	0.0
Cooling	RTU	72.9%	7.66	5.58	51,491.0
Cooling	PTAC	2.7%	8.59	0.23	2,115.2
Cooling	PTHP	1.9%	8.59	0.17	1,523.7
Cooling	Evaporative Central AC	3.3%	3.06	0.10	930.2
Cooling	Air-Source Heat Pump	8.2%	7.66	0.63	5,805.1
Cooling	Geothermal Heat Pump	0.0%	4.66	0.00	0.0
Heating	Electric Furnace	6.1%	5.26	0.32	2,951.8
Heating	Electric Room Heat	0.6%	5.01	0.03	254.7
Heating	PTHP	1.9%	3.34	0.06	592.2
Heating	Air-Source Heat Pump	8.2%	3.71	0.30	2,813.6
Heating	Geothermal Heat Pump	0.0%	2.65	0.00	0.0
Ventilation	Ventilation	100.0%	2.13	2.13	19,624.0
Water Heating	Water Heater	57.9%	8.27	4.79	44,174.1
Interior Lighting	General Service Lighting	100.0%	1.34	1.34	12,363.6
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94	8,664.9
Interior Lighting	Linear Lighting	100.0%	1.87	1.87	17,227.3
Interior Lighting	High-Bay Lighting	100.0%	2.92	2.92	26,927.5
Exterior Lighting	General Service Lighting	100.0%	0.28	0.28	2,547.8
Exterior Lighting	Linear Lighting	100.0%	0.40	0.40	3,723.2
Exterior Lighting	Area Lighting	100.0%	2.14	2.14	19,751.0
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.78	5.02	46,272.8
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	3.04	0.21	1,964.8
Refrigeration	Glass Door Display	5.2%	1.56	0.08	749.0
Refrigeration	Open Display Case	5.2%	9.25	0.48	4,439.6
Refrigeration	Icemaker	97.3%	2.56	2.49	22,955.2
Refrigeration	Vending Machine	97.3%	1.20	1.17	10,780.5
Food Preparation	Oven	0.0%	16.94	0.00	0.0
Food Preparation	Fryer	0.0%	24.50	0.00	0.0
Food Preparation	Dishwasher	52.5%	16.86	8.85	81,667.7
Food Preparation	Hot Food Container	0.0%	2.31	0.00	0.0
Food Preparation	Steamer	0.0%	12.36	0.00	0.0
Office Equipment	Desktop Computer	100.0%	0.29	0.29	2,695.4
Office Equipment	Laptop	100.0%	0.04	0.04	333.0
Office Equipment	Monitor	100.0%	0.05	0.05	475.7
Office Equipment	Server	50.0%	0.34	0.17	1,585.6
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	590.3
Office Equipment	POS Terminal	100.0%	0.09	0.09	846.9
Miscellaneous	Non-HVAC Motors	20.0%	0.52	0.10	953.8
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	2.07	2.07	19,099.0
Total				45.41	418,890.3

Table A-101   Utah Restaurant New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	6.13	0.00
Cooling	Water-Cooled Chiller	0.0%	5.64	0.00
Cooling	RTU	72.9%	5.51	4.02
Cooling	PTAC	2.7%	5.93	0.16
Cooling	PTHP	1.9%	5.93	0.11
Cooling	Evaporative Central AC	3.3%	2.65	0.09
Cooling	Air-Source Heat Pump	8.2%	5.85	0.48
Cooling	Geothermal Heat Pump	0.0%	3.43	0.00
Heating	Electric Furnace	6.1%	5.67	0.35
Heating	Electric Room Heat	0.6%	5.40	0.03
Heating	PTHP	1.9%	3.01	0.06
Heating	Air-Source Heat Pump	8.2%	3.19	0.26
Heating	Geothermal Heat Pump	0.0%	2.50	0.00
Ventilation	Ventilation	100.0%	1.91	1.91
Water Heating	Water Heater	57.9%	7.78	4.50
Interior Lighting	General Service Lighting	100.0%	1.27	1.27
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94
Interior Lighting	Linear Lighting	100.0%	1.69	1.69
Interior Lighting	High-Bay Lighting	100.0%	2.63	2.63
Exterior Lighting	General Service Lighting	100.0%	0.25	0.25
Exterior Lighting	Linear Lighting	100.0%	0.36	0.36
Exterior Lighting	Area Lighting	100.0%	1.93	1.93
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.10	4.51
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.74	0.19
Refrigeration	Glass Door Display	5.2%	1.41	0.07
Refrigeration	Open Display Case	5.2%	8.33	0.43
Refrigeration	Icemaker	97.3%	2.30	2.24
Refrigeration	Vending Machine	97.3%	1.08	1.05
Food Preparation	Oven	0.0%	15.25	0.00
Food Preparation	Fryer	0.0%	22.05	0.00
Food Preparation	Dishwasher	52.5%	15.17	7.97
Food Preparation	Hot Food Container	0.0%	2.08	0.00
Food Preparation	Steamer	0.0%	11.13	0.00
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	50.0%	0.33	0.16
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.09	0.09
Miscellaneous	Non-HVAC Motors	20.0%	0.47	0.09
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	2.07	2.07
Total				40.36

Table A-102   Utah Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.5%	6.98	0.04	249.5
Cooling	Water-Cooled Chiller	0.3%	6.73	0.02	148.1
Cooling	RTU	71.3%	7.78	5.55	38,458.2
Cooling	PTAC	2.1%	8.73	0.19	1,288.3
Cooling	PTHP	0.6%	8.73	0.05	380.9
Cooling	Evaporative Central AC	1.2%	3.11	0.04	253.5
Cooling	Air-Source Heat Pump	7.2%	7.38	0.53	3,698.3
Cooling	Geothermal Heat Pump	0.0%	2.85	0.00	0.0
Heating	Electric Furnace	6.4%	6.12	0.39	2,702.0
Heating	Electric Room Heat	1.2%	5.83	0.07	473.8
Heating	PTHP	0.6%	2.84	0.02	123.8
Heating	Air-Source Heat Pump	7.2%	3.15	0.23	1,580.0
Heating	Geothermal Heat Pump	0.0%	2.15	0.00	0.0
Ventilation	Ventilation	100.0%	2.01	2.01	13,948.1
Water Heating	Water Heater	62.5%	2.10	1.31	9,089.1
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	2,644.6
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30	2,045.5
Interior Lighting	Linear Lighting	100.0%	5.01	5.01	34,723.1
Interior Lighting	High-Bay Lighting	100.0%	2.02	2.02	14,000.0
Exterior Lighting	General Service Lighting	100.0%	0.36	0.36	2,508.5
Exterior Lighting	Linear Lighting	100.0%	0.38	0.38	2,644.2
Exterior Lighting	Area Lighting	100.0%	1.78	1.78	12,358.6
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	5.13	0.82	5,684.2
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.33	0.27	1,892.1
Refrigeration	Glass Door Display	94.9%	3.37	3.20	22,188.0
Refrigeration	Open Display Case	94.9%	20.00	18.98	131,518.1
Refrigeration	Icemaker	98.9%	0.28	0.27	1,893.7
Refrigeration	Vending Machine	98.9%	0.26	0.26	1,778.7
Food Preparation	Oven	11.0%	0.60	0.07	457.6
Food Preparation	Fryer	87.0%	0.87	0.76	5,234.4
Food Preparation	Dishwasher	54.9%	1.19	0.66	4,543.4
Food Preparation	Hot Food Container	73.0%	0.16	0.12	827.3
Food Preparation	Steamer	20.0%	0.88	0.18	1,214.3
Office Equipment	Desktop Computer	100.0%	0.16	0.16	1,108.2
Office Equipment	Laptop	64.0%	0.02	0.02	109.5
Office Equipment	Monitor	100.0%	0.03	0.03	195.6
Office Equipment	Server	100.0%	0.09	0.09	651.9
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	121.3
Office Equipment	POS Terminal	100.0%	0.06	0.06	435.3
Miscellaneous	Non-HVAC Motors	34.6%	0.15	0.05	356.3
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.47	0.47	3,259.5
Total				47.16	326,787.7

Table A-103   Utah Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.5%	5.72	0.03
Cooling	Water-Cooled Chiller	0.3%	5.35	0.02
Cooling	RTU	71.3%	6.77	4.83
Cooling	PTAC	2.1%	6.03	0.13
Cooling	PTHP	0.6%	6.03	0.04
Cooling	Evaporative Central AC	1.2%	2.69	0.03
Cooling	Air-Source Heat Pump	7.2%	6.36	0.46
Cooling	Geothermal Heat Pump	0.0%	2.10	0.00
Heating	Electric Furnace	6.4%	4.95	0.32
Heating	Electric Room Heat	1.2%	4.71	0.06
Heating	PTHP	0.6%	2.56	0.02
Heating	Air-Source Heat Pump	7.2%	4.02	0.29
Heating	Geothermal Heat Pump	0.0%	2.03	0.00
Ventilation	Ventilation	100.0%	2.98	2.98
Water Heating	Water Heater	62.5%	1.97	1.23
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30
Interior Lighting	Linear Lighting	100.0%	4.52	4.52
Interior Lighting	High-Bay Lighting	100.0%	1.82	1.82
Exterior Lighting	General Service Lighting	100.0%	0.33	0.33
Exterior Lighting	Linear Lighting	100.0%	0.34	0.34
Exterior Lighting	Area Lighting	100.0%	1.61	1.61
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	4.61	0.74
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.30	0.25
Refrigeration	Glass Door Display	94.9%	3.04	2.88
Refrigeration	Open Display Case	94.9%	18.00	17.08
Refrigeration	Icemaker	98.9%	0.25	0.25
Refrigeration	Vending Machine	98.9%	0.23	0.23
Food Preparation	Oven	11.0%	0.54	0.06
Food Preparation	Fryer	87.0%	0.78	0.68
Food Preparation	Dishwasher	54.9%	1.08	0.59
Food Preparation	Hot Food Container	73.0%	0.15	0.11
Food Preparation	Steamer	20.0%	0.79	0.16
Office Equipment	Desktop Computer	100.0%	0.15	0.15
Office Equipment	Laptop	64.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.09	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	34.6%	0.13	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.47	0.47
Total				43.60

Table A-104   Utah Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	16.7%	8.90	1.48	18,351.9
Cooling	Water-Cooled Chiller	66.7%	9.43	6.29	77,806.9
Cooling	RTU	11.0%	8.98	0.98	12,174.7
Cooling	PTAC	0.4%	10.07	0.04	479.4
Cooling	PTHP	0.0%	10.07	0.00	0.0
Cooling	Evaporative Central AC	0.0%	3.59	0.00	0.0
Cooling	Air-Source Heat Pump	0.6%	8.96	0.05	639.9
Cooling	Geothermal Heat Pump	0.9%	5.46	0.05	584.5
Heating	Electric Furnace	3.0%	12.31	0.36	4,496.7
Heating	Electric Room Heat	0.1%	11.73	0.01	88.2
Heating	PTHP	0.0%	7.23	0.00	0.0
Heating	Air-Source Heat Pump	0.6%	8.03	0.05	573.5
Heating	Geothermal Heat Pump	0.9%	5.64	0.05	604.2
Ventilation	Ventilation	100.0%	3.46	3.46	42,815.3
Water Heating	Water Heater	4.0%	3.44	0.14	1,682.2
Interior Lighting	General Service Lighting	100.0%	0.55	0.55	6,789.1
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	2,822.9
Interior Lighting	Linear Lighting	100.0%	4.04	4.04	49,933.3
Interior Lighting	High-Bay Lighting	100.0%	2.59	2.59	32,077.5
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	545.7
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	1,012.9
Exterior Lighting	Area Lighting	100.0%	0.66	0.66	8,215.8
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.23	0.08	958.1
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.05	0.03	325.8
Refrigeration	Glass Door Display	90.4%	0.05	0.05	604.6
Refrigeration	Open Display Case	90.4%	0.32	0.29	3,583.4
Refrigeration	Icemaker	90.4%	0.18	0.16	1,980.4
Refrigeration	Vending Machine	90.4%	0.08	0.08	930.1
Food Preparation	Oven	69.7%	0.49	0.34	4,231.7
Food Preparation	Fryer	80.7%	0.71	0.57	7,085.4
Food Preparation	Dishwasher	53.5%	0.98	0.52	6,461.0
Food Preparation	Hot Food Container	53.5%	0.13	0.07	884.3
Food Preparation	Steamer	53.5%	0.72	0.38	4,737.5
Office Equipment	Desktop Computer	100.0%	0.56	0.56	6,893.5
Office Equipment	Laptop	100.0%	0.03	0.03	425.8
Office Equipment	Monitor	100.0%	0.10	0.10	1,216.5
Office Equipment	Server	100.0%	0.07	0.07	811.0
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	754.8
Office Equipment	POS Terminal	100.0%	0.04	0.04	541.5
Miscellaneous	Non-HVAC Motors	74.1%	0.53	0.39	4,813.8
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	63.0%	0.03	0.02	244.3
Miscellaneous	Clothes Dryer	58.0%	0.10	0.06	730.1
Miscellaneous	Miscellaneous	100.0%	4.09	4.09	50,546.5
Total				29.15	360,454.8

Table A-105   Utah Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.7%	5.70	0.95
Cooling	Water-Cooled Chiller	66.7%	5.43	3.63
Cooling	RTU	11.0%	6.56	0.72
Cooling	PTAC	0.4%	7.82	0.03
Cooling	PTHP	0.0%	7.82	0.00
Cooling	Evaporative Central AC	0.0%	3.09	0.00
Cooling	Air-Source Heat Pump	0.6%	6.83	0.04
Cooling	Geothermal Heat Pump	0.9%	4.02	0.03
Heating	Electric Furnace	3.0%	9.01	0.27
Heating	Electric Room Heat	0.1%	8.58	0.01
Heating	PTHP	0.0%	7.14	0.00
Heating	Air-Source Heat Pump	0.6%	3.13	0.02
Heating	Geothermal Heat Pump	0.9%	5.32	0.05
Ventilation	Ventilation	100.0%	2.48	2.48
Water Heating	Water Heater	4.0%	3.23	0.13
Interior Lighting	General Service Lighting	100.0%	0.52	0.52
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	3.64	3.64
Interior Lighting	High-Bay Lighting	100.0%	2.34	2.34
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.60	0.60
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.21	0.07
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.05	0.02
Refrigeration	Glass Door Display	90.4%	0.05	0.04
Refrigeration	Open Display Case	90.4%	0.29	0.26
Refrigeration	Icemaker	90.4%	0.16	0.14
Refrigeration	Vending Machine	90.4%	0.07	0.07
Food Preparation	Oven	69.7%	0.44	0.31
Food Preparation	Fryer	80.7%	0.64	0.52
Food Preparation	Dishwasher	53.5%	0.88	0.47
Food Preparation	Hot Food Container	53.5%	0.12	0.06
Food Preparation	Steamer	53.5%	0.64	0.34
Office Equipment	Desktop Computer	100.0%	0.53	0.53
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.09	0.09
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.04	0.04
Miscellaneous	Non-HVAC Motors	74.1%	0.47	0.35
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	63.0%	0.03	0.02
Miscellaneous	Clothes Dryer	58.0%	0.09	0.05
Miscellaneous	Miscellaneous	100.0%	4.09	4.09
Total				23.43

Table A-106   Utah College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	27.3%	6.73	1.84	34,676.4
Cooling	Water-Cooled Chiller	0.0%	8.18	0.00	0.0
Cooling	RTU	44.8%	4.51	2.02	38,148.4
Cooling	PTAC	2.9%	5.06	0.15	2,779.2
Cooling	PTHP	2.0%	5.06	0.10	1,945.8
Cooling	Evaporative Central AC	0.0%	1.80	0.00	1.3
Cooling	Air-Source Heat Pump	7.6%	4.51	0.34	6,452.3
Cooling	Geothermal Heat Pump	5.5%	2.74	0.15	2,844.2
Heating	Electric Furnace	0.0%	10.10	0.00	0.0
Heating	Electric Room Heat	16.2%	9.62	1.56	29,354.4
Heating	PTHP	2.0%	6.01	0.12	2,310.9
Heating	Air-Source Heat Pump	7.6%	6.68	0.51	9,565.0
Heating	Geothermal Heat Pump	5.5%	5.03	0.28	5,214.5
Ventilation	Ventilation	100.0%	1.48	1.48	27,839.6
Water Heating	Water Heater	64.3%	2.00	1.29	24,319.2
Interior Lighting	General Service Lighting	100.0%	0.09	0.09	1,782.6
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	762.7
Interior Lighting	Linear Lighting	100.0%	2.19	2.19	41,259.9
Interior Lighting	High-Bay Lighting	100.0%	1.42	1.42	26,845.9
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	377.5
Exterior Lighting	Linear Lighting	100.0%	0.75	0.75	14,133.1
Exterior Lighting	Area Lighting	100.0%	0.29	0.29	5,419.9
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.16	0.01	231.5
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01	180.5
Refrigeration	Glass Door Display	26.6%	0.04	0.01	184.4
Refrigeration	Open Display Case	26.6%	0.22	0.06	1,093.0
Refrigeration	Icemaker	26.6%	0.12	0.03	604.1
Refrigeration	Vending Machine	26.6%	0.06	0.02	283.7
Food Preparation	Oven	21.0%	0.23	0.05	908.8
Food Preparation	Fryer	21.0%	0.33	0.07	1,314.3
Food Preparation	Dishwasher	21.0%	0.46	0.10	1,808.9
Food Preparation	Hot Food Container	21.0%	0.06	0.01	247.6
Food Preparation	Steamer	21.0%	0.33	0.07	1,326.4
Office Equipment	Desktop Computer	100.0%	0.47	0.47	8,956.5
Office Equipment	Laptop	100.0%	0.02	0.02	414.9
Office Equipment	Monitor	100.0%	0.08	0.08	1,580.6
Office Equipment	Server	100.0%	0.06	0.06	1,053.7
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	1,225.8
Office Equipment	POS Terminal	100.0%	0.02	0.02	351.8
Miscellaneous	Non-HVAC Motors	88.8%	0.08	0.07	1,269.6
Miscellaneous	Pool Pump	90.3%	0.01	0.01	195.5
Miscellaneous	Pool Heater	36.2%	0.01	0.01	101.6
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	10.2
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	24.4
Miscellaneous	Miscellaneous	100.0%	0.33	0.33	6,291.2
Total				16.21	305,691.8

Table A-107   Utah College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	27.3%	4.07	1.11
Cooling	Water-Cooled Chiller	0.0%	4.50	0.00
Cooling	RTU	44.8%	3.17	1.42
Cooling	PTAC	2.9%	3.93	0.11
Cooling	PTHP	2.0%	3.93	0.08
Cooling	Evaporative Central AC	0.0%	1.56	0.00
Cooling	Air-Source Heat Pump	7.6%	3.29	0.25
Cooling	Geothermal Heat Pump	5.5%	2.02	0.11
Heating	Electric Furnace	0.0%	9.90	0.00
Heating	Electric Room Heat	16.2%	9.42	1.52
Heating	PTHP	2.0%	5.94	0.12
Heating	Air-Source Heat Pump	7.6%	5.23	0.40
Heating	Geothermal Heat Pump	5.5%	4.74	0.26
Ventilation	Ventilation	100.0%	1.45	1.45
Water Heating	Water Heater	64.3%	1.88	1.21
Interior Lighting	General Service Lighting	100.0%	0.09	0.09
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	1.97	1.97
Interior Lighting	High-Bay Lighting	100.0%	1.28	1.28
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.68	0.68
Exterior Lighting	Area Lighting	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.14	0.01
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.06	0.01
Refrigeration	Glass Door Display	26.6%	0.03	0.01
Refrigeration	Open Display Case	26.6%	0.20	0.05
Refrigeration	Icemaker	26.6%	0.11	0.03
Refrigeration	Vending Machine	26.6%	0.05	0.01
Food Preparation	Oven	21.0%	0.21	0.04
Food Preparation	Fryer	21.0%	0.30	0.06
Food Preparation	Dishwasher	21.0%	0.41	0.09
Food Preparation	Hot Food Container	21.0%	0.06	0.01
Food Preparation	Steamer	21.0%	0.30	0.06
Office Equipment	Desktop Computer	100.0%	0.45	0.45
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.08	0.08
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	88.8%	0.07	0.06
Miscellaneous	Pool Pump	90.3%	0.01	0.01
Miscellaneous	Pool Heater	36.2%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.33	0.33
Total				13.88

Table A-108   Utah School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	22.1%	3.37	0.74	28,051.2
Cooling	Water-Cooled Chiller	0.0%	4.09	0.00	0.0
Cooling	RTU	36.2%	2.26	0.82	30,859.8
Cooling	PTAC	2.4%	2.53	0.06	2,248.2
Cooling	PTHP	1.6%	2.53	0.04	1,574.1
Cooling	Evaporative Central AC	0.0%	0.90	0.00	1.1
Cooling	Air-Source Heat Pump	6.1%	2.25	0.14	5,219.5
Cooling	Geothermal Heat Pump	4.4%	1.37	0.06	2,300.8
Heating	Electric Furnace	0.0%	6.19	0.00	0.0
Heating	Electric Room Heat	4.4%	5.89	0.26	9,873.2
Heating	PTHP	1.6%	3.68	0.06	2,290.1
Heating	Air-Source Heat Pump	6.1%	4.09	0.25	9,478.8
Heating	Geothermal Heat Pump	4.4%	3.08	0.14	5,167.5
Ventilation	Ventilation	100.0%	0.72	0.72	27,300.6
Water Heating	Water Heater	50.0%	1.00	0.50	18,936.7
Interior Lighting	General Service Lighting	100.0%	0.16	0.16	6,141.8
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18	6,862.6
Interior Lighting	Linear Lighting	100.0%	1.51	1.51	57,123.8
Interior Lighting	High-Bay Lighting	100.0%	0.81	0.81	30,593.1
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00	150.7
Exterior Lighting	Linear Lighting	100.0%	0.66	0.66	24,813.5
Exterior Lighting	Area Lighting	100.0%	0.12	0.12	4,533.2
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.17	0.03	1,208.9
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.08	0.02	942.5
Refrigeration	Glass Door Display	65.7%	0.04	0.03	962.9
Refrigeration	Open Display Case	65.7%	0.23	0.15	5,707.6
Refrigeration	Icemaker	65.7%	0.13	0.08	3,154.4
Refrigeration	Vending Machine	65.7%	0.06	0.04	1,481.4
Food Preparation	Oven	64.8%	0.11	0.07	2,750.2
Food Preparation	Fryer	58.6%	0.16	0.10	3,596.7
Food Preparation	Dishwasher	52.3%	0.22	0.12	4,419.9
Food Preparation	Hot Food Container	52.3%	0.03	0.02	604.9
Food Preparation	Steamer	52.3%	0.16	0.09	3,240.9
Office Equipment	Desktop Computer	100.0%	0.29	0.29	10,955.1
Office Equipment	Laptop	100.0%	0.02	0.02	676.6
Office Equipment	Monitor	100.0%	0.05	0.05	1,933.3
Office Equipment	Server	100.0%	0.07	0.07	2,577.7
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03	1,199.5
Office Equipment	POS Terminal	36.0%	0.01	0.00	123.9
Miscellaneous	Non-HVAC Motors	43.7%	0.05	0.02	760.3
Miscellaneous	Pool Pump	6.0%	0.01	0.00	31.6
Miscellaneous	Pool Heater	1.0%	0.01	0.00	3.4
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	24.9
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	59.4
Miscellaneous	Miscellaneous	100.0%	0.21	0.21	7,961.6
Total				8.68	327,897.8

Table A-109   Utah School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.1%	2.03	0.45
Cooling	Water-Cooled Chiller	0.0%	2.25	0.00
Cooling	RTU	36.2%	1.58	0.57
Cooling	PTAC	2.4%	1.97	0.05
Cooling	PTHP	1.6%	1.97	0.03
Cooling	Evaporative Central AC	0.0%	0.78	0.00
Cooling	Air-Source Heat Pump	6.1%	1.64	0.10
Cooling	Geothermal Heat Pump	4.4%	1.01	0.04
Heating	Electric Furnace	0.0%	6.06	0.00
Heating	Electric Room Heat	4.4%	5.77	0.26
Heating	PTHP	1.6%	3.64	0.06
Heating	Air-Source Heat Pump	6.1%	3.20	0.20
Heating	Geothermal Heat Pump	4.4%	2.91	0.13
Ventilation	Ventilation	100.0%	0.71	0.71
Water Heating	Water Heater	50.0%	0.94	0.47
Interior Lighting	General Service Lighting	100.0%	0.15	0.15
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18
Interior Lighting	Linear Lighting	100.0%	1.37	1.37
Interior Lighting	High-Bay Lighting	100.0%	0.73	0.73
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00
Exterior Lighting	Linear Lighting	100.0%	0.59	0.59
Exterior Lighting	Area Lighting	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.15	0.03
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.07	0.02
Refrigeration	Glass Door Display	65.7%	0.03	0.02
Refrigeration	Open Display Case	65.7%	0.21	0.14
Refrigeration	Icemaker	65.7%	0.11	0.08
Refrigeration	Vending Machine	65.7%	0.05	0.04
Food Preparation	Oven	64.8%	0.10	0.07
Food Preparation	Fryer	58.6%	0.15	0.09
Food Preparation	Dishwasher	52.3%	0.20	0.11
Food Preparation	Hot Food Container	52.3%	0.03	0.01
Food Preparation	Steamer	52.3%	0.15	0.08
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	43.7%	0.04	0.02
Miscellaneous	Pool Pump	6.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.21	0.21
Total				7.55

Table A-110   Utah Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.0%	1.04	0.02	677.6
Cooling	Water-Cooled Chiller	7.3%	1.19	0.09	2,811.3
Cooling	RTU	15.8%	3.09	0.49	15,862.1
Cooling	PTAC	38.8%	3.47	1.34	43,760.1
Cooling	PTHP	13.0%	3.47	0.45	14,731.7
Cooling	Evaporative Central AC	0.5%	1.24	0.01	191.0
Cooling	Air-Source Heat Pump	5.1%	3.09	0.16	5,127.0
Cooling	Geothermal Heat Pump	5.5%	2.91	0.16	5,177.8
Heating	Electric Furnace	1.4%	2.09	0.03	979.0
Heating	Electric Room Heat	51.1%	1.99	1.02	33,082.3
Heating	PTHP	13.0%	1.70	0.22	7,223.4
Heating	Air-Source Heat Pump	5.1%	1.89	0.10	3,134.5
Heating	Geothermal Heat Pump	5.5%	1.37	0.07	2,439.8
Ventilation	Ventilation	100.0%	0.89	0.89	28,903.6
Water Heating	Water Heater	50.0%	2.99	1.49	48,647.2
Interior Lighting	General Service Lighting	100.0%	0.81	0.81	26,333.4
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43	13,945.1
Interior Lighting	Linear Lighting	100.0%	0.46	0.46	14,845.9
Interior Lighting	High-Bay Lighting	100.0%	1.29	1.29	41,891.9
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	1,240.2
Exterior Lighting	Linear Lighting	100.0%	0.03	0.03	833.2
Exterior Lighting	Area Lighting	100.0%	1.73	1.73	56,347.6
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.38	0.01	370.9
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.09	0.02	527.2
Refrigeration	Glass Door Display	58.9%	0.09	0.05	1,677.2
Refrigeration	Open Display Case	58.9%	0.52	0.31	9,941.6
Refrigeration	Icemaker	58.9%	0.14	0.08	2,747.2
Refrigeration	Vending Machine	58.9%	0.13	0.08	2,580.3
Food Preparation	Oven	13.8%	0.24	0.03	1,100.9
Food Preparation	Fryer	21.0%	0.35	0.07	2,422.8
Food Preparation	Dishwasher	30.0%	0.49	0.15	4,767.5
Food Preparation	Hot Food Container	30.0%	0.07	0.02	652.5
Food Preparation	Steamer	30.0%	0.36	0.11	3,495.8
Office Equipment	Desktop Computer	100.0%	0.08	0.08	2,718.1
Office Equipment	Laptop	100.0%	0.01	0.01	419.7
Office Equipment	Monitor	100.0%	0.01	0.01	479.7
Office Equipment	Server	100.0%	0.05	0.05	1,598.9
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	297.6
Office Equipment	POS Terminal	58.0%	0.01	0.01	247.7
Miscellaneous	Non-HVAC Motors	91.3%	0.12	0.11	3,565.5
Miscellaneous	Pool Pump	76.0%	0.01	0.01	299.8
Miscellaneous	Pool Heater	27.0%	0.02	0.00	138.0
Miscellaneous	Clothes Washer	67.0%	0.02	0.01	416.7
Miscellaneous	Clothes Dryer	26.0%	0.06	0.02	524.8
Miscellaneous	Miscellaneous	100.0%	0.56	0.56	18,085.2
Total				13.12	427,261.5

Table A-111   Utah Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	2.0%	0.91	0.02
Cooling	Water-Cooled Chiller	7.3%	1.01	0.07
Cooling	RTU	15.8%	2.96	0.47
Cooling	PTAC	38.8%	2.69	1.04
Cooling	PTHP	13.0%	2.69	0.35
Cooling	Evaporative Central AC	0.5%	1.07	0.01
Cooling	Air-Source Heat Pump	5.1%	3.02	0.15
Cooling	Geothermal Heat Pump	5.5%	2.14	0.12
Heating	Electric Furnace	1.4%	2.00	0.03
Heating	Electric Room Heat	51.1%	1.90	0.97
Heating	PTHP	13.0%	1.68	0.22
Heating	Air-Source Heat Pump	5.1%	1.57	0.08
Heating	Geothermal Heat Pump	5.5%	1.29	0.07
Ventilation	Ventilation	100.0%	0.80	0.80
Water Heating	Water Heater	50.0%	2.81	1.40
Interior Lighting	General Service Lighting	100.0%	0.77	0.77
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43
Interior Lighting	Linear Lighting	100.0%	0.41	0.41
Interior Lighting	High-Bay Lighting	100.0%	1.16	1.16
Exterior Lighting	General Service Lighting	100.0%	0.03	0.03
Exterior Lighting	Linear Lighting	100.0%	0.02	0.02
Exterior Lighting	Area Lighting	100.0%	1.56	1.56
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.34	0.01
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.08	0.01
Refrigeration	Glass Door Display	58.9%	0.08	0.05
Refrigeration	Open Display Case	58.9%	0.47	0.27
Refrigeration	Icemaker	58.9%	0.13	0.08
Refrigeration	Vending Machine	58.9%	0.12	0.07
Food Preparation	Oven	13.8%	0.22	0.03
Food Preparation	Fryer	21.0%	0.32	0.07
Food Preparation	Dishwasher	30.0%	0.44	0.13
Food Preparation	Hot Food Container	30.0%	0.06	0.02
Food Preparation	Steamer	30.0%	0.32	0.10
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	58.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	91.3%	0.11	0.10
Miscellaneous	Pool Pump	76.0%	0.01	0.01
Miscellaneous	Pool Heater	27.0%	0.01	0.00
Miscellaneous	Clothes Washer	67.0%	0.02	0.01
Miscellaneous	Clothes Dryer	26.0%	0.06	0.01
Miscellaneous	Miscellaneous	100.0%	0.56	0.56
Total				11.89

Table A-112   Utah Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	2.52	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	2.38	0.00	0.0
Cooling	RTU	16.0%	2.81	0.45	78,456.5
Cooling	PTAC	1.1%	3.15	0.03	5,777.1
Cooling	PTHP	0.3%	3.15	0.01	1,625.8
Cooling	Evaporative Central AC	0.0%	1.12	0.00	0.0
Cooling	Air-Source Heat Pump	1.7%	2.81	0.05	8,284.9
Cooling	Geothermal Heat Pump	0.0%	1.71	0.00	0.0
Heating	Electric Furnace	0.7%	6.19	0.04	7,650.0
Heating	Electric Room Heat	3.8%	5.90	0.23	39,408.4
Heating	PTHP	0.3%	5.00	0.01	2,583.3
Heating	Air-Source Heat Pump	1.7%	5.56	0.09	16,417.5
Heating	Geothermal Heat Pump	0.0%	4.86	0.00	0.0
Ventilation	Ventilation	100.0%	0.22	0.22	38,829.2
Water Heating	Water Heater	51.9%	0.22	0.12	20,301.0
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	12,652.0
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	6,255.7
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	49,170.7
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	295,797.8
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	3,480.8
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	13,510.6
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	65,947.6
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.43	0.00	826.2
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.10	0.00	337.5
Refrigeration	Glass Door Display	10.1%	0.10	0.01	1,749.1
Refrigeration	Open Display Case	10.1%	0.59	0.06	10,367.5
Refrigeration	Icemaker	10.1%	0.16	0.02	2,864.9
Refrigeration	Vending Machine	10.1%	0.08	0.01	1,345.4
Food Preparation	Oven	2.3%	0.03	0.00	119.1
Food Preparation	Fryer	2.3%	0.04	0.00	172.2
Food Preparation	Dishwasher	2.3%	0.06	0.00	237.0
Food Preparation	Hot Food Container	2.3%	0.01	0.00	32.4
Food Preparation	Steamer	2.3%	0.04	0.00	173.8
Office Equipment	Desktop Computer	100.0%	0.09	0.09	15,445.3
Office Equipment	Laptop	100.0%	0.01	0.01	1,907.9
Office Equipment	Monitor	100.0%	0.02	0.02	2,725.6
Office Equipment	Server	89.0%	0.10	0.09	16,172.1
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	1,691.1
Office Equipment	POS Terminal	77.0%	0.03	0.02	3,736.9
Miscellaneous	Non-HVAC Motors	49.9%	0.10	0.05	8,604.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.34	0.34	60,237.0
Total				4.55	794,894.3

Table A-113   Utah Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	1.66	0.00
Cooling	Water-Cooled Chiller	0.0%	1.55	0.00
Cooling	RTU	16.0%	1.85	0.30
Cooling	PTAC	1.1%	2.41	0.03
Cooling	PTHP	0.3%	2.41	0.01
Cooling	Evaporative Central AC	0.0%	0.97	0.00
Cooling	Air-Source Heat Pump	1.7%	1.74	0.03
Cooling	Geothermal Heat Pump	0.0%	1.26	0.00
Heating	Electric Furnace	0.7%	4.99	0.04
Heating	Electric Room Heat	3.8%	4.75	0.18
Heating	PTHP	0.3%	4.66	0.01
Heating	Air-Source Heat Pump	1.7%	3.16	0.05
Heating	Geothermal Heat Pump	0.0%	4.58	0.00
Ventilation	Ventilation	100.0%	0.17	0.17
Water Heating	Water Heater	51.9%	0.21	0.11
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.39	0.00
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Glass Door Display	10.1%	0.09	0.01
Refrigeration	Open Display Case	10.1%	0.53	0.05
Refrigeration	Icemaker	10.1%	0.15	0.01
Refrigeration	Vending Machine	10.1%	0.07	0.01
Food Preparation	Oven	2.3%	0.03	0.00
Food Preparation	Fryer	2.3%	0.04	0.00
Food Preparation	Dishwasher	2.3%	0.05	0.00
Food Preparation	Hot Food Container	2.3%	0.01	0.00
Food Preparation	Steamer	2.3%	0.04	0.00
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.10	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.03	0.02
Miscellaneous	Non-HVAC Motors	49.9%	0.09	0.04
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.34	0.34
Total				3.94

Table A-114   Utah Warehouse, Controlled Atmosphere Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	15.0%	2.22	0.33	1,126.1
Cooling	Water-Cooled Chiller	1.7%	2.10	0.03	118.0
Cooling	RTU	19.6%	2.47	0.49	1,642.7
Cooling	PTAC	1.2%	2.78	0.03	111.0
Cooling	PTHP	0.1%	2.78	0.00	11.1
Cooling	Evaporative Central AC	0.1%	0.99	0.00	4.0
Cooling	Air-Source Heat Pump	1.9%	2.47	0.05	155.0
Cooling	Geothermal Heat Pump	0.0%	1.51	0.00	0.0
Heating	Electric Furnace	0.5%	5.25	0.03	86.9
Heating	Electric Room Heat	2.6%	5.00	0.13	447.5
Heating	PTHP	0.1%	4.24	0.01	17.0
Heating	Air-Source Heat Pump	1.9%	4.71	0.09	295.1
Heating	Geothermal Heat Pump	0.0%	4.11	0.00	0.0
Ventilation	Ventilation	100.0%	0.68	0.68	2,301.7
Water Heating	Water Heater	52.7%	0.39	0.20	692.1
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	245.1
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	121.2
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	952.6
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	5,730.8
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	67.4
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	261.8
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	1,277.7
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	14.84	13.61	46,046.2
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.67	0.01	45.1
Refrigeration	Glass Door Display	10.1%	0.68	0.07	233.6
Refrigeration	Open Display Case	10.1%	4.05	0.41	1,384.9
Refrigeration	Icemaker	91.7%	1.12	1.03	3,474.6
Refrigeration	Vending Machine	91.7%	0.53	0.48	1,631.8
Food Preparation	Oven	40.8%	0.05	0.02	73.2
Food Preparation	Fryer	40.8%	0.08	0.03	105.8
Food Preparation	Dishwasher	40.8%	0.11	0.04	145.6
Food Preparation	Hot Food Container	40.8%	0.01	0.01	19.9
Food Preparation	Steamer	40.8%	0.08	0.03	106.8
Office Equipment	Desktop Computer	100.0%	0.06	0.06	219.6
Office Equipment	Laptop	100.0%	0.01	0.01	27.1
Office Equipment	Monitor	100.0%	0.01	0.01	38.8
Office Equipment	Server	89.0%	0.08	0.07	230.0
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	24.0
Office Equipment	POS Terminal	77.0%	0.02	0.02	53.1
Miscellaneous	Non-HVAC Motors	79.5%	0.08	0.06	212.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.28	0.28	942.1
Total				20.89	70,679.6

Table A-115   Utah Warehouse, Controlled Atmosphere New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	15.0%	1.46	0.22
Cooling	Water-Cooled Chiller	1.7%	1.36	0.02
Cooling	RTU	19.6%	1.63	0.32
Cooling	PTAC	1.2%	2.12	0.03
Cooling	PTHP	0.1%	2.12	0.00
Cooling	Evaporative Central AC	0.1%	0.86	0.00
Cooling	Air-Source Heat Pump	1.9%	1.54	0.03
Cooling	Geothermal Heat Pump	0.0%	1.11	0.00
Heating	Electric Furnace	0.5%	4.23	0.02
Heating	Electric Room Heat	2.6%	4.03	0.11
Heating	PTHP	0.1%	3.95	0.00
Heating	Air-Source Heat Pump	1.9%	2.68	0.05
Heating	Geothermal Heat Pump	0.0%	3.88	0.00
Ventilation	Ventilation	100.0%	0.52	0.52
Water Heating	Water Heater	52.7%	0.37	0.19
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	14.84	13.61
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.67	0.01
Refrigeration	Glass Door Display	10.1%	0.68	0.07
Refrigeration	Open Display Case	10.1%	4.05	0.41
Refrigeration	Icemaker	91.7%	1.12	1.03
Refrigeration	Vending Machine	91.7%	0.53	0.48
Food Preparation	Oven	40.8%	0.05	0.02
Food Preparation	Fryer	40.8%	0.07	0.03
Food Preparation	Dishwasher	40.8%	0.09	0.04
Food Preparation	Hot Food Container	40.8%	0.01	0.01
Food Preparation	Steamer	40.8%	0.07	0.03
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.07	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.02	0.01
Miscellaneous	Non-HVAC Motors	79.5%	0.07	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.28	0.28
Total				20.05

Table A-116   Utah Data Center Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	14.7%	35.93	5.27	10,008.9
Cooling	Water-Cooled Chiller	9.0%	34.96	3.16	5,997.0
Cooling	RTU	47.6%	38.77	18.44	34,996.4
Cooling	PTAC	2.5%	43.51	1.09	2,076.3
Cooling	PTHP	0.8%	43.51	0.35	658.6
Cooling	Evaporative Central AC	0.1%	15.51	0.01	14.8
Cooling	Air-Source Heat Pump	15.2%	38.77	5.90	11,188.8
Cooling	Geothermal Heat Pump	8.2%	23.62	1.93	3,655.9
Heating	Electric Furnace	1.2%	3.12	0.04	68.5
Heating	Electric Room Heat	22.3%	2.97	0.66	1,256.8
Heating	PTHP	0.8%	2.46	0.02	37.2
Heating	Air-Source Heat Pump	15.2%	2.73	0.42	787.7
Heating	Geothermal Heat Pump	8.2%	2.37	0.19	366.9
Ventilation	Ventilation	100.0%	25.38	25.38	48,173.0
Water Heating	Water Heater	45.2%	0.65	0.29	556.6
Interior Lighting	General Service Lighting	100.0%	0.47	0.47	900.4
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27	505.7
Interior Lighting	Linear Lighting	100.0%	3.91	3.91	7,415.4
Interior Lighting	High-Bay Lighting	100.0%	2.74	2.74	5,197.1
Exterior Lighting	General Service Lighting	100.0%	0.11	0.11	207.7
Exterior Lighting	Linear Lighting	100.0%	0.24	0.24	457.0
Exterior Lighting	Area Lighting	100.0%	1.12	1.12	2,119.6
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.10	0.00	3.9
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00	6.2
Refrigeration	Glass Door Display	5.1%	0.02	0.00	2.3
Refrigeration	Open Display Case	5.1%	0.14	0.01	13.7
Refrigeration	Icemaker	5.1%	0.04	0.00	3.8
Refrigeration	Vending Machine	5.1%	0.02	0.00	1.8
Food Preparation	Oven	3.6%	0.07	0.00	4.9
Food Preparation	Fryer	3.6%	0.10	0.00	7.0
Food Preparation	Dishwasher	3.6%	0.14	0.01	9.7
Food Preparation	Hot Food Container	3.6%	0.02	0.00	1.3
Food Preparation	Steamer	3.6%	0.10	0.00	7.1
Office Equipment	Desktop Computer	100.0%	5.40	5.40	10,250.7
Office Equipment	Laptop	100.0%	0.33	0.33	633.1
Office Equipment	Monitor	100.0%	0.95	0.95	1,808.9
Office Equipment	Server	100.0%	63.54	63.54	120,595.9
Office Equipment	Printer/Copier/Fax	100.0%	0.59	0.59	1,122.4
Office Equipment	POS Terminal	40.0%	0.17	0.07	128.8
Miscellaneous	Non-HVAC Motors	89.6%	5.38	4.82	9,142.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	18.39	18.39	34,900.8
Total				166.13	315,291.2

Table A-117   Utah Data Center New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.7%	22.41	3.29
Cooling	Water-Cooled Chiller	9.0%	18.70	1.69
Cooling	RTU	47.6%	25.51	12.13
Cooling	PTAC	2.5%	33.80	0.85
Cooling	PTHP	0.8%	33.80	0.27
Cooling	Evaporative Central AC	0.1%	13.40	0.01
Cooling	Air-Source Heat Pump	15.2%	24.08	3.66
Cooling	Geothermal Heat Pump	8.2%	17.38	1.42
Heating	Electric Furnace	1.2%	2.51	0.03
Heating	Electric Room Heat	22.3%	2.39	0.53
Heating	PTHP	0.8%	2.43	0.02
Heating	Air-Source Heat Pump	15.2%	1.55	0.24
Heating	Geothermal Heat Pump	8.2%	2.24	0.18
Ventilation	Ventilation	100.0%	17.56	17.56
Water Heating	Water Heater	45.2%	0.61	0.28
Interior Lighting	General Service Lighting	100.0%	0.45	0.45
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27
Interior Lighting	Linear Lighting	100.0%	3.53	3.53
Interior Lighting	High-Bay Lighting	100.0%	2.47	2.47
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10
Exterior Lighting	Linear Lighting	100.0%	0.22	0.22
Exterior Lighting	Area Lighting	100.0%	1.01	1.01
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00
Refrigeration	Glass Door Display	5.1%	0.02	0.00
Refrigeration	Open Display Case	5.1%	0.13	0.01
Refrigeration	Icemaker	5.1%	0.04	0.00
Refrigeration	Vending Machine	5.1%	0.02	0.00
Food Preparation	Oven	3.6%	0.06	0.00
Food Preparation	Fryer	3.6%	0.09	0.00
Food Preparation	Dishwasher	3.6%	0.13	0.00
Food Preparation	Hot Food Container	3.6%	0.02	0.00
Food Preparation	Steamer	3.6%	0.09	0.00
Office Equipment	Desktop Computer	100.0%	5.13	5.13
Office Equipment	Laptop	100.0%	0.32	0.32
Office Equipment	Monitor	100.0%	0.91	0.91
Office Equipment	Server	100.0%	60.37	60.37
Office Equipment	Printer/Copier/Fax	100.0%	0.56	0.56
Office Equipment	POS Terminal	40.0%	0.16	0.06
Miscellaneous	Non-HVAC Motors	89.6%	4.84	4.34
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	18.39	18.39
Total				140.29

Table A-118   Utah Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	9.7%	2.88	0.28	30,685.1
Cooling	Water-Cooled Chiller	5.0%	2.78	0.14	15,310.6
Cooling	RTU	56.8%	3.21	1.82	201,082.3
Cooling	PTAC	5.1%	3.60	0.18	20,168.0
Cooling	PTHP	2.6%	3.60	0.09	10,295.7
Cooling	Evaporative Central AC	0.0%	1.28	0.00	12.4
Cooling	Air-Source Heat Pump	5.5%	3.21	0.18	19,418.3
Cooling	Geothermal Heat Pump	1.0%	1.96	0.02	2,261.2
Heating	Electric Furnace	12.5%	3.89	0.48	53,305.9
Heating	Electric Room Heat	14.8%	3.70	0.55	60,280.7
Heating	PTHP	2.6%	3.02	0.08	8,628.7
Heating	Air-Source Heat Pump	5.5%	3.36	0.18	20,292.5
Heating	Geothermal Heat Pump	1.0%	2.73	0.03	3,158.9
Ventilation	Ventilation	100.0%	0.67	0.67	73,823.1
Water Heating	Water Heater	53.0%	1.27	0.67	74,028.0
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	41,477.8
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	25,198.8
Interior Lighting	Linear Lighting	100.0%	1.46	1.46	161,333.7
Interior Lighting	High-Bay Lighting	100.0%	1.56	1.56	171,875.9
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09	10,233.8
Exterior Lighting	Linear Lighting	100.0%	0.06	0.06	6,502.6
Exterior Lighting	Area Lighting	100.0%	0.64	0.64	70,329.3
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.55	0.06	6,275.7
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.12	0.01	1,643.2
Refrigeration	Glass Door Display	3.4%	0.13	0.00	481.9
Refrigeration	Open Display Case	3.4%	0.75	0.03	2,856.2
Refrigeration	Icemaker	21.6%	0.21	0.04	4,943.9
Refrigeration	Vending Machine	21.6%	0.20	0.04	4,643.6
Food Preparation	Oven	58.9%	0.08	0.05	5,015.7
Food Preparation	Fryer	29.9%	0.11	0.03	3,682.1
Food Preparation	Dishwasher	15.4%	0.15	0.02	2,611.7
Food Preparation	Hot Food Container	15.4%	0.02	0.00	357.5
Food Preparation	Steamer	15.4%	0.11	0.02	1,915.1
Office Equipment	Desktop Computer	100.0%	0.20	0.20	21,766.5
Office Equipment	Laptop	100.0%	0.03	0.03	3,361.0
Office Equipment	Monitor	100.0%	0.03	0.03	3,841.1
Office Equipment	Server	66.0%	0.12	0.08	8,450.5
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	2,383.2
Office Equipment	POS Terminal	28.0%	0.03	0.01	957.5
Miscellaneous	Non-HVAC Motors	59.9%	0.14	0.08	8,941.3
Miscellaneous	Pool Pump	4.0%	0.01	0.00	45.2
Miscellaneous	Pool Heater	1.0%	0.01	0.00	14.7
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	21.4
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00	46.3
Miscellaneous	Miscellaneous	100.0%	0.53	0.53	57,952.6
Total				11.09	1,221,911.0

Table A-119   Utah Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	9.7%	2.24	0.22
Cooling	Water-Cooled Chiller	5.0%	1.82	0.09
Cooling	RTU	56.8%	2.27	1.29
Cooling	PTAC	5.1%	2.45	0.12
Cooling	PTHP	2.6%	2.45	0.06
Cooling	Evaporative Central AC	0.0%	1.11	0.00
Cooling	Air-Source Heat Pump	5.5%	2.41	0.13
Cooling	Geothermal Heat Pump	1.0%	1.44	0.02
Heating	Electric Furnace	12.5%	3.06	0.38
Heating	Electric Room Heat	14.8%	2.91	0.43
Heating	PTHP	2.6%	2.56	0.07
Heating	Air-Source Heat Pump	5.5%	1.93	0.11
Heating	Geothermal Heat Pump	1.0%	2.58	0.03
Ventilation	Ventilation	100.0%	0.58	0.58
Water Heating	Water Heater	53.0%	1.19	0.63
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	1.32	1.32
Interior Lighting	High-Bay Lighting	100.0%	1.41	1.41
Exterior Lighting	General Service Lighting	100.0%	0.08	0.08
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.58	0.58
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.50	0.05
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.11	0.01
Refrigeration	Glass Door Display	3.4%	0.11	0.00
Refrigeration	Open Display Case	3.4%	0.68	0.02
Refrigeration	Icemaker	21.6%	0.19	0.04
Refrigeration	Vending Machine	21.6%	0.18	0.04
Food Preparation	Oven	58.9%	0.07	0.04
Food Preparation	Fryer	29.9%	0.10	0.03
Food Preparation	Dishwasher	15.4%	0.14	0.02
Food Preparation	Hot Food Container	15.4%	0.02	0.00
Food Preparation	Steamer	15.4%	0.10	0.02
Office Equipment	Desktop Computer	100.0%	0.19	0.19
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	66.0%	0.11	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	28.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	59.9%	0.12	0.07
Miscellaneous	Pool Pump	4.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.53	0.53
Total				9.42

Table A-120   Washington Large Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.7%	3.08	0.42	1,745.4
Cooling	Water-Cooled Chiller	8.5%	3.37	0.28	1,175.1
Cooling	RTU	44.5%	3.22	1.43	5,916.5
Cooling	PTAC	2.4%	3.80	0.09	368.2
Cooling	PTHP	0.7%	3.22	0.02	99.2
Cooling	Evaporative Central AC	0.0%	1.29	0.00	2.5
Cooling	Air-Source Heat Pump	14.2%	3.22	0.46	1,891.7
Cooling	Geothermal Heat Pump	7.6%	1.96	0.15	618.1
Heating	Electric Furnace	1.2%	5.64	0.07	287.0
Heating	Electric Room Heat	23.8%	5.37	1.28	5,267.0
Heating	PTHP	0.7%	4.29	0.03	132.1
Heating	Air-Source Heat Pump	14.2%	4.77	0.68	2,797.9
Heating	Geothermal Heat Pump	7.6%	3.85	0.29	1,209.9
Ventilation	Ventilation	100.0%	3.11	3.11	12,844.7
Water Heating	Water Heater	45.2%	1.04	0.47	1,937.5
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	1,025.4
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10	424.9
Interior Lighting	Linear Lighting	100.0%	1.72	1.72	7,115.5
Interior Lighting	High-Bay Lighting	100.0%	1.01	1.01	4,166.0
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10	394.1
Exterior Lighting	Linear Lighting	100.0%	0.18	0.18	742.6
Exterior Lighting	Area Lighting	100.0%	1.28	1.28	5,271.4
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.14	0.00	11.7
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00	18.4
Refrigeration	Glass Door Display	77.4%	0.03	0.03	104.5
Refrigeration	Open Display Case	77.4%	0.19	0.15	619.3
Refrigeration	Icemaker	44.9%	0.05	0.02	99.3
Refrigeration	Vending Machine	44.9%	0.05	0.02	93.2
Food Preparation	Oven	66.0%	0.09	0.06	240.5
Food Preparation	Fryer	76.4%	0.13	0.10	402.6
Food Preparation	Dishwasher	43.1%	0.18	0.08	312.3
Food Preparation	Hot Food Container	43.1%	0.02	0.01	42.7
Food Preparation	Steamer	43.1%	0.13	0.06	229.0
Office Equipment	Desktop Computer	100.0%	2.35	2.35	9,683.6
Office Equipment	Laptop	100.0%	0.36	0.36	1,495.3
Office Equipment	Monitor	100.0%	0.41	0.41	1,708.9
Office Equipment	Server	100.0%	0.23	0.23	949.4
Office Equipment	Printer/Copier/Fax	100.0%	0.21	0.21	883.6
Office Equipment	POS Terminal	40.0%	0.03	0.01	50.7
Miscellaneous	Non-HVAC Motors	89.6%	0.35	0.31	1,292.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.42	1.42	5,844.4
Total				19.27	79,514.3

Table A-121   Washington Large Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	13.7%	2.68	0.37
Cooling	Water-Cooled Chiller	8.5%	2.48	0.21
Cooling	RTU	44.5%	2.13	0.95
Cooling	PTAC	2.4%	2.92	0.07
Cooling	PTHP	0.7%	2.48	0.02
Cooling	Evaporative Central AC	0.0%	1.11	0.00
Cooling	Air-Source Heat Pump	14.2%	2.21	0.31
Cooling	Geothermal Heat Pump	7.6%	1.45	0.11
Heating	Electric Furnace	1.2%	6.46	0.08
Heating	Electric Room Heat	23.8%	6.15	1.46
Heating	PTHP	0.7%	4.11	0.03
Heating	Air-Source Heat Pump	14.2%	4.16	0.59
Heating	Geothermal Heat Pump	7.6%	3.63	0.28
Ventilation	Ventilation	100.0%	2.65	2.65
Water Heating	Water Heater	45.2%	0.98	0.44
Interior Lighting	General Service Lighting	100.0%	0.24	0.24
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10
Interior Lighting	Linear Lighting	100.0%	1.56	1.56
Interior Lighting	High-Bay Lighting	100.0%	0.91	0.91
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09
Exterior Lighting	Linear Lighting	100.0%	0.16	0.16
Exterior Lighting	Area Lighting	100.0%	1.15	1.15
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.13	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00
Refrigeration	Glass Door Display	77.4%	0.03	0.02
Refrigeration	Open Display Case	77.4%	0.17	0.14
Refrigeration	Icemaker	44.9%	0.05	0.02
Refrigeration	Vending Machine	44.9%	0.05	0.02
Food Preparation	Oven	66.0%	0.08	0.05
Food Preparation	Fryer	76.4%	0.11	0.09
Food Preparation	Dishwasher	43.1%	0.16	0.07
Food Preparation	Hot Food Container	43.1%	0.02	0.01
Food Preparation	Steamer	43.1%	0.12	0.05
Office Equipment	Desktop Computer	100.0%	2.23	2.23
Office Equipment	Laptop	100.0%	0.34	0.34
Office Equipment	Monitor	100.0%	0.39	0.39
Office Equipment	Server	100.0%	0.22	0.22
Office Equipment	Printer/Copier/Fax	100.0%	0.20	0.20
Office Equipment	POS Terminal	40.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	89.6%	0.31	0.28
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.42	1.42
Total				17.35

Table A-122   Washington Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.17	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	3.45	0.00	0.0
Cooling	RTU	65.6%	3.61	2.37	30,278.2
Cooling	PTAC	2.3%	4.25	0.10	1,257.4
Cooling	PTHP	0.7%	3.61	0.03	338.7
Cooling	Evaporative Central AC	0.0%	1.44	0.00	8.6
Cooling	Air-Source Heat Pump	14.0%	3.61	0.50	6,458.7
Cooling	Geothermal Heat Pump	7.5%	2.20	0.16	2,110.1
Heating	Electric Furnace	1.1%	6.82	0.08	991.4
Heating	Electric Room Heat	21.9%	6.49	1.42	18,192.9
Heating	PTHP	0.7%	5.16	0.04	484.5
Heating	Air-Source Heat Pump	14.0%	5.73	0.80	10,265.2
Heating	Geothermal Heat Pump	7.5%	4.44	0.33	4,258.0
Ventilation	Ventilation	100.0%	1.25	1.25	15,945.0
Water Heating	Water Heater	60.0%	0.94	0.56	7,186.9
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	3,155.6
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13	1,699.0
Interior Lighting	Linear Lighting	100.0%	1.54	1.54	19,733.5
Interior Lighting	High-Bay Lighting	100.0%	1.51	1.51	19,326.1
Exterior Lighting	General Service Lighting	100.0%	0.16	0.16	2,079.3
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07	930.8
Exterior Lighting	Area Lighting	100.0%	1.58	1.58	20,191.4
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.66	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.15	0.01	167.0
Refrigeration	Glass Door Display	0.0%	0.15	0.00	0.0
Refrigeration	Open Display Case	0.0%	0.90	0.00	0.0
Refrigeration	Icemaker	5.1%	0.25	0.01	163.2
Refrigeration	Vending Machine	5.1%	0.12	0.01	76.7
Food Preparation	Oven	3.6%	0.19	0.01	87.3
Food Preparation	Fryer	3.6%	0.27	0.01	126.2
Food Preparation	Dishwasher	3.6%	0.37	0.01	173.7
Food Preparation	Hot Food Container	3.6%	0.05	0.00	23.8
Food Preparation	Steamer	3.6%	0.27	0.01	127.4
Office Equipment	Desktop Computer	100.0%	1.24	1.24	15,885.0
Office Equipment	Laptop	100.0%	0.19	0.19	2,452.8
Office Equipment	Monitor	100.0%	0.22	0.22	2,803.2
Office Equipment	Server	100.0%	0.36	0.36	4,672.1
Office Equipment	Printer/Copier/Fax	100.0%	0.17	0.17	2,174.1
Office Equipment	POS Terminal	20.0%	0.10	0.02	249.6
Miscellaneous	Non-HVAC Motors	22.0%	0.28	0.06	780.9
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.19	1.19	15,173.3
Total				16.41	210,027.6

Table A-123   *Washington Small Office New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	2.75	0.00
Cooling	Water-Cooled Chiller	0.0%	3.09	0.00
Cooling	RTU	65.6%	2.22	1.46
Cooling	PTAC	2.3%	2.91	0.07
Cooling	PTHP	0.7%	2.47	0.02
Cooling	Evaporative Central AC	0.0%	1.25	0.00
Cooling	Air-Source Heat Pump	14.0%	2.36	0.33
Cooling	Geothermal Heat Pump	7.5%	1.62	0.12
Heating	Electric Furnace	1.1%	6.38	0.07
Heating	Electric Room Heat	21.9%	6.07	1.33
Heating	PTHP	0.7%	4.51	0.03
Heating	Air-Source Heat Pump	14.0%	3.91	0.55
Heating	Geothermal Heat Pump	7.5%	4.18	0.31
Ventilation	Ventilation	100.0%	1.07	1.07
Water Heating	Water Heater	60.0%	0.88	0.53
Interior Lighting	General Service Lighting	100.0%	0.23	0.23
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13
Interior Lighting	Linear Lighting	100.0%	1.39	1.39
Interior Lighting	High-Bay Lighting	100.0%	1.36	1.36
Exterior Lighting	General Service Lighting	100.0%	0.15	0.15
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	1.42	1.42
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.60	0.00
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.13	0.01
Refrigeration	Glass Door Display	0.0%	0.14	0.00
Refrigeration	Open Display Case	0.0%	0.81	0.00
Refrigeration	Icemaker	5.1%	0.23	0.01
Refrigeration	Vending Machine	5.1%	0.11	0.01
Food Preparation	Oven	3.6%	0.17	0.01
Food Preparation	Fryer	3.6%	0.24	0.01
Food Preparation	Dishwasher	3.6%	0.33	0.01
Food Preparation	Hot Food Container	3.6%	0.05	0.00
Food Preparation	Steamer	3.6%	0.25	0.01
Office Equipment	Desktop Computer	100.0%	1.18	1.18
Office Equipment	Laptop	100.0%	0.18	0.18
Office Equipment	Monitor	100.0%	0.21	0.21
Office Equipment	Server	100.0%	0.35	0.35
Office Equipment	Printer/Copier/Fax	100.0%	0.16	0.16
Office Equipment	POS Terminal	20.0%	0.09	0.02
Miscellaneous	Non-HVAC Motors	22.0%	0.25	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.19	1.19
Total				14.04

Table A-124   Washington Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	1.1%	2.81	0.03	111.0
Cooling	Water-Cooled Chiller	0.7%	3.05	0.02	74.3
Cooling	RTU	79.5%	3.19	2.54	8,843.8
Cooling	PTAC	3.5%	3.76	0.13	455.7
Cooling	PTHP	0.7%	3.19	0.02	79.7
Cooling	Evaporative Central AC	4.1%	1.28	0.05	180.9
Cooling	Air-Source Heat Pump	4.2%	3.19	0.13	468.7
Cooling	Geothermal Heat Pump	0.0%	1.95	0.00	0.0
Heating	Electric Furnace	3.4%	5.23	0.18	613.7
Heating	Electric Room Heat	39.3%	4.99	1.96	6,834.6
Heating	PTHP	0.7%	3.95	0.03	98.7
Heating	Air-Source Heat Pump	4.2%	4.39	0.18	645.0
Heating	Geothermal Heat Pump	0.0%	3.44	0.00	0.0
Ventilation	Ventilation	100.0%	3.11	3.11	10,854.7
Water Heating	Water Heater	65.5%	1.04	0.68	2,374.1
Interior Lighting	General Service Lighting	100.0%	0.50	0.50	1,735.6
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47	1,651.3
Interior Lighting	Linear Lighting	100.0%	3.00	3.00	10,471.3
Interior Lighting	High-Bay Lighting	100.0%	1.99	1.99	6,941.1
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	829.6
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	278.5
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	2,944.3
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.34	0.01	24.0
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.08	0.01	37.7
Refrigeration	Glass Door Display	81.7%	0.08	0.06	225.6
Refrigeration	Open Display Case	81.7%	0.47	0.38	1,337.0
Refrigeration	Icemaker	52.4%	0.26	0.14	473.9
Refrigeration	Vending Machine	52.4%	0.12	0.06	222.6
Food Preparation	Oven	48.9%	0.16	0.08	275.9
Food Preparation	Fryer	45.2%	0.23	0.11	368.8
Food Preparation	Dishwasher	39.6%	0.32	0.13	444.4
Food Preparation	Hot Food Container	39.6%	0.04	0.02	60.8
Food Preparation	Steamer	39.6%	0.24	0.09	325.9
Office Equipment	Desktop Computer	100.0%	0.30	0.30	1,057.5
Office Equipment	Laptop	100.0%	0.05	0.05	163.3
Office Equipment	Monitor	100.0%	0.05	0.05	186.6
Office Equipment	Server	82.0%	0.04	0.04	127.5
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	144.7
Office Equipment	POS Terminal	100.0%	0.01	0.01	24.9
Miscellaneous	Non-HVAC Motors	40.2%	0.21	0.08	288.7
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	7.0%	0.00	0.00	0.5
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00	0.9
Miscellaneous	Miscellaneous	100.0%	0.78	0.78	2,717.4
Total				18.64	64,995.3

Table A-125   Washington Large Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	1.1%	2.23	0.03
Cooling	Water-Cooled Chiller	0.7%	2.04	0.01
Cooling	RTU	79.5%	2.68	2.13
Cooling	PTAC	3.5%	2.57	0.09
Cooling	PTHP	0.7%	2.19	0.02
Cooling	Evaporative Central AC	4.1%	1.10	0.04
Cooling	Air-Source Heat Pump	4.2%	2.47	0.10
Cooling	Geothermal Heat Pump	0.0%	1.43	0.00
Heating	Electric Furnace	3.4%	3.70	0.12
Heating	Electric Room Heat	39.3%	3.52	1.38
Heating	PTHP	0.7%	3.46	0.02
Heating	Air-Source Heat Pump	4.2%	2.47	0.10
Heating	Geothermal Heat Pump	0.0%	3.24	0.00
Ventilation	Ventilation	100.0%	2.62	2.62
Water Heating	Water Heater	65.5%	0.98	0.64
Interior Lighting	General Service Lighting	100.0%	0.47	0.47
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47
Interior Lighting	Linear Lighting	100.0%	2.71	2.71
Interior Lighting	High-Bay Lighting	100.0%	1.80	1.80
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.31	0.01
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01
Refrigeration	Glass Door Display	81.7%	0.07	0.06
Refrigeration	Open Display Case	81.7%	0.42	0.35
Refrigeration	Icemaker	52.4%	0.23	0.12
Refrigeration	Vending Machine	52.4%	0.11	0.06
Food Preparation	Oven	48.9%	0.15	0.07
Food Preparation	Fryer	45.2%	0.21	0.10
Food Preparation	Dishwasher	39.6%	0.29	0.11
Food Preparation	Hot Food Container	39.6%	0.04	0.02
Food Preparation	Steamer	39.6%	0.21	0.08
Office Equipment	Desktop Computer	100.0%	0.29	0.29
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	82.0%	0.04	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	40.2%	0.19	0.07
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	7.0%	0.00	0.00
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.78	0.78
Total				16.12

Table A-126   Washington Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.18	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	3.46	0.00	0.0
Cooling	RTU	67.0%	3.62	2.43	21,196.0
Cooling	PTAC	2.4%	3.80	0.09	785.2
Cooling	PTHP	0.8%	3.62	0.03	237.0
Cooling	Evaporative Central AC	0.0%	1.45	0.00	6.0
Cooling	Air-Source Heat Pump	14.3%	3.62	0.52	4,518.1
Cooling	Geothermal Heat Pump	7.7%	2.20	0.17	1,475.4
Heating	Electric Furnace	0.5%	7.87	0.04	342.9
Heating	Electric Room Heat	9.6%	7.50	0.72	6,293.1
Heating	PTHP	0.8%	5.25	0.04	344.0
Heating	Air-Source Heat Pump	14.3%	5.84	0.83	7,288.9
Heating	Geothermal Heat Pump	7.7%	3.97	0.30	2,656.1
Ventilation	Ventilation	100.0%	1.25	1.25	10,874.4
Water Heating	Water Heater	61.8%	0.94	0.58	5,045.6
Interior Lighting	General Service Lighting	100.0%	0.33	0.33	2,868.3
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31	2,729.0
Interior Lighting	Linear Lighting	100.0%	1.98	1.98	17,304.9
Interior Lighting	High-Bay Lighting	100.0%	1.31	1.31	11,470.9
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	2,077.3
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	697.3
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	7,372.5
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.21	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.05	0.00	21.7
Refrigeration	Glass Door Display	5.4%	0.05	0.00	22.2
Refrigeration	Open Display Case	5.4%	0.28	0.02	131.8
Refrigeration	Icemaker	5.1%	0.16	0.01	69.3
Refrigeration	Vending Machine	5.1%	0.07	0.00	32.6
Food Preparation	Oven	3.6%	0.19	0.01	59.5
Food Preparation	Fryer	3.6%	0.27	0.01	86.1
Food Preparation	Dishwasher	3.6%	0.37	0.01	118.5
Food Preparation	Hot Food Container	3.6%	0.05	0.00	16.2
Food Preparation	Steamer	3.6%	0.27	0.01	86.9
Office Equipment	Desktop Computer	100.0%	0.10	0.10	897.2
Office Equipment	Laptop	100.0%	0.02	0.02	138.5
Office Equipment	Monitor	100.0%	0.02	0.02	158.3
Office Equipment	Server	100.0%	0.12	0.12	1,055.5
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	98.2
Office Equipment	POS Terminal	100.0%	0.03	0.03	281.9
Miscellaneous	Non-HVAC Motors	22.0%	0.13	0.03	258.5
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.00	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.58	0.58	5,022.8
Total				13.07	114,138.7

Table A-127   Washington Small Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	2.52	0.00
Cooling	Water-Cooled Chiller	0.0%	2.32	0.00
Cooling	RTU	67.0%	2.67	1.79
Cooling	PTAC	2.4%	2.57	0.06
Cooling	PTHP	0.8%	2.44	0.02
Cooling	Evaporative Central AC	0.0%	1.25	0.00
Cooling	Air-Source Heat Pump	14.3%	2.83	0.41
Cooling	Geothermal Heat Pump	7.7%	1.62	0.12
Heating	Electric Furnace	0.5%	5.21	0.03
Heating	Electric Room Heat	9.6%	4.96	0.48
Heating	PTHP	0.8%	4.01	0.03
Heating	Air-Source Heat Pump	14.3%	2.84	0.41
Heating	Geothermal Heat Pump	7.7%	3.74	0.29
Ventilation	Ventilation	100.0%	1.07	1.07
Water Heating	Water Heater	61.8%	0.88	0.54
Interior Lighting	General Service Lighting	100.0%	0.31	0.31
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31
Interior Lighting	Linear Lighting	100.0%	1.79	1.79
Interior Lighting	High-Bay Lighting	100.0%	1.19	1.19
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.19	0.00
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00
Refrigeration	Glass Door Display	5.4%	0.04	0.00
Refrigeration	Open Display Case	5.4%	0.25	0.01
Refrigeration	Icemaker	5.1%	0.14	0.01
Refrigeration	Vending Machine	5.1%	0.07	0.00
Food Preparation	Oven	3.6%	0.17	0.01
Food Preparation	Fryer	3.6%	0.24	0.01
Food Preparation	Dishwasher	3.6%	0.33	0.01
Food Preparation	Hot Food Container	3.6%	0.05	0.00
Food Preparation	Steamer	3.6%	0.25	0.01
Office Equipment	Desktop Computer	100.0%	0.10	0.10
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.03	0.03
Miscellaneous	Non-HVAC Motors	22.0%	0.12	0.03
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.00	0.00
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.58	0.58
Total				10.84

Table A-128   Washington Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.49	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	3.52	0.00	0.0
Cooling	RTU	72.9%	3.99	2.91	4,995.5
Cooling	PTAC	2.7%	4.69	0.13	215.3
Cooling	PTHP	1.9%	3.98	0.08	131.7
Cooling	Evaporative Central AC	3.3%	1.59	0.05	90.2
Cooling	Air-Source Heat Pump	8.2%	3.98	0.33	563.2
Cooling	Geothermal Heat Pump	0.0%	2.43	0.00	0.0
Heating	Electric Furnace	19.1%	4.81	0.92	1,575.1
Heating	Electric Room Heat	1.7%	4.58	0.08	135.9
Heating	PTHP	1.9%	3.01	0.06	99.6
Heating	Air-Source Heat Pump	8.2%	3.35	0.28	473.0
Heating	Geothermal Heat Pump	0.0%	2.37	0.00	0.0
Ventilation	Ventilation	100.0%	1.98	1.98	3,405.4
Water Heating	Water Heater	57.9%	7.75	4.49	7,713.1
Interior Lighting	General Service Lighting	100.0%	1.34	1.34	2,304.2
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94	1,614.9
Interior Lighting	Linear Lighting	100.0%	1.87	1.87	3,210.6
Interior Lighting	High-Bay Lighting	100.0%	2.92	2.92	5,018.4
Exterior Lighting	General Service Lighting	100.0%	0.28	0.28	474.8
Exterior Lighting	Linear Lighting	100.0%	0.40	0.40	693.9
Exterior Lighting	Area Lighting	100.0%	2.14	2.14	3,680.9
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.59	4.88	8,383.7
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.96	0.21	356.0
Refrigeration	Glass Door Display	5.2%	1.52	0.08	135.7
Refrigeration	Open Display Case	5.2%	9.00	0.47	804.4
Refrigeration	Icemaker	97.3%	2.49	2.42	4,159.0
Refrigeration	Vending Machine	97.3%	1.17	1.14	1,953.2
Food Preparation	Oven	21.0%	3.95	0.83	1,425.0
Food Preparation	Fryer	82.0%	5.71	4.68	8,046.9
Food Preparation	Dishwasher	52.5%	3.93	2.06	3,546.0
Food Preparation	Hot Food Container	84.0%	0.54	0.45	776.4
Food Preparation	Steamer	16.0%	2.88	0.46	792.3
Office Equipment	Desktop Computer	100.0%	0.29	0.29	502.3
Office Equipment	Laptop	100.0%	0.04	0.04	62.1
Office Equipment	Monitor	100.0%	0.05	0.05	88.6
Office Equipment	Server	50.0%	0.34	0.17	295.5
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	110.0
Office Equipment	POS Terminal	100.0%	0.09	0.09	157.8
Miscellaneous	Non-HVAC Motors	20.0%	0.54	0.11	184.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	2.15	2.15	3,692.9
Total				41.80	71,868.0

Table A-129   Washington Restaurant New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	3.31	0.00
Cooling	Water-Cooled Chiller	0.0%	3.21	0.00
Cooling	RTU	72.9%	2.90	2.12
Cooling	PTAC	2.7%	3.21	0.09
Cooling	PTHP	1.9%	2.73	0.05
Cooling	Evaporative Central AC	3.3%	1.38	0.05
Cooling	Air-Source Heat Pump	8.2%	3.08	0.25
Cooling	Geothermal Heat Pump	0.0%	1.79	0.00
Heating	Electric Furnace	19.1%	4.83	0.92
Heating	Electric Room Heat	1.7%	4.60	0.08
Heating	PTHP	1.9%	2.63	0.05
Heating	Air-Source Heat Pump	8.2%	2.69	0.22
Heating	Geothermal Heat Pump	0.0%	2.23	0.00
Ventilation	Ventilation	100.0%	1.80	1.80
Water Heating	Water Heater	57.9%	7.29	4.22
Interior Lighting	General Service Lighting	100.0%	1.27	1.27
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94
Interior Lighting	Linear Lighting	100.0%	1.69	1.69
Interior Lighting	High-Bay Lighting	100.0%	2.63	2.63
Exterior Lighting	General Service Lighting	100.0%	0.25	0.25
Exterior Lighting	Linear Lighting	100.0%	0.36	0.36
Exterior Lighting	Area Lighting	100.0%	1.93	1.93
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	5.93	4.39
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.66	0.19
Refrigeration	Glass Door Display	5.2%	1.37	0.07
Refrigeration	Open Display Case	5.2%	8.10	0.42
Refrigeration	Icemaker	97.3%	2.24	2.18
Refrigeration	Vending Machine	97.3%	1.05	1.02
Food Preparation	Oven	21.0%	3.55	0.75
Food Preparation	Fryer	82.0%	5.14	4.21
Food Preparation	Dishwasher	52.5%	3.54	1.86
Food Preparation	Hot Food Container	84.0%	0.48	0.41
Food Preparation	Steamer	16.0%	2.59	0.41
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	50.0%	0.33	0.16
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.09	0.09
Miscellaneous	Non-HVAC Motors	20.0%	0.48	0.10
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	2.15	2.15
Total				37.74

Table A-130   Washington Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.5%	3.98	0.02	38.3
Cooling	Water-Cooled Chiller	0.3%	4.33	0.01	25.7
Cooling	RTU	71.3%	4.53	3.23	6,034.0
Cooling	PTAC	2.1%	5.33	0.11	212.1
Cooling	PTHP	0.6%	4.15	0.03	48.8
Cooling	Evaporative Central AC	1.2%	1.81	0.02	39.8
Cooling	Air-Source Heat Pump	7.2%	4.15	0.30	560.6
Cooling	Geothermal Heat Pump	0.0%	1.41	0.00	0.0
Heating	Electric Furnace	6.4%	7.41	0.47	881.2
Heating	Electric Room Heat	1.2%	7.06	0.08	154.5
Heating	PTHP	0.6%	3.42	0.02	40.2
Heating	Air-Source Heat Pump	7.2%	3.80	0.27	512.8
Heating	Geothermal Heat Pump	0.0%	2.65	0.00	0.0
Ventilation	Ventilation	100.0%	2.18	2.18	4,069.5
Water Heating	Water Heater	62.5%	2.29	1.43	2,671.2
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	712.3
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30	550.9
Interior Lighting	Linear Lighting	100.0%	5.01	5.01	9,352.4
Interior Lighting	High-Bay Lighting	100.0%	2.02	2.02	3,770.8
Exterior Lighting	General Service Lighting	100.0%	0.36	0.36	675.6
Exterior Lighting	Linear Lighting	100.0%	0.38	0.38	712.2
Exterior Lighting	Area Lighting	100.0%	1.78	1.78	3,328.7
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	5.38	0.86	1,605.5
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.34	0.29	534.4
Refrigeration	Glass Door Display	94.9%	3.54	3.36	6,267.1
Refrigeration	Open Display Case	94.9%	20.97	19.90	37,148.0
Refrigeration	Icemaker	98.9%	0.29	0.29	534.9
Refrigeration	Vending Machine	98.9%	0.27	0.27	502.4
Food Preparation	Oven	11.0%	0.64	0.07	130.7
Food Preparation	Fryer	87.0%	0.92	0.80	1,495.2
Food Preparation	Dishwasher	54.9%	1.27	0.70	1,297.8
Food Preparation	Hot Food Container	73.0%	0.17	0.13	236.3
Food Preparation	Steamer	20.0%	0.93	0.19	346.9
Office Equipment	Desktop Computer	100.0%	0.16	0.16	298.5
Office Equipment	Laptop	64.0%	0.02	0.02	29.5
Office Equipment	Monitor	100.0%	0.03	0.03	52.7
Office Equipment	Server	100.0%	0.09	0.09	175.6
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	32.7
Office Equipment	POS Terminal	100.0%	0.06	0.06	117.2
Miscellaneous	Non-HVAC Motors	34.6%	0.20	0.07	129.1
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.63	0.63	1,181.0
Total				46.35	86,507.1

Table A-131   Washington Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.5%	3.32	0.02
Cooling	Water-Cooled Chiller	0.3%	3.52	0.01
Cooling	RTU	71.3%	3.81	2.72
Cooling	PTAC	2.1%	3.65	0.08
Cooling	PTHP	0.6%	2.84	0.02
Cooling	Evaporative Central AC	1.2%	1.57	0.02
Cooling	Air-Source Heat Pump	7.2%	3.26	0.24
Cooling	Geothermal Heat Pump	0.0%	1.03	0.00
Heating	Electric Furnace	6.4%	5.23	0.33
Heating	Electric Room Heat	1.2%	4.98	0.06
Heating	PTHP	0.6%	2.99	0.02
Heating	Air-Source Heat Pump	7.2%	4.83	0.35
Heating	Geothermal Heat Pump	0.0%	2.49	0.00
Ventilation	Ventilation	100.0%	3.22	3.22
Water Heating	Water Heater	62.5%	2.15	1.35
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30
Interior Lighting	Linear Lighting	100.0%	4.52	4.52
Interior Lighting	High-Bay Lighting	100.0%	1.82	1.82
Exterior Lighting	General Service Lighting	100.0%	0.33	0.33
Exterior Lighting	Linear Lighting	100.0%	0.34	0.34
Exterior Lighting	Area Lighting	100.0%	1.61	1.61
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	4.84	0.77
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.31	0.26
Refrigeration	Glass Door Display	94.9%	3.18	3.02
Refrigeration	Open Display Case	94.9%	18.87	17.91
Refrigeration	Icemaker	98.9%	0.26	0.26
Refrigeration	Vending Machine	98.9%	0.24	0.24
Food Preparation	Oven	11.0%	0.57	0.06
Food Preparation	Fryer	87.0%	0.83	0.72
Food Preparation	Dishwasher	54.9%	1.14	0.63
Food Preparation	Hot Food Container	73.0%	0.16	0.11
Food Preparation	Steamer	20.0%	0.84	0.17
Office Equipment	Desktop Computer	100.0%	0.15	0.15
Office Equipment	Laptop	64.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.09	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	34.6%	0.18	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.63	0.63
Total				42.91

Table A-132   Washington Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	16.7%	5.60	0.93	3,129.8
Cooling	Water-Cooled Chiller	66.7%	7.13	4.76	15,935.4
Cooling	RTU	11.0%	5.57	0.61	2,047.5
Cooling	PTAC	0.4%	6.56	0.03	84.6
Cooling	PTHP	0.0%	5.56	0.00	0.0
Cooling	Evaporative Central AC	0.0%	2.23	0.00	0.0
Cooling	Air-Source Heat Pump	0.6%	5.56	0.03	107.5
Cooling	Geothermal Heat Pump	0.9%	3.38	0.03	98.1
Heating	Electric Furnace	3.0%	17.22	0.51	1,704.0
Heating	Electric Room Heat	0.1%	16.40	0.01	33.4
Heating	PTHP	0.0%	10.10	0.00	0.0
Heating	Air-Source Heat Pump	0.6%	11.22	0.06	217.0
Heating	Geothermal Heat Pump	0.9%	7.92	0.07	229.6
Ventilation	Ventilation	100.0%	4.56	4.56	15,288.8
Water Heating	Water Heater	12.6%	4.56	0.57	1,923.3
Interior Lighting	General Service Lighting	100.0%	0.55	0.55	1,839.2
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	764.8
Interior Lighting	Linear Lighting	100.0%	4.04	4.04	13,527.5
Interior Lighting	High-Bay Lighting	100.0%	2.59	2.59	8,690.1
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	147.8
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	274.4
Exterior Lighting	Area Lighting	100.0%	0.66	0.66	2,225.7
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.27	0.09	303.8
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.06	0.03	103.3
Refrigeration	Glass Door Display	90.4%	0.06	0.06	191.7
Refrigeration	Open Display Case	90.4%	0.38	0.34	1,136.1
Refrigeration	Icemaker	90.4%	0.21	0.19	627.9
Refrigeration	Vending Machine	90.4%	0.10	0.09	294.9
Food Preparation	Oven	69.7%	0.64	0.45	1,496.1
Food Preparation	Fryer	80.7%	0.93	0.75	2,505.1
Food Preparation	Dishwasher	53.5%	1.28	0.68	2,284.3
Food Preparation	Hot Food Container	53.5%	0.17	0.09	312.7
Food Preparation	Steamer	53.5%	0.93	0.50	1,675.0
Office Equipment	Desktop Computer	100.0%	0.56	0.56	1,867.5
Office Equipment	Laptop	100.0%	0.03	0.03	115.3
Office Equipment	Monitor	100.0%	0.10	0.10	329.6
Office Equipment	Server	100.0%	0.07	0.07	219.7
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	204.5
Office Equipment	POS Terminal	100.0%	0.04	0.04	146.7
Miscellaneous	Non-HVAC Motors	74.1%	0.63	0.47	1,560.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	63.0%	0.04	0.02	79.2
Miscellaneous	Clothes Dryer	58.0%	0.12	0.07	236.7
Miscellaneous	Miscellaneous	100.0%	4.89	4.89	16,384.4
Total				29.95	100,343.5

Table A-133   Washington Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.7%	3.41	0.57
Cooling	Water-Cooled Chiller	66.7%	4.22	2.81
Cooling	RTU	11.0%	4.71	0.52
Cooling	PTAC	0.4%	5.05	0.02
Cooling	PTHP	0.0%	4.28	0.00
Cooling	Evaporative Central AC	0.0%	1.91	0.00
Cooling	Air-Source Heat Pump	0.6%	4.92	0.03
Cooling	Geothermal Heat Pump	0.9%	2.49	0.02
Heating	Electric Furnace	3.0%	14.33	0.42
Heating	Electric Room Heat	0.1%	13.64	0.01
Heating	PTHP	0.0%	9.68	0.00
Heating	Air-Source Heat Pump	0.6%	5.03	0.03
Heating	Geothermal Heat Pump	0.9%	7.46	0.06
Ventilation	Ventilation	100.0%	3.29	3.29
Water Heating	Water Heater	12.6%	4.28	0.54
Interior Lighting	General Service Lighting	100.0%	0.52	0.52
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	3.64	3.64
Interior Lighting	High-Bay Lighting	100.0%	2.34	2.34
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.60	0.60
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.25	0.08
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.06	0.03
Refrigeration	Glass Door Display	90.4%	0.06	0.05
Refrigeration	Open Display Case	90.4%	0.34	0.31
Refrigeration	Icemaker	90.4%	0.19	0.17
Refrigeration	Vending Machine	90.4%	0.09	0.08
Food Preparation	Oven	69.7%	0.58	0.40
Food Preparation	Fryer	80.7%	0.83	0.67
Food Preparation	Dishwasher	53.5%	1.15	0.61
Food Preparation	Hot Food Container	53.5%	0.16	0.08
Food Preparation	Steamer	53.5%	0.84	0.45
Office Equipment	Desktop Computer	100.0%	0.53	0.53
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.09	0.09
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.04	0.04
Miscellaneous	Non-HVAC Motors	74.1%	0.57	0.42
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	63.0%	0.03	0.02
Miscellaneous	Clothes Dryer	58.0%	0.11	0.06
Miscellaneous	Miscellaneous	100.0%	4.89	4.89
Total				24.92

Table A-134   Washington College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	28.5%	4.25	1.21	4,815.8
Cooling	Water-Cooled Chiller	0.0%	5.34	0.00	0.0
Cooling	RTU	46.8%	2.49	1.16	4,628.1
Cooling	PTAC	3.0%	2.93	0.09	353.7
Cooling	PTHP	2.1%	2.48	0.05	210.1
Cooling	Evaporative Central AC	0.0%	1.00	0.00	0.2
Cooling	Air-Source Heat Pump	7.9%	2.48	0.20	782.6
Cooling	Geothermal Heat Pump	5.7%	1.51	0.09	344.9
Heating	Electric Furnace	0.0%	11.87	0.00	0.0
Heating	Electric Room Heat	8.1%	11.31	0.91	3,632.8
Heating	PTHP	2.1%	7.12	0.15	602.3
Heating	Air-Source Heat Pump	7.9%	7.92	0.63	2,493.1
Heating	Geothermal Heat Pump	5.7%	5.95	0.34	1,356.8
Ventilation	Ventilation	100.0%	1.52	1.52	6,066.9
Water Heating	Water Heater	55.3%	2.08	1.15	4,579.7
Interior Lighting	General Service Lighting	100.0%	0.09	0.09	376.0
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	160.9
Interior Lighting	Linear Lighting	100.0%	2.19	2.19	8,702.5
Interior Lighting	High-Bay Lighting	100.0%	1.42	1.42	5,662.3
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	79.6
Exterior Lighting	Linear Lighting	100.0%	0.75	0.75	2,980.9
Exterior Lighting	Area Lighting	100.0%	0.29	0.29	1,143.2
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.16	0.01	49.8
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01	38.8
Refrigeration	Glass Door Display	26.6%	0.04	0.01	39.7
Refrigeration	Open Display Case	26.6%	0.22	0.06	235.0
Refrigeration	Icemaker	26.6%	0.12	0.03	129.9
Refrigeration	Vending Machine	26.6%	0.06	0.02	61.0
Food Preparation	Oven	21.0%	0.24	0.05	198.3
Food Preparation	Fryer	21.0%	0.34	0.07	286.7
Food Preparation	Dishwasher	21.0%	0.47	0.10	394.6
Food Preparation	Hot Food Container	21.0%	0.06	0.01	54.0
Food Preparation	Steamer	21.0%	0.35	0.07	289.3
Office Equipment	Desktop Computer	100.0%	0.47	0.47	1,889.1
Office Equipment	Laptop	100.0%	0.02	0.02	87.5
Office Equipment	Monitor	100.0%	0.08	0.08	333.4
Office Equipment	Server	100.0%	0.06	0.06	222.2
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	258.6
Office Equipment	POS Terminal	100.0%	0.02	0.02	74.2
Miscellaneous	Non-HVAC Motors	88.8%	0.08	0.07	279.7
Miscellaneous	Pool Pump	90.3%	0.01	0.01	43.1
Miscellaneous	Pool Heater	36.2%	0.02	0.01	22.4
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	2.3
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	5.4
Miscellaneous	Miscellaneous	100.0%	0.35	0.35	1,386.1
Total				13.91	55,353.2

Table A-135   Washington College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	28.5%	2.37	0.67
Cooling	Water-Cooled Chiller	0.0%	2.72	0.00
Cooling	RTU	46.8%	1.74	0.81
Cooling	PTAC	3.0%	2.26	0.07
Cooling	PTHP	2.1%	1.91	0.04
Cooling	Evaporative Central AC	0.0%	0.86	0.00
Cooling	Air-Source Heat Pump	7.9%	1.81	0.14
Cooling	Geothermal Heat Pump	5.7%	1.11	0.06
Heating	Electric Furnace	0.0%	11.28	0.00
Heating	Electric Room Heat	8.1%	10.74	0.87
Heating	PTHP	2.1%	6.83	0.15
Heating	Air-Source Heat Pump	7.9%	6.01	0.48
Heating	Geothermal Heat Pump	5.7%	5.61	0.32
Ventilation	Ventilation	100.0%	1.49	1.49
Water Heating	Water Heater	55.3%	1.96	1.08
Interior Lighting	General Service Lighting	100.0%	0.09	0.09
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	1.97	1.97
Interior Lighting	High-Bay Lighting	100.0%	1.28	1.28
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.68	0.68
Exterior Lighting	Area Lighting	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.15	0.01
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01
Refrigeration	Glass Door Display	26.6%	0.03	0.01
Refrigeration	Open Display Case	26.6%	0.20	0.05
Refrigeration	Icemaker	26.6%	0.11	0.03
Refrigeration	Vending Machine	26.6%	0.05	0.01
Food Preparation	Oven	21.0%	0.21	0.04
Food Preparation	Fryer	21.0%	0.31	0.06
Food Preparation	Dishwasher	21.0%	0.42	0.09
Food Preparation	Hot Food Container	21.0%	0.06	0.01
Food Preparation	Steamer	21.0%	0.31	0.07
Office Equipment	Desktop Computer	100.0%	0.45	0.45
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.08	0.08
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	88.8%	0.07	0.06
Miscellaneous	Pool Pump	90.3%	0.01	0.01
Miscellaneous	Pool Heater	36.2%	0.01	0.01
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.35	0.35
Total				12.05

Table A-136   Washington School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	22.1%	1.97	0.43	4,353.5
Cooling	Water-Cooled Chiller	0.0%	2.47	0.00	0.0
Cooling	RTU	36.2%	1.15	0.42	4,183.9
Cooling	PTAC	2.4%	1.35	0.03	319.8
Cooling	PTHP	1.6%	1.15	0.02	189.9
Cooling	Evaporative Central AC	0.0%	0.46	0.00	0.1
Cooling	Air-Source Heat Pump	6.1%	1.15	0.07	707.5
Cooling	Geothermal Heat Pump	4.4%	0.70	0.03	311.8
Heating	Electric Furnace	0.0%	6.44	0.00	0.0
Heating	Electric Room Heat	4.4%	6.13	0.27	2,730.6
Heating	PTHP	1.6%	3.86	0.06	638.4
Heating	Air-Source Heat Pump	6.1%	4.29	0.26	2,642.3
Heating	Geothermal Heat Pump	4.4%	3.23	0.14	1,438.0
Ventilation	Ventilation	100.0%	0.71	0.71	7,136.1
Water Heating	Water Heater	50.0%	0.99	0.50	4,968.2
Interior Lighting	General Service Lighting	100.0%	0.16	0.16	1,632.4
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18	1,823.9
Interior Lighting	Linear Lighting	100.0%	1.51	1.51	15,182.4
Interior Lighting	High-Bay Lighting	100.0%	0.81	0.81	8,131.1
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00	40.1
Exterior Lighting	Linear Lighting	100.0%	0.66	0.66	6,594.9
Exterior Lighting	Area Lighting	100.0%	0.12	0.12	1,204.8
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.17	0.03	319.1
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.08	0.02	248.8
Refrigeration	Glass Door Display	65.7%	0.04	0.03	254.2
Refrigeration	Open Display Case	65.7%	0.23	0.15	1,506.6
Refrigeration	Icemaker	65.7%	0.13	0.08	832.6
Refrigeration	Vending Machine	65.7%	0.06	0.04	391.0
Food Preparation	Oven	64.8%	0.11	0.07	722.7
Food Preparation	Fryer	58.6%	0.16	0.09	945.1
Food Preparation	Dishwasher	52.3%	0.22	0.12	1,161.4
Food Preparation	Hot Food Container	52.3%	0.03	0.02	159.0
Food Preparation	Steamer	52.3%	0.16	0.08	851.6
Office Equipment	Desktop Computer	100.0%	0.29	0.29	2,911.7
Office Equipment	Laptop	100.0%	0.02	0.02	179.8
Office Equipment	Monitor	100.0%	0.05	0.05	513.8
Office Equipment	Server	100.0%	0.07	0.07	685.1
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03	318.8
Office Equipment	POS Terminal	36.0%	0.01	0.00	32.9
Miscellaneous	Non-HVAC Motors	43.7%	0.07	0.03	313.4
Miscellaneous	Pool Pump	6.0%	0.02	0.00	13.0
Miscellaneous	Pool Heater	1.0%	0.01	0.00	1.4
Miscellaneous	Clothes Washer	15.0%	0.01	0.00	10.3
Miscellaneous	Clothes Dryer	11.0%	0.02	0.00	24.5
Miscellaneous	Miscellaneous	100.0%	0.33	0.33	3,281.6
Total				7.96	79,908.0

Table A-137   Washington School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.1%	1.09	0.24
Cooling	Water-Cooled Chiller	0.0%	1.26	0.00
Cooling	RTU	36.2%	0.81	0.29
Cooling	PTAC	2.4%	1.04	0.02
Cooling	PTHP	1.6%	0.89	0.01
Cooling	Evaporative Central AC	0.0%	0.40	0.00
Cooling	Air-Source Heat Pump	6.1%	0.84	0.05
Cooling	Geothermal Heat Pump	4.4%	0.51	0.02
Heating	Electric Furnace	0.0%	6.12	0.00
Heating	Electric Room Heat	4.4%	5.82	0.26
Heating	PTHP	1.6%	3.70	0.06
Heating	Air-Source Heat Pump	6.1%	3.26	0.20
Heating	Geothermal Heat Pump	4.4%	3.04	0.14
Ventilation	Ventilation	100.0%	0.70	0.70
Water Heating	Water Heater	50.0%	0.93	0.47
Interior Lighting	General Service Lighting	100.0%	0.15	0.15
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18
Interior Lighting	Linear Lighting	100.0%	1.37	1.37
Interior Lighting	High-Bay Lighting	100.0%	0.73	0.73
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00
Exterior Lighting	Linear Lighting	100.0%	0.59	0.59
Exterior Lighting	Area Lighting	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.15	0.03
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.07	0.02
Refrigeration	Glass Door Display	65.7%	0.03	0.02
Refrigeration	Open Display Case	65.7%	0.21	0.14
Refrigeration	Icemaker	65.7%	0.11	0.07
Refrigeration	Vending Machine	65.7%	0.05	0.04
Food Preparation	Oven	64.8%	0.10	0.06
Food Preparation	Fryer	58.6%	0.14	0.08
Food Preparation	Dishwasher	52.3%	0.20	0.10
Food Preparation	Hot Food Container	52.3%	0.03	0.01
Food Preparation	Steamer	52.3%	0.15	0.08
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	43.7%	0.06	0.03
Miscellaneous	Pool Pump	6.0%	0.02	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.01	0.00
Miscellaneous	Clothes Dryer	11.0%	0.02	0.00
Miscellaneous	Miscellaneous	100.0%	0.33	0.33
Total				7.06

Table A-138   Washington Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.0%	0.49	0.01	20.7
Cooling	Water-Cooled Chiller	7.3%	0.62	0.05	95.4
Cooling	RTU	15.8%	1.52	0.24	506.1
Cooling	PTAC	38.8%	1.79	0.70	1,464.6
Cooling	PTHP	13.0%	1.52	0.20	418.8
Cooling	Evaporative Central AC	0.5%	0.61	0.00	6.1
Cooling	Air-Source Heat Pump	5.1%	1.52	0.08	163.6
Cooling	Geothermal Heat Pump	5.5%	1.44	0.08	165.6
Heating	Electric Furnace	1.4%	3.02	0.04	91.6
Heating	Electric Room Heat	51.1%	2.88	1.47	3,095.1
Heating	PTHP	13.0%	2.42	0.32	664.8
Heating	Air-Source Heat Pump	5.1%	2.69	0.14	288.5
Heating	Geothermal Heat Pump	5.5%	1.90	0.10	218.3
Ventilation	Ventilation	100.0%	0.94	0.94	1,990.3
Water Heating	Water Heater	50.0%	3.20	1.60	3,374.1
Interior Lighting	General Service Lighting	100.0%	0.81	0.81	1,703.2
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43	901.9
Interior Lighting	Linear Lighting	100.0%	0.46	0.46	960.2
Interior Lighting	High-Bay Lighting	100.0%	1.29	1.29	2,709.5
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	80.2
Exterior Lighting	Linear Lighting	100.0%	0.03	0.03	53.9
Exterior Lighting	Area Lighting	100.0%	1.73	1.73	3,644.4
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.39	0.01	24.9
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.09	0.02	35.4
Refrigeration	Glass Door Display	58.9%	0.09	0.05	112.5
Refrigeration	Open Display Case	58.9%	0.54	0.32	666.9
Refrigeration	Icemaker	58.9%	0.15	0.09	184.3
Refrigeration	Vending Machine	58.9%	0.14	0.08	173.1
Food Preparation	Oven	13.8%	0.26	0.04	74.9
Food Preparation	Fryer	21.0%	0.37	0.08	164.8
Food Preparation	Dishwasher	30.0%	0.51	0.15	324.3
Food Preparation	Hot Food Container	30.0%	0.07	0.02	44.4
Food Preparation	Steamer	30.0%	0.38	0.11	237.8
Office Equipment	Desktop Computer	100.0%	0.08	0.08	175.8
Office Equipment	Laptop	100.0%	0.01	0.01	27.1
Office Equipment	Monitor	100.0%	0.01	0.01	31.0
Office Equipment	Server	100.0%	0.05	0.05	103.4
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	19.2
Office Equipment	POS Terminal	58.0%	0.01	0.01	16.0
Miscellaneous	Non-HVAC Motors	91.3%	0.14	0.12	262.3
Miscellaneous	Pool Pump	76.0%	0.01	0.01	22.0
Miscellaneous	Pool Heater	27.0%	0.02	0.00	10.2
Miscellaneous	Clothes Washer	67.0%	0.02	0.01	30.6
Miscellaneous	Clothes Dryer	26.0%	0.07	0.02	38.6
Miscellaneous	Miscellaneous	100.0%	0.63	0.63	1,330.2
Total				12.69	26,726.6

Table A-139   Washington Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	2.0%	0.41	0.01
Cooling	Water-Cooled Chiller	7.3%	0.53	0.04
Cooling	RTU	15.8%	1.48	0.23
Cooling	PTAC	38.8%	1.38	0.54
Cooling	PTHP	13.0%	1.17	0.15
Cooling	Evaporative Central AC	0.5%	0.52	0.00
Cooling	Air-Source Heat Pump	5.1%	1.52	0.08
Cooling	Geothermal Heat Pump	5.5%	1.06	0.06
Heating	Electric Furnace	1.4%	2.80	0.04
Heating	Electric Room Heat	51.1%	2.66	1.36
Heating	PTHP	13.0%	2.32	0.30
Heating	Air-Source Heat Pump	5.1%	2.16	0.11
Heating	Geothermal Heat Pump	5.5%	1.79	0.10
Ventilation	Ventilation	100.0%	0.85	0.85
Water Heating	Water Heater	50.0%	3.01	1.51
Interior Lighting	General Service Lighting	100.0%	0.77	0.77
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43
Interior Lighting	Linear Lighting	100.0%	0.41	0.41
Interior Lighting	High-Bay Lighting	100.0%	1.16	1.16
Exterior Lighting	General Service Lighting	100.0%	0.03	0.03
Exterior Lighting	Linear Lighting	100.0%	0.02	0.02
Exterior Lighting	Area Lighting	100.0%	1.56	1.56
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.35	0.01
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.08	0.02
Refrigeration	Glass Door Display	58.9%	0.08	0.05
Refrigeration	Open Display Case	58.9%	0.48	0.28
Refrigeration	Icemaker	58.9%	0.13	0.08
Refrigeration	Vending Machine	58.9%	0.13	0.07
Food Preparation	Oven	13.8%	0.23	0.03
Food Preparation	Fryer	21.0%	0.34	0.07
Food Preparation	Dishwasher	30.0%	0.46	0.14
Food Preparation	Hot Food Container	30.0%	0.06	0.02
Food Preparation	Steamer	30.0%	0.34	0.10
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	58.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	91.3%	0.12	0.11
Miscellaneous	Pool Pump	76.0%	0.01	0.01
Miscellaneous	Pool Heater	27.0%	0.02	0.00
Miscellaneous	Clothes Washer	67.0%	0.02	0.01
Miscellaneous	Clothes Dryer	26.0%	0.06	0.02
Miscellaneous	Miscellaneous	100.0%	0.63	0.63
Total				11.59

Table A-140   Washington Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	1.59	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	1.68	0.00	0.0
Cooling	RTU	16.0%	1.78	0.28	5,820.4
Cooling	PTAC	1.1%	2.09	0.02	449.6
Cooling	PTHP	0.3%	1.78	0.01	107.4
Cooling	Evaporative Central AC	0.0%	0.71	0.00	0.0
Cooling	Air-Source Heat Pump	1.7%	1.78	0.03	614.5
Cooling	Geothermal Heat Pump	0.0%	1.08	0.00	0.0
Heating	Electric Furnace	2.3%	7.84	0.18	3,676.5
Heating	Electric Room Heat	12.4%	7.46	0.93	18,939.0
Heating	PTHP	0.3%	6.19	0.02	374.5
Heating	Air-Source Heat Pump	1.7%	6.88	0.12	2,379.7
Heating	Geothermal Heat Pump	0.0%	5.93	0.00	0.0
Ventilation	Ventilation	100.0%	0.26	0.26	5,302.1
Water Heating	Water Heater	55.3%	0.26	0.15	2,976.1
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	1,481.5
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	732.5
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	5,757.7
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	34,636.6
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	407.6
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	1,582.0
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	7,722.2
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.49	0.01	111.0
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.11	0.00	45.4
Refrigeration	Glass Door Display	10.1%	0.11	0.01	235.1
Refrigeration	Open Display Case	10.1%	0.67	0.07	1,393.5
Refrigeration	Icemaker	10.1%	0.19	0.02	385.1
Refrigeration	Vending Machine	10.1%	0.09	0.01	180.8
Food Preparation	Oven	2.3%	0.03	0.00	16.2
Food Preparation	Fryer	2.3%	0.05	0.00	23.5
Food Preparation	Dishwasher	2.3%	0.07	0.00	32.3
Food Preparation	Hot Food Container	2.3%	0.01	0.00	4.4
Food Preparation	Steamer	2.3%	0.05	0.00	23.7
Office Equipment	Desktop Computer	100.0%	0.09	0.09	1,808.6
Office Equipment	Laptop	100.0%	0.01	0.01	223.4
Office Equipment	Monitor	100.0%	0.02	0.02	319.2
Office Equipment	Server	89.0%	0.10	0.09	1,893.7
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	198.0
Office Equipment	POS Terminal	77.0%	0.03	0.02	437.6
Miscellaneous	Non-HVAC Motors	49.9%	0.12	0.06	1,261.6
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.43	0.43	8,831.8
Total				5.40	110,384.7

Table A-141   Washington Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	0.99	0.00
Cooling	Water-Cooled Chiller	0.0%	1.07	0.00
Cooling	RTU	16.0%	1.10	0.18
Cooling	PTAC	1.1%	1.59	0.02
Cooling	PTHP	0.3%	1.35	0.00
Cooling	Evaporative Central AC	0.0%	0.61	0.00
Cooling	Air-Source Heat Pump	1.7%	1.04	0.02
Cooling	Geothermal Heat Pump	0.0%	0.80	0.00
Heating	Electric Furnace	2.3%	4.64	0.11
Heating	Electric Room Heat	12.4%	4.42	0.55
Heating	PTHP	0.3%	5.19	0.02
Heating	Air-Source Heat Pump	1.7%	2.87	0.05
Heating	Geothermal Heat Pump	0.0%	5.60	0.00
Ventilation	Ventilation	100.0%	0.19	0.19
Water Heating	Water Heater	55.3%	0.25	0.14
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.44	0.00
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.10	0.00
Refrigeration	Glass Door Display	10.1%	0.10	0.01
Refrigeration	Open Display Case	10.1%	0.61	0.06
Refrigeration	Icemaker	10.1%	0.17	0.02
Refrigeration	Vending Machine	10.1%	0.08	0.01
Food Preparation	Oven	2.3%	0.03	0.00
Food Preparation	Fryer	2.3%	0.05	0.00
Food Preparation	Dishwasher	2.3%	0.06	0.00
Food Preparation	Hot Food Container	2.3%	0.01	0.00
Food Preparation	Steamer	2.3%	0.05	0.00
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.10	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.03	0.02
Miscellaneous	Non-HVAC Motors	49.9%	0.11	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.43	0.43
Total				4.40

Table A-142   Washington Warehouse, Controlled Atmosphere Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	15.0%	1.25	0.19	3,146.9
Cooling	Water-Cooled Chiller	1.7%	1.32	0.02	368.3
Cooling	RTU	19.7%	1.39	0.27	4,599.2
Cooling	PTAC	1.2%	1.64	0.02	326.2
Cooling	PTHP	0.1%	1.39	0.00	27.7
Cooling	Evaporative Central AC	0.1%	0.56	0.00	11.1
Cooling	Air-Source Heat Pump	1.9%	1.39	0.03	433.9
Cooling	Geothermal Heat Pump	0.0%	0.85	0.00	0.0
Heating	Electric Furnace	1.8%	6.31	0.12	1,944.4
Heating	Electric Room Heat	10.0%	6.01	0.60	10,016.6
Heating	PTHP	0.1%	4.98	0.01	99.2
Heating	Air-Source Heat Pump	1.9%	5.54	0.10	1,727.1
Heating	Geothermal Heat Pump	0.0%	4.78	0.00	0.0
Ventilation	Ventilation	100.0%	0.73	0.73	12,237.6
Water Heating	Water Heater	67.5%	0.42	0.28	4,731.0
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	1,213.5
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	600.0
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	4,716.2
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	28,371.1
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	333.9
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	1,295.9
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	6,325.3
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	15.53	14.24	238,606.0
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.70	0.01	233.6
Refrigeration	Glass Door Display	10.1%	0.72	0.07	1,210.7
Refrigeration	Open Display Case	10.1%	4.24	0.43	7,176.4
Refrigeration	Icemaker	91.7%	1.17	1.07	18,004.7
Refrigeration	Vending Machine	91.7%	0.55	0.50	8,455.6
Food Preparation	Oven	40.8%	0.06	0.02	388.5
Food Preparation	Fryer	40.8%	0.08	0.03	561.8
Food Preparation	Dishwasher	40.8%	0.11	0.05	773.2
Food Preparation	Hot Food Container	40.8%	0.02	0.01	105.8
Food Preparation	Steamer	40.8%	0.08	0.03	567.0
Office Equipment	Desktop Computer	100.0%	0.06	0.06	1,087.4
Office Equipment	Laptop	100.0%	0.01	0.01	134.3
Office Equipment	Monitor	100.0%	0.01	0.01	191.9
Office Equipment	Server	89.0%	0.08	0.07	1,138.5
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	119.1
Office Equipment	POS Terminal	77.0%	0.02	0.02	263.1
Miscellaneous	Non-HVAC Motors	79.5%	0.09	0.07	1,205.1
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.32	0.32	5,338.0
Total				21.97	368,085.6

Table A-143   Washington Warehouse, Controlled Atmosphere New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	15.0%	0.78	0.12
Cooling	Water-Cooled Chiller	1.7%	0.84	0.01
Cooling	RTU	19.7%	0.86	0.17
Cooling	PTAC	1.2%	1.24	0.01
Cooling	PTHP	0.1%	1.06	0.00
Cooling	Evaporative Central AC	0.1%	0.48	0.00
Cooling	Air-Source Heat Pump	1.9%	0.82	0.02
Cooling	Geothermal Heat Pump	0.0%	0.62	0.00
Heating	Electric Furnace	1.8%	3.73	0.07
Heating	Electric Room Heat	10.0%	3.56	0.35
Heating	PTHP	0.1%	4.18	0.00
Heating	Air-Source Heat Pump	1.9%	2.31	0.04
Heating	Geothermal Heat Pump	0.0%	4.50	0.00
Ventilation	Ventilation	100.0%	0.53	0.53
Water Heating	Water Heater	67.5%	0.39	0.27
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	15.53	14.24
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.70	0.01
Refrigeration	Glass Door Display	10.1%	0.72	0.07
Refrigeration	Open Display Case	10.1%	4.24	0.43
Refrigeration	Icemaker	91.7%	1.17	1.07
Refrigeration	Vending Machine	91.7%	0.55	0.50
Food Preparation	Oven	40.8%	0.05	0.02
Food Preparation	Fryer	40.8%	0.07	0.03
Food Preparation	Dishwasher	40.8%	0.10	0.04
Food Preparation	Hot Food Container	40.8%	0.01	0.01
Food Preparation	Steamer	40.8%	0.07	0.03
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.07	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.02	0.01
Miscellaneous	Non-HVAC Motors	79.5%	0.08	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.32	0.32
Total				20.93

Table A-144   Washington Data Center Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	14.7%	36.06	5.29	42.3
Cooling	Water-Cooled Chiller	9.0%	39.42	3.56	28.5
Cooling	RTU	47.6%	37.72	17.94	143.5
Cooling	PTAC	2.5%	44.40	1.12	8.9
Cooling	PTHP	0.8%	37.72	0.30	2.4
Cooling	Evaporative Central AC	0.1%	15.09	0.01	0.1
Cooling	Air-Source Heat Pump	15.2%	37.72	5.74	45.9
Cooling	Geothermal Heat Pump	8.2%	22.99	1.87	15.0
Heating	Electric Furnace	1.2%	3.69	0.04	0.3
Heating	Electric Room Heat	22.3%	3.51	0.78	6.3
Heating	PTHP	0.8%	2.81	0.02	0.2
Heating	Air-Source Heat Pump	15.2%	3.12	0.47	3.8
Heating	Geothermal Heat Pump	8.2%	2.52	0.21	1.6
Ventilation	Ventilation	100.0%	26.31	26.31	210.4
Water Heating	Water Heater	45.2%	0.68	0.31	2.4
Interior Lighting	General Service Lighting	100.0%	0.47	0.47	3.8
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27	2.1
Interior Lighting	Linear Lighting	100.0%	3.91	3.91	31.3
Interior Lighting	High-Bay Lighting	100.0%	2.74	2.74	21.9
Exterior Lighting	General Service Lighting	100.0%	0.11	0.11	0.9
Exterior Lighting	Linear Lighting	100.0%	0.24	0.24	1.9
Exterior Lighting	Area Lighting	100.0%	1.12	1.12	8.9
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.11	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00	0.0
Refrigeration	Glass Door Display	5.1%	0.02	0.00	0.0
Refrigeration	Open Display Case	5.1%	0.14	0.01	0.1
Refrigeration	Icemaker	5.1%	0.04	0.00	0.0
Refrigeration	Vending Machine	5.1%	0.02	0.00	0.0
Food Preparation	Oven	3.6%	0.07	0.00	0.0
Food Preparation	Fryer	3.6%	0.11	0.00	0.0
Food Preparation	Dishwasher	3.6%	0.14	0.01	0.0
Food Preparation	Hot Food Container	3.6%	0.02	0.00	0.0
Food Preparation	Steamer	3.6%	0.11	0.00	0.0
Office Equipment	Desktop Computer	100.0%	5.32	5.32	42.5
Office Equipment	Laptop	100.0%	0.33	0.33	2.6
Office Equipment	Monitor	100.0%	0.94	0.94	7.5
Office Equipment	Server	100.0%	62.58	62.58	500.5
Office Equipment	Printer/Copier/Fax	100.0%	0.58	0.58	4.7
Office Equipment	POS Terminal	40.0%	0.17	0.07	0.5
Miscellaneous	Non-HVAC Motors	89.6%	5.38	4.82	38.5
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	18.39	18.39	147.1
Total				165.88	1,326.7

Table A-145   Washington Data Center New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.7%	20.59	3.02
Cooling	Water-Cooled Chiller	9.0%	20.71	1.87
Cooling	RTU	47.6%	23.42	11.14
Cooling	PTAC	2.5%	34.21	0.86
Cooling	PTHP	0.8%	29.06	0.23
Cooling	Evaporative Central AC	0.1%	13.04	0.01
Cooling	Air-Source Heat Pump	15.2%	22.10	3.36
Cooling	Geothermal Heat Pump	8.2%	16.91	1.38
Heating	Electric Furnace	1.2%	2.18	0.03
Heating	Electric Room Heat	22.3%	2.08	0.46
Heating	PTHP	0.8%	2.69	0.02
Heating	Air-Source Heat Pump	15.2%	1.30	0.20
Heating	Geothermal Heat Pump	8.2%	2.37	0.19
Ventilation	Ventilation	100.0%	16.77	16.77
Water Heating	Water Heater	45.2%	0.64	0.29
Interior Lighting	General Service Lighting	100.0%	0.45	0.45
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27
Interior Lighting	Linear Lighting	100.0%	3.53	3.53
Interior Lighting	High-Bay Lighting	100.0%	2.47	2.47
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10
Exterior Lighting	Linear Lighting	100.0%	0.22	0.22
Exterior Lighting	Area Lighting	100.0%	1.01	1.01
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00
Refrigeration	Glass Door Display	5.1%	0.02	0.00
Refrigeration	Open Display Case	5.1%	0.13	0.01
Refrigeration	Icemaker	5.1%	0.04	0.00
Refrigeration	Vending Machine	5.1%	0.02	0.00
Food Preparation	Oven	3.6%	0.07	0.00
Food Preparation	Fryer	3.6%	0.09	0.00
Food Preparation	Dishwasher	3.6%	0.13	0.00
Food Preparation	Hot Food Container	3.6%	0.02	0.00
Food Preparation	Steamer	3.6%	0.10	0.00
Office Equipment	Desktop Computer	100.0%	5.05	5.05
Office Equipment	Laptop	100.0%	0.31	0.31
Office Equipment	Monitor	100.0%	0.89	0.89
Office Equipment	Server	100.0%	59.45	59.45
Office Equipment	Printer/Copier/Fax	100.0%	0.55	0.55
Office Equipment	POS Terminal	40.0%	0.16	0.06
Miscellaneous	Non-HVAC Motors	89.6%	4.84	4.34
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	18.39	18.39
Total				136.95

Table A-146   Washington Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	9.7%	1.64	0.16	2,108.1
Cooling	Water-Cooled Chiller	5.0%	1.78	0.09	1,186.3
Cooling	RTU	56.8%	1.86	1.06	14,112.3
Cooling	PTAC	5.1%	2.19	0.11	1,484.9
Cooling	PTHP	2.6%	1.86	0.05	643.9
Cooling	Evaporative Central AC	0.0%	0.74	0.00	0.9
Cooling	Air-Source Heat Pump	5.5%	1.86	0.10	1,362.8
Cooling	Geothermal Heat Pump	1.0%	1.13	0.01	158.7
Heating	Electric Furnace	12.5%	4.77	0.59	7,930.6
Heating	Electric Room Heat	14.8%	4.55	0.67	8,968.2
Heating	PTHP	2.6%	3.61	0.09	1,247.7
Heating	Air-Source Heat Pump	5.5%	4.01	0.22	2,934.3
Heating	Geothermal Heat Pump	1.0%	3.13	0.03	438.7
Ventilation	Ventilation	100.0%	0.73	0.73	9,754.6
Water Heating	Water Heater	53.0%	1.39	0.74	9,833.6
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	5,022.2
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	3,051.1
Interior Lighting	Linear Lighting	100.0%	1.46	1.46	19,534.5
Interior Lighting	High-Bay Lighting	100.0%	1.56	1.56	20,811.0
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09	1,239.1
Exterior Lighting	Linear Lighting	100.0%	0.06	0.06	787.3
Exterior Lighting	Area Lighting	100.0%	0.64	0.64	8,515.6
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.58	0.06	793.8
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.13	0.02	207.9
Refrigeration	Glass Door Display	3.4%	0.13	0.00	61.0
Refrigeration	Open Display Case	3.4%	0.79	0.03	361.3
Refrigeration	Icemaker	21.6%	0.22	0.05	625.4
Refrigeration	Vending Machine	21.6%	0.20	0.04	587.4
Food Preparation	Oven	58.9%	0.08	0.05	655.1
Food Preparation	Fryer	29.9%	0.12	0.04	481.0
Food Preparation	Dishwasher	15.4%	0.17	0.03	341.1
Food Preparation	Hot Food Container	15.4%	0.02	0.00	46.7
Food Preparation	Steamer	15.4%	0.12	0.02	250.1
Office Equipment	Desktop Computer	100.0%	0.20	0.20	2,635.5
Office Equipment	Laptop	100.0%	0.03	0.03	407.0
Office Equipment	Monitor	100.0%	0.03	0.03	465.1
Office Equipment	Server	66.0%	0.12	0.08	1,023.2
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	288.6
Office Equipment	POS Terminal	28.0%	0.03	0.01	115.9
Miscellaneous	Non-HVAC Motors	59.9%	0.15	0.09	1,163.3
Miscellaneous	Pool Pump	4.0%	0.01	0.00	5.9
Miscellaneous	Pool Heater	1.0%	0.01	0.00	1.9
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	2.8
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00	6.0
Miscellaneous	Miscellaneous	100.0%	0.57	0.57	7,539.6
Total				10.43	139,191.7

Table A-147   Washington Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	9.7%	1.30	0.13
Cooling	Water-Cooled Chiller	5.0%	1.19	0.06
Cooling	RTU	56.8%	1.37	0.78
Cooling	PTAC	5.1%	1.48	0.08
Cooling	PTHP	2.6%	1.26	0.03
Cooling	Evaporative Central AC	0.0%	0.64	0.00
Cooling	Air-Source Heat Pump	5.5%	1.46	0.08
Cooling	Geothermal Heat Pump	1.0%	0.83	0.01
Heating	Electric Furnace	12.5%	3.16	0.39
Heating	Electric Room Heat	14.8%	3.01	0.44
Heating	PTHP	2.6%	2.76	0.07
Heating	Air-Source Heat Pump	5.5%	1.95	0.11
Heating	Geothermal Heat Pump	1.0%	2.96	0.03
Ventilation	Ventilation	100.0%	0.63	0.63
Water Heating	Water Heater	53.0%	1.31	0.69
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	1.32	1.32
Interior Lighting	High-Bay Lighting	100.0%	1.41	1.41
Exterior Lighting	General Service Lighting	100.0%	0.08	0.08
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.58	0.58
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.52	0.05
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.12	0.01
Refrigeration	Glass Door Display	3.4%	0.12	0.00
Refrigeration	Open Display Case	3.4%	0.71	0.02
Refrigeration	Icemaker	21.6%	0.20	0.04
Refrigeration	Vending Machine	21.6%	0.18	0.04
Food Preparation	Oven	58.9%	0.08	0.04
Food Preparation	Fryer	29.9%	0.11	0.03
Food Preparation	Dishwasher	15.4%	0.15	0.02
Food Preparation	Hot Food Container	15.4%	0.02	0.00
Food Preparation	Steamer	15.4%	0.11	0.02
Office Equipment	Desktop Computer	100.0%	0.19	0.19
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	66.0%	0.11	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	28.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	59.9%	0.13	0.08
Miscellaneous	Pool Pump	4.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.57	0.57
Total				8.85

Table A-148   Wyoming Large Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.7%	5.47	0.75	3,146.6
Cooling	Water-Cooled Chiller	8.5%	5.69	0.48	2,016.9
Cooling	RTU	44.5%	5.78	2.57	10,773.9
Cooling	PTAC	2.4%	7.30	0.17	719.7
Cooling	PTHP	0.7%	7.30	0.05	228.3
Cooling	Evaporative Central AC	0.0%	2.31	0.00	4.6
Cooling	Air-Source Heat Pump	14.2%	5.78	0.82	3,444.8
Cooling	Geothermal Heat Pump	7.6%	3.52	0.27	1,125.5
Heating	Electric Furnace	1.2%	4.78	0.06	247.0
Heating	Electric Room Heat	23.8%	4.55	1.08	4,532.5
Heating	PTHP	0.7%	3.77	0.03	117.7
Heating	Air-Source Heat Pump	14.2%	4.19	0.60	2,494.3
Heating	Geothermal Heat Pump	7.6%	3.22	0.25	1,028.1
Ventilation	Ventilation	100.0%	2.96	2.96	12,395.0
Water Heating	Water Heater	45.2%	0.98	0.44	1,861.9
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	1,041.4
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10	431.5
Interior Lighting	Linear Lighting	100.0%	1.72	1.72	7,226.1
Interior Lighting	High-Bay Lighting	100.0%	1.01	1.01	4,230.8
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10	400.2
Exterior Lighting	Linear Lighting	100.0%	0.18	0.18	754.1
Exterior Lighting	Area Lighting	100.0%	1.28	1.28	5,353.3
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.14	0.00	11.5
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00	18.1
Refrigeration	Glass Door Display	77.4%	0.03	0.02	102.7
Refrigeration	Open Display Case	77.4%	0.19	0.15	608.8
Refrigeration	Icemaker	44.9%	0.05	0.02	97.6
Refrigeration	Vending Machine	44.9%	0.05	0.02	91.7
Food Preparation	Oven	66.0%	0.08	0.06	232.2
Food Preparation	Fryer	76.4%	0.12	0.09	388.8
Food Preparation	Dishwasher	43.1%	0.17	0.07	301.6
Food Preparation	Hot Food Container	43.1%	0.02	0.01	41.3
Food Preparation	Steamer	43.1%	0.12	0.05	221.1
Office Equipment	Desktop Computer	100.0%	2.35	2.35	9,834.0
Office Equipment	Laptop	100.0%	0.36	0.36	1,518.5
Office Equipment	Monitor	100.0%	0.41	0.41	1,735.4
Office Equipment	Server	100.0%	0.23	0.23	964.1
Office Equipment	Printer/Copier/Fax	100.0%	0.21	0.21	897.3
Office Equipment	POS Terminal	40.0%	0.03	0.01	51.5
Miscellaneous	Non-HVAC Motors	89.6%	0.32	0.28	1,192.6
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.29	1.29	5,393.3
Total				20.83	87,276.2

Table A-149   Wyoming Large Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	13.7%	4.34	0.60
Cooling	Water-Cooled Chiller	8.5%	3.82	0.32
Cooling	RTU	44.5%	3.76	1.67
Cooling	PTAC	2.4%	5.67	0.13
Cooling	PTHP	0.7%	5.67	0.04
Cooling	Evaporative Central AC	0.0%	2.00	0.00
Cooling	Air-Source Heat Pump	14.2%	3.90	0.55
Cooling	Geothermal Heat Pump	7.6%	2.59	0.20
Heating	Electric Furnace	1.2%	5.06	0.06
Heating	Electric Room Heat	23.8%	4.82	1.15
Heating	PTHP	0.7%	3.72	0.03
Heating	Air-Source Heat Pump	14.2%	3.01	0.43
Heating	Geothermal Heat Pump	7.6%	3.03	0.23
Ventilation	Ventilation	100.0%	2.50	2.50
Water Heating	Water Heater	45.2%	0.92	0.42
Interior Lighting	General Service Lighting	100.0%	0.24	0.24
Interior Lighting	Exempted Lighting	100.0%	0.10	0.10
Interior Lighting	Linear Lighting	100.0%	1.56	1.56
Interior Lighting	High-Bay Lighting	100.0%	0.91	0.91
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09
Exterior Lighting	Linear Lighting	100.0%	0.16	0.16
Exterior Lighting	Area Lighting	100.0%	1.15	1.15
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.12	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.03	0.00
Refrigeration	Glass Door Display	77.4%	0.03	0.02
Refrigeration	Open Display Case	77.4%	0.17	0.13
Refrigeration	Icemaker	44.9%	0.05	0.02
Refrigeration	Vending Machine	44.9%	0.04	0.02
Food Preparation	Oven	66.0%	0.08	0.05
Food Preparation	Fryer	76.4%	0.11	0.08
Food Preparation	Dishwasher	43.1%	0.15	0.06
Food Preparation	Hot Food Container	43.1%	0.02	0.01
Food Preparation	Steamer	43.1%	0.11	0.05
Office Equipment	Desktop Computer	100.0%	2.23	2.23
Office Equipment	Laptop	100.0%	0.34	0.34
Office Equipment	Monitor	100.0%	0.39	0.39
Office Equipment	Server	100.0%	0.22	0.22
Office Equipment	Printer/Copier/Fax	100.0%	0.20	0.20
Office Equipment	POS Terminal	40.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	89.6%	0.29	0.26
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.29	1.29
Total				17.94

Table A-150   Wyoming Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.54	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	5.73	0.00	0.0
Cooling	RTU	65.9%	6.18	4.07	65,112.5
Cooling	PTAC	2.3%	7.80	0.18	2,902.4
Cooling	PTHP	0.7%	7.80	0.06	920.6
Cooling	Evaporative Central AC	0.0%	2.47	0.00	18.4
Cooling	Air-Source Heat Pump	14.1%	6.18	0.87	13,890.0
Cooling	Geothermal Heat Pump	7.5%	3.76	0.28	4,538.3
Heating	Electric Furnace	0.9%	5.81	0.05	790.8
Heating	Electric Room Heat	16.4%	5.53	0.91	14,511.2
Heating	PTHP	0.7%	4.62	0.03	545.4
Heating	Air-Source Heat Pump	14.1%	5.14	0.72	11,555.2
Heating	Geothermal Heat Pump	7.5%	3.65	0.28	4,398.8
Ventilation	Ventilation	100.0%	1.17	1.17	18,774.5
Water Heating	Water Heater	60.0%	0.87	0.52	8,364.3
Interior Lighting	General Service Lighting	100.0%	0.25	0.25	3,940.3
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13	2,121.5
Interior Lighting	Linear Lighting	100.0%	1.54	1.54	24,640.4
Interior Lighting	High-Bay Lighting	100.0%	1.51	1.51	24,131.7
Exterior Lighting	General Service Lighting	100.0%	0.16	0.16	2,596.3
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07	1,162.3
Exterior Lighting	Area Lighting	100.0%	1.58	1.58	25,212.2
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.64	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.14	0.01	201.4
Refrigeration	Glass Door Display	0.0%	0.15	0.00	0.0
Refrigeration	Open Display Case	0.0%	0.87	0.00	0.0
Refrigeration	Icemaker	5.1%	0.24	0.01	196.8
Refrigeration	Vending Machine	5.1%	0.11	0.01	92.4
Food Preparation	Oven	3.6%	0.17	0.01	102.0
Food Preparation	Fryer	3.6%	0.25	0.01	147.4
Food Preparation	Dishwasher	3.6%	0.35	0.01	202.9
Food Preparation	Hot Food Container	3.6%	0.05	0.00	27.8
Food Preparation	Steamer	3.6%	0.26	0.01	148.8
Office Equipment	Desktop Computer	100.0%	1.24	1.24	19,835.0
Office Equipment	Laptop	100.0%	0.19	0.19	3,062.8
Office Equipment	Monitor	100.0%	0.22	0.22	3,500.3
Office Equipment	Server	100.0%	0.36	0.36	5,833.8
Office Equipment	Printer/Copier/Fax	100.0%	0.17	0.17	2,714.7
Office Equipment	POS Terminal	20.0%	0.10	0.02	311.6
Miscellaneous	Non-HVAC Motors	22.0%	0.24	0.05	833.0
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	1.01	1.01	16,184.8
Total				17.74	283,522.4

Table A-151   Wyoming Small Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	4.45	0.00
Cooling	Water-Cooled Chiller	0.0%	4.68	0.00
Cooling	RTU	65.9%	3.79	2.50
Cooling	PTAC	2.3%	5.39	0.13
Cooling	PTHP	0.7%	5.39	0.04
Cooling	Evaporative Central AC	0.0%	2.14	0.00
Cooling	Air-Source Heat Pump	14.1%	4.02	0.57
Cooling	Geothermal Heat Pump	7.5%	2.77	0.21
Heating	Electric Furnace	0.9%	6.42	0.05
Heating	Electric Room Heat	16.4%	6.12	1.00
Heating	PTHP	0.7%	4.16	0.03
Heating	Air-Source Heat Pump	14.1%	3.89	0.55
Heating	Geothermal Heat Pump	7.5%	3.44	0.26
Ventilation	Ventilation	100.0%	1.01	1.01
Water Heating	Water Heater	60.0%	0.82	0.49
Interior Lighting	General Service Lighting	100.0%	0.23	0.23
Interior Lighting	Exempted Lighting	100.0%	0.13	0.13
Interior Lighting	Linear Lighting	100.0%	1.39	1.39
Interior Lighting	High-Bay Lighting	100.0%	1.36	1.36
Exterior Lighting	General Service Lighting	100.0%	0.15	0.15
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	1.42	1.42
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.58	0.00
Refrigeration	Reach-in Refrigerator/Freezer	8.8%	0.13	0.01
Refrigeration	Glass Door Display	0.0%	0.13	0.00
Refrigeration	Open Display Case	0.0%	0.79	0.00
Refrigeration	Icemaker	5.1%	0.22	0.01
Refrigeration	Vending Machine	5.1%	0.10	0.01
Food Preparation	Oven	3.6%	0.16	0.01
Food Preparation	Fryer	3.6%	0.23	0.01
Food Preparation	Dishwasher	3.6%	0.31	0.01
Food Preparation	Hot Food Container	3.6%	0.04	0.00
Food Preparation	Steamer	3.6%	0.23	0.01
Office Equipment	Desktop Computer	100.0%	1.18	1.18
Office Equipment	Laptop	100.0%	0.18	0.18
Office Equipment	Monitor	100.0%	0.21	0.21
Office Equipment	Server	100.0%	0.35	0.35
Office Equipment	Printer/Copier/Fax	100.0%	0.16	0.16
Office Equipment	POS Terminal	20.0%	0.09	0.02
Miscellaneous	Non-HVAC Motors	22.0%	0.21	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	1.01	1.01
Total				14.81

Table A-152   Wyoming Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	1.1%	5.09	0.06	377.4
Cooling	Water-Cooled Chiller	0.7%	5.27	0.04	240.4
Cooling	RTU	79.0%	5.68	4.48	29,469.6
Cooling	PTAC	3.5%	7.18	0.25	1,629.9
Cooling	PTHP	0.7%	7.18	0.05	335.6
Cooling	Evaporative Central AC	4.0%	2.27	0.09	602.8
Cooling	Air-Source Heat Pump	4.2%	5.68	0.24	1,561.8
Cooling	Geothermal Heat Pump	0.0%	3.46	0.00	0.0
Heating	Electric Furnace	3.4%	4.46	0.15	986.2
Heating	Electric Room Heat	39.3%	4.25	1.67	10,982.3
Heating	PTHP	0.7%	3.51	0.02	164.1
Heating	Air-Source Heat Pump	4.2%	3.90	0.16	1,072.1
Heating	Geothermal Heat Pump	0.0%	2.84	0.00	0.0
Ventilation	Ventilation	100.0%	2.96	2.96	19,439.3
Water Heating	Water Heater	61.0%	0.98	0.60	3,942.7
Interior Lighting	General Service Lighting	100.0%	0.50	0.50	3,271.1
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47	3,112.2
Interior Lighting	Linear Lighting	100.0%	3.00	3.00	19,735.0
Interior Lighting	High-Bay Lighting	100.0%	1.99	1.99	13,081.7
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	1,563.5
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	524.9
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	5,549.1
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.33	0.01	42.9
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01	67.3
Refrigeration	Glass Door Display	81.7%	0.08	0.06	403.2
Refrigeration	Open Display Case	81.7%	0.45	0.36	2,390.1
Refrigeration	Icemaker	52.4%	0.25	0.13	847.2
Refrigeration	Vending Machine	52.4%	0.12	0.06	397.9
Food Preparation	Oven	48.9%	0.15	0.07	477.0
Food Preparation	Fryer	45.2%	0.21	0.10	637.6
Food Preparation	Dishwasher	39.6%	0.30	0.12	768.2
Food Preparation	Hot Food Container	39.6%	0.04	0.02	105.1
Food Preparation	Steamer	39.6%	0.22	0.09	563.3
Office Equipment	Desktop Computer	100.0%	0.30	0.30	1,993.1
Office Equipment	Laptop	100.0%	0.05	0.05	307.8
Office Equipment	Monitor	100.0%	0.05	0.05	351.7
Office Equipment	Server	82.0%	0.04	0.04	240.3
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	272.8
Office Equipment	POS Terminal	100.0%	0.01	0.01	47.0
Miscellaneous	Non-HVAC Motors	40.2%	0.18	0.07	464.1
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	7.0%	0.00	0.00	0.8
Miscellaneous	Clothes Dryer	4.0%	0.01	0.00	1.4
Miscellaneous	Miscellaneous	100.0%	0.66	0.66	4,368.3
Total				20.15	132,388.7

Table A-153   Wyoming Large Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	1.1%	3.96	0.04
Cooling	Water-Cooled Chiller	0.7%	3.44	0.02
Cooling	RTU	79.0%	4.62	3.65
Cooling	PTAC	3.5%	4.95	0.17
Cooling	PTHP	0.7%	4.95	0.04
Cooling	Evaporative Central AC	4.0%	1.96	0.08
Cooling	Air-Source Heat Pump	4.2%	4.27	0.18
Cooling	Geothermal Heat Pump	0.0%	2.55	0.00
Heating	Electric Furnace	3.4%	3.61	0.12
Heating	Electric Room Heat	39.3%	3.43	1.35
Heating	PTHP	0.7%	3.16	0.02
Heating	Air-Source Heat Pump	4.2%	2.56	0.11
Heating	Geothermal Heat Pump	0.0%	2.68	0.00
Ventilation	Ventilation	100.0%	2.48	2.48
Water Heating	Water Heater	61.0%	0.92	0.56
Interior Lighting	General Service Lighting	100.0%	0.47	0.47
Interior Lighting	Exempted Lighting	100.0%	0.47	0.47
Interior Lighting	Linear Lighting	100.0%	2.71	2.71
Interior Lighting	High-Bay Lighting	100.0%	1.80	1.80
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.29	0.01
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.07	0.01
Refrigeration	Glass Door Display	81.7%	0.07	0.06
Refrigeration	Open Display Case	81.7%	0.40	0.33
Refrigeration	Icemaker	52.4%	0.22	0.12
Refrigeration	Vending Machine	52.4%	0.10	0.05
Food Preparation	Oven	48.9%	0.13	0.07
Food Preparation	Fryer	45.2%	0.19	0.09
Food Preparation	Dishwasher	39.6%	0.27	0.11
Food Preparation	Hot Food Container	39.6%	0.04	0.01
Food Preparation	Steamer	39.6%	0.19	0.08
Office Equipment	Desktop Computer	100.0%	0.29	0.29
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	82.0%	0.04	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	40.2%	0.16	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	7.0%	0.00	0.00
Miscellaneous	Clothes Dryer	4.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.66	0.66
Total				17.44

Table A-154   Wyoming Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.59	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	5.78	0.00	0.0
Cooling	RTU	67.0%	6.23	4.18	36,200.8
Cooling	PTAC	2.4%	6.40	0.15	1,313.0
Cooling	PTHP	0.8%	6.40	0.05	416.5
Cooling	Evaporative Central AC	0.0%	2.49	0.00	10.2
Cooling	Air-Source Heat Pump	14.3%	6.22	0.89	7,715.0
Cooling	Geothermal Heat Pump	7.7%	3.79	0.29	2,519.2
Heating	Electric Furnace	0.5%	6.39	0.03	276.3
Heating	Electric Room Heat	9.6%	6.09	0.58	5,069.6
Heating	PTHP	0.8%	4.69	0.04	304.9
Heating	Air-Source Heat Pump	14.3%	5.21	0.75	6,460.3
Heating	Geothermal Heat Pump	7.7%	3.28	0.25	2,181.7
Ventilation	Ventilation	100.0%	1.17	1.17	10,180.8
Water Heating	Water Heater	61.8%	0.87	0.54	4,669.1
Interior Lighting	General Service Lighting	100.0%	0.33	0.33	2,847.8
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31	2,709.5
Interior Lighting	Linear Lighting	100.0%	1.98	1.98	17,181.0
Interior Lighting	High-Bay Lighting	100.0%	1.31	1.31	11,388.7
Exterior Lighting	General Service Lighting	100.0%	0.24	0.24	2,062.4
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	692.3
Exterior Lighting	Area Lighting	100.0%	0.84	0.84	7,319.7
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.20	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00	20.8
Refrigeration	Glass Door Display	5.4%	0.05	0.00	21.3
Refrigeration	Open Display Case	5.4%	0.27	0.01	126.3
Refrigeration	Icemaker	5.1%	0.15	0.01	66.5
Refrigeration	Vending Machine	5.1%	0.07	0.00	31.2
Food Preparation	Oven	3.6%	0.17	0.01	55.3
Food Preparation	Fryer	3.6%	0.25	0.01	80.0
Food Preparation	Dishwasher	3.6%	0.35	0.01	110.0
Food Preparation	Hot Food Container	3.6%	0.05	0.00	15.1
Food Preparation	Steamer	3.6%	0.26	0.01	80.7
Office Equipment	Desktop Computer	100.0%	0.10	0.10	890.8
Office Equipment	Laptop	100.0%	0.02	0.02	137.5
Office Equipment	Monitor	100.0%	0.02	0.02	157.2
Office Equipment	Server	100.0%	0.12	0.12	1,048.0
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	97.5
Office Equipment	POS Terminal	100.0%	0.03	0.03	279.9
Miscellaneous	Non-HVAC Motors	22.0%	0.12	0.03	231.4
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.00	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.52	0.52	4,496.4
Total				14.94	129,464.8

Table A-155   *Wyoming Small Retail New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	4.35	0.00
Cooling	Water-Cooled Chiller	0.0%	3.78	0.00
Cooling	RTU	67.0%	4.41	2.95
Cooling	PTAC	2.4%	4.35	0.10
Cooling	PTHP	0.8%	4.35	0.03
Cooling	Evaporative Central AC	0.0%	2.15	0.00
Cooling	Air-Source Heat Pump	14.3%	4.67	0.67
Cooling	Geothermal Heat Pump	7.7%	2.79	0.21
Heating	Electric Furnace	0.5%	5.03	0.03
Heating	Electric Room Heat	9.6%	4.79	0.46
Heating	PTHP	0.8%	3.98	0.03
Heating	Air-Source Heat Pump	14.3%	2.99	0.43
Heating	Geothermal Heat Pump	7.7%	3.09	0.24
Ventilation	Ventilation	100.0%	1.01	1.01
Water Heating	Water Heater	61.8%	0.82	0.51
Interior Lighting	General Service Lighting	100.0%	0.31	0.31
Interior Lighting	Exempted Lighting	100.0%	0.31	0.31
Interior Lighting	Linear Lighting	100.0%	1.79	1.79
Interior Lighting	High-Bay Lighting	100.0%	1.19	1.19
Exterior Lighting	General Service Lighting	100.0%	0.21	0.21
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.76	0.76
Refrigeration	Walk-in Refrigerator/Freezer	0.0%	0.18	0.00
Refrigeration	Reach-in Refrigerator/Freezer	5.4%	0.04	0.00
Refrigeration	Glass Door Display	5.4%	0.04	0.00
Refrigeration	Open Display Case	5.4%	0.24	0.01
Refrigeration	Icemaker	5.1%	0.14	0.01
Refrigeration	Vending Machine	5.1%	0.06	0.00
Food Preparation	Oven	3.6%	0.16	0.01
Food Preparation	Fryer	3.6%	0.23	0.01
Food Preparation	Dishwasher	3.6%	0.31	0.01
Food Preparation	Hot Food Container	3.6%	0.04	0.00
Food Preparation	Steamer	3.6%	0.23	0.01
Office Equipment	Desktop Computer	100.0%	0.10	0.10
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.03	0.03
Miscellaneous	Non-HVAC Motors	22.0%	0.11	0.02
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.00	0.00
Miscellaneous	Clothes Dryer	0.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.52	0.52
Total				12.21

Table A-156   Wyoming Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	6.17	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	6.24	0.00	0.0
Cooling	RTU	72.9%	7.60	5.54	10,210.4
Cooling	PTAC	2.7%	9.60	0.26	472.3
Cooling	PTHP	1.9%	9.60	0.18	340.2
Cooling	Evaporative Central AC	3.3%	3.04	0.10	184.5
Cooling	Air-Source Heat Pump	8.2%	7.60	0.62	1,151.1
Cooling	Geothermal Heat Pump	0.0%	4.63	0.00	0.0
Heating	Electric Furnace	6.1%	5.05	0.31	566.2
Heating	Electric Room Heat	0.6%	4.81	0.03	48.9
Heating	PTHP	1.9%	3.46	0.07	122.7
Heating	Air-Source Heat Pump	8.2%	3.85	0.32	583.1
Heating	Geothermal Heat Pump	0.0%	2.52	0.00	0.0
Ventilation	Ventilation	100.0%	2.13	2.13	3,920.2
Water Heating	Water Heater	57.9%	8.27	4.79	8,824.4
Interior Lighting	General Service Lighting	100.0%	1.34	1.34	2,469.8
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94	1,730.9
Interior Lighting	Linear Lighting	100.0%	1.87	1.87	3,441.4
Interior Lighting	High-Bay Lighting	100.0%	2.92	2.92	5,379.1
Exterior Lighting	General Service Lighting	100.0%	0.28	0.28	509.0
Exterior Lighting	Linear Lighting	100.0%	0.40	0.40	743.8
Exterior Lighting	Area Lighting	100.0%	2.14	2.14	3,945.5
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.78	5.02	9,243.6
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	3.04	0.21	392.5
Refrigeration	Glass Door Display	5.2%	1.56	0.08	149.6
Refrigeration	Open Display Case	5.2%	9.25	0.48	886.9
Refrigeration	Icemaker	97.3%	2.56	2.49	4,585.6
Refrigeration	Vending Machine	97.3%	1.20	1.17	2,153.5
Food Preparation	Oven	0.0%	16.94	0.00	0.0
Food Preparation	Fryer	0.0%	24.50	0.00	0.0
Food Preparation	Dishwasher	52.5%	16.86	8.85	16,314.2
Food Preparation	Hot Food Container	0.0%	2.31	0.00	0.0
Food Preparation	Steamer	0.0%	12.36	0.00	0.0
Office Equipment	Desktop Computer	100.0%	0.29	0.29	538.5
Office Equipment	Laptop	100.0%	0.04	0.04	66.5
Office Equipment	Monitor	100.0%	0.05	0.05	95.0
Office Equipment	Server	50.0%	0.34	0.17	316.7
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	117.9
Office Equipment	POS Terminal	100.0%	0.09	0.09	169.2
Miscellaneous	Non-HVAC Motors	20.0%	0.52	0.10	190.5
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	2.07	2.07	3,815.3
Total				45.41	83,679.1

Table A-157   Wyoming Restaurant New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	5.83	0.00
Cooling	Water-Cooled Chiller	0.0%	5.57	0.00
Cooling	RTU	72.9%	5.47	3.99
Cooling	PTAC	2.7%	6.63	0.18
Cooling	PTHP	1.9%	6.63	0.13
Cooling	Evaporative Central AC	3.3%	2.63	0.09
Cooling	Air-Source Heat Pump	8.2%	5.81	0.48
Cooling	Geothermal Heat Pump	0.0%	3.41	0.00
Heating	Electric Furnace	6.1%	5.45	0.33
Heating	Electric Room Heat	0.6%	5.19	0.03
Heating	PTHP	1.9%	3.12	0.06
Heating	Air-Source Heat Pump	8.2%	3.31	0.27
Heating	Geothermal Heat Pump	0.0%	2.38	0.00
Ventilation	Ventilation	100.0%	1.91	1.91
Water Heating	Water Heater	57.9%	7.78	4.50
Interior Lighting	General Service Lighting	100.0%	1.27	1.27
Interior Lighting	Exempted Lighting	100.0%	0.94	0.94
Interior Lighting	Linear Lighting	100.0%	1.69	1.69
Interior Lighting	High-Bay Lighting	100.0%	2.63	2.63
Exterior Lighting	General Service Lighting	100.0%	0.25	0.25
Exterior Lighting	Linear Lighting	100.0%	0.36	0.36
Exterior Lighting	Area Lighting	100.0%	1.93	1.93
Refrigeration	Walk-in Refrigerator/Freezer	74.0%	6.10	4.51
Refrigeration	Reach-in Refrigerator/Freezer	7.0%	2.74	0.19
Refrigeration	Glass Door Display	5.2%	1.41	0.07
Refrigeration	Open Display Case	5.2%	8.33	0.43
Refrigeration	Icemaker	97.3%	2.30	2.24
Refrigeration	Vending Machine	97.3%	1.08	1.05
Food Preparation	Oven	0.0%	15.25	0.00
Food Preparation	Fryer	0.0%	22.05	0.00
Food Preparation	Dishwasher	52.5%	15.17	7.97
Food Preparation	Hot Food Container	0.0%	2.08	0.00
Food Preparation	Steamer	0.0%	11.13	0.00
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	50.0%	0.33	0.16
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.09	0.09
Miscellaneous	Non-HVAC Motors	20.0%	0.47	0.09
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	2.07	2.07
Total				40.35

Table A-158   Wyoming Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.5%	6.95	0.04	48.9
Cooling	Water-Cooled Chiller	0.3%	7.19	0.02	31.2
Cooling	RTU	71.3%	7.75	5.53	7,544.1
Cooling	PTAC	2.1%	9.79	0.21	284.6
Cooling	PTHP	0.6%	9.79	0.06	84.1
Cooling	Evaporative Central AC	1.2%	3.10	0.04	49.7
Cooling	Air-Source Heat Pump	7.2%	7.25	0.52	715.6
Cooling	Geothermal Heat Pump	0.0%	2.57	0.00	0.0
Heating	Electric Furnace	6.4%	5.87	0.37	510.9
Heating	Electric Room Heat	1.2%	5.59	0.07	89.6
Heating	PTHP	0.6%	3.05	0.02	26.2
Heating	Air-Source Heat Pump	7.2%	3.39	0.24	334.2
Heating	Geothermal Heat Pump	0.0%	2.22	0.00	0.0
Ventilation	Ventilation	100.0%	2.01	2.01	2,746.6
Water Heating	Water Heater	62.5%	2.10	1.31	1,789.8
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	520.8
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30	402.8
Interior Lighting	Linear Lighting	100.0%	5.01	5.01	6,837.5
Interior Lighting	High-Bay Lighting	100.0%	2.02	2.02	2,756.8
Exterior Lighting	General Service Lighting	100.0%	0.36	0.36	494.0
Exterior Lighting	Linear Lighting	100.0%	0.38	0.38	520.7
Exterior Lighting	Area Lighting	100.0%	1.78	1.78	2,433.6
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	5.13	0.82	1,119.3
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.33	0.27	372.6
Refrigeration	Glass Door Display	94.9%	3.37	3.20	4,369.2
Refrigeration	Open Display Case	94.9%	20.00	18.98	25,897.9
Refrigeration	Icemaker	98.9%	0.28	0.27	372.9
Refrigeration	Vending Machine	98.9%	0.26	0.26	350.3
Food Preparation	Oven	11.0%	0.60	0.07	90.1
Food Preparation	Fryer	87.0%	0.87	0.76	1,030.7
Food Preparation	Dishwasher	54.9%	1.19	0.66	894.7
Food Preparation	Hot Food Container	73.0%	0.16	0.12	162.9
Food Preparation	Steamer	20.0%	0.88	0.18	239.1
Office Equipment	Desktop Computer	100.0%	0.16	0.16	218.2
Office Equipment	Laptop	64.0%	0.02	0.02	21.6
Office Equipment	Monitor	100.0%	0.03	0.03	38.5
Office Equipment	Server	100.0%	0.09	0.09	128.4
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	23.9
Office Equipment	POS Terminal	100.0%	0.06	0.06	85.7
Miscellaneous	Non-HVAC Motors	34.6%	0.15	0.05	70.2
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.47	0.47	641.8
Total				47.16	64,349.4

Table A-159   Wyoming Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.5%	5.70	0.03
Cooling	Water-Cooled Chiller	0.3%	5.72	0.02
Cooling	RTU	71.3%	6.74	4.81
Cooling	PTAC	2.1%	6.76	0.14
Cooling	PTHP	0.6%	6.76	0.04
Cooling	Evaporative Central AC	1.2%	2.68	0.03
Cooling	Air-Source Heat Pump	7.2%	6.25	0.45
Cooling	Geothermal Heat Pump	0.0%	1.89	0.00
Heating	Electric Furnace	6.4%	4.75	0.30
Heating	Electric Room Heat	1.2%	4.52	0.05
Heating	PTHP	0.6%	2.75	0.02
Heating	Air-Source Heat Pump	7.2%	4.32	0.31
Heating	Geothermal Heat Pump	0.0%	2.09	0.00
Ventilation	Ventilation	100.0%	2.98	2.98
Water Heating	Water Heater	62.5%	1.97	1.23
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.30	0.30
Interior Lighting	Linear Lighting	100.0%	4.52	4.52
Interior Lighting	High-Bay Lighting	100.0%	1.82	1.82
Exterior Lighting	General Service Lighting	100.0%	0.33	0.33
Exterior Lighting	Linear Lighting	100.0%	0.34	0.34
Exterior Lighting	Area Lighting	100.0%	1.61	1.61
Refrigeration	Walk-in Refrigerator/Freezer	16.0%	4.61	0.74
Refrigeration	Reach-in Refrigerator/Freezer	83.1%	0.30	0.25
Refrigeration	Glass Door Display	94.9%	3.04	2.88
Refrigeration	Open Display Case	94.9%	18.00	17.08
Refrigeration	Icemaker	98.9%	0.25	0.25
Refrigeration	Vending Machine	98.9%	0.23	0.23
Food Preparation	Oven	11.0%	0.54	0.06
Food Preparation	Fryer	87.0%	0.78	0.68
Food Preparation	Dishwasher	54.9%	1.08	0.59
Food Preparation	Hot Food Container	73.0%	0.15	0.11
Food Preparation	Steamer	20.0%	0.79	0.16
Office Equipment	Desktop Computer	100.0%	0.15	0.15
Office Equipment	Laptop	64.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.09	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	34.6%	0.13	0.05
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.47	0.47
Total				43.60

Table A-160   Wyoming Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	16.7%	8.27	1.38	4,744.0
Cooling	Water-Cooled Chiller	66.7%	9.74	6.50	22,342.6
Cooling	RTU	11.0%	8.12	0.89	3,060.8
Cooling	PTAC	0.4%	10.26	0.04	135.7
Cooling	PTHP	0.0%	10.26	0.00	0.0
Cooling	Evaporative Central AC	0.0%	3.25	0.00	0.0
Cooling	Air-Source Heat Pump	0.6%	8.10	0.05	160.8
Cooling	Geothermal Heat Pump	0.9%	4.93	0.04	146.8
Heating	Electric Furnace	3.0%	12.11	0.36	1,229.1
Heating	Electric Room Heat	0.1%	11.53	0.01	24.1
Heating	PTHP	0.0%	7.90	0.00	0.0
Heating	Air-Source Heat Pump	0.6%	8.78	0.05	174.2
Heating	Geothermal Heat Pump	0.9%	5.87	0.05	174.7
Ventilation	Ventilation	100.0%	3.46	3.46	11,902.8
Water Heating	Water Heater	4.0%	3.44	0.14	467.7
Interior Lighting	General Service Lighting	100.0%	0.55	0.55	1,887.4
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	784.8
Interior Lighting	Linear Lighting	100.0%	4.04	4.04	13,881.7
Interior Lighting	High-Bay Lighting	100.0%	2.59	2.59	8,917.7
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	151.7
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	281.6
Exterior Lighting	Area Lighting	100.0%	0.66	0.66	2,284.0
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.23	0.08	266.4
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.05	0.03	90.6
Refrigeration	Glass Door Display	90.4%	0.05	0.05	168.1
Refrigeration	Open Display Case	90.4%	0.32	0.29	996.2
Refrigeration	Icemaker	90.4%	0.18	0.16	550.6
Refrigeration	Vending Machine	90.4%	0.08	0.08	258.6
Food Preparation	Oven	69.7%	0.49	0.34	1,176.4
Food Preparation	Fryer	80.7%	0.71	0.57	1,969.8
Food Preparation	Dishwasher	53.5%	0.98	0.52	1,796.2
Food Preparation	Hot Food Container	53.5%	0.13	0.07	245.8
Food Preparation	Steamer	53.5%	0.72	0.38	1,317.1
Office Equipment	Desktop Computer	100.0%	0.56	0.56	1,916.4
Office Equipment	Laptop	100.0%	0.03	0.03	118.4
Office Equipment	Monitor	100.0%	0.10	0.10	338.2
Office Equipment	Server	100.0%	0.07	0.07	225.5
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	209.8
Office Equipment	POS Terminal	100.0%	0.04	0.04	150.5
Miscellaneous	Non-HVAC Motors	74.1%	0.53	0.39	1,338.3
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	63.0%	0.03	0.02	67.9
Miscellaneous	Clothes Dryer	58.0%	0.10	0.06	203.0
Miscellaneous	Miscellaneous	100.0%	4.09	4.09	14,052.2
Total				29.15	100,208.0

Table A-161   Wyoming Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.7%	5.30	0.88
Cooling	Water-Cooled Chiller	66.7%	5.61	3.74
Cooling	RTU	11.0%	5.93	0.65
Cooling	PTAC	0.4%	7.97	0.03
Cooling	PTHP	0.0%	7.97	0.00
Cooling	Evaporative Central AC	0.0%	2.80	0.00
Cooling	Air-Source Heat Pump	0.6%	6.18	0.04
Cooling	Geothermal Heat Pump	0.9%	3.63	0.03
Heating	Electric Furnace	3.0%	8.86	0.26
Heating	Electric Room Heat	0.1%	8.44	0.01
Heating	PTHP	0.0%	7.80	0.00
Heating	Air-Source Heat Pump	0.6%	3.42	0.02
Heating	Geothermal Heat Pump	0.9%	5.53	0.05
Ventilation	Ventilation	100.0%	2.48	2.48
Water Heating	Water Heater	4.0%	3.23	0.13
Interior Lighting	General Service Lighting	100.0%	0.52	0.52
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	3.64	3.64
Interior Lighting	High-Bay Lighting	100.0%	2.34	2.34
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.60	0.60
Refrigeration	Walk-in Refrigerator/Freezer	33.0%	0.21	0.07
Refrigeration	Reach-in Refrigerator/Freezer	50.0%	0.05	0.02
Refrigeration	Glass Door Display	90.4%	0.05	0.04
Refrigeration	Open Display Case	90.4%	0.29	0.26
Refrigeration	Icemaker	90.4%	0.16	0.14
Refrigeration	Vending Machine	90.4%	0.07	0.07
Food Preparation	Oven	69.7%	0.44	0.31
Food Preparation	Fryer	80.7%	0.64	0.52
Food Preparation	Dishwasher	53.5%	0.88	0.47
Food Preparation	Hot Food Container	53.5%	0.12	0.06
Food Preparation	Steamer	53.5%	0.64	0.34
Office Equipment	Desktop Computer	100.0%	0.53	0.53
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.09	0.09
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.04	0.04
Miscellaneous	Non-HVAC Motors	74.1%	0.47	0.35
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	63.0%	0.03	0.02
Miscellaneous	Clothes Dryer	58.0%	0.09	0.05
Miscellaneous	Miscellaneous	100.0%	4.09	4.09
Total				23.41

Table A-162   Wyoming College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	27.3%	7.51	2.05	14,619.5
Cooling	Water-Cooled Chiller	0.0%	9.77	0.00	0.0
Cooling	RTU	44.8%	4.12	1.85	13,155.4
Cooling	PTAC	2.9%	5.20	0.15	1,079.2
Cooling	PTHP	2.0%	5.20	0.11	755.6
Cooling	Evaporative Central AC	0.0%	1.65	0.00	0.4
Cooling	Air-Source Heat Pump	7.6%	4.11	0.31	2,222.2
Cooling	Geothermal Heat Pump	5.5%	2.50	0.14	978.9
Heating	Electric Furnace	0.0%	9.79	0.00	0.0
Heating	Electric Room Heat	16.2%	9.32	1.51	10,750.9
Heating	PTHP	2.0%	6.43	0.13	934.2
Heating	Air-Source Heat Pump	7.6%	7.15	0.54	3,866.8
Heating	Geothermal Heat Pump	5.5%	5.10	0.28	1,995.1
Ventilation	Ventilation	100.0%	1.48	1.48	10,517.8
Water Heating	Water Heater	64.3%	2.00	1.29	9,187.8
Interior Lighting	General Service Lighting	100.0%	0.09	0.09	673.5
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	288.1
Interior Lighting	Linear Lighting	100.0%	2.19	2.19	15,588.0
Interior Lighting	High-Bay Lighting	100.0%	1.42	1.42	10,142.4
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	142.6
Exterior Lighting	Linear Lighting	100.0%	0.75	0.75	5,339.5
Exterior Lighting	Area Lighting	100.0%	0.29	0.29	2,047.7
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.16	0.01	87.5
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.07	0.01	68.2
Refrigeration	Glass Door Display	26.6%	0.04	0.01	69.7
Refrigeration	Open Display Case	26.6%	0.22	0.06	412.9
Refrigeration	Icemaker	26.6%	0.12	0.03	228.2
Refrigeration	Vending Machine	26.6%	0.06	0.02	107.2
Food Preparation	Oven	21.0%	0.23	0.05	343.4
Food Preparation	Fryer	21.0%	0.33	0.07	496.5
Food Preparation	Dishwasher	21.0%	0.46	0.10	683.4
Food Preparation	Hot Food Container	21.0%	0.06	0.01	93.5
Food Preparation	Steamer	21.0%	0.33	0.07	501.1
Office Equipment	Desktop Computer	100.0%	0.47	0.47	3,383.8
Office Equipment	Laptop	100.0%	0.02	0.02	156.7
Office Equipment	Monitor	100.0%	0.08	0.08	597.1
Office Equipment	Server	100.0%	0.06	0.06	398.1
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06	463.1
Office Equipment	POS Terminal	100.0%	0.02	0.02	132.9
Miscellaneous	Non-HVAC Motors	88.8%	0.08	0.07	479.7
Miscellaneous	Pool Pump	90.3%	0.01	0.01	73.8
Miscellaneous	Pool Heater	36.2%	0.01	0.01	38.4
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	3.9
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	9.2
Miscellaneous	Miscellaneous	100.0%	0.33	0.33	2,376.8
Total				16.21	115,490.9

Table A-163   Wyoming College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	27.3%	4.54	1.24
Cooling	Water-Cooled Chiller	0.0%	5.37	0.00
Cooling	RTU	44.8%	2.89	1.30
Cooling	PTAC	2.9%	4.04	0.12
Cooling	PTHP	2.0%	4.04	0.08
Cooling	Evaporative Central AC	0.0%	1.42	0.00
Cooling	Air-Source Heat Pump	7.6%	3.00	0.23
Cooling	Geothermal Heat Pump	5.5%	1.84	0.10
Heating	Electric Furnace	0.0%	9.59	0.00
Heating	Electric Room Heat	16.2%	9.14	1.48
Heating	PTHP	2.0%	6.36	0.13
Heating	Air-Source Heat Pump	7.6%	5.60	0.42
Heating	Geothermal Heat Pump	5.5%	4.80	0.26
Ventilation	Ventilation	100.0%	1.45	1.45
Water Heating	Water Heater	64.3%	1.88	1.21
Interior Lighting	General Service Lighting	100.0%	0.09	0.09
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	1.97	1.97
Interior Lighting	High-Bay Lighting	100.0%	1.28	1.28
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.68	0.68
Exterior Lighting	Area Lighting	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator/Freezer	7.7%	0.14	0.01
Refrigeration	Reach-in Refrigerator/Freezer	13.4%	0.06	0.01
Refrigeration	Glass Door Display	26.6%	0.03	0.01
Refrigeration	Open Display Case	26.6%	0.20	0.05
Refrigeration	Icemaker	26.6%	0.11	0.03
Refrigeration	Vending Machine	26.6%	0.05	0.01
Food Preparation	Oven	21.0%	0.21	0.04
Food Preparation	Fryer	21.0%	0.30	0.06
Food Preparation	Dishwasher	21.0%	0.41	0.09
Food Preparation	Hot Food Container	21.0%	0.06	0.01
Food Preparation	Steamer	21.0%	0.30	0.06
Office Equipment	Desktop Computer	100.0%	0.45	0.45
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.08	0.08
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.06	0.06
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	88.8%	0.07	0.06
Miscellaneous	Pool Pump	90.3%	0.01	0.01
Miscellaneous	Pool Heater	36.2%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.33	0.33
Total				13.85

Table A-164   Wyoming School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	22.1%	3.76	0.83	8,100.5
Cooling	Water-Cooled Chiller	0.0%	4.88	0.00	0.0
Cooling	RTU	36.2%	2.06	0.75	7,289.2
Cooling	PTAC	2.4%	2.60	0.06	597.9
Cooling	PTHP	1.6%	2.60	0.04	418.6
Cooling	Evaporative Central AC	0.0%	0.82	0.00	0.2
Cooling	Air-Source Heat Pump	6.1%	2.05	0.13	1,231.3
Cooling	Geothermal Heat Pump	4.4%	1.25	0.06	542.4
Heating	Electric Furnace	0.0%	5.87	0.00	0.0
Heating	Electric Room Heat	4.4%	5.59	0.25	2,423.6
Heating	PTHP	1.6%	3.86	0.06	620.5
Heating	Air-Source Heat Pump	6.1%	4.29	0.26	2,568.4
Heating	Geothermal Heat Pump	4.4%	3.05	0.14	1,325.2
Ventilation	Ventilation	100.0%	0.72	0.72	7,064.7
Water Heating	Water Heater	50.0%	1.00	0.50	4,900.4
Interior Lighting	General Service Lighting	100.0%	0.16	0.16	1,589.4
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18	1,775.9
Interior Lighting	Linear Lighting	100.0%	1.51	1.51	14,782.2
Interior Lighting	High-Bay Lighting	100.0%	0.81	0.81	7,916.7
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00	39.0
Exterior Lighting	Linear Lighting	100.0%	0.66	0.66	6,421.1
Exterior Lighting	Area Lighting	100.0%	0.12	0.12	1,173.1
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.17	0.03	312.8
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.08	0.02	243.9
Refrigeration	Glass Door Display	65.7%	0.04	0.03	249.2
Refrigeration	Open Display Case	65.7%	0.23	0.15	1,477.0
Refrigeration	Icemaker	65.7%	0.13	0.08	816.3
Refrigeration	Vending Machine	65.7%	0.06	0.04	383.3
Food Preparation	Oven	64.8%	0.11	0.07	711.7
Food Preparation	Fryer	58.6%	0.16	0.10	930.7
Food Preparation	Dishwasher	52.3%	0.22	0.12	1,143.8
Food Preparation	Hot Food Container	52.3%	0.03	0.02	156.5
Food Preparation	Steamer	52.3%	0.16	0.09	838.7
Office Equipment	Desktop Computer	100.0%	0.29	0.29	2,834.9
Office Equipment	Laptop	100.0%	0.02	0.02	175.1
Office Equipment	Monitor	100.0%	0.05	0.05	500.3
Office Equipment	Server	100.0%	0.07	0.07	667.0
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03	310.4
Office Equipment	POS Terminal	36.0%	0.01	0.00	32.1
Miscellaneous	Non-HVAC Motors	43.7%	0.05	0.02	196.8
Miscellaneous	Pool Pump	6.0%	0.01	0.00	8.2
Miscellaneous	Pool Heater	1.0%	0.01	0.00	0.9
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	6.5
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00	15.4
Miscellaneous	Miscellaneous	100.0%	0.21	0.21	2,060.3
Total				8.68	84,851.9

Table A-165   Wyoming School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.1%	2.27	0.50
Cooling	Water-Cooled Chiller	0.0%	2.69	0.00
Cooling	RTU	36.2%	1.45	0.52
Cooling	PTAC	2.4%	2.02	0.05
Cooling	PTHP	1.6%	2.02	0.03
Cooling	Evaporative Central AC	0.0%	0.71	0.00
Cooling	Air-Source Heat Pump	6.1%	1.50	0.09
Cooling	Geothermal Heat Pump	4.4%	0.92	0.04
Heating	Electric Furnace	0.0%	5.75	0.00
Heating	Electric Room Heat	4.4%	5.48	0.24
Heating	PTHP	1.6%	3.81	0.06
Heating	Air-Source Heat Pump	6.1%	3.35	0.21
Heating	Geothermal Heat Pump	4.4%	2.88	0.13
Ventilation	Ventilation	100.0%	0.71	0.71
Water Heating	Water Heater	50.0%	0.94	0.47
Interior Lighting	General Service Lighting	100.0%	0.15	0.15
Interior Lighting	Exempted Lighting	100.0%	0.18	0.18
Interior Lighting	Linear Lighting	100.0%	1.37	1.37
Interior Lighting	High-Bay Lighting	100.0%	0.73	0.73
Exterior Lighting	General Service Lighting	100.0%	0.00	0.00
Exterior Lighting	Linear Lighting	100.0%	0.59	0.59
Exterior Lighting	Area Lighting	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator/Freezer	19.0%	0.15	0.03
Refrigeration	Reach-in Refrigerator/Freezer	33.0%	0.07	0.02
Refrigeration	Glass Door Display	65.7%	0.03	0.02
Refrigeration	Open Display Case	65.7%	0.21	0.14
Refrigeration	Icemaker	65.7%	0.11	0.08
Refrigeration	Vending Machine	65.7%	0.05	0.04
Food Preparation	Oven	64.8%	0.10	0.07
Food Preparation	Fryer	58.6%	0.15	0.09
Food Preparation	Dishwasher	52.3%	0.20	0.11
Food Preparation	Hot Food Container	52.3%	0.03	0.01
Food Preparation	Steamer	52.3%	0.15	0.08
Office Equipment	Desktop Computer	100.0%	0.28	0.28
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Monitor	100.0%	0.05	0.05
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	43.7%	0.04	0.02
Miscellaneous	Pool Pump	6.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	11.0%	0.01	0.00
Miscellaneous	Miscellaneous	100.0%	0.21	0.21
Total				7.54

Table A-166   Wyoming Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.0%	0.94	0.02	123.1
Cooling	Water-Cooled Chiller	7.3%	1.18	0.09	564.8
Cooling	RTU	15.8%	2.85	0.45	2,937.6
Cooling	PTAC	38.8%	3.59	1.39	9,125.2
Cooling	PTHP	13.0%	3.59	0.47	3,072.0
Cooling	Evaporative Central AC	0.5%	1.14	0.01	35.4
Cooling	Air-Source Heat Pump	5.1%	2.85	0.14	949.5
Cooling	Geothermal Heat Pump	5.5%	2.68	0.15	958.6
Heating	Electric Furnace	1.4%	2.09	0.03	196.9
Heating	Electric Room Heat	51.1%	1.99	1.02	6,653.4
Heating	PTHP	13.0%	1.72	0.22	1,473.6
Heating	Air-Source Heat Pump	5.1%	1.92	0.10	639.5
Heating	Geothermal Heat Pump	5.5%	1.29	0.07	460.7
Ventilation	Ventilation	100.0%	0.89	0.89	5,812.9
Water Heating	Water Heater	50.0%	2.99	1.49	9,783.7
Interior Lighting	General Service Lighting	100.0%	0.81	0.81	5,296.0
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43	2,804.6
Interior Lighting	Linear Lighting	100.0%	0.46	0.46	2,985.7
Interior Lighting	High-Bay Lighting	100.0%	1.29	1.29	8,425.1
Exterior Lighting	General Service Lighting	100.0%	0.04	0.04	249.4
Exterior Lighting	Linear Lighting	100.0%	0.03	0.03	167.6
Exterior Lighting	Area Lighting	100.0%	1.73	1.73	11,332.3
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.38	0.01	74.6
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.09	0.02	106.0
Refrigeration	Glass Door Display	58.9%	0.09	0.05	337.3
Refrigeration	Open Display Case	58.9%	0.52	0.31	1,999.4
Refrigeration	Icemaker	58.9%	0.14	0.08	552.5
Refrigeration	Vending Machine	58.9%	0.13	0.08	518.9
Food Preparation	Oven	13.8%	0.24	0.03	221.4
Food Preparation	Fryer	21.0%	0.35	0.07	487.3
Food Preparation	Dishwasher	30.0%	0.49	0.15	958.8
Food Preparation	Hot Food Container	30.0%	0.07	0.02	131.2
Food Preparation	Steamer	30.0%	0.36	0.11	703.1
Office Equipment	Desktop Computer	100.0%	0.08	0.08	546.7
Office Equipment	Laptop	100.0%	0.01	0.01	84.4
Office Equipment	Monitor	100.0%	0.01	0.01	96.5
Office Equipment	Server	100.0%	0.05	0.05	321.6
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	59.9
Office Equipment	POS Terminal	58.0%	0.01	0.01	49.8
Miscellaneous	Non-HVAC Motors	91.3%	0.12	0.11	717.1
Miscellaneous	Pool Pump	76.0%	0.01	0.01	60.3
Miscellaneous	Pool Heater	27.0%	0.02	0.00	27.8
Miscellaneous	Clothes Washer	67.0%	0.02	0.01	83.8
Miscellaneous	Clothes Dryer	26.0%	0.06	0.02	105.5
Miscellaneous	Miscellaneous	100.0%	0.56	0.56	3,637.2
Total				13.12	85,928.6

Table A-167   Wyoming Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	2.0%	0.83	0.02
Cooling	Water-Cooled Chiller	7.3%	1.01	0.07
Cooling	RTU	15.8%	2.73	0.43
Cooling	PTAC	38.8%	2.79	1.08
Cooling	PTHP	13.0%	2.79	0.36
Cooling	Evaporative Central AC	0.5%	0.98	0.00
Cooling	Air-Source Heat Pump	5.1%	2.78	0.14
Cooling	Geothermal Heat Pump	5.5%	1.97	0.11
Heating	Electric Furnace	1.4%	2.00	0.03
Heating	Electric Room Heat	51.1%	1.90	0.97
Heating	PTHP	13.0%	1.70	0.22
Heating	Air-Source Heat Pump	5.1%	1.60	0.08
Heating	Geothermal Heat Pump	5.5%	1.21	0.07
Ventilation	Ventilation	100.0%	0.80	0.80
Water Heating	Water Heater	50.0%	2.81	1.40
Interior Lighting	General Service Lighting	100.0%	0.77	0.77
Interior Lighting	Exempted Lighting	100.0%	0.43	0.43
Interior Lighting	Linear Lighting	100.0%	0.41	0.41
Interior Lighting	High-Bay Lighting	100.0%	1.16	1.16
Exterior Lighting	General Service Lighting	100.0%	0.03	0.03
Exterior Lighting	Linear Lighting	100.0%	0.02	0.02
Exterior Lighting	Area Lighting	100.0%	1.56	1.56
Refrigeration	Walk-in Refrigerator/Freezer	3.0%	0.34	0.01
Refrigeration	Reach-in Refrigerator/Freezer	19.0%	0.08	0.01
Refrigeration	Glass Door Display	58.9%	0.08	0.05
Refrigeration	Open Display Case	58.9%	0.47	0.27
Refrigeration	Icemaker	58.9%	0.13	0.08
Refrigeration	Vending Machine	58.9%	0.12	0.07
Food Preparation	Oven	13.8%	0.22	0.03
Food Preparation	Fryer	21.0%	0.32	0.07
Food Preparation	Dishwasher	30.0%	0.44	0.13
Food Preparation	Hot Food Container	30.0%	0.06	0.02
Food Preparation	Steamer	30.0%	0.32	0.10
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.05	0.05
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	58.0%	0.01	0.01
Miscellaneous	Non-HVAC Motors	91.3%	0.11	0.10
Miscellaneous	Pool Pump	76.0%	0.01	0.01
Miscellaneous	Pool Heater	27.0%	0.01	0.00
Miscellaneous	Clothes Washer	67.0%	0.02	0.01
Miscellaneous	Clothes Dryer	26.0%	0.06	0.01
Miscellaneous	Miscellaneous	100.0%	0.56	0.56
Total				11.88

Table A-168   Wyoming Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	2.60	0.00	0.0
Cooling	Water-Cooled Chiller	0.0%	2.68	0.00	0.0
Cooling	RTU	16.0%	2.78	0.44	9,046.5
Cooling	PTAC	1.1%	3.51	0.04	750.1
Cooling	PTHP	0.3%	3.51	0.01	211.1
Cooling	Evaporative Central AC	0.0%	1.11	0.00	0.0
Cooling	Air-Source Heat Pump	1.7%	2.78	0.05	955.3
Cooling	Geothermal Heat Pump	0.0%	1.69	0.00	0.0
Heating	Electric Furnace	0.7%	6.18	0.04	888.6
Heating	Electric Room Heat	3.8%	5.88	0.23	4,577.7
Heating	PTHP	0.3%	5.03	0.01	302.7
Heating	Air-Source Heat Pump	1.7%	5.59	0.09	1,923.5
Heating	Geothermal Heat Pump	0.0%	4.61	0.00	0.0
Ventilation	Ventilation	100.0%	0.22	0.22	4,521.6
Water Heating	Water Heater	51.9%	0.22	0.12	2,364.0
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	1,473.3
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	728.5
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	5,725.9
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	34,445.2
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	405.3
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	1,573.3
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	7,679.5
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.43	0.00	96.2
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.10	0.00	39.3
Refrigeration	Glass Door Display	10.1%	0.10	0.01	203.7
Refrigeration	Open Display Case	10.1%	0.59	0.06	1,207.3
Refrigeration	Icemaker	10.1%	0.16	0.02	333.6
Refrigeration	Vending Machine	10.1%	0.08	0.01	156.7
Food Preparation	Oven	2.3%	0.03	0.00	13.9
Food Preparation	Fryer	2.3%	0.04	0.00	20.0
Food Preparation	Dishwasher	2.3%	0.06	0.00	27.6
Food Preparation	Hot Food Container	2.3%	0.01	0.00	3.8
Food Preparation	Steamer	2.3%	0.04	0.00	20.2
Office Equipment	Desktop Computer	100.0%	0.09	0.09	1,798.6
Office Equipment	Laptop	100.0%	0.01	0.01	222.2
Office Equipment	Monitor	100.0%	0.02	0.02	317.4
Office Equipment	Server	89.0%	0.10	0.09	1,883.2
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	196.9
Office Equipment	POS Terminal	77.0%	0.03	0.02	435.2
Miscellaneous	Non-HVAC Motors	49.9%	0.10	0.05	1,002.0
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.34	0.34	7,014.5
Total				4.55	92,564.3

Table A-169   Wyoming Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	1.71	0.00
Cooling	Water-Cooled Chiller	0.0%	1.74	0.00
Cooling	RTU	16.0%	1.83	0.29
Cooling	PTAC	1.1%	2.68	0.03
Cooling	PTHP	0.3%	2.68	0.01
Cooling	Evaporative Central AC	0.0%	0.96	0.00
Cooling	Air-Source Heat Pump	1.7%	1.73	0.03
Cooling	Geothermal Heat Pump	0.0%	1.24	0.00
Heating	Electric Furnace	0.7%	4.98	0.04
Heating	Electric Room Heat	3.8%	4.74	0.18
Heating	PTHP	0.3%	4.69	0.01
Heating	Air-Source Heat Pump	1.7%	3.18	0.05
Heating	Geothermal Heat Pump	0.0%	4.35	0.00
Ventilation	Ventilation	100.0%	0.17	0.17
Water Heating	Water Heater	51.9%	0.21	0.11
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	1.1%	0.39	0.00
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Glass Door Display	10.1%	0.09	0.01
Refrigeration	Open Display Case	10.1%	0.53	0.05
Refrigeration	Icemaker	10.1%	0.15	0.01
Refrigeration	Vending Machine	10.1%	0.07	0.01
Food Preparation	Oven	2.3%	0.03	0.00
Food Preparation	Fryer	2.3%	0.04	0.00
Food Preparation	Dishwasher	2.3%	0.05	0.00
Food Preparation	Hot Food Container	2.3%	0.01	0.00
Food Preparation	Steamer	2.3%	0.04	0.00
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.10	0.09
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.03	0.02
Miscellaneous	Non-HVAC Motors	49.9%	0.09	0.04
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.34	0.34
Total				3.95

Table A-170   Wyoming Warehouse, Controlled Atmosphere Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	15.0%	2.26	0.34	78.5
Cooling	Water-Cooled Chiller	1.7%	2.33	0.04	9.0
Cooling	RTU	19.6%	2.41	0.47	109.8
Cooling	PTAC	1.2%	3.05	0.04	8.4
Cooling	PTHP	0.1%	3.05	0.00	0.8
Cooling	Evaporative Central AC	0.1%	0.97	0.00	0.3
Cooling	Air-Source Heat Pump	1.9%	2.41	0.04	10.4
Cooling	Geothermal Heat Pump	0.0%	1.47	0.00	0.0
Heating	Electric Furnace	0.5%	5.23	0.03	5.9
Heating	Electric Room Heat	2.6%	4.98	0.13	30.6
Heating	PTHP	0.1%	4.26	0.01	1.2
Heating	Air-Source Heat Pump	1.9%	4.73	0.09	20.3
Heating	Geothermal Heat Pump	0.0%	3.90	0.00	0.0
Ventilation	Ventilation	100.0%	0.68	0.68	157.8
Water Heating	Water Heater	52.7%	0.39	0.20	47.4
Interior Lighting	General Service Lighting	100.0%	0.07	0.07	16.8
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04	8.3
Interior Lighting	Linear Lighting	100.0%	0.28	0.28	65.3
Interior Lighting	High-Bay Lighting	100.0%	1.69	1.69	392.8
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02	4.6
Exterior Lighting	Linear Lighting	100.0%	0.08	0.08	17.9
Exterior Lighting	Area Lighting	100.0%	0.38	0.38	87.6
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	14.84	13.61	3,155.9
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.67	0.01	3.1
Refrigeration	Glass Door Display	10.1%	0.68	0.07	16.0
Refrigeration	Open Display Case	10.1%	4.05	0.41	94.9
Refrigeration	Icemaker	91.7%	1.12	1.03	238.1
Refrigeration	Vending Machine	91.7%	0.53	0.48	111.8
Food Preparation	Oven	40.8%	0.05	0.02	5.0
Food Preparation	Fryer	40.8%	0.08	0.03	7.3
Food Preparation	Dishwasher	40.8%	0.11	0.04	10.0
Food Preparation	Hot Food Container	40.8%	0.01	0.01	1.4
Food Preparation	Steamer	40.8%	0.08	0.03	7.3
Office Equipment	Desktop Computer	100.0%	0.06	0.06	15.1
Office Equipment	Laptop	100.0%	0.01	0.01	1.9
Office Equipment	Monitor	100.0%	0.01	0.01	2.7
Office Equipment	Server	89.0%	0.08	0.07	15.8
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	1.6
Office Equipment	POS Terminal	77.0%	0.02	0.02	3.6
Miscellaneous	Non-HVAC Motors	79.5%	0.08	0.06	14.6
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	0.28	0.28	64.6
Total				20.89	4,844.3

Table A-171   *Wyoming Warehouse, Controlled Atmosphere New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	15.0%	1.49	0.22
Cooling	Water-Cooled Chiller	1.7%	1.51	0.03
Cooling	RTU	19.6%	1.59	0.31
Cooling	PTAC	1.2%	2.33	0.03
Cooling	PTHP	0.1%	2.33	0.00
Cooling	Evaporative Central AC	0.1%	0.83	0.00
Cooling	Air-Source Heat Pump	1.9%	1.50	0.03
Cooling	Geothermal Heat Pump	0.0%	1.08	0.00
Heating	Electric Furnace	0.5%	4.21	0.02
Heating	Electric Room Heat	2.6%	4.01	0.11
Heating	PTHP	0.1%	3.97	0.00
Heating	Air-Source Heat Pump	1.9%	2.69	0.05
Heating	Geothermal Heat Pump	0.0%	3.68	0.00
Ventilation	Ventilation	100.0%	0.52	0.52
Water Heating	Water Heater	52.7%	0.37	0.19
Interior Lighting	General Service Lighting	100.0%	0.07	0.07
Interior Lighting	Exempted Lighting	100.0%	0.04	0.04
Interior Lighting	Linear Lighting	100.0%	0.25	0.25
Interior Lighting	High-Bay Lighting	100.0%	1.53	1.53
Exterior Lighting	General Service Lighting	100.0%	0.02	0.02
Exterior Lighting	Linear Lighting	100.0%	0.07	0.07
Exterior Lighting	Area Lighting	100.0%	0.34	0.34
Refrigeration	Walk-in Refrigerator/Freezer	91.7%	14.84	13.61
Refrigeration	Reach-in Refrigerator/Freezer	2.0%	0.67	0.01
Refrigeration	Glass Door Display	10.1%	0.68	0.07
Refrigeration	Open Display Case	10.1%	4.05	0.41
Refrigeration	Icemaker	91.7%	1.12	1.03
Refrigeration	Vending Machine	91.7%	0.53	0.48
Food Preparation	Oven	40.8%	0.05	0.02
Food Preparation	Fryer	40.8%	0.07	0.03
Food Preparation	Dishwasher	40.8%	0.09	0.04
Food Preparation	Hot Food Container	40.8%	0.01	0.01
Food Preparation	Steamer	40.8%	0.07	0.03
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Server	89.0%	0.07	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	77.0%	0.02	0.01
Miscellaneous	Non-HVAC Motors	79.5%	0.07	0.06
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	0.28	0.28
Total				20.05

Table A-172   Wyoming Data Center Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	14.7%	36.11	5.30	0.9
Cooling	Water-Cooled Chiller	9.0%	37.58	3.40	0.6
Cooling	RTU	47.6%	38.15	18.15	3.0
Cooling	PTAC	2.5%	48.21	1.21	0.2
Cooling	PTHP	0.8%	48.21	0.38	0.1
Cooling	Evaporative Central AC	0.1%	15.26	0.01	0.0
Cooling	Air-Source Heat Pump	15.2%	38.15	5.80	1.0
Cooling	Geothermal Heat Pump	8.2%	23.25	1.90	0.3
Heating	Electric Furnace	1.2%	3.17	0.04	0.0
Heating	Electric Room Heat	22.3%	3.02	0.67	0.1
Heating	PTHP	0.8%	2.50	0.02	0.0
Heating	Air-Source Heat Pump	15.2%	2.78	0.42	0.1
Heating	Geothermal Heat Pump	8.2%	2.14	0.17	0.0
Ventilation	Ventilation	100.0%	25.38	25.38	4.2
Water Heating	Water Heater	45.2%	0.65	0.29	0.0
Interior Lighting	General Service Lighting	100.0%	0.47	0.47	0.1
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27	0.0
Interior Lighting	Linear Lighting	100.0%	3.91	3.91	0.6
Interior Lighting	High-Bay Lighting	100.0%	2.74	2.74	0.5
Exterior Lighting	General Service Lighting	100.0%	0.11	0.11	0.0
Exterior Lighting	Linear Lighting	100.0%	0.24	0.24	0.0
Exterior Lighting	Area Lighting	100.0%	1.12	1.12	0.2
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.10	0.00	0.0
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00	0.0
Refrigeration	Glass Door Display	5.1%	0.02	0.00	0.0
Refrigeration	Open Display Case	5.1%	0.14	0.01	0.0
Refrigeration	Icemaker	5.1%	0.04	0.00	0.0
Refrigeration	Vending Machine	5.1%	0.02	0.00	0.0
Food Preparation	Oven	3.6%	0.07	0.00	0.0
Food Preparation	Fryer	3.6%	0.10	0.00	0.0
Food Preparation	Dishwasher	3.6%	0.14	0.01	0.0
Food Preparation	Hot Food Container	3.6%	0.02	0.00	0.0
Food Preparation	Steamer	3.6%	0.10	0.00	0.0
Office Equipment	Desktop Computer	100.0%	5.40	5.40	0.9
Office Equipment	Laptop	100.0%	0.33	0.33	0.1
Office Equipment	Monitor	100.0%	0.95	0.95	0.2
Office Equipment	Server	100.0%	63.54	63.54	10.5
Office Equipment	Printer/Copier/Fax	100.0%	0.59	0.59	0.1
Office Equipment	POS Terminal	40.0%	0.17	0.07	0.0
Miscellaneous	Non-HVAC Motors	89.6%	5.38	4.82	0.8
Miscellaneous	Pool Pump	0.0%	0.10	0.00	0.0
Miscellaneous	Pool Heater	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Washer	0.0%	0.10	0.00	0.0
Miscellaneous	Clothes Dryer	0.0%	0.10	0.00	0.0
Miscellaneous	Miscellaneous	100.0%	18.39	18.39	3.0
Total				166.13	27.5

Table A-173   Wyoming Data Center New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.7%	22.52	3.31
Cooling	Water-Cooled Chiller	9.0%	20.10	1.82
Cooling	RTU	47.6%	25.10	11.94
Cooling	PTAC	2.5%	37.45	0.94
Cooling	PTHP	0.8%	37.45	0.30
Cooling	Evaporative Central AC	0.1%	13.19	0.01
Cooling	Air-Source Heat Pump	15.2%	23.70	3.60
Cooling	Geothermal Heat Pump	8.2%	17.10	1.39
Heating	Electric Furnace	1.2%	2.55	0.03
Heating	Electric Room Heat	22.3%	2.43	0.54
Heating	PTHP	0.8%	2.47	0.02
Heating	Air-Source Heat Pump	15.2%	1.58	0.24
Heating	Geothermal Heat Pump	8.2%	2.01	0.16
Ventilation	Ventilation	100.0%	17.56	17.56
Water Heating	Water Heater	45.2%	0.61	0.28
Interior Lighting	General Service Lighting	100.0%	0.45	0.45
Interior Lighting	Exempted Lighting	100.0%	0.27	0.27
Interior Lighting	Linear Lighting	100.0%	3.53	3.53
Interior Lighting	High-Bay Lighting	100.0%	2.47	2.47
Exterior Lighting	General Service Lighting	100.0%	0.10	0.10
Exterior Lighting	Linear Lighting	100.0%	0.22	0.22
Exterior Lighting	Area Lighting	100.0%	1.01	1.01
Refrigeration	Walk-in Refrigerator/Freezer	2.0%	0.09	0.00
Refrigeration	Reach-in Refrigerator/Freezer	14.0%	0.02	0.00
Refrigeration	Glass Door Display	5.1%	0.02	0.00
Refrigeration	Open Display Case	5.1%	0.13	0.01
Refrigeration	Icemaker	5.1%	0.04	0.00
Refrigeration	Vending Machine	5.1%	0.02	0.00
Food Preparation	Oven	3.6%	0.06	0.00
Food Preparation	Fryer	3.6%	0.09	0.00
Food Preparation	Dishwasher	3.6%	0.13	0.00
Food Preparation	Hot Food Container	3.6%	0.02	0.00
Food Preparation	Steamer	3.6%	0.09	0.00
Office Equipment	Desktop Computer	100.0%	5.13	5.13
Office Equipment	Laptop	100.0%	0.32	0.32
Office Equipment	Monitor	100.0%	0.91	0.91
Office Equipment	Server	100.0%	60.37	60.37
Office Equipment	Printer/Copier/Fax	100.0%	0.56	0.56
Office Equipment	POS Terminal	40.0%	0.16	0.06
Miscellaneous	Non-HVAC Motors	89.6%	4.84	4.34
Miscellaneous	Pool Pump	0.0%	0.09	0.00
Miscellaneous	Pool Heater	0.0%	0.09	0.00
Miscellaneous	Clothes Washer	0.0%	0.09	0.00
Miscellaneous	Clothes Dryer	0.0%	0.09	0.00
Miscellaneous	Miscellaneous	100.0%	18.39	18.39
Total				140.28

Table A-174   Wyoming Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	9.7%	2.83	0.27	3,175.1
Cooling	Water-Cooled Chiller	5.0%	2.93	0.15	1,700.1
Cooling	RTU	56.8%	3.16	1.80	20,824.7
Cooling	PTAC	5.1%	3.99	0.20	2,351.8
Cooling	PTHP	2.6%	3.99	0.10	1,200.6
Cooling	Evaporative Central AC	0.0%	1.26	0.00	1.3
Cooling	Air-Source Heat Pump	5.5%	3.16	0.17	2,011.0
Cooling	Geothermal Heat Pump	1.0%	1.92	0.02	234.2
Heating	Electric Furnace	12.5%	3.88	0.48	5,609.2
Heating	Electric Room Heat	14.8%	3.70	0.55	6,343.1
Heating	PTHP	2.6%	3.06	0.08	919.0
Heating	Air-Source Heat Pump	5.5%	3.39	0.19	2,161.3
Heating	Geothermal Heat Pump	1.0%	2.47	0.03	300.9
Ventilation	Ventilation	100.0%	0.67	0.67	7,770.9
Water Heating	Water Heater	53.0%	1.27	0.67	7,792.5
Interior Lighting	General Service Lighting	100.0%	0.38	0.38	4,366.1
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23	2,652.5
Interior Lighting	Linear Lighting	100.0%	1.46	1.46	16,982.7
Interior Lighting	High-Bay Lighting	100.0%	1.56	1.56	18,092.4
Exterior Lighting	General Service Lighting	100.0%	0.09	0.09	1,077.3
Exterior Lighting	Linear Lighting	100.0%	0.06	0.06	684.5
Exterior Lighting	Area Lighting	100.0%	0.64	0.64	7,403.2
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.55	0.06	660.6
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.12	0.01	173.0
Refrigeration	Glass Door Display	3.4%	0.13	0.00	50.7
Refrigeration	Open Display Case	3.4%	0.75	0.03	300.7
Refrigeration	Icemaker	21.6%	0.21	0.04	520.4
Refrigeration	Vending Machine	21.6%	0.20	0.04	488.8
Food Preparation	Oven	58.9%	0.08	0.05	528.0
Food Preparation	Fryer	29.9%	0.11	0.03	387.6
Food Preparation	Dishwasher	15.4%	0.15	0.02	274.9
Food Preparation	Hot Food Container	15.4%	0.02	0.00	37.6
Food Preparation	Steamer	15.4%	0.11	0.02	201.6
Office Equipment	Desktop Computer	100.0%	0.20	0.20	2,291.2
Office Equipment	Laptop	100.0%	0.03	0.03	353.8
Office Equipment	Monitor	100.0%	0.03	0.03	404.3
Office Equipment	Server	66.0%	0.12	0.08	889.5
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	250.9
Office Equipment	POS Terminal	28.0%	0.03	0.01	100.8
Miscellaneous	Non-HVAC Motors	59.9%	0.14	0.08	941.2
Miscellaneous	Pool Pump	4.0%	0.01	0.00	4.8
Miscellaneous	Pool Heater	1.0%	0.01	0.00	1.5
Miscellaneous	Clothes Washer	15.0%	0.00	0.00	2.3
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00	4.9
Miscellaneous	Miscellaneous	100.0%	0.53	0.53	6,100.3
Total				11.09	128,623.6

Table A-175   Wyoming Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	9.7%	2.21	0.21
Cooling	Water-Cooled Chiller	5.0%	1.92	0.10
Cooling	RTU	56.8%	2.23	1.27
Cooling	PTAC	5.1%	2.71	0.14
Cooling	PTHP	2.6%	2.71	0.07
Cooling	Evaporative Central AC	0.0%	1.09	0.00
Cooling	Air-Source Heat Pump	5.5%	2.37	0.13
Cooling	Geothermal Heat Pump	1.0%	1.42	0.01
Heating	Electric Furnace	12.5%	3.06	0.38
Heating	Electric Room Heat	14.8%	2.91	0.43
Heating	PTHP	2.6%	2.59	0.07
Heating	Air-Source Heat Pump	5.5%	1.95	0.11
Heating	Geothermal Heat Pump	1.0%	2.33	0.02
Ventilation	Ventilation	100.0%	0.58	0.58
Water Heating	Water Heater	53.0%	1.19	0.63
Interior Lighting	General Service Lighting	100.0%	0.36	0.36
Interior Lighting	Exempted Lighting	100.0%	0.23	0.23
Interior Lighting	Linear Lighting	100.0%	1.32	1.32
Interior Lighting	High-Bay Lighting	100.0%	1.41	1.41
Exterior Lighting	General Service Lighting	100.0%	0.08	0.08
Exterior Lighting	Linear Lighting	100.0%	0.05	0.05
Exterior Lighting	Area Lighting	100.0%	0.58	0.58
Refrigeration	Walk-in Refrigerator/Freezer	10.3%	0.50	0.05
Refrigeration	Reach-in Refrigerator/Freezer	12.1%	0.11	0.01
Refrigeration	Glass Door Display	3.4%	0.11	0.00
Refrigeration	Open Display Case	3.4%	0.68	0.02
Refrigeration	Icemaker	21.6%	0.19	0.04
Refrigeration	Vending Machine	21.6%	0.18	0.04
Food Preparation	Oven	58.9%	0.07	0.04
Food Preparation	Fryer	29.9%	0.10	0.03
Food Preparation	Dishwasher	15.4%	0.14	0.02
Food Preparation	Hot Food Container	15.4%	0.02	0.00
Food Preparation	Steamer	15.4%	0.10	0.02
Office Equipment	Desktop Computer	100.0%	0.19	0.19
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Server	66.0%	0.11	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	28.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	59.9%	0.12	0.07
Miscellaneous	Pool Pump	4.0%	0.01	0.00
Miscellaneous	Pool Heater	1.0%	0.01	0.00
Miscellaneous	Clothes Washer	15.0%	0.00	0.00
Miscellaneous	Clothes Dryer	10.0%	0.00	0.00
Miscellaneous	Miscellaneous	100.0%	0.53	0.53
Total				9.41

Industrial Market Profiles

Table A-176   California Agriculture Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	239	6	17
Cooling	Water-Cooled Chiller	2.5%	226	6	16
Cooling	RTU	11.6%	266	31	90
Cooling	Air-Source Heat Pump	1.7%	266	4	13
Cooling	Geothermal Heat Pump	0.0%	177	0	0
Heating	Electric Furnace	2.3%	1,163	27	77
Heating	Electric Room Heat	12.4%	1,108	137	399
Heating	Air-Source Heat Pump	1.7%	1,044	18	51
Heating	Geothermal Heat Pump	0.0%	696	0	0
Ventilation	Ventilation	100.0%	39	39	112
Interior Lighting	General Service Lighting	100.0%	10	10	28
Interior Lighting	High-Bay Lighting	100.0%	150	150	433
Interior Lighting	Linear Lighting	100.0%	25	25	72
Exterior Lighting	General Service Lighting	100.0%	2	2	5
Exterior Lighting	Area Lighting	100.0%	33	33	97
Exterior Lighting	Linear Lighting	100.0%	7	7	20
Motors	Pumps	100.0%	89	89	257
Motors	Fans & Blowers	100.0%	552	552	1,601
Motors	Compressed Air	100.0%	117	117	340
Motors	Material Handling	100.0%	679	679	1,968
Motors	Other Motors	0.0%	157	0	0
Process	Process Heating	100.0%	237	237	686
Process	Process Cooling	100.0%	398	398	1,155
Process	Process Refrigeration	100.0%	398	398	1,155
Process	Process Electrochemical	100.0%	8	8	22
Process	Process Other	100.0%	30	30	86
Miscellaneous	Miscellaneous	100.0%	157	157	454
Total				3,158	9,154

Table A-177   California Agriculture New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	239	6
Cooling	Water-Cooled Chiller	2.5%	226	6
Cooling	RTU	11.6%	296	34
Cooling	Air-Source Heat Pump	1.7%	292	5
Cooling	Geothermal Heat Pump	0.0%	177	0
Heating	Electric Furnace	2.3%	1,163	27
Heating	Electric Room Heat	12.4%	1,108	137
Heating	Air-Source Heat Pump	1.7%	1,077	18
Heating	Geothermal Heat Pump	0.0%	696	0
Ventilation	Ventilation	100.0%	38	38
Interior Lighting	General Service Lighting	100.0%	9	9
Interior Lighting	High-Bay Lighting	100.0%	119	119
Interior Lighting	Linear Lighting	100.0%	17	17
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	30	30
Exterior Lighting	Linear Lighting	100.0%	4	4
Motors	Pumps	100.0%	89	89
Motors	Fans & Blowers	100.0%	552	552
Motors	Compressed Air	100.0%	117	117
Motors	Material Handling	100.0%	679	679
Motors	Other Motors	0.0%	157	0
Process	Process Heating	100.0%	237	237
Process	Process Cooling	100.0%	398	398
Process	Process Refrigeration	100.0%	398	398
Process	Process Electrochemical	100.0%	8	8
Process	Process Other	100.0%	30	30
Miscellaneous	Miscellaneous	100.0%	157	157
Total				3,118

Table A-178   California Mining and Extraction Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,403	35	1
Cooling	Water-Cooled Chiller	2.5%	1,323	33	0
Cooling	RTU	11.6%	1,561	182	3
Cooling	Air-Source Heat Pump	1.7%	1,561	26	0
Cooling	Geothermal Heat Pump	0.0%	1,041	0	0
Heating	Electric Furnace	2.3%	6,825	157	2
Heating	Electric Room Heat	12.4%	6,500	807	12
Heating	Air-Source Heat Pump	1.7%	6,124	104	2
Heating	Geothermal Heat Pump	0.0%	4,085	0	0
Ventilation	Ventilation	100.0%	226	226	3
Interior Lighting	General Service Lighting	100.0%	85	85	1
Interior Lighting	High-Bay Lighting	100.0%	1,336	1,336	20
Interior Lighting	Linear Lighting	100.0%	222	222	3
Exterior Lighting	General Service Lighting	100.0%	16	16	0
Exterior Lighting	Area Lighting	100.0%	298	298	4
Exterior Lighting	Linear Lighting	100.0%	61	61	1
Motors	Pumps	100.0%	15,335	15,335	230
Motors	Fans & Blowers	100.0%	4,260	4,260	64
Motors	Compressed Air	100.0%	6,390	6,390	96
Motors	Material Handling	100.0%	4,473	4,473	67
Motors	Other Motors	100.0%	12,140	12,140	182
Process	Process Heating	100.0%	448	448	7
Process	Process Cooling	0.0%	448	0	0
Process	Process Refrigeration	0.0%	448	0	0
Process	Process Electrochemical	100.0%	448	448	7
Process	Process Other	100.0%	2,466	2,466	37
Miscellaneous	Miscellaneous	100.0%	448	448	7
Total				49,996	750

Table A-179   California Mining and Extraction New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,403	35
Cooling	Water-Cooled Chiller	2.5%	1,323	33
Cooling	RTU	11.6%	1,736	202
Cooling	Air-Source Heat Pump	1.7%	1,714	29
Cooling	Geothermal Heat Pump	0.0%	1,041	0
Heating	Electric Furnace	2.3%	6,825	157
Heating	Electric Room Heat	12.4%	6,500	807
Heating	Air-Source Heat Pump	1.7%	6,321	107
Heating	Geothermal Heat Pump	0.0%	4,085	0
Ventilation	Ventilation	100.0%	222	222
Interior Lighting	General Service Lighting	100.0%	82	82
Interior Lighting	High-Bay Lighting	100.0%	1,062	1,062
Interior Lighting	Linear Lighting	100.0%	152	152
Exterior Lighting	General Service Lighting	100.0%	15	15
Exterior Lighting	Area Lighting	100.0%	272	272
Exterior Lighting	Linear Lighting	100.0%	40	40
Motors	Pumps	100.0%	15,335	15,335
Motors	Fans & Blowers	100.0%	4,260	4,260
Motors	Compressed Air	100.0%	6,390	6,390
Motors	Material Handling	100.0%	4,473	4,473
Motors	Other Motors	100.0%	12,140	12,140
Process	Process Heating	100.0%	448	448
Process	Process Cooling	0.0%	448	0
Process	Process Refrigeration	0.0%	448	0
Process	Process Electrochemical	100.0%	448	448
Process	Process Other	100.0%	2,466	2,466
Miscellaneous	Miscellaneous	100.0%	448	448
Total				49,623

Table A-180   California Food Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,355	59	15
Cooling	Water-Cooled Chiller	2.5%	2,220	56	14
Cooling	RTU	11.6%	2,620	305	76
Cooling	Air-Source Heat Pump	1.7%	2,620	44	11
Cooling	Geothermal Heat Pump	0.0%	1,747	0	0
Heating	Electric Furnace	2.3%	11,452	263	66
Heating	Electric Room Heat	12.4%	10,907	1,353	338
Heating	Air-Source Heat Pump	1.7%	10,277	174	43
Heating	Geothermal Heat Pump	0.0%	6,855	0	0
Ventilation	Ventilation	100.0%	380	380	95
Interior Lighting	General Service Lighting	100.0%	232	232	58
Interior Lighting	High-Bay Lighting	100.0%	3,635	3,635	909
Interior Lighting	Linear Lighting	100.0%	604	604	151
Exterior Lighting	General Service Lighting	100.0%	43	43	11
Exterior Lighting	Area Lighting	100.0%	810	810	203
Exterior Lighting	Linear Lighting	100.0%	166	166	42
Motors	Pumps	100.0%	11,434	11,434	2,859
Motors	Fans & Blowers	100.0%	19,011	19,011	4,753
Motors	Compressed Air	100.0%	7,312	7,312	1,828
Motors	Material Handling	100.0%	35,865	35,865	8,966
Motors	Other Motors	100.0%	3,669	3,669	917
Process	Process Heating	100.0%	4,792	4,792	1,198
Process	Process Cooling	100.0%	6,517	6,517	1,629
Process	Process Refrigeration	100.0%	6,517	6,517	1,629
Process	Process Electrochemical	100.0%	257	257	64
Process	Process Other	100.0%	1,000	1,000	250
Miscellaneous	Miscellaneous	100.0%	2,085	2,085	521
Total				106,584	26,646

Table A-181   California Food Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,355	59
Cooling	Water-Cooled Chiller	2.5%	2,220	56
Cooling	RTU	11.6%	2,912	339
Cooling	Air-Source Heat Pump	1.7%	2,876	49
Cooling	Geothermal Heat Pump	0.0%	1,747	0
Heating	Electric Furnace	2.3%	11,452	263
Heating	Electric Room Heat	12.4%	10,907	1,353
Heating	Air-Source Heat Pump	1.7%	10,607	179
Heating	Geothermal Heat Pump	0.0%	6,855	0
Ventilation	Ventilation	100.0%	373	373
Interior Lighting	General Service Lighting	100.0%	223	223
Interior Lighting	High-Bay Lighting	100.0%	2,891	2,891
Interior Lighting	Linear Lighting	100.0%	414	414
Exterior Lighting	General Service Lighting	100.0%	40	40
Exterior Lighting	Area Lighting	100.0%	741	741
Exterior Lighting	Linear Lighting	100.0%	108	108
Motors	Pumps	100.0%	11,434	11,434
Motors	Fans & Blowers	100.0%	19,011	19,011
Motors	Compressed Air	100.0%	7,312	7,312
Motors	Material Handling	100.0%	35,865	35,865
Motors	Other Motors	100.0%	3,669	3,669
Process	Process Heating	100.0%	4,792	4,792
Process	Process Cooling	100.0%	6,517	6,517
Process	Process Refrigeration	100.0%	6,517	6,517
Process	Process Electrochemical	100.0%	257	257
Process	Process Other	100.0%	1,000	1,000
Miscellaneous	Miscellaneous	100.0%	2,085	2,085
Total				105,546

Table A-182   California Paper Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	9	0	0
Cooling	Water-Cooled Chiller	2.5%	8	0	0
Cooling	RTU	11.6%	10	1	0
Cooling	Air-Source Heat Pump	1.7%	10	0	0
Cooling	Geothermal Heat Pump	0.0%	7	0	0
Heating	Electric Furnace	2.3%	43	1	0
Heating	Electric Room Heat	12.4%	41	5	0
Heating	Air-Source Heat Pump	1.7%	39	1	0
Heating	Geothermal Heat Pump	0.0%	26	0	0
Ventilation	Ventilation	100.0%	1	1	0
Interior Lighting	General Service Lighting	100.0%	1	1	0
Interior Lighting	High-Bay Lighting	100.0%	18	18	0
Interior Lighting	Linear Lighting	100.0%	3	3	0
Exterior Lighting	General Service Lighting	100.0%	0	0	0
Exterior Lighting	Area Lighting	100.0%	4	4	0
Exterior Lighting	Linear Lighting	100.0%	1	1	0
Motors	Pumps	100.0%	120	120	1
Motors	Fans & Blowers	100.0%	116	116	1
Motors	Compressed Air	100.0%	65	65	0
Motors	Material Handling	100.0%	277	277	1
Motors	Other Motors	100.0%	7	7	0
Process	Process Heating	100.0%	17	17	0
Process	Process Cooling	100.0%	3	3	0
Process	Process Refrigeration	100.0%	3	3	0
Process	Process Electrochemical	100.0%	6	6	0
Process	Process Other	100.0%	10	10	0
Miscellaneous	Miscellaneous	100.0%	10	10	0
Total				673	3

Table A-183 California Paper Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	9	0
Cooling	Water-Cooled Chiller	2.5%	8	0
Cooling	RTU	11.6%	11	1
Cooling	Air-Source Heat Pump	1.7%	11	0
Cooling	Geothermal Heat Pump	0.0%	7	0
Heating	Electric Furnace	2.3%	43	1
Heating	Electric Room Heat	12.4%	41	5
Heating	Air-Source Heat Pump	1.7%	40	1
Heating	Geothermal Heat Pump	0.0%	26	0
Ventilation	Ventilation	100.0%	1	1
Interior Lighting	General Service Lighting	100.0%	1	1
Interior Lighting	High-Bay Lighting	100.0%	15	15
Interior Lighting	Linear Lighting	100.0%	2	2
Exterior Lighting	General Service Lighting	100.0%	0	0
Exterior Lighting	Area Lighting	100.0%	4	4
Exterior Lighting	Linear Lighting	100.0%	1	1
Motors	Pumps	100.0%	120	120
Motors	Fans & Blowers	100.0%	116	116
Motors	Compressed Air	100.0%	65	65
Motors	Material Handling	100.0%	277	277
Motors	Other Motors	100.0%	7	7
Process	Process Heating	100.0%	17	17
Process	Process Cooling	100.0%	3	3
Process	Process Refrigeration	100.0%	3	3
Process	Process Electrochemical	100.0%	6	6
Process	Process Other	100.0%	10	10
Miscellaneous	Miscellaneous	100.0%	10	10
Total				667

Table A-184   California Petroleum Refining Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	222	6	0
Cooling	Water-Cooled Chiller	2.5%	210	5	0
Cooling	RTU	11.6%	247	29	0
Cooling	Air-Source Heat Pump	1.7%	247	4	0
Cooling	Geothermal Heat Pump	0.0%	165	0	0
Heating	Electric Furnace	2.3%	1,081	25	0
Heating	Electric Room Heat	12.4%	1,029	128	1
Heating	Air-Source Heat Pump	1.7%	970	16	0
Heating	Geothermal Heat Pump	0.0%	647	0	0
Ventilation	Ventilation	100.0%	36	36	0
Interior Lighting	General Service Lighting	100.0%	7	7	0
Interior Lighting	High-Bay Lighting	100.0%	109	109	1
Interior Lighting	Linear Lighting	100.0%	18	18	0
Exterior Lighting	General Service Lighting	100.0%	1	1	0
Exterior Lighting	Area Lighting	100.0%	24	24	0
Exterior Lighting	Linear Lighting	100.0%	5	5	0
Motors	Pumps	100.0%	3,256	3,256	33
Motors	Fans & Blowers	100.0%	534	534	5
Motors	Compressed Air	100.0%	854	854	9
Motors	Material Handling	100.0%	765	765	8
Motors	Other Motors	100.0%	299	299	3
Process	Process Heating	100.0%	286	286	3
Process	Process Cooling	100.0%	174	174	2
Process	Process Refrigeration	100.0%	174	174	2
Process	Process Electrochemical	100.0%	7	7	0
Process	Process Other	100.0%	53	53	1
Miscellaneous	Miscellaneous	100.0%	74	74	1
Total				6,890	69

Table A-185   California Petroleum Refining New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	222	6
Cooling	Water-Cooled Chiller	2.5%	210	5
Cooling	RTU	11.6%	275	32
Cooling	Air-Source Heat Pump	1.7%	272	5
Cooling	Geothermal Heat Pump	0.0%	165	0
Heating	Electric Furnace	2.3%	1,081	25
Heating	Electric Room Heat	12.4%	1,029	128
Heating	Air-Source Heat Pump	1.7%	1,001	17
Heating	Geothermal Heat Pump	0.0%	647	0
Ventilation	Ventilation	100.0%	35	35
Interior Lighting	General Service Lighting	100.0%	7	7
Interior Lighting	High-Bay Lighting	100.0%	87	87
Interior Lighting	Linear Lighting	100.0%	12	12
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	22	22
Exterior Lighting	Linear Lighting	100.0%	3	3
Motors	Pumps	100.0%	3,256	3,256
Motors	Fans & Blowers	100.0%	534	534
Motors	Compressed Air	100.0%	854	854
Motors	Material Handling	100.0%	765	765
Motors	Other Motors	100.0%	299	299
Process	Process Heating	100.0%	286	286
Process	Process Cooling	100.0%	174	174
Process	Process Refrigeration	100.0%	174	174
Process	Process Electrochemical	100.0%	7	7
Process	Process Other	100.0%	53	53
Miscellaneous	Miscellaneous	100.0%	74	74
Total				6,861

Table A-186   California Stone Clay Glass Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	274	7	0
Cooling	Water-Cooled Chiller	2.5%	259	6	0
Cooling	RTU	11.6%	305	36	1
Cooling	Air-Source Heat Pump	1.7%	305	5	0
Cooling	Geothermal Heat Pump	0.0%	203	0	0
Heating	Electric Furnace	2.3%	1,334	31	1
Heating	Electric Room Heat	12.4%	1,270	158	6
Heating	Air-Source Heat Pump	1.7%	1,197	20	1
Heating	Geothermal Heat Pump	0.0%	798	0	0
Ventilation	Ventilation	100.0%	44	44	2
Interior Lighting	General Service Lighting	100.0%	11	11	0
Interior Lighting	High-Bay Lighting	100.0%	165	165	6
Interior Lighting	Linear Lighting	100.0%	27	27	1
Exterior Lighting	General Service Lighting	100.0%	2	2	0
Exterior Lighting	Area Lighting	100.0%	37	37	1
Exterior Lighting	Linear Lighting	100.0%	8	8	0
Motors	Pumps	100.0%	324	324	12
Motors	Fans & Blowers	100.0%	455	455	17
Motors	Compressed Air	100.0%	82	82	3
Motors	Material Handling	100.0%	1,885	1,885	70
Motors	Other Motors	100.0%	29	29	1
Process	Process Heating	100.0%	993	993	37
Process	Process Cooling	100.0%	61	61	2
Process	Process Refrigeration	100.0%	61	61	2
Process	Process Electrochemical	100.0%	17	17	1
Process	Process Other	100.0%	203	203	8
Miscellaneous	Miscellaneous	100.0%	158	158	6
Total				4,824	180

Table A-187   California Stone Clay Glass Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	274	7
Cooling	Water-Cooled Chiller	2.5%	259	6
Cooling	RTU	11.6%	339	39
Cooling	Air-Source Heat Pump	1.7%	335	6
Cooling	Geothermal Heat Pump	0.0%	203	0
Heating	Electric Furnace	2.3%	1,334	31
Heating	Electric Room Heat	12.4%	1,270	158
Heating	Air-Source Heat Pump	1.7%	1,235	21
Heating	Geothermal Heat Pump	0.0%	798	0
Ventilation	Ventilation	100.0%	43	43
Interior Lighting	General Service Lighting	100.0%	10	10
Interior Lighting	High-Bay Lighting	100.0%	131	131
Interior Lighting	Linear Lighting	100.0%	19	19
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	34	34
Exterior Lighting	Linear Lighting	100.0%	5	5
Motors	Pumps	100.0%	324	324
Motors	Fans & Blowers	100.0%	455	455
Motors	Compressed Air	100.0%	82	82
Motors	Material Handling	100.0%	1,885	1,885
Motors	Other Motors	100.0%	29	29
Process	Process Heating	100.0%	993	993
Process	Process Cooling	100.0%	61	61
Process	Process Refrigeration	100.0%	61	61
Process	Process Electrochemical	100.0%	17	17
Process	Process Other	100.0%	203	203
Miscellaneous	Miscellaneous	100.0%	158	158
Total				4,779

Table A-188   California Transportation Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	545	14	1
Cooling	Water-Cooled Chiller	2.5%	514	13	1
Cooling	RTU	11.6%	606	71	5
Cooling	Air-Source Heat Pump	1.7%	606	10	1
Cooling	Geothermal Heat Pump	0.0%	404	0	0
Heating	Electric Furnace	2.3%	2,649	61	5
Heating	Electric Room Heat	12.4%	2,523	313	24
Heating	Air-Source Heat Pump	1.7%	2,377	40	3
Heating	Geothermal Heat Pump	0.0%	1,586	0	0
Ventilation	Ventilation	100.0%	88	88	7
Interior Lighting	General Service Lighting	100.0%	19	19	1
Interior Lighting	High-Bay Lighting	100.0%	290	290	22
Interior Lighting	Linear Lighting	100.0%	48	48	4
Exterior Lighting	General Service Lighting	100.0%	3	3	0
Exterior Lighting	Area Lighting	100.0%	65	65	5
Exterior Lighting	Linear Lighting	100.0%	13	13	1
Motors	Pumps	100.0%	147	147	11
Motors	Fans & Blowers	100.0%	70	70	5
Motors	Compressed Air	100.0%	149	149	11
Motors	Material Handling	100.0%	719	719	55
Motors	Other Motors	100.0%	18	18	1
Process	Process Heating	100.0%	411	411	31
Process	Process Cooling	100.0%	91	91	7
Process	Process Refrigeration	100.0%	91	91	7
Process	Process Electrochemical	100.0%	49	49	4
Process	Process Other	100.0%	111	111	8
Miscellaneous	Miscellaneous	100.0%	180	180	14
Total				3,084	234

Table A-189   California Transportation Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	545	14
Cooling	Water-Cooled Chiller	2.5%	514	13
Cooling	RTU	11.6%	674	78
Cooling	Air-Source Heat Pump	1.7%	665	11
Cooling	Geothermal Heat Pump	0.0%	404	0
Heating	Electric Furnace	2.3%	2,649	61
Heating	Electric Room Heat	12.4%	2,523	313
Heating	Air-Source Heat Pump	1.7%	2,453	41
Heating	Geothermal Heat Pump	0.0%	1,586	0
Ventilation	Ventilation	100.0%	86	86
Interior Lighting	General Service Lighting	100.0%	18	18
Interior Lighting	High-Bay Lighting	100.0%	231	231
Interior Lighting	Linear Lighting	100.0%	33	33
Exterior Lighting	General Service Lighting	100.0%	3	3
Exterior Lighting	Area Lighting	100.0%	59	59
Exterior Lighting	Linear Lighting	100.0%	9	9
Motors	Pumps	100.0%	147	147
Motors	Fans & Blowers	100.0%	70	70
Motors	Compressed Air	100.0%	149	149
Motors	Material Handling	100.0%	719	719
Motors	Other Motors	100.0%	18	18
Process	Process Heating	100.0%	411	411
Process	Process Cooling	100.0%	91	91
Process	Process Refrigeration	100.0%	91	91
Process	Process Electrochemical	100.0%	49	49
Process	Process Other	100.0%	111	111
Miscellaneous	Miscellaneous	100.0%	180	180
Total				3,006

Table A-190   California Wastewater Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	515	13	1
Cooling	Water-Cooled Chiller	2.5%	486	12	1
Cooling	RTU	11.6%	573	67	7
Cooling	Air-Source Heat Pump	1.7%	573	10	1
Cooling	Geothermal Heat Pump	0.0%	382	0	0
Heating	Electric Furnace	2.3%	2,506	57	6
Heating	Electric Room Heat	12.4%	2,387	296	29
Heating	Air-Source Heat Pump	1.7%	2,249	38	4
Heating	Geothermal Heat Pump	0.0%	1,500	0	0
Ventilation	Ventilation	100.0%	83	83	8
Interior Lighting	General Service Lighting	100.0%	22	22	2
Interior Lighting	High-Bay Lighting	100.0%	351	351	34
Interior Lighting	Linear Lighting	100.0%	58	58	6
Exterior Lighting	General Service Lighting	100.0%	4	4	0
Exterior Lighting	Area Lighting	100.0%	78	78	8
Exterior Lighting	Linear Lighting	100.0%	16	16	2
Motors	Pumps	100.0%	2,850	2,850	280
Motors	Fans & Blowers	100.0%	7,016	7,016	688
Motors	Compressed Air	100.0%	150	150	15
Motors	Material Handling	100.0%	670	670	66
Motors	Other Motors	100.0%	210	210	21
Process	Process Heating	0.0%	328	0	0
Process	Process Cooling	0.0%	328	0	0
Process	Process Refrigeration	0.0%	328	0	0
Process	Process Electrochemical	0.0%	328	0	0
Process	Process Other	100.0%	556	556	54
Miscellaneous	Miscellaneous	100.0%	328	328	32
Total				12,887	1,264

Table A-191   California Wastewater New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	515	13
Cooling	Water-Cooled Chiller	2.5%	486	12
Cooling	RTU	11.6%	637	74
Cooling	Air-Source Heat Pump	1.7%	629	11
Cooling	Geothermal Heat Pump	0.0%	382	0
Heating	Electric Furnace	2.3%	2,506	57
Heating	Electric Room Heat	12.4%	2,387	296
Heating	Air-Source Heat Pump	1.7%	2,321	39
Heating	Geothermal Heat Pump	0.0%	1,500	0
Ventilation	Ventilation	100.0%	82	82
Interior Lighting	General Service Lighting	100.0%	22	22
Interior Lighting	High-Bay Lighting	100.0%	279	279
Interior Lighting	Linear Lighting	100.0%	40	40
Exterior Lighting	General Service Lighting	100.0%	4	4
Exterior Lighting	Area Lighting	100.0%	72	72
Exterior Lighting	Linear Lighting	100.0%	10	10
Motors	Pumps	100.0%	2,850	2,850
Motors	Fans & Blowers	100.0%	7,016	7,016
Motors	Compressed Air	100.0%	150	150
Motors	Material Handling	100.0%	670	670
Motors	Other Motors	100.0%	210	210
Process	Process Heating	0.0%	328	0
Process	Process Cooling	0.0%	328	0
Process	Process Refrigeration	0.0%	328	0
Process	Process Electrochemical	0.0%	328	0
Process	Process Other	100.0%	556	556
Miscellaneous	Miscellaneous	100.0%	328	328
Total				12,791

Table A-192   California Water Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	219	5	2
Cooling	Water-Cooled Chiller	2.5%	207	5	2
Cooling	RTU	11.6%	244	28	10
Cooling	Air-Source Heat Pump	1.7%	244	4	1
Cooling	Geothermal Heat Pump	0.0%	163	0	0
Heating	Electric Furnace	2.3%	1,067	24	9
Heating	Electric Room Heat	12.4%	1,016	126	46
Heating	Air-Source Heat Pump	1.7%	957	16	6
Heating	Geothermal Heat Pump	0.0%	639	0	0
Ventilation	Ventilation	100.0%	35	35	13
Interior Lighting	General Service Lighting	100.0%	10	10	3
Interior Lighting	High-Bay Lighting	100.0%	150	150	54
Interior Lighting	Linear Lighting	100.0%	25	25	9
Exterior Lighting	General Service Lighting	100.0%	2	2	1
Exterior Lighting	Area Lighting	100.0%	33	33	12
Exterior Lighting	Linear Lighting	100.0%	7	7	2
Motors	Pumps	100.0%	4,382	4,382	1,590
Motors	Fans & Blowers	0.0%	140	0	0
Motors	Compressed Air	100.0%	64	64	23
Motors	Material Handling	100.0%	190	190	69
Motors	Other Motors	100.0%	2	2	1
Process	Process Heating	0.0%	140	0	0
Process	Process Cooling	0.0%	140	0	0
Process	Process Refrigeration	0.0%	140	0	0
Process	Process Electrochemical	0.0%	140	0	0
Process	Process Other	100.0%	237	237	86
Miscellaneous	Miscellaneous	100.0%	140	140	51
Total				5,486	1,991

Table A-193   California Water New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	219	5
Cooling	Water-Cooled Chiller	2.5%	207	5
Cooling	RTU	11.6%	271	32
Cooling	Air-Source Heat Pump	1.7%	268	5
Cooling	Geothermal Heat Pump	0.0%	163	0
Heating	Electric Furnace	2.3%	1,067	24
Heating	Electric Room Heat	12.4%	1,016	126
Heating	Air-Source Heat Pump	1.7%	988	17
Heating	Geothermal Heat Pump	0.0%	639	0
Ventilation	Ventilation	100.0%	35	35
Interior Lighting	General Service Lighting	100.0%	9	9
Interior Lighting	High-Bay Lighting	100.0%	119	119
Interior Lighting	Linear Lighting	100.0%	17	17
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	30	30
Exterior Lighting	Linear Lighting	100.0%	4	4
Motors	Pumps	100.0%	4,382	4,382
Motors	Fans & Blowers	0.0%	140	0
Motors	Compressed Air	100.0%	64	64
Motors	Material Handling	100.0%	190	190
Motors	Other Motors	100.0%	2	2
Process	Process Heating	0.0%	140	0
Process	Process Cooling	0.0%	140	0
Process	Process Refrigeration	0.0%	140	0
Process	Process Electrochemical	0.0%	140	0
Process	Process Other	100.0%	237	237
Miscellaneous	Miscellaneous	100.0%	140	140
Total				5,445

Table A-194   California Chemical Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	427	11	0
Cooling	Water-Cooled Chiller	2.5%	403	10	0
Cooling	RTU	11.6%	475	55	1
Cooling	Air-Source Heat Pump	1.7%	475	8	0
Cooling	Geothermal Heat Pump	0.0%	317	0	0
Heating	Electric Furnace	2.3%	2,077	48	0
Heating	Electric Room Heat	12.4%	1,978	245	2
Heating	Air-Source Heat Pump	1.7%	1,864	32	0
Heating	Geothermal Heat Pump	0.0%	1,243	0	0
Ventilation	Ventilation	100.0%	69	69	1
Interior Lighting	General Service Lighting	100.0%	13	13	0
Interior Lighting	High-Bay Lighting	100.0%	199	199	2
Interior Lighting	Linear Lighting	100.0%	33	33	0
Exterior Lighting	General Service Lighting	100.0%	2	2	0
Exterior Lighting	Area Lighting	100.0%	44	44	0
Exterior Lighting	Linear Lighting	100.0%	9	9	0
Motors	Pumps	100.0%	1,240	1,240	12
Motors	Fans & Blowers	100.0%	567	567	6
Motors	Compressed Air	100.0%	1,314	1,314	13
Motors	Material Handling	100.0%	1,191	1,191	12
Motors	Other Motors	100.0%	156	156	2
Process	Process Heating	100.0%	522	522	5
Process	Process Cooling	100.0%	293	293	3
Process	Process Refrigeration	100.0%	293	293	3
Process	Process Electrochemical	100.0%	1,500	1,500	15
Process	Process Other	100.0%	93	93	1
Miscellaneous	Miscellaneous	100.0%	231	231	2
Total				8,179	82

Table A-195   California Chemical Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	427	11
Cooling	Water-Cooled Chiller	2.5%	403	10
Cooling	RTU	11.6%	528	62
Cooling	Air-Source Heat Pump	1.7%	522	9
Cooling	Geothermal Heat Pump	0.0%	317	0
Heating	Electric Furnace	2.3%	2,077	48
Heating	Electric Room Heat	12.4%	1,978	245
Heating	Air-Source Heat Pump	1.7%	1,924	33
Heating	Geothermal Heat Pump	0.0%	1,243	0
Ventilation	Ventilation	100.0%	68	68
Interior Lighting	General Service Lighting	100.0%	12	12
Interior Lighting	High-Bay Lighting	100.0%	158	158
Interior Lighting	Linear Lighting	100.0%	23	23
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	41	41
Exterior Lighting	Linear Lighting	100.0%	6	6
Motors	Pumps	100.0%	1,240	1,240
Motors	Fans & Blowers	100.0%	567	567
Motors	Compressed Air	100.0%	1,314	1,314
Motors	Material Handling	100.0%	1,191	1,191
Motors	Other Motors	100.0%	156	156
Process	Process Heating	100.0%	522	522
Process	Process Cooling	100.0%	293	293
Process	Process Refrigeration	100.0%	293	293
Process	Process Electrochemical	100.0%	1,500	1,500
Process	Process Other	100.0%	93	93
Miscellaneous	Miscellaneous	100.0%	231	231
Total				8,127

Table A-196   California Electronic Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	3,538	88	8
Cooling	Water-Cooled Chiller	2.5%	3,336	83	7
Cooling	RTU	11.6%	3,937	458	40
Cooling	Air-Source Heat Pump	1.7%	3,936	67	6
Cooling	Geothermal Heat Pump	0.0%	2,625	0	0
Heating	Electric Furnace	2.3%	17,206	395	35
Heating	Electric Room Heat	12.4%	16,387	2,033	179
Heating	Air-Source Heat Pump	1.7%	15,440	261	23
Heating	Geothermal Heat Pump	0.0%	10,299	0	0
Ventilation	Ventilation	100.0%	571	571	50
Interior Lighting	General Service Lighting	100.0%	68	68	6
Interior Lighting	High-Bay Lighting	100.0%	1,067	1,067	94
Interior Lighting	Linear Lighting	100.0%	177	177	16
Exterior Lighting	General Service Lighting	100.0%	13	13	1
Exterior Lighting	Area Lighting	100.0%	238	238	21
Exterior Lighting	Linear Lighting	100.0%	49	49	4
Motors	Pumps	100.0%	201	201	18
Motors	Fans & Blowers	100.0%	322	322	28
Motors	Compressed Air	100.0%	582	582	51
Motors	Material Handling	100.0%	1,819	1,819	160
Motors	Other Motors	0.0%	1,196	0	0
Process	Process Heating	100.0%	1,518	1,518	134
Process	Process Cooling	100.0%	705	705	62
Process	Process Refrigeration	100.0%	705	705	62
Process	Process Electrochemical	100.0%	265	265	23
Process	Process Other	100.0%	1,333	1,333	117
Miscellaneous	Miscellaneous	100.0%	1,196	1,196	105
Total				14,213	1,251

Table A-197   California Electronic Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	3,538	88
Cooling	Water-Cooled Chiller	2.5%	3,336	83
Cooling	RTU	11.6%	4,376	509
Cooling	Air-Source Heat Pump	1.7%	4,322	73
Cooling	Geothermal Heat Pump	0.0%	2,625	0
Heating	Electric Furnace	2.3%	17,206	395
Heating	Electric Room Heat	12.4%	16,387	2,033
Heating	Air-Source Heat Pump	1.7%	15,935	269
Heating	Geothermal Heat Pump	0.0%	10,299	0
Ventilation	Ventilation	100.0%	560	560
Interior Lighting	General Service Lighting	100.0%	65	65
Interior Lighting	High-Bay Lighting	100.0%	848	848
Interior Lighting	Linear Lighting	100.0%	122	122
Exterior Lighting	General Service Lighting	100.0%	12	12
Exterior Lighting	Area Lighting	100.0%	217	217
Exterior Lighting	Linear Lighting	100.0%	32	32
Motors	Pumps	100.0%	201	201
Motors	Fans & Blowers	100.0%	322	322
Motors	Compressed Air	100.0%	582	582
Motors	Material Handling	100.0%	1,819	1,819
Motors	Other Motors	0.0%	1,196	0
Process	Process Heating	100.0%	1,518	1,518
Process	Process Cooling	100.0%	705	705
Process	Process Refrigeration	100.0%	705	705
Process	Process Electrochemical	100.0%	265	265
Process	Process Other	100.0%	1,333	1,333
Miscellaneous	Miscellaneous	100.0%	1,196	1,196
Total				13,952

Table A-198   California Industrial Machinery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	285	7	1
Cooling	Water-Cooled Chiller	2.5%	269	7	1
Cooling	RTU	11.6%	317	37	6
Cooling	Air-Source Heat Pump	1.7%	317	5	1
Cooling	Geothermal Heat Pump	0.0%	211	0	0
Heating	Electric Furnace	2.3%	1,385	32	5
Heating	Electric Room Heat	12.4%	1,319	164	27
Heating	Air-Source Heat Pump	1.7%	1,243	21	3
Heating	Geothermal Heat Pump	0.0%	829	0	0
Ventilation	Ventilation	100.0%	46	46	8
Interior Lighting	General Service Lighting	100.0%	8	8	1
Interior Lighting	High-Bay Lighting	100.0%	128	128	21
Interior Lighting	Linear Lighting	100.0%	21	21	4
Exterior Lighting	General Service Lighting	100.0%	2	2	0
Exterior Lighting	Area Lighting	100.0%	29	29	5
Exterior Lighting	Linear Lighting	100.0%	6	6	1
Motors	Pumps	100.0%	70	70	12
Motors	Fans & Blowers	100.0%	164	164	27
Motors	Compressed Air	100.0%	140	140	23
Motors	Material Handling	100.0%	226	226	37
Motors	Other Motors	0.0%	98	0	0
Process	Process Heating	100.0%	93	93	15
Process	Process Cooling	100.0%	18	18	3
Process	Process Refrigeration	100.0%	18	18	3
Process	Process Electrochemical	100.0%	12	12	2
Process	Process Other	100.0%	42	42	7
Miscellaneous	Miscellaneous	100.0%	98	98	16
Total				1,394	231

Table A-199   California Industrial Machinery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	285	7
Cooling	Water-Cooled Chiller	2.5%	269	7
Cooling	RTU	11.6%	352	41
Cooling	Air-Source Heat Pump	1.7%	348	6
Cooling	Geothermal Heat Pump	0.0%	211	0
Heating	Electric Furnace	2.3%	1,385	32
Heating	Electric Room Heat	12.4%	1,319	164
Heating	Air-Source Heat Pump	1.7%	1,283	22
Heating	Geothermal Heat Pump	0.0%	829	0
Ventilation	Ventilation	100.0%	45	45
Interior Lighting	General Service Lighting	100.0%	8	8
Interior Lighting	High-Bay Lighting	100.0%	102	102
Interior Lighting	Linear Lighting	100.0%	15	15
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	26	26
Exterior Lighting	Linear Lighting	100.0%	4	4
Motors	Pumps	100.0%	70	70
Motors	Fans & Blowers	100.0%	164	164
Motors	Compressed Air	100.0%	140	140
Motors	Material Handling	100.0%	226	226
Motors	Other Motors	0.0%	98	0
Process	Process Heating	100.0%	93	93
Process	Process Cooling	100.0%	18	18
Process	Process Refrigeration	100.0%	18	18
Process	Process Electrochemical	100.0%	12	12
Process	Process Other	100.0%	42	42
Miscellaneous	Miscellaneous	100.0%	98	98
Total				1,360

Table A-200   California Lumber & Wood Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	511	13	10
Cooling	Water-Cooled Chiller	2.5%	482	12	10
Cooling	RTU	11.6%	569	66	53
Cooling	Air-Source Heat Pump	1.7%	569	10	8
Cooling	Geothermal Heat Pump	0.0%	379	0	0
Heating	Electric Furnace	2.3%	2,486	57	46
Heating	Electric Room Heat	12.4%	2,367	294	236
Heating	Air-Source Heat Pump	1.7%	2,231	38	30
Heating	Geothermal Heat Pump	0.0%	1,488	0	0
Ventilation	Ventilation	100.0%	82	82	66
Interior Lighting	General Service Lighting	100.0%	35	35	28
Interior Lighting	High-Bay Lighting	100.0%	548	548	440
Interior Lighting	Linear Lighting	100.0%	91	91	73
Exterior Lighting	General Service Lighting	100.0%	6	6	5
Exterior Lighting	Area Lighting	100.0%	122	122	98
Exterior Lighting	Linear Lighting	100.0%	25	25	20
Motors	Pumps	100.0%	1,218	1,218	980
Motors	Fans & Blowers	100.0%	898	898	722
Motors	Compressed Air	100.0%	462	462	371
Motors	Material Handling	100.0%	6,215	6,215	4,997
Motors	Other Motors	100.0%	94	94	76
Process	Process Heating	100.0%	1,016	1,016	816
Process	Process Cooling	100.0%	75	75	61
Process	Process Refrigeration	100.0%	75	75	61
Process	Process Electrochemical	100.0%	88	88	70
Process	Process Other	100.0%	63	63	51
Miscellaneous	Miscellaneous	100.0%	535	535	430
Total				12,138	9,759

Table A-201   California Lumber & Wood Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	511	13
Cooling	Water-Cooled Chiller	2.5%	482	12
Cooling	RTU	11.6%	632	74
Cooling	Air-Source Heat Pump	1.7%	624	11
Cooling	Geothermal Heat Pump	0.0%	379	0
Heating	Electric Furnace	2.3%	2,486	57
Heating	Electric Room Heat	12.4%	2,367	294
Heating	Air-Source Heat Pump	1.7%	2,302	39
Heating	Geothermal Heat Pump	0.0%	1,488	0
Ventilation	Ventilation	100.0%	81	81
Interior Lighting	General Service Lighting	100.0%	34	34
Interior Lighting	High-Bay Lighting	100.0%	436	436
Interior Lighting	Linear Lighting	100.0%	62	62
Exterior Lighting	General Service Lighting	100.0%	6	6
Exterior Lighting	Area Lighting	100.0%	112	112
Exterior Lighting	Linear Lighting	100.0%	16	16
Motors	Pumps	100.0%	1,218	1,218
Motors	Fans & Blowers	100.0%	898	898
Motors	Compressed Air	100.0%	462	462
Motors	Material Handling	100.0%	6,215	6,215
Motors	Other Motors	100.0%	94	94
Process	Process Heating	100.0%	1,016	1,016
Process	Process Cooling	100.0%	75	75
Process	Process Refrigeration	100.0%	75	75
Process	Process Electrochemical	100.0%	88	88
Process	Process Other	100.0%	63	63
Miscellaneous	Miscellaneous	100.0%	535	535
Total				11,984

Table A-202   California Metal Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	62	2	0
Cooling	Water-Cooled Chiller	2.5%	59	1	0
Cooling	RTU	11.6%	69	8	2
Cooling	Air-Source Heat Pump	1.7%	69	1	0
Cooling	Geothermal Heat Pump	0.0%	46	0	0
Heating	Electric Furnace	2.3%	302	7	2
Heating	Electric Room Heat	12.4%	288	36	10
Heating	Air-Source Heat Pump	1.7%	271	5	1
Heating	Geothermal Heat Pump	0.0%	181	0	0
Ventilation	Ventilation	100.0%	10	10	3
Interior Lighting	General Service Lighting	100.0%	3	3	1
Interior Lighting	High-Bay Lighting	100.0%	41	41	12
Interior Lighting	Linear Lighting	100.0%	7	7	2
Exterior Lighting	General Service Lighting	100.0%	0	0	0
Exterior Lighting	Area Lighting	100.0%	9	9	3
Exterior Lighting	Linear Lighting	100.0%	2	2	1
Motors	Pumps	100.0%	43	43	12
Motors	Fans & Blowers	100.0%	21	21	6
Motors	Compressed Air	100.0%	44	44	12
Motors	Material Handling	100.0%	212	212	60
Motors	Other Motors	100.0%	5	5	2
Process	Process Heating	100.0%	126	126	36
Process	Process Cooling	100.0%	11	11	3
Process	Process Refrigeration	100.0%	11	11	3
Process	Process Electrochemical	100.0%	21	21	6
Process	Process Other	100.0%	27	27	8
Miscellaneous	Miscellaneous	100.0%	26	26	7
Total				681	192

Table A-203   California Metal Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	62	2
Cooling	Water-Cooled Chiller	2.5%	59	1
Cooling	RTU	11.6%	77	9
Cooling	Air-Source Heat Pump	1.7%	76	1
Cooling	Geothermal Heat Pump	0.0%	46	0
Heating	Electric Furnace	2.3%	302	7
Heating	Electric Room Heat	12.4%	288	36
Heating	Air-Source Heat Pump	1.7%	280	5
Heating	Geothermal Heat Pump	0.0%	181	0
Ventilation	Ventilation	100.0%	10	10
Interior Lighting	General Service Lighting	100.0%	3	3
Interior Lighting	High-Bay Lighting	100.0%	33	33
Interior Lighting	Linear Lighting	100.0%	5	5
Exterior Lighting	General Service Lighting	100.0%	0	0
Exterior Lighting	Area Lighting	100.0%	8	8
Exterior Lighting	Linear Lighting	100.0%	1	1
Motors	Pumps	100.0%	43	43
Motors	Fans & Blowers	100.0%	21	21
Motors	Compressed Air	100.0%	44	44
Motors	Material Handling	100.0%	212	212
Motors	Other Motors	100.0%	5	5
Process	Process Heating	100.0%	126	126
Process	Process Cooling	100.0%	11	11
Process	Process Refrigeration	100.0%	11	11
Process	Process Electrochemical	100.0%	21	21
Process	Process Other	100.0%	27	27
Miscellaneous	Miscellaneous	100.0%	26	26
Total				670

Table A-204   California Miscellaneous Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	277	7	3
Cooling	Water-Cooled Chiller	2.5%	262	7	3
Cooling	RTU	11.6%	309	36	17
Cooling	Air-Source Heat Pump	1.7%	309	5	2
Cooling	Geothermal Heat Pump	0.0%	206	0	0
Heating	Electric Furnace	2.3%	1,349	31	14
Heating	Electric Room Heat	12.4%	1,285	159	74
Heating	Air-Source Heat Pump	1.7%	1,210	20	10
Heating	Geothermal Heat Pump	0.0%	807	0	0
Ventilation	Ventilation	100.0%	45	45	21
Interior Lighting	General Service Lighting	100.0%	9	9	4
Interior Lighting	High-Bay Lighting	100.0%	134	134	62
Interior Lighting	Linear Lighting	100.0%	22	22	10
Exterior Lighting	General Service Lighting	100.0%	2	2	1
Exterior Lighting	Area Lighting	100.0%	30	30	14
Exterior Lighting	Linear Lighting	100.0%	6	6	3
Motors	Pumps	100.0%	92	92	43
Motors	Fans & Blowers	100.0%	61	61	28
Motors	Compressed Air	100.0%	65	65	30
Motors	Material Handling	100.0%	172	172	80
Motors	Other Motors	100.0%	25	25	12
Process	Process Heating	100.0%	133	133	62
Process	Process Cooling	100.0%	35	35	16
Process	Process Refrigeration	100.0%	35	35	16
Process	Process Electrochemical	100.0%	13	13	6
Process	Process Other	100.0%	15	15	7
Miscellaneous	Miscellaneous	100.0%	81	81	37
Total				1,240	577

Table A-205   California Miscellaneous Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	277	7
Cooling	Water-Cooled Chiller	2.5%	262	7
Cooling	RTU	11.6%	343	40
Cooling	Air-Source Heat Pump	1.7%	339	6
Cooling	Geothermal Heat Pump	0.0%	206	0
Heating	Electric Furnace	2.3%	1,349	31
Heating	Electric Room Heat	12.4%	1,285	159
Heating	Air-Source Heat Pump	1.7%	1,249	21
Heating	Geothermal Heat Pump	0.0%	807	0
Ventilation	Ventilation	100.0%	44	44
Interior Lighting	General Service Lighting	100.0%	8	8
Interior Lighting	High-Bay Lighting	100.0%	107	107
Interior Lighting	Linear Lighting	100.0%	15	15
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	27	27
Exterior Lighting	Linear Lighting	100.0%	4	4
Motors	Pumps	100.0%	92	92
Motors	Fans & Blowers	100.0%	61	61
Motors	Compressed Air	100.0%	65	65
Motors	Material Handling	100.0%	172	172
Motors	Other Motors	100.0%	25	25
Process	Process Heating	100.0%	133	133
Process	Process Cooling	100.0%	35	35
Process	Process Refrigeration	100.0%	35	35
Process	Process Electrochemical	100.0%	13	13
Process	Process Other	100.0%	15	15
Miscellaneous	Miscellaneous	100.0%	81	81
Total				1,205

Table A-206   Idaho Agriculture Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	662	17	291
Cooling	Water-Cooled Chiller	2.5%	670	17	294
Cooling	RTU	11.3%	711	81	1,414
Cooling	Air-Source Heat Pump	1.7%	711	12	211
Cooling	Geothermal Heat Pump	0.0%	474	0	0
Heating	Electric Furnace	0.7%	1,561	11	194
Heating	Electric Room Heat	3.8%	1,486	57	998
Heating	Air-Source Heat Pump	1.7%	1,421	24	422
Heating	Geothermal Heat Pump	0.0%	948	0	0
Ventilation	Ventilation	100.0%	56	56	988
Interior Lighting	General Service Lighting	100.0%	10	10	172
Interior Lighting	High-Bay Lighting	100.0%	153	153	2,689
Interior Lighting	Linear Lighting	100.0%	25	25	447
Exterior Lighting	General Service Lighting	100.0%	2	2	32
Exterior Lighting	Area Lighting	100.0%	34	34	600
Exterior Lighting	Linear Lighting	100.0%	7	7	123
Motors	Pumps	100.0%	91	91	1,595
Motors	Fans & Blowers	100.0%	566	566	9,936
Motors	Compressed Air	100.0%	120	120	2,110
Motors	Material Handling	100.0%	695	695	12,212
Motors	Other Motors	0.0%	160	0	0
Process	Process Heating	100.0%	242	242	4,258
Process	Process Cooling	100.0%	408	408	7,165
Process	Process Refrigeration	100.0%	408	408	7,165
Process	Process Electrochemical	100.0%	8	8	137
Process	Process Other	100.0%	30	30	533
Miscellaneous	Miscellaneous	100.0%	160	160	2,815
Total				3,235	56,799

Table A-207   Idaho Agriculture New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	662	17
Cooling	Water-Cooled Chiller	2.5%	670	17
Cooling	RTU	11.3%	790	90
Cooling	Air-Source Heat Pump	1.7%	781	13
Cooling	Geothermal Heat Pump	0.0%	474	0
Heating	Electric Furnace	0.7%	1,561	11
Heating	Electric Room Heat	3.8%	1,486	57
Heating	Air-Source Heat Pump	1.7%	1,466	25
Heating	Geothermal Heat Pump	0.0%	948	0
Ventilation	Ventilation	100.0%	54	54
Interior Lighting	General Service Lighting	100.0%	9	9
Interior Lighting	High-Bay Lighting	100.0%	122	122
Interior Lighting	Linear Lighting	100.0%	25	25
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	31	31
Exterior Lighting	Linear Lighting	100.0%	6	6
Motors	Pumps	100.0%	91	91
Motors	Fans & Blowers	100.0%	566	566
Motors	Compressed Air	100.0%	120	120
Motors	Material Handling	100.0%	695	695
Motors	Other Motors	0.0%	160	0
Process	Process Heating	100.0%	242	242
Process	Process Cooling	100.0%	408	408
Process	Process Refrigeration	100.0%	408	408
Process	Process Electrochemical	100.0%	8	8
Process	Process Other	100.0%	30	30
Miscellaneous	Miscellaneous	100.0%	160	160
Total				3,207

Table A-208   Idaho Mining and Extraction Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,605	65	44
Cooling	Water-Cooled Chiller	2.5%	2,637	66	45
Cooling	RTU	11.3%	2,798	317	215
Cooling	Air-Source Heat Pump	1.7%	2,797	47	32
Cooling	Geothermal Heat Pump	0.0%	1,866	0	0
Heating	Electric Furnace	0.7%	6,141	43	30
Heating	Electric Room Heat	3.8%	5,849	224	152
Heating	Air-Source Heat Pump	1.7%	5,590	95	64
Heating	Geothermal Heat Pump	0.0%	3,728	0	0
Ventilation	Ventilation	100.0%	221	221	150
Interior Lighting	General Service Lighting	100.0%	59	59	40
Interior Lighting	High-Bay Lighting	100.0%	918	918	624
Interior Lighting	Linear Lighting	100.0%	153	153	104
Exterior Lighting	General Service Lighting	100.0%	11	11	7
Exterior Lighting	Area Lighting	100.0%	205	205	139
Exterior Lighting	Linear Lighting	100.0%	42	42	29
Motors	Pumps	100.0%	10,535	10,535	7,164
Motors	Fans & Blowers	100.0%	2,926	2,926	1,990
Motors	Compressed Air	100.0%	4,390	4,390	2,985
Motors	Material Handling	100.0%	3,073	3,073	2,089
Motors	Other Motors	100.0%	8,340	8,340	5,671
Process	Process Heating	100.0%	308	308	209
Process	Process Cooling	0.0%	308	0	0
Process	Process Refrigeration	0.0%	308	0	0
Process	Process Electrochemical	100.0%	308	308	209
Process	Process Other	100.0%	1,694	1,694	1,152
Miscellaneous	Miscellaneous	100.0%	308	308	209
Total				34,347	23,356

Table A-209   Idaho Mining and Extraction New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,605	65
Cooling	Water-Cooled Chiller	2.5%	2,637	66
Cooling	RTU	11.3%	3,110	352
Cooling	Air-Source Heat Pump	1.7%	3,071	52
Cooling	Geothermal Heat Pump	0.0%	1,866	0
Heating	Electric Furnace	0.7%	6,141	43
Heating	Electric Room Heat	3.8%	5,849	224
Heating	Air-Source Heat Pump	1.7%	5,769	98
Heating	Geothermal Heat Pump	0.0%	3,728	0
Ventilation	Ventilation	100.0%	212	212
Interior Lighting	General Service Lighting	100.0%	56	56
Interior Lighting	High-Bay Lighting	100.0%	730	730
Interior Lighting	Linear Lighting	100.0%	147	147
Exterior Lighting	General Service Lighting	100.0%	10	10
Exterior Lighting	Area Lighting	100.0%	187	187
Exterior Lighting	Linear Lighting	100.0%	39	39
Motors	Pumps	100.0%	10,535	10,535
Motors	Fans & Blowers	100.0%	2,926	2,926
Motors	Compressed Air	100.0%	4,390	4,390
Motors	Material Handling	100.0%	3,073	3,073
Motors	Other Motors	100.0%	8,340	8,340
Process	Process Heating	100.0%	308	308
Process	Process Cooling	0.0%	308	0
Process	Process Refrigeration	0.0%	308	0
Process	Process Electrochemical	100.0%	308	308
Process	Process Other	100.0%	1,694	1,694
Miscellaneous	Miscellaneous	100.0%	308	308
Total				34,164

Table A-210   Idaho Food Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	83,519	2,088	167
Cooling	Water-Cooled Chiller	2.5%	84,569	2,114	169
Cooling	RTU	11.3%	89,716	10,161	813
Cooling	Air-Source Heat Pump	1.7%	89,697	1,517	121
Cooling	Geothermal Heat Pump	0.0%	59,828	0	0
Heating	Electric Furnace	0.7%	196,931	1,392	111
Heating	Electric Room Heat	3.8%	187,553	7,173	574
Heating	Air-Source Heat Pump	1.7%	179,252	3,031	242
Heating	Geothermal Heat Pump	0.0%	119,561	0	0
Ventilation	Ventilation	100.0%	7,097	7,097	568
Interior Lighting	General Service Lighting	100.0%	3,051	3,051	244
Interior Lighting	High-Bay Lighting	100.0%	47,726	47,726	3,818
Interior Lighting	Linear Lighting	100.0%	7,934	7,934	635
Exterior Lighting	General Service Lighting	100.0%	562	562	45
Exterior Lighting	Area Lighting	100.0%	10,640	10,640	851
Exterior Lighting	Linear Lighting	100.0%	2,180	2,180	174
Motors	Pumps	100.0%	150,113	150,113	12,009
Motors	Fans & Blowers	100.0%	249,584	249,584	19,967
Motors	Compressed Air	100.0%	95,990	95,990	7,679
Motors	Material Handling	100.0%	470,842	470,842	37,667
Motors	Other Motors	100.0%	48,166	48,166	3,853
Process	Process Heating	100.0%	62,917	62,917	5,033
Process	Process Cooling	100.0%	85,557	85,557	6,845
Process	Process Refrigeration	100.0%	85,557	85,557	6,845
Process	Process Electrochemical	100.0%	3,379	3,379	270
Process	Process Other	100.0%	13,122	13,122	1,050
Miscellaneous	Miscellaneous	100.0%	27,376	27,376	2,190
Total				1,399,268	111,941

Table A-211   Idaho Food Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	83,519	2,088
Cooling	Water-Cooled Chiller	2.5%	84,569	2,114
Cooling	RTU	11.3%	99,722	11,294
Cooling	Air-Source Heat Pump	1.7%	98,493	1,666
Cooling	Geothermal Heat Pump	0.0%	59,828	0
Heating	Electric Furnace	0.7%	196,931	1,392
Heating	Electric Room Heat	3.8%	187,553	7,173
Heating	Air-Source Heat Pump	1.7%	185,003	3,128
Heating	Geothermal Heat Pump	0.0%	119,561	0
Ventilation	Ventilation	100.0%	6,789	6,789
Interior Lighting	General Service Lighting	100.0%	2,925	2,925
Interior Lighting	High-Bay Lighting	100.0%	37,952	37,952
Interior Lighting	Linear Lighting	100.0%	7,659	7,659
Exterior Lighting	General Service Lighting	100.0%	528	528
Exterior Lighting	Area Lighting	100.0%	9,726	9,726
Exterior Lighting	Linear Lighting	100.0%	2,024	2,024
Motors	Pumps	100.0%	150,113	150,113
Motors	Fans & Blowers	100.0%	249,584	249,584
Motors	Compressed Air	100.0%	95,990	95,990
Motors	Material Handling	100.0%	470,842	470,842
Motors	Other Motors	100.0%	48,166	48,166
Process	Process Heating	100.0%	62,917	62,917
Process	Process Cooling	100.0%	85,557	85,557
Process	Process Refrigeration	100.0%	85,557	85,557
Process	Process Electrochemical	100.0%	3,379	3,379
Process	Process Other	100.0%	13,122	13,122
Miscellaneous	Miscellaneous	100.0%	27,376	27,376
Total				1,389,062

Table A-212   Idaho Paper Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	176	4	5
Cooling	Water-Cooled Chiller	2.5%	178	4	5
Cooling	RTU	11.3%	189	21	25
Cooling	Air-Source Heat Pump	1.7%	189	3	4
Cooling	Geothermal Heat Pump	0.0%	126	0	0
Heating	Electric Furnace	0.7%	416	3	3
Heating	Electric Room Heat	3.8%	396	15	18
Heating	Air-Source Heat Pump	1.7%	378	6	7
Heating	Geothermal Heat Pump	0.0%	252	0	0
Ventilation	Ventilation	100.0%	15	15	18
Interior Lighting	General Service Lighting	100.0%	9	9	10
Interior Lighting	High-Bay Lighting	100.0%	135	135	158
Interior Lighting	Linear Lighting	100.0%	22	22	26
Exterior Lighting	General Service Lighting	100.0%	2	2	2
Exterior Lighting	Area Lighting	100.0%	30	30	35
Exterior Lighting	Linear Lighting	100.0%	6	6	7
Motors	Pumps	100.0%	884	884	1,035
Motors	Fans & Blowers	100.0%	855	855	1,000
Motors	Compressed Air	100.0%	480	480	562
Motors	Material Handling	100.0%	2,039	2,039	2,385
Motors	Other Motors	100.0%	54	54	63
Process	Process Heating	100.0%	127	127	148
Process	Process Cooling	100.0%	25	25	29
Process	Process Refrigeration	100.0%	25	25	29
Process	Process Electrochemical	100.0%	42	42	49
Process	Process Other	100.0%	72	72	85
Miscellaneous	Miscellaneous	100.0%	77	77	90
Total				4,957	5,800

Table A-213   Idaho Paper Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	176	4
Cooling	Water-Cooled Chiller	2.5%	178	4
Cooling	RTU	11.3%	210	24
Cooling	Air-Source Heat Pump	1.7%	208	4
Cooling	Geothermal Heat Pump	0.0%	126	0
Heating	Electric Furnace	0.7%	416	3
Heating	Electric Room Heat	3.8%	396	15
Heating	Air-Source Heat Pump	1.7%	390	7
Heating	Geothermal Heat Pump	0.0%	252	0
Ventilation	Ventilation	100.0%	14	14
Interior Lighting	General Service Lighting	100.0%	8	8
Interior Lighting	High-Bay Lighting	100.0%	107	107
Interior Lighting	Linear Lighting	100.0%	22	22
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	28	28
Exterior Lighting	Linear Lighting	100.0%	6	6
Motors	Pumps	100.0%	884	884
Motors	Fans & Blowers	100.0%	855	855
Motors	Compressed Air	100.0%	480	480
Motors	Material Handling	100.0%	2,039	2,039
Motors	Other Motors	100.0%	54	54
Process	Process Heating	100.0%	127	127
Process	Process Cooling	100.0%	25	25
Process	Process Refrigeration	100.0%	25	25
Process	Process Electrochemical	100.0%	42	42
Process	Process Other	100.0%	72	72
Miscellaneous	Miscellaneous	100.0%	77	77
Total				4,928

Table A-214   Idaho Petroleum Refining Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	10	0	1
Cooling	Water-Cooled Chiller	2.5%	10	0	1
Cooling	RTU	11.3%	11	1	3
Cooling	Air-Source Heat Pump	1.7%	11	0	0
Cooling	Geothermal Heat Pump	0.0%	7	0	0
Heating	Electric Furnace	0.7%	24	0	0
Heating	Electric Room Heat	3.8%	23	1	2
Heating	Air-Source Heat Pump	1.7%	22	0	1
Heating	Geothermal Heat Pump	0.0%	15	0	0
Ventilation	Ventilation	100.0%	1	1	2
Interior Lighting	General Service Lighting	100.0%	0	0	0
Interior Lighting	High-Bay Lighting	100.0%	2	2	4
Interior Lighting	Linear Lighting	100.0%	0	0	1
Exterior Lighting	General Service Lighting	100.0%	0	0	0
Exterior Lighting	Area Lighting	100.0%	0	0	1
Exterior Lighting	Linear Lighting	100.0%	0	0	0
Motors	Pumps	100.0%	55	55	127
Motors	Fans & Blowers	100.0%	9	9	21
Motors	Compressed Air	100.0%	15	15	33
Motors	Material Handling	100.0%	13	13	30
Motors	Other Motors	100.0%	5	5	12
Process	Process Heating	100.0%	5	5	11
Process	Process Cooling	100.0%	3	3	7
Process	Process Refrigeration	100.0%	3	3	7
Process	Process Electrochemical	100.0%	0	0	0
Process	Process Other	100.0%	1	1	2
Miscellaneous	Miscellaneous	100.0%	1	1	3
Total				117	270

Table A-215   Idaho Petroleum Refining New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	10	0
Cooling	Water-Cooled Chiller	2.5%	10	0
Cooling	RTU	11.3%	12	1
Cooling	Air-Source Heat Pump	1.7%	12	0
Cooling	Geothermal Heat Pump	0.0%	7	0
Heating	Electric Furnace	0.7%	24	0
Heating	Electric Room Heat	3.8%	23	1
Heating	Air-Source Heat Pump	1.7%	23	0
Heating	Geothermal Heat Pump	0.0%	15	0
Ventilation	Ventilation	100.0%	1	1
Interior Lighting	General Service Lighting	100.0%	0	0
Interior Lighting	High-Bay Lighting	100.0%	1	1
Interior Lighting	Linear Lighting	100.0%	0	0
Exterior Lighting	General Service Lighting	100.0%	0	0
Exterior Lighting	Area Lighting	100.0%	0	0
Exterior Lighting	Linear Lighting	100.0%	0	0
Motors	Pumps	100.0%	55	55
Motors	Fans & Blowers	100.0%	9	9
Motors	Compressed Air	100.0%	15	15
Motors	Material Handling	100.0%	13	13
Motors	Other Motors	100.0%	5	5
Process	Process Heating	100.0%	5	5
Process	Process Cooling	100.0%	3	3
Process	Process Refrigeration	100.0%	3	3
Process	Process Electrochemical	100.0%	0	0
Process	Process Other	100.0%	1	1
Miscellaneous	Miscellaneous	100.0%	1	1
Total				117

Table A-216   Idaho Stone Clay Glass Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,555	64	31
Cooling	Water-Cooled Chiller	2.5%	2,587	65	31
Cooling	RTU	11.3%	2,744	311	149
Cooling	Air-Source Heat Pump	1.7%	2,744	46	22
Cooling	Geothermal Heat Pump	0.0%	1,830	0	0
Heating	Electric Furnace	0.7%	6,024	43	20
Heating	Electric Room Heat	3.8%	5,737	219	105
Heating	Air-Source Heat Pump	1.7%	5,483	93	45
Heating	Geothermal Heat Pump	0.0%	3,657	0	0
Ventilation	Ventilation	100.0%	217	217	104
Interior Lighting	General Service Lighting	100.0%	36	36	17
Interior Lighting	High-Bay Lighting	100.0%	569	569	273
Interior Lighting	Linear Lighting	100.0%	95	95	45
Exterior Lighting	General Service Lighting	100.0%	7	7	3
Exterior Lighting	Area Lighting	100.0%	127	127	61
Exterior Lighting	Linear Lighting	100.0%	26	26	12
Motors	Pumps	100.0%	1,116	1,116	536
Motors	Fans & Blowers	100.0%	1,570	1,570	754
Motors	Compressed Air	100.0%	283	283	136
Motors	Material Handling	100.0%	6,501	6,501	3,121
Motors	Other Motors	100.0%	101	101	49
Process	Process Heating	100.0%	3,424	3,424	1,643
Process	Process Cooling	100.0%	210	210	101
Process	Process Refrigeration	100.0%	210	210	101
Process	Process Electrochemical	100.0%	59	59	28
Process	Process Other	100.0%	698	698	335
Miscellaneous	Miscellaneous	100.0%	545	545	262
Total				16,634	7,984

Table A-217   Idaho Stone Clay Glass Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,555	64
Cooling	Water-Cooled Chiller	2.5%	2,587	65
Cooling	RTU	11.3%	3,051	345
Cooling	Air-Source Heat Pump	1.7%	3,013	51
Cooling	Geothermal Heat Pump	0.0%	1,830	0
Heating	Electric Furnace	0.7%	6,024	43
Heating	Electric Room Heat	3.8%	5,737	219
Heating	Air-Source Heat Pump	1.7%	5,659	96
Heating	Geothermal Heat Pump	0.0%	3,657	0
Ventilation	Ventilation	100.0%	208	208
Interior Lighting	General Service Lighting	100.0%	35	35
Interior Lighting	High-Bay Lighting	100.0%	452	452
Interior Lighting	Linear Lighting	100.0%	91	91
Exterior Lighting	General Service Lighting	100.0%	6	6
Exterior Lighting	Area Lighting	100.0%	116	116
Exterior Lighting	Linear Lighting	100.0%	24	24
Motors	Pumps	100.0%	1,116	1,116
Motors	Fans & Blowers	100.0%	1,570	1,570
Motors	Compressed Air	100.0%	283	283
Motors	Material Handling	100.0%	6,501	6,501
Motors	Other Motors	100.0%	101	101
Process	Process Heating	100.0%	3,424	3,424
Process	Process Cooling	100.0%	210	210
Process	Process Refrigeration	100.0%	210	210
Process	Process Electrochemical	100.0%	59	59
Process	Process Other	100.0%	698	698
Miscellaneous	Miscellaneous	100.0%	545	545
Total				16,532

Table A-218   Idaho Transportation Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	356	9	26
Cooling	Water-Cooled Chiller	2.5%	360	9	27
Cooling	RTU	11.3%	382	43	128
Cooling	Air-Source Heat Pump	1.7%	382	6	19
Cooling	Geothermal Heat Pump	0.0%	255	0	0
Heating	Electric Furnace	0.7%	839	6	18
Heating	Electric Room Heat	3.8%	799	31	90
Heating	Air-Source Heat Pump	1.7%	764	13	38
Heating	Geothermal Heat Pump	0.0%	509	0	0
Ventilation	Ventilation	100.0%	30	30	89
Interior Lighting	General Service Lighting	100.0%	4	4	13
Interior Lighting	High-Bay Lighting	100.0%	70	70	207
Interior Lighting	Linear Lighting	100.0%	12	12	34
Exterior Lighting	General Service Lighting	100.0%	1	1	2
Exterior Lighting	Area Lighting	100.0%	16	16	46
Exterior Lighting	Linear Lighting	100.0%	3	3	9
Motors	Pumps	100.0%	36	36	105
Motors	Fans & Blowers	100.0%	17	17	50
Motors	Compressed Air	100.0%	36	36	106
Motors	Material Handling	100.0%	174	174	513
Motors	Other Motors	100.0%	4	4	13
Process	Process Heating	100.0%	99	99	293
Process	Process Cooling	100.0%	22	22	65
Process	Process Refrigeration	100.0%	22	22	65
Process	Process Electrochemical	100.0%	12	12	35
Process	Process Other	100.0%	27	27	79
Miscellaneous	Miscellaneous	100.0%	44	44	129
Total				746	2,200

Table A-219   Idaho Transportation Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	356	9
Cooling	Water-Cooled Chiller	2.5%	360	9
Cooling	RTU	11.3%	425	48
Cooling	Air-Source Heat Pump	1.7%	420	7
Cooling	Geothermal Heat Pump	0.0%	255	0
Heating	Electric Furnace	0.7%	839	6
Heating	Electric Room Heat	3.8%	799	31
Heating	Air-Source Heat Pump	1.7%	788	13
Heating	Geothermal Heat Pump	0.0%	509	0
Ventilation	Ventilation	100.0%	29	29
Interior Lighting	General Service Lighting	100.0%	4	4
Interior Lighting	High-Bay Lighting	100.0%	56	56
Interior Lighting	Linear Lighting	100.0%	11	11
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	14	14
Exterior Lighting	Linear Lighting	100.0%	3	3
Motors	Pumps	100.0%	36	36
Motors	Fans & Blowers	100.0%	17	17
Motors	Compressed Air	100.0%	36	36
Motors	Material Handling	100.0%	174	174
Motors	Other Motors	100.0%	4	4
Process	Process Heating	100.0%	99	99
Process	Process Cooling	100.0%	22	22
Process	Process Refrigeration	100.0%	22	22
Process	Process Electrochemical	100.0%	12	12
Process	Process Other	100.0%	27	27
Miscellaneous	Miscellaneous	100.0%	44	44
Total				734

Table A-220   Idaho Wastewater Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,256	56	15
Cooling	Water-Cooled Chiller	2.5%	2,284	57	16
Cooling	RTU	11.3%	2,423	274	75
Cooling	Air-Source Heat Pump	1.7%	2,422	41	11
Cooling	Geothermal Heat Pump	0.0%	1,616	0	0
Heating	Electric Furnace	0.7%	5,319	38	10
Heating	Electric Room Heat	3.8%	5,065	194	53
Heating	Air-Source Heat Pump	1.7%	4,841	82	22
Heating	Geothermal Heat Pump	0.0%	3,229	0	0
Ventilation	Ventilation	100.0%	192	192	52
Interior Lighting	General Service Lighting	100.0%	36	36	10
Interior Lighting	High-Bay Lighting	100.0%	569	569	155
Interior Lighting	Linear Lighting	100.0%	95	95	26
Exterior Lighting	General Service Lighting	100.0%	7	7	2
Exterior Lighting	Area Lighting	100.0%	127	127	35
Exterior Lighting	Linear Lighting	100.0%	26	26	7
Motors	Pumps	100.0%	4,617	4,617	1,256
Motors	Fans & Blowers	100.0%	11,367	11,367	3,092
Motors	Compressed Air	100.0%	243	243	66
Motors	Material Handling	100.0%	1,086	1,086	295
Motors	Other Motors	100.0%	340	340	93
Process	Process Heating	0.0%	532	0	0
Process	Process Cooling	0.0%	532	0	0
Process	Process Refrigeration	0.0%	532	0	0
Process	Process Electrochemical	0.0%	532	0	0
Process	Process Other	100.0%	900	900	245
Miscellaneous	Miscellaneous	100.0%	532	532	145
Total				20,880	5,679

Table A-221   Idaho Wastewater New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,256	56
Cooling	Water-Cooled Chiller	2.5%	2,284	57
Cooling	RTU	11.3%	2,693	305
Cooling	Air-Source Heat Pump	1.7%	2,660	45
Cooling	Geothermal Heat Pump	0.0%	1,616	0
Heating	Electric Furnace	0.7%	5,319	38
Heating	Electric Room Heat	3.8%	5,065	194
Heating	Air-Source Heat Pump	1.7%	4,996	84
Heating	Geothermal Heat Pump	0.0%	3,229	0
Ventilation	Ventilation	100.0%	183	183
Interior Lighting	General Service Lighting	100.0%	35	35
Interior Lighting	High-Bay Lighting	100.0%	453	453
Interior Lighting	Linear Lighting	100.0%	91	91
Exterior Lighting	General Service Lighting	100.0%	6	6
Exterior Lighting	Area Lighting	100.0%	116	116
Exterior Lighting	Linear Lighting	100.0%	24	24
Motors	Pumps	100.0%	4,617	4,617
Motors	Fans & Blowers	100.0%	11,367	11,367
Motors	Compressed Air	100.0%	243	243
Motors	Material Handling	100.0%	1,086	1,086
Motors	Other Motors	100.0%	340	340
Process	Process Heating	0.0%	532	0
Process	Process Cooling	0.0%	532	0
Process	Process Refrigeration	0.0%	532	0
Process	Process Electrochemical	0.0%	532	0
Process	Process Other	100.0%	900	900
Miscellaneous	Miscellaneous	100.0%	532	532
Total				20,774

Table A-222   Idaho Water Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	4,369	109	30
Cooling	Water-Cooled Chiller	2.5%	4,424	111	30
Cooling	RTU	11.3%	4,693	532	145
Cooling	Air-Source Heat Pump	1.7%	4,692	79	22
Cooling	Geothermal Heat Pump	0.0%	3,130	0	0
Heating	Electric Furnace	0.7%	10,302	73	20
Heating	Electric Room Heat	3.8%	9,812	375	102
Heating	Air-Source Heat Pump	1.7%	9,377	159	43
Heating	Geothermal Heat Pump	0.0%	6,255	0	0
Ventilation	Ventilation	100.0%	371	371	101
Interior Lighting	General Service Lighting	100.0%	70	70	19
Interior Lighting	High-Bay Lighting	100.0%	1,103	1,103	300
Interior Lighting	Linear Lighting	100.0%	183	183	50
Exterior Lighting	General Service Lighting	100.0%	13	13	4
Exterior Lighting	Area Lighting	100.0%	246	246	67
Exterior Lighting	Linear Lighting	100.0%	50	50	14
Motors	Pumps	100.0%	32,308	32,308	8,788
Motors	Fans & Blowers	0.0%	1,030	0	0
Motors	Compressed Air	100.0%	471	471	128
Motors	Material Handling	100.0%	1,402	1,402	381
Motors	Other Motors	100.0%	16	16	4
Process	Process Heating	0.0%	1,030	0	0
Process	Process Cooling	0.0%	1,030	0	0
Process	Process Refrigeration	0.0%	1,030	0	0
Process	Process Electrochemical	0.0%	1,030	0	0
Process	Process Other	100.0%	1,744	1,744	474
Miscellaneous	Miscellaneous	100.0%	1,030	1,030	280
Total				40,445	11,001

Table A-223   Idaho Water New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	4,369	109
Cooling	Water-Cooled Chiller	2.5%	4,424	111
Cooling	RTU	11.3%	5,217	591
Cooling	Air-Source Heat Pump	1.7%	5,153	87
Cooling	Geothermal Heat Pump	0.0%	3,130	0
Heating	Electric Furnace	0.7%	10,302	73
Heating	Electric Room Heat	3.8%	9,812	375
Heating	Air-Source Heat Pump	1.7%	9,678	164
Heating	Geothermal Heat Pump	0.0%	6,255	0
Ventilation	Ventilation	100.0%	355	355
Interior Lighting	General Service Lighting	100.0%	68	68
Interior Lighting	High-Bay Lighting	100.0%	877	877
Interior Lighting	Linear Lighting	100.0%	177	177
Exterior Lighting	General Service Lighting	100.0%	12	12
Exterior Lighting	Area Lighting	100.0%	225	225
Exterior Lighting	Linear Lighting	100.0%	47	47
Motors	Pumps	100.0%	32,308	32,308
Motors	Fans & Blowers	0.0%	1,030	0
Motors	Compressed Air	100.0%	471	471
Motors	Material Handling	100.0%	1,402	1,402
Motors	Other Motors	100.0%	16	16
Process	Process Heating	0.0%	1,030	0
Process	Process Cooling	0.0%	1,030	0
Process	Process Refrigeration	0.0%	1,030	0
Process	Process Electrochemical	0.0%	1,030	0
Process	Process Other	100.0%	1,744	1,744
Miscellaneous	Miscellaneous	100.0%	1,030	1,030
Total				40,240

Table A-224   Idaho Chemical Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	12,337	308	160
Cooling	Water-Cooled Chiller	2.5%	12,492	312	162
Cooling	RTU	11.3%	13,252	1,501	780
Cooling	Air-Source Heat Pump	1.7%	13,249	224	117
Cooling	Geothermal Heat Pump	0.0%	8,837	0	0
Heating	Electric Furnace	0.7%	29,089	206	107
Heating	Electric Room Heat	3.8%	27,704	1,060	551
Heating	Air-Source Heat Pump	1.7%	26,478	448	233
Heating	Geothermal Heat Pump	0.0%	17,661	0	0
Ventilation	Ventilation	100.0%	1,048	1,048	545
Interior Lighting	General Service Lighting	100.0%	136	136	71
Interior Lighting	High-Bay Lighting	100.0%	2,126	2,126	1,105
Interior Lighting	Linear Lighting	100.0%	353	353	184
Exterior Lighting	General Service Lighting	100.0%	25	25	13
Exterior Lighting	Area Lighting	100.0%	474	474	246
Exterior Lighting	Linear Lighting	100.0%	97	97	50
Motors	Pumps	100.0%	13,260	13,260	6,895
Motors	Fans & Blowers	100.0%	6,059	6,059	3,151
Motors	Compressed Air	100.0%	14,051	14,051	7,306
Motors	Material Handling	100.0%	12,733	12,733	6,621
Motors	Other Motors	100.0%	1,669	1,669	868
Process	Process Heating	100.0%	5,584	5,584	2,904
Process	Process Cooling	100.0%	3,134	3,134	1,629
Process	Process Refrigeration	100.0%	3,134	3,134	1,629
Process	Process Electrochemical	100.0%	16,036	16,036	8,339
Process	Process Other	100.0%	998	998	519
Miscellaneous	Miscellaneous	100.0%	2,467	2,467	1,283
Total				87,443	45,470

Table A-225   Idaho Chemical Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	12,337	308
Cooling	Water-Cooled Chiller	2.5%	12,492	312
Cooling	RTU	11.3%	14,730	1,668
Cooling	Air-Source Heat Pump	1.7%	14,549	246
Cooling	Geothermal Heat Pump	0.0%	8,837	0
Heating	Electric Furnace	0.7%	29,089	206
Heating	Electric Room Heat	3.8%	27,704	1,060
Heating	Air-Source Heat Pump	1.7%	27,327	462
Heating	Geothermal Heat Pump	0.0%	17,661	0
Ventilation	Ventilation	100.0%	1,003	1,003
Interior Lighting	General Service Lighting	100.0%	130	130
Interior Lighting	High-Bay Lighting	100.0%	1,690	1,690
Interior Lighting	Linear Lighting	100.0%	341	341
Exterior Lighting	General Service Lighting	100.0%	24	24
Exterior Lighting	Area Lighting	100.0%	433	433
Exterior Lighting	Linear Lighting	100.0%	90	90
Motors	Pumps	100.0%	13,260	13,260
Motors	Fans & Blowers	100.0%	6,059	6,059
Motors	Compressed Air	100.0%	14,051	14,051
Motors	Material Handling	100.0%	12,733	12,733
Motors	Other Motors	100.0%	1,669	1,669
Process	Process Heating	100.0%	5,584	5,584
Process	Process Cooling	100.0%	3,134	3,134
Process	Process Refrigeration	100.0%	3,134	3,134
Process	Process Electrochemical	100.0%	16,036	16,036
Process	Process Other	100.0%	998	998
Miscellaneous	Miscellaneous	100.0%	2,467	2,467
Total				87,099

Table A-226   Idaho Electronic Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	937	23	11
Cooling	Water-Cooled Chiller	2.5%	949	24	12
Cooling	RTU	11.3%	1,006	114	56
Cooling	Air-Source Heat Pump	1.7%	1,006	17	8
Cooling	Geothermal Heat Pump	0.0%	671	0	0
Heating	Electric Furnace	0.7%	2,209	16	8
Heating	Electric Room Heat	3.8%	2,104	80	39
Heating	Air-Source Heat Pump	1.7%	2,011	34	17
Heating	Geothermal Heat Pump	0.0%	1,341	0	0
Ventilation	Ventilation	100.0%	80	80	39
Interior Lighting	General Service Lighting	100.0%	7	7	3
Interior Lighting	High-Bay Lighting	100.0%	105	105	51
Interior Lighting	Linear Lighting	100.0%	17	17	9
Exterior Lighting	General Service Lighting	100.0%	1	1	1
Exterior Lighting	Area Lighting	100.0%	23	23	11
Exterior Lighting	Linear Lighting	100.0%	5	5	2
Motors	Pumps	100.0%	20	20	10
Motors	Fans & Blowers	100.0%	32	32	15
Motors	Compressed Air	100.0%	57	57	28
Motors	Material Handling	100.0%	178	178	87
Motors	Other Motors	0.0%	117	0	0
Process	Process Heating	100.0%	149	149	73
Process	Process Cooling	100.0%	69	69	34
Process	Process Refrigeration	100.0%	69	69	34
Process	Process Electrochemical	100.0%	26	26	13
Process	Process Other	100.0%	131	131	64
Miscellaneous	Miscellaneous	100.0%	117	117	57
Total				1,393	683

Table A-227   Idaho Electronic Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	937	23
Cooling	Water-Cooled Chiller	2.5%	949	24
Cooling	RTU	11.3%	1,119	127
Cooling	Air-Source Heat Pump	1.7%	1,105	19
Cooling	Geothermal Heat Pump	0.0%	671	0
Heating	Electric Furnace	0.7%	2,209	16
Heating	Electric Room Heat	3.8%	2,104	80
Heating	Air-Source Heat Pump	1.7%	2,075	35
Heating	Geothermal Heat Pump	0.0%	1,341	0
Ventilation	Ventilation	100.0%	76	76
Interior Lighting	General Service Lighting	100.0%	6	6
Interior Lighting	High-Bay Lighting	100.0%	83	83
Interior Lighting	Linear Lighting	100.0%	17	17
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	21	21
Exterior Lighting	Linear Lighting	100.0%	4	4
Motors	Pumps	100.0%	20	20
Motors	Fans & Blowers	100.0%	32	32
Motors	Compressed Air	100.0%	57	57
Motors	Material Handling	100.0%	178	178
Motors	Other Motors	0.0%	117	0
Process	Process Heating	100.0%	149	149
Process	Process Cooling	100.0%	69	69
Process	Process Refrigeration	100.0%	69	69
Process	Process Electrochemical	100.0%	26	26
Process	Process Other	100.0%	131	131
Miscellaneous	Miscellaneous	100.0%	117	117
Total				1,380

Table A-228   Idaho Industrial Machinery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	40,695	1,017	61
Cooling	Water-Cooled Chiller	2.5%	41,207	1,030	62
Cooling	RTU	11.3%	43,715	4,951	297
Cooling	Air-Source Heat Pump	1.7%	43,705	739	44
Cooling	Geothermal Heat Pump	0.0%	29,151	0	0
Heating	Electric Furnace	0.7%	95,955	678	41
Heating	Electric Room Heat	3.8%	91,386	3,495	210
Heating	Air-Source Heat Pump	1.7%	87,342	1,477	89
Heating	Geothermal Heat Pump	0.0%	58,257	0	0
Ventilation	Ventilation	100.0%	3,458	3,458	207
Interior Lighting	General Service Lighting	100.0%	433	433	26
Interior Lighting	High-Bay Lighting	100.0%	6,778	6,778	407
Interior Lighting	Linear Lighting	100.0%	1,127	1,127	68
Exterior Lighting	General Service Lighting	100.0%	80	80	5
Exterior Lighting	Area Lighting	100.0%	1,511	1,511	91
Exterior Lighting	Linear Lighting	100.0%	310	310	19
Motors	Pumps	100.0%	3,723	3,723	223
Motors	Fans & Blowers	100.0%	8,665	8,665	520
Motors	Compressed Air	100.0%	7,379	7,379	443
Motors	Material Handling	100.0%	11,946	11,946	717
Motors	Other Motors	0.0%	5,171	0	0
Process	Process Heating	100.0%	4,936	4,936	296
Process	Process Cooling	100.0%	967	967	58
Process	Process Refrigeration	100.0%	967	967	58
Process	Process Electrochemical	100.0%	655	655	39
Process	Process Other	100.0%	2,202	2,202	132
Miscellaneous	Miscellaneous	100.0%	5,171	5,171	310
Total				73,696	4,422

Table A-229   Idaho Industrial Machinery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	40,695	1,017
Cooling	Water-Cooled Chiller	2.5%	41,207	1,030
Cooling	RTU	11.3%	48,590	5,503
Cooling	Air-Source Heat Pump	1.7%	47,991	812
Cooling	Geothermal Heat Pump	0.0%	29,151	0
Heating	Electric Furnace	0.7%	95,955	678
Heating	Electric Room Heat	3.8%	91,386	3,495
Heating	Air-Source Heat Pump	1.7%	90,144	1,524
Heating	Geothermal Heat Pump	0.0%	58,257	0
Ventilation	Ventilation	100.0%	3,308	3,308
Interior Lighting	General Service Lighting	100.0%	415	415
Interior Lighting	High-Bay Lighting	100.0%	5,390	5,390
Interior Lighting	Linear Lighting	100.0%	1,088	1,088
Exterior Lighting	General Service Lighting	100.0%	75	75
Exterior Lighting	Area Lighting	100.0%	1,381	1,381
Exterior Lighting	Linear Lighting	100.0%	287	287
Motors	Pumps	100.0%	3,723	3,723
Motors	Fans & Blowers	100.0%	8,665	8,665
Motors	Compressed Air	100.0%	7,379	7,379
Motors	Material Handling	100.0%	11,946	11,946
Motors	Other Motors	0.0%	5,171	0
Process	Process Heating	100.0%	4,936	4,936
Process	Process Cooling	100.0%	967	967
Process	Process Refrigeration	100.0%	967	967
Process	Process Electrochemical	100.0%	655	655
Process	Process Other	100.0%	2,202	2,202
Miscellaneous	Miscellaneous	100.0%	5,171	5,171
Total				72,617

Table A-230   Idaho Lumber & Wood Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,559	64	16
Cooling	Water-Cooled Chiller	2.5%	2,591	65	16
Cooling	RTU	11.3%	2,749	311	78
Cooling	Air-Source Heat Pump	1.7%	2,748	46	12
Cooling	Geothermal Heat Pump	0.0%	1,833	0	0
Heating	Electric Furnace	0.7%	6,033	43	11
Heating	Electric Room Heat	3.8%	5,746	220	55
Heating	Air-Source Heat Pump	1.7%	5,492	93	23
Heating	Geothermal Heat Pump	0.0%	3,663	0	0
Ventilation	Ventilation	100.0%	217	217	54
Interior Lighting	General Service Lighting	100.0%	65	65	16
Interior Lighting	High-Bay Lighting	100.0%	1,015	1,015	254
Interior Lighting	Linear Lighting	100.0%	169	169	42
Exterior Lighting	General Service Lighting	100.0%	12	12	3
Exterior Lighting	Area Lighting	100.0%	226	226	57
Exterior Lighting	Linear Lighting	100.0%	46	46	12
Motors	Pumps	100.0%	2,258	2,258	564
Motors	Fans & Blowers	100.0%	1,664	1,664	416
Motors	Compressed Air	100.0%	856	856	214
Motors	Material Handling	100.0%	11,517	11,517	2,879
Motors	Other Motors	100.0%	175	175	44
Process	Process Heating	100.0%	1,882	1,882	470
Process	Process Cooling	100.0%	140	140	35
Process	Process Refrigeration	100.0%	140	140	35
Process	Process Electrochemical	100.0%	162	162	41
Process	Process Other	100.0%	117	117	29
Miscellaneous	Miscellaneous	100.0%	992	992	248
Total				22,494	5,623

Table A-231   Idaho Lumber & Wood Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,559	64
Cooling	Water-Cooled Chiller	2.5%	2,591	65
Cooling	RTU	11.3%	3,055	346
Cooling	Air-Source Heat Pump	1.7%	3,017	51
Cooling	Geothermal Heat Pump	0.0%	1,833	0
Heating	Electric Furnace	0.7%	6,033	43
Heating	Electric Room Heat	3.8%	5,746	220
Heating	Air-Source Heat Pump	1.7%	5,668	96
Heating	Geothermal Heat Pump	0.0%	3,663	0
Ventilation	Ventilation	100.0%	208	208
Interior Lighting	General Service Lighting	100.0%	62	62
Interior Lighting	High-Bay Lighting	100.0%	807	807
Interior Lighting	Linear Lighting	100.0%	163	163
Exterior Lighting	General Service Lighting	100.0%	11	11
Exterior Lighting	Area Lighting	100.0%	207	207
Exterior Lighting	Linear Lighting	100.0%	43	43
Motors	Pumps	100.0%	2,258	2,258
Motors	Fans & Blowers	100.0%	1,664	1,664
Motors	Compressed Air	100.0%	856	856
Motors	Material Handling	100.0%	11,517	11,517
Motors	Other Motors	100.0%	175	175
Process	Process Heating	100.0%	1,882	1,882
Process	Process Cooling	100.0%	140	140
Process	Process Refrigeration	100.0%	140	140
Process	Process Electrochemical	100.0%	162	162
Process	Process Other	100.0%	117	117
Miscellaneous	Miscellaneous	100.0%	992	992
Total				22,287

Table A-232 Idaho Metal Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	7,592	190	23
Cooling	Water-Cooled Chiller	2.5%	7,687	192	23
Cooling	RTU	11.3%	8,155	924	111
Cooling	Air-Source Heat Pump	1.7%	8,153	138	17
Cooling	Geothermal Heat Pump	0.0%	5,438	0	0
Heating	Electric Furnace	0.7%	17,900	127	15
Heating	Electric Room Heat	3.8%	17,048	652	78
Heating	Air-Source Heat Pump	1.7%	16,293	276	33
Heating	Geothermal Heat Pump	0.0%	10,868	0	0
Ventilation	Ventilation	100.0%	645	645	77
Interior Lighting	General Service Lighting	100.0%	120	120	14
Interior Lighting	High-Bay Lighting	100.0%	1,870	1,870	224
Interior Lighting	Linear Lighting	100.0%	311	311	37
Exterior Lighting	General Service Lighting	100.0%	22	22	3
Exterior Lighting	Area Lighting	100.0%	417	417	50
Exterior Lighting	Linear Lighting	100.0%	85	85	10
Motors	Pumps	100.0%	1,964	1,964	236
Motors	Fans & Blowers	100.0%	938	938	113
Motors	Compressed Air	100.0%	1,984	1,984	238
Motors	Material Handling	100.0%	9,585	9,585	1,150
Motors	Other Motors	100.0%	245	245	29
Process	Process Heating	100.0%	5,711	5,711	685
Process	Process Cooling	100.0%	505	505	61
Process	Process Refrigeration	100.0%	505	505	61
Process	Process Electrochemical	100.0%	962	962	115
Process	Process Other	100.0%	1,233	1,233	148
Miscellaneous	Miscellaneous	100.0%	1,165	1,165	140
Total				30,764	3,692

Table A-233   Idaho Metal Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	7,592	190
Cooling	Water-Cooled Chiller	2.5%	7,687	192
Cooling	RTU	11.3%	9,064	1,027
Cooling	Air-Source Heat Pump	1.7%	8,953	151
Cooling	Geothermal Heat Pump	0.0%	5,438	0
Heating	Electric Furnace	0.7%	17,900	127
Heating	Electric Room Heat	3.8%	17,048	652
Heating	Air-Source Heat Pump	1.7%	16,816	284
Heating	Geothermal Heat Pump	0.0%	10,868	0
Ventilation	Ventilation	100.0%	617	617
Interior Lighting	General Service Lighting	100.0%	115	115
Interior Lighting	High-Bay Lighting	100.0%	1,487	1,487
Interior Lighting	Linear Lighting	100.0%	300	300
Exterior Lighting	General Service Lighting	100.0%	21	21
Exterior Lighting	Area Lighting	100.0%	381	381
Exterior Lighting	Linear Lighting	100.0%	79	79
Motors	Pumps	100.0%	1,964	1,964
Motors	Fans & Blowers	100.0%	938	938
Motors	Compressed Air	100.0%	1,984	1,984
Motors	Material Handling	100.0%	9,585	9,585
Motors	Other Motors	100.0%	245	245
Process	Process Heating	100.0%	5,711	5,711
Process	Process Cooling	100.0%	505	505
Process	Process Refrigeration	100.0%	505	505
Process	Process Electrochemical	100.0%	962	962
Process	Process Other	100.0%	1,233	1,233
Miscellaneous	Miscellaneous	100.0%	1,165	1,165
Total				30,420

Table A-234   Idaho Miscellaneous Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	5,695	142	174
Cooling	Water-Cooled Chiller	2.5%	5,767	144	176
Cooling	RTU	11.3%	6,118	693	845
Cooling	Air-Source Heat Pump	1.7%	6,116	103	126
Cooling	Geothermal Heat Pump	0.0%	4,080	0	0
Heating	Electric Furnace	0.7%	13,428	95	116
Heating	Electric Room Heat	3.8%	12,789	489	597
Heating	Air-Source Heat Pump	1.7%	12,223	207	252
Heating	Geothermal Heat Pump	0.0%	8,153	0	0
Ventilation	Ventilation	100.0%	484	484	590
Interior Lighting	General Service Lighting	100.0%	65	65	80
Interior Lighting	High-Bay Lighting	100.0%	1,021	1,021	1,246
Interior Lighting	Linear Lighting	100.0%	170	170	207
Exterior Lighting	General Service Lighting	100.0%	12	12	15
Exterior Lighting	Area Lighting	100.0%	228	228	278
Exterior Lighting	Linear Lighting	100.0%	47	47	57
Motors	Pumps	100.0%	700	700	854
Motors	Fans & Blowers	100.0%	464	464	566
Motors	Compressed Air	100.0%	491	491	599
Motors	Material Handling	100.0%	1,309	1,309	1,597
Motors	Other Motors	100.0%	190	190	232
Process	Process Heating	100.0%	1,014	1,014	1,237
Process	Process Cooling	100.0%	266	266	325
Process	Process Refrigeration	100.0%	266	266	325
Process	Process Electrochemical	100.0%	102	102	125
Process	Process Other	100.0%	111	111	136
Miscellaneous	Miscellaneous	100.0%	612	612	746
Total				9,427	11,500

Table A-235   Idaho Miscellaneous Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	5,695	142
Cooling	Water-Cooled Chiller	2.5%	5,767	144
Cooling	RTU	11.3%	6,800	770
Cooling	Air-Source Heat Pump	1.7%	6,716	114
Cooling	Geothermal Heat Pump	0.0%	4,080	0
Heating	Electric Furnace	0.7%	13,428	95
Heating	Electric Room Heat	3.8%	12,789	489
Heating	Air-Source Heat Pump	1.7%	12,615	213
Heating	Geothermal Heat Pump	0.0%	8,153	0
Ventilation	Ventilation	100.0%	463	463
Interior Lighting	General Service Lighting	100.0%	63	63
Interior Lighting	High-Bay Lighting	100.0%	812	812
Interior Lighting	Linear Lighting	100.0%	164	164
Exterior Lighting	General Service Lighting	100.0%	11	11
Exterior Lighting	Area Lighting	100.0%	208	208
Exterior Lighting	Linear Lighting	100.0%	43	43
Motors	Pumps	100.0%	700	700
Motors	Fans & Blowers	100.0%	464	464
Motors	Compressed Air	100.0%	491	491
Motors	Material Handling	100.0%	1,309	1,309
Motors	Other Motors	100.0%	190	190
Process	Process Heating	100.0%	1,014	1,014
Process	Process Cooling	100.0%	266	266
Process	Process Refrigeration	100.0%	266	266
Process	Process Electrochemical	100.0%	102	102
Process	Process Other	100.0%	111	111
Miscellaneous	Miscellaneous	100.0%	612	612
Total				9,258

Table A-236   Utah Agriculture Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	624	16	541
Cooling	Water-Cooled Chiller	2.5%	588	15	510
Cooling	RTU	11.6%	694	81	2,802
Cooling	Air-Source Heat Pump	1.7%	694	12	407
Cooling	Geothermal Heat Pump	0.0%	463	0	0
Heating	Electric Furnace	0.7%	1,532	11	376
Heating	Electric Room Heat	3.8%	1,459	56	1,935
Heating	Air-Source Heat Pump	1.7%	1,375	23	806
Heating	Geothermal Heat Pump	0.0%	917	0	0
Ventilation	Ventilation	100.0%	55	55	1,907
Interior Lighting	General Service Lighting	100.0%	10	10	332
Interior Lighting	High-Bay Lighting	100.0%	150	150	5,189
Interior Lighting	Linear Lighting	100.0%	25	25	863
Exterior Lighting	General Service Lighting	100.0%	2	2	61
Exterior Lighting	Area Lighting	100.0%	33	33	1,157
Exterior Lighting	Linear Lighting	100.0%	7	7	237
Motors	Pumps	100.0%	89	89	3,078
Motors	Fans & Blowers	100.0%	553	553	19,174
Motors	Compressed Air	100.0%	117	117	4,071
Motors	Material Handling	100.0%	679	679	23,564
Motors	Other Motors	0.0%	157	0	0
Process	Process Heating	100.0%	237	237	8,216
Process	Process Cooling	100.0%	399	399	13,826
Process	Process Refrigeration	100.0%	399	399	13,826
Process	Process Electrochemical	100.0%	8	8	265
Process	Process Other	100.0%	30	30	1,028
Miscellaneous	Miscellaneous	100.0%	157	157	5,432
Total				3,160	109,602

Table A-237   Utah Agriculture New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	624	16
Cooling	Water-Cooled Chiller	2.5%	588	15
Cooling	RTU	11.6%	771	90
Cooling	Air-Source Heat Pump	1.7%	762	13
Cooling	Geothermal Heat Pump	0.0%	463	0
Heating	Electric Furnace	0.7%	1,532	11
Heating	Electric Room Heat	3.8%	1,459	56
Heating	Air-Source Heat Pump	1.7%	1,419	24
Heating	Geothermal Heat Pump	0.0%	917	0
Ventilation	Ventilation	100.0%	53	53
Interior Lighting	General Service Lighting	100.0%	9	9
Interior Lighting	High-Bay Lighting	100.0%	119	119
Interior Lighting	Linear Lighting	100.0%	24	24
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	30	30
Exterior Lighting	Linear Lighting	100.0%	6	6
Motors	Pumps	100.0%	89	89
Motors	Fans & Blowers	100.0%	553	553
Motors	Compressed Air	100.0%	117	117
Motors	Material Handling	100.0%	679	679
Motors	Other Motors	0.0%	157	0
Process	Process Heating	100.0%	237	237
Process	Process Cooling	100.0%	399	399
Process	Process Refrigeration	100.0%	399	399
Process	Process Electrochemical	100.0%	8	8
Process	Process Other	100.0%	30	30
Miscellaneous	Miscellaneous	100.0%	157	157
Total				3,134

Table A-238   Utah Mining and Extraction Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	12,976	324	2,164
Cooling	Water-Cooled Chiller	2.5%	12,235	306	2,040
Cooling	RTU	11.6%	14,437	1,681	11,213
Cooling	Air-Source Heat Pump	1.7%	14,434	244	1,628
Cooling	Geothermal Heat Pump	0.0%	9,627	0	0
Heating	Electric Furnace	0.7%	31,874	225	1,503
Heating	Electric Room Heat	3.8%	30,356	1,161	7,744
Heating	Air-Source Heat Pump	1.7%	28,602	484	3,226
Heating	Geothermal Heat Pump	0.0%	19,078	0	0
Ventilation	Ventilation	100.0%	1,144	1,144	7,630
Interior Lighting	General Service Lighting	100.0%	303	303	2,021
Interior Lighting	High-Bay Lighting	100.0%	4,740	4,740	31,618
Interior Lighting	Linear Lighting	100.0%	788	788	5,256
Exterior Lighting	General Service Lighting	100.0%	56	56	372
Exterior Lighting	Area Lighting	100.0%	1,057	1,057	7,049
Exterior Lighting	Linear Lighting	100.0%	217	217	1,444
Motors	Pumps	100.0%	54,420	54,420	362,984
Motors	Fans & Blowers	100.0%	15,117	15,117	100,829
Motors	Compressed Air	100.0%	22,675	22,675	151,243
Motors	Material Handling	100.0%	15,873	15,873	105,870
Motors	Other Motors	100.0%	43,083	43,083	287,362
Process	Process Heating	100.0%	1,591	1,591	10,614
Process	Process Cooling	0.0%	1,591	0	0
Process	Process Refrigeration	0.0%	1,591	0	0
Process	Process Electrochemical	100.0%	1,591	1,591	10,614
Process	Process Other	100.0%	8,752	8,752	58,375
Miscellaneous	Miscellaneous	100.0%	1,591	1,591	10,614
Total				177,423	1,183,412

Table A-239   Utah Mining and Extraction New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	12,976	324
Cooling	Water-Cooled Chiller	2.5%	12,235	306
Cooling	RTU	11.6%	16,047	1,869
Cooling	Air-Source Heat Pump	1.7%	15,849	268
Cooling	Geothermal Heat Pump	0.0%	9,627	0
Heating	Electric Furnace	0.7%	31,874	225
Heating	Electric Room Heat	3.8%	30,356	1,161
Heating	Air-Source Heat Pump	1.7%	29,520	499
Heating	Geothermal Heat Pump	0.0%	19,078	0
Ventilation	Ventilation	100.0%	1,094	1,094
Interior Lighting	General Service Lighting	100.0%	291	291
Interior Lighting	High-Bay Lighting	100.0%	3,770	3,770
Interior Lighting	Linear Lighting	100.0%	761	761
Exterior Lighting	General Service Lighting	100.0%	52	52
Exterior Lighting	Area Lighting	100.0%	966	966
Exterior Lighting	Linear Lighting	100.0%	201	201
Motors	Pumps	100.0%	54,420	54,420
Motors	Fans & Blowers	100.0%	15,117	15,117
Motors	Compressed Air	100.0%	22,675	22,675
Motors	Material Handling	100.0%	15,873	15,873
Motors	Other Motors	100.0%	43,083	43,083
Process	Process Heating	100.0%	1,591	1,591
Process	Process Cooling	0.0%	1,591	0
Process	Process Refrigeration	0.0%	1,591	0
Process	Process Electrochemical	100.0%	1,591	1,591
Process	Process Other	100.0%	8,752	8,752
Miscellaneous	Miscellaneous	100.0%	1,591	1,591
Total				176,480

Table A-240   Utah Food Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	4,172	104	626
Cooling	Water-Cooled Chiller	2.5%	3,933	98	590
Cooling	RTU	11.6%	4,641	540	3,243
Cooling	Air-Source Heat Pump	1.7%	4,640	78	471
Cooling	Geothermal Heat Pump	0.0%	3,095	0	0
Heating	Electric Furnace	0.7%	10,247	72	435
Heating	Electric Room Heat	3.8%	9,759	373	2,239
Heating	Air-Source Heat Pump	1.7%	9,195	155	933
Heating	Geothermal Heat Pump	0.0%	6,133	0	0
Ventilation	Ventilation	100.0%	368	368	2,207
Interior Lighting	General Service Lighting	100.0%	158	158	948
Interior Lighting	High-Bay Lighting	100.0%	2,472	2,472	14,830
Interior Lighting	Linear Lighting	100.0%	411	411	2,465
Exterior Lighting	General Service Lighting	100.0%	29	29	175
Exterior Lighting	Area Lighting	100.0%	551	551	3,306
Exterior Lighting	Linear Lighting	100.0%	113	113	677
Motors	Pumps	100.0%	7,774	7,774	46,644
Motors	Fans & Blowers	100.0%	12,925	12,925	77,551
Motors	Compressed Air	100.0%	4,971	4,971	29,826
Motors	Material Handling	100.0%	24,384	24,384	146,301
Motors	Other Motors	100.0%	2,494	2,494	14,966
Process	Process Heating	100.0%	3,258	3,258	19,550
Process	Process Cooling	100.0%	4,431	4,431	26,585
Process	Process Refrigeration	100.0%	4,431	4,431	26,585
Process	Process Electrochemical	100.0%	175	175	1,050
Process	Process Other	100.0%	680	680	4,077
Miscellaneous	Miscellaneous	100.0%	1,418	1,418	8,506
Total				72,464	434,785

Table A-241   Utah Food Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	4,172	104
Cooling	Water-Cooled Chiller	2.5%	3,933	98
Cooling	RTU	11.6%	5,159	601
Cooling	Air-Source Heat Pump	1.7%	5,095	86
Cooling	Geothermal Heat Pump	0.0%	3,095	0
Heating	Electric Furnace	0.7%	10,247	72
Heating	Electric Room Heat	3.8%	9,759	373
Heating	Air-Source Heat Pump	1.7%	9,490	160
Heating	Geothermal Heat Pump	0.0%	6,133	0
Ventilation	Ventilation	100.0%	352	352
Interior Lighting	General Service Lighting	100.0%	151	151
Interior Lighting	High-Bay Lighting	100.0%	1,965	1,965
Interior Lighting	Linear Lighting	100.0%	397	397
Exterior Lighting	General Service Lighting	100.0%	27	27
Exterior Lighting	Area Lighting	100.0%	504	504
Exterior Lighting	Linear Lighting	100.0%	105	105
Motors	Pumps	100.0%	7,774	7,774
Motors	Fans & Blowers	100.0%	12,925	12,925
Motors	Compressed Air	100.0%	4,971	4,971
Motors	Material Handling	100.0%	24,384	24,384
Motors	Other Motors	100.0%	2,494	2,494
Process	Process Heating	100.0%	3,258	3,258
Process	Process Cooling	100.0%	4,431	4,431
Process	Process Refrigeration	100.0%	4,431	4,431
Process	Process Electrochemical	100.0%	175	175
Process	Process Other	100.0%	680	680
Miscellaneous	Miscellaneous	100.0%	1,418	1,418
Total				71,937

Table A-242   Utah Paper Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,641	41	185
Cooling	Water-Cooled Chiller	2.5%	1,548	39	174
Cooling	RTU	11.6%	1,826	213	957
Cooling	Air-Source Heat Pump	1.7%	1,826	31	139
Cooling	Geothermal Heat Pump	0.0%	1,218	0	0
Heating	Electric Furnace	0.7%	4,032	29	128
Heating	Electric Room Heat	3.8%	3,840	147	661
Heating	Air-Source Heat Pump	1.7%	3,618	61	275
Heating	Geothermal Heat Pump	0.0%	2,413	0	0
Ventilation	Ventilation	100.0%	145	145	651
Interior Lighting	General Service Lighting	100.0%	83	83	375
Interior Lighting	High-Bay Lighting	100.0%	1,305	1,305	5,872
Interior Lighting	Linear Lighting	100.0%	217	217	976
Exterior Lighting	General Service Lighting	100.0%	15	15	69
Exterior Lighting	Area Lighting	100.0%	291	291	1,309
Exterior Lighting	Linear Lighting	100.0%	60	60	268
Motors	Pumps	100.0%	8,538	8,538	38,423
Motors	Fans & Blowers	100.0%	8,254	8,254	37,143
Motors	Compressed Air	100.0%	4,638	4,638	20,871
Motors	Material Handling	100.0%	19,684	19,684	88,576
Motors	Other Motors	100.0%	521	521	2,345
Process	Process Heating	100.0%	1,223	1,223	5,501
Process	Process Cooling	100.0%	242	242	1,088
Process	Process Refrigeration	100.0%	242	242	1,088
Process	Process Electrochemical	100.0%	403	403	1,813
Process	Process Other	100.0%	698	698	3,143
Miscellaneous	Miscellaneous	100.0%	741	741	3,333
Total				47,859	215,364

Table A-243   Utah Paper Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,641	41
Cooling	Water-Cooled Chiller	2.5%	1,548	39
Cooling	RTU	11.6%	2,030	236
Cooling	Air-Source Heat Pump	1.7%	2,005	34
Cooling	Geothermal Heat Pump	0.0%	1,218	0
Heating	Electric Furnace	0.7%	4,032	29
Heating	Electric Room Heat	3.8%	3,840	147
Heating	Air-Source Heat Pump	1.7%	3,734	63
Heating	Geothermal Heat Pump	0.0%	2,413	0
Ventilation	Ventilation	100.0%	138	138
Interior Lighting	General Service Lighting	100.0%	80	80
Interior Lighting	High-Bay Lighting	100.0%	1,038	1,038
Interior Lighting	Linear Lighting	100.0%	209	209
Exterior Lighting	General Service Lighting	100.0%	14	14
Exterior Lighting	Area Lighting	100.0%	266	266
Exterior Lighting	Linear Lighting	100.0%	55	55
Motors	Pumps	100.0%	8,538	8,538
Motors	Fans & Blowers	100.0%	8,254	8,254
Motors	Compressed Air	100.0%	4,638	4,638
Motors	Material Handling	100.0%	19,684	19,684
Motors	Other Motors	100.0%	521	521
Process	Process Heating	100.0%	1,223	1,223
Process	Process Cooling	100.0%	242	242
Process	Process Refrigeration	100.0%	242	242
Process	Process Electrochemical	100.0%	403	403
Process	Process Other	100.0%	698	698
Miscellaneous	Miscellaneous	100.0%	741	741
Total				47,573

Table A-244   Utah Petroleum Refining Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	14,664	367	825
Cooling	Water-Cooled Chiller	2.5%	13,826	346	778
Cooling	RTU	11.6%	16,315	1,900	4,274
Cooling	Air-Source Heat Pump	1.7%	16,311	276	621
Cooling	Geothermal Heat Pump	0.0%	10,879	0	0
Heating	Electric Furnace	0.7%	36,019	255	573
Heating	Electric Room Heat	3.8%	34,304	1,312	2,952
Heating	Air-Source Heat Pump	1.7%	32,322	547	1,230
Heating	Geothermal Heat Pump	0.0%	21,559	0	0
Ventilation	Ventilation	100.0%	1,293	1,293	2,909
Interior Lighting	General Service Lighting	100.0%	177	177	398
Interior Lighting	High-Bay Lighting	100.0%	2,764	2,764	6,219
Interior Lighting	Linear Lighting	100.0%	459	459	1,034
Exterior Lighting	General Service Lighting	100.0%	33	33	73
Exterior Lighting	Area Lighting	100.0%	616	616	1,387
Exterior Lighting	Linear Lighting	100.0%	126	126	284
Motors	Pumps	100.0%	82,434	82,434	185,478
Motors	Fans & Blowers	100.0%	13,514	13,514	30,406
Motors	Compressed Air	100.0%	21,622	21,622	48,650
Motors	Material Handling	100.0%	19,370	19,370	43,582
Motors	Other Motors	100.0%	7,572	7,572	17,036
Process	Process Heating	100.0%	7,236	7,236	16,282
Process	Process Cooling	100.0%	4,412	4,412	9,926
Process	Process Refrigeration	100.0%	4,412	4,412	9,926
Process	Process Electrochemical	100.0%	178	178	399
Process	Process Other	100.0%	1,345	1,345	3,027
Miscellaneous	Miscellaneous	100.0%	1,885	1,885	4,240
Total				174,448	392,508

Table A-245   Utah Petroleum Refining New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	14,664	367
Cooling	Water-Cooled Chiller	2.5%	13,826	346
Cooling	RTU	11.6%	18,135	2,112
Cooling	Air-Source Heat Pump	1.7%	17,911	303
Cooling	Geothermal Heat Pump	0.0%	10,879	0
Heating	Electric Furnace	0.7%	36,019	255
Heating	Electric Room Heat	3.8%	34,304	1,312
Heating	Air-Source Heat Pump	1.7%	33,359	564
Heating	Geothermal Heat Pump	0.0%	21,559	0
Ventilation	Ventilation	100.0%	1,237	1,237
Interior Lighting	General Service Lighting	100.0%	169	169
Interior Lighting	High-Bay Lighting	100.0%	2,198	2,198
Interior Lighting	Linear Lighting	100.0%	444	444
Exterior Lighting	General Service Lighting	100.0%	31	31
Exterior Lighting	Area Lighting	100.0%	563	563
Exterior Lighting	Linear Lighting	100.0%	117	117
Motors	Pumps	100.0%	82,434	82,434
Motors	Fans & Blowers	100.0%	13,514	13,514
Motors	Compressed Air	100.0%	21,622	21,622
Motors	Material Handling	100.0%	19,370	19,370
Motors	Other Motors	100.0%	7,572	7,572
Process	Process Heating	100.0%	7,236	7,236
Process	Process Cooling	100.0%	4,412	4,412
Process	Process Refrigeration	100.0%	4,412	4,412
Process	Process Electrochemical	100.0%	178	178
Process	Process Other	100.0%	1,345	1,345
Miscellaneous	Miscellaneous	100.0%	1,885	1,885
Total				173,995

Table A-246   Utah Stone Clay Glass Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	18,939	473	1,013
Cooling	Water-Cooled Chiller	2.5%	17,856	446	955
Cooling	RTU	11.6%	21,070	2,453	5,250
Cooling	Air-Source Heat Pump	1.7%	21,065	356	762
Cooling	Geothermal Heat Pump	0.0%	14,051	0	0
Heating	Electric Furnace	0.7%	46,518	329	704
Heating	Electric Room Heat	3.8%	44,303	1,694	3,626
Heating	Air-Source Heat Pump	1.7%	41,744	706	1,511
Heating	Geothermal Heat Pump	0.0%	27,843	0	0
Ventilation	Ventilation	100.0%	1,669	1,669	3,573
Interior Lighting	General Service Lighting	100.0%	279	279	598
Interior Lighting	High-Bay Lighting	100.0%	4,369	4,369	9,350
Interior Lighting	Linear Lighting	100.0%	726	726	1,554
Exterior Lighting	General Service Lighting	100.0%	51	51	110
Exterior Lighting	Area Lighting	100.0%	974	974	2,085
Exterior Lighting	Linear Lighting	100.0%	200	200	427
Motors	Pumps	100.0%	8,576	8,576	18,353
Motors	Fans & Blowers	100.0%	12,069	12,069	25,827
Motors	Compressed Air	100.0%	2,172	2,172	4,649
Motors	Material Handling	100.0%	49,964	49,964	106,923
Motors	Other Motors	100.0%	780	780	1,668
Process	Process Heating	100.0%	26,312	26,312	56,308
Process	Process Cooling	100.0%	1,615	1,615	3,455
Process	Process Refrigeration	100.0%	1,615	1,615	3,455
Process	Process Electrochemical	100.0%	453	453	969
Process	Process Other	100.0%	5,367	5,367	11,486
Miscellaneous	Miscellaneous	100.0%	4,189	4,189	8,964
Total				127,839	273,576

Table A-247   Utah Stone Clay Glass Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	18,939	473
Cooling	Water-Cooled Chiller	2.5%	17,856	446
Cooling	RTU	11.6%	23,420	2,727
Cooling	Air-Source Heat Pump	1.7%	23,131	391
Cooling	Geothermal Heat Pump	0.0%	14,051	0
Heating	Electric Furnace	0.7%	46,518	329
Heating	Electric Room Heat	3.8%	44,303	1,694
Heating	Air-Source Heat Pump	1.7%	43,083	729
Heating	Geothermal Heat Pump	0.0%	27,843	0
Ventilation	Ventilation	100.0%	1,597	1,597
Interior Lighting	General Service Lighting	100.0%	268	268
Interior Lighting	High-Bay Lighting	100.0%	3,475	3,475
Interior Lighting	Linear Lighting	100.0%	701	701
Exterior Lighting	General Service Lighting	100.0%	48	48
Exterior Lighting	Area Lighting	100.0%	890	890
Exterior Lighting	Linear Lighting	100.0%	185	185
Motors	Pumps	100.0%	8,576	8,576
Motors	Fans & Blowers	100.0%	12,069	12,069
Motors	Compressed Air	100.0%	2,172	2,172
Motors	Material Handling	100.0%	49,964	49,964
Motors	Other Motors	100.0%	780	780
Process	Process Heating	100.0%	26,312	26,312
Process	Process Cooling	100.0%	1,615	1,615
Process	Process Refrigeration	100.0%	1,615	1,615
Process	Process Electrochemical	100.0%	453	453
Process	Process Other	100.0%	5,367	5,367
Miscellaneous	Miscellaneous	100.0%	4,189	4,189
Total				127,065

Table A-248   Utah Transportation Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	19,112	478	4,372
Cooling	Water-Cooled Chiller	2.5%	18,019	450	4,122
Cooling	RTU	11.6%	21,263	2,476	22,654
Cooling	Air-Source Heat Pump	1.7%	21,258	359	3,289
Cooling	Geothermal Heat Pump	0.0%	14,179	0	0
Heating	Electric Furnace	0.7%	46,944	332	3,037
Heating	Electric Room Heat	3.8%	44,708	1,710	15,646
Heating	Air-Source Heat Pump	1.7%	42,126	712	6,518
Heating	Geothermal Heat Pump	0.0%	28,098	0	0
Ventilation	Ventilation	100.0%	1,685	1,685	15,416
Interior Lighting	General Service Lighting	100.0%	250	250	2,285
Interior Lighting	High-Bay Lighting	100.0%	3,908	3,908	35,755
Interior Lighting	Linear Lighting	100.0%	650	650	5,944
Exterior Lighting	General Service Lighting	100.0%	46	46	421
Exterior Lighting	Area Lighting	100.0%	871	871	7,971
Exterior Lighting	Linear Lighting	100.0%	178	178	1,633
Motors	Pumps	100.0%	1,984	1,984	18,154
Motors	Fans & Blowers	100.0%	948	948	8,670
Motors	Compressed Air	100.0%	2,004	2,004	18,339
Motors	Material Handling	100.0%	9,680	9,680	88,574
Motors	Other Motors	100.0%	247	247	2,260
Process	Process Heating	100.0%	5,529	5,529	50,590
Process	Process Cooling	100.0%	1,220	1,220	11,166
Process	Process Refrigeration	100.0%	1,220	1,220	11,166
Process	Process Electrochemical	100.0%	663	663	6,069
Process	Process Other	100.0%	1,489	1,489	13,628
Miscellaneous	Miscellaneous	100.0%	2,430	2,430	22,232
Total				41,520	379,911

Table A-249   Utah Transportation Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	19,112	478
Cooling	Water-Cooled Chiller	2.5%	18,019	450
Cooling	RTU	11.6%	23,635	2,752
Cooling	Air-Source Heat Pump	1.7%	23,343	395
Cooling	Geothermal Heat Pump	0.0%	14,179	0
Heating	Electric Furnace	0.7%	46,944	332
Heating	Electric Room Heat	3.8%	44,708	1,710
Heating	Air-Source Heat Pump	1.7%	43,477	735
Heating	Geothermal Heat Pump	0.0%	28,098	0
Ventilation	Ventilation	100.0%	1,612	1,612
Interior Lighting	General Service Lighting	100.0%	239	239
Interior Lighting	High-Bay Lighting	100.0%	3,107	3,107
Interior Lighting	Linear Lighting	100.0%	627	627
Exterior Lighting	General Service Lighting	100.0%	43	43
Exterior Lighting	Area Lighting	100.0%	796	796
Exterior Lighting	Linear Lighting	100.0%	166	166
Motors	Pumps	100.0%	1,984	1,984
Motors	Fans & Blowers	100.0%	948	948
Motors	Compressed Air	100.0%	2,004	2,004
Motors	Material Handling	100.0%	9,680	9,680
Motors	Other Motors	100.0%	247	247
Process	Process Heating	100.0%	5,529	5,529
Process	Process Cooling	100.0%	1,220	1,220
Process	Process Refrigeration	100.0%	1,220	1,220
Process	Process Electrochemical	100.0%	663	663
Process	Process Other	100.0%	1,489	1,489
Miscellaneous	Miscellaneous	100.0%	2,430	2,430
Total				40,858

Table A-250   Utah Wastewater Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	3,827	96	236
Cooling	Water-Cooled Chiller	2.5%	3,608	90	222
Cooling	RTU	11.6%	4,258	496	1,222
Cooling	Air-Source Heat Pump	1.7%	4,256	72	177
Cooling	Geothermal Heat Pump	0.0%	2,839	0	0
Heating	Electric Furnace	0.7%	9,400	66	164
Heating	Electric Room Heat	3.8%	8,952	342	844
Heating	Air-Source Heat Pump	1.7%	8,435	143	351
Heating	Geothermal Heat Pump	0.0%	5,626	0	0
Ventilation	Ventilation	100.0%	337	337	831
Interior Lighting	General Service Lighting	100.0%	64	64	158
Interior Lighting	High-Bay Lighting	100.0%	1,001	1,001	2,468
Interior Lighting	Linear Lighting	100.0%	166	166	410
Exterior Lighting	General Service Lighting	100.0%	12	12	29
Exterior Lighting	Area Lighting	100.0%	223	223	550
Exterior Lighting	Linear Lighting	100.0%	46	46	113
Motors	Pumps	100.0%	8,121	8,121	20,011
Motors	Fans & Blowers	100.0%	19,994	19,994	49,266
Motors	Compressed Air	100.0%	428	428	1,054
Motors	Material Handling	100.0%	1,911	1,911	4,708
Motors	Other Motors	100.0%	599	599	1,476
Process	Process Heating	0.0%	936	0	0
Process	Process Cooling	0.0%	936	0	0
Process	Process Refrigeration	0.0%	936	0	0
Process	Process Electrochemical	0.0%	936	0	0
Process	Process Other	100.0%	1,583	1,583	3,901
Miscellaneous	Miscellaneous	100.0%	936	936	2,305
Total				36,727	90,495

Table A-251   Utah Wastewater New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	3,827	96
Cooling	Water-Cooled Chiller	2.5%	3,608	90
Cooling	RTU	11.6%	4,732	551
Cooling	Air-Source Heat Pump	1.7%	4,674	79
Cooling	Geothermal Heat Pump	0.0%	2,839	0
Heating	Electric Furnace	0.7%	9,400	66
Heating	Electric Room Heat	3.8%	8,952	342
Heating	Air-Source Heat Pump	1.7%	8,705	147
Heating	Geothermal Heat Pump	0.0%	5,626	0
Ventilation	Ventilation	100.0%	323	323
Interior Lighting	General Service Lighting	100.0%	61	61
Interior Lighting	High-Bay Lighting	100.0%	796	796
Interior Lighting	Linear Lighting	100.0%	161	161
Exterior Lighting	General Service Lighting	100.0%	11	11
Exterior Lighting	Area Lighting	100.0%	204	204
Exterior Lighting	Linear Lighting	100.0%	42	42
Motors	Pumps	100.0%	8,121	8,121
Motors	Fans & Blowers	100.0%	19,994	19,994
Motors	Compressed Air	100.0%	428	428
Motors	Material Handling	100.0%	1,911	1,911
Motors	Other Motors	100.0%	599	599
Process	Process Heating	0.0%	936	0
Process	Process Cooling	0.0%	936	0
Process	Process Refrigeration	0.0%	936	0
Process	Process Electrochemical	0.0%	936	0
Process	Process Other	100.0%	1,583	1,583
Miscellaneous	Miscellaneous	100.0%	936	936
Total				36,542

Table A-252   Utah Water Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	7,843	196	1,824
Cooling	Water-Cooled Chiller	2.5%	7,394	185	1,720
Cooling	RTU	11.6%	8,725	1,016	9,453
Cooling	Air-Source Heat Pump	1.7%	8,723	148	1,372
Cooling	Geothermal Heat Pump	0.0%	5,818	0	0
Heating	Electric Furnace	0.7%	19,264	136	1,267
Heating	Electric Room Heat	3.8%	18,346	702	6,528
Heating	Air-Source Heat Pump	1.7%	17,286	292	2,720
Heating	Geothermal Heat Pump	0.0%	11,530	0	0
Ventilation	Ventilation	100.0%	691	691	6,432
Interior Lighting	General Service Lighting	100.0%	131	131	1,221
Interior Lighting	High-Bay Lighting	100.0%	2,052	2,052	19,095
Interior Lighting	Linear Lighting	100.0%	341	341	3,174
Exterior Lighting	General Service Lighting	100.0%	24	24	225
Exterior Lighting	Area Lighting	100.0%	458	458	4,257
Exterior Lighting	Linear Lighting	100.0%	94	94	872
Motors	Pumps	100.0%	60,125	60,125	559,404
Motors	Fans & Blowers	0.0%	1,917	0	0
Motors	Compressed Air	100.0%	877	877	8,156
Motors	Material Handling	100.0%	2,609	2,609	24,270
Motors	Other Motors	100.0%	29	29	272
Process	Process Heating	0.0%	1,917	0	0
Process	Process Cooling	0.0%	1,917	0	0
Process	Process Refrigeration	0.0%	1,917	0	0
Process	Process Electrochemical	0.0%	1,917	0	0
Process	Process Other	100.0%	3,245	3,245	30,190
Miscellaneous	Miscellaneous	100.0%	1,917	1,917	17,839
Total				75,268	700,293

Table A-253   Utah Water New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	7,843	196
Cooling	Water-Cooled Chiller	2.5%	7,394	185
Cooling	RTU	11.6%	9,699	1,129
Cooling	Air-Source Heat Pump	1.7%	9,579	162
Cooling	Geothermal Heat Pump	0.0%	5,818	0
Heating	Electric Furnace	0.7%	19,264	136
Heating	Electric Room Heat	3.8%	18,346	702
Heating	Air-Source Heat Pump	1.7%	17,841	302
Heating	Geothermal Heat Pump	0.0%	11,530	0
Ventilation	Ventilation	100.0%	661	661
Interior Lighting	General Service Lighting	100.0%	126	126
Interior Lighting	High-Bay Lighting	100.0%	1,632	1,632
Interior Lighting	Linear Lighting	100.0%	329	329
Exterior Lighting	General Service Lighting	100.0%	23	23
Exterior Lighting	Area Lighting	100.0%	418	418
Exterior Lighting	Linear Lighting	100.0%	87	87
Motors	Pumps	100.0%	60,125	60,125
Motors	Fans & Blowers	0.0%	1,917	0
Motors	Compressed Air	100.0%	877	877
Motors	Material Handling	100.0%	2,609	2,609
Motors	Other Motors	100.0%	29	29
Process	Process Heating	0.0%	1,917	0
Process	Process Cooling	0.0%	1,917	0
Process	Process Refrigeration	0.0%	1,917	0
Process	Process Electrochemical	0.0%	1,917	0
Process	Process Other	100.0%	3,245	3,245
Miscellaneous	Miscellaneous	100.0%	1,917	1,917
Total				74,890

Table A-254   Utah Chemical Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	29,429	736	1,486
Cooling	Water-Cooled Chiller	2.5%	27,746	694	1,401
Cooling	RTU	11.6%	32,742	3,812	7,701
Cooling	Air-Source Heat Pump	1.7%	32,734	554	1,118
Cooling	Geothermal Heat Pump	0.0%	21,833	0	0
Heating	Electric Furnace	0.7%	72,286	511	1,032
Heating	Electric Room Heat	3.8%	68,844	2,633	5,319
Heating	Air-Source Heat Pump	1.7%	64,866	1,097	2,216
Heating	Geothermal Heat Pump	0.0%	43,266	0	0
Ventilation	Ventilation	100.0%	2,594	2,594	5,240
Interior Lighting	General Service Lighting	100.0%	336	336	679
Interior Lighting	High-Bay Lighting	100.0%	5,257	5,257	10,619
Interior Lighting	Linear Lighting	100.0%	874	874	1,765
Exterior Lighting	General Service Lighting	100.0%	62	62	125
Exterior Lighting	Area Lighting	100.0%	1,172	1,172	2,368
Exterior Lighting	Linear Lighting	100.0%	240	240	485
Motors	Pumps	100.0%	32,796	32,796	66,247
Motors	Fans & Blowers	100.0%	14,986	14,986	30,272
Motors	Compressed Air	100.0%	34,750	34,750	70,196
Motors	Material Handling	100.0%	31,493	31,493	63,615
Motors	Other Motors	100.0%	4,128	4,128	8,339
Process	Process Heating	100.0%	13,811	13,811	27,898
Process	Process Cooling	100.0%	7,750	7,750	15,655
Process	Process Refrigeration	100.0%	7,750	7,750	15,655
Process	Process Electrochemical	100.0%	39,661	39,661	80,116
Process	Process Other	100.0%	2,468	2,468	4,985
Miscellaneous	Miscellaneous	100.0%	6,100	6,100	12,323
Total				216,266	436,857

Table A-255   Utah Chemical Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	29,429	736
Cooling	Water-Cooled Chiller	2.5%	27,746	694
Cooling	RTU	11.6%	36,393	4,238
Cooling	Air-Source Heat Pump	1.7%	35,944	608
Cooling	Geothermal Heat Pump	0.0%	21,833	0
Heating	Electric Furnace	0.7%	72,286	511
Heating	Electric Room Heat	3.8%	68,844	2,633
Heating	Air-Source Heat Pump	1.7%	66,947	1,132
Heating	Geothermal Heat Pump	0.0%	43,266	0
Ventilation	Ventilation	100.0%	2,482	2,482
Interior Lighting	General Service Lighting	100.0%	322	322
Interior Lighting	High-Bay Lighting	100.0%	4,180	4,180
Interior Lighting	Linear Lighting	100.0%	844	844
Exterior Lighting	General Service Lighting	100.0%	58	58
Exterior Lighting	Area Lighting	100.0%	1,071	1,071
Exterior Lighting	Linear Lighting	100.0%	223	223
Motors	Pumps	100.0%	32,796	32,796
Motors	Fans & Blowers	100.0%	14,986	14,986
Motors	Compressed Air	100.0%	34,750	34,750
Motors	Material Handling	100.0%	31,493	31,493
Motors	Other Motors	100.0%	4,128	4,128
Process	Process Heating	100.0%	13,811	13,811
Process	Process Cooling	100.0%	7,750	7,750
Process	Process Refrigeration	100.0%	7,750	7,750
Process	Process Electrochemical	100.0%	39,661	39,661
Process	Process Other	100.0%	2,468	2,468
Miscellaneous	Miscellaneous	100.0%	6,100	6,100
Total				215,426

Table A-256   Utah Electronic Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	45,175	1,129	6,618
Cooling	Water-Cooled Chiller	2.5%	42,592	1,065	6,240
Cooling	RTU	11.6%	50,260	5,852	34,294
Cooling	Air-Source Heat Pump	1.7%	50,248	850	4,979
Cooling	Geothermal Heat Pump	0.0%	33,515	0	0
Heating	Electric Furnace	0.7%	110,962	785	4,598
Heating	Electric Room Heat	3.8%	105,678	4,042	23,684
Heating	Air-Source Heat Pump	1.7%	99,573	1,684	9,867
Heating	Geothermal Heat Pump	0.0%	66,415	0	0
Ventilation	Ventilation	100.0%	3,982	3,982	23,336
Interior Lighting	General Service Lighting	100.0%	334	334	1,958
Interior Lighting	High-Bay Lighting	100.0%	5,228	5,228	30,636
Interior Lighting	Linear Lighting	100.0%	869	869	5,093
Exterior Lighting	General Service Lighting	100.0%	62	62	361
Exterior Lighting	Area Lighting	100.0%	1,166	1,166	6,830
Exterior Lighting	Linear Lighting	100.0%	239	239	1,399
Motors	Pumps	100.0%	985	985	5,772
Motors	Fans & Blowers	100.0%	1,576	1,576	9,236
Motors	Compressed Air	100.0%	2,851	2,851	16,709
Motors	Material Handling	100.0%	8,915	8,915	52,239
Motors	Other Motors	0.0%	5,859	0	0
Process	Process Heating	100.0%	7,438	7,438	43,588
Process	Process Cooling	100.0%	3,454	3,454	20,242
Process	Process Refrigeration	100.0%	3,454	3,454	20,242
Process	Process Electrochemical	100.0%	1,298	1,298	7,607
Process	Process Other	100.0%	6,531	6,531	38,271
Miscellaneous	Miscellaneous	100.0%	5,859	5,859	34,333
Total				69,647	408,132

Table A-257   Utah Electronic Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	45,175	1,129
Cooling	Water-Cooled Chiller	2.5%	42,592	1,065
Cooling	RTU	11.6%	55,866	6,505
Cooling	Air-Source Heat Pump	1.7%	55,176	933
Cooling	Geothermal Heat Pump	0.0%	33,515	0
Heating	Electric Furnace	0.7%	110,962	785
Heating	Electric Room Heat	3.8%	105,678	4,042
Heating	Air-Source Heat Pump	1.7%	102,767	1,738
Heating	Geothermal Heat Pump	0.0%	66,415	0
Ventilation	Ventilation	100.0%	3,810	3,810
Interior Lighting	General Service Lighting	100.0%	320	320
Interior Lighting	High-Bay Lighting	100.0%	4,157	4,157
Interior Lighting	Linear Lighting	100.0%	839	839
Exterior Lighting	General Service Lighting	100.0%	58	58
Exterior Lighting	Area Lighting	100.0%	1,065	1,065
Exterior Lighting	Linear Lighting	100.0%	222	222
Motors	Pumps	100.0%	985	985
Motors	Fans & Blowers	100.0%	1,576	1,576
Motors	Compressed Air	100.0%	2,851	2,851
Motors	Material Handling	100.0%	8,915	8,915
Motors	Other Motors	0.0%	5,859	0
Process	Process Heating	100.0%	7,438	7,438
Process	Process Cooling	100.0%	3,454	3,454
Process	Process Refrigeration	100.0%	3,454	3,454
Process	Process Electrochemical	100.0%	1,298	1,298
Process	Process Other	100.0%	6,531	6,531
Miscellaneous	Miscellaneous	100.0%	5,859	5,859
Total				69,029

Table A-258   Utah Industrial Machinery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	3,471	87	1,194
Cooling	Water-Cooled Chiller	2.5%	3,273	82	1,126
Cooling	RTU	11.6%	3,862	450	6,188
Cooling	Air-Source Heat Pump	1.7%	3,861	65	898
Cooling	Geothermal Heat Pump	0.0%	2,575	0	0
Heating	Electric Furnace	0.7%	8,526	60	830
Heating	Electric Room Heat	3.8%	8,120	311	4,273
Heating	Air-Source Heat Pump	1.7%	7,651	129	1,780
Heating	Geothermal Heat Pump	0.0%	5,103	0	0
Ventilation	Ventilation	100.0%	306	306	4,211
Interior Lighting	General Service Lighting	100.0%	38	38	527
Interior Lighting	High-Bay Lighting	100.0%	599	599	8,249
Interior Lighting	Linear Lighting	100.0%	100	100	1,371
Exterior Lighting	General Service Lighting	100.0%	7	7	97
Exterior Lighting	Area Lighting	100.0%	134	134	1,839
Exterior Lighting	Linear Lighting	100.0%	27	27	377
Motors	Pumps	100.0%	329	329	4,531
Motors	Fans & Blowers	100.0%	766	766	10,545
Motors	Compressed Air	100.0%	653	653	8,979
Motors	Material Handling	100.0%	1,056	1,056	14,537
Motors	Other Motors	0.0%	457	0	0
Process	Process Heating	100.0%	436	436	6,006
Process	Process Cooling	100.0%	86	86	1,177
Process	Process Refrigeration	100.0%	86	86	1,177
Process	Process Electrochemical	100.0%	58	58	797
Process	Process Other	100.0%	195	195	2,680
Miscellaneous	Miscellaneous	100.0%	457	457	6,293
Total				6,517	89,681

Table A-259   Utah Industrial Machinery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	3,471	87
Cooling	Water-Cooled Chiller	2.5%	3,273	82
Cooling	RTU	11.6%	4,293	500
Cooling	Air-Source Heat Pump	1.7%	4,240	72
Cooling	Geothermal Heat Pump	0.0%	2,575	0
Heating	Electric Furnace	0.7%	8,526	60
Heating	Electric Room Heat	3.8%	8,120	311
Heating	Air-Source Heat Pump	1.7%	7,897	134
Heating	Geothermal Heat Pump	0.0%	5,103	0
Ventilation	Ventilation	100.0%	293	293
Interior Lighting	General Service Lighting	100.0%	37	37
Interior Lighting	High-Bay Lighting	100.0%	477	477
Interior Lighting	Linear Lighting	100.0%	96	96
Exterior Lighting	General Service Lighting	100.0%	7	7
Exterior Lighting	Area Lighting	100.0%	122	122
Exterior Lighting	Linear Lighting	100.0%	25	25
Motors	Pumps	100.0%	329	329
Motors	Fans & Blowers	100.0%	766	766
Motors	Compressed Air	100.0%	653	653
Motors	Material Handling	100.0%	1,056	1,056
Motors	Other Motors	0.0%	457	0
Process	Process Heating	100.0%	436	436
Process	Process Cooling	100.0%	86	86
Process	Process Refrigeration	100.0%	86	86
Process	Process Electrochemical	100.0%	58	58
Process	Process Other	100.0%	195	195
Miscellaneous	Miscellaneous	100.0%	457	457
Total				6,423

Table A-260   Utah Lumber & Wood Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,231	31	72
Cooling	Water-Cooled Chiller	2.5%	1,160	29	68
Cooling	RTU	11.6%	1,369	159	372
Cooling	Air-Source Heat Pump	1.7%	1,369	23	54
Cooling	Geothermal Heat Pump	0.0%	913	0	0
Heating	Electric Furnace	0.7%	3,023	21	50
Heating	Electric Room Heat	3.8%	2,879	110	257
Heating	Air-Source Heat Pump	1.7%	2,713	46	107
Heating	Geothermal Heat Pump	0.0%	1,810	0	0
Ventilation	Ventilation	100.0%	109	109	253
Interior Lighting	General Service Lighting	100.0%	32	32	75
Interior Lighting	High-Bay Lighting	100.0%	506	506	1,179
Interior Lighting	Linear Lighting	100.0%	84	84	196
Exterior Lighting	General Service Lighting	100.0%	6	6	14
Exterior Lighting	Area Lighting	100.0%	113	113	263
Exterior Lighting	Linear Lighting	100.0%	23	23	54
Motors	Pumps	100.0%	1,126	1,126	2,624
Motors	Fans & Blowers	100.0%	830	830	1,933
Motors	Compressed Air	100.0%	427	427	995
Motors	Material Handling	100.0%	5,744	5,744	13,383
Motors	Other Motors	100.0%	87	87	203
Process	Process Heating	100.0%	939	939	2,187
Process	Process Cooling	100.0%	70	70	162
Process	Process Refrigeration	100.0%	70	70	162
Process	Process Electrochemical	100.0%	81	81	189
Process	Process Other	100.0%	58	58	136
Miscellaneous	Miscellaneous	100.0%	495	495	1,152
Total				11,218	26,139

Table A-261   Utah Lumber & Wood Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,231	31
Cooling	Water-Cooled Chiller	2.5%	1,160	29
Cooling	RTU	11.6%	1,522	177
Cooling	Air-Source Heat Pump	1.7%	1,503	25
Cooling	Geothermal Heat Pump	0.0%	913	0
Heating	Electric Furnace	0.7%	3,023	21
Heating	Electric Room Heat	3.8%	2,879	110
Heating	Air-Source Heat Pump	1.7%	2,800	47
Heating	Geothermal Heat Pump	0.0%	1,810	0
Ventilation	Ventilation	100.0%	104	104
Interior Lighting	General Service Lighting	100.0%	31	31
Interior Lighting	High-Bay Lighting	100.0%	403	403
Interior Lighting	Linear Lighting	100.0%	81	81
Exterior Lighting	General Service Lighting	100.0%	6	6
Exterior Lighting	Area Lighting	100.0%	103	103
Exterior Lighting	Linear Lighting	100.0%	21	21
Motors	Pumps	100.0%	1,126	1,126
Motors	Fans & Blowers	100.0%	830	830
Motors	Compressed Air	100.0%	427	427
Motors	Material Handling	100.0%	5,744	5,744
Motors	Other Motors	100.0%	87	87
Process	Process Heating	100.0%	939	939
Process	Process Cooling	100.0%	70	70
Process	Process Refrigeration	100.0%	70	70
Process	Process Electrochemical	100.0%	81	81
Process	Process Other	100.0%	58	58
Miscellaneous	Miscellaneous	100.0%	495	495
Total				11,115

Table A-262   Utah Metal Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	5,663	142	1,597
Cooling	Water-Cooled Chiller	2.5%	5,339	133	1,506
Cooling	RTU	11.6%	6,300	734	8,275
Cooling	Air-Source Heat Pump	1.7%	6,298	107	1,201
Cooling	Geothermal Heat Pump	0.0%	4,201	0	0
Heating	Electric Furnace	0.7%	13,909	98	1,109
Heating	Electric Room Heat	3.8%	13,246	507	5,715
Heating	Air-Source Heat Pump	1.7%	12,481	211	2,381
Heating	Geothermal Heat Pump	0.0%	8,325	0	0
Ventilation	Ventilation	100.0%	499	499	5,631
Interior Lighting	General Service Lighting	100.0%	92	92	1,043
Interior Lighting	High-Bay Lighting	100.0%	1,446	1,446	16,311
Interior Lighting	Linear Lighting	100.0%	240	240	2,711
Exterior Lighting	General Service Lighting	100.0%	17	17	192
Exterior Lighting	Area Lighting	100.0%	322	322	3,636
Exterior Lighting	Linear Lighting	100.0%	66	66	745
Motors	Pumps	100.0%	1,519	1,519	17,136
Motors	Fans & Blowers	100.0%	726	726	8,184
Motors	Compressed Air	100.0%	1,535	1,535	17,311
Motors	Material Handling	100.0%	7,412	7,412	83,609
Motors	Other Motors	100.0%	189	189	2,133
Process	Process Heating	100.0%	4,417	4,417	49,821
Process	Process Cooling	100.0%	391	391	4,405
Process	Process Refrigeration	100.0%	391	391	4,405
Process	Process Electrochemical	100.0%	744	744	8,389
Process	Process Other	100.0%	953	953	10,752
Miscellaneous	Miscellaneous	100.0%	901	901	10,165
Total				23,791	268,362

Table A-263   Utah Metal Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	5,663	142
Cooling	Water-Cooled Chiller	2.5%	5,339	133
Cooling	RTU	11.6%	7,003	815
Cooling	Air-Source Heat Pump	1.7%	6,916	117
Cooling	Geothermal Heat Pump	0.0%	4,201	0
Heating	Electric Furnace	0.7%	13,909	98
Heating	Electric Room Heat	3.8%	13,246	507
Heating	Air-Source Heat Pump	1.7%	12,882	218
Heating	Geothermal Heat Pump	0.0%	8,325	0
Ventilation	Ventilation	100.0%	478	478
Interior Lighting	General Service Lighting	100.0%	89	89
Interior Lighting	High-Bay Lighting	100.0%	1,150	1,150
Interior Lighting	Linear Lighting	100.0%	232	232
Exterior Lighting	General Service Lighting	100.0%	16	16
Exterior Lighting	Area Lighting	100.0%	295	295
Exterior Lighting	Linear Lighting	100.0%	61	61
Motors	Pumps	100.0%	1,519	1,519
Motors	Fans & Blowers	100.0%	726	726
Motors	Compressed Air	100.0%	1,535	1,535
Motors	Material Handling	100.0%	7,412	7,412
Motors	Other Motors	100.0%	189	189
Process	Process Heating	100.0%	4,417	4,417
Process	Process Cooling	100.0%	391	391
Process	Process Refrigeration	100.0%	391	391
Process	Process Electrochemical	100.0%	744	744
Process	Process Other	100.0%	953	953
Miscellaneous	Miscellaneous	100.0%	901	901
Total				23,527

Table A-264   Utah Miscellaneous Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	27,157	679	10,157
Cooling	Water-Cooled Chiller	2.5%	25,604	640	9,576
Cooling	RTU	11.6%	30,214	3,518	52,631
Cooling	Air-Source Heat Pump	1.7%	30,207	511	7,641
Cooling	Geothermal Heat Pump	0.0%	20,148	0	0
Heating	Electric Furnace	0.7%	66,705	472	7,056
Heating	Electric Room Heat	3.8%	63,528	2,430	36,348
Heating	Air-Source Heat Pump	1.7%	59,858	1,012	15,142
Heating	Geothermal Heat Pump	0.0%	39,925	0	0
Ventilation	Ventilation	100.0%	2,394	2,394	35,814
Interior Lighting	General Service Lighting	100.0%	323	323	4,827
Interior Lighting	High-Bay Lighting	100.0%	5,048	5,048	75,512
Interior Lighting	Linear Lighting	100.0%	839	839	12,552
Exterior Lighting	General Service Lighting	100.0%	59	59	889
Exterior Lighting	Area Lighting	100.0%	1,125	1,125	16,835
Exterior Lighting	Linear Lighting	100.0%	231	231	3,449
Motors	Pumps	100.0%	3,463	3,463	51,799
Motors	Fans & Blowers	100.0%	2,296	2,296	34,341
Motors	Compressed Air	100.0%	2,426	2,426	36,293
Motors	Material Handling	100.0%	6,472	6,472	96,826
Motors	Other Motors	100.0%	940	940	14,065
Process	Process Heating	100.0%	5,013	5,013	75,001
Process	Process Cooling	100.0%	1,316	1,316	19,692
Process	Process Refrigeration	100.0%	1,316	1,316	19,692
Process	Process Electrochemical	100.0%	507	507	7,580
Process	Process Other	100.0%	550	550	8,226
Miscellaneous	Miscellaneous	100.0%	3,025	3,025	45,254
Total				46,604	697,198

Table A-265   Utah Miscellaneous Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	27,157	679
Cooling	Water-Cooled Chiller	2.5%	25,604	640
Cooling	RTU	11.6%	33,584	3,910
Cooling	Air-Source Heat Pump	1.7%	33,169	561
Cooling	Geothermal Heat Pump	0.0%	20,148	0
Heating	Electric Furnace	0.7%	66,705	472
Heating	Electric Room Heat	3.8%	63,528	2,430
Heating	Air-Source Heat Pump	1.7%	61,779	1,045
Heating	Geothermal Heat Pump	0.0%	39,925	0
Ventilation	Ventilation	100.0%	2,290	2,290
Interior Lighting	General Service Lighting	100.0%	309	309
Interior Lighting	High-Bay Lighting	100.0%	4,014	4,014
Interior Lighting	Linear Lighting	100.0%	810	810
Exterior Lighting	General Service Lighting	100.0%	56	56
Exterior Lighting	Area Lighting	100.0%	1,029	1,029
Exterior Lighting	Linear Lighting	100.0%	214	214
Motors	Pumps	100.0%	3,463	3,463
Motors	Fans & Blowers	100.0%	2,296	2,296
Motors	Compressed Air	100.0%	2,426	2,426
Motors	Material Handling	100.0%	6,472	6,472
Motors	Other Motors	100.0%	940	940
Process	Process Heating	100.0%	5,013	5,013
Process	Process Cooling	100.0%	1,316	1,316
Process	Process Refrigeration	100.0%	1,316	1,316
Process	Process Electrochemical	100.0%	507	507
Process	Process Other	100.0%	550	550
Miscellaneous	Miscellaneous	100.0%	3,025	3,025
Total				45,783

Table A-266   Washington Agriculture Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	327	8	170
Cooling	Water-Cooled Chiller	2.5%	344	9	179
Cooling	RTU	11.4%	364	42	865
Cooling	Air-Source Heat Pump	1.7%	364	6	128
Cooling	Geothermal Heat Pump	0.0%	243	0	0
Heating	Electric Furnace	2.3%	1,604	37	767
Heating	Electric Room Heat	12.4%	1,528	190	3,951
Heating	Air-Source Heat Pump	1.7%	1,409	24	496
Heating	Geothermal Heat Pump	0.0%	940	0	0
Ventilation	Ventilation	100.0%	53	53	1,106
Interior Lighting	General Service Lighting	100.0%	13	13	274
Interior Lighting	High-Bay Lighting	100.0%	206	206	4,283
Interior Lighting	Linear Lighting	100.0%	34	34	712
Exterior Lighting	General Service Lighting	100.0%	2	2	50
Exterior Lighting	Area Lighting	100.0%	46	46	955
Exterior Lighting	Linear Lighting	100.0%	9	9	196
Motors	Pumps	100.0%	122	122	2,541
Motors	Fans & Blowers	100.0%	759	759	15,826
Motors	Compressed Air	100.0%	161	161	3,360
Motors	Material Handling	100.0%	933	933	19,450
Motors	Other Motors	0.0%	215	0	0
Process	Process Heating	100.0%	325	325	6,782
Process	Process Cooling	100.0%	548	548	11,412
Process	Process Refrigeration	100.0%	548	548	11,412
Process	Process Electrochemical	100.0%	10	10	218
Process	Process Other	100.0%	41	41	848
Miscellaneous	Miscellaneous	100.0%	215	215	4,484
Total				4,341	90,467

Table A-267   Washington Agriculture New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	327	8
Cooling	Water-Cooled Chiller	2.5%	344	9
Cooling	RTU	11.4%	405	46
Cooling	Air-Source Heat Pump	1.7%	399	7
Cooling	Geothermal Heat Pump	0.0%	243	0
Heating	Electric Furnace	2.3%	1,604	37
Heating	Electric Room Heat	12.4%	1,528	190
Heating	Air-Source Heat Pump	1.7%	1,454	25
Heating	Geothermal Heat Pump	0.0%	940	0
Ventilation	Ventilation	100.0%	52	52
Interior Lighting	General Service Lighting	100.0%	13	13
Interior Lighting	High-Bay Lighting	100.0%	163	163
Interior Lighting	Linear Lighting	100.0%	33	33
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	42	42
Exterior Lighting	Linear Lighting	100.0%	9	9
Motors	Pumps	100.0%	122	122
Motors	Fans & Blowers	100.0%	759	759
Motors	Compressed Air	100.0%	161	161
Motors	Material Handling	100.0%	933	933
Motors	Other Motors	0.0%	215	0
Process	Process Heating	100.0%	325	325
Process	Process Cooling	100.0%	548	548
Process	Process Refrigeration	100.0%	548	548
Process	Process Electrochemical	100.0%	10	10
Process	Process Other	100.0%	41	41
Miscellaneous	Miscellaneous	100.0%	215	215
Total				4,297

Table A-268   Washington Mining and Extraction Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	275	7	3
Cooling	Water-Cooled Chiller	2.5%	289	7	3
Cooling	RTU	11.4%	306	35	14
Cooling	Air-Source Heat Pump	1.7%	306	5	2
Cooling	Geothermal Heat Pump	0.0%	204	0	0
Heating	Electric Furnace	2.3%	1,350	31	13
Heating	Electric Room Heat	12.4%	1,285	159	65
Heating	Air-Source Heat Pump	1.7%	1,185	20	8
Heating	Geothermal Heat Pump	0.0%	790	0	0
Ventilation	Ventilation	100.0%	45	45	18
Interior Lighting	General Service Lighting	100.0%	17	17	7
Interior Lighting	High-Bay Lighting	100.0%	263	263	108
Interior Lighting	Linear Lighting	100.0%	44	44	18
Exterior Lighting	General Service Lighting	100.0%	3	3	1
Exterior Lighting	Area Lighting	100.0%	59	59	24
Exterior Lighting	Linear Lighting	100.0%	12	12	5
Motors	Pumps	100.0%	3,023	3,023	1,239
Motors	Fans & Blowers	100.0%	840	840	344
Motors	Compressed Air	100.0%	1,259	1,259	516
Motors	Material Handling	100.0%	882	882	361
Motors	Other Motors	100.0%	2,393	2,393	981
Process	Process Heating	100.0%	88	88	36
Process	Process Cooling	0.0%	88	0	0
Process	Process Refrigeration	0.0%	88	0	0
Process	Process Electrochemical	100.0%	88	88	36
Process	Process Other	100.0%	486	486	199
Miscellaneous	Miscellaneous	100.0%	88	88	36
Total				9,855	4,040

Table A-269   Washington Mining and Extraction New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	275	7
Cooling	Water-Cooled Chiller	2.5%	289	7
Cooling	RTU	11.4%	340	39
Cooling	Air-Source Heat Pump	1.7%	336	6
Cooling	Geothermal Heat Pump	0.0%	204	0
Heating	Electric Furnace	2.3%	1,350	31
Heating	Electric Room Heat	12.4%	1,285	159
Heating	Air-Source Heat Pump	1.7%	1,223	21
Heating	Geothermal Heat Pump	0.0%	790	0
Ventilation	Ventilation	100.0%	44	44
Interior Lighting	General Service Lighting	100.0%	16	16
Interior Lighting	High-Bay Lighting	100.0%	209	209
Interior Lighting	Linear Lighting	100.0%	42	42
Exterior Lighting	General Service Lighting	100.0%	3	3
Exterior Lighting	Area Lighting	100.0%	54	54
Exterior Lighting	Linear Lighting	100.0%	11	11
Motors	Pumps	100.0%	3,023	3,023
Motors	Fans & Blowers	100.0%	840	840
Motors	Compressed Air	100.0%	1,259	1,259
Motors	Material Handling	100.0%	882	882
Motors	Other Motors	100.0%	2,393	2,393
Process	Process Heating	100.0%	88	88
Process	Process Cooling	0.0%	88	0
Process	Process Refrigeration	0.0%	88	0
Process	Process Electrochemical	100.0%	88	88
Process	Process Other	100.0%	486	486
Miscellaneous	Miscellaneous	100.0%	88	88
Total				9,797

Table A-270   Washington Food Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	611	15	78
Cooling	Water-Cooled Chiller	2.5%	644	16	82
Cooling	RTU	11.4%	681	78	396
Cooling	Air-Source Heat Pump	1.7%	681	12	59
Cooling	Geothermal Heat Pump	0.0%	454	0	0
Heating	Electric Furnace	2.3%	3,003	69	351
Heating	Electric Room Heat	12.4%	2,860	355	1,810
Heating	Air-Source Heat Pump	1.7%	2,637	45	227
Heating	Geothermal Heat Pump	0.0%	1,759	0	0
Ventilation	Ventilation	100.0%	99	99	507
Interior Lighting	General Service Lighting	100.0%	61	61	310
Interior Lighting	High-Bay Lighting	100.0%	950	950	4,846
Interior Lighting	Linear Lighting	100.0%	158	158	806
Exterior Lighting	General Service Lighting	100.0%	11	11	57
Exterior Lighting	Area Lighting	100.0%	212	212	1,080
Exterior Lighting	Linear Lighting	100.0%	43	43	221
Motors	Pumps	100.0%	2,989	2,989	15,242
Motors	Fans & Blowers	100.0%	4,969	4,969	25,341
Motors	Compressed Air	100.0%	1,911	1,911	9,746
Motors	Material Handling	100.0%	9,374	9,374	47,807
Motors	Other Motors	100.0%	959	959	4,891
Process	Process Heating	100.0%	1,253	1,253	6,388
Process	Process Cooling	100.0%	1,703	1,703	8,687
Process	Process Refrigeration	100.0%	1,703	1,703	8,687
Process	Process Electrochemical	100.0%	67	67	343
Process	Process Other	100.0%	261	261	1,332
Miscellaneous	Miscellaneous	100.0%	545	545	2,780
Total				27,858	142,074

Table A-271   Washington Food Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	611	15
Cooling	Water-Cooled Chiller	2.5%	644	16
Cooling	RTU	11.4%	757	86
Cooling	Air-Source Heat Pump	1.7%	748	13
Cooling	Geothermal Heat Pump	0.0%	454	0
Heating	Electric Furnace	2.3%	3,003	69
Heating	Electric Room Heat	12.4%	2,860	355
Heating	Air-Source Heat Pump	1.7%	2,722	46
Heating	Geothermal Heat Pump	0.0%	1,759	0
Ventilation	Ventilation	100.0%	97	97
Interior Lighting	General Service Lighting	100.0%	58	58
Interior Lighting	High-Bay Lighting	100.0%	756	756
Interior Lighting	Linear Lighting	100.0%	152	152
Exterior Lighting	General Service Lighting	100.0%	11	11
Exterior Lighting	Area Lighting	100.0%	194	194
Exterior Lighting	Linear Lighting	100.0%	40	40
Motors	Pumps	100.0%	2,989	2,989
Motors	Fans & Blowers	100.0%	4,969	4,969
Motors	Compressed Air	100.0%	1,911	1,911
Motors	Material Handling	100.0%	9,374	9,374
Motors	Other Motors	100.0%	959	959
Process	Process Heating	100.0%	1,253	1,253
Process	Process Cooling	100.0%	1,703	1,703
Process	Process Refrigeration	100.0%	1,703	1,703
Process	Process Electrochemical	100.0%	67	67
Process	Process Other	100.0%	261	261
Miscellaneous	Miscellaneous	100.0%	545	545
Total				27,642

Table A-272   Washington Paper Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,394	60	118
Cooling	Water-Cooled Chiller	2.5%	2,521	63	125
Cooling	RTU	11.4%	2,668	304	602
Cooling	Air-Source Heat Pump	1.7%	2,667	45	89
Cooling	Geothermal Heat Pump	0.0%	1,779	0	0
Heating	Electric Furnace	2.3%	11,761	270	534
Heating	Electric Room Heat	12.4%	11,201	1,390	2,752
Heating	Air-Source Heat Pump	1.7%	10,328	175	346
Heating	Geothermal Heat Pump	0.0%	6,889	0	0
Ventilation	Ventilation	100.0%	389	389	770
Interior Lighting	General Service Lighting	100.0%	319	319	632
Interior Lighting	High-Bay Lighting	100.0%	4,994	4,994	9,888
Interior Lighting	Linear Lighting	100.0%	830	830	1,644
Exterior Lighting	General Service Lighting	100.0%	59	59	116
Exterior Lighting	Area Lighting	100.0%	1,113	1,113	2,204
Exterior Lighting	Linear Lighting	100.0%	228	228	452
Motors	Pumps	100.0%	32,674	32,674	64,695
Motors	Fans & Blowers	100.0%	31,586	31,586	62,540
Motors	Compressed Air	100.0%	17,749	17,749	35,142
Motors	Material Handling	100.0%	75,324	75,324	149,142
Motors	Other Motors	100.0%	1,994	1,994	3,949
Process	Process Heating	100.0%	4,678	4,678	9,263
Process	Process Cooling	100.0%	925	925	1,831
Process	Process Refrigeration	100.0%	925	925	1,831
Process	Process Electrochemical	100.0%	1,542	1,542	3,052
Process	Process Other	100.0%	2,673	2,673	5,292
Miscellaneous	Miscellaneous	100.0%	2,834	2,834	5,611
Total				183,142	362,622

Table A-273   Washington Paper Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,394	60
Cooling	Water-Cooled Chiller	2.5%	2,521	63
Cooling	RTU	11.4%	2,966	338
Cooling	Air-Source Heat Pump	1.7%	2,928	50
Cooling	Geothermal Heat Pump	0.0%	1,779	0
Heating	Electric Furnace	2.3%	11,761	270
Heating	Electric Room Heat	12.4%	11,201	1,390
Heating	Air-Source Heat Pump	1.7%	10,659	180
Heating	Geothermal Heat Pump	0.0%	6,889	0
Ventilation	Ventilation	100.0%	382	382
Interior Lighting	General Service Lighting	100.0%	306	306
Interior Lighting	High-Bay Lighting	100.0%	3,971	3,971
Interior Lighting	Linear Lighting	100.0%	801	801
Exterior Lighting	General Service Lighting	100.0%	55	55
Exterior Lighting	Area Lighting	100.0%	1,018	1,018
Exterior Lighting	Linear Lighting	100.0%	212	212
Motors	Pumps	100.0%	32,674	32,674
Motors	Fans & Blowers	100.0%	31,586	31,586
Motors	Compressed Air	100.0%	17,749	17,749
Motors	Material Handling	100.0%	75,324	75,324
Motors	Other Motors	100.0%	1,994	1,994
Process	Process Heating	100.0%	4,678	4,678
Process	Process Cooling	100.0%	925	925
Process	Process Refrigeration	100.0%	925	925
Process	Process Electrochemical	100.0%	1,542	1,542
Process	Process Other	100.0%	2,673	2,673
Miscellaneous	Miscellaneous	100.0%	2,834	2,834
Total				181,999

Table A-274   Washington Petroleum Refining Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	115	3	1
Cooling	Water-Cooled Chiller	2.5%	121	3	1
Cooling	RTU	11.4%	128	15	3
Cooling	Air-Source Heat Pump	1.7%	128	2	0
Cooling	Geothermal Heat Pump	0.0%	85	0	0
Heating	Electric Furnace	2.3%	564	13	3
Heating	Electric Room Heat	12.4%	538	67	13
Heating	Air-Source Heat Pump	1.7%	496	8	2
Heating	Geothermal Heat Pump	0.0%	331	0	0
Ventilation	Ventilation	100.0%	19	19	4
Interior Lighting	General Service Lighting	100.0%	4	4	1
Interior Lighting	High-Bay Lighting	100.0%	57	57	11
Interior Lighting	Linear Lighting	100.0%	9	9	2
Exterior Lighting	General Service Lighting	100.0%	1	1	0
Exterior Lighting	Area Lighting	100.0%	13	13	3
Exterior Lighting	Linear Lighting	100.0%	3	3	1
Motors	Pumps	100.0%	1,694	1,694	339
Motors	Fans & Blowers	100.0%	278	278	56
Motors	Compressed Air	100.0%	444	444	89
Motors	Material Handling	100.0%	398	398	80
Motors	Other Motors	100.0%	156	156	31
Process	Process Heating	100.0%	149	149	30
Process	Process Cooling	100.0%	91	91	18
Process	Process Refrigeration	100.0%	91	91	18
Process	Process Electrochemical	100.0%	4	4	1
Process	Process Other	100.0%	28	28	6
Miscellaneous	Miscellaneous	100.0%	39	39	8
Total				3,586	717

Table A-275   Washington Petroleum Refining New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	115	3
Cooling	Water-Cooled Chiller	2.5%	121	3
Cooling	RTU	11.4%	142	16
Cooling	Air-Source Heat Pump	1.7%	141	2
Cooling	Geothermal Heat Pump	0.0%	85	0
Heating	Electric Furnace	2.3%	564	13
Heating	Electric Room Heat	12.4%	538	67
Heating	Air-Source Heat Pump	1.7%	512	9
Heating	Geothermal Heat Pump	0.0%	331	0
Ventilation	Ventilation	100.0%	18	18
Interior Lighting	General Service Lighting	100.0%	3	3
Interior Lighting	High-Bay Lighting	100.0%	45	45
Interior Lighting	Linear Lighting	100.0%	9	9
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	12	12
Exterior Lighting	Linear Lighting	100.0%	2	2
Motors	Pumps	100.0%	1,694	1,694
Motors	Fans & Blowers	100.0%	278	278
Motors	Compressed Air	100.0%	444	444
Motors	Material Handling	100.0%	398	398
Motors	Other Motors	100.0%	156	156
Process	Process Heating	100.0%	149	149
Process	Process Cooling	100.0%	91	91
Process	Process Refrigeration	100.0%	91	91
Process	Process Electrochemical	100.0%	4	4
Process	Process Other	100.0%	28	28
Miscellaneous	Miscellaneous	100.0%	39	39
Total				3,574

Table A-276   Washington Stone Clay Glass Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	428	11	1
Cooling	Water-Cooled Chiller	2.5%	451	11	1
Cooling	RTU	11.4%	477	54	6
Cooling	Air-Source Heat Pump	1.7%	477	8	1
Cooling	Geothermal Heat Pump	0.0%	318	0	0
Heating	Electric Furnace	2.3%	2,105	48	5
Heating	Electric Room Heat	12.4%	2,004	249	27
Heating	Air-Source Heat Pump	1.7%	1,848	31	3
Heating	Geothermal Heat Pump	0.0%	1,233	0	0
Ventilation	Ventilation	100.0%	70	70	8
Interior Lighting	General Service Lighting	100.0%	17	17	2
Interior Lighting	High-Bay Lighting	100.0%	259	259	29
Interior Lighting	Linear Lighting	100.0%	43	43	5
Exterior Lighting	General Service Lighting	100.0%	3	3	0
Exterior Lighting	Area Lighting	100.0%	58	58	6
Exterior Lighting	Linear Lighting	100.0%	12	12	1
Motors	Pumps	100.0%	509	509	56
Motors	Fans & Blowers	100.0%	716	716	79
Motors	Compressed Air	100.0%	129	129	14
Motors	Material Handling	100.0%	2,965	2,965	326
Motors	Other Motors	100.0%	46	46	5
Process	Process Heating	100.0%	1,562	1,562	172
Process	Process Cooling	100.0%	96	96	11
Process	Process Refrigeration	100.0%	96	96	11
Process	Process Electrochemical	100.0%	27	27	3
Process	Process Other	100.0%	319	319	35
Miscellaneous	Miscellaneous	100.0%	249	249	27
Total				7,587	835

Table A-277   Washington Stone Clay Glass Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	428	11
Cooling	Water-Cooled Chiller	2.5%	451	11
Cooling	RTU	11.4%	531	61
Cooling	Air-Source Heat Pump	1.7%	524	9
Cooling	Geothermal Heat Pump	0.0%	318	0
Heating	Electric Furnace	2.3%	2,105	48
Heating	Electric Room Heat	12.4%	2,004	249
Heating	Air-Source Heat Pump	1.7%	1,907	32
Heating	Geothermal Heat Pump	0.0%	1,233	0
Ventilation	Ventilation	100.0%	68	68
Interior Lighting	General Service Lighting	100.0%	16	16
Interior Lighting	High-Bay Lighting	100.0%	206	206
Interior Lighting	Linear Lighting	100.0%	42	42
Exterior Lighting	General Service Lighting	100.0%	3	3
Exterior Lighting	Area Lighting	100.0%	53	53
Exterior Lighting	Linear Lighting	100.0%	11	11
Motors	Pumps	100.0%	509	509
Motors	Fans & Blowers	100.0%	716	716
Motors	Compressed Air	100.0%	129	129
Motors	Material Handling	100.0%	2,965	2,965
Motors	Other Motors	100.0%	46	46
Process	Process Heating	100.0%	1,562	1,562
Process	Process Cooling	100.0%	96	96
Process	Process Refrigeration	100.0%	96	96
Process	Process Electrochemical	100.0%	27	27
Process	Process Other	100.0%	319	319
Miscellaneous	Miscellaneous	100.0%	249	249
Total				7,532

Table A-278   Washington Transportation Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	870	22	17
Cooling	Water-Cooled Chiller	2.5%	917	23	18
Cooling	RTU	11.4%	970	111	88
Cooling	Air-Source Heat Pump	1.7%	969	16	13
Cooling	Geothermal Heat Pump	0.0%	647	0	0
Heating	Electric Furnace	2.3%	4,275	98	78
Heating	Electric Room Heat	12.4%	4,072	505	404
Heating	Air-Source Heat Pump	1.7%	3,754	63	51
Heating	Geothermal Heat Pump	0.0%	2,504	0	0
Ventilation	Ventilation	100.0%	141	141	113
Interior Lighting	General Service Lighting	100.0%	30	30	24
Interior Lighting	High-Bay Lighting	100.0%	467	467	373
Interior Lighting	Linear Lighting	100.0%	78	78	62
Exterior Lighting	General Service Lighting	100.0%	5	5	4
Exterior Lighting	Area Lighting	100.0%	104	104	83
Exterior Lighting	Linear Lighting	100.0%	21	21	17
Motors	Pumps	100.0%	237	237	190
Motors	Fans & Blowers	100.0%	113	113	91
Motors	Compressed Air	100.0%	239	239	192
Motors	Material Handling	100.0%	1,156	1,156	925
Motors	Other Motors	100.0%	30	30	24
Process	Process Heating	100.0%	661	661	528
Process	Process Cooling	100.0%	146	146	117
Process	Process Refrigeration	100.0%	146	146	117
Process	Process Electrochemical	100.0%	79	79	63
Process	Process Other	100.0%	178	178	142
Miscellaneous	Miscellaneous	100.0%	290	290	232
Total				4,960	3,968

Table A-279   Washington Transportation Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	870	22
Cooling	Water-Cooled Chiller	2.5%	917	23
Cooling	RTU	11.4%	1,078	123
Cooling	Air-Source Heat Pump	1.7%	1,064	18
Cooling	Geothermal Heat Pump	0.0%	647	0
Heating	Electric Furnace	2.3%	4,275	98
Heating	Electric Room Heat	12.4%	4,072	505
Heating	Air-Source Heat Pump	1.7%	3,875	66
Heating	Geothermal Heat Pump	0.0%	2,504	0
Ventilation	Ventilation	100.0%	139	139
Interior Lighting	General Service Lighting	100.0%	29	29
Interior Lighting	High-Bay Lighting	100.0%	371	371
Interior Lighting	Linear Lighting	100.0%	75	75
Exterior Lighting	General Service Lighting	100.0%	5	5
Exterior Lighting	Area Lighting	100.0%	95	95
Exterior Lighting	Linear Lighting	100.0%	20	20
Motors	Pumps	100.0%	237	237
Motors	Fans & Blowers	100.0%	113	113
Motors	Compressed Air	100.0%	239	239
Motors	Material Handling	100.0%	1,156	1,156
Motors	Other Motors	100.0%	30	30
Process	Process Heating	100.0%	661	661
Process	Process Cooling	100.0%	146	146
Process	Process Refrigeration	100.0%	146	146
Process	Process Electrochemical	100.0%	79	79
Process	Process Other	100.0%	178	178
Miscellaneous	Miscellaneous	100.0%	290	290
Total				4,863

Table A-280   Washington Wastewater Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	982	25	13
Cooling	Water-Cooled Chiller	2.5%	1,035	26	14
Cooling	RTU	11.4%	1,095	125	66
Cooling	Air-Source Heat Pump	1.7%	1,094	19	10
Cooling	Geothermal Heat Pump	0.0%	730	0	0
Heating	Electric Furnace	2.3%	4,827	111	58
Heating	Electric Room Heat	12.4%	4,597	570	301
Heating	Air-Source Heat Pump	1.7%	4,238	72	38
Heating	Geothermal Heat Pump	0.0%	2,827	0	0
Ventilation	Ventilation	100.0%	160	160	84
Interior Lighting	General Service Lighting	100.0%	43	43	23
Interior Lighting	High-Bay Lighting	100.0%	675	675	356
Interior Lighting	Linear Lighting	100.0%	112	112	59
Exterior Lighting	General Service Lighting	100.0%	8	8	4
Exterior Lighting	Area Lighting	100.0%	150	150	79
Exterior Lighting	Linear Lighting	100.0%	31	31	16
Motors	Pumps	100.0%	5,470	5,470	2,888
Motors	Fans & Blowers	100.0%	13,467	13,467	7,111
Motors	Compressed Air	100.0%	288	288	152
Motors	Material Handling	100.0%	1,287	1,287	679
Motors	Other Motors	100.0%	403	403	213
Process	Process Heating	0.0%	630	0	0
Process	Process Cooling	0.0%	630	0	0
Process	Process Refrigeration	0.0%	630	0	0
Process	Process Electrochemical	0.0%	630	0	0
Process	Process Other	100.0%	1,066	1,066	563
Miscellaneous	Miscellaneous	100.0%	630	630	333
Total				24,738	13,061

Table A-281   Washington Wastewater New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	982	25
Cooling	Water-Cooled Chiller	2.5%	1,035	26
Cooling	RTU	11.4%	1,217	139
Cooling	Air-Source Heat Pump	1.7%	1,202	20
Cooling	Geothermal Heat Pump	0.0%	730	0
Heating	Electric Furnace	2.3%	4,827	111
Heating	Electric Room Heat	12.4%	4,597	570
Heating	Air-Source Heat Pump	1.7%	4,374	74
Heating	Geothermal Heat Pump	0.0%	2,827	0
Ventilation	Ventilation	100.0%	157	157
Interior Lighting	General Service Lighting	100.0%	41	41
Interior Lighting	High-Bay Lighting	100.0%	536	536
Interior Lighting	Linear Lighting	100.0%	108	108
Exterior Lighting	General Service Lighting	100.0%	7	7
Exterior Lighting	Area Lighting	100.0%	137	137
Exterior Lighting	Linear Lighting	100.0%	29	29
Motors	Pumps	100.0%	5,470	5,470
Motors	Fans & Blowers	100.0%	13,467	13,467
Motors	Compressed Air	100.0%	288	288
Motors	Material Handling	100.0%	1,287	1,287
Motors	Other Motors	100.0%	403	403
Process	Process Heating	0.0%	630	0
Process	Process Cooling	0.0%	630	0
Process	Process Refrigeration	0.0%	630	0
Process	Process Electrochemical	0.0%	630	0
Process	Process Other	100.0%	1,066	1,066
Miscellaneous	Miscellaneous	100.0%	630	630
Total				24,593

Table A-282   Washington Water Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	301	8	14
Cooling	Water-Cooled Chiller	2.5%	317	8	15
Cooling	RTU	11.4%	335	38	71
Cooling	Air-Source Heat Pump	1.7%	335	6	10
Cooling	Geothermal Heat Pump	0.0%	224	0	0
Heating	Electric Furnace	2.3%	1,478	34	63
Heating	Electric Room Heat	12.4%	1,408	175	323
Heating	Air-Source Heat Pump	1.7%	1,298	22	41
Heating	Geothermal Heat Pump	0.0%	866	0	0
Ventilation	Ventilation	100.0%	49	49	90
Interior Lighting	General Service Lighting	100.0%	13	13	24
Interior Lighting	High-Bay Lighting	100.0%	207	207	382
Interior Lighting	Linear Lighting	100.0%	34	34	63
Exterior Lighting	General Service Lighting	100.0%	2	2	4
Exterior Lighting	Area Lighting	100.0%	46	46	85
Exterior Lighting	Linear Lighting	100.0%	9	9	17
Motors	Pumps	100.0%	6,053	6,053	11,186
Motors	Fans & Blowers	0.0%	193	0	0
Motors	Compressed Air	100.0%	88	88	163
Motors	Material Handling	100.0%	263	263	485
Motors	Other Motors	100.0%	3	3	5
Process	Process Heating	0.0%	193	0	0
Process	Process Cooling	0.0%	193	0	0
Process	Process Refrigeration	0.0%	193	0	0
Process	Process Electrochemical	0.0%	193	0	0
Process	Process Other	100.0%	327	327	604
Miscellaneous	Miscellaneous	100.0%	193	193	357
Total				7,577	14,003

Table A-283   Washington Water New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	301	8
Cooling	Water-Cooled Chiller	2.5%	317	8
Cooling	RTU	11.4%	373	43
Cooling	Air-Source Heat Pump	1.7%	368	6
Cooling	Geothermal Heat Pump	0.0%	224	0
Heating	Electric Furnace	2.3%	1,478	34
Heating	Electric Room Heat	12.4%	1,408	175
Heating	Air-Source Heat Pump	1.7%	1,340	23
Heating	Geothermal Heat Pump	0.0%	866	0
Ventilation	Ventilation	100.0%	48	48
Interior Lighting	General Service Lighting	100.0%	13	13
Interior Lighting	High-Bay Lighting	100.0%	164	164
Interior Lighting	Linear Lighting	100.0%	33	33
Exterior Lighting	General Service Lighting	100.0%	2	2
Exterior Lighting	Area Lighting	100.0%	42	42
Exterior Lighting	Linear Lighting	100.0%	9	9
Motors	Pumps	100.0%	6,053	6,053
Motors	Fans & Blowers	0.0%	193	0
Motors	Compressed Air	100.0%	88	88
Motors	Material Handling	100.0%	263	263
Motors	Other Motors	100.0%	3	3
Process	Process Heating	0.0%	193	0
Process	Process Cooling	0.0%	193	0
Process	Process Refrigeration	0.0%	193	0
Process	Process Electrochemical	0.0%	193	0
Process	Process Other	100.0%	327	327
Miscellaneous	Miscellaneous	100.0%	193	193
Total				7,533

Table A-284   Washington Chemical Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	103	3	0
Cooling	Water-Cooled Chiller	2.5%	108	3	0
Cooling	RTU	11.4%	115	13	2
Cooling	Air-Source Heat Pump	1.7%	115	2	0
Cooling	Geothermal Heat Pump	0.0%	76	0	0
Heating	Electric Furnace	2.3%	505	12	2
Heating	Electric Room Heat	12.4%	481	60	11
Heating	Air-Source Heat Pump	1.7%	444	8	1
Heating	Geothermal Heat Pump	0.0%	296	0	0
Ventilation	Ventilation	100.0%	17	17	3
Interior Lighting	General Service Lighting	100.0%	3	3	1
Interior Lighting	High-Bay Lighting	100.0%	48	48	9
Interior Lighting	Linear Lighting	100.0%	8	8	1
Exterior Lighting	General Service Lighting	100.0%	1	1	0
Exterior Lighting	Area Lighting	100.0%	11	11	2
Exterior Lighting	Linear Lighting	100.0%	2	2	0
Motors	Pumps	100.0%	301	301	54
Motors	Fans & Blowers	100.0%	137	137	25
Motors	Compressed Air	100.0%	319	319	57
Motors	Material Handling	100.0%	289	289	52
Motors	Other Motors	100.0%	38	38	7
Process	Process Heating	100.0%	127	127	23
Process	Process Cooling	100.0%	71	71	13
Process	Process Refrigeration	100.0%	71	71	13
Process	Process Electrochemical	100.0%	364	364	65
Process	Process Other	100.0%	23	23	4
Miscellaneous	Miscellaneous	100.0%	56	56	10
Total				1,982	357

Table A-285   Washington Chemical Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	103	3
Cooling	Water-Cooled Chiller	2.5%	108	3
Cooling	RTU	11.4%	127	15
Cooling	Air-Source Heat Pump	1.7%	126	2
Cooling	Geothermal Heat Pump	0.0%	76	0
Heating	Electric Furnace	2.3%	505	12
Heating	Electric Room Heat	12.4%	481	60
Heating	Air-Source Heat Pump	1.7%	458	8
Heating	Geothermal Heat Pump	0.0%	296	0
Ventilation	Ventilation	100.0%	16	16
Interior Lighting	General Service Lighting	100.0%	3	3
Interior Lighting	High-Bay Lighting	100.0%	38	38
Interior Lighting	Linear Lighting	100.0%	8	8
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	10	10
Exterior Lighting	Linear Lighting	100.0%	2	2
Motors	Pumps	100.0%	301	301
Motors	Fans & Blowers	100.0%	137	137
Motors	Compressed Air	100.0%	319	319
Motors	Material Handling	100.0%	289	289
Motors	Other Motors	100.0%	38	38
Process	Process Heating	100.0%	127	127
Process	Process Cooling	100.0%	71	71
Process	Process Refrigeration	100.0%	71	71
Process	Process Electrochemical	100.0%	364	364
Process	Process Other	100.0%	23	23
Miscellaneous	Miscellaneous	100.0%	56	56
Total				1,973

Table A-286   Washington Electronic Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	274	7	10
Cooling	Water-Cooled Chiller	2.5%	289	7	11
Cooling	RTU	11.4%	305	35	51
Cooling	Air-Source Heat Pump	1.7%	305	5	8
Cooling	Geothermal Heat Pump	0.0%	204	0	0
Heating	Electric Furnace	2.3%	1,346	31	45
Heating	Electric Room Heat	12.4%	1,282	159	234
Heating	Air-Source Heat Pump	1.7%	1,182	20	29
Heating	Geothermal Heat Pump	0.0%	789	0	0
Ventilation	Ventilation	100.0%	45	45	65
Interior Lighting	General Service Lighting	100.0%	5	5	8
Interior Lighting	High-Bay Lighting	100.0%	83	83	122
Interior Lighting	Linear Lighting	100.0%	14	14	20
Exterior Lighting	General Service Lighting	100.0%	1	1	1
Exterior Lighting	Area Lighting	100.0%	19	19	27
Exterior Lighting	Linear Lighting	100.0%	4	4	6
Motors	Pumps	100.0%	16	16	23
Motors	Fans & Blowers	100.0%	25	25	37
Motors	Compressed Air	100.0%	45	45	67
Motors	Material Handling	100.0%	142	142	209
Motors	Other Motors	0.0%	93	0	0
Process	Process Heating	100.0%	118	118	174
Process	Process Cooling	100.0%	55	55	81
Process	Process Refrigeration	100.0%	55	55	81
Process	Process Electrochemical	100.0%	21	21	30
Process	Process Other	100.0%	104	104	153
Miscellaneous	Miscellaneous	100.0%	93	93	137
Total				1,108	1,629

Table A-287   Washington Electronic Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	274	7
Cooling	Water-Cooled Chiller	2.5%	289	7
Cooling	RTU	11.4%	339	39
Cooling	Air-Source Heat Pump	1.7%	335	6
Cooling	Geothermal Heat Pump	0.0%	204	0
Heating	Electric Furnace	2.3%	1,346	31
Heating	Electric Room Heat	12.4%	1,282	159
Heating	Air-Source Heat Pump	1.7%	1,220	21
Heating	Geothermal Heat Pump	0.0%	789	0
Ventilation	Ventilation	100.0%	44	44
Interior Lighting	General Service Lighting	100.0%	5	5
Interior Lighting	High-Bay Lighting	100.0%	66	66
Interior Lighting	Linear Lighting	100.0%	13	13
Exterior Lighting	General Service Lighting	100.0%	1	1
Exterior Lighting	Area Lighting	100.0%	17	17
Exterior Lighting	Linear Lighting	100.0%	4	4
Motors	Pumps	100.0%	16	16
Motors	Fans & Blowers	100.0%	25	25
Motors	Compressed Air	100.0%	45	45
Motors	Material Handling	100.0%	142	142
Motors	Other Motors	0.0%	93	0
Process	Process Heating	100.0%	118	118
Process	Process Cooling	100.0%	55	55
Process	Process Refrigeration	100.0%	55	55
Process	Process Electrochemical	100.0%	21	21
Process	Process Other	100.0%	104	104
Miscellaneous	Miscellaneous	100.0%	93	93
Total				1,093

Table A-288   Washington Industrial Machinery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,501	38	82
Cooling	Water-Cooled Chiller	2.5%	1,581	40	86
Cooling	RTU	11.4%	1,673	191	416
Cooling	Air-Source Heat Pump	1.7%	1,672	28	62
Cooling	Geothermal Heat Pump	0.0%	1,115	0	0
Heating	Electric Furnace	2.3%	7,373	169	369
Heating	Electric Room Heat	12.4%	7,022	871	1,899
Heating	Air-Source Heat Pump	1.7%	6,474	109	239
Heating	Geothermal Heat Pump	0.0%	4,318	0	0
Ventilation	Ventilation	100.0%	244	244	532
Interior Lighting	General Service Lighting	100.0%	43	43	95
Interior Lighting	High-Bay Lighting	100.0%	680	680	1,482
Interior Lighting	Linear Lighting	100.0%	113	113	246
Exterior Lighting	General Service Lighting	100.0%	8	8	17
Exterior Lighting	Area Lighting	100.0%	152	152	330
Exterior Lighting	Linear Lighting	100.0%	31	31	68
Motors	Pumps	100.0%	373	373	814
Motors	Fans & Blowers	100.0%	869	869	1,895
Motors	Compressed Air	100.0%	740	740	1,614
Motors	Material Handling	100.0%	1,198	1,198	2,612
Motors	Other Motors	0.0%	519	0	0
Process	Process Heating	100.0%	495	495	1,079
Process	Process Cooling	100.0%	97	97	211
Process	Process Refrigeration	100.0%	97	97	211
Process	Process Electrochemical	100.0%	66	66	143
Process	Process Other	100.0%	221	221	482
Miscellaneous	Miscellaneous	100.0%	519	519	1,131
Total				7,393	16,116

Table A-289   Washington Industrial Machinery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,501	38
Cooling	Water-Cooled Chiller	2.5%	1,581	40
Cooling	RTU	11.4%	1,859	212
Cooling	Air-Source Heat Pump	1.7%	1,836	31
Cooling	Geothermal Heat Pump	0.0%	1,115	0
Heating	Electric Furnace	2.3%	7,373	169
Heating	Electric Room Heat	12.4%	7,022	871
Heating	Air-Source Heat Pump	1.7%	6,682	113
Heating	Geothermal Heat Pump	0.0%	4,318	0
Ventilation	Ventilation	100.0%	239	239
Interior Lighting	General Service Lighting	100.0%	42	42
Interior Lighting	High-Bay Lighting	100.0%	541	541
Interior Lighting	Linear Lighting	100.0%	109	109
Exterior Lighting	General Service Lighting	100.0%	8	8
Exterior Lighting	Area Lighting	100.0%	139	139
Exterior Lighting	Linear Lighting	100.0%	29	29
Motors	Pumps	100.0%	373	373
Motors	Fans & Blowers	100.0%	869	869
Motors	Compressed Air	100.0%	740	740
Motors	Material Handling	100.0%	1,198	1,198
Motors	Other Motors	0.0%	519	0
Process	Process Heating	100.0%	495	495
Process	Process Cooling	100.0%	97	97
Process	Process Refrigeration	100.0%	97	97
Process	Process Electrochemical	100.0%	66	66
Process	Process Other	100.0%	221	221
Miscellaneous	Miscellaneous	100.0%	519	519
Total				7,255

Table A-290   Washington Lumber & Wood Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	615	15	9
Cooling	Water-Cooled Chiller	2.5%	648	16	9
Cooling	RTU	11.4%	685	78	44
Cooling	Air-Source Heat Pump	1.7%	685	12	6
Cooling	Geothermal Heat Pump	0.0%	457	0	0
Heating	Electric Furnace	2.3%	3,021	69	39
Heating	Electric Room Heat	12.4%	2,877	357	200
Heating	Air-Source Heat Pump	1.7%	2,653	45	25
Heating	Geothermal Heat Pump	0.0%	1,769	0	0
Ventilation	Ventilation	100.0%	100	100	56
Interior Lighting	General Service Lighting	100.0%	42	42	24
Interior Lighting	High-Bay Lighting	100.0%	663	663	372
Interior Lighting	Linear Lighting	100.0%	110	110	62
Exterior Lighting	General Service Lighting	100.0%	8	8	4
Exterior Lighting	Area Lighting	100.0%	148	148	83
Exterior Lighting	Linear Lighting	100.0%	30	30	17
Motors	Pumps	100.0%	1,476	1,476	827
Motors	Fans & Blowers	100.0%	1,088	1,088	609
Motors	Compressed Air	100.0%	560	560	313
Motors	Material Handling	100.0%	7,529	7,529	4,216
Motors	Other Motors	100.0%	114	114	64
Process	Process Heating	100.0%	1,230	1,230	689
Process	Process Cooling	100.0%	91	91	51
Process	Process Refrigeration	100.0%	91	91	51
Process	Process Electrochemical	100.0%	106	106	59
Process	Process Other	100.0%	77	77	43
Miscellaneous	Miscellaneous	100.0%	648	648	363
Total				14,704	8,234

Table A-291   Washington Lumber & Wood Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	615	15
Cooling	Water-Cooled Chiller	2.5%	648	16
Cooling	RTU	11.4%	762	87
Cooling	Air-Source Heat Pump	1.7%	752	13
Cooling	Geothermal Heat Pump	0.0%	457	0
Heating	Electric Furnace	2.3%	3,021	69
Heating	Electric Room Heat	12.4%	2,877	357
Heating	Air-Source Heat Pump	1.7%	2,738	46
Heating	Geothermal Heat Pump	0.0%	1,769	0
Ventilation	Ventilation	100.0%	98	98
Interior Lighting	General Service Lighting	100.0%	41	41
Interior Lighting	High-Bay Lighting	100.0%	528	528
Interior Lighting	Linear Lighting	100.0%	106	106
Exterior Lighting	General Service Lighting	100.0%	7	7
Exterior Lighting	Area Lighting	100.0%	135	135
Exterior Lighting	Linear Lighting	100.0%	28	28
Motors	Pumps	100.0%	1,476	1,476
Motors	Fans & Blowers	100.0%	1,088	1,088
Motors	Compressed Air	100.0%	560	560
Motors	Material Handling	100.0%	7,529	7,529
Motors	Other Motors	100.0%	114	114
Process	Process Heating	100.0%	1,230	1,230
Process	Process Cooling	100.0%	91	91
Process	Process Refrigeration	100.0%	91	91
Process	Process Electrochemical	100.0%	106	106
Process	Process Other	100.0%	77	77
Miscellaneous	Miscellaneous	100.0%	648	648
Total				14,557

Table A-292   Washington Metal Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	677	17	22
Cooling	Water-Cooled Chiller	2.5%	714	18	23
Cooling	RTU	11.4%	755	86	110
Cooling	Air-Source Heat Pump	1.7%	755	13	16
Cooling	Geothermal Heat Pump	0.0%	503	0	0
Heating	Electric Furnace	2.3%	3,329	76	98
Heating	Electric Room Heat	12.4%	3,170	393	504
Heating	Air-Source Heat Pump	1.7%	2,923	49	63
Heating	Geothermal Heat Pump	0.0%	1,950	0	0
Ventilation	Ventilation	100.0%	110	110	141
Interior Lighting	General Service Lighting	100.0%	29	29	37
Interior Lighting	High-Bay Lighting	100.0%	454	454	581
Interior Lighting	Linear Lighting	100.0%	75	75	97
Exterior Lighting	General Service Lighting	100.0%	5	5	7
Exterior Lighting	Area Lighting	100.0%	101	101	130
Exterior Lighting	Linear Lighting	100.0%	21	21	27
Motors	Pumps	100.0%	477	477	610
Motors	Fans & Blowers	100.0%	228	228	292
Motors	Compressed Air	100.0%	482	482	617
Motors	Material Handling	100.0%	2,327	2,327	2,978
Motors	Other Motors	100.0%	59	59	76
Process	Process Heating	100.0%	1,387	1,387	1,775
Process	Process Cooling	100.0%	123	123	157
Process	Process Refrigeration	100.0%	123	123	157
Process	Process Electrochemical	100.0%	233	233	299
Process	Process Other	100.0%	299	299	383
Miscellaneous	Miscellaneous	100.0%	283	283	362
Total				7,469	9,560

Table A-293   Washington Metal Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	677	17
Cooling	Water-Cooled Chiller	2.5%	714	18
Cooling	RTU	11.4%	839	96
Cooling	Air-Source Heat Pump	1.7%	829	14
Cooling	Geothermal Heat Pump	0.0%	503	0
Heating	Electric Furnace	2.3%	3,329	76
Heating	Electric Room Heat	12.4%	3,170	393
Heating	Air-Source Heat Pump	1.7%	3,017	51
Heating	Geothermal Heat Pump	0.0%	1,950	0
Ventilation	Ventilation	100.0%	108	108
Interior Lighting	General Service Lighting	100.0%	28	28
Interior Lighting	High-Bay Lighting	100.0%	361	361
Interior Lighting	Linear Lighting	100.0%	73	73
Exterior Lighting	General Service Lighting	100.0%	5	5
Exterior Lighting	Area Lighting	100.0%	93	93
Exterior Lighting	Linear Lighting	100.0%	19	19
Motors	Pumps	100.0%	477	477
Motors	Fans & Blowers	100.0%	228	228
Motors	Compressed Air	100.0%	482	482
Motors	Material Handling	100.0%	2,327	2,327
Motors	Other Motors	100.0%	59	59
Process	Process Heating	100.0%	1,387	1,387
Process	Process Cooling	100.0%	123	123
Process	Process Refrigeration	100.0%	123	123
Process	Process Electrochemical	100.0%	233	233
Process	Process Other	100.0%	299	299
Miscellaneous	Miscellaneous	100.0%	283	283
Total				7,372

Table A-294   Washington Miscellaneous Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	11,105	278	555
Cooling	Water-Cooled Chiller	2.5%	11,697	292	585
Cooling	RTU	11.4%	12,378	1,412	2,823
Cooling	Air-Source Heat Pump	1.7%	12,372	209	418
Cooling	Geothermal Heat Pump	0.0%	8,252	0	0
Heating	Electric Furnace	2.3%	54,562	1,252	2,503
Heating	Electric Room Heat	12.4%	51,964	6,448	12,896
Heating	Air-Source Heat Pump	1.7%	47,913	810	1,620
Heating	Geothermal Heat Pump	0.0%	31,958	0	0
Ventilation	Ventilation	100.0%	1,805	1,805	3,610
Interior Lighting	General Service Lighting	100.0%	346	346	692
Interior Lighting	High-Bay Lighting	100.0%	5,416	5,416	10,832
Interior Lighting	Linear Lighting	100.0%	900	900	1,801
Exterior Lighting	General Service Lighting	100.0%	64	64	127
Exterior Lighting	Area Lighting	100.0%	1,207	1,207	2,415
Exterior Lighting	Linear Lighting	100.0%	247	247	495
Motors	Pumps	100.0%	3,715	3,715	7,430
Motors	Fans & Blowers	100.0%	2,463	2,463	4,926
Motors	Compressed Air	100.0%	2,603	2,603	5,206
Motors	Material Handling	100.0%	6,945	6,945	13,889
Motors	Other Motors	100.0%	1,009	1,009	2,018
Process	Process Heating	100.0%	5,379	5,379	10,759
Process	Process Cooling	100.0%	1,412	1,412	2,825
Process	Process Refrigeration	100.0%	1,412	1,412	2,825
Process	Process Electrochemical	100.0%	544	544	1,087
Process	Process Other	100.0%	590	590	1,180
Miscellaneous	Miscellaneous	100.0%	3,246	3,246	6,491
Total				50,005	100,009

Table A-295   Washington Miscellaneous Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	11,105	278
Cooling	Water-Cooled Chiller	2.5%	11,697	292
Cooling	RTU	11.4%	13,758	1,569
Cooling	Air-Source Heat Pump	1.7%	13,585	230
Cooling	Geothermal Heat Pump	0.0%	8,252	0
Heating	Electric Furnace	2.3%	54,562	1,252
Heating	Electric Room Heat	12.4%	51,964	6,448
Heating	Air-Source Heat Pump	1.7%	49,450	836
Heating	Geothermal Heat Pump	0.0%	31,958	0
Ventilation	Ventilation	100.0%	1,771	1,771
Interior Lighting	General Service Lighting	100.0%	332	332
Interior Lighting	High-Bay Lighting	100.0%	4,307	4,307
Interior Lighting	Linear Lighting	100.0%	869	869
Exterior Lighting	General Service Lighting	100.0%	60	60
Exterior Lighting	Area Lighting	100.0%	1,104	1,104
Exterior Lighting	Linear Lighting	100.0%	230	230
Motors	Pumps	100.0%	3,715	3,715
Motors	Fans & Blowers	100.0%	2,463	2,463
Motors	Compressed Air	100.0%	2,603	2,603
Motors	Material Handling	100.0%	6,945	6,945
Motors	Other Motors	100.0%	1,009	1,009
Process	Process Heating	100.0%	5,379	5,379
Process	Process Cooling	100.0%	1,412	1,412
Process	Process Refrigeration	100.0%	1,412	1,412
Process	Process Electrochemical	100.0%	544	544
Process	Process Other	100.0%	590	590
Miscellaneous	Miscellaneous	100.0%	3,246	3,246
Total				48,894

Table A-296   Wyoming Agriculture Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	169	4	50
Cooling	Water-Cooled Chiller	2.5%	174	4	51
Cooling	RTU	11.3%	180	20	240
Cooling	Air-Source Heat Pump	1.7%	180	3	36
Cooling	Geothermal Heat Pump	0.0%	120	0	0
Heating	Electric Furnace	0.7%	401	3	34
Heating	Electric Room Heat	3.8%	382	15	173
Heating	Air-Source Heat Pump	1.7%	363	6	73
Heating	Geothermal Heat Pump	0.0%	242	0	0
Ventilation	Ventilation	100.0%	14	14	171
Interior Lighting	General Service Lighting	100.0%	2	2	30
Interior Lighting	High-Bay Lighting	100.0%	39	39	462
Interior Lighting	Linear Lighting	100.0%	7	7	77
Exterior Lighting	General Service Lighting	100.0%	0	0	5
Exterior Lighting	Area Lighting	100.0%	9	9	103
Exterior Lighting	Linear Lighting	100.0%	2	2	21
Motors	Pumps	100.0%	23	23	274
Motors	Fans & Blowers	100.0%	144	144	1,708
Motors	Compressed Air	100.0%	31	31	363
Motors	Material Handling	100.0%	178	178	2,099
Motors	Other Motors	0.0%	41	0	0
Process	Process Heating	100.0%	62	62	732
Process	Process Cooling	100.0%	104	104	1,231
Process	Process Refrigeration	100.0%	104	104	1,231
Process	Process Electrochemical	100.0%	2	2	24
Process	Process Other	100.0%	8	8	92
Miscellaneous	Miscellaneous	100.0%	41	41	484
Total				826	9,762

Table A-297   Wyoming Agriculture New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	169	4
Cooling	Water-Cooled Chiller	2.5%	174	4
Cooling	RTU	11.3%	201	23
Cooling	Air-Source Heat Pump	1.7%	198	3
Cooling	Geothermal Heat Pump	0.0%	120	0
Heating	Electric Furnace	0.7%	401	3
Heating	Electric Room Heat	3.8%	382	15
Heating	Air-Source Heat Pump	1.7%	375	6
Heating	Geothermal Heat Pump	0.0%	242	0
Ventilation	Ventilation	100.0%	14	14
Interior Lighting	General Service Lighting	100.0%	2	2
Interior Lighting	High-Bay Lighting	100.0%	31	31
Interior Lighting	Linear Lighting	100.0%	6	6
Exterior Lighting	General Service Lighting	100.0%	0	0
Exterior Lighting	Area Lighting	100.0%	8	8
Exterior Lighting	Linear Lighting	100.0%	2	2
Motors	Pumps	100.0%	23	23
Motors	Fans & Blowers	100.0%	144	144
Motors	Compressed Air	100.0%	31	31
Motors	Material Handling	100.0%	178	178
Motors	Other Motors	0.0%	41	0
Process	Process Heating	100.0%	62	62
Process	Process Cooling	100.0%	104	104
Process	Process Refrigeration	100.0%	104	104
Process	Process Electrochemical	100.0%	2	2
Process	Process Other	100.0%	8	8
Miscellaneous	Miscellaneous	100.0%	41	41
Total				819

Table A-298   Wyoming Mining and Extraction Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	19,074	477	10,891
Cooling	Water-Cooled Chiller	2.5%	19,640	491	11,214
Cooling	RTU	11.3%	20,359	2,292	52,341
Cooling	Air-Source Heat Pump	1.7%	20,354	344	7,861
Cooling	Geothermal Heat Pump	0.0%	13,576	0	0
Heating	Electric Furnace	0.7%	45,281	320	7,313
Heating	Electric Room Heat	3.8%	43,125	1,649	37,671
Heating	Air-Source Heat Pump	1.7%	40,984	693	15,829
Heating	Geothermal Heat Pump	0.0%	27,337	0	0
Ventilation	Ventilation	100.0%	1,629	1,629	37,209
Interior Lighting	General Service Lighting	100.0%	430	430	9,811
Interior Lighting	High-Bay Lighting	100.0%	6,720	6,720	153,489
Interior Lighting	Linear Lighting	100.0%	1,117	1,117	25,515
Exterior Lighting	General Service Lighting	100.0%	79	79	1,806
Exterior Lighting	Area Lighting	100.0%	1,498	1,498	34,220
Exterior Lighting	Linear Lighting	100.0%	307	307	7,011
Motors	Pumps	100.0%	77,149	77,149	1,762,077
Motors	Fans & Blowers	100.0%	21,430	21,430	489,466
Motors	Compressed Air	100.0%	32,145	32,145	734,199
Motors	Material Handling	100.0%	22,502	22,502	513,939
Motors	Other Motors	100.0%	61,076	61,076	1,394,978
Process	Process Heating	100.0%	2,256	2,256	51,523
Process	Process Cooling	0.0%	2,256	0	0
Process	Process Refrigeration	0.0%	2,256	0	0
Process	Process Electrochemical	100.0%	2,256	2,256	51,523
Process	Process Other	100.0%	12,407	12,407	283,375
Miscellaneous	Miscellaneous	100.0%	2,256	2,256	51,523
Total				251,523	5,744,783

Table A-299   Wyoming Mining and Extraction New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	19,074	477
Cooling	Water-Cooled Chiller	2.5%	19,640	491
Cooling	RTU	11.3%	22,630	2,547
Cooling	Air-Source Heat Pump	1.7%	22,351	378
Cooling	Geothermal Heat Pump	0.0%	13,576	0
Heating	Electric Furnace	0.7%	45,281	320
Heating	Electric Room Heat	3.8%	43,125	1,649
Heating	Air-Source Heat Pump	1.7%	42,299	715
Heating	Geothermal Heat Pump	0.0%	27,337	0
Ventilation	Ventilation	100.0%	1,559	1,559
Interior Lighting	General Service Lighting	100.0%	412	412
Interior Lighting	High-Bay Lighting	100.0%	5,344	5,344
Interior Lighting	Linear Lighting	100.0%	1,078	1,078
Exterior Lighting	General Service Lighting	100.0%	74	74
Exterior Lighting	Area Lighting	100.0%	1,369	1,369
Exterior Lighting	Linear Lighting	100.0%	285	285
Motors	Pumps	100.0%	77,149	77,149
Motors	Fans & Blowers	100.0%	21,430	21,430
Motors	Compressed Air	100.0%	32,145	32,145
Motors	Material Handling	100.0%	22,502	22,502
Motors	Other Motors	100.0%	61,076	61,076
Process	Process Heating	100.0%	2,256	2,256
Process	Process Cooling	0.0%	2,256	0
Process	Process Refrigeration	0.0%	2,256	0
Process	Process Electrochemical	100.0%	2,256	2,256
Process	Process Other	100.0%	12,407	12,407
Miscellaneous	Miscellaneous	100.0%	2,256	2,256
Total				250,176

Table A-300   Wyoming Food Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,040	26	38
Cooling	Water-Cooled Chiller	2.5%	1,071	27	39
Cooling	RTU	11.3%	1,110	125	182
Cooling	Air-Source Heat Pump	1.7%	1,110	19	27
Cooling	Geothermal Heat Pump	0.0%	740	0	0
Heating	Electric Furnace	0.7%	2,470	17	25
Heating	Electric Room Heat	3.8%	2,352	90	131
Heating	Air-Source Heat Pump	1.7%	2,235	38	55
Heating	Geothermal Heat Pump	0.0%	1,491	0	0
Ventilation	Ventilation	100.0%	89	89	130
Interior Lighting	General Service Lighting	100.0%	38	38	55
Interior Lighting	High-Bay Lighting	100.0%	594	594	868
Interior Lighting	Linear Lighting	100.0%	99	99	144
Exterior Lighting	General Service Lighting	100.0%	7	7	10
Exterior Lighting	Area Lighting	100.0%	133	133	193
Exterior Lighting	Linear Lighting	100.0%	27	27	40
Motors	Pumps	100.0%	1,870	1,870	2,730
Motors	Fans & Blowers	100.0%	3,109	3,109	4,539
Motors	Compressed Air	100.0%	1,196	1,196	1,746
Motors	Material Handling	100.0%	5,865	5,865	8,562
Motors	Other Motors	100.0%	600	600	876
Process	Process Heating	100.0%	784	784	1,144
Process	Process Cooling	100.0%	1,066	1,066	1,556
Process	Process Refrigeration	100.0%	1,066	1,066	1,556
Process	Process Electrochemical	100.0%	42	42	61
Process	Process Other	100.0%	163	163	239
Miscellaneous	Miscellaneous	100.0%	341	341	498
Total				17,428	25,445

Table A-301   Wyoming Food Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,040	26
Cooling	Water-Cooled Chiller	2.5%	1,071	27
Cooling	RTU	11.3%	1,234	139
Cooling	Air-Source Heat Pump	1.7%	1,219	21
Cooling	Geothermal Heat Pump	0.0%	740	0
Heating	Electric Furnace	0.7%	2,470	17
Heating	Electric Room Heat	3.8%	2,352	90
Heating	Air-Source Heat Pump	1.7%	2,307	39
Heating	Geothermal Heat Pump	0.0%	1,491	0
Ventilation	Ventilation	100.0%	85	85
Interior Lighting	General Service Lighting	100.0%	36	36
Interior Lighting	High-Bay Lighting	100.0%	473	473
Interior Lighting	Linear Lighting	100.0%	95	95
Exterior Lighting	General Service Lighting	100.0%	7	7
Exterior Lighting	Area Lighting	100.0%	121	121
Exterior Lighting	Linear Lighting	100.0%	25	25
Motors	Pumps	100.0%	1,870	1,870
Motors	Fans & Blowers	100.0%	3,109	3,109
Motors	Compressed Air	100.0%	1,196	1,196
Motors	Material Handling	100.0%	5,865	5,865
Motors	Other Motors	100.0%	600	600
Process	Process Heating	100.0%	784	784
Process	Process Cooling	100.0%	1,066	1,066
Process	Process Refrigeration	100.0%	1,066	1,066
Process	Process Electrochemical	100.0%	42	42
Process	Process Other	100.0%	163	163
Miscellaneous	Miscellaneous	100.0%	341	341
Total				17,301

Table A-302   Wyoming Paper Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	10	0	0
Cooling	Water-Cooled Chiller	2.5%	11	0	0
Cooling	RTU	11.3%	11	1	0
Cooling	Air-Source Heat Pump	1.7%	11	0	0
Cooling	Geothermal Heat Pump	0.0%	7	0	0
Heating	Electric Furnace	0.7%	25	0	0
Heating	Electric Room Heat	3.8%	24	1	0
Heating	Air-Source Heat Pump	1.7%	22	0	0
Heating	Geothermal Heat Pump	0.0%	15	0	0
Ventilation	Ventilation	100.0%	1	1	0
Interior Lighting	General Service Lighting	100.0%	1	1	0
Interior Lighting	High-Bay Lighting	100.0%	8	8	1
Interior Lighting	Linear Lighting	100.0%	1	1	0
Exterior Lighting	General Service Lighting	100.0%	0	0	0
Exterior Lighting	Area Lighting	100.0%	2	2	0
Exterior Lighting	Linear Lighting	100.0%	0	0	0
Motors	Pumps	100.0%	52	52	5
Motors	Fans & Blowers	100.0%	50	50	5
Motors	Compressed Air	100.0%	28	28	3
Motors	Material Handling	100.0%	120	120	11
Motors	Other Motors	100.0%	3	3	0
Process	Process Heating	100.0%	7	7	1
Process	Process Cooling	100.0%	1	1	0
Process	Process Refrigeration	100.0%	1	1	0
Process	Process Electrochemical	100.0%	2	2	0
Process	Process Other	100.0%	4	4	0
Miscellaneous	Miscellaneous	100.0%	5	5	0
Total				293	26

Table A-303   Wyoming Paper Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	10	0
Cooling	Water-Cooled Chiller	2.5%	11	0
Cooling	RTU	11.3%	12	1
Cooling	Air-Source Heat Pump	1.7%	12	0
Cooling	Geothermal Heat Pump	0.0%	7	0
Heating	Electric Furnace	0.7%	25	0
Heating	Electric Room Heat	3.8%	24	1
Heating	Air-Source Heat Pump	1.7%	23	0
Heating	Geothermal Heat Pump	0.0%	15	0
Ventilation	Ventilation	100.0%	1	1
Interior Lighting	General Service Lighting	100.0%	0	0
Interior Lighting	High-Bay Lighting	100.0%	6	6
Interior Lighting	Linear Lighting	100.0%	1	1
Exterior Lighting	General Service Lighting	100.0%	0	0
Exterior Lighting	Area Lighting	100.0%	2	2
Exterior Lighting	Linear Lighting	100.0%	0	0
Motors	Pumps	100.0%	52	52
Motors	Fans & Blowers	100.0%	50	50
Motors	Compressed Air	100.0%	28	28
Motors	Material Handling	100.0%	120	120
Motors	Other Motors	100.0%	3	3
Process	Process Heating	100.0%	7	7
Process	Process Cooling	100.0%	1	1
Process	Process Refrigeration	100.0%	1	1
Process	Process Electrochemical	100.0%	2	2
Process	Process Other	100.0%	4	4
Miscellaneous	Miscellaneous	100.0%	5	5
Total				291

Table A-304   Wyoming Petroleum Refining Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	20,209	505	707
Cooling	Water-Cooled Chiller	2.5%	20,809	520	728
Cooling	RTU	11.3%	21,572	2,428	3,399
Cooling	Air-Source Heat Pump	1.7%	21,566	365	511
Cooling	Geothermal Heat Pump	0.0%	14,385	0	0
Heating	Electric Furnace	0.7%	47,978	339	475
Heating	Electric Room Heat	3.8%	45,693	1,748	2,447
Heating	Air-Source Heat Pump	1.7%	43,424	734	1,028
Heating	Geothermal Heat Pump	0.0%	28,964	0	0
Ventilation	Ventilation	100.0%	1,726	1,726	2,417
Interior Lighting	General Service Lighting	100.0%	235	235	329
Interior Lighting	High-Bay Lighting	100.0%	3,674	3,674	5,144
Interior Lighting	Linear Lighting	100.0%	611	611	855
Exterior Lighting	General Service Lighting	100.0%	43	43	61
Exterior Lighting	Area Lighting	100.0%	819	819	1,147
Exterior Lighting	Linear Lighting	100.0%	168	168	235
Motors	Pumps	100.0%	109,570	109,570	153,398
Motors	Fans & Blowers	100.0%	17,962	17,962	25,147
Motors	Compressed Air	100.0%	28,740	28,740	40,236
Motors	Material Handling	100.0%	25,746	25,746	36,044
Motors	Other Motors	100.0%	10,064	10,064	14,090
Process	Process Heating	100.0%	9,618	9,618	13,466
Process	Process Cooling	100.0%	5,864	5,864	8,210
Process	Process Refrigeration	100.0%	5,864	5,864	8,210
Process	Process Electrochemical	100.0%	236	236	330
Process	Process Other	100.0%	1,788	1,788	2,503
Miscellaneous	Miscellaneous	100.0%	2,505	2,505	3,507
Total				231,872	324,621

Table A-305   Wyoming Petroleum Refining New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	20,209	505
Cooling	Water-Cooled Chiller	2.5%	20,809	520
Cooling	RTU	11.3%	23,977	2,699
Cooling	Air-Source Heat Pump	1.7%	23,681	400
Cooling	Geothermal Heat Pump	0.0%	14,385	0
Heating	Electric Furnace	0.7%	47,978	339
Heating	Electric Room Heat	3.8%	45,693	1,748
Heating	Air-Source Heat Pump	1.7%	44,818	758
Heating	Geothermal Heat Pump	0.0%	28,964	0
Ventilation	Ventilation	100.0%	1,651	1,651
Interior Lighting	General Service Lighting	100.0%	225	225
Interior Lighting	High-Bay Lighting	100.0%	2,922	2,922
Interior Lighting	Linear Lighting	100.0%	590	590
Exterior Lighting	General Service Lighting	100.0%	41	41
Exterior Lighting	Area Lighting	100.0%	749	749
Exterior Lighting	Linear Lighting	100.0%	156	156
Motors	Pumps	100.0%	109,570	109,570
Motors	Fans & Blowers	100.0%	17,962	17,962
Motors	Compressed Air	100.0%	28,740	28,740
Motors	Material Handling	100.0%	25,746	25,746
Motors	Other Motors	100.0%	10,064	10,064
Process	Process Heating	100.0%	9,618	9,618
Process	Process Cooling	100.0%	5,864	5,864
Process	Process Refrigeration	100.0%	5,864	5,864
Process	Process Electrochemical	100.0%	236	236
Process	Process Other	100.0%	1,788	1,788
Miscellaneous	Miscellaneous	100.0%	2,505	2,505
Total				231,260

Table A-306   Wyoming Stone Clay Glass Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	49,099	1,227	503
Cooling	Water-Cooled Chiller	2.5%	50,557	1,264	518
Cooling	RTU	11.3%	52,409	5,899	2,419
Cooling	Air-Source Heat Pump	1.7%	52,396	886	363
Cooling	Geothermal Heat Pump	0.0%	34,948	0	0
Heating	Electric Furnace	0.7%	116,563	824	338
Heating	Electric Room Heat	3.8%	111,012	4,246	1,741
Heating	Air-Source Heat Pump	1.7%	105,501	1,784	731
Heating	Geothermal Heat Pump	0.0%	70,369	0	0
Ventilation	Ventilation	100.0%	4,194	4,194	1,719
Interior Lighting	General Service Lighting	100.0%	698	698	286
Interior Lighting	High-Bay Lighting	100.0%	10,925	10,925	4,479
Interior Lighting	Linear Lighting	100.0%	1,816	1,816	745
Exterior Lighting	General Service Lighting	100.0%	129	129	53
Exterior Lighting	Area Lighting	100.0%	2,436	2,436	999
Exterior Lighting	Linear Lighting	100.0%	499	499	205
Motors	Pumps	100.0%	21,444	21,444	8,792
Motors	Fans & Blowers	100.0%	30,177	30,177	12,373
Motors	Compressed Air	100.0%	5,432	5,432	2,227
Motors	Material Handling	100.0%	124,932	124,932	51,222
Motors	Other Motors	100.0%	1,949	1,949	799
Process	Process Heating	100.0%	65,792	65,792	26,975
Process	Process Cooling	100.0%	4,037	4,037	1,655
Process	Process Refrigeration	100.0%	4,037	4,037	1,655
Process	Process Electrochemical	100.0%	1,132	1,132	464
Process	Process Other	100.0%	13,420	13,420	5,502
Miscellaneous	Miscellaneous	100.0%	10,473	10,473	4,294
Total				319,653	131,058

Table A-307   Wyoming Stone Clay Glass Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	49,099	1,227
Cooling	Water-Cooled Chiller	2.5%	50,557	1,264
Cooling	RTU	11.3%	58,254	6,557
Cooling	Air-Source Heat Pump	1.7%	57,535	973
Cooling	Geothermal Heat Pump	0.0%	34,948	0
Heating	Electric Furnace	0.7%	116,563	824
Heating	Electric Room Heat	3.8%	111,012	4,246
Heating	Air-Source Heat Pump	1.7%	108,886	1,841
Heating	Geothermal Heat Pump	0.0%	70,369	0
Ventilation	Ventilation	100.0%	4,012	4,012
Interior Lighting	General Service Lighting	100.0%	670	670
Interior Lighting	High-Bay Lighting	100.0%	8,688	8,688
Interior Lighting	Linear Lighting	100.0%	1,753	1,753
Exterior Lighting	General Service Lighting	100.0%	121	121
Exterior Lighting	Area Lighting	100.0%	2,226	2,226
Exterior Lighting	Linear Lighting	100.0%	463	463
Motors	Pumps	100.0%	21,444	21,444
Motors	Fans & Blowers	100.0%	30,177	30,177
Motors	Compressed Air	100.0%	5,432	5,432
Motors	Material Handling	100.0%	124,932	124,932
Motors	Other Motors	100.0%	1,949	1,949
Process	Process Heating	100.0%	65,792	65,792
Process	Process Cooling	100.0%	4,037	4,037
Process	Process Refrigeration	100.0%	4,037	4,037
Process	Process Electrochemical	100.0%	1,132	1,132
Process	Process Other	100.0%	13,420	13,420
Miscellaneous	Miscellaneous	100.0%	10,473	10,473
Total				317,692

Table A-308   Wyoming Transportation Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,226	31	58
Cooling	Water-Cooled Chiller	2.5%	1,263	32	60
Cooling	RTU	11.3%	1,309	147	280
Cooling	Air-Source Heat Pump	1.7%	1,309	22	42
Cooling	Geothermal Heat Pump	0.0%	873	0	0
Heating	Electric Furnace	0.7%	2,912	21	39
Heating	Electric Room Heat	3.8%	2,773	106	202
Heating	Air-Source Heat Pump	1.7%	2,635	45	85
Heating	Geothermal Heat Pump	0.0%	1,758	0	0
Ventilation	Ventilation	100.0%	105	105	199
Interior Lighting	General Service Lighting	100.0%	15	15	29
Interior Lighting	High-Bay Lighting	100.0%	242	242	460
Interior Lighting	Linear Lighting	100.0%	40	40	76
Exterior Lighting	General Service Lighting	100.0%	3	3	5
Exterior Lighting	Area Lighting	100.0%	54	54	102
Exterior Lighting	Linear Lighting	100.0%	11	11	21
Motors	Pumps	100.0%	123	123	233
Motors	Fans & Blowers	100.0%	59	59	111
Motors	Compressed Air	100.0%	124	124	236
Motors	Material Handling	100.0%	599	599	1,138
Motors	Other Motors	100.0%	15	15	29
Process	Process Heating	100.0%	342	342	650
Process	Process Cooling	100.0%	76	76	144
Process	Process Refrigeration	100.0%	76	76	144
Process	Process Electrochemical	100.0%	41	41	78
Process	Process Other	100.0%	92	92	175
Miscellaneous	Miscellaneous	100.0%	150	150	286
Total				2,570	4,883

Table A-309   Wyoming Transportation Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,226	31
Cooling	Water-Cooled Chiller	2.5%	1,263	32
Cooling	RTU	11.3%	1,455	164
Cooling	Air-Source Heat Pump	1.7%	1,437	24
Cooling	Geothermal Heat Pump	0.0%	873	0
Heating	Electric Furnace	0.7%	2,912	21
Heating	Electric Room Heat	3.8%	2,773	106
Heating	Air-Source Heat Pump	1.7%	2,720	46
Heating	Geothermal Heat Pump	0.0%	1,758	0
Ventilation	Ventilation	100.0%	100	100
Interior Lighting	General Service Lighting	100.0%	15	15
Interior Lighting	High-Bay Lighting	100.0%	192	192
Interior Lighting	Linear Lighting	100.0%	39	39
Exterior Lighting	General Service Lighting	100.0%	3	3
Exterior Lighting	Area Lighting	100.0%	49	49
Exterior Lighting	Linear Lighting	100.0%	10	10
Motors	Pumps	100.0%	123	123
Motors	Fans & Blowers	100.0%	59	59
Motors	Compressed Air	100.0%	124	124
Motors	Material Handling	100.0%	599	599
Motors	Other Motors	100.0%	15	15
Process	Process Heating	100.0%	342	342
Process	Process Cooling	100.0%	76	76
Process	Process Refrigeration	100.0%	76	76
Process	Process Electrochemical	100.0%	41	41
Process	Process Other	100.0%	92	92
Miscellaneous	Miscellaneous	100.0%	150	150
Total				2,528

Table A-310   Wyoming Wastewater Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,702	68	61
Cooling	Water-Cooled Chiller	2.5%	2,782	70	63
Cooling	RTU	11.3%	2,884	325	293
Cooling	Air-Source Heat Pump	1.7%	2,884	49	44
Cooling	Geothermal Heat Pump	0.0%	1,923	0	0
Heating	Electric Furnace	0.7%	6,415	45	41
Heating	Electric Room Heat	3.8%	6,110	234	211
Heating	Air-Source Heat Pump	1.7%	5,806	98	89
Heating	Geothermal Heat Pump	0.0%	3,873	0	0
Ventilation	Ventilation	100.0%	231	231	209
Interior Lighting	General Service Lighting	100.0%	44	44	39
Interior Lighting	High-Bay Lighting	100.0%	682	682	617
Interior Lighting	Linear Lighting	100.0%	113	113	102
Exterior Lighting	General Service Lighting	100.0%	8	8	7
Exterior Lighting	Area Lighting	100.0%	152	152	137
Exterior Lighting	Linear Lighting	100.0%	31	31	28
Motors	Pumps	100.0%	5,531	5,531	5,000
Motors	Fans & Blowers	100.0%	13,617	13,617	12,310
Motors	Compressed Air	100.0%	291	291	263
Motors	Material Handling	100.0%	1,301	1,301	1,176
Motors	Other Motors	100.0%	408	408	369
Process	Process Heating	0.0%	637	0	0
Process	Process Cooling	0.0%	637	0	0
Process	Process Refrigeration	0.0%	637	0	0
Process	Process Electrochemical	0.0%	637	0	0
Process	Process Other	100.0%	1,078	1,078	975
Miscellaneous	Miscellaneous	100.0%	637	637	576
Total				25,012	22,611

Table A-311   Wyoming Wastewater New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,702	68
Cooling	Water-Cooled Chiller	2.5%	2,782	70
Cooling	RTU	11.3%	3,206	361
Cooling	Air-Source Heat Pump	1.7%	3,166	54
Cooling	Geothermal Heat Pump	0.0%	1,923	0
Heating	Electric Furnace	0.7%	6,415	45
Heating	Electric Room Heat	3.8%	6,110	234
Heating	Air-Source Heat Pump	1.7%	5,992	101
Heating	Geothermal Heat Pump	0.0%	3,873	0
Ventilation	Ventilation	100.0%	221	221
Interior Lighting	General Service Lighting	100.0%	42	42
Interior Lighting	High-Bay Lighting	100.0%	542	542
Interior Lighting	Linear Lighting	100.0%	109	109
Exterior Lighting	General Service Lighting	100.0%	8	8
Exterior Lighting	Area Lighting	100.0%	139	139
Exterior Lighting	Linear Lighting	100.0%	29	29
Motors	Pumps	100.0%	5,531	5,531
Motors	Fans & Blowers	100.0%	13,617	13,617
Motors	Compressed Air	100.0%	291	291
Motors	Material Handling	100.0%	1,301	1,301
Motors	Other Motors	100.0%	408	408
Process	Process Heating	0.0%	637	0
Process	Process Cooling	0.0%	637	0
Process	Process Refrigeration	0.0%	637	0
Process	Process Electrochemical	0.0%	637	0
Process	Process Other	100.0%	1,078	1,078
Miscellaneous	Miscellaneous	100.0%	637	637
Total				24,885

Table A-312   Wyoming Water Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	1,236	31	78
Cooling	Water-Cooled Chiller	2.5%	1,273	32	80
Cooling	RTU	11.3%	1,320	149	374
Cooling	Air-Source Heat Pump	1.7%	1,319	22	56
Cooling	Geothermal Heat Pump	0.0%	880	0	0
Heating	Electric Furnace	0.7%	2,935	21	52
Heating	Electric Room Heat	3.8%	2,795	107	269
Heating	Air-Source Heat Pump	1.7%	2,657	45	113
Heating	Geothermal Heat Pump	0.0%	1,772	0	0
Ventilation	Ventilation	100.0%	106	106	266
Interior Lighting	General Service Lighting	100.0%	20	20	50
Interior Lighting	High-Bay Lighting	100.0%	312	312	786
Interior Lighting	Linear Lighting	100.0%	52	52	131
Exterior Lighting	General Service Lighting	100.0%	4	4	9
Exterior Lighting	Area Lighting	100.0%	70	70	175
Exterior Lighting	Linear Lighting	100.0%	14	14	36
Motors	Pumps	100.0%	9,142	9,142	23,037
Motors	Fans & Blowers	0.0%	292	0	0
Motors	Compressed Air	100.0%	133	133	336
Motors	Material Handling	100.0%	397	397	999
Motors	Other Motors	100.0%	4	4	11
Process	Process Heating	0.0%	292	0	0
Process	Process Cooling	0.0%	292	0	0
Process	Process Refrigeration	0.0%	292	0	0
Process	Process Electrochemical	0.0%	292	0	0
Process	Process Other	100.0%	493	493	1,243
Miscellaneous	Miscellaneous	100.0%	292	292	735
Total				11,444	28,839

Table A-313   Wyoming Water New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	1,236	31
Cooling	Water-Cooled Chiller	2.5%	1,273	32
Cooling	RTU	11.3%	1,467	165
Cooling	Air-Source Heat Pump	1.7%	1,449	24
Cooling	Geothermal Heat Pump	0.0%	880	0
Heating	Electric Furnace	0.7%	2,935	21
Heating	Electric Room Heat	3.8%	2,795	107
Heating	Air-Source Heat Pump	1.7%	2,742	46
Heating	Geothermal Heat Pump	0.0%	1,772	0
Ventilation	Ventilation	100.0%	101	101
Interior Lighting	General Service Lighting	100.0%	19	19
Interior Lighting	High-Bay Lighting	100.0%	248	248
Interior Lighting	Linear Lighting	100.0%	50	50
Exterior Lighting	General Service Lighting	100.0%	3	3
Exterior Lighting	Area Lighting	100.0%	64	64
Exterior Lighting	Linear Lighting	100.0%	13	13
Motors	Pumps	100.0%	9,142	9,142
Motors	Fans & Blowers	0.0%	292	0
Motors	Compressed Air	100.0%	133	133
Motors	Material Handling	100.0%	397	397
Motors	Other Motors	100.0%	4	4
Process	Process Heating	0.0%	292	0
Process	Process Cooling	0.0%	292	0
Process	Process Refrigeration	0.0%	292	0
Process	Process Electrochemical	0.0%	292	0
Process	Process Other	100.0%	493	493
Miscellaneous	Miscellaneous	100.0%	292	292
Total				11,386

Table A-314   Wyoming Chemical Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	127,414	3,185	1,242
Cooling	Water-Cooled Chiller	2.5%	131,196	3,280	1,279
Cooling	RTU	11.3%	136,002	15,308	5,970
Cooling	Air-Source Heat Pump	1.7%	135,970	2,299	897
Cooling	Geothermal Heat Pump	0.0%	90,692	0	0
Heating	Electric Furnace	0.7%	302,484	2,139	834
Heating	Electric Room Heat	3.8%	288,080	11,018	4,297
Heating	Air-Source Heat Pump	1.7%	273,779	4,630	1,806
Heating	Geothermal Heat Pump	0.0%	182,610	0	0
Ventilation	Ventilation	100.0%	10,883	10,883	4,244
Interior Lighting	General Service Lighting	100.0%	1,403	1,403	547
Interior Lighting	High-Bay Lighting	100.0%	21,952	21,952	8,561
Interior Lighting	Linear Lighting	100.0%	3,649	3,649	1,423
Exterior Lighting	General Service Lighting	100.0%	258	258	101
Exterior Lighting	Area Lighting	100.0%	4,894	4,894	1,909
Exterior Lighting	Linear Lighting	100.0%	1,003	1,003	391
Motors	Pumps	100.0%	136,946	136,946	53,409
Motors	Fans & Blowers	100.0%	62,578	62,578	24,405
Motors	Compressed Air	100.0%	145,108	145,108	56,592
Motors	Material Handling	100.0%	131,504	131,504	51,287
Motors	Other Motors	100.0%	17,239	17,239	6,723
Process	Process Heating	100.0%	57,670	57,670	22,491
Process	Process Cooling	100.0%	32,363	32,363	12,621
Process	Process Refrigeration	100.0%	32,363	32,363	12,621
Process	Process Electrochemical	100.0%	165,615	165,615	64,590
Process	Process Other	100.0%	10,306	10,306	4,019
Miscellaneous	Miscellaneous	100.0%	25,473	25,473	9,935
Total				903,065	352,195

Table A-315   Wyoming Chemical Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	127,414	3,185
Cooling	Water-Cooled Chiller	2.5%	131,196	3,280
Cooling	RTU	11.3%	151,171	17,016
Cooling	Air-Source Heat Pump	1.7%	149,304	2,525
Cooling	Geothermal Heat Pump	0.0%	90,692	0
Heating	Electric Furnace	0.7%	302,484	2,139
Heating	Electric Room Heat	3.8%	288,080	11,018
Heating	Air-Source Heat Pump	1.7%	282,562	4,778
Heating	Geothermal Heat Pump	0.0%	182,610	0
Ventilation	Ventilation	100.0%	10,411	10,411
Interior Lighting	General Service Lighting	100.0%	1,345	1,345
Interior Lighting	High-Bay Lighting	100.0%	17,456	17,456
Interior Lighting	Linear Lighting	100.0%	3,523	3,523
Exterior Lighting	General Service Lighting	100.0%	243	243
Exterior Lighting	Area Lighting	100.0%	4,473	4,473
Exterior Lighting	Linear Lighting	100.0%	931	931
Motors	Pumps	100.0%	136,946	136,946
Motors	Fans & Blowers	100.0%	62,578	62,578
Motors	Compressed Air	100.0%	145,108	145,108
Motors	Material Handling	100.0%	131,504	131,504
Motors	Other Motors	100.0%	17,239	17,239
Process	Process Heating	100.0%	57,670	57,670
Process	Process Cooling	100.0%	32,363	32,363
Process	Process Refrigeration	100.0%	32,363	32,363
Process	Process Electrochemical	100.0%	165,615	165,615
Process	Process Other	100.0%	10,306	10,306
Miscellaneous	Miscellaneous	100.0%	25,473	25,473
Total				899,487

Table A-316   Wyoming Electronic Equipment Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	4,500	112	217
Cooling	Water-Cooled Chiller	2.5%	4,634	116	224
Cooling	RTU	11.3%	4,803	541	1,043
Cooling	Air-Source Heat Pump	1.7%	4,802	81	157
Cooling	Geothermal Heat Pump	0.0%	3,203	0	0
Heating	Electric Furnace	0.7%	10,683	76	146
Heating	Electric Room Heat	3.8%	10,174	389	751
Heating	Air-Source Heat Pump	1.7%	9,669	164	316
Heating	Geothermal Heat Pump	0.0%	6,449	0	0
Ventilation	Ventilation	100.0%	384	384	742
Interior Lighting	General Service Lighting	100.0%	32	32	62
Interior Lighting	High-Bay Lighting	100.0%	502	502	969
Interior Lighting	Linear Lighting	100.0%	83	83	161
Exterior Lighting	General Service Lighting	100.0%	6	6	11
Exterior Lighting	Area Lighting	100.0%	112	112	216
Exterior Lighting	Linear Lighting	100.0%	23	23	44
Motors	Pumps	100.0%	95	95	183
Motors	Fans & Blowers	100.0%	151	151	292
Motors	Compressed Air	100.0%	274	274	529
Motors	Material Handling	100.0%	856	856	1,653
Motors	Other Motors	0.0%	563	0	0
Process	Process Heating	100.0%	715	715	1,379
Process	Process Cooling	100.0%	332	332	640
Process	Process Refrigeration	100.0%	332	332	640
Process	Process Electrochemical	100.0%	125	125	241
Process	Process Other	100.0%	627	627	1,211
Miscellaneous	Miscellaneous	100.0%	563	563	1,086
Total				6,691	12,914

Table A-317   Wyoming Electronic Equipment Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	4,500	112
Cooling	Water-Cooled Chiller	2.5%	4,634	116
Cooling	RTU	11.3%	5,339	601
Cooling	Air-Source Heat Pump	1.7%	5,273	89
Cooling	Geothermal Heat Pump	0.0%	3,203	0
Heating	Electric Furnace	0.7%	10,683	76
Heating	Electric Room Heat	3.8%	10,174	389
Heating	Air-Source Heat Pump	1.7%	9,979	169
Heating	Geothermal Heat Pump	0.0%	6,449	0
Ventilation	Ventilation	100.0%	368	368
Interior Lighting	General Service Lighting	100.0%	31	31
Interior Lighting	High-Bay Lighting	100.0%	399	399
Interior Lighting	Linear Lighting	100.0%	81	81
Exterior Lighting	General Service Lighting	100.0%	6	6
Exterior Lighting	Area Lighting	100.0%	102	102
Exterior Lighting	Linear Lighting	100.0%	21	21
Motors	Pumps	100.0%	95	95
Motors	Fans & Blowers	100.0%	151	151
Motors	Compressed Air	100.0%	274	274
Motors	Material Handling	100.0%	856	856
Motors	Other Motors	0.0%	563	0
Process	Process Heating	100.0%	715	715
Process	Process Cooling	100.0%	332	332
Process	Process Refrigeration	100.0%	332	332
Process	Process Electrochemical	100.0%	125	125
Process	Process Other	100.0%	627	627
Miscellaneous	Miscellaneous	100.0%	563	563
Total				6,629

Table A-318   Wyoming Industrial Machinery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,147	54	183
Cooling	Water-Cooled Chiller	2.5%	2,211	55	188
Cooling	RTU	11.3%	2,292	258	877
Cooling	Air-Source Heat Pump	1.7%	2,291	39	132
Cooling	Geothermal Heat Pump	0.0%	1,528	0	0
Heating	Electric Furnace	0.7%	5,097	36	123
Heating	Electric Room Heat	3.8%	4,855	186	631
Heating	Air-Source Heat Pump	1.7%	4,614	78	265
Heating	Geothermal Heat Pump	0.0%	3,077	0	0
Ventilation	Ventilation	100.0%	183	183	624
Interior Lighting	General Service Lighting	100.0%	23	23	78
Interior Lighting	High-Bay Lighting	100.0%	358	358	1,216
Interior Lighting	Linear Lighting	100.0%	59	59	202
Exterior Lighting	General Service Lighting	100.0%	4	4	14
Exterior Lighting	Area Lighting	100.0%	80	80	271
Exterior Lighting	Linear Lighting	100.0%	16	16	56
Motors	Pumps	100.0%	196	196	668
Motors	Fans & Blowers	100.0%	457	457	1,554
Motors	Compressed Air	100.0%	389	389	1,324
Motors	Material Handling	100.0%	630	630	2,143
Motors	Other Motors	0.0%	273	0	0
Process	Process Heating	100.0%	260	260	885
Process	Process Cooling	100.0%	51	51	173
Process	Process Refrigeration	100.0%	51	51	173
Process	Process Electrochemical	100.0%	35	35	117
Process	Process Other	100.0%	116	116	395
Miscellaneous	Miscellaneous	100.0%	273	273	928
Total				3,888	13,220

Table A-319   Wyoming Industrial Machinery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,147	54
Cooling	Water-Cooled Chiller	2.5%	2,211	55
Cooling	RTU	11.3%	2,547	287
Cooling	Air-Source Heat Pump	1.7%	2,516	43
Cooling	Geothermal Heat Pump	0.0%	1,528	0
Heating	Electric Furnace	0.7%	5,097	36
Heating	Electric Room Heat	3.8%	4,855	186
Heating	Air-Source Heat Pump	1.7%	4,762	81
Heating	Geothermal Heat Pump	0.0%	3,077	0
Ventilation	Ventilation	100.0%	175	175
Interior Lighting	General Service Lighting	100.0%	22	22
Interior Lighting	High-Bay Lighting	100.0%	284	284
Interior Lighting	Linear Lighting	100.0%	57	57
Exterior Lighting	General Service Lighting	100.0%	4	4
Exterior Lighting	Area Lighting	100.0%	73	73
Exterior Lighting	Linear Lighting	100.0%	15	15
Motors	Pumps	100.0%	196	196
Motors	Fans & Blowers	100.0%	457	457
Motors	Compressed Air	100.0%	389	389
Motors	Material Handling	100.0%	630	630
Motors	Other Motors	0.0%	273	0
Process	Process Heating	100.0%	260	260
Process	Process Cooling	100.0%	51	51
Process	Process Refrigeration	100.0%	51	51
Process	Process Electrochemical	100.0%	35	35
Process	Process Other	100.0%	116	116
Miscellaneous	Miscellaneous	100.0%	273	273
Total				3,831

Table A-320   Wyoming Lumber & Wood Products Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	2,990	75	33
Cooling	Water-Cooled Chiller	2.5%	3,079	77	34
Cooling	RTU	11.3%	3,192	359	158
Cooling	Air-Source Heat Pump	1.7%	3,191	54	24
Cooling	Geothermal Heat Pump	0.0%	2,128	0	0
Heating	Electric Furnace	0.7%	7,099	50	22
Heating	Electric Room Heat	3.8%	6,761	259	114
Heating	Air-Source Heat Pump	1.7%	6,425	109	48
Heating	Geothermal Heat Pump	0.0%	4,285	0	0
Ventilation	Ventilation	100.0%	255	255	112
Interior Lighting	General Service Lighting	100.0%	76	76	33
Interior Lighting	High-Bay Lighting	100.0%	1,186	1,186	522
Interior Lighting	Linear Lighting	100.0%	197	197	87
Exterior Lighting	General Service Lighting	100.0%	14	14	6
Exterior Lighting	Area Lighting	100.0%	264	264	116
Exterior Lighting	Linear Lighting	100.0%	54	54	24
Motors	Pumps	100.0%	2,638	2,638	1,161
Motors	Fans & Blowers	100.0%	1,944	1,944	855
Motors	Compressed Air	100.0%	1,000	1,000	440
Motors	Material Handling	100.0%	13,458	13,458	5,922
Motors	Other Motors	100.0%	204	204	90
Process	Process Heating	100.0%	2,199	2,199	968
Process	Process Cooling	100.0%	163	163	72
Process	Process Refrigeration	100.0%	163	163	72
Process	Process Electrochemical	100.0%	190	190	83
Process	Process Other	100.0%	137	137	60
Miscellaneous	Miscellaneous	100.0%	1,159	1,159	510
Total				26,285	11,565

Table A-321   Wyoming Lumber & Wood Products New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	2,990	75
Cooling	Water-Cooled Chiller	2.5%	3,079	77
Cooling	RTU	11.3%	3,548	399
Cooling	Air-Source Heat Pump	1.7%	3,504	59
Cooling	Geothermal Heat Pump	0.0%	2,128	0
Heating	Electric Furnace	0.7%	7,099	50
Heating	Electric Room Heat	3.8%	6,761	259
Heating	Air-Source Heat Pump	1.7%	6,631	112
Heating	Geothermal Heat Pump	0.0%	4,285	0
Ventilation	Ventilation	100.0%	244	244
Interior Lighting	General Service Lighting	100.0%	73	73
Interior Lighting	High-Bay Lighting	100.0%	943	943
Interior Lighting	Linear Lighting	100.0%	190	190
Exterior Lighting	General Service Lighting	100.0%	13	13
Exterior Lighting	Area Lighting	100.0%	242	242
Exterior Lighting	Linear Lighting	100.0%	50	50
Motors	Pumps	100.0%	2,638	2,638
Motors	Fans & Blowers	100.0%	1,944	1,944
Motors	Compressed Air	100.0%	1,000	1,000
Motors	Material Handling	100.0%	13,458	13,458
Motors	Other Motors	100.0%	204	204
Process	Process Heating	100.0%	2,199	2,199
Process	Process Cooling	100.0%	163	163
Process	Process Refrigeration	100.0%	163	163
Process	Process Electrochemical	100.0%	190	190
Process	Process Other	100.0%	137	137
Miscellaneous	Miscellaneous	100.0%	1,159	1,159
Total				26,042

Table A-322 Wyoming Metal Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	4,783	120	232
Cooling	Water-Cooled Chiller	2.5%	4,925	123	239
Cooling	RTU	11.3%	5,105	575	1,115
Cooling	Air-Source Heat Pump	1.7%	5,104	86	167
Cooling	Geothermal Heat Pump	0.0%	3,405	0	0
Heating	Electric Furnace	0.7%	11,355	80	156
Heating	Electric Room Heat	3.8%	10,814	414	802
Heating	Air-Source Heat Pump	1.7%	10,278	174	337
Heating	Geothermal Heat Pump	0.0%	6,855	0	0
Ventilation	Ventilation	100.0%	409	409	793
Interior Lighting	General Service Lighting	100.0%	75	75	146
Interior Lighting	High-Bay Lighting	100.0%	1,178	1,178	2,285
Interior Lighting	Linear Lighting	100.0%	196	196	380
Exterior Lighting	General Service Lighting	100.0%	14	14	27
Exterior Lighting	Area Lighting	100.0%	263	263	510
Exterior Lighting	Linear Lighting	100.0%	54	54	104
Motors	Pumps	100.0%	1,238	1,238	2,401
Motors	Fans & Blowers	100.0%	591	591	1,147
Motors	Compressed Air	100.0%	1,250	1,250	2,425
Motors	Material Handling	100.0%	6,038	6,038	11,715
Motors	Other Motors	100.0%	154	154	299
Process	Process Heating	100.0%	3,598	3,598	6,981
Process	Process Cooling	100.0%	318	318	617
Process	Process Refrigeration	100.0%	318	318	617
Process	Process Electrochemical	100.0%	606	606	1,175
Process	Process Other	100.0%	777	777	1,506
Miscellaneous	Miscellaneous	100.0%	734	734	1,424
Total				19,382	37,601

Table A-323   Wyoming Metal Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	4,783	120
Cooling	Water-Cooled Chiller	2.5%	4,925	123
Cooling	RTU	11.3%	5,675	639
Cooling	Air-Source Heat Pump	1.7%	5,605	95
Cooling	Geothermal Heat Pump	0.0%	3,405	0
Heating	Electric Furnace	0.7%	11,355	80
Heating	Electric Room Heat	3.8%	10,814	414
Heating	Air-Source Heat Pump	1.7%	10,607	179
Heating	Geothermal Heat Pump	0.0%	6,855	0
Ventilation	Ventilation	100.0%	391	391
Interior Lighting	General Service Lighting	100.0%	72	72
Interior Lighting	High-Bay Lighting	100.0%	937	937
Interior Lighting	Linear Lighting	100.0%	189	189
Exterior Lighting	General Service Lighting	100.0%	13	13
Exterior Lighting	Area Lighting	100.0%	240	240
Exterior Lighting	Linear Lighting	100.0%	50	50
Motors	Pumps	100.0%	1,238	1,238
Motors	Fans & Blowers	100.0%	591	591
Motors	Compressed Air	100.0%	1,250	1,250
Motors	Material Handling	100.0%	6,038	6,038
Motors	Other Motors	100.0%	154	154
Process	Process Heating	100.0%	3,598	3,598
Process	Process Cooling	100.0%	318	318
Process	Process Refrigeration	100.0%	318	318
Process	Process Electrochemical	100.0%	606	606
Process	Process Other	100.0%	777	777
Miscellaneous	Miscellaneous	100.0%	734	734
Total				19,164

Table A-324   Wyoming Miscellaneous Manufacturing Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	2.5%	5,453	136	263
Cooling	Water-Cooled Chiller	2.5%	5,615	140	271
Cooling	RTU	11.3%	5,821	655	1,265
Cooling	Air-Source Heat Pump	1.7%	5,820	98	190
Cooling	Geothermal Heat Pump	0.0%	3,882	0	0
Heating	Electric Furnace	0.7%	12,947	92	177
Heating	Electric Room Heat	3.8%	12,330	472	910
Heating	Air-Source Heat Pump	1.7%	11,718	198	382
Heating	Geothermal Heat Pump	0.0%	7,816	0	0
Ventilation	Ventilation	100.0%	466	466	899
Interior Lighting	General Service Lighting	100.0%	62	62	121
Interior Lighting	High-Bay Lighting	100.0%	978	978	1,887
Interior Lighting	Linear Lighting	100.0%	163	163	314
Exterior Lighting	General Service Lighting	100.0%	12	12	22
Exterior Lighting	Area Lighting	100.0%	218	218	421
Exterior Lighting	Linear Lighting	100.0%	45	45	86
Motors	Pumps	100.0%	671	671	1,294
Motors	Fans & Blowers	100.0%	445	445	858
Motors	Compressed Air	100.0%	470	470	907
Motors	Material Handling	100.0%	1,254	1,254	2,419
Motors	Other Motors	100.0%	182	182	351
Process	Process Heating	100.0%	971	971	1,874
Process	Process Cooling	100.0%	255	255	492
Process	Process Refrigeration	100.0%	255	255	492
Process	Process Electrochemical	100.0%	98	98	189
Process	Process Other	100.0%	107	107	206
Miscellaneous	Miscellaneous	100.0%	586	586	1,131
Total				9,026	17,421

Table A-325   Wyoming Miscellaneous Manufacturing New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	2.5%	5,453	136
Cooling	Water-Cooled Chiller	2.5%	5,615	140
Cooling	RTU	11.3%	6,470	728
Cooling	Air-Source Heat Pump	1.7%	6,390	108
Cooling	Geothermal Heat Pump	0.0%	3,882	0
Heating	Electric Furnace	0.7%	12,947	92
Heating	Electric Room Heat	3.8%	12,330	472
Heating	Air-Source Heat Pump	1.7%	12,094	205
Heating	Geothermal Heat Pump	0.0%	7,816	0
Ventilation	Ventilation	100.0%	446	446
Interior Lighting	General Service Lighting	100.0%	60	60
Interior Lighting	High-Bay Lighting	100.0%	777	777
Interior Lighting	Linear Lighting	100.0%	157	157
Exterior Lighting	General Service Lighting	100.0%	11	11
Exterior Lighting	Area Lighting	100.0%	199	199
Exterior Lighting	Linear Lighting	100.0%	41	41
Motors	Pumps	100.0%	671	671
Motors	Fans & Blowers	100.0%	445	445
Motors	Compressed Air	100.0%	470	470
Motors	Material Handling	100.0%	1,254	1,254
Motors	Other Motors	100.0%	182	182
Process	Process Heating	100.0%	971	971
Process	Process Cooling	100.0%	255	255
Process	Process Refrigeration	100.0%	255	255
Process	Process Electrochemical	100.0%	98	98
Process	Process Other	100.0%	107	107
Miscellaneous	Miscellaneous	100.0%	586	586
Total				8,864

Irrigation Market Profiles

Table A-326   California Irrigation Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	80.6%	18,140	14,627	30.3
Motors	Pumps (100 HP+)	17.3%	165,284	28,598	59.2
Motors	Other Motors	2.1%	9,127	188	0.4
Total				43,414	89.9

Table A-327   California Irrigation New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	80.6%	18,106	14,600
Motors	Pumps (100 HP+)	17.3%	163,745	28,332
Motors	Other Motors	2.1%	9,018	186
Total				43,118

Table A-328   Idaho Irrigation Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	36.9%	22,709	8,385	43.5
Motors	Pumps (100 HP+)	58.4%	206,915	120,909	627.5
Motors	Other Motors	4.6%	11,425	530	2.8
Total				129,824	673.8

Table A-329   Idaho Irrigation New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	36.9%	22,667	8,370
Motors	Pumps (100 HP+)	58.4%	204,989	119,783
Motors	Other Motors	4.6%	11,290	524
Total				128,677

Table A-330   Utah Irrigation Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	56.7%	18,928	10,738	36.6
Motors	Pumps (100 HP+)	32.8%	172,458	56,508	192.5
Motors	Other Motors	10.5%	9,523	1,000	3.4
Total				68,246	232.4

Table A-331   Utah Irrigation New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	56.7%	18,892	10,718
Motors	Pumps (100 HP+)	32.8%	170,853	55,982
Motors	Other Motors	10.5%	9,410	988
Total				67,688

Table A-332   Washington Irrigation Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	95.1%	22,302	21,206	113.5
Motors	Pumps (100 HP+)	4.2%	203,202	8,501	45.5
Motors	Other Motors	0.7%	11,220	82	0.4
Total				29,789	159.4

Table A-333   Washington Irrigation New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	95.1%	22,260	21,166
Motors	Pumps (100 HP+)	4.2%	201,311	8,422
Motors	Other Motors	0.7%	11,087	81
Total				29,669

Table A-334   Wyoming Irrigation Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	70.8%	12,985	9,189	7.6
Motors	Pumps (100 HP+)	18.8%	118,312	22,230	18.4
Motors	Other Motors	10.4%	6,533	682	0.6
Total				32,101	26.5

Table A-335   Wyoming Irrigation New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	70.8%	12,961	9,172
Motors	Pumps (100 HP+)	18.8%	117,211	22,023
Motors	Other Motors	10.4%	6,455	674
Total				31,869

Street Lighting Market Profiles

Table A-336   California Street Lighting Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	Company - 100W	26.6%	479	127	353
Street Lighting	Company - 150W	6.4%	804	51	142
Street Lighting	Company - 250W	0.3%	1,208	3	9
Street Lighting	Company - 400W	0.1%	1,900	1	3
Street Lighting	Customer - 100W	20.0%	729	146	405
Street Lighting	Customer - 150W	17.1%	605	103	287
Street Lighting	Customer - 250W	6.7%	1,180	79	219
Street Lighting	Customer - 400W	1.2%	1,208	15	40
Street Lighting	Customer - 1000W	0.0%	0	0	0
Street Lighting	Other	21.6%	724	156	434
Total				683	1,894

Table A-337   Idaho Street Lighting Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	Company - 100W	7.8%	479	37	153
Street Lighting	Company - 150W	0.3%	804	2	9
Street Lighting	Company - 250W	0.6%	1,208	8	32
Street Lighting	Company - 400W	0.2%	1,900	4	18
Street Lighting	Customer - 100W	63.8%	479	306	1,249
Street Lighting	Customer - 150W	5.5%	802	44	179
Street Lighting	Customer - 250W	8.8%	1,208	107	436
Street Lighting	Customer - 400W	4.6%	1,815	84	343
Street Lighting	Customer - 1000W	0.0%	0	0	0
Street Lighting	Other	8.3%	802	67	273
Total				659	2,691

Table A-338   Utah Street Lighting Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	Company - 100W	21.1%	479	101	10,285
Street Lighting	Company - 150W	2.4%	726	17	1,758
Street Lighting	Company - 250W	2.1%	1,205	26	2,631
Street Lighting	Company - 400W	0.8%	1,873	16	1,592
Street Lighting	Customer - 100W	27.4%	493	135	13,712
Street Lighting	Customer - 150W	18.9%	785	148	15,063
Street Lighting	Customer - 250W	9.3%	1,015	95	9,619
Street Lighting	Customer - 400W	7.3%	1,823	133	13,465
Street Lighting	Customer - 1000W	0.6%	498	3	285
Street Lighting	Other	10.1%	779	79	7,980
Total				752	76,391

Table A-339   Washington Street Lighting Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	Company - 100W	21.7%	479	104	1,519
Street Lighting	Company - 150W	21.6%	797	172	2,514
Street Lighting	Company - 250W	3.2%	1,203	38	555
Street Lighting	Company - 400W	2.7%	1,766	48	698
Street Lighting	Customer - 100W	8.3%	486	40	585
Street Lighting	Customer - 150W	14.1%	482	68	990
Street Lighting	Customer - 250W	2.9%	1,204	34	502
Street Lighting	Customer - 400W	2.7%	1,472	40	578
Street Lighting	Customer - 1000W	0.2%	1,900	4	56
Street Lighting	Other	22.6%	674	152	2,221
Total				701	10,217

Table A-340   Wyoming Street Lighting Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	Company - 100W	42.2%	479	202	3,816
Street Lighting	Company - 150W	14.6%	785	114	2,161
Street Lighting	Company - 250W	4.1%	1,208	50	942
Street Lighting	Company - 400W	2.6%	1,845	48	898
Street Lighting	Customer - 100W	0.2%	479	1	15
Street Lighting	Customer - 150W	12.3%	484	59	1,123
Street Lighting	Customer - 250W	0.6%	1,208	7	131
Street Lighting	Customer - 400W	1.8%	1,253	22	417
Street Lighting	Customer - 1000W	0.0%	1,900	0	4
Street Lighting	Other	21.7%	597	130	2,447
Total				633	11,954

BASELINE PROJECTIONS

As mentioned in the analysis approach section of Volume 2 of this report, prior to developing estimates of energy-efficiency potential, AEG developed baseline projections of annual electricity use for 2016 through 2038 by state, sector, customer segment and end use without new utility DSM programs. These baseline projections are provided below.

Baseline Projections by State and Sector

Figure B-1   Overall Baseline Projection by Sector (MWh)
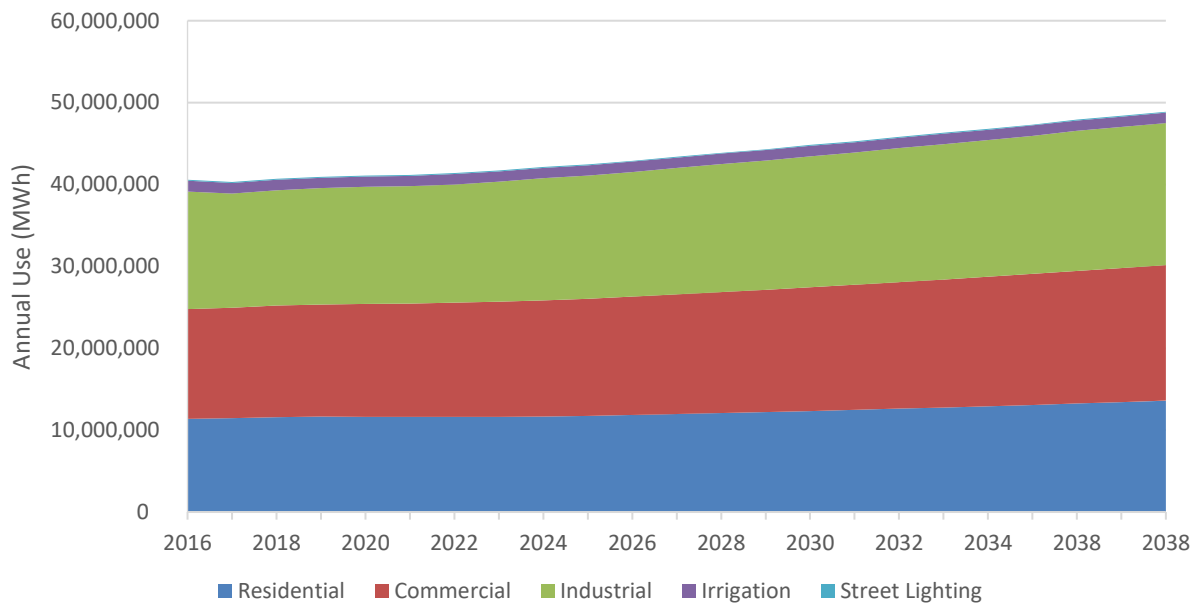
Figure B-2   California Baseline Projection by Sector (MWh)
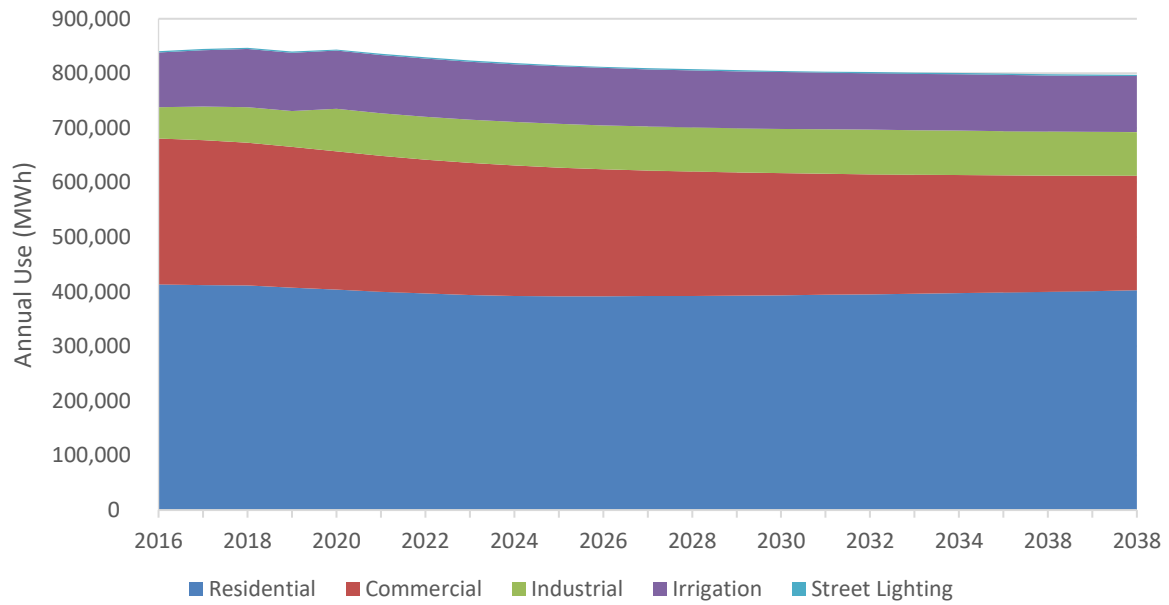
Figure B-3   Idaho Baseline Projection by Sector (MWh)
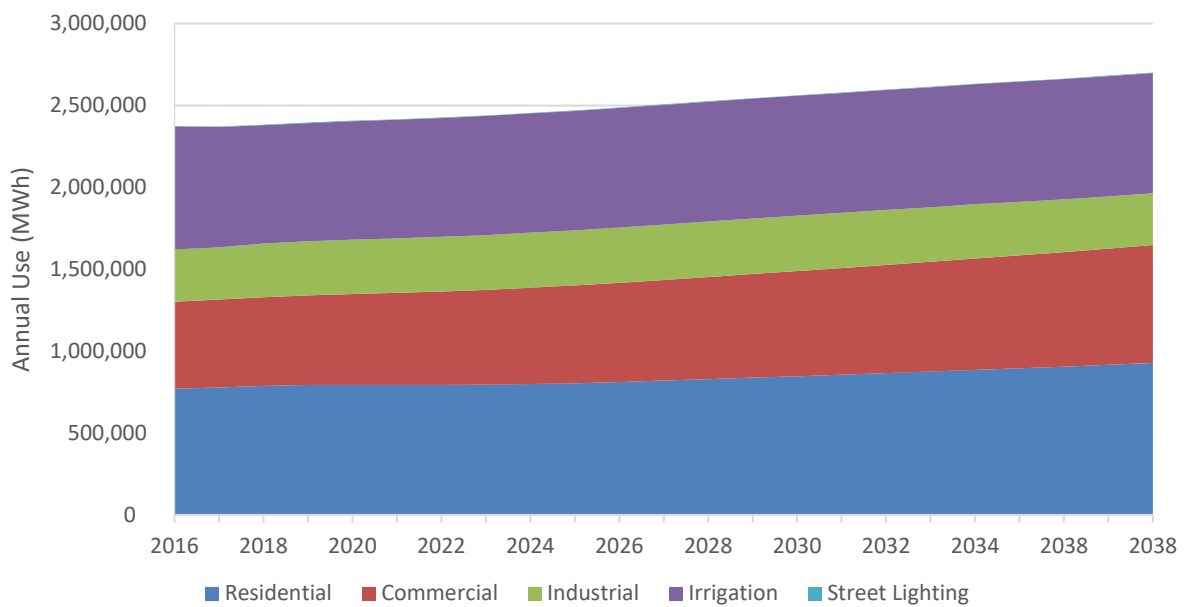
Figure B-4   Utah Baseline Projection by Sector (MWh)
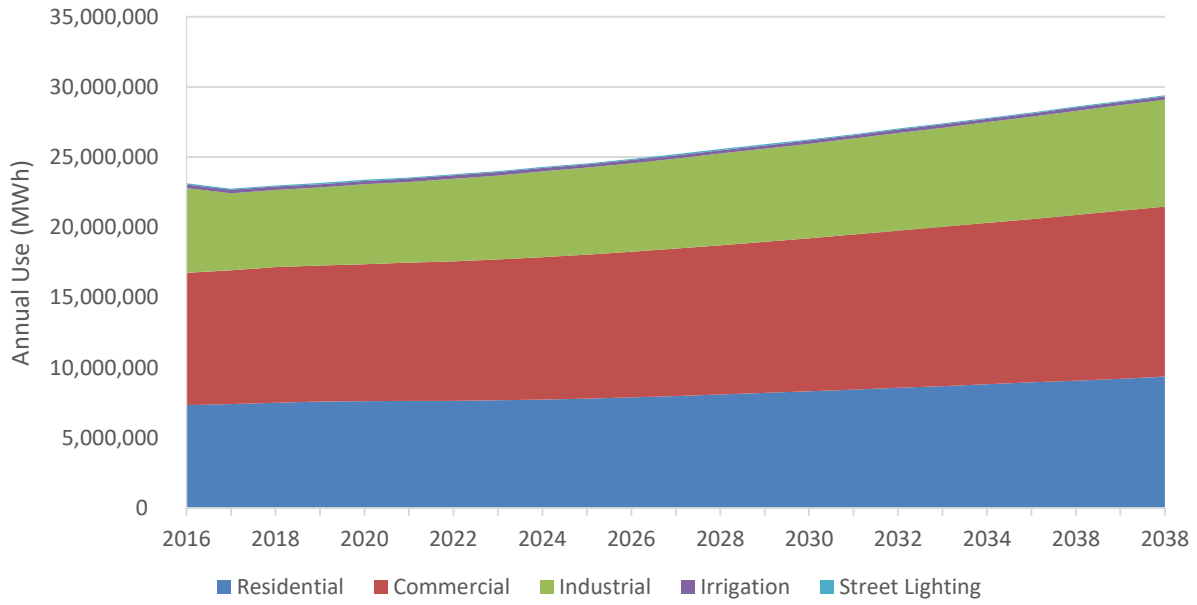
Figure B-5   Washington Baseline Projection by Sector (MWh)
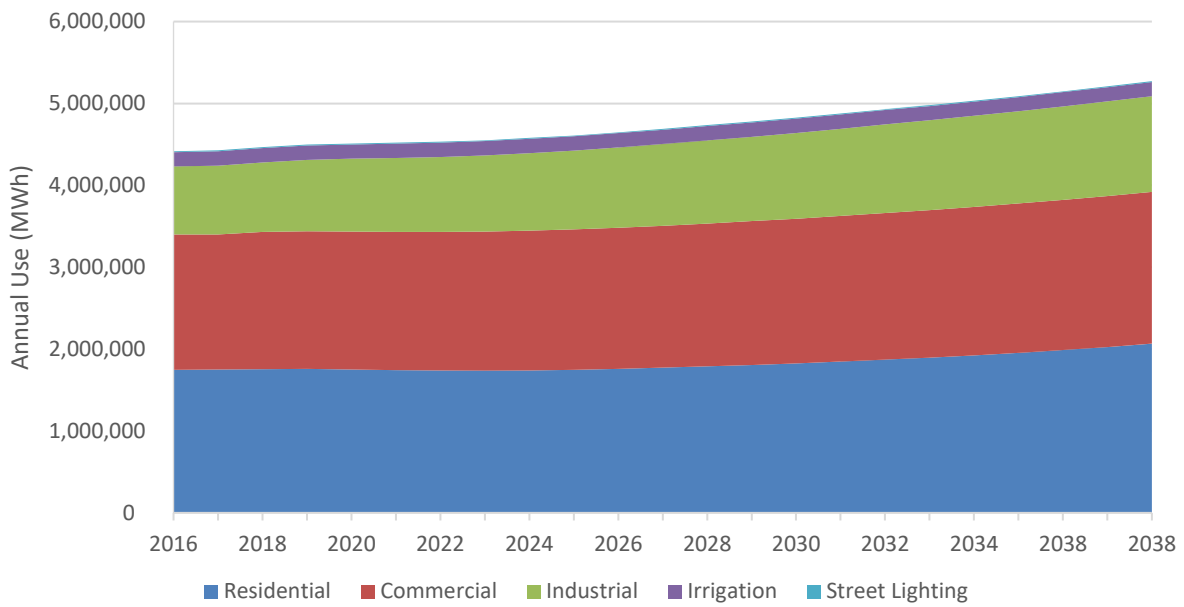
Figure B-6   Wyoming Baseline Projection by Sector (MWh)
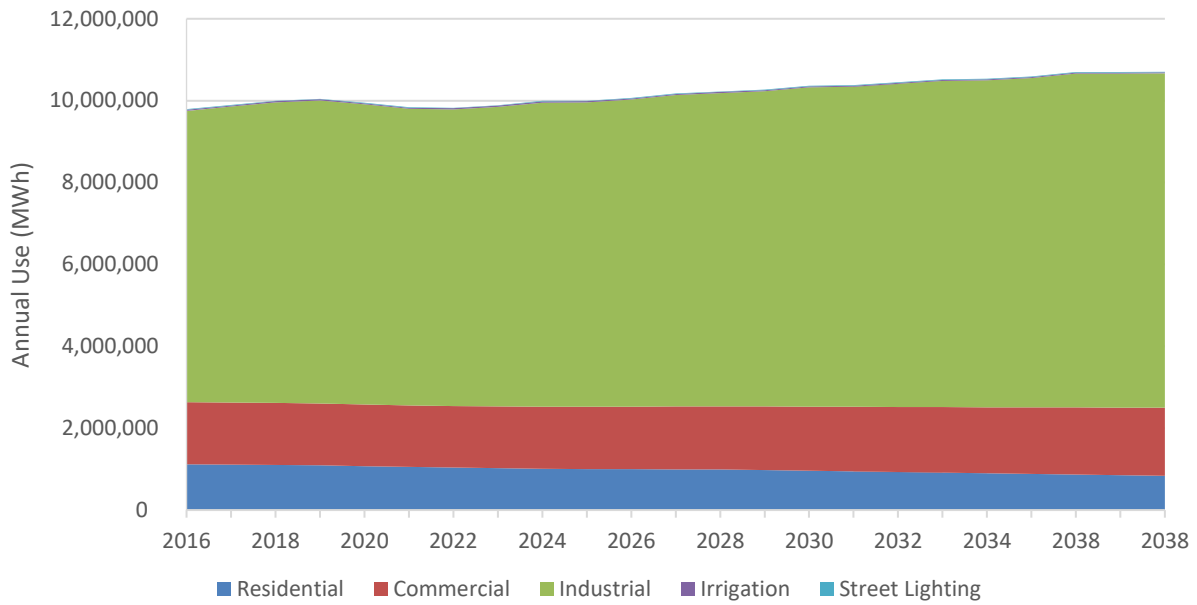
Baseline Projections by State, Sector, and Segment

Figure B-7   Overall Residential Baseline Projection by Segment (MWh)
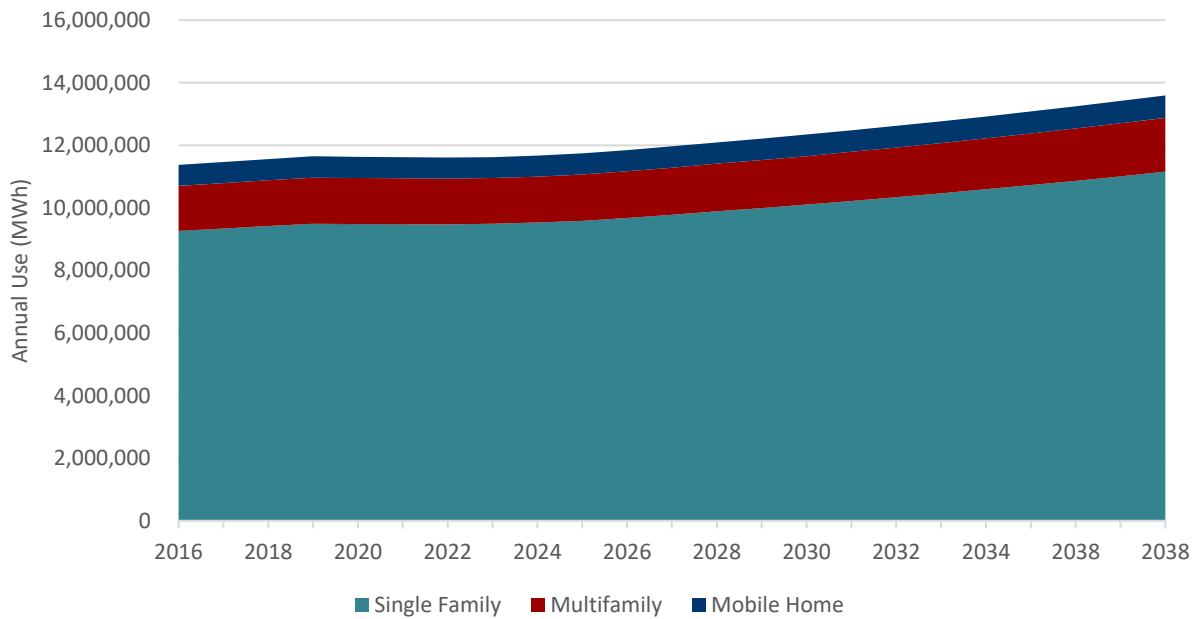
Figure B-8   California Residential Baseline Projection by Segment (MWh)
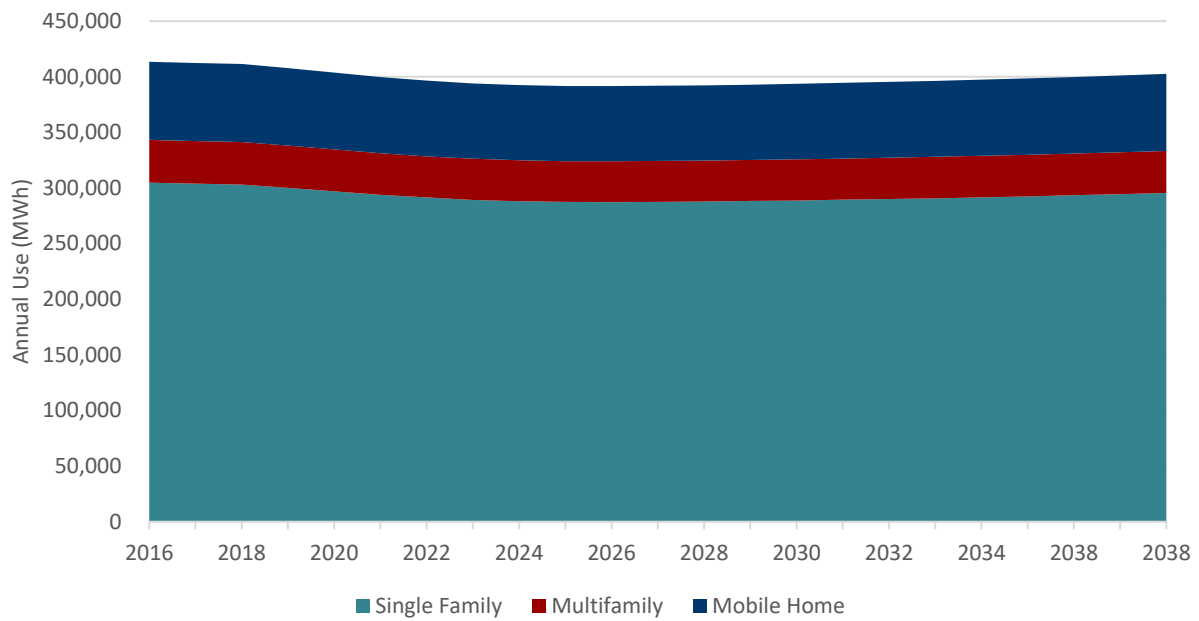
Figure B-9   Idaho Residential Baseline Projection by Segment (MWh)
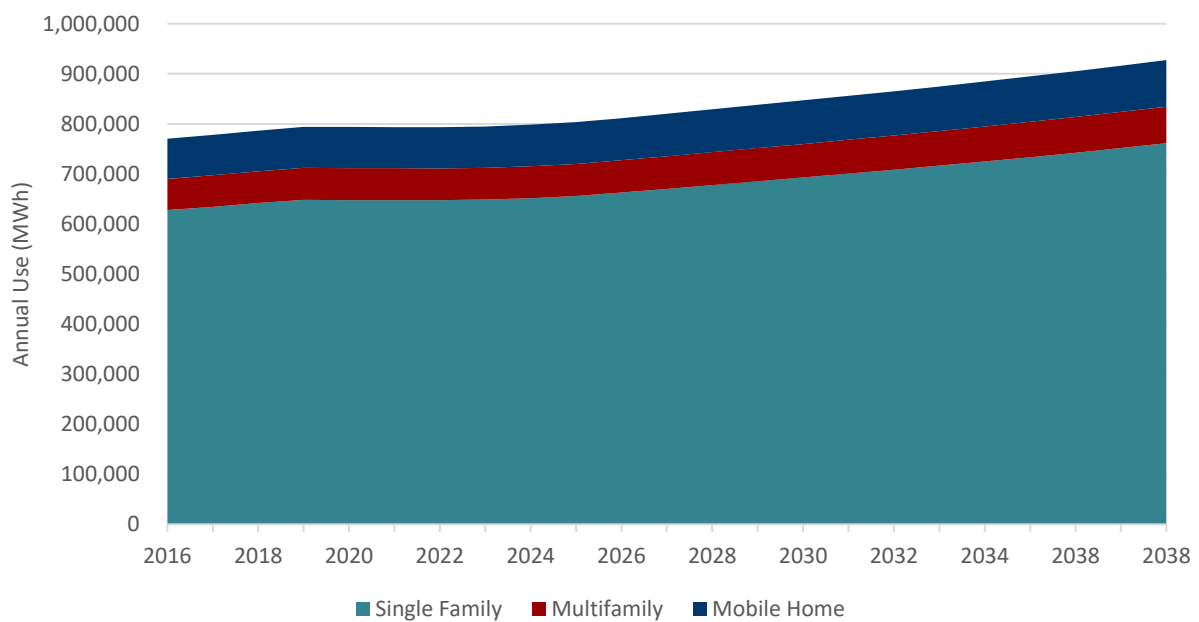
Figure B-10   *Utah Residential Baseline Projection by Segment (MWh)*
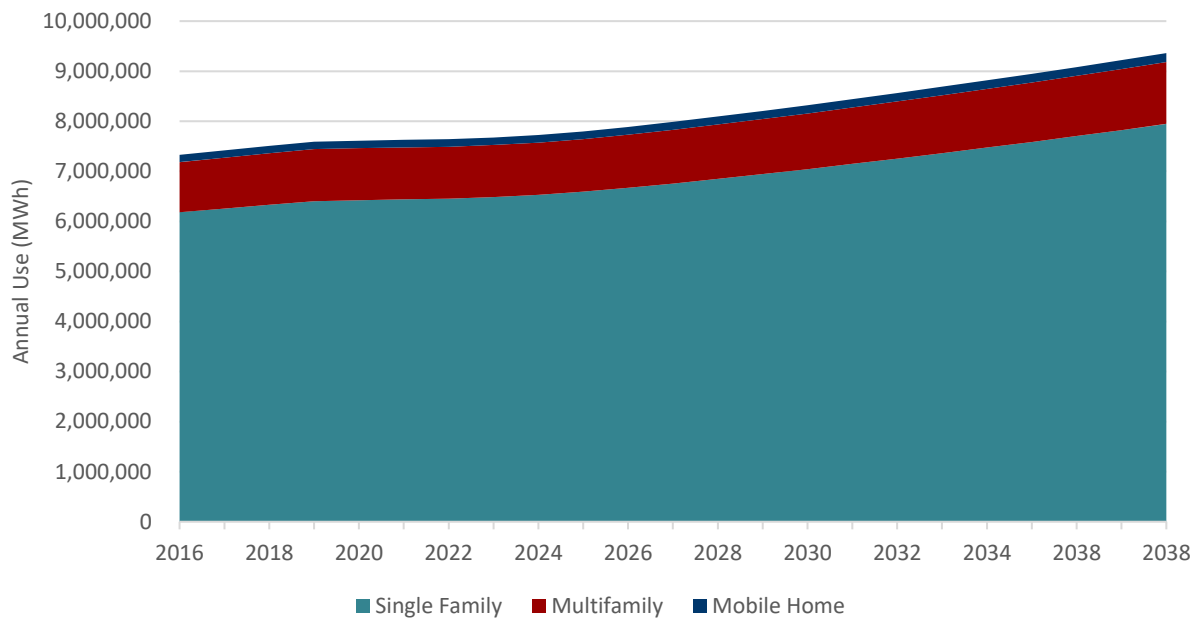
Figure B-11   *Washington Residential Baseline Projection by Segment (MWh)*
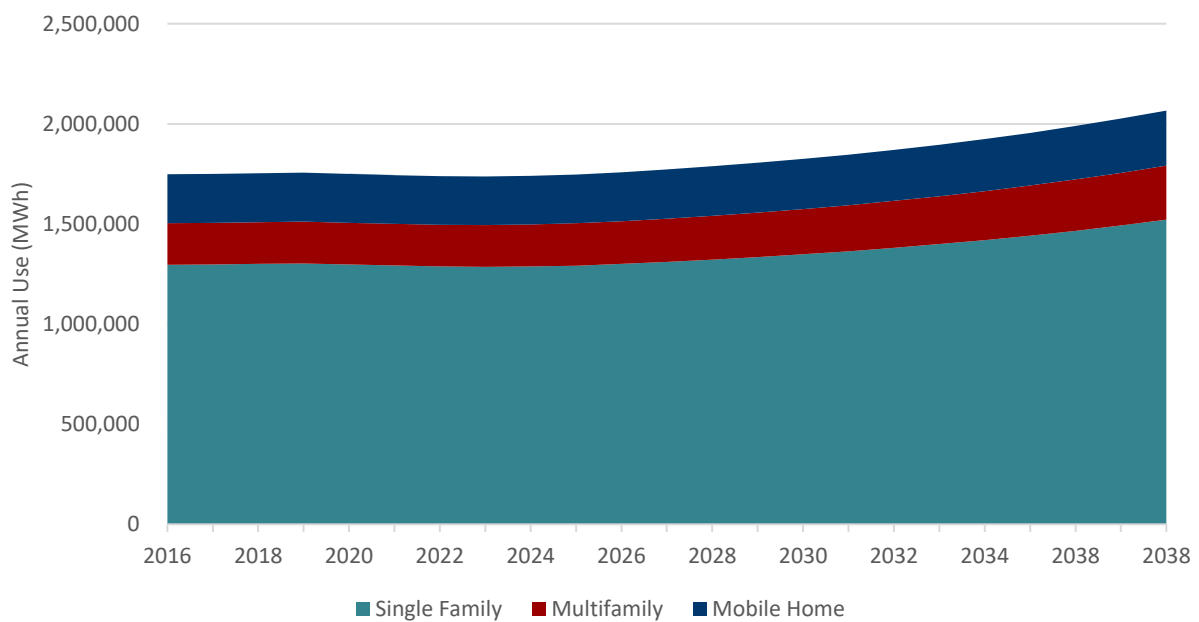
Figure B-12   Wyoming Residential Baseline Projection by Segment (MWh)
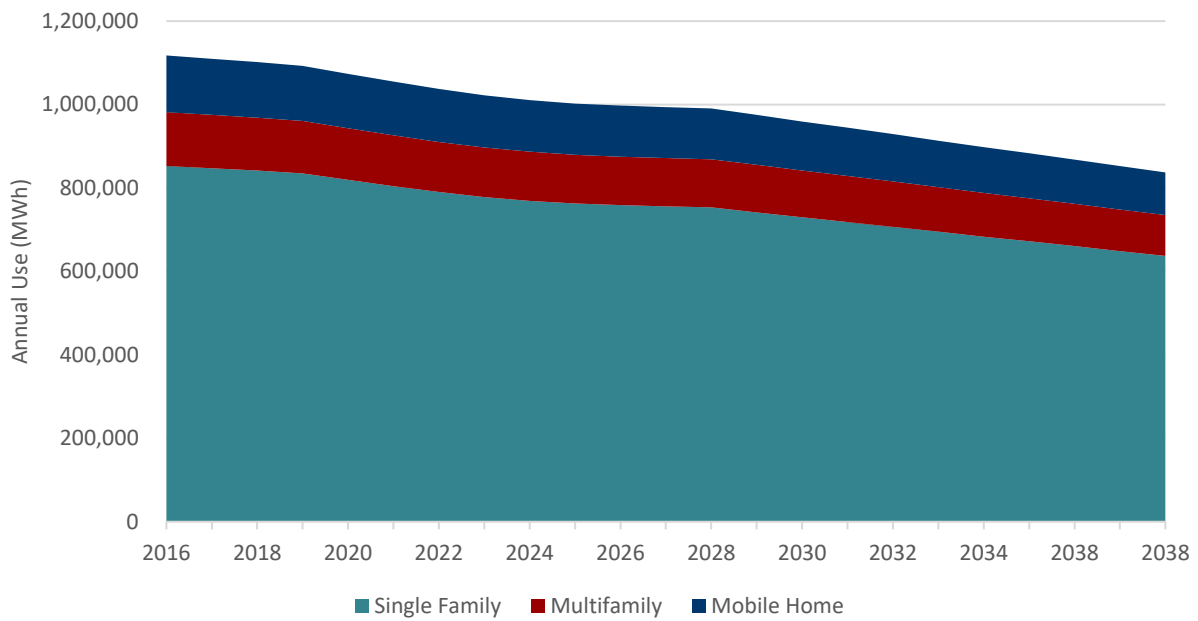
Figure B-13   Overall Commercial Baseline Projection by Segment (MWh)
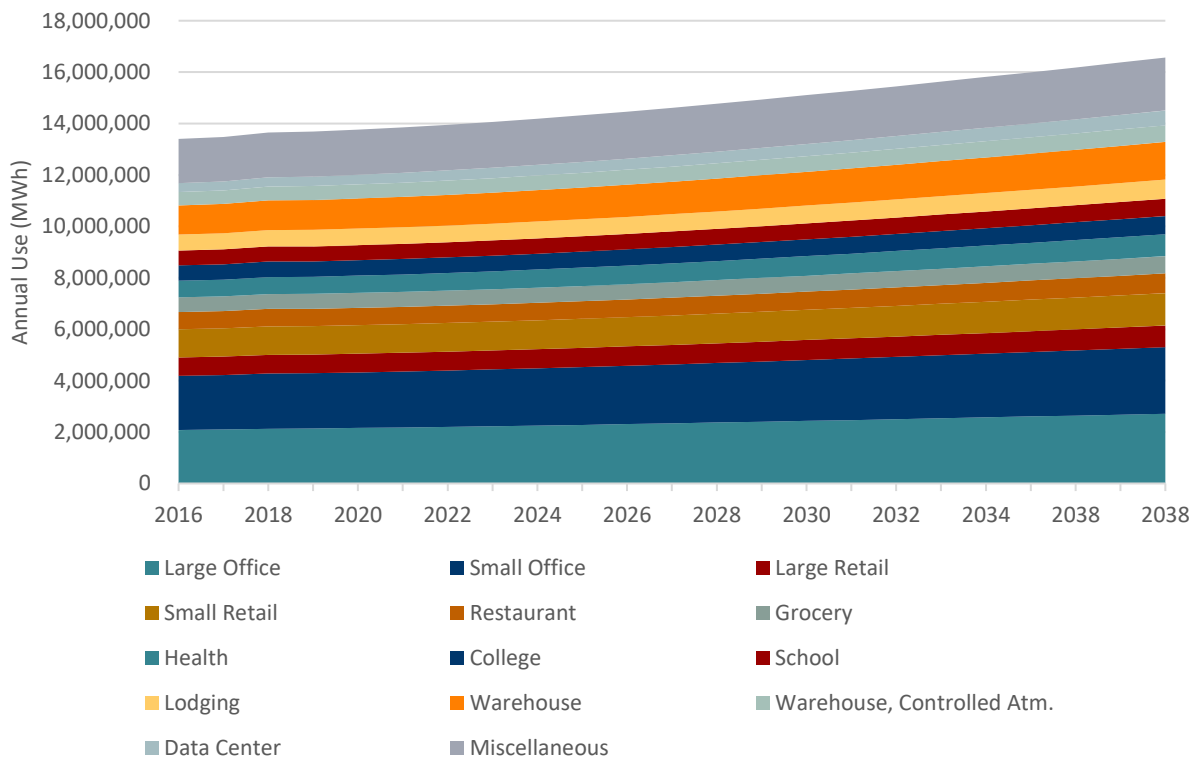
Figure B-14   California Commercial Baseline Projection by Segment (MWh)

Legend:
- Large Office
- Small Office
- Large Retail
- Small Retail
- Restaurant
- Grocery
- Health
- College
- School
- Lodging
- Warehouse
- Warehouse, Controlled Atm.
- Data Center
- Miscellaneous
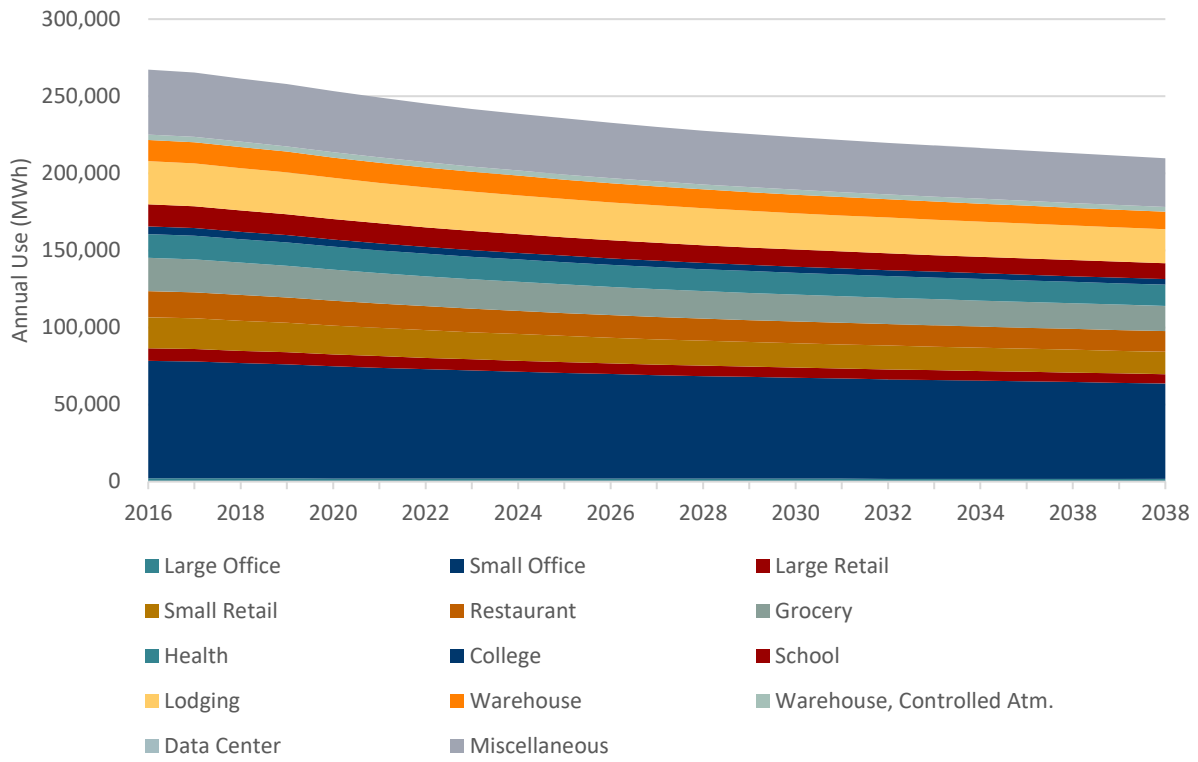
Figure B-15   Idaho Commercial Baseline Projection by Segment (MWh)

Legend:
- Large Office
- Small Office
- Large Retail
- Small Retail
- Restaurant
- Grocery
- Health
- College
- School
- Lodging
- Warehouse
- Warehouse, Controlled Atm.
- Data Center
- Miscellaneous
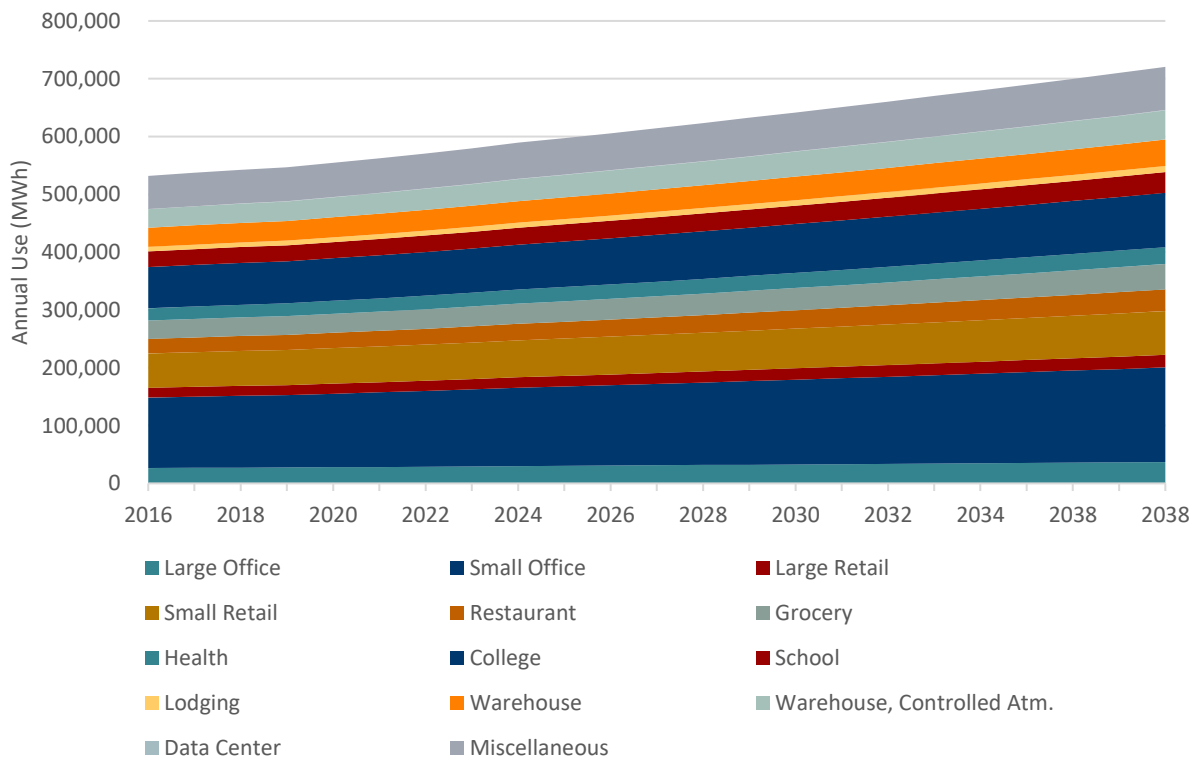
Figure B-16   Utah Commercial Baseline Projection by Segment (MWh)
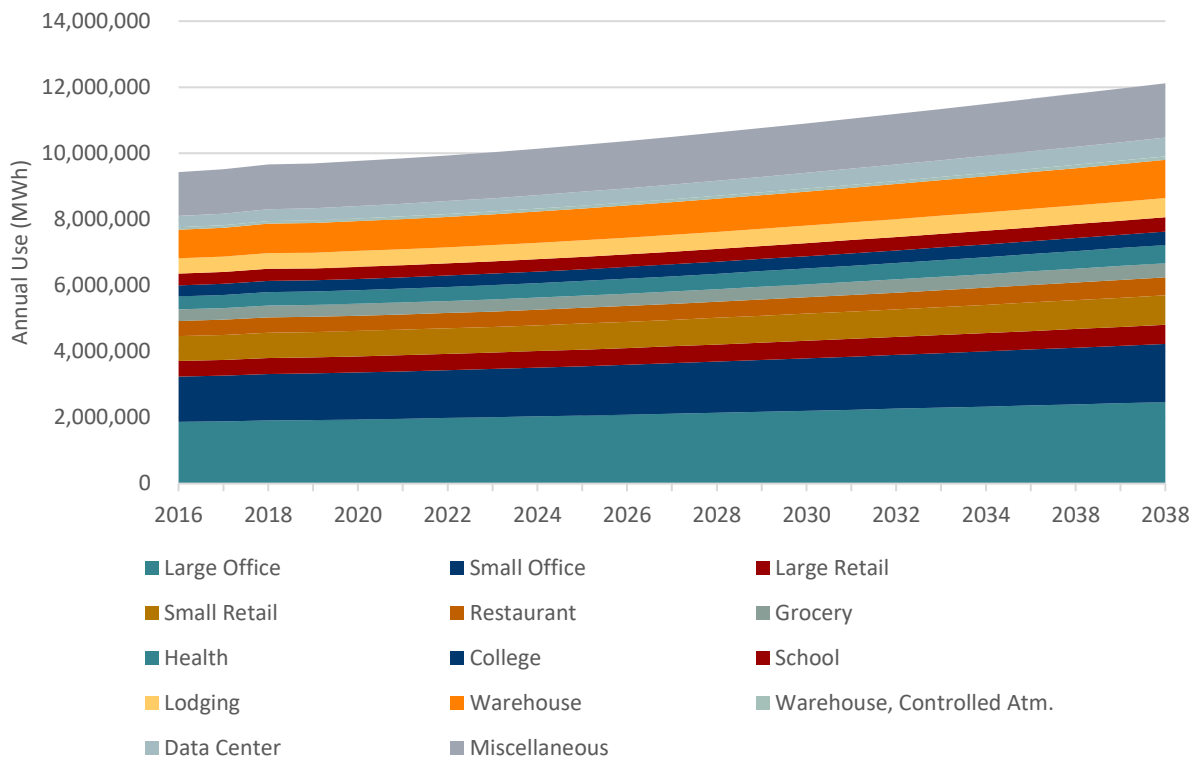
Figure B-17   Washington Commercial Baseline Projection by Segment (MWh)
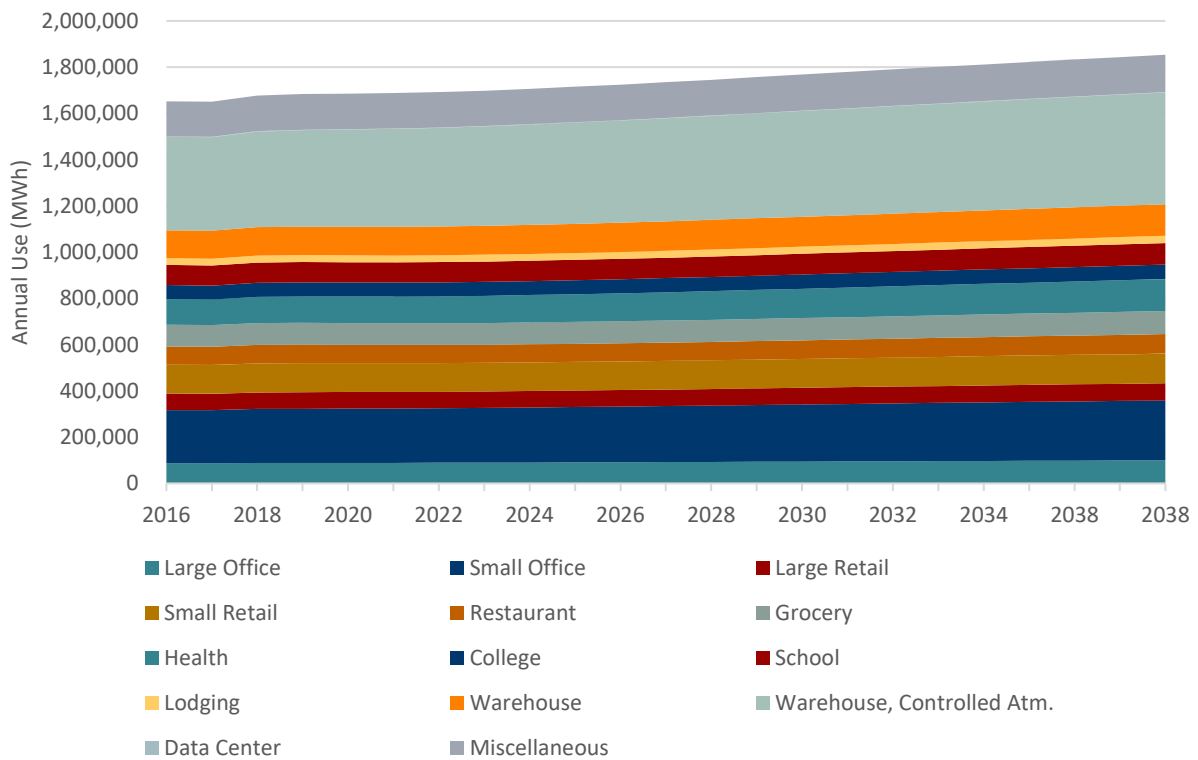
Figure B-18   *Wyoming Commercial Baseline Projection by Segment (MWh)*

Legend:
- Large Office
- Small Office
- Large Retail
- Small Retail
- Restaurant
- Grocery
- Health
- College
- School
- Lodging
- Warehouse
- Warehouse, Controlled Atm.
- Data Center
- Miscellaneous
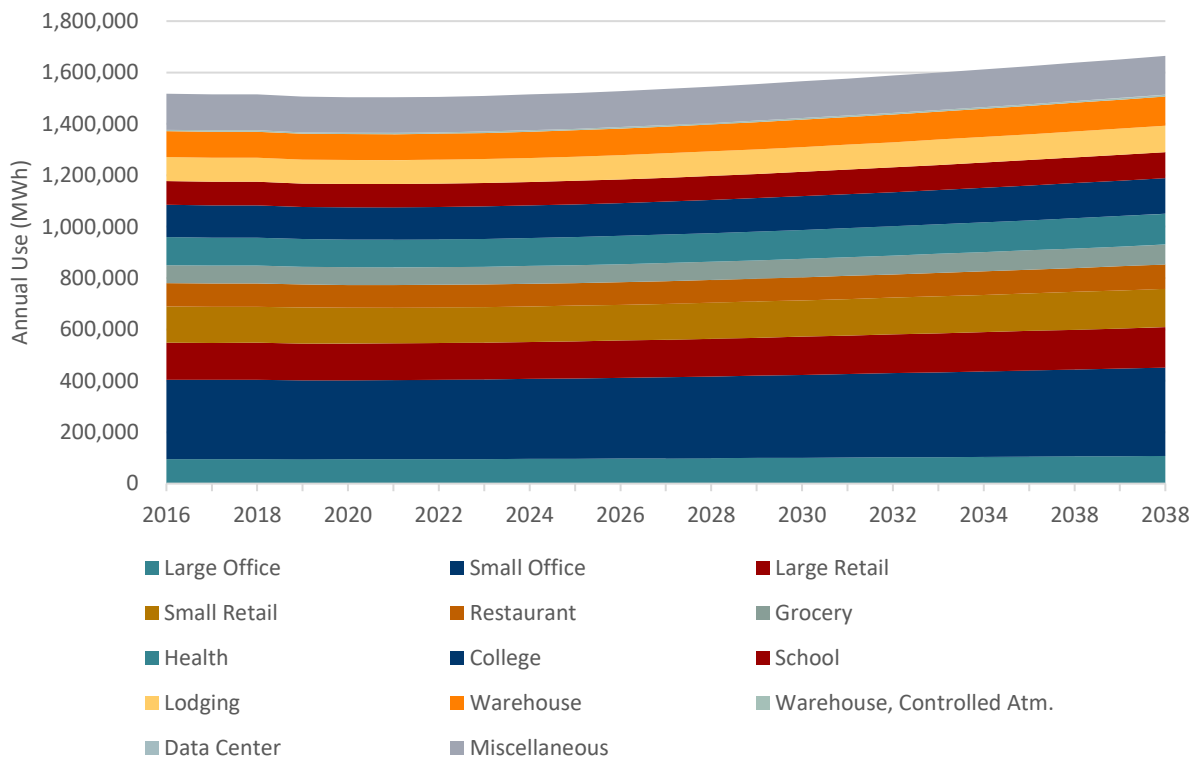
Figure B-19   *Overall Industrial Baseline Projection by Segment (MWh)*

Legend:
- Agriculture
- Mining
- Food Mfg
- Paper Mfg
- Petroleum Refining
- Stone Clay Glass Products
- Transportation Equipment Mfg
- Wastewater
- Water
- Chemical Mfg
- Electronic Equipment Mfg
- Industrial Machinery
- Lumber Wood Products
- Metal Mfg
- Misc. Mfg
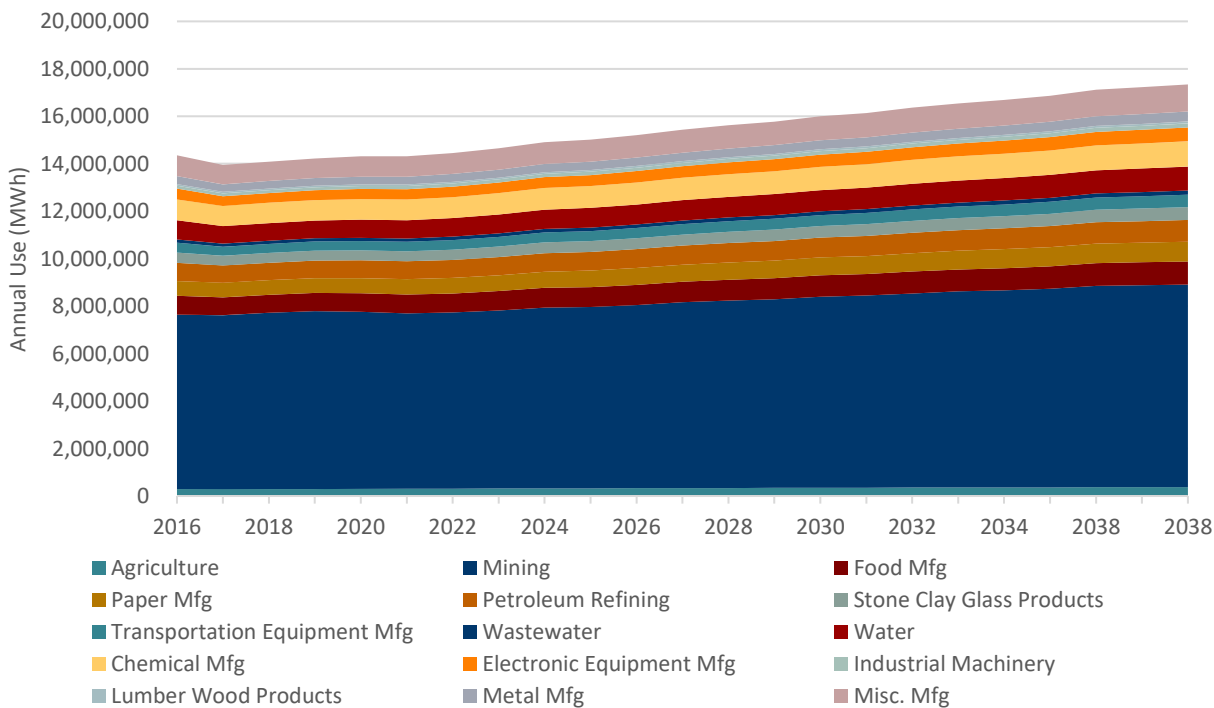
Figure B-20   California Industrial Baseline Projection by Segment (MWh)
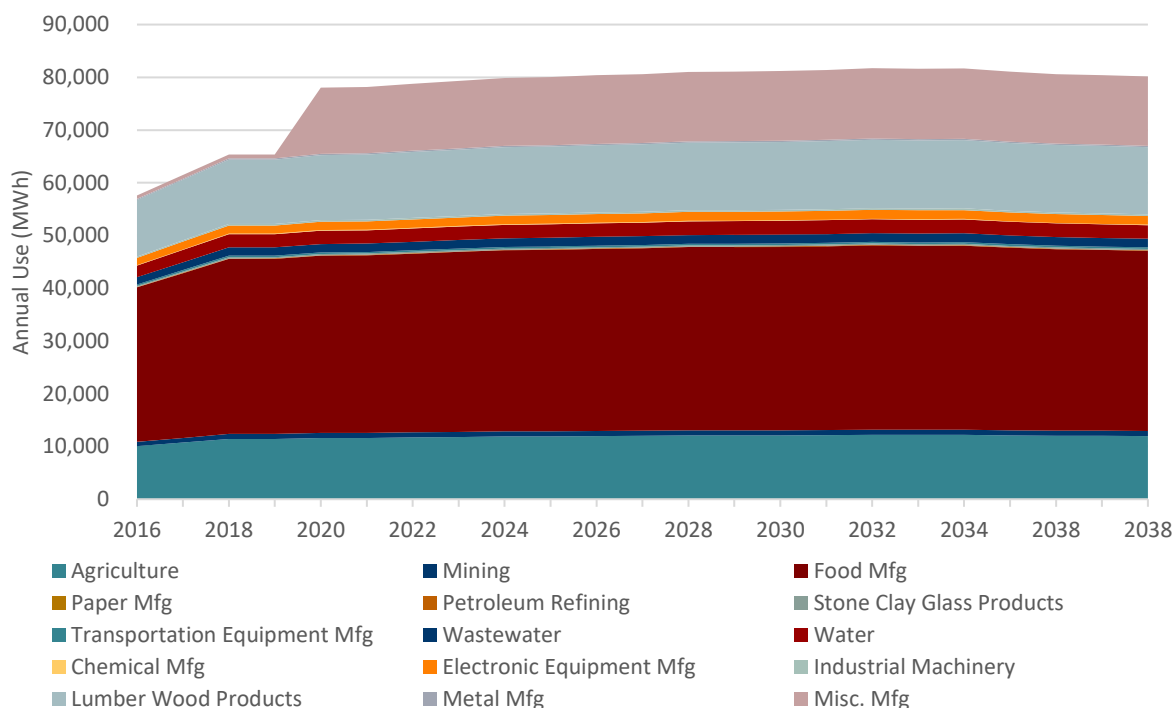
Figure B-21   Idaho Industrial Baseline Projection by Segment (MWh)
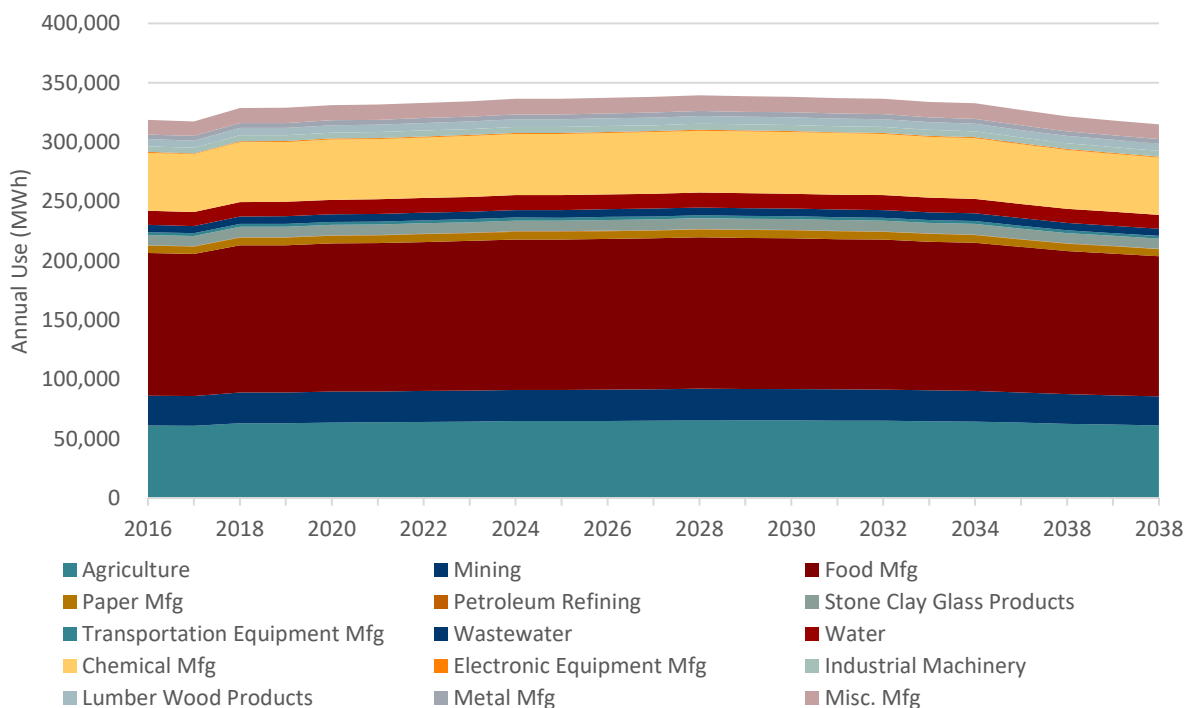
Figure B-22   Utah Industrial Baseline Projection by Segment (MWh)
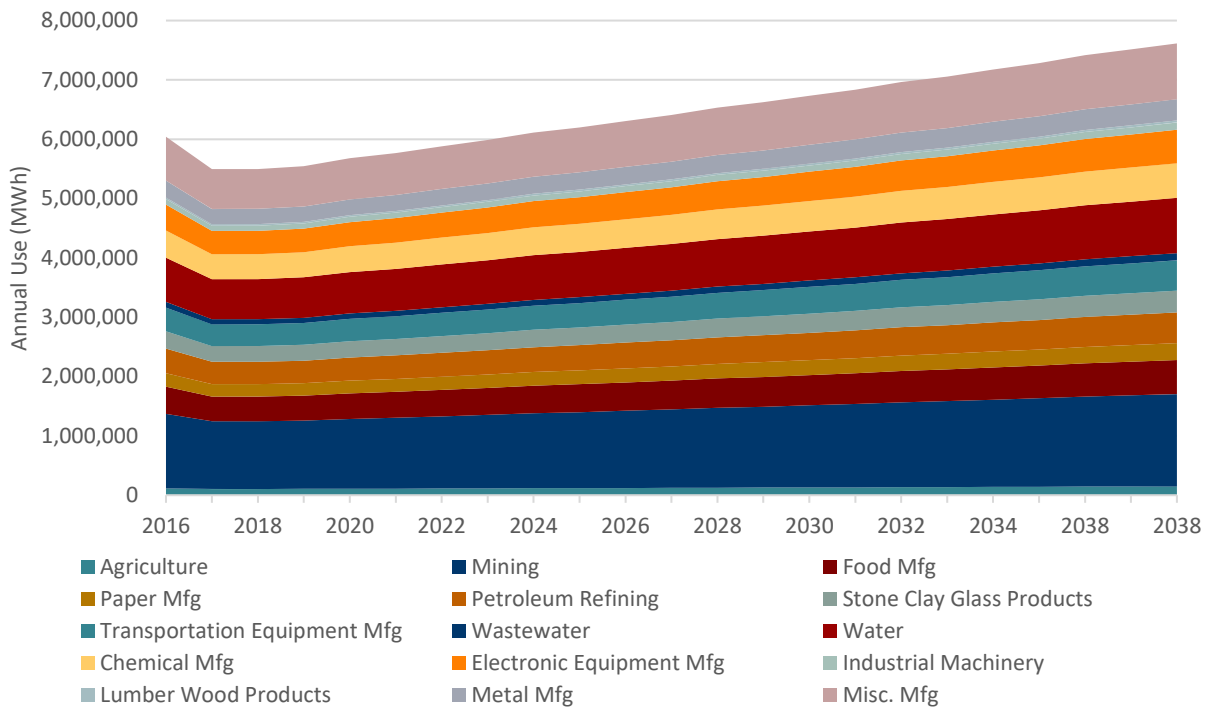
Figure B-23   Washington Industrial Baseline Projection by Segment (MWh)
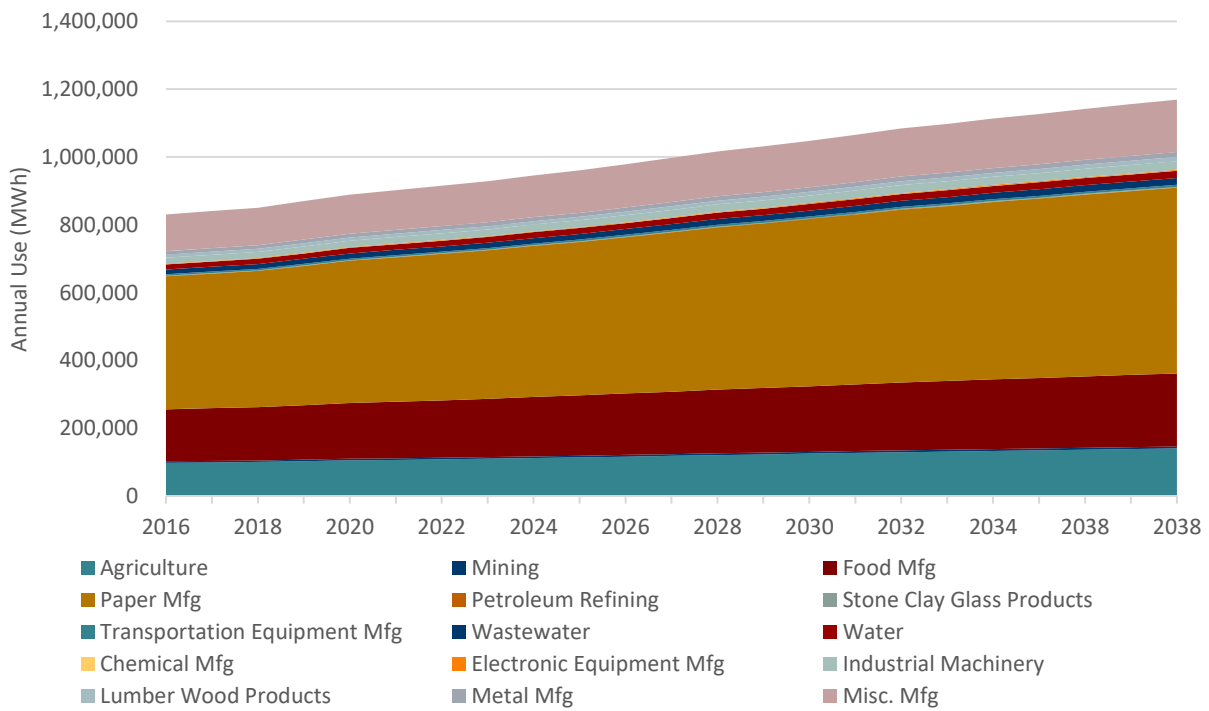
Figure B-24   Wyoming Industrial Baseline Projection by Segment (MWh)

Legend:
- Agriculture
- Mining
- Food Mfg
- Paper Mfg
- Petroleum Refining
- Stone Clay Glass Products
- Transportation Equipment Mfg
- Wastewater
- Water
- Chemical Mfg
- Electronic Equipment Mfg
- Industrial Machinery
- Lumber Wood Products
- Metal Mfg
- Misc. Mfg
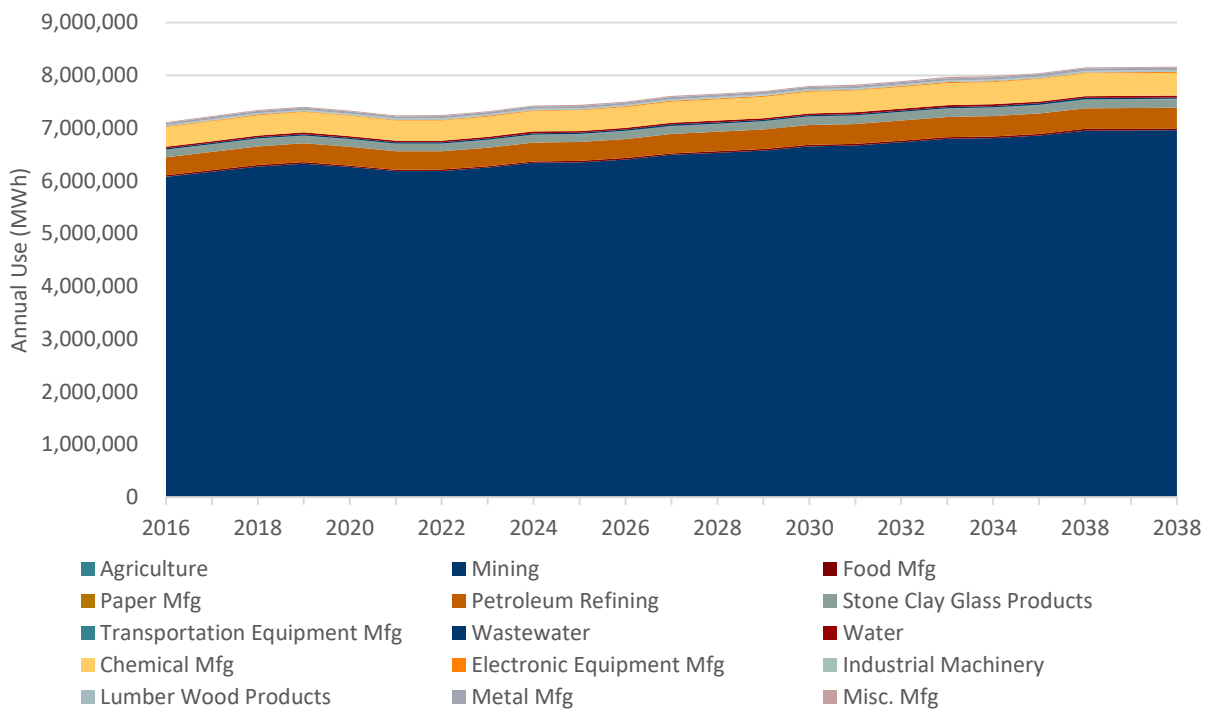
Figure B-25   Overall Irrigation Baseline Projection by Segment (MWh)

Legend:
- Irrigation - Overall
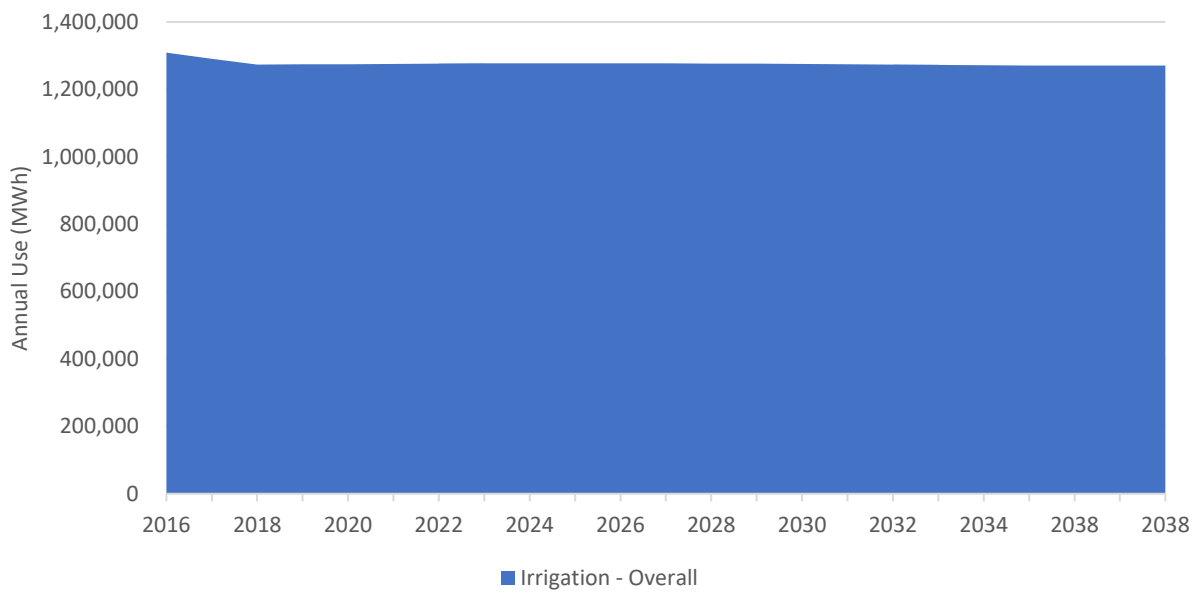
Figure B-26   California Irrigation Baseline Projection by Segment (MWh)
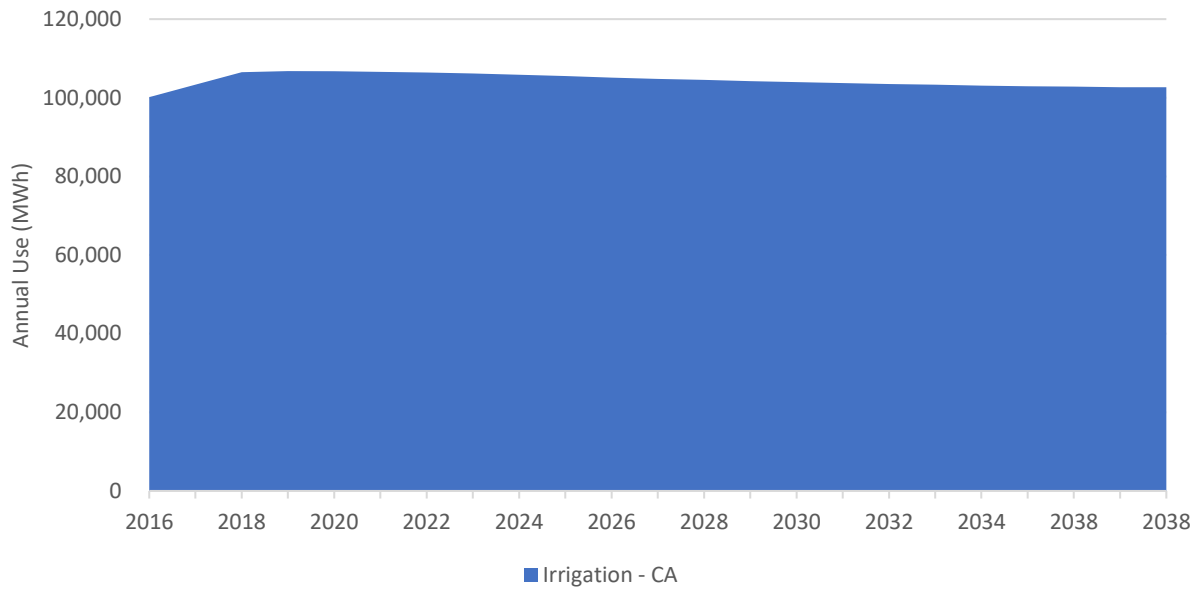
Figure B-27   Idaho Irrigation Baseline Projection by Segment (MWh)
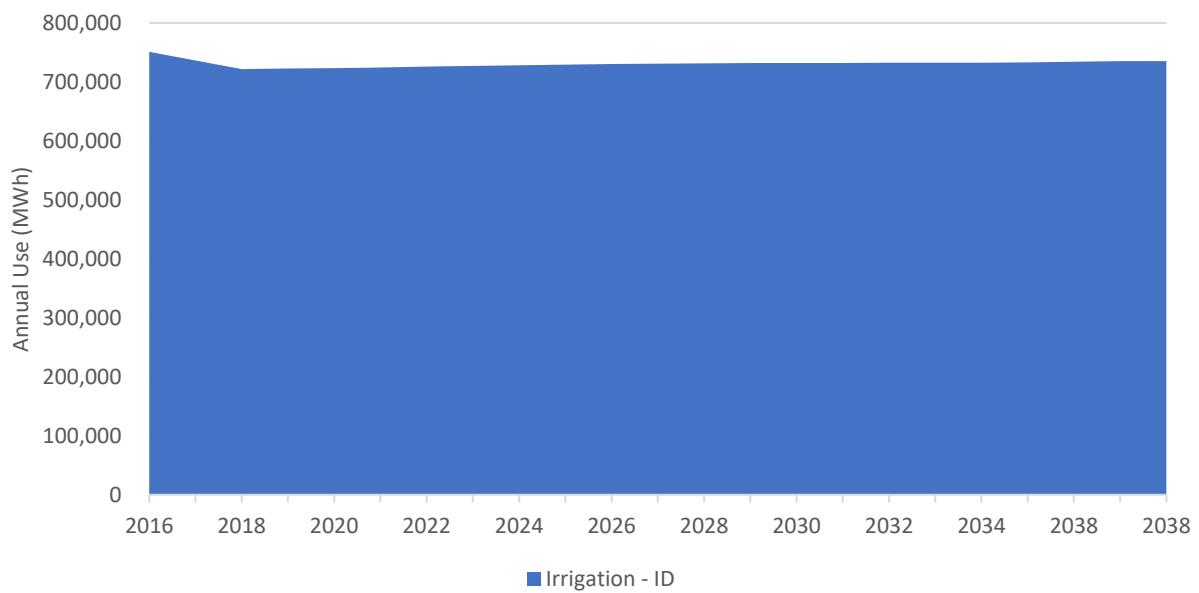
Figure B-28   Utah Irrigation Baseline Projection by Segment (MWh)
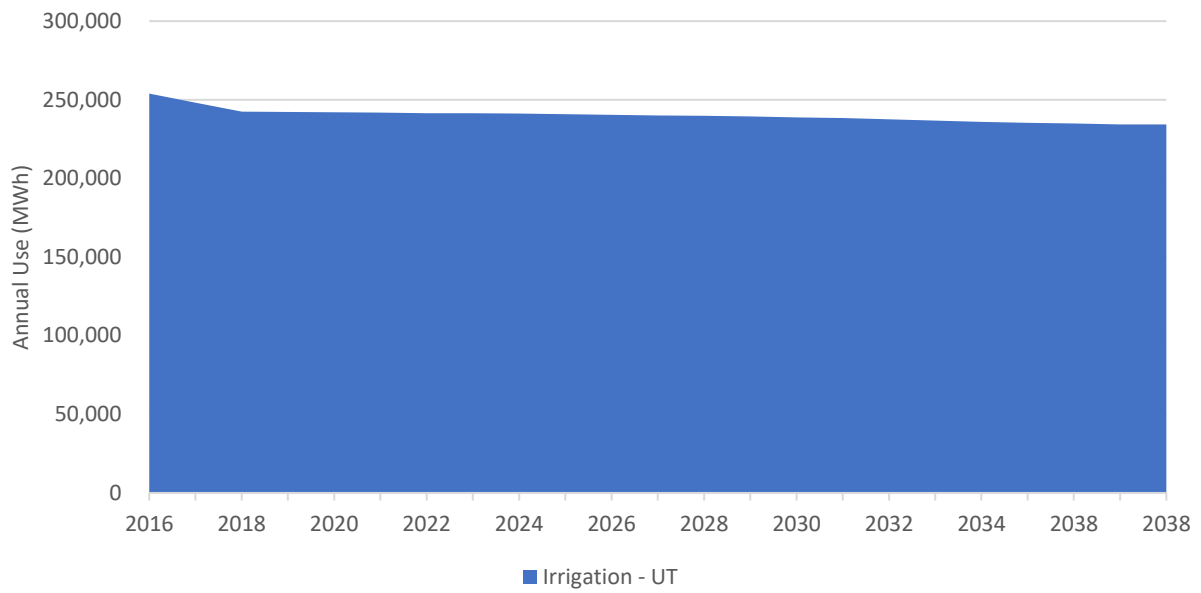
Figure B-29   Washington Irrigation Baseline Projection by Segment (MWh)
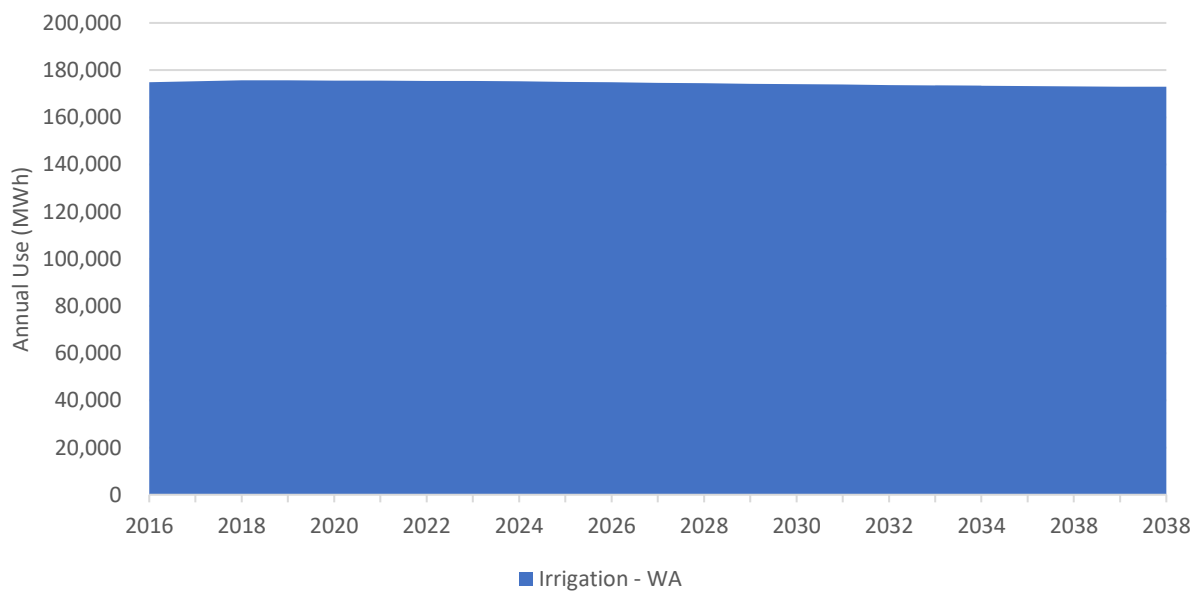
Figure B-30   Wyoming Irrigation Baseline Projection by Segment (MWh)
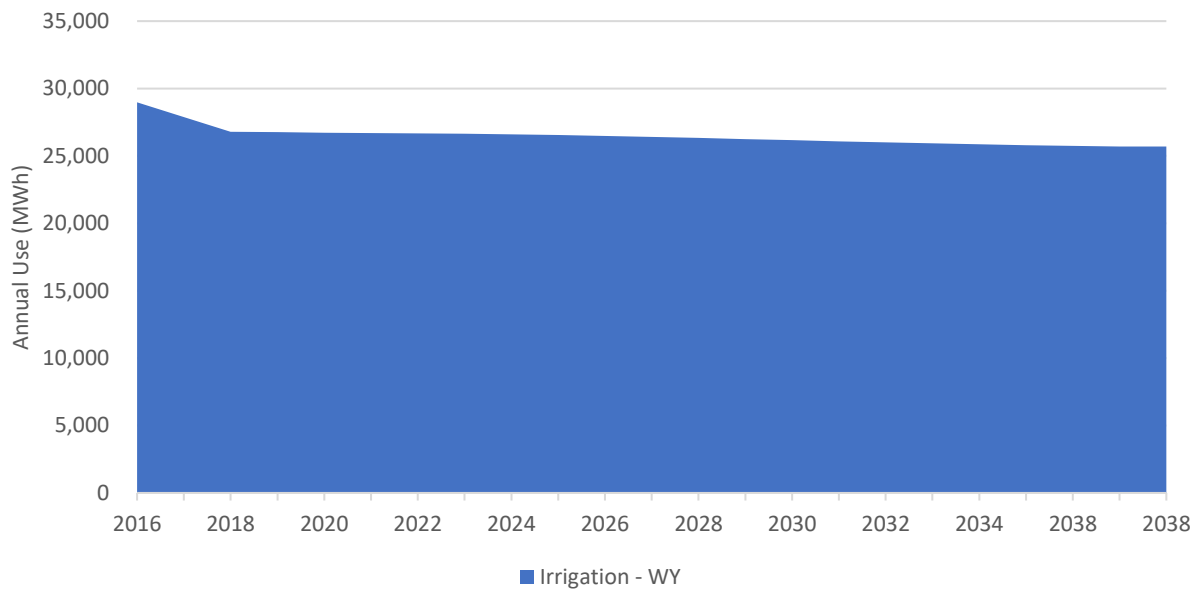
Figure B-31   Overall Street Lighting Baseline Projection by Segment (MWh)
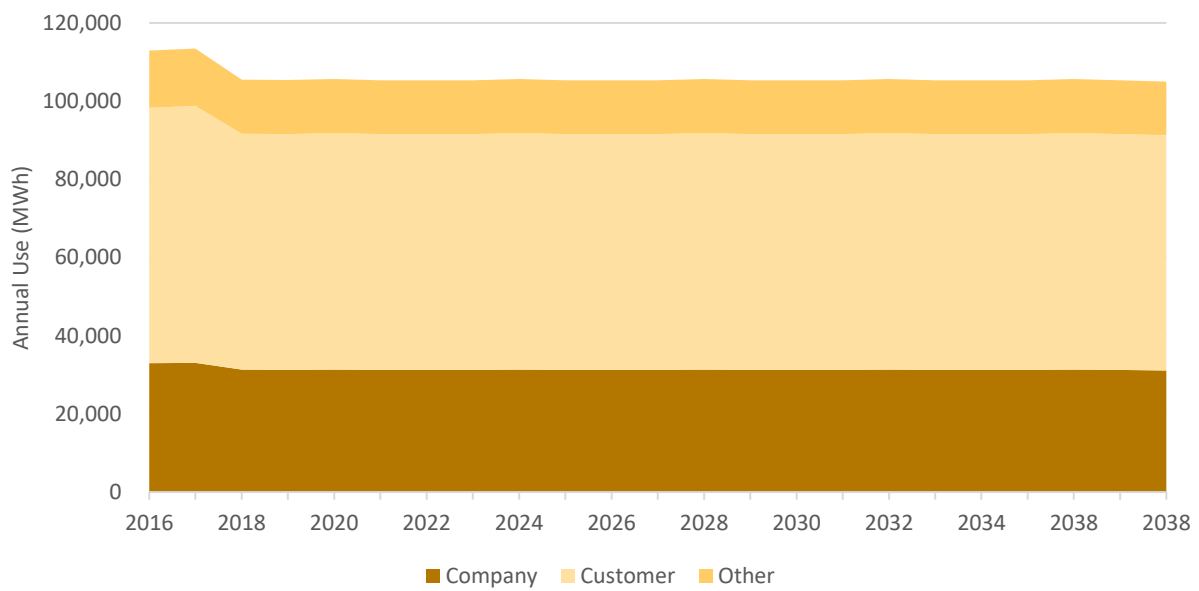
Figure B-32   California Street Lighting Baseline Projection by Segment (MWh)
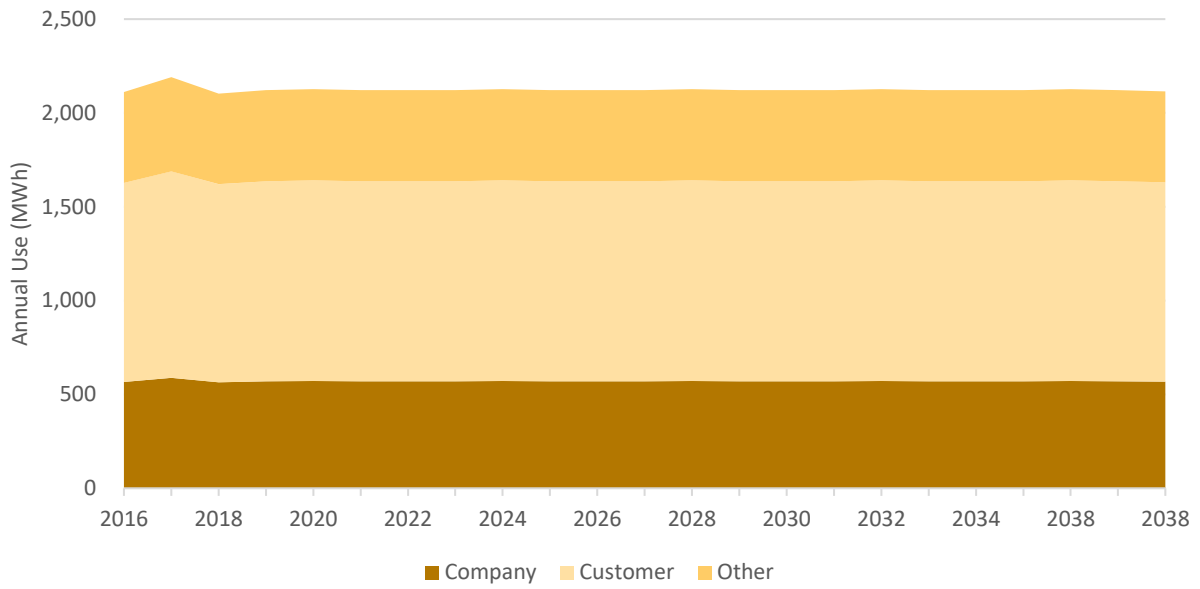
Figure B-33   Idaho Street Lighting Baseline Projection by Segment (MWh)
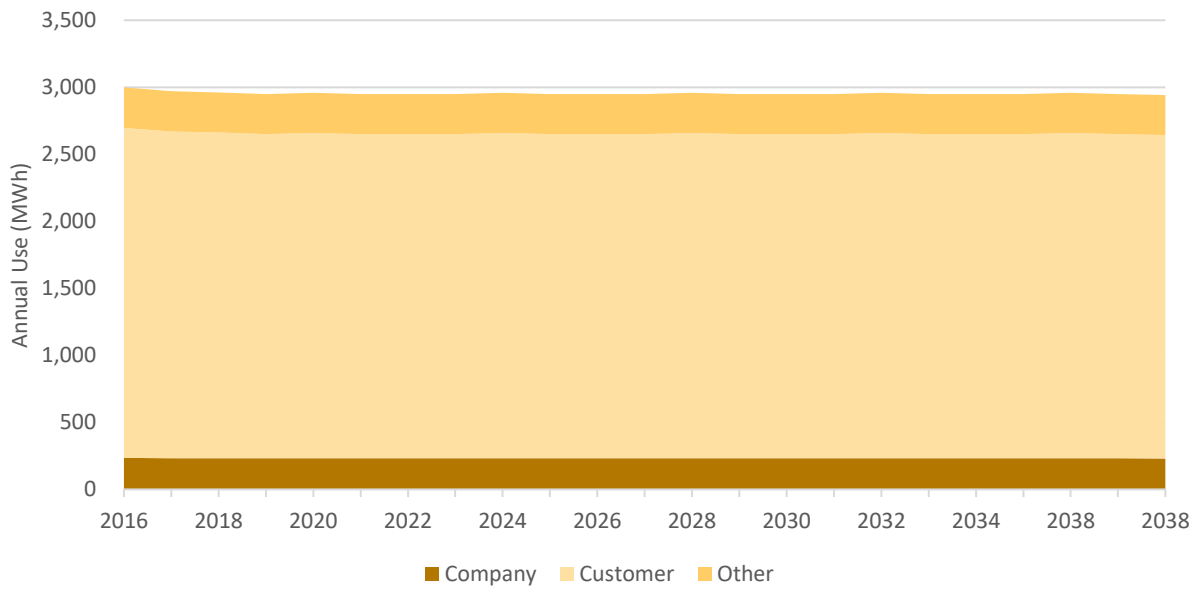
Figure B-34   Utah Street Lighting Baseline Projection by Segment (MWh)
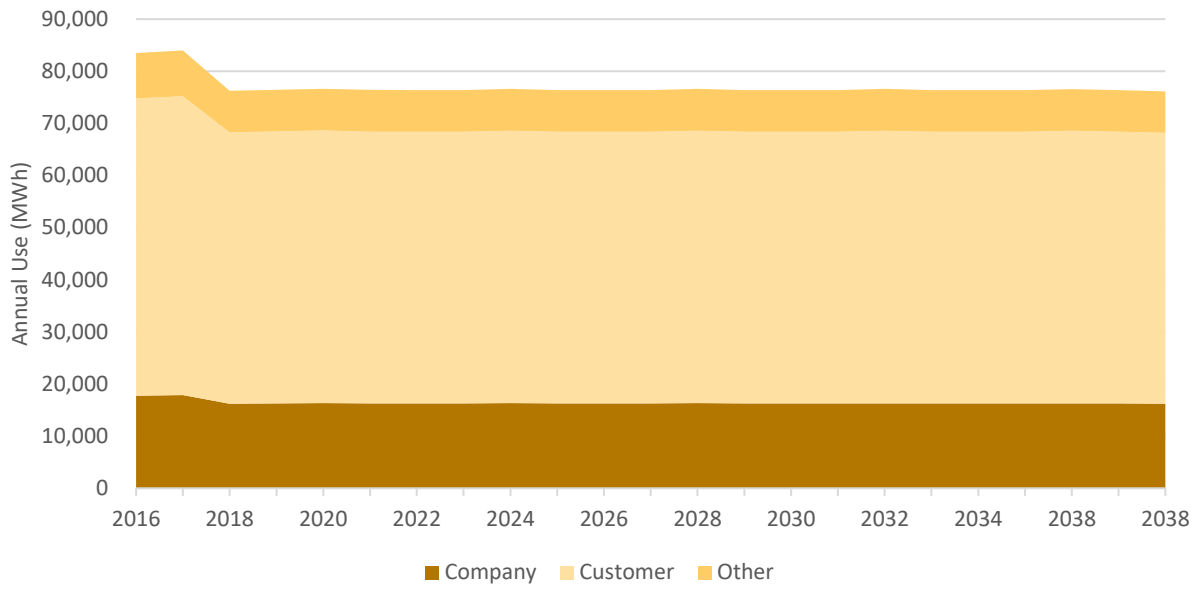
Figure B-35   Washington Street Lighting Baseline Projection by Segment (MWh)
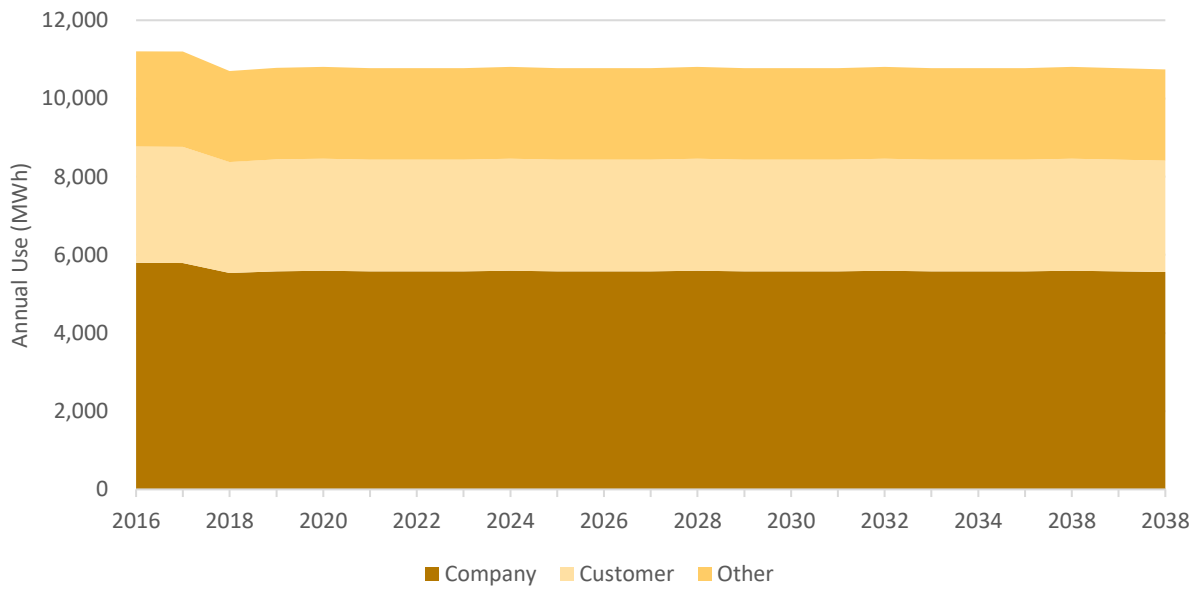
Figure B-36   Wyoming Street Lighting Baseline Projection by Segment (MWh)
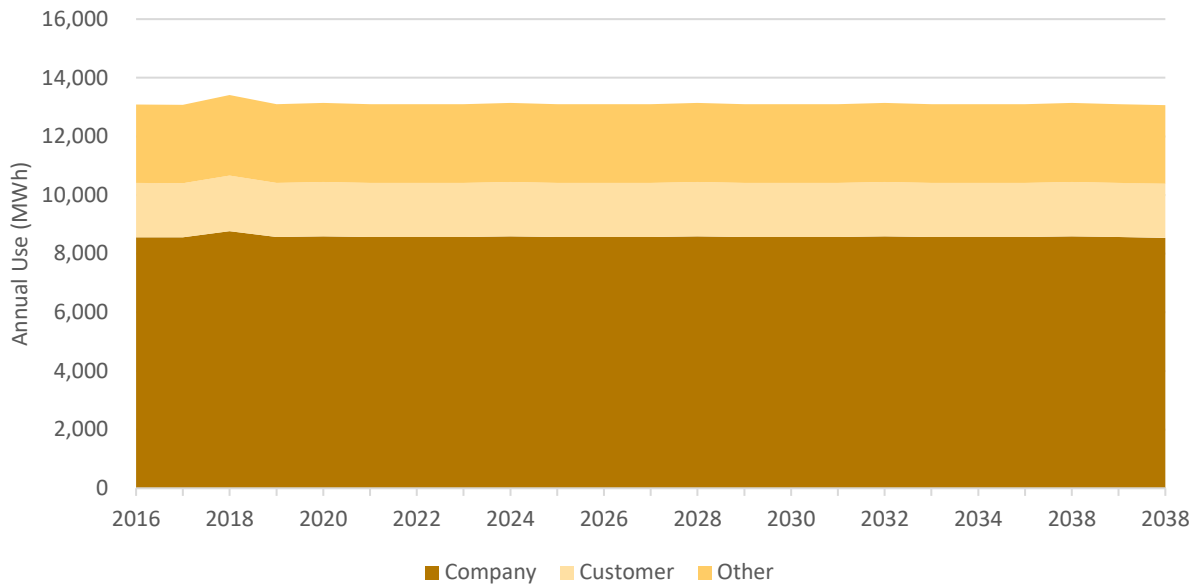
Baseline Projection Pie Charts by State, Sector, and Segment

This section presents pie charts that show the baseline projections of energy consumption for each state territory and sector in the study, broken down by market segment in 2038.

Figure B-37   California Residential Baseline Projection by Segment, 2038

Total: 402,597   MWh
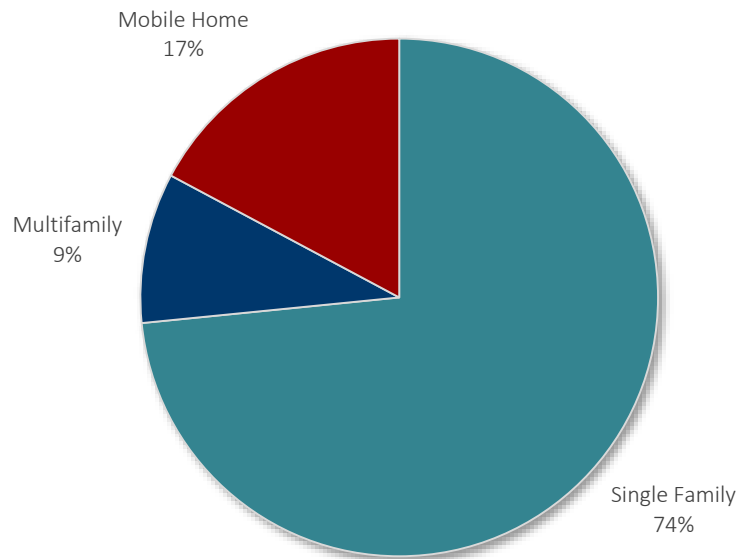
Figure B-38   Idaho Residential Baseline Projection by Segment, 2038

Total: 927,482   MWh
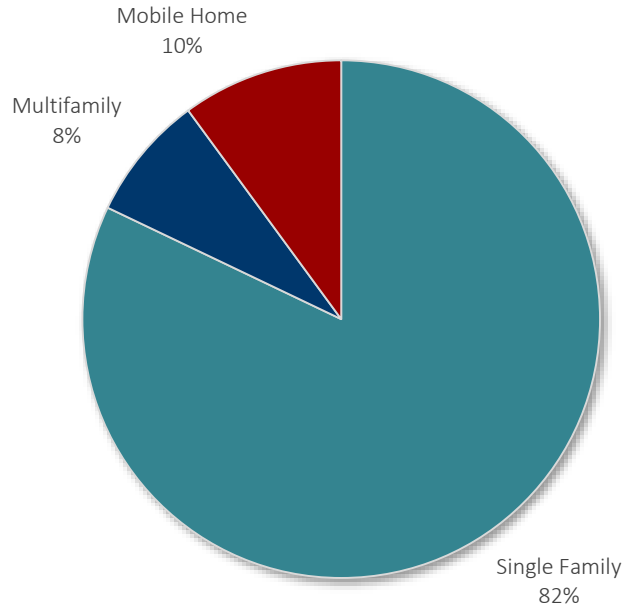
Figure B-39   Utah Residential Baseline Projection by Segment, 2038

Total: 9,361,466   MWh
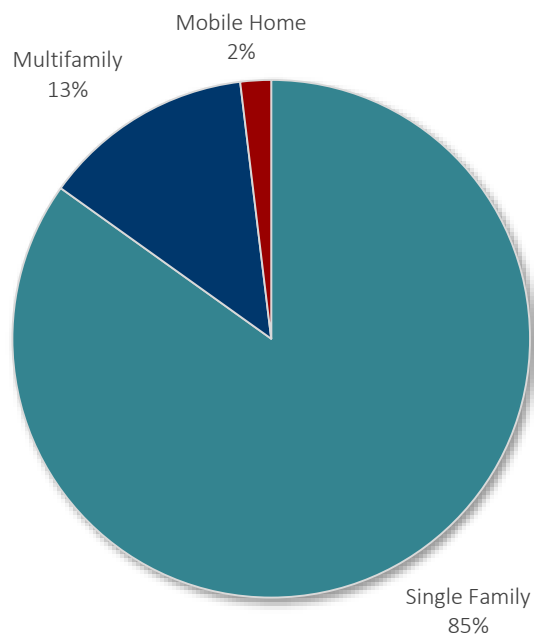
Figure B-40   Washington Residential Baseline Projection by Segment, 2038

Total: 2,066,193   MWh
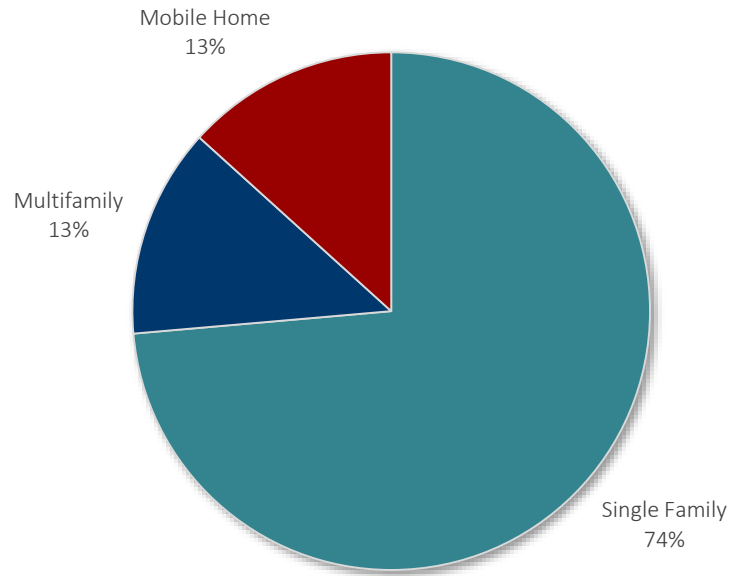
Figure B-41   Wyoming Residential Baseline Projection by Segment, 2038

Total: 836,990   MWh
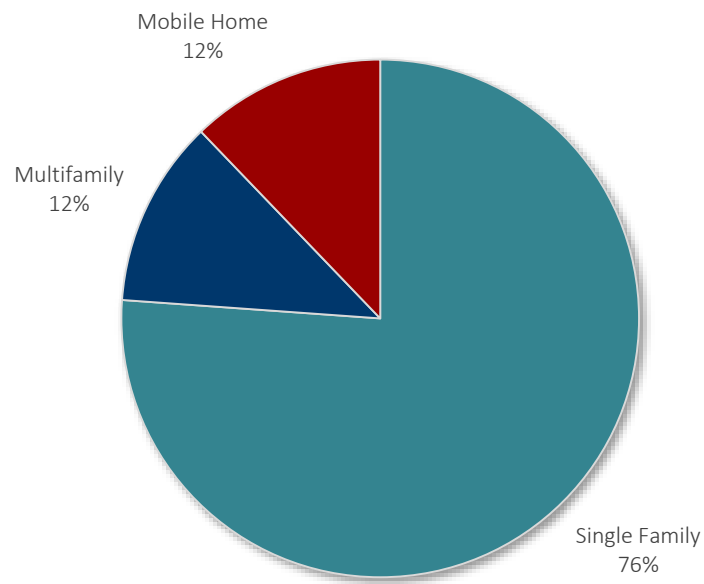
Figure B-42   California Commercial Baseline Projection by Segment, 2038

Total: 209,798   MWh
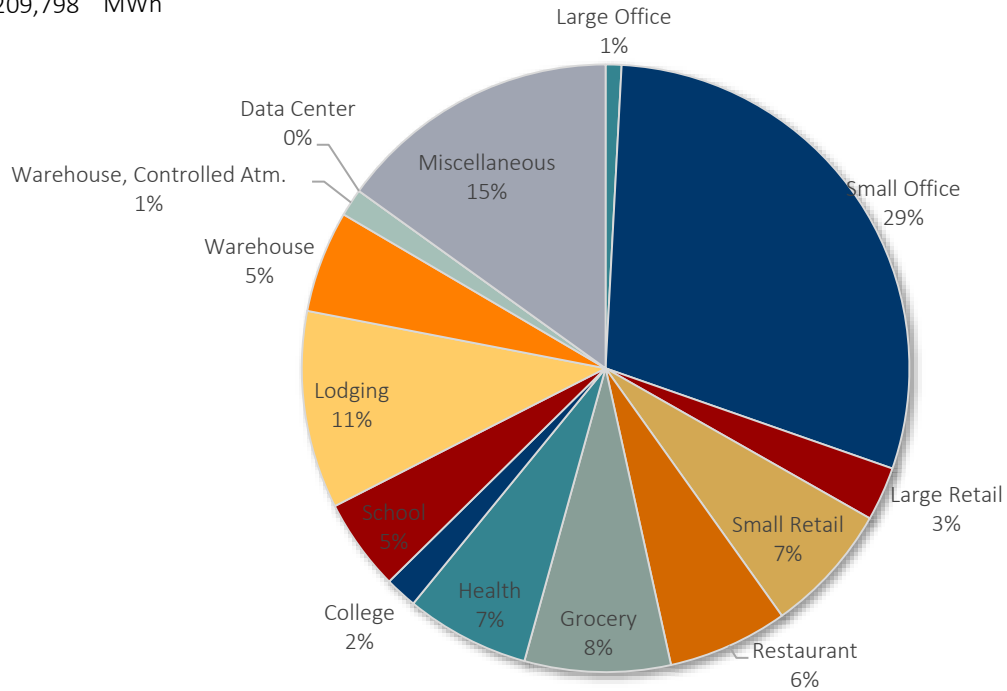
Figure B-43   Idaho Commercial Baseline Projection by Segment, 2038

Total: 720,530   MWh
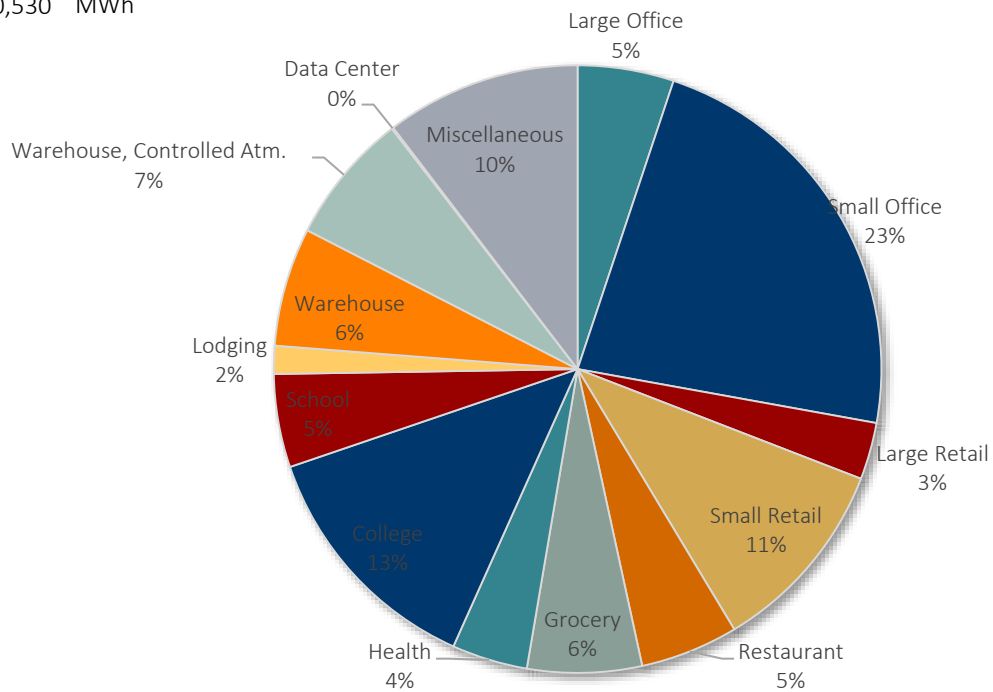
Figure B-44   Utah Commercial Baseline Projection by Segment, 2038

Total: 12,118,586   MWh
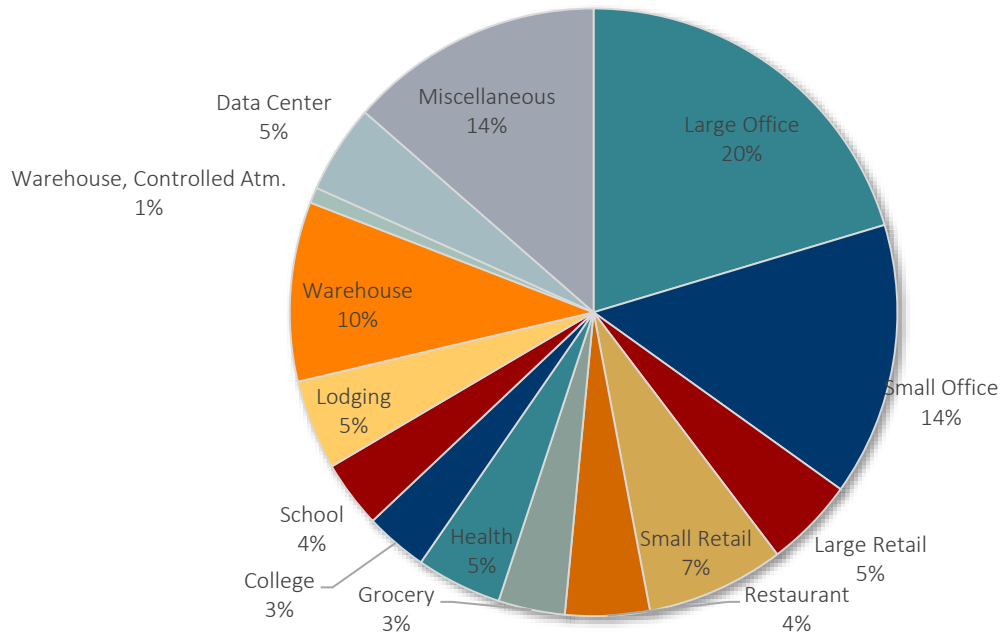
Figure B-45   Washington Commercial Baseline Projection by Segment, 2038

Total: 1,853,792   MWh
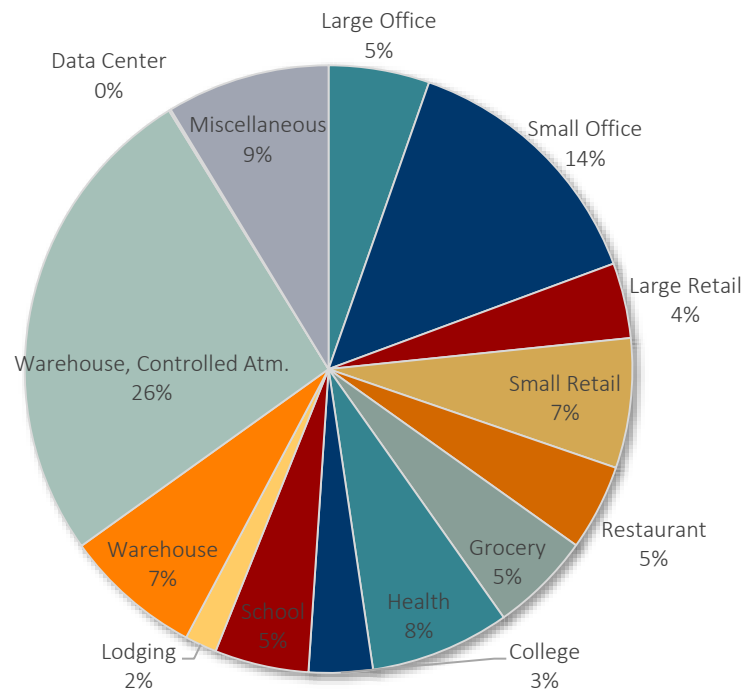
Figure B-46   Wyoming Commercial Baseline Projection by Segment, 2038

Total: 1,664,722 MWh
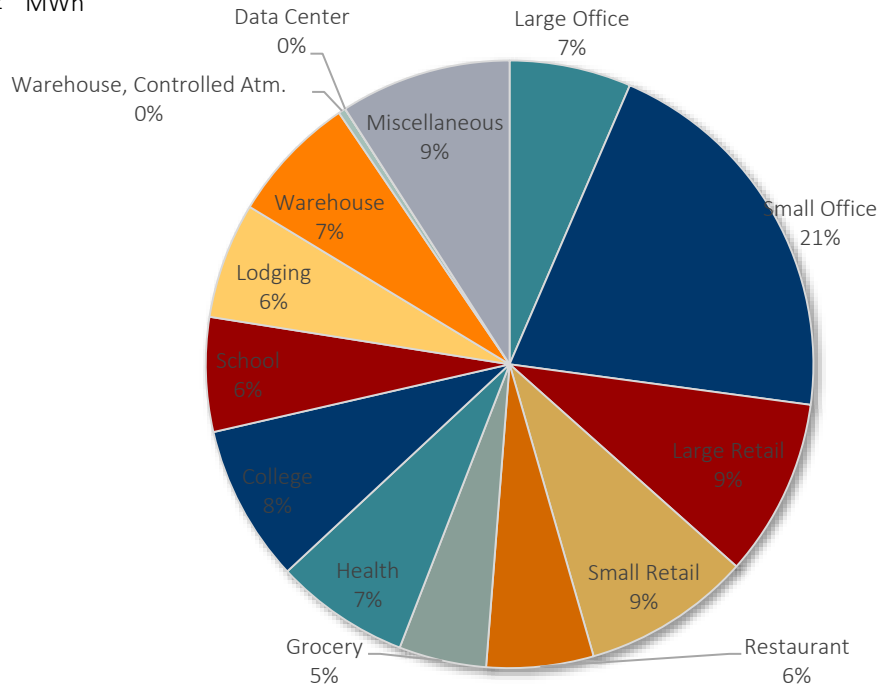
Figure B-47   California Industrial Baseline Projection by Segment, 2038

Total: 80,145 MWh
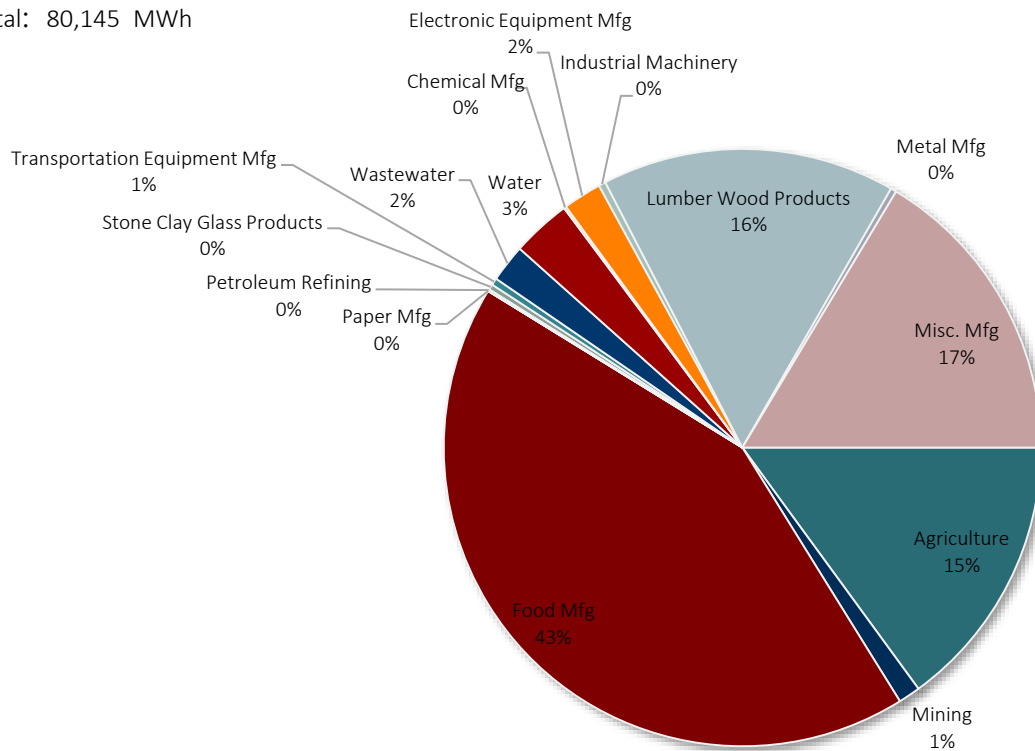
Figure B-48   Idaho Industrial Baseline Projection by Segment, 2038

Total: 314,849 MWh
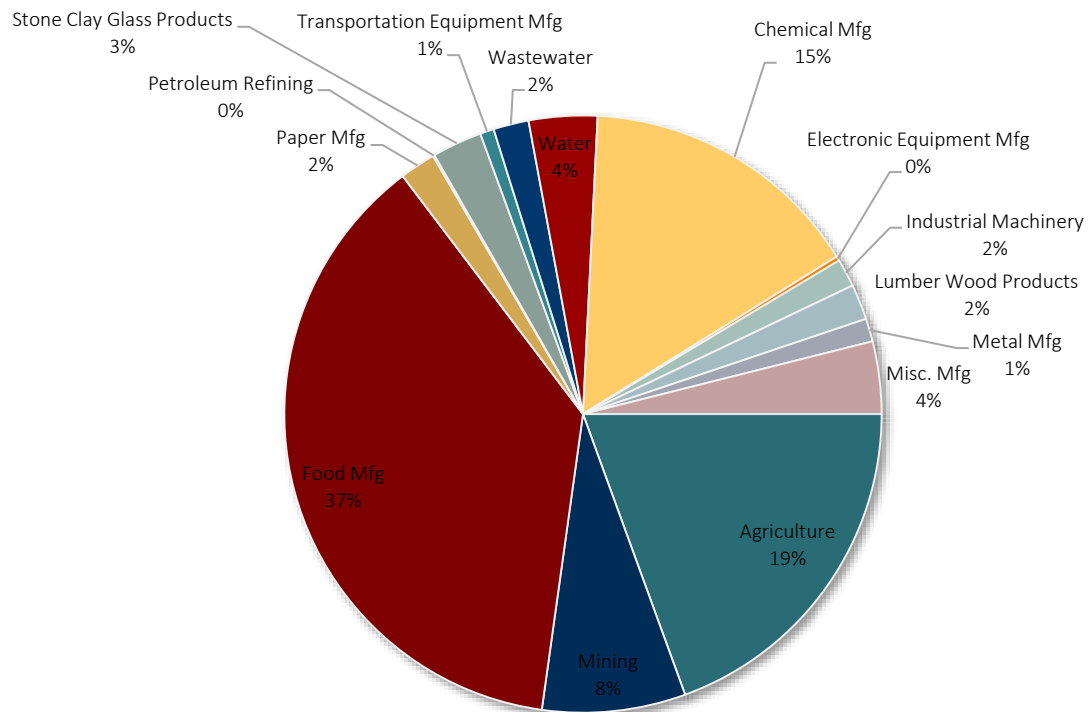
Figure B-49   Utah Industrial Baseline Projection by Segment, 2038

Total: 7,614,576 MWh
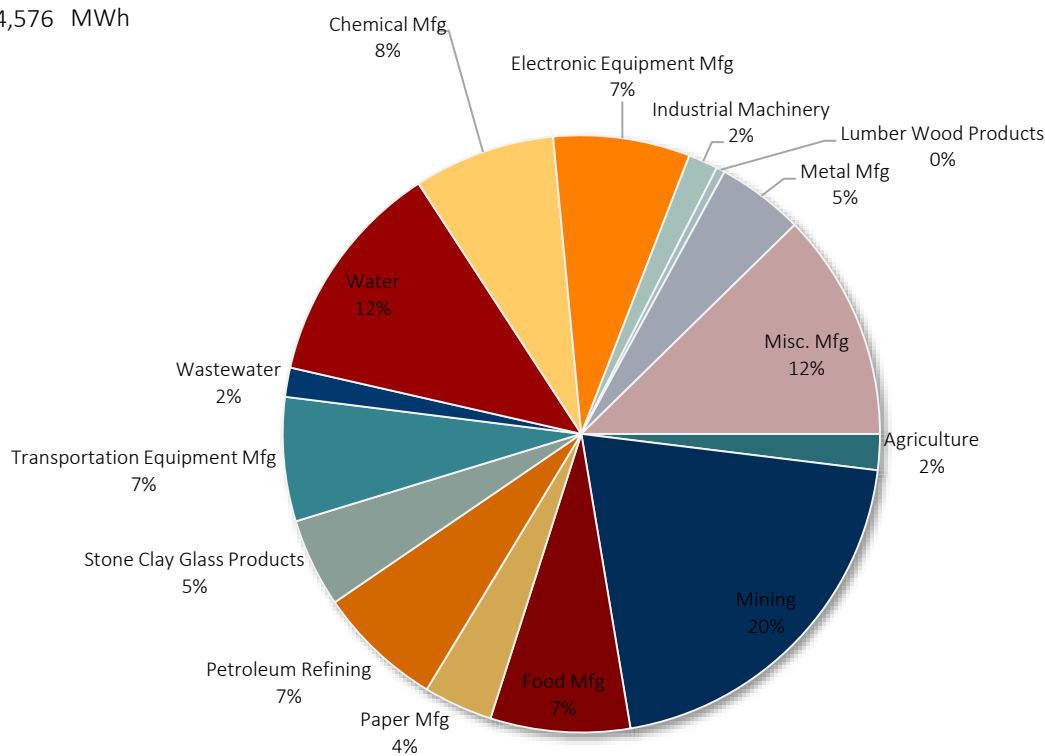
Figure B-50   Washington Industrial Baseline Projection by Segment, 2038

Total: 1,168,972 MWh
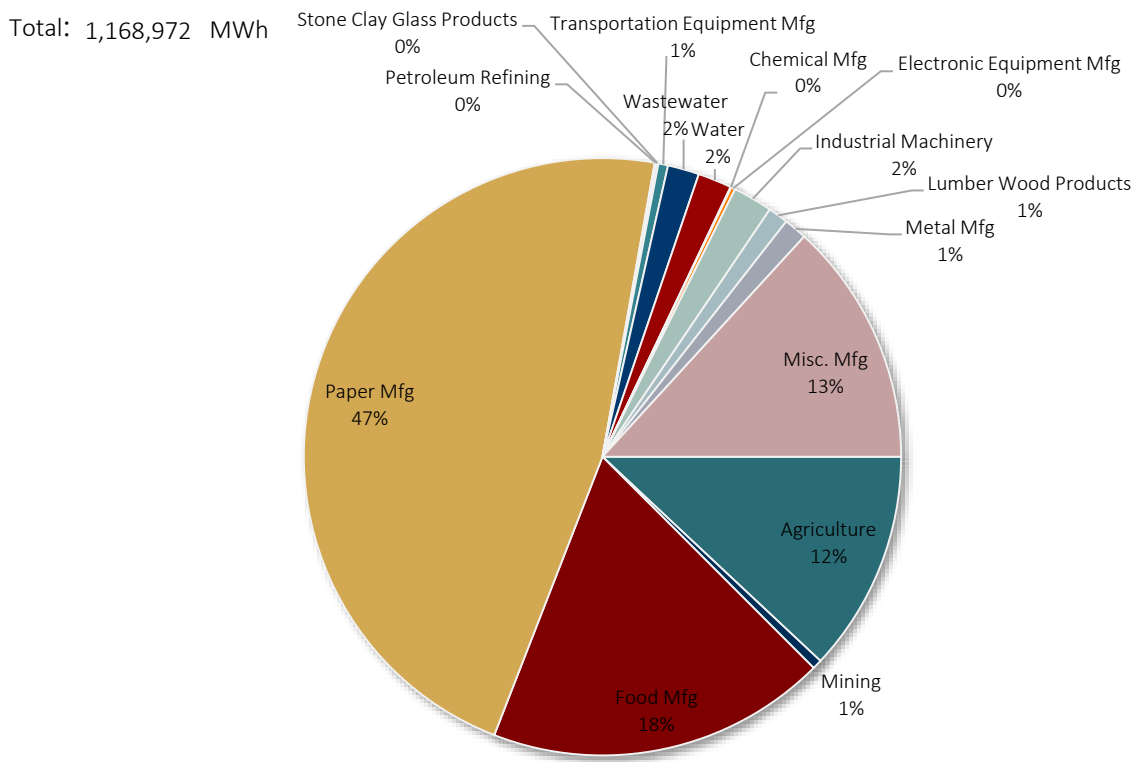
Figure B-51   Wyoming Industrial Baseline Projection by Segment, 2038

Total: 8,163,836 MWh
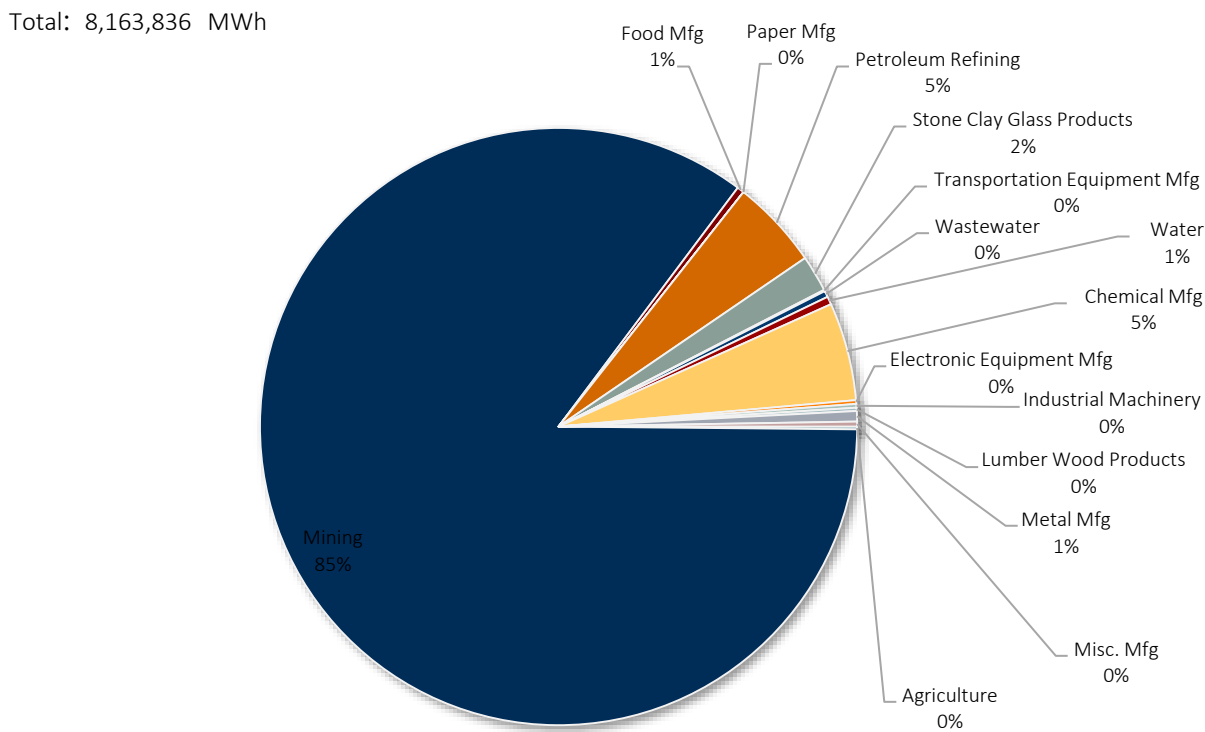
Figure B-52   California Irrigation Baseline Projection by Segment, 2038

Total: 102,649 MWh
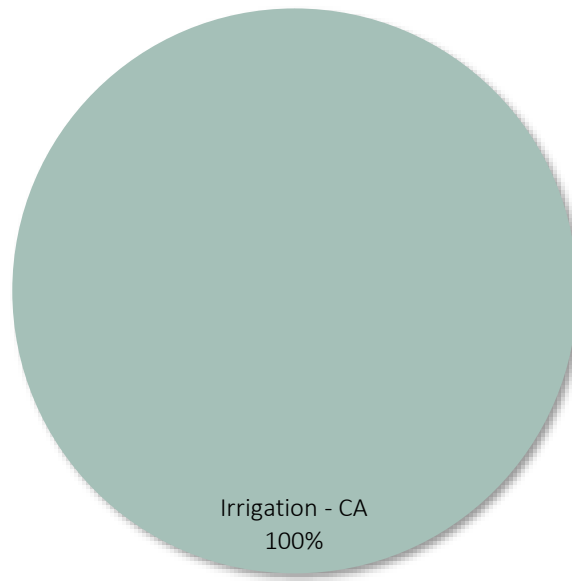
Irrigation - CA
100%

Figure B-53   Idaho Irrigation Baseline Projection by Segment, 2038

Total: 735,021 MWh
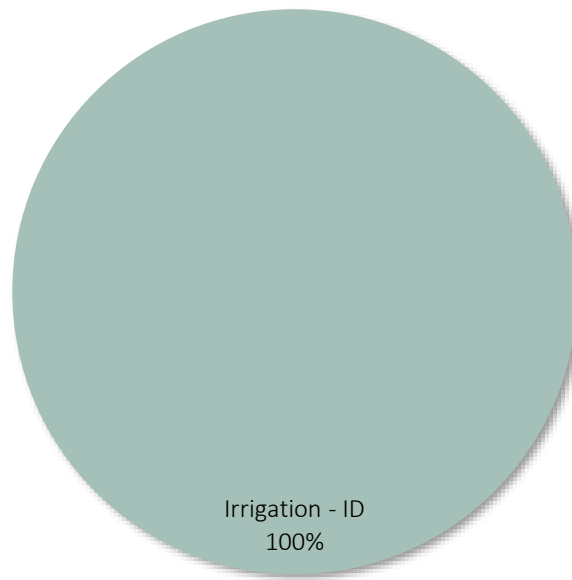
Irrigation - ID
100%

Figure B-54   Utah Irrigation Baseline Projection by Segment, 2038

Total: 234,365   MWh
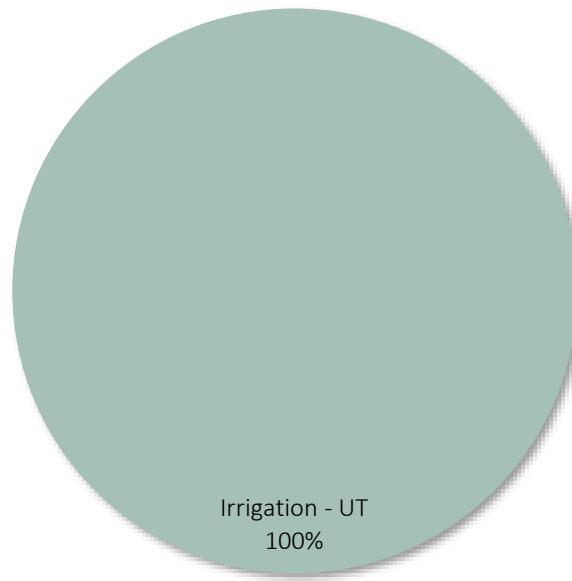
Irrigation - UT
100%

Figure B-55   Washington Irrigation Baseline Projection by Segment, 2038

Total: 172,922   MWh
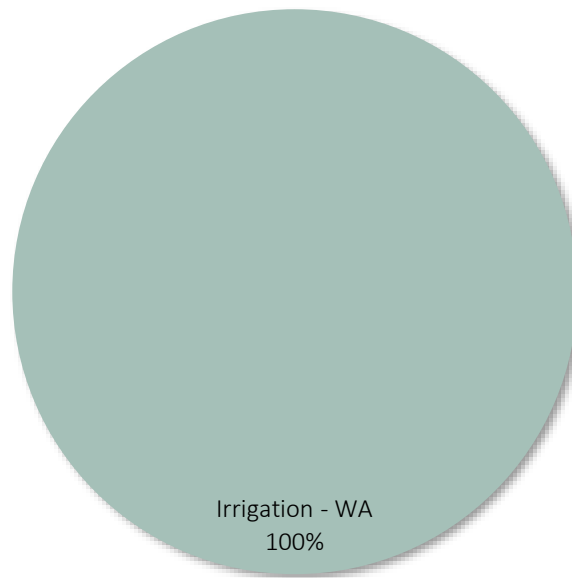
Irrigation - WA
100%

Figure B-56   Wyoming Irrigation Baseline Projection by Segment, 2038

Total: 25,697 MWh
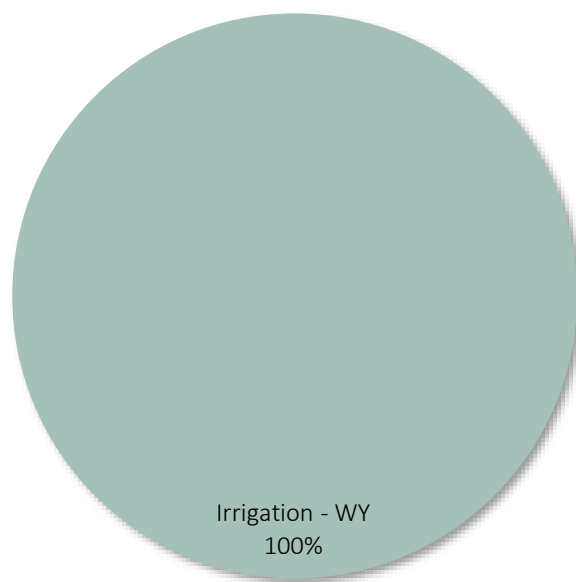
Figure B-57   California Street Lighting Baseline Projection by Segment, 2038

Total: 2,116 MWh
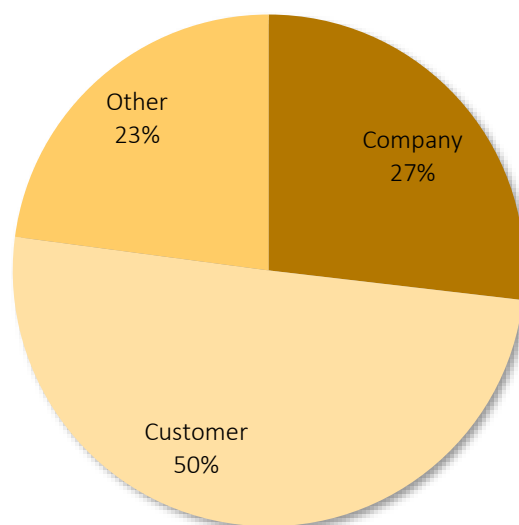
Figure B-58   Idaho Street Lighting Baseline Projection by Segment, 2038

Total: 2,942 MWh
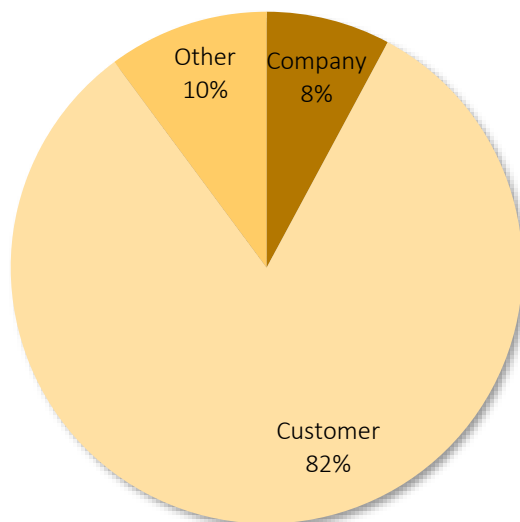
Figure B-59   Utah Street Lighting Baseline Projection by Segment, 2038

Total: 76,166 MWh
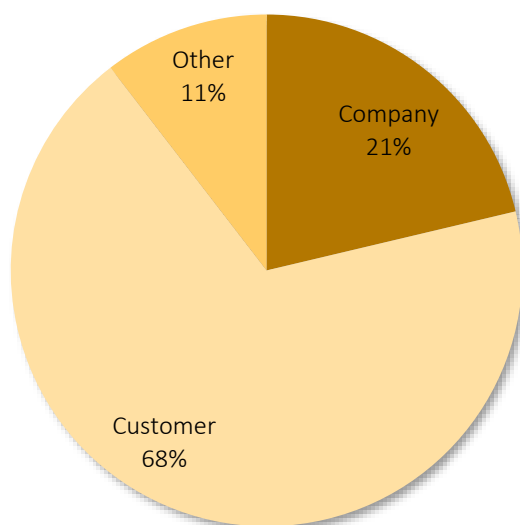
Figure B-60   Washington Street Lighting Baseline Projection by Segment, 2038

Total: 10,744 MWh
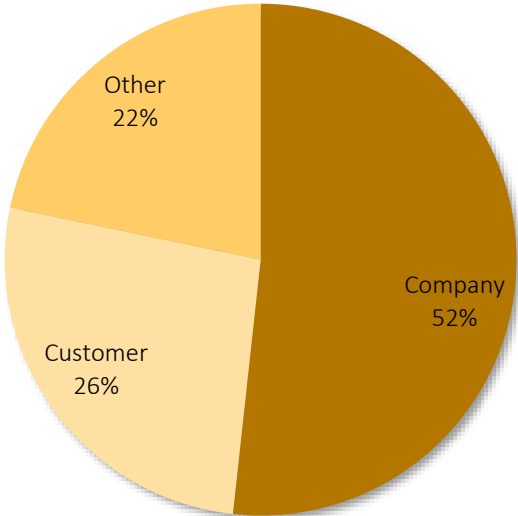
Figure B-61   Wyoming Street Lighting Baseline Projection by Segment, 2038

Total: 13,062 MWh
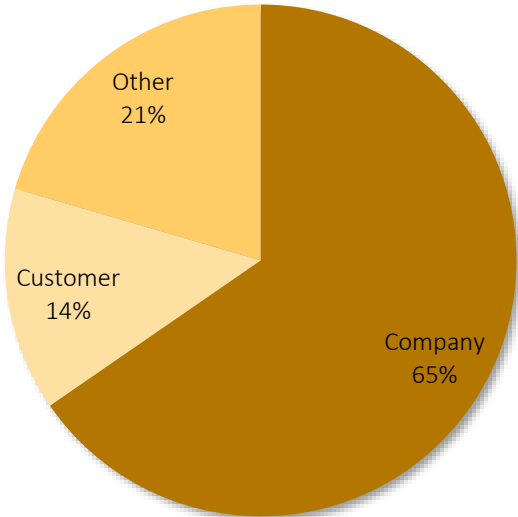
Baseline Projections Pie Charts by State, Sector, and End Use

This section presents pie charts that show the baseline projections of energy consumption for each state territory and sector in the study, broken down by end use in 2038.

Figure B-62   California Residential Baseline Projection by End Use, 2038

Total: 402,597   MWh
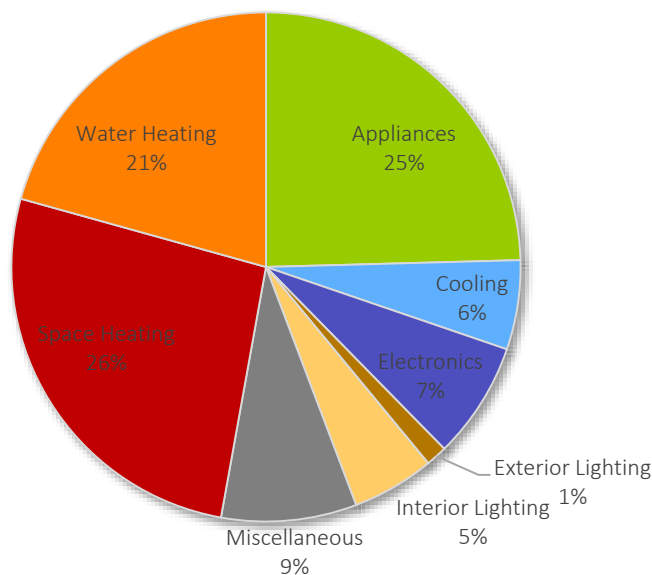
Figure B-63   Idaho Residential Baseline Projection by End Use, 2038

Total: 927,482   MWh
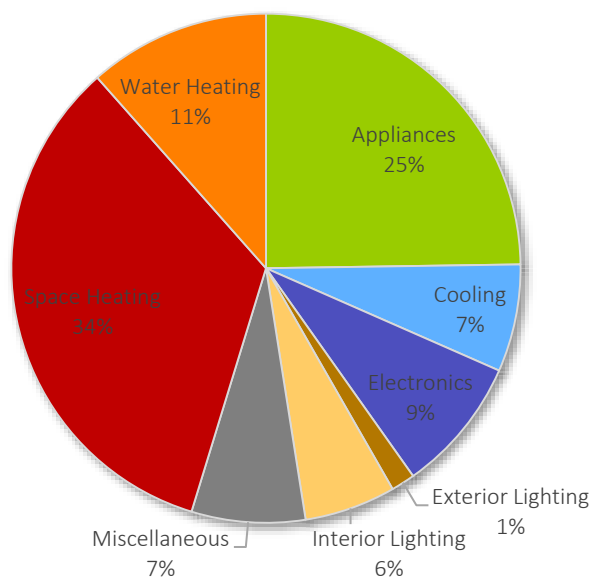
Figure B-64   Utah Residential Baseline Projection by End Use, 2038

Total: 9,361,466   MWh
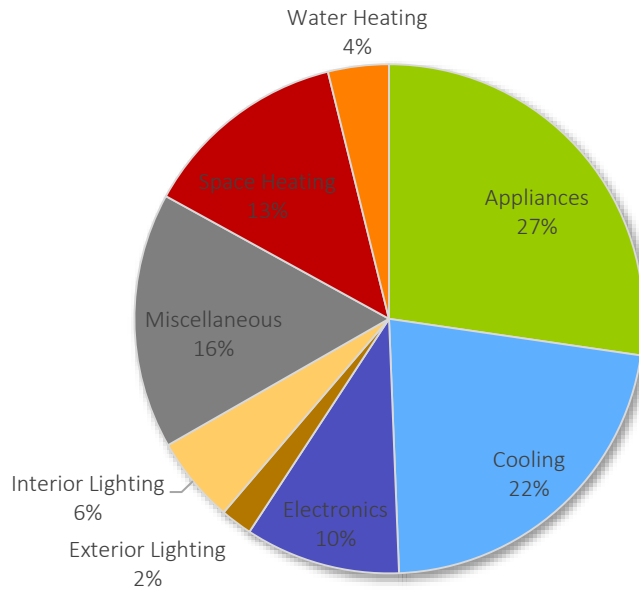
Figure B-65   Washington Residential Baseline Projection by End Use, 2038

Total: 2,066,193   MWh
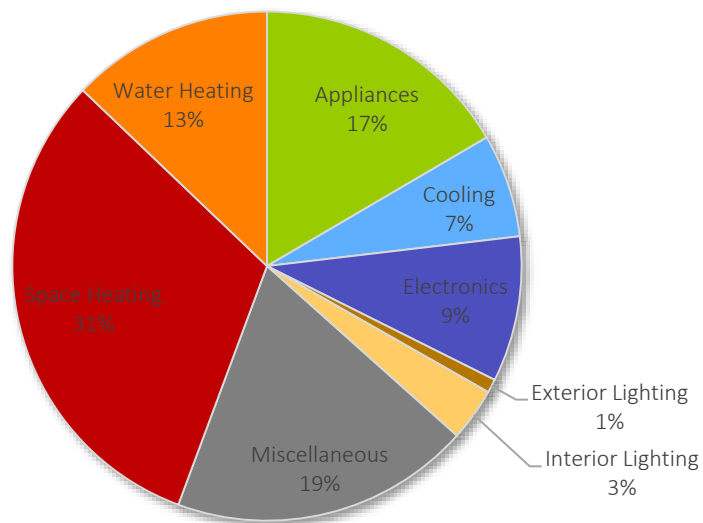
Figure B-66   Wyoming Residential Baseline Projection by End Use, 2038

Total: 836,990   MWh
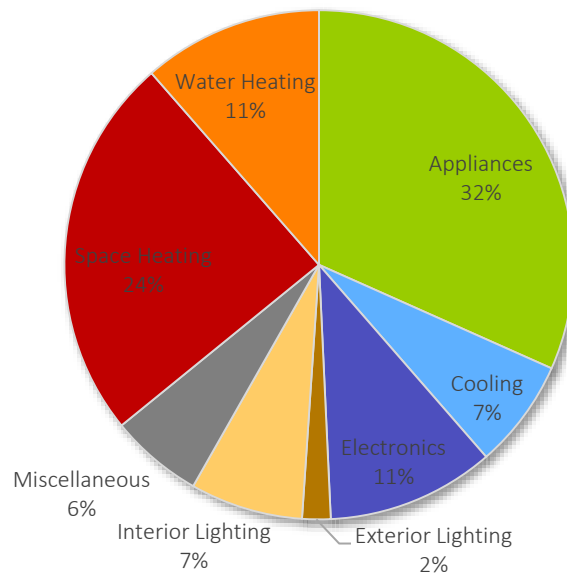
Figure B-67   California Commercial Baseline Projection by End Use, 2038

Total: 209,798   MWh
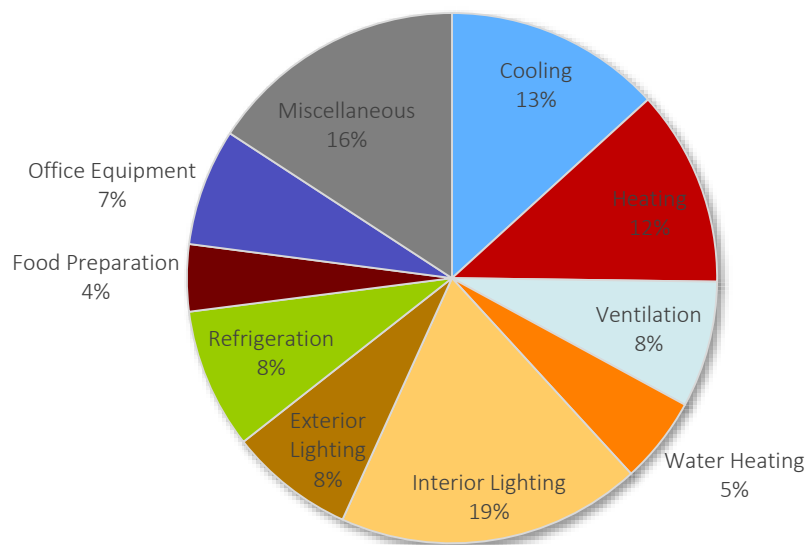
Figure B-68   Idaho Commercial Baseline Projection by End Use, 2038

Total: 720,530   MWh
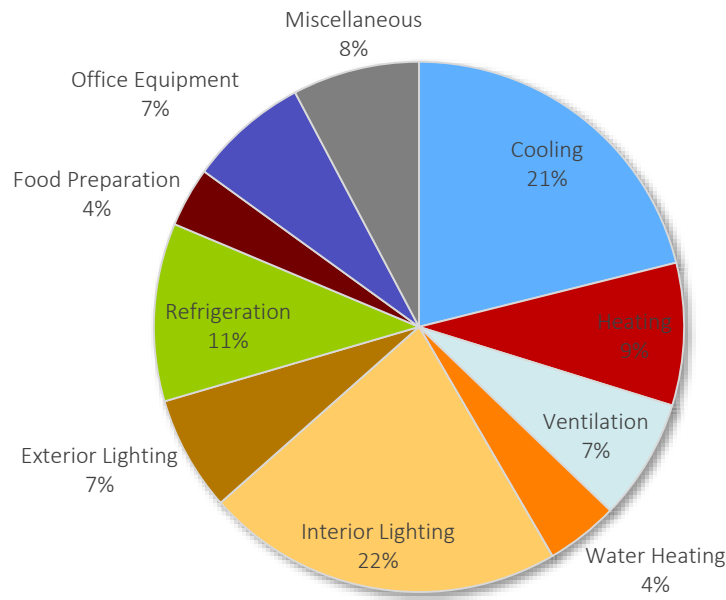
Figure B-69   Utah Commercial Baseline Projection by End Use, 2038

Total: 12,118,586   MWh
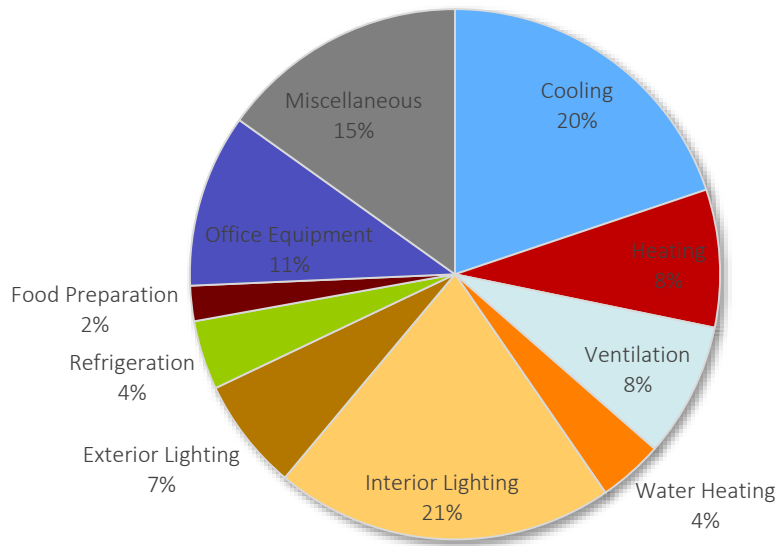
Figure B-70   Washington Commercial Baseline Projection by End Use, 2038

Total: 1,853,792   MWh
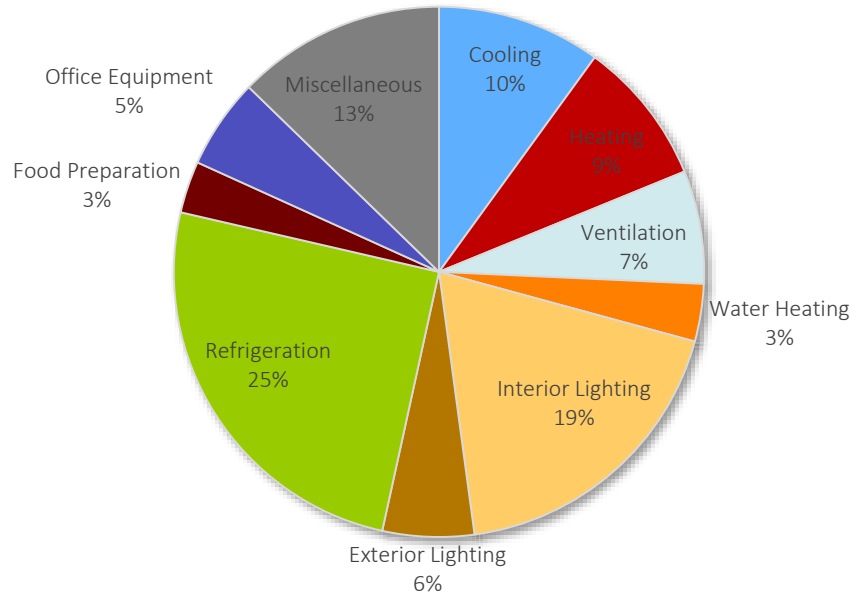
Figure B-71   Wyoming Commercial Baseline Projection by End Use, 2038

Total: 1,664,722   MWh
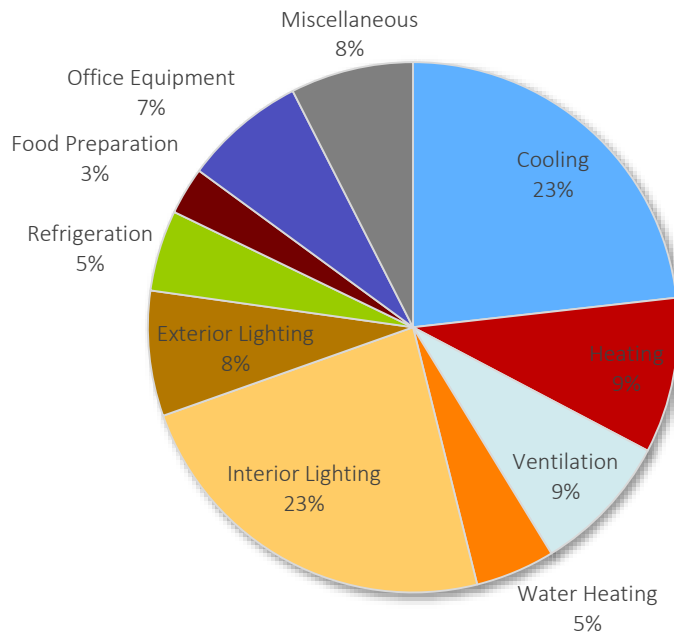
Figure B-72   California Industrial Baseline Projection by End Use, 2038

Total: 80,145   MWh
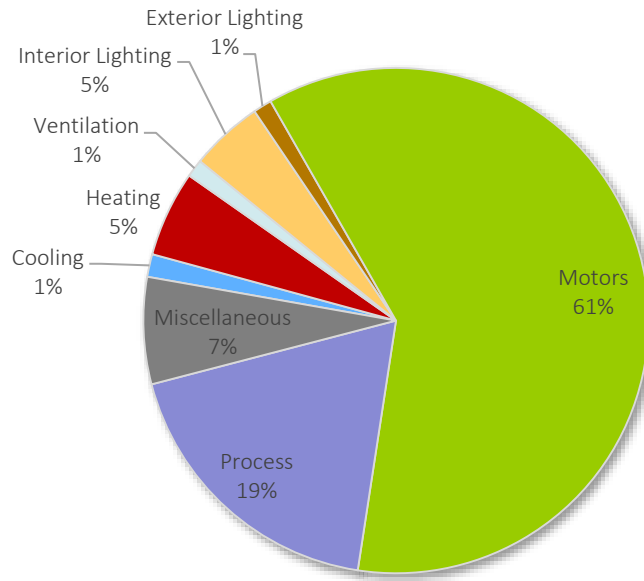
Figure B-73   Idaho Industrial Baseline Projection by End Use, 2038

Total: 314,849   MWh
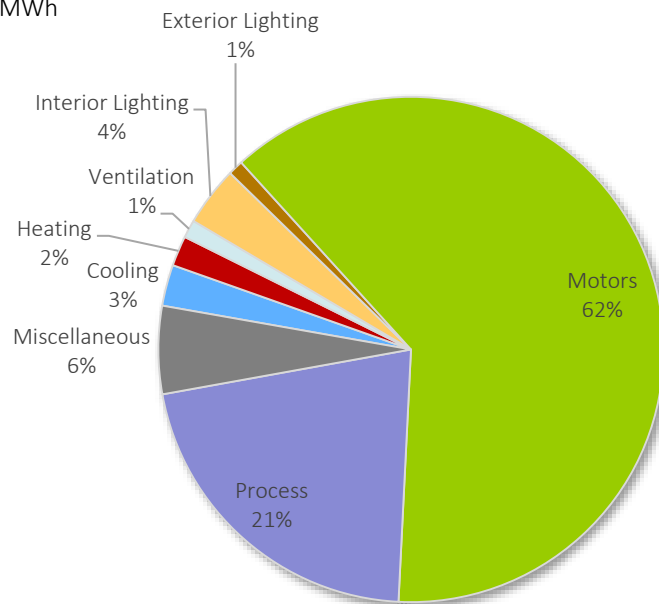
Figure B-74   Utah Industrial Baseline Projection by End Use, 2038

Total: 7,614,576   MWh
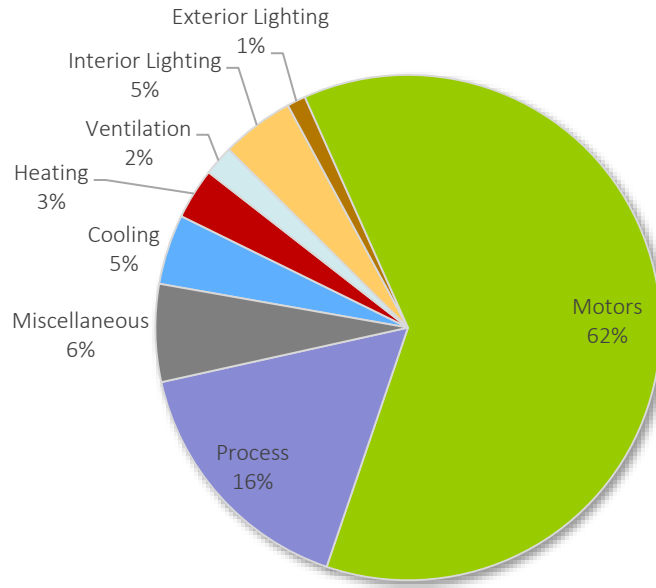
Figure B-75   Washington Industrial Baseline Projection by End Use, 2038

Total: 1,168,972   MWh
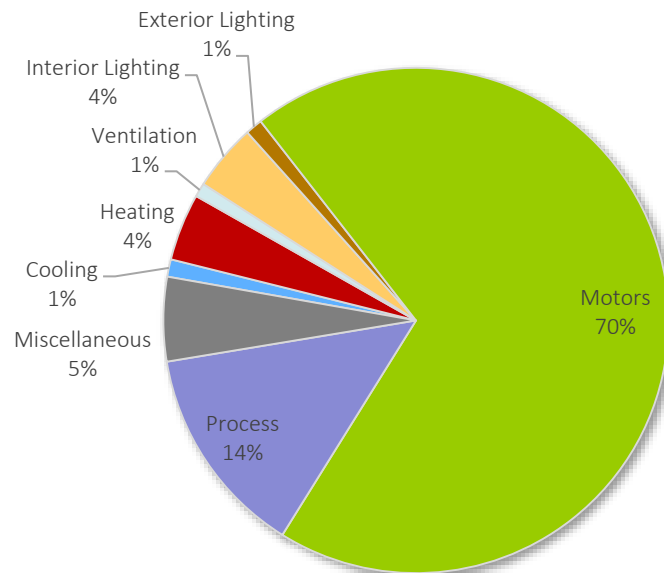
Figure B-76   Wyoming Industrial Baseline Projection by End Use, 2038

Total: 8,163,836   MWh
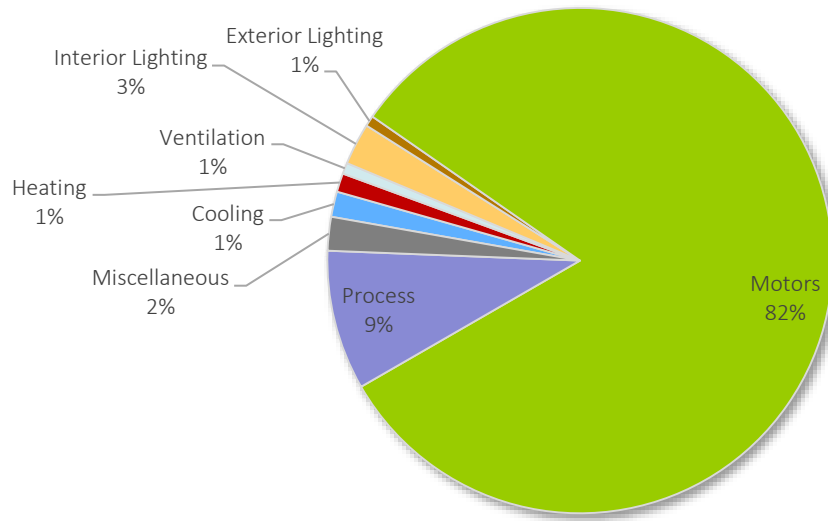
Figure B-77   California Irrigation Baseline Projection by End Use, 2038

Total: 102,649   MWh
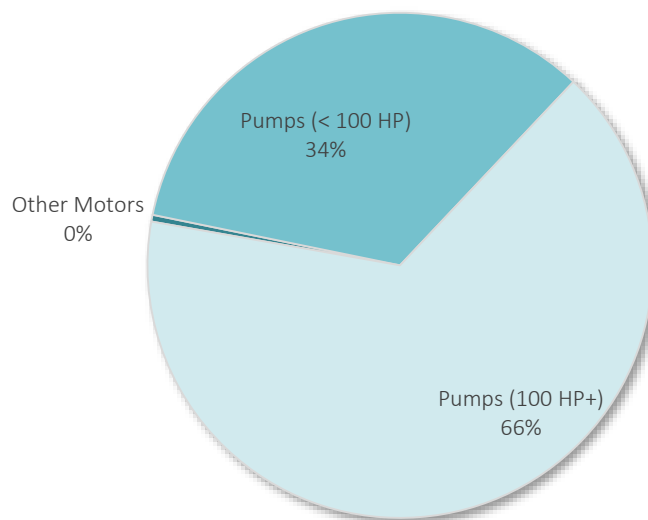
Figure B-78   Idaho Irrigation Baseline Projection by End Use, 2038

Total: 735,021   MWh
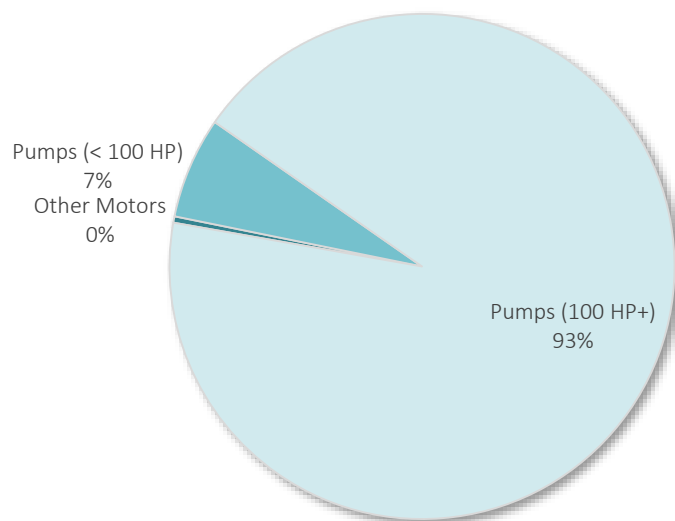
Figure B-79   Utah Irrigation Baseline Projection by End Use, 2038

Total: 234,365   MWh
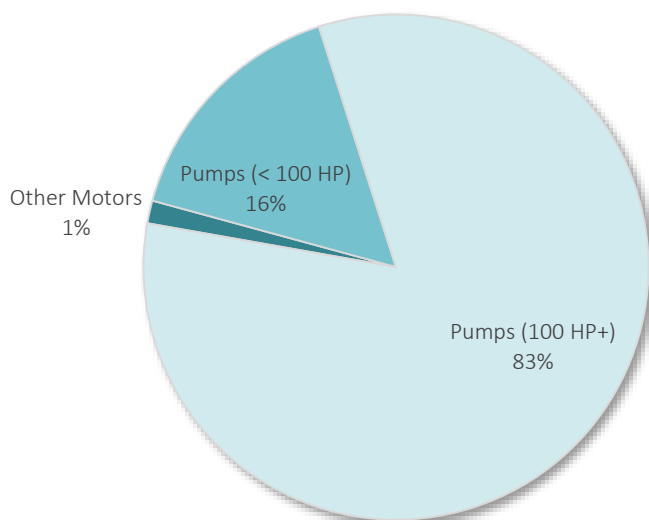
Figure B-80   Washington Irrigation Baseline Projection by End Use, 2038

Total: 172,922   MWh
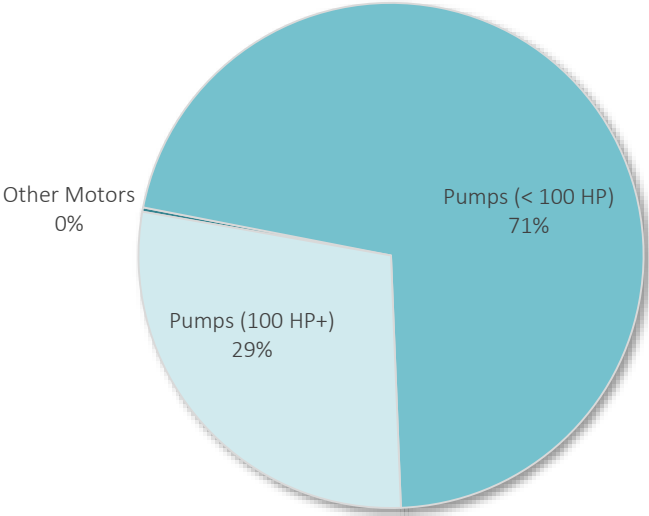
Figure B-81   Wyoming Irrigation Baseline Projection by End Use, 2038

Total: 25,697   MWh
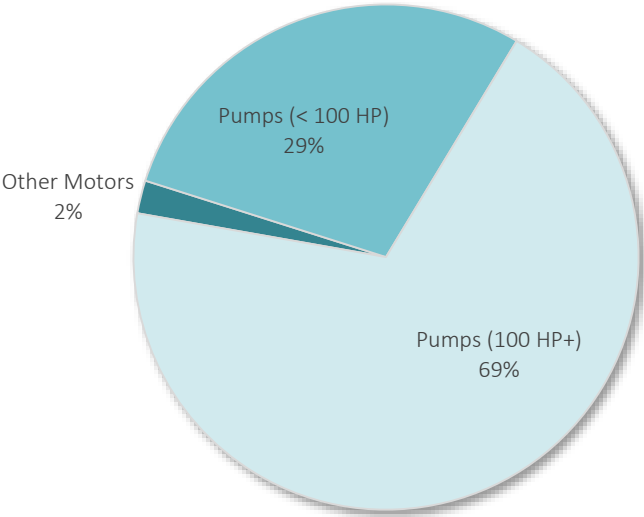
Street Lighting consists of a single end use and is not shown here.

TECHNICAL ACHIEVABLE POTENTIAL PIE CHARTS

This section provides pie charts that show the Technical Achievable Potential for each state territory and sector in the study, broken down by end use in 2038.

Figure C-1   California Residential Technical Achievable Potential by End Use, 2038

Total: 126,785   MWh
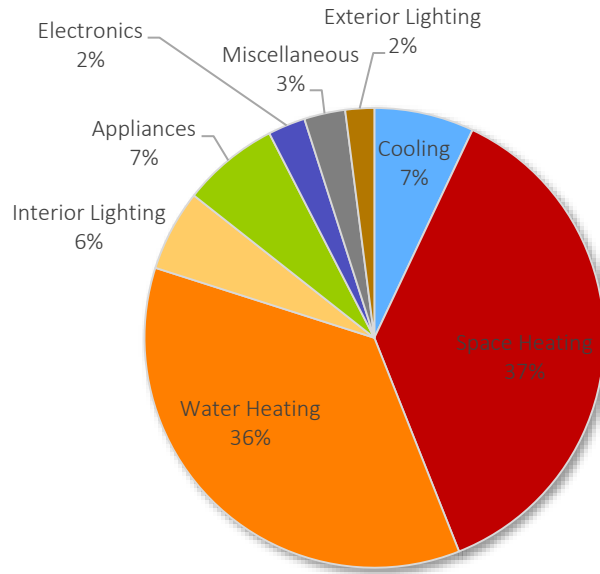
Figure C-2   Idaho Residential Technical Achievable Potential by End Use, 2038

Total: 206,534   MWh
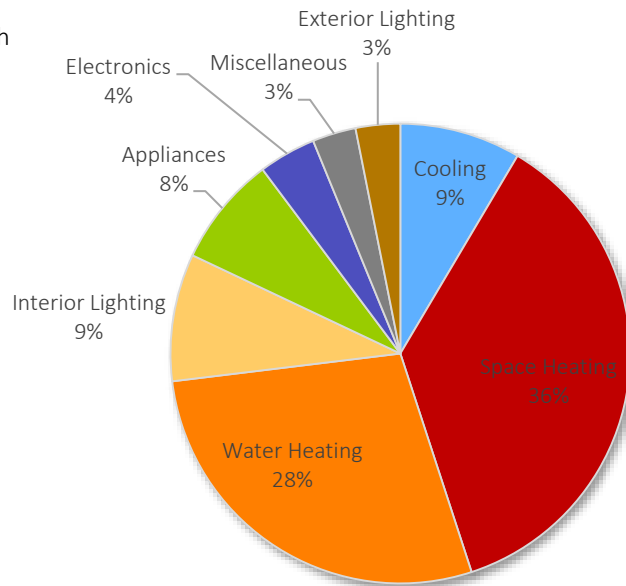
Figure C-3   *Utah Residential Technical Achievable Potential by End Use, 2038*

Total: 1,660,103 MWh

- Cooling 26%
- Space Heating 23%
- Water Heating 13%
- Interior Lighting 11%
- Appliances 11%
- Electronics 6%
- Miscellaneous 6%
- Exterior Lighting 4%
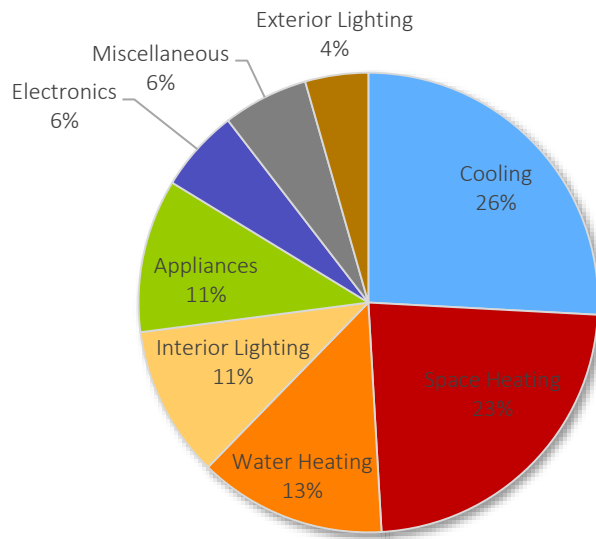
Figure C-4   *Washington Residential Technical Achievable Potential by End Use, 2038*

Total: 455,686 MWh

- Space Heating 39%
- Water Heating 31%
- Cooling 8%
- Appliances 7%
- Interior Lighting 6%
- Miscellaneous 5%
- Electronics 2%
- Exterior Lighting 2%
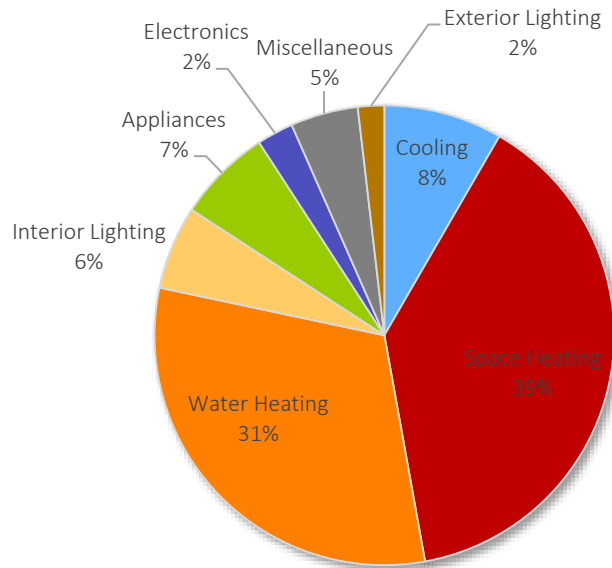
Figure C-5   Wyoming Residential Technical Achievable Potential by End Use, 2038

Total: 225,090   MWh
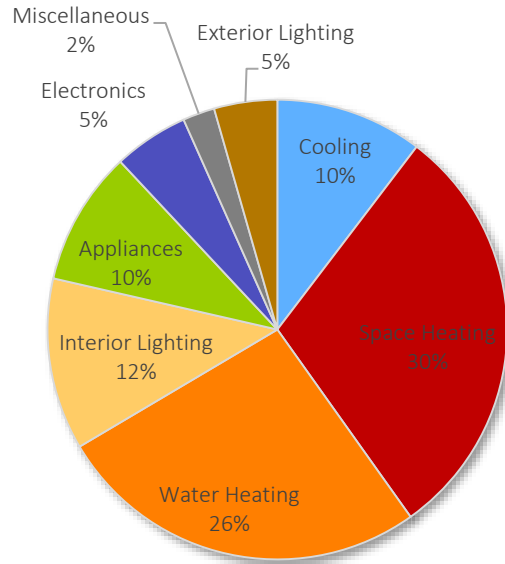
Figure C-6   California Commercial Technical Achievable Potential by End Use, 2038

Total: 63,347   MWh
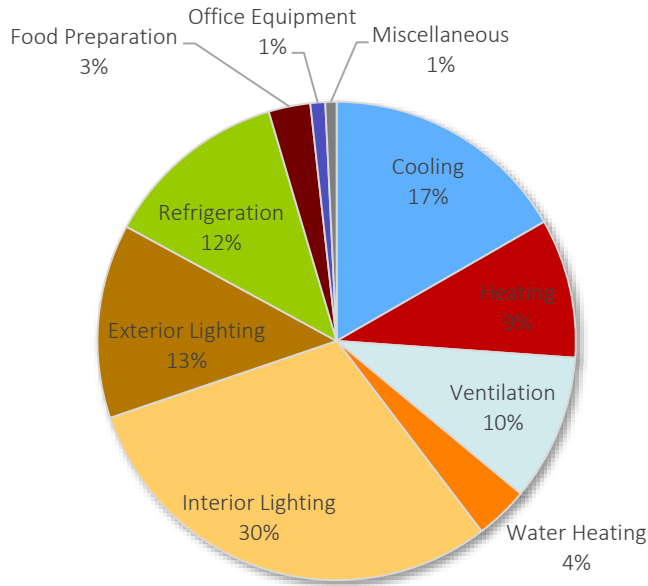
Figure C-7   Idaho Commercial Technical Achievable Potential by End Use, 2038

Total: 196,402 MWh
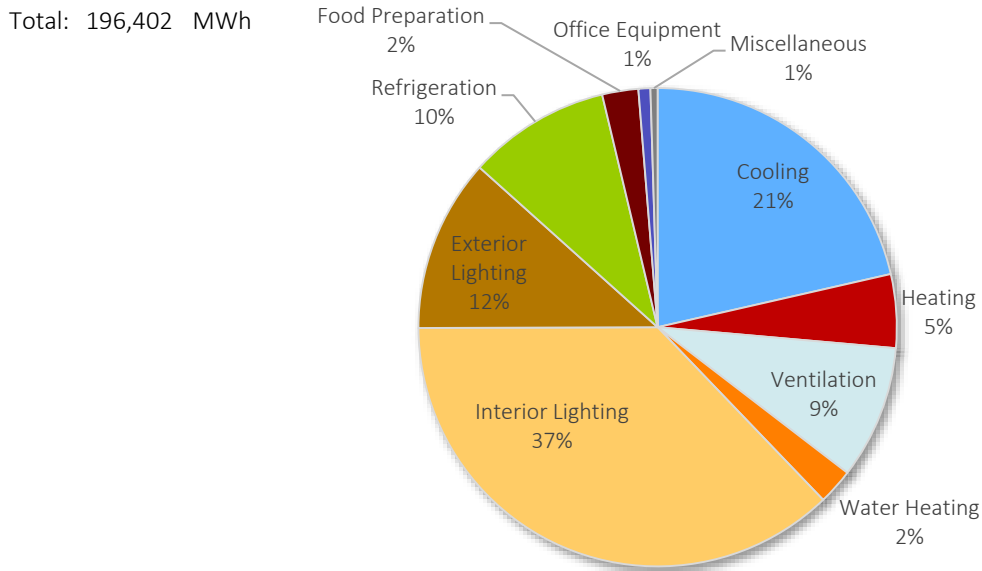
Figure C-8   Utah Commercial Technical Achievable Potential by End Use, 2038

Total: 3,287,307 MWh
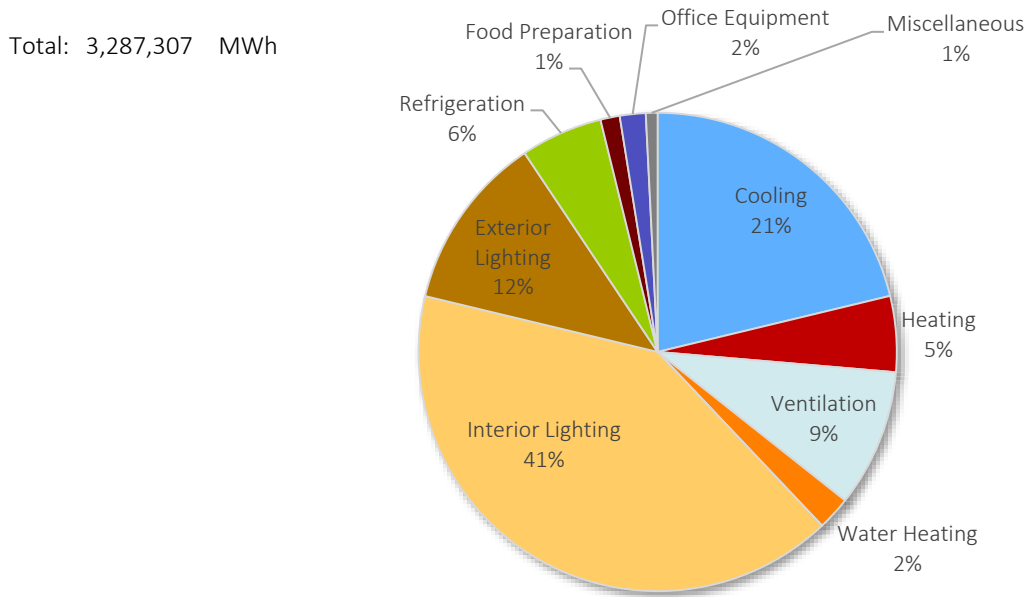
Figure C-9   Washington Commercial Technical Achievable Potential by End Use, 2038

Total: 482,221 MWh
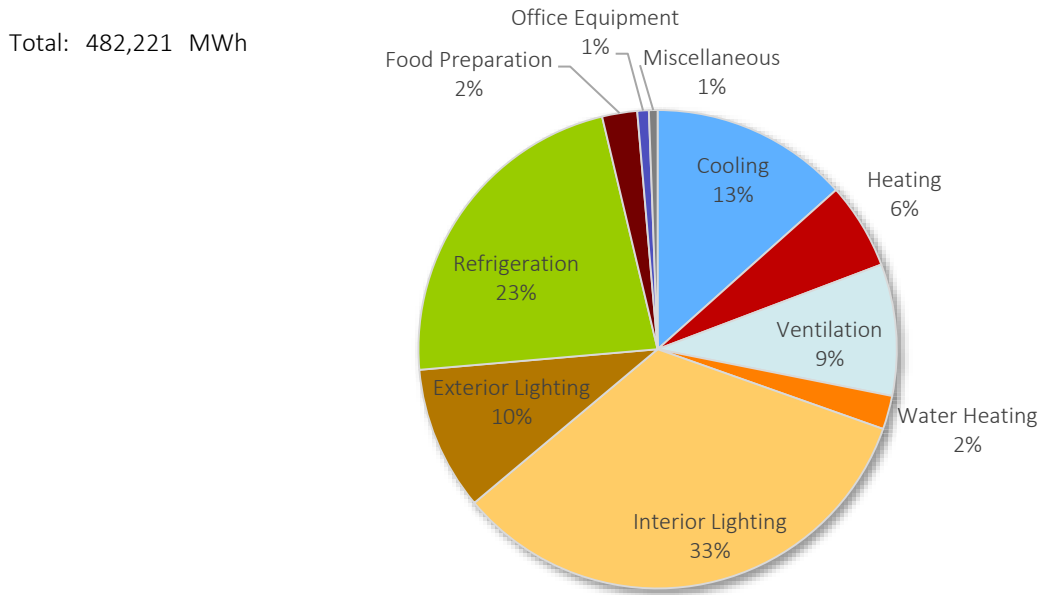
Figure C-10   Wyoming Commercial Technical Achievable Potential by End Use, 2038

Total: 504,808 MWh
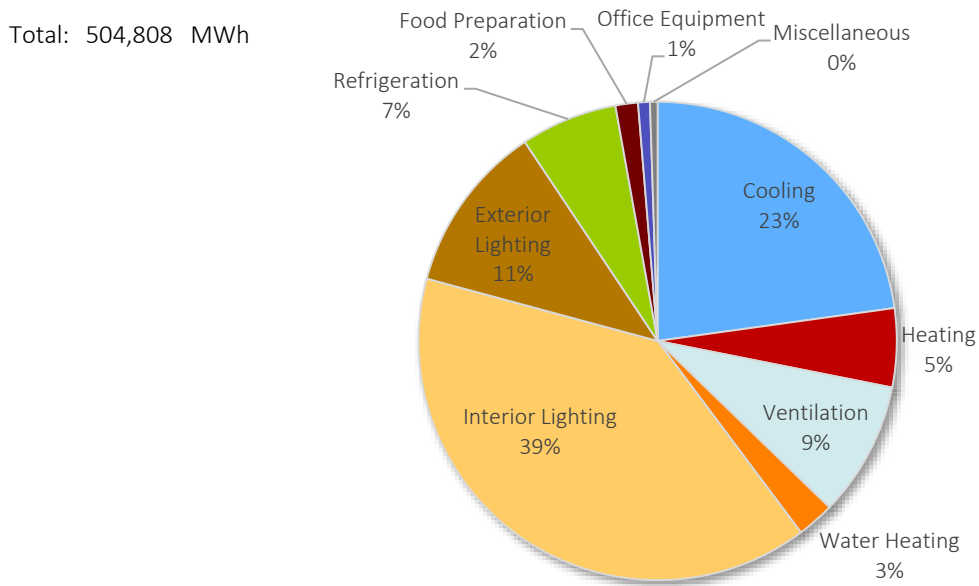
Figure C-11   California Industrial Technical Achievable Potential by End Use, 2038

Total: 10,127   MWh
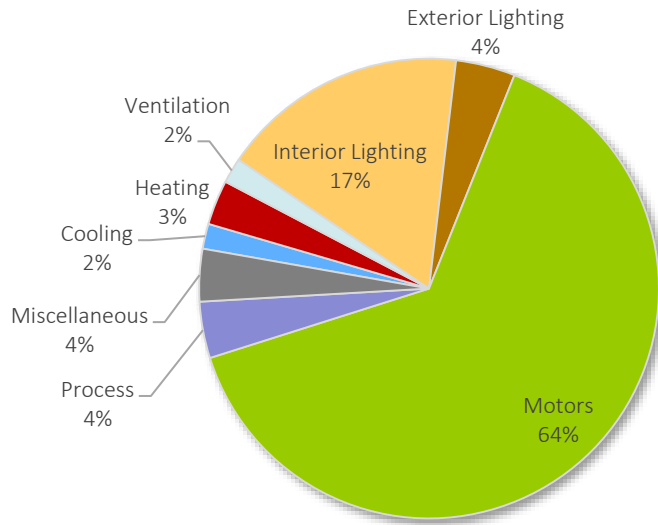
Figure C-12   Idaho Industrial Technical Achievable Potential by End Use, 2038

Total: 43,536   MWh
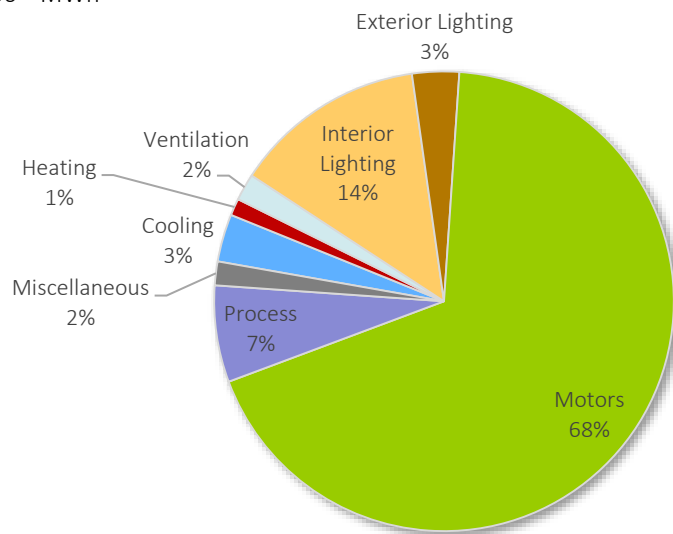
Figure C-13   Utah Industrial Technical Achievable Potential by End Use, 2038

Total: 1,039,868   MWh
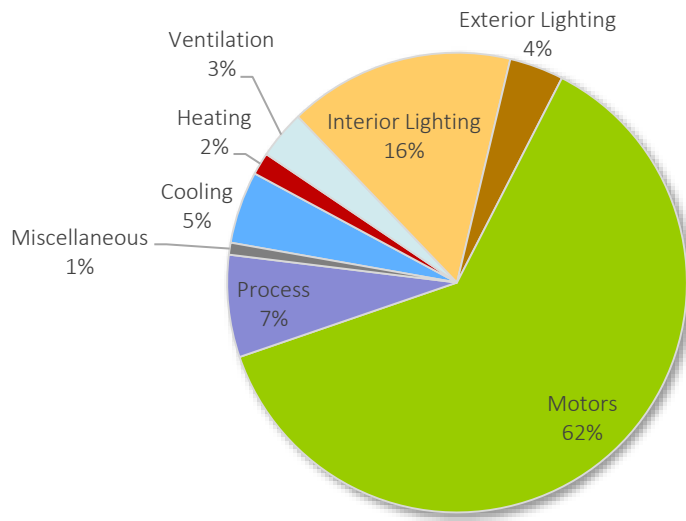
Figure C-14   Washington Industrial Technical Achievable Potential by End Use, 2038

Total: 150,422   MWh
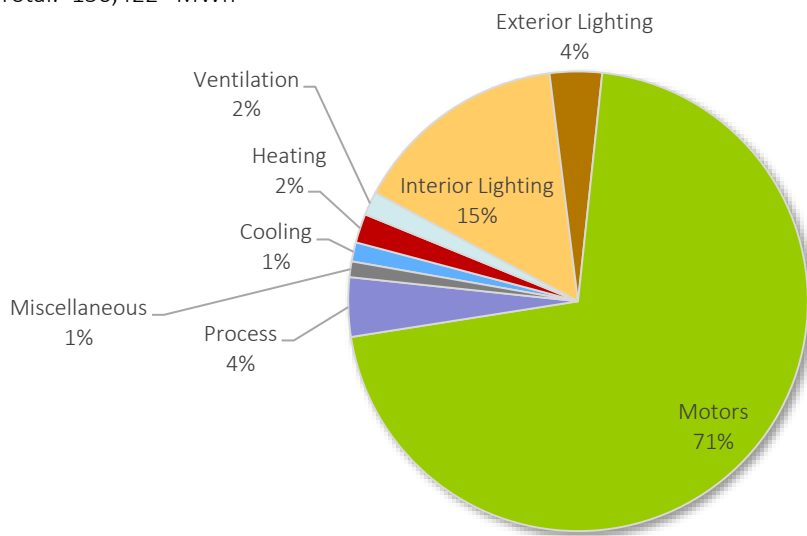
Figure C-15   Wyoming Industrial Technical Achievable Potential by End Use, 2038

Total: 1,000,703 MWh
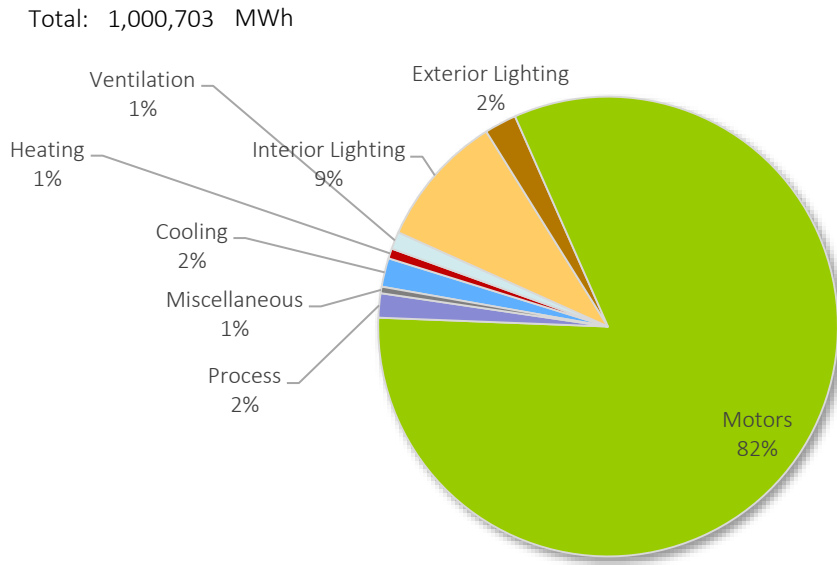
Figure C-16   California Irrigation Technical Achievable Potential by End Use, 2038

Total: 10,464 MWh
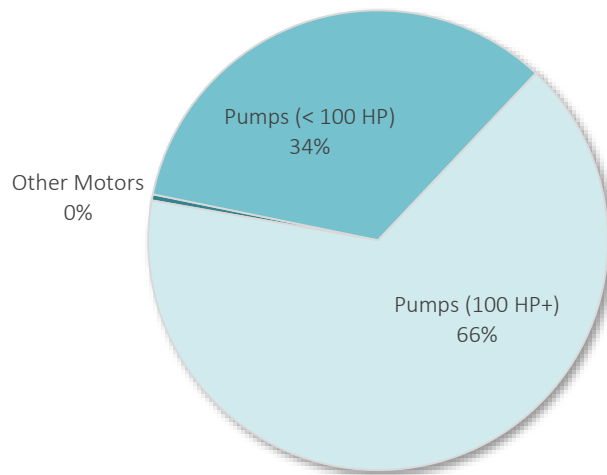
Figure C-17   Idaho Irrigation Technical Achievable Potential by End Use, 2038

Total: 69,311 MWh
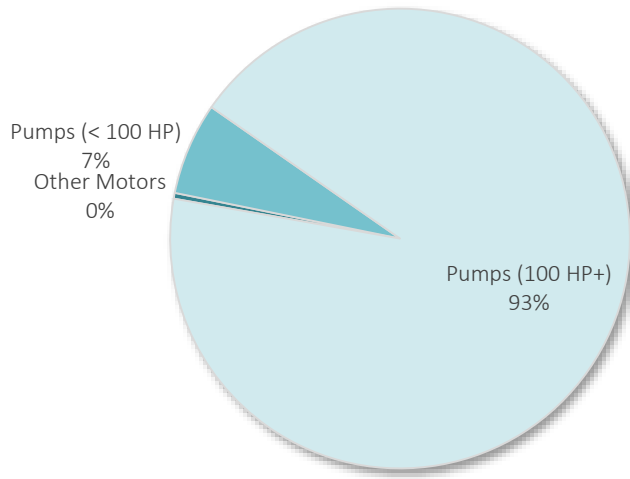
Figure C-18   Utah Irrigation Technical Achievable Potential by End Use, 2038

Total: 22,893 MWh
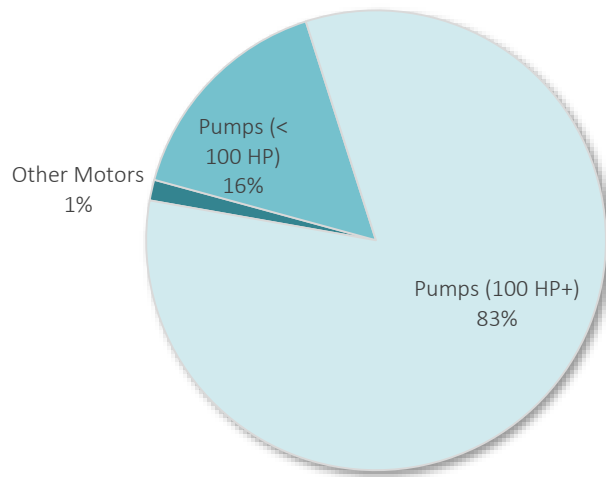
Figure C-19   Washington Irrigation Technical Achievable Potential by End Use, 2038

Total: 17,561 MWh
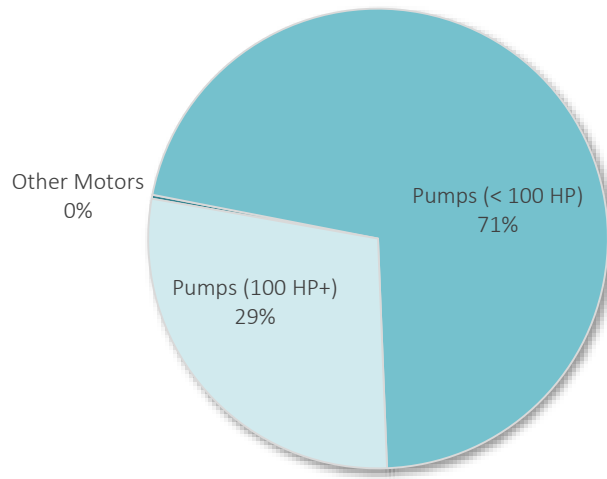
Figure C-20   Wyoming Irrigation Technical Achievable Potential by End Use, 2038

Total: 2,546   MWh
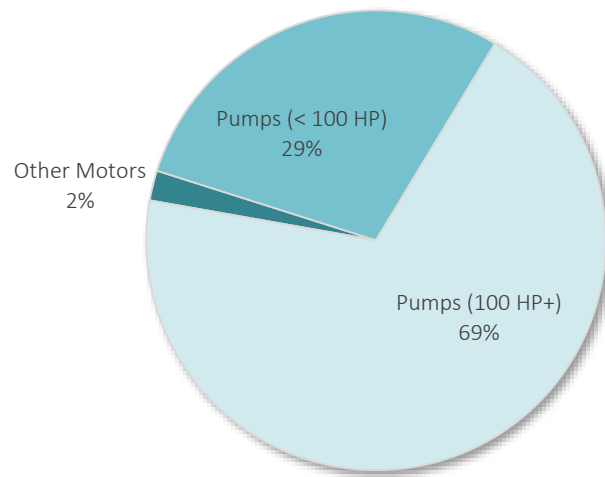
Street Lighting consists of a single end use and is not shown here.

LIST OF CLASS 2 EMERGING TECHNOLOGY MEASURES

As described in Chapter 3 of Volume 2 of this report, AEG developed the Class 2 DSM measure list based on a comprehensive review of measures implemented in current industry best practice programs and exhaustive research into the pipeline of technologies that may become viable over the study time horizon. The emerging technologies selected for inclusion in the study (shown in Table D-1) are measures that have not yet gained mainstream adoption but can reasonably be expected to reach commercial availability within the study time horizon.

Table D-341   Emerging Technology Measures Included in Class 2 DSM Analysis

Sector	Measure Name
Residential	Advanced Power Strips - IR Sensing
Residential	Advanced Power Strips - Load or Occupancy
Residential	Connected Home Control System
Residential	Ducting - Repair and Sealing - Aerosol
Residential	Ductless Mini Split Heat Pump (Ducted Forced Air)
Residential	Windows - Cellular Shades
Residential	ENERGY STAR Home Design
Residential	Space Heating - Heat Recovery Ventilator
Residential	Thermostat - Connected
Residential	Water Heater - Desuperheater
Residential	Water Heater - Drainwater Heat Recovery
Residential	Water Heater - Solar System
Residential	Water Heater - Thermostatic Shower Restriction Valve
Residential	Windows - Low-e Storm Addition
Residential	Advanced New Construction Design - Zero Net Energy
Residential	Integrated Heat Pump - Combination HVAC and DHW
Residential	Insulation - Insulated Concrete Forms
Residential	Pool Cleaner - Robotic
Residential	Building Shell - Liquid-Applied Weather-Resistive Barrier
Residential	Insulation - Wall Sheathing - External - Insulated Vinyl Siding
C&I	Commercial Laundry - Ozone Treatment

Sector	Measure Name
C&I	Compressed Air - End Use Optimization
C&I	Dairy - Heat Recovery from Refrigeration
C&I	Data Center - Cutting Edge Measures
C&I	Ductless Mini Split Heat Pump
C&I	HVAC - Dedicated Outdoor Air System (DOAS)
C&I	Interior Lighting - Embedded Fixture Controls
C&I	Interior Lighting - Networked Fixture Controls
C&I	Interior Lighting - LEC Exit Lighting
C&I	Miscellaneous - Improved Vertical Lift Technology
C&I	Refrigeration - Permanent Magnet Synchronous Fan Motor
C&I	RTU - Advanced Controls
C&I	Strategic Energy Management
C&I	Streetlighting - Dimming and Tuning Controls
C&I	Thermostat - Wi-Fi/Interactive
C&I	Ultra-Low Temperature Freezer - ENERGY STAR
C&I	Ventilation - Nighttime Air Purge
C&I	Ventilation - Fan Drive Improvements
C&I	Ventilation - Permanent Magnet Synchronous Fan Motor
C&I	Interior Lighting - Photoluminescent Exit Lighting
C&I	Refrigeration - Evaporative Condenser
C&I	Center Pivot - Low Energy Spray Application
C&I	Chiller - Variable Speed Compressor
C&I	Interior Lighting - Networked Fixture Controls
C&I	Compressed Air - Heat of Compression Desiccant Dryer
C&I	Petroleum Pump - Energy Management

Certain technologies reviewed were still in the laboratory stage without reliable estimates of cost or operating characteristics at the time of the analysis and were thus excluded from the estimation of Class 2 DSM potential in this assessment. In addition, the savings that would be attributed to some of these measures, specifically efficient lighting, are already captured through other technologies included in the assessment, and therefore, including these emerging technologies would not have had a material, net impact on the identified potential. Table D-2 provides a list of measures falling into this category, along with a brief explanation on why each was excluded from the analysis.

Table D-342   Emerging Technology Measures Excluded from Class 2 DSM Analysis

Sector	Measure Name	Rationale for Exclusion
Residential	Ceiling Fan - Occupancy Sensor	AEG does not expect this measure to gain much traction or provide significant savings compared to residential lighting controls due to the fan's low energy use. Fan shutoff could also result in a cooling penalty if the central system must turn on mid-day because the fan stops.
Residential	Central AC - Non-Vapor Compression - Magnetocaloric	Screened out - will be reflected in high efficiency AC if they come on market, but technology is only at prototypical level.
Residential	Central AC - Waste Heat Recovery	Screened out - this measure is not being used in residential applications and would require custom knowledge of specific building loads both for the heat source (compressor superheat) and heat sink (not space heating). We do, however, model heat recovery during the winter when the heat source and sink are one in the same.
Residential	Central AC - Water-Cooled Condenser	Screened out - concept has been validated for hot/dry climates, but likely not effective strategy in PNW. Technology more applicable to larger system size (i.e. C&I chillers); smaller systems waste a lot of water and are not maintained properly. Evaporative AC and hybrid systems with evaporative pre-cooling more prevalent. This measure is not recommended for residential applications, however water-cooled chillers are common in C&I settings and are captured within our standard measure list. There are also significant health risks associated with this application in a residential setting.
Residential	Central Heat Pump - Advanced Defrost Method	Screened out - this feature is assumed to be included in advanced (highly efficient) air-source heat pumps as part of the equipment measures and should not be added as a separate measure.
Residential	Clothes Dryer - Heat Recovery	Screened out - this measure is not currently available residentially and would require custom knowledge of specific building loads to characterize the heat sink.
Residential	Clothes Washer - Polymer Bead Washer	Screened out - Available from a few vendors but have not gained market traction. Major impact = water savings. Revisit in a couple years.
Residential	Ductless Mini Split AC	Screened out: this measure is more appropriate in southern California, where heating loads are minimal. In climates with nontrivial heating loads, this measure would neglect heating benefits realized through installation of a ductless minisplit heat pump. Additionally, central cooling is much more prevalent than zonal cooling across all segments in Utah, which reduces applicability.

Sector	Measure Name	Rationale for Exclusion
Residential	Electronics - Advanced Outlets	Screened out - possible to include, but too much overlap with advanced power strips. E3T even references these as having an advanced power strip incentive from BPA.
Residential	Exterior Lighting - Networked Fixture Controls	Screened out as expensive in residential context and having too much overlap with (1) scheduling/timers, (2) occupancy/vacancy sensing, (3) dimming (or task tuning), and (4) daylighting--and communication between fixtures/lamps. This is already included within the connected home measure. Since this needs to connect to a larger "EMS"-type system, it is not suitable to bundle with individual lamp replacements.
Residential	HVAC - District Heating and Cooling	Promising; has mostly been applied to commercial campuses to date. Could be applicable for smaller residential communities (gated community, low-rise multifamily complex, cul-de-sac). Interesting application for an "Eco-Block", community, or rural microgrid; other flavors include residential geothermal loop leasing, etc. Screened out due to characterization difficulty and likelihood of custom project, but pilots should be encouraged.
Residential	HVAC - Electronically Commutated Motors	Screened out - effectively required by residential furnace fans starting 2019. Could be offered as drop-in replacement for existing split capacitor motors, but low operating hours/high programming costs/multi-speed baseline in residential applications would lead to low cost-effectiveness. Could add in COM sector.
Residential	HVAC - Natural Ventilation / Mixed-Mode Conditioning	Screened out - this is a commercial measure. Natural ventilation in residential sector is highly behavioral and already prevalent.
Residential	Insulation - Phase Change Building Materials	Screened out as low emerging technology with low likelihood of gaining market traction. Not commercially available at the moment.
Residential	Insulation - Aerogel	Screened out - no savings data available,and difficult to get trustworthy costs; recommend revisiting this high efficiency insulation level later. Some target costs are available, but this advanced insulation material is not prevalent at this time.
Residential	Insulation - Wall Cavity - Thermal Break Shear	Possible to add based on rough estimates from 2017 NEEA case study, though separating the wall insulation impacts from total home impacts (that include efficient windows) could prove challenging. This type of measure is likely to be included when designing a Zero Net Energy (ZNE) home. That measure also includes windows and other efficient shell measures.

Sector	Measure Name	Rationale for Exclusion
Residential	Interior Lighting - Heliostat Daylighting	Screened out as low emerging technology with low likelihood of gaining market traction. More applicable to commercial sector, and only cost is available.
Residential	Interior Lighting - Networked Fixture Controls	Screened out as expensive in residential context and having too much overlap with (1) scheduling/timers, (2) occupancy/vacancy sensing, (3) dimming (or task tuning), and (4) daylighting--and communication between fixtures/lamps. Included in connected home control measure as well. Since this needs to connect to a larger "EMS"-type system, it is not suitable to bundle with individual lamp replacements.
Residential	Non-Intrusive Load Monitoring	Screened out - this technology provides load disaggregation based on a single metering point as opposed to submetering each individual end use. This is considered an enabling technology and does not actually save energy unless coupled with other measures and programs.
Residential	Photovoltaics - Direct DC Distribution	Screened out - not mature enough but promising. Best applied to zero net energy new construction.
Residential	Radiant Cooling - Chilled Beam/Ceiling Panels	Promising technology to investigate further; unlikely to get robust prescriptive measure characterization.
Residential	Refrigeration - Non-Vapor Compression - Magnetocaloric	Screened out - will be reflected in high efficiency refrigerators if they come on market, but technology is only at prototypical level.
Residential	Solar Pre-heater for Ventilation Air	Screened out as low emerging technology with low likelihood of gaining market traction, especially in residential sector
Residential	Stove/Oven - Induction	Consider adding; data available but unclear how it overlaps with the 7th Plan Efficient Oven measure. Induction oven is more parallel to the 7th plan efficient level for a convection stove/oven rather than a separate, higher efficiency level.
Residential	Ventilation - Permanent Magnet Synchronous Fan Motor	Should be added to commercial; not applicable to residential
Residential	Water Heater - Advanced Storage Tanks	Screened out - still in R&D, only target cost and savings levels available.
Residential	Water Heater - Connected Controls	Screened out - intelligent controls are included in connected home measure and likely to be included in load management/DLC program analysis. This is a new device. The controls come pre-installed with the unit. This option is also already included within our "DLC Water Heating" measure within the Class 1 analysis.

Sector	Measure Name	Rationale for Exclusion
Residential	Water Heater - Solar Electric	If solar PV is already installed, some of that energy will be used for water heating. Upon further review, this measure is not suitable since it connects directly with the water heater and is not used for net-energy metering. Will exclude this measure.
Residential	Windows - Aerogel Insulation	Screened out. This measure for super high-performance windows is possible, but the high cost (estimated by E3TNW to be 6x the cost of a conventional double-pane window) makes the technology unlikely to be cost effective.
Residential	Windows - Automated Shading	Screened out - No cost data available; has to be paired with dimming lighting controls and is an enabling technology for automated dynamic daylighting systems.
C&I	HVAC - Advanced Non-Vapor Compression Systems	While this a large set of important emerging technologies, it is unclear which one will win out; so far only evaporative AC (already a separate measure) and absorption/adsorption heat pumps are commercially available. Other technologies like magnetocaloric, ejector heat pump, and vuilleumier heat pump are in more advanced emerging stage. Most promising with greatest potential (yet still in R&D) is thermoelastic. These technologies are still unproven, with limited to no savings or cost data available. As these technologies come into the market and if they become competitive, the efficiencies will be reflected in HVAC efficiency levels. However, AEG encourages Pacificorp to fund pilot projects and get better data on these systems.
C&I	Central Heat Pump - CO2 Compression	This technology is likely expensive due to high pressure requirements and has not been widely implemented in the United States to date, though it has seen implementation in Europe. This is a promising heat pump application and is an appealing way to supplant high GWP refrigerants. AEG recommends investigating transcritical CO2 systems in a C&I refrigeration setting in future years, though HVAC applications are also available.
C&I	Chiller - Evaporative - Sub-Wet Bulb	Given recent demonstrations by PG&E (2017) and SCE (2015), various entities see this as a promising technology. However, it will be difficult to characterize and get reliable data for savings in various locations as well as cost. Could be applicable to UT.
C&I	Circulating Engine Block Heater	Enough data to include from reputable sources (2014/15 SCE/CalTF workpapers). This measure is different from the Engine Block Heater Controls measure that is already in the study.

Sector	Measure Name	Rationale for Exclusion
C&I	Commercial Laundry - Clothes Dryer - Heat Recovery	Limited development for laundromat/larger commercial applications, but nevertheless promising application. Likely more applicable to gas dryers, and not enough data to include at the moment.
C&I	Commercial Laundry - CO2 Cleaning	Promising technology that has been implemented but is an expensive alternative to traditional PCE process. Could include as measure with rough costs and savings estimates.
C&I	Commercial Laundry - Wastewater Recycling	Difficult to characterize and get reliable data for custom process like this, but this measure provides significant energy savings as well was water and wastewater non-energy benefits. Similar to dryer heat recovery, this is likely to be more applicable to gas water heating.
C&I	Electric Arc Furnace - Waste Heat Recovery	New Arc Furnaces are a measure from 7th Plan and in the measure list, so their saturation will have to be quantified and waste heat recovery for these units could be included as an emerging industrial measure. No cost data available; will likely have to use DEER air-to-air heat exchanger cost. However, the waste heat from these systems can be high quality and could be used to generate electricity in a Waste Heat to Power application that will be looked at during AEG's WTP&RT analysis. Therefore, the waste heat recovery measure (often used for low-grade heat) may be supplanted.
C&I	Electronics - Advanced Outlets	Screened out - possible to include, but too much overlap with advanced power strips. E3T even references these as having an advanced power strip incentive from BPA.
C&I	Food Processing - Radio Frequency Defrosting	Promising technology, although costs are not freely available. Have to exclude since this is an electrification technology that mostly replaces gas process heating of air and water for frozen food defrosting.
C&I	HVAC - Natural Ventilation / Mixed-Mode Conditioning	Screened out - difficult to define savings and costs due to the custom nature of natural ventilation flows based on building architecture and included in Advanced New Construction Designs measure.
C&I	Insulation - Phase Change Building Materials	Screened out as low emerging technology with low likelihood of gaining market traction. Not commercially available at the moment.
C&I	Insulation - Wall Cavity - Aerogel	Screened out - no savings data available, and difficult to get trustworthy costs; recommend revisiting this high efficiency insulation level later. While some target costs may be available, this advanced insulation material is not prevalent at this time and it is especially difficult to justify the cost for the large surface area of a commercial building envelope.

Sector	Measure Name	Rationale for Exclusion
C&I	Insulation - Wall Cavity - Vacuum Insulated Panels	Screened out - no savings data available, and difficult to get trustworthy costs; recommend revisiting this high efficiency insulation level later. While some target costs may be available, this advanced insulation material is not prevalent at this time and it is especially difficult to justify the cost for the large surface area of a commercial building envelope.
C&I	Municipal Water Treatment - High-Speed Turbo Blowers	No cost data is readily available, but this technology is commercially available.
C&I	Municipal Water Treatment - Fine Bubble Diffuser Aeration	Could include, though savings data unreliable. Will consider if enough data is available.
C&I	Municipal Water Treatment - UV-C LED Disinfection	This technology is still being studied for disinfection effectiveness (including an ongoing investigation by AEG), and UV LED solutions for larger drinking water applications are not commercially available at this time. AEG does have some rough estimates but does not expect this technology to be more available for another 5 years.
C&I	Non-Intrusive Load Monitoring	Screened out - this is an enabling technology that allows for more accurate disaggregation and enables more effective behavioral programs for customer feedback, in-home displays and reports, and further EE measure assessment/recommendation. Could be included as part of behavioral program suite.
C&I	Paper and Pulp - Low Shear Repulping Unit for Coated Paper Recovery	Significant amount of energy and (unquantified) non-energy benefits compared to a thermo-mechanical pulp mill processing virgin material. Can include if more data is found, but not enough to include at the moment.
C&I	Process - Additive Manufacturing - Aerospace - Titanium Brackets	The Pacific Northwest (specifically Washington) has a large aerospace industry. AEG has found significant potential for additive manufacturing in this field. While process measures are always custom and difficult to quantify, AEG can leverage our prior case study and lifecycle analysis for this application to characterize this measure.

Note: While AM does provide significant energy savings on a Btu basis, these are typically not electricity savings. Electrification/fuel switching occurs by supplanting large gas heating process with electrified AM/industrial 3D printing methods. |
| C&I | Process - Additive Manufacturing - Automotive - Aluminum Pump Housing | AEG has found significant potential for additive manufacturing in the automotive field. While process measures are always custom and difficult to quantify, AEG can leverage our prior case study and lifecycle analysis for this application to characterize this measure.

Note: While AM does provide energy savings on a Btu basis, these are typically not electricity savings. Electrification/fuel switching occurs by supplanting large gas heating process with electrified AM/industrial 3D printing methods. |

Sector	Measure Name	Rationale for Exclusion
C&I	Process - Heat Treatment - Electron Beam Curing	This measure can apply across many manufacturing segments, but no costs are currently available. Possibility of fuel switching when autoclaves are direct fuel-fired, but the autoclaves discussed by E3TNW are electric. Very limited applicability.
C&I	Process - Heat Treatment - Microwave Curing/Sintering/Heat Treatment	This measure can apply across many manufacturing segments, but no costs are currently available. Possibility of fuel switching when ceramic sintering units are direct fuel-fired, but the baseline units discussed by E3TNW are electric.
C&I	Process Heating - Exhaust Energy Recovery	Screened out - custom applications that are often retrofitted on a natural gas system. No costs available.
C&I	Process Optimization - Near-Net-Shape Casting	Screened out - Promising measure, but applicable to direct fuel-fired process and unlikely to save electricity on site.
C&I	Radiant HVAC - Chilled Beam/Ceiling Panels	Promising technology to investigate further; unlikely to get robust prescriptive measure characterization.
C&I	Refrigeration - CO2 Compression	While this technology may be expensive due to high pressure requirements and has not been widely implemented in the United States to date, it has seen a significant amount of installations in Europe. This is a promising application and is an appealing way to supplant high GWP refrigerants. Transcritical CO2 refrigeration systems in a C&I setting require more custom design and should be revisited in future years.
C&I	Refrigeration - Heat Recovery	Screened out - no savings data readily available, and difficult to get trustworthy costs for a custom measure such as this. The heat recovery system must be engineered for each industrial application due to the varying parameters of the refrigeration system and heat sinks available at a particular facility.
C&I	Refrigeration - Install High Efficiency Subcooled Multiplex	Can include; the effort required to characterize this measure would be significant if PG&E workpaper (PGE3PREF117) does not have sufficient data.
C&I	Refrigeration - Non-Vapor Compression - Magnetocaloric	Screened out - will be reflected in high efficiency refrigeration if it comes on market, but technology is only at prototypical level.
C&I	Refrigeration - Thermal Storage - Phase Change Materials	While this is primarily a load shifting technology, letting the refrigeration system coast over the peak period also saves energy by operating during off-peak, colder periods. Most demonstration projects have been done in Southern California with one in the Bay Area. AEG recommends further Pacific Northwest pilots and revisiting this measure once it is more prevalent. Energy savings can be included as part of Class 1&3 measure.

Sector	Measure Name	Rationale for Exclusion
C&I	Windows - High Efficiency Glazing - Dynamic	Thermochromic technology not as versatile as electrochromic but potentially cheaper. Unlikely to be cost effective without non-energy benefits from comfort/productivity.
C&I	Commercial Laundry - Clothes Dryer - Automatic Cycle Termination	This feature is assumed to be included in high efficiency options and is unlikely to be implemented as a stand-alone retrofit option on packaged clothes drying systems. Clothes dryers meeting the ENERGY STAR specification (20% below standard) typically employ improved automatic termination sensors to avoid wasted energy from over-drying clothes.
C&I	Commercial Laundry - Clothes Dryer - Heat Pump	Small units in a commercial setting are already included in the residential multifamily segment. Not yet applicable to larger units; revisit in future study.
C&I	Scientific Irrigation Practices	Screened out per recent RTF / NWPCC Agriculture potential study guidance that this has become standard practice.
C&I	HVAC - Heat Recovery with Variable Refrigerant Flow	This measure specifically focuses on combining VRF and Heat Recovery systems. A VRF heat pump is already included as part of the equipment list and would result in too much overlap.
C&I	Motors - Two-Stage Gearboxes	Lack of reliable measure data resulted in this measure's exclusion.

CLASS 2 DSM RESOURCE RAMPING

This appendix presents the methods used by Applied Energy Group (AEG) to develop reasonable estimates of annual Class 2 DSM (energy-efficiency) potential available for acquisition in PacifiCorp's California, Idaho, Utah, Washington, and Wyoming service territories for consideration in PacifiCorp's 2019 Integrated Resource Plan (IRP).

General Methodology

AEG began by estimating the technical potential for Class 2 DSM resources in the given territory. That is, the amount of energy that could be saved in the absence of market barriers and cost-effectiveness considerations. This technical potential is then translated to annual technical achievable potential by applying achievability factors and "ramp rates," representing the rate at which these resources could be achieved in each market. The application of achievability factors and ramp rates is consistent with the method used by the Northwest Power and Conservation Council (Council) in its Seventh Northwest Conservation and Electric Power Plan (7th Plan). The resulting quantities are then presented as "annual technical achievable" potential, allowing PacifiCorp's IRP model to determine the amount of technical achievable potential that is cost-effective in a given year, which informs PacifiCorp's acquisition targets in each state.

AEG assumes that Class 2 DSM measure acquisition is ramped (i.e., acquired) over the planning horizon depending on market availability. In general, market availability is dictated by the existence of programs, customer awareness, technology availability, and other considerations. The intent of this ramp rate is to establish a path to full market maturity for each measure or technology group and ensure that resource planning selections don't overstep acquisition capabilities. Class 2 DSM resources are divided into two categories, each of which has its own timing and achievability considerations:

- *Lost Opportunity Resources* are opportunities at the time of equipment burnout or new construction. When equipment is replaced, a unique opportunity exists to upgrade efficiency at incremental (above standard equipment), rather than full cost. If standard equipment is installed, the high-efficiency equipment would not be installed until the new equipment reaches the end of its normal life cycle, without early replacement (usually requiring a significantly higher incremental cost). The same applies for opportunities at the time of new construction.

- *Discretionary Resources* are retrofit opportunities in existing building stock that are not subject to such stringent timing constraints and can, theoretically, be acquired at any point in the planning period assuming customer willingness and necessary delivery infrastructure.

The timing challenges created by lost opportunities make these resources more difficult to acquire than discretionary opportunities. As detailed in the methodology section below, we assume that 85% of discretionary potential can be acquired over the planning period but estimate a lower achievable rate for lost opportunity resources depending on the measure life, equipment stock turnover, and other factors. These assumptions are consistent with those used in the Council's 7[h] Plan.

In addition to the timing considerations for each measure, it is important to recognize the interaction between the two measure types. For example, if a functioning, but inefficient, refrigerator is replaced before the end of its useful life (a discretionary opportunity), then those savings should not also be counted as an equipment replacement opportunity when the original unit would have needed to be replaced (lost opportunity). Similarly, if a home is weatherized (discretionary), upgrading the heating or cooling equipment will save less than it would have in absence of weatherization.

Both methods use recent state-specific program history to inform short-term achievable potential to account for the level of program infrastructure and awareness currently in place in each jurisdiction. This process is designed to avoid large increases or decreases in short-term acquisition, which are unlikely to occur in practice.

Specific Ramp Rate Methodology

This subsection describes AEG's process for applying ramp rates. The analysis distinguishes between measure ramping, which reflects the technical limitations of acquiring individual measures, and market ramping, which accounts for the level of delivery infrastructure in specific markets in PacifiCorp's jurisdictions. Measure and market ramp rates are provided in Table E-1 at the end of this section. Annual values for lost opportunity measure ramp rates indicate the share of the annual opportunity deemed achievable, whereas discretionary values indicate the cumulative share of the 20-year opportunity assumed to be achievable by a given year.

Measure Ramp Rates

The study applied measure ramp rates to determine the annual availability of the identified potential lost opportunity and discretionary resources, interpreting and applying these rates differently for each class (as described below). Measure ramp rates generally matched those used in the Council's 7th Power Plan, although the study incorporated additional considerations for Class 2 DSM measure acquisition:

- For lost opportunity measures, the fourth year of the 7th Power Plan ramp rates (2019) was aligned with the study's first year (2019). Discretionary measures were aligned with the first year of the 7th Power Plan ramp rates (2016).

- For measures not included in the 7th Power Plan, the study assigned a ramp rate considered appropriate for that technology (i.e., the same ramp rate as a similar measure in 7th Power Plan).

Lost Opportunity Resources

Lost opportunity energy efficiency measures correspond to equipment measures, which follow a natural equipment turnover cycle, as well as non-equipment measures in new construction instances that are fundamentally different and typically easier to implement during the construction process as opposed to after construction has been completed.

In addition to natural timing constraints imposed by equipment turnover and new construction rates, the AEG team applied measure ramp rates to reflect other resource acquisition limitations over the study horizon, such as market availability. These measure ramp rates have a maximum value of 85%, reflecting the Council's assumption that, on average, up to 85% of technical potential could be achieved in a given year by the end of a 20-year planning horizon. Per Council methodology, emerging technology measures on the "LOMax60" rate will instead reach a maximum value of 55%. When combined with the effects of stock turnover for lost opportunity measures, this equates to 20-year potential savings that are lower than 85% of the technical opportunity. Overall, this results in achievability of 74% of the lost opportunity technical potential over the 20-year study period.

To calculate annual technical achievable potential for each lost opportunity measure, the study multiplied the number of units turning over or available in any given year by the adoption factor provided by the ramp rate, consistent with the Council's methodology. Because of the interactions between the equipment turnover and new construction, the lost opportunities of measure availability until the next life cycle, and the timeframe limit at 20 years, the Council methodology for these measures produces potential less than 85% of technical potential.

Discretionary Resources

Discretionary resources differ from lost opportunity resources due to their acquisition availability at any point within the study horizon. From a theoretical perspective, all technical achievable potential for discretionary resources could be acquired in the study's first year. However, from a practical perspective,

this outcome is realistically impossible to achieve due to infrastructure and budgetary constraints as well as customer preferences and considerations.

As a result, the study addresses technical potential for discretionary resources by spacing the acquisition according to the ramp rates specified for a given measure, thus creating annual, incremental values. To assess technical achievable potential, AEG then applies the 85% market achievability limit defined by the Council. Per Council methodology, emerging technology measures on the "RetroMax60" rate will instead reach a maximum value of 55%.

Market Ramp Rates

The 2017 assessment applied market ramp rates on top of measure ramp rates to reflect state-specific considerations affecting acquisition rates, such as age of programs, small and rural markets, and current delivery infrastructure. This mechanism was used solely in the Wyoming industrial sector to reflect that program momentum is still building. The current assessment has removed this market ramp rate, as noted in Volume 2 of this report.

Table E-343 Measure and Market Ramp Rates Used in AEG's Analysis

Ramp Rate Name	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
LO12Med	37.3%	46.6%	55.0%	61.7%	67.1%	71.4%	74.8%	77.6%	79.8%	81.6%	83.0%	84.1%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
LO5Med	19.8%	27.0%	35.4%	44.6%	54.1%	62.9%	70.6%	76.5%	80.5%	83.0%	84.2%	84.7%	84.9%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
LO1Slow	2.7%	4.7%	7.4%	11.2%	16.1%	22.1%	29.2%	37.2%	45.7%	54.2%	62.3%	69.4%	75.1%	79.4%	82.3%	84.1%	85.0%	85.0%	85.0%	85.0%
LO50Fast	75.6%	80.7%	83.2%	84.3%	84.8%	84.9%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
LO20Fast	48.8%	55.1%	60.5%	65.2%	69.1%	72.5%	75.3%	77.6%	79.4%	80.9%	82.0%	82.8%	83.5%	84.0%	84.4%	84.8%	85.0%	85.0%	85.0%	85.0%
LOEven20	17.0%	21.3%	25.5%	29.8%	34.0%	38.3%	42.5%	46.8%	51.0%	55.3%	59.5%	63.8%	68.0%	72.3%	76.5%	80.8%	85.0%	85.0%	85.0%	85.0%
LOMax60	8.3%	12.2%	16.4%	20.3%	24.0%	27.6%	30.9%	34.0%	36.9%	39.7%	42.4%	44.8%	47.2%	49.4%	51.4%	53.4%	55.3%	57.1%	58.9%	60.8%
LO3Slow	5.3%	9.3%	15.0%	22.2%	30.6%	39.7%	48.7%	57.2%	64.6%	70.7%	75.4%	78.9%	81.3%	83.0%	84.0%	84.6%	85.0%	85.0%	85.0%	85.0%
Retro12Med	11.0%	11.0%	11.0%	11.0%	11.0%	9.9%	7.9%	6.3%	5.1%	4.0%	3.2%	2.6%	2.1%	1.7%	1.3%	1.1%	0.0%	0.0%	0.0%	0.0%
Retro5Med	4.3%	5.2%	6.4%	7.4%	8.5%	9.9%	10.9%	11.1%	10.5%	9.0%	7.0%	4.8%	2.9%	1.5%	0.6%	0.2%	0.1%	0.0%	0.0%	0.0%
Retro1Slow	0.3%	0.5%	0.9%	1.5%	2.3%	3.3%	4.4%	5.7%	7.1%	8.4%	9.4%	10.0%	10.0%	9.5%	8.3%	6.8%	5.1%	3.4%	2.1%	1.0%
Retro50Fast	45.0%	21.0%	14.0%	9.0%	6.0%	3.0%	1.3%	0.5%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retro20Fast	22.4%	15.7%	10.9%	8.5%	7.4%	6.4%	5.5%	4.7%	3.9%	3.3%	2.8%	2.1%	1.7%	1.3%	1.0%	0.8%	0.6%	0.5%	0.4%	0.3%
RetroEven20	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
RetroMax60	1.0%	2.0%	2.9%	3.8%	4.6%	4.9%	4.6%	4.4%	4.1%	3.9%	3.7%	3.5%	3.3%	3.1%	2.9%	2.7%	2.6%	2.4%	2.3%	2.2%
Retro3Slow	0.6%	0.9%	1.7%	3.1%	4.8%	6.7%	8.5%	9.9%	10.7%	10.7%	9.9%	8.7%	7.2%	5.6%	4.1%	2.9%	1.9%	1.2%	0.7%	0.4%
CustomBehav-CA Res	100%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
LightingPPA	33.3%	26.7%	20.0%	13.3%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

D Indicates discretionary measure ramp rate

* Assumption of 55% maximum achievability from Council's 7th Power Plan

** Modeled as 65% of available opportunity in new construction every year to reflect Council's assumption that less than 85% of lost opportunities are achievable over 20 years.

***Behavioral program savings are highly dependent on implementation practices. These custom ramp rates were developed to correspond with PacifiCorp's planned implementation schedule over the next two to three years. The Washington market is assumed fully saturated before study period.

COMPARISON OF WASHINGTON MEASURES TO THE COUNCIL'S 7TH PLAN AND THE RTF

In compliance with Chapter 19.285 of the Revised Code of Washington (RCW), Chapter 480-109 of the Washington Administrative Code (WAC), and as described in Volume 2 of this report, this study employs methodologies consistent with the Northwest Power and Conservation Council's (Council's) Northwest Conservation and Electric Power Plan to estimate available Class 2 DSM (energy-efficiency) potential in PacifiCorp's Washington territory. Additionally, AEG conducted a thorough review of baseline and measure assumptions used by the Council or by the Regional Technical Forum (RTF); these included costs, savings, applicability, and base year saturation. Although this study relies on data specific to PacifiCorp's service territory wherever possible, Council/RTF assumptions were incorporated where appropriate.

Since the completion of the Council's 7th Plan, the RTF has continued to review baseline and measure assumptions. Accordingly, AEG prioritized more recent RTF assumptions, reflecting updated analyses and methodologies employed in the region. A comparison to Council/RTF unit energy savings (UES) values is shown in the following tables.

As part of this multi-state study, measures were mapped, where possible, to RTF and 7th Plan measures. However, not all measure names, measure-efficiency tiers, measure iterations, and measure savings will directly mirror the RTF or 7th Plan. These differences account for changes in federal equipment efficiency standards, the latest version of Washington energy code(s), and characteristics specific to PacifiCorp's territory, where appropriate. For certain measures, due to the overall complexity of updating the RTF and Council measure savings to current code and standards directly, the measure savings were calculated as a percent of end-use consumption and assumed to apply as such throughout the analysis time horizon.

Residential Sector

Differences between AEG and Council/RTF UES values in the residential sector are primarily driven by inputs to building simulation modeling, measures referencing PacifiCorp evaluation results, and updates reflecting recent ENERGY STAR specifications and/or changes in energy code and equipment efficiency standards. to develop estimates of energy consumption and savings for weather-sensitive equipment and measures (e.g., central air conditioning, heat pumps, and insulation) in single-family, multifamily, and manufactured homes, the Council and RTF use the Simple Energy and Enthalpy Model (SEEM), whereas AEG used its in-house Building Energy Simulation Tool (BEST), which is based on the DOE-2 building simulation tool. Model inputs were adjusted for PacifiCorp's territory, customizing parameters such as building square feet and climate zones to match customer-specific data. Thus, the methodology to estimate savings is comparable to that employed by the Council and RTF, but the actual savings may differ due to unique characteristics of homes within PacifiCorp's service territory compared to Northwest regional averages. A comparison of residential UES values and explanations of differences, where material, are provided in Table F-1 below.

Commercial Sector

For the commercial sector, RTF and Council measure savings were represented in the model as a percentage of end-use consumption. RTF and Council measure workbooks may contain multiple savings values based on the capacity, efficiency, fuel type, climate zone, etc. Therefore, weighted averages were used to develop a single savings value that is specific to PacifiCorp's service territory, where possible.

In addition, there are some measures that exist in the residential sector but not in the commercial sector. For example, residential-sized clothes washers and dishwashers are applied in commercial buildings, but no RTF workbook exists. In these cases, AEG used the residential sector workbook, adjusted to reflect how these units are used in commercial buildings.

The major differences between commercial RTF/Council savings values and those developed for Washington in this assessment are driven by the use of PacifiCorp evaluation results, Washington building codes and/or efficiency standards, and updates reflecting recent changes in ENERGY STAR specifications. See Table F-2 for a measure-level comparison of savings values and explanations of key drivers of differences, where present.

Industrial, Irrigation, and Street Lighting Sectors

For the industrial sector, the end use savings assumptions again relied heavily on the RTF and the Council's industrial analysis in the 7th Plan. Updates were made based on recent energy savings assumptions from the U.S. Department of Energy's (DOE) Industrial Assessment Center (IAC) Database, Northwest Energy Efficiency Alliance's (NEEA's) 2014 Industrial Facilities Site Assessment (IFSA), PacifiCorp's Market Characterization studies, and other industrial sources. Primary differences in industrial savings between this study and the region are driven by PacifiCorp's specific mix of industry and facility types and the use of a recently updated United Nations Industrial Development Organization study on industrial measure improvements. See Table F-3 for a measure-level comparison of savings values and explanations of key drivers of differences, where present.

The irrigation sector savings assumptions are largely based off agriculture measure workbooks in the 7th Plan, adapted to use throughout PacifiCorp's service territory. See Table F-4 for a measure-level comparison of savings values and explanations of key drivers of differences, where present.

The street lighting sector relied on PacifiCorp's current inventory of existing equipment and replacement options. Measure and baseline efficiencies are territory-specific based on PacifiCorp's data and differ from Council assumptions in some cases. See Table F-5 for a measure-level comparison of savings values and explanations of key drivers of differences, where present.

Table F-344   Comparison of 7th Plan and RTF Residential Measures in Washington

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
Single Family	Air-Source Heat Pump	Cooling	Installation	0.00	0.00	RTF ResSFExistingHVAC-4.2	
Single Family	Air-Source Heat Pump	Space Heating	Installation	98.04	82.29	RTF ResSFExistingHVAC-4.2	
Mobile Home	Air-Source Heat Pump	Cooling	Installation	0.00	0.00	RTF ResMHExistingHVAC-3.4	
Mobile Home	Air-Source Heat Pump	Space Heating	Installation	59.71	67.66	RTF ResMHExistingHVAC-3.4	
Single Family	Water Heater - Desuperheater	Water Heating	Installation	1,552.70	1,609.26	RTF ResGSHP-2.6	
All Residential	Water Heater (<= 55 Gal) - NEEA Tier 3 Heat Pump (UEF 2.6)	Water Heating	Installation	1,700.09	1,477.88	RTF ResHPWH-4.0	CPA is from code baseline - market baseline addressed in purchase shares
All Residential	Water Heater (<= 55 Gal) - NEEA Tier 3 Heat Pump (UEF 2.6)	Water Heating	Installation	128.51	115.14	RTF ResHPWH-4.0	CPA is from code baseline - market baseline addressed in purchase shares
All Residential	General Service Screw-In	Interior Lighting	Lamp	21.53	10.0 - 29.8	RTF ResLightingBulbs-4.2	CPA reports average lumens, RTF is a range.
All Residential	Exempted Lighting	Interior Lighting	Lamp	25.43	15.40	RTF ResLightingBulbs-4.2	CPA is from code baseline - market baseline addressed in purchase shares
All Residential	Screw-in	Exterior Lighting	Lamp	34.28	9.0 - 57.6	RTF ResLightingBulbs-4.2	CPA reports average lumens, RTF is a range.
All Residential	Refrigerator	Appliances	Installation	15.91	10.80	RTF ResRefrigeratorsAndFreezers-4.3	
All Residential	Second Refrigerator	Appliances	Installation	17.68	10.80	RTF ResRefrigeratorsAndFreezers-4.3	
All Residential	Freezer	Appliances	Installation	46.10	24.84	RTF ResRefrigeratorsAndFreezers-4.3	
All Residential	Clothes Dryer	Appliances	Installation	41.76	44.93	RTF ResClothesDryers-2.1	
All Residential	Dishwasher	Appliances	Installation	53.22	3.44	Res-Dishwasher-7P_v4	CPA includes more efficient CEE Tier 1 and "Best in Class" options

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Residential	Stove/Oven	Appliances	Installation	192.48	51.23	res-oven-7p_v3p	CPA includes more efficient Induction option.
All Residential	Microwave	Appliances	Installation	8.51	8.69	res-microwave-7p_v3p	
All Residential	Personal Computers	Electronics	Installation	63.97	63.57	res-computers-7p_v4	
All Residential	Monitor	Electronics	Installation	80.95	29.69	res-computers-7p_v4	CPA updated source to ENERGY STAR v7.0
All Residential	Laptops	Electronics	Installation	18.48	18.37	res-computers-7p_v4	
All Residential	Electric Vehicles	Miscellaneous	Installation	129.51	116.75	res-evcharger-7p_v2p	
All Residential	Pool Pump	Miscellaneous	Installation	2,483.70	2,211.75	RTF EfficientPoolPumps-2.1	Avg. of 1-2 HP indoor and outdoor self-priming
Single Family	Insulation - Ceiling Installation	Cooling	square foot	0.22	0.22	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Ceiling Installation	Space Heating	square foot	1.51	1.53	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Ceiling Upgrade	Cooling	square foot	0.03	0.03	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Ceiling Upgrade	Space Heating	square foot	0.35	0.36	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Wall Cavity Installation	Cooling	square foot	0.03	0.03	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Wall Cavity Installation	Space Heating	square foot	1.38	1.40	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Floor Installation	Cooling	square foot	(0.04)	(0.04)	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Insulation - Floor Installation	Space Heating	square foot	0.63	0.64	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Windows - High Efficiency/ENERGY STAR	Cooling	square foot	0.60	0.62	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Windows - High Efficiency/ENERGY STAR	Space Heating	square foot	6.36	6.46	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Windows - Low-e Storm Addition	Cooling	square foot	0.00	0.00	RTF ResSFWx-3.7	
Single Family	Windows - Low-e Storm Addition	Space Heating	square foot	7.85	7.97	RTF ResSFWx-3.7	Weighted average by saturation
Single Family	Building Shell - Infiltration Control	Cooling	square foot	0.00	0.00	RTF ResSFWx-3.7	

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
Single Family	Building Shell - Infiltration Control	Space Heating	square foot	0.36	0.36	RTF ResSFWx-3.7	
Multifamily	Insulation - Ceiling Installation	Cooling	square foot	0.22	n/a	RTF ResMFWeatherization-3.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Multifamily	Insulation - Ceiling Installation	Space Heating	square foot	0.89	0.90	RTF ResMFWeatherization-3.4	Weighted average by saturation
Multifamily	Insulation - Wall Cavity Installation	Cooling	square foot	0.02	n/a	RTF ResMFWeatherization-3.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Multifamily	Insulation - Wall Cavity Installation	Space Heating	square foot	0.63	2.16	RTF ResMFWeatherization-3.4	Source savings were nearly equivalent to space heating use per square foot, AEG used % of end use consumption
Multifamily	Insulation - Floor Installation	Cooling	square foot	(0.01)	n/a	RTF ResMFWeatherization-3.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Multifamily	Insulation - Floor Installation	Space Heating	square foot	0.19	1.48	RTF ResMFWeatherization-3.4	Source savings were nearly equivalent to space heating use per square foot, AEG used % of end use consumption
Multifamily	Windows - High Efficiency/ENERGY STAR	Cooling	square foot	0.42	n/a	RTF ResMFWeatherization-3.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Multifamily	Windows - High Efficiency/ENERGY STAR	Space Heating	square foot	3.37	1.65-30.43	RTF ResMFWeatherization-3.4	Most savings values were substantially higher than single family use per square foot. AEG used % of end use consumption
Multifamily	Windows - Low-e Storm Addition	Cooling	square foot	0.00	n/a	RTF ResMFWeatherization-3.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Multifamily	Windows - Low-e Storm Addition	Space Heating	square foot	4.16	15.34	RTF ResMFWeatherization-3.4	Most savings values were substantially higher than single family use per square foot. AEG used % of end use consumption
Multifamily	Doors - Storm and Thermal	Cooling	square foot	0.00	0.00	RTF ResMFWeatherization-3.4	
Multifamily	Doors - Storm and Thermal	Space Heating	square foot	3.03	3.04	RTF ResMFWeatherization-3.4	
Mobile Home	Insulation - Ceiling Installation	Cooling	square foot	0.17	0.04	RTF ResMHWeatherization-4.4	Weighted average by saturation

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
Mobile Home	Insulation - Ceiling Installation	Space Heating	square foot	0.76	0.59	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Insulation - Ceiling Upgrade	Cooling	square foot	0.02	n/a	RTF ResMHWeatherization-4.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Mobile Home	Insulation - Ceiling Upgrade	Space Heating	square foot	0.30	0.30	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Insulation - Floor Installation	Cooling	square foot	(0.02)	(0.02)	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Insulation - Floor Installation	Space Heating	square foot	0.32	0.48	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Insulation - Floor Upgrade	Cooling	square foot	(0.00)	(0.01)	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Insulation - Floor Upgrade	Space Heating	square foot	0.20	0.20	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Windows - High Efficiency/ENERGY STAR	Cooling	square foot	0.57	0.35	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Windows - High Efficiency/ENERGY STAR	Space Heating	square foot	5.57	3.61	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Windows - Low-e Storm Addition	Cooling	square foot	0.00	0.00	RTF ResMHWeatherization-4.4	
Mobile Home	Windows - Low-e Storm Addition	Space Heating	square foot	6.12	6.19	RTF ResMHWeatherization-4.4	Weighted average by saturation
Mobile Home	Building Shell - Infiltration Control	Cooling	square foot	0.00	n/a	RTF ResMHWeatherization-4.4	Cooling savings not provided in 7th Plan, AEG used % of end use consumption
Mobile Home	Building Shell - Infiltration Control	Space Heating	square foot	0.23	0.24	RTF ResMHWeatherization-4.4	Weighted average by saturation
All Residential	Ducting - Repair and Sealing	Cooling	Household	0.00	0.00	RTF ResSFDuctSealing-4.4	Weighted average by saturation

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Residential	Ducting - Repair and Sealing	Space Heating	Household	837.21	853.54	RTF ResSFDuctSealing-4.4	Weighted average by saturation
Single Family	Ductless Mini Split Heat Pump (Zonal)	Cooling	Installation	72.46	72.73	RTF ResNewConstructionDuctlessHeatPump-1.1	
Single Family	Ductless Mini Split Heat Pump (Zonal)	Space Heating	Installation	2,028.96	2,028.96	RTF ResNewConstructionDuctlessHeatPump-1.1	
Single Family	Ductless Mini Split Heat Pump (Ducted Forced Air)	Cooling	Installation	129.27	132.74	RTF ResDHPonFAF-1.6	
Single Family	Ductless Mini Split Heat Pump (Ducted Forced Air)	Space Heating	Installation	3,376.55	3,376.55	RTF ResDHPonFAF-1.6	
Single Family	Furnace - Conversion to Air-Source Heat Pump	Space Heating	Installation	3,710.60	3,710.60	RTF ResSFExistingHVAC-4.2	
All Residential	Space Heating - Heat Recovery Ventilator	Cooling	Installation	0.00	8.46	res-hrv-7p_v1p	Negligible cooling savings in measure.
All Residential	Space Heating - Heat Recovery Ventilator	Space Heating	Installation	946.57	961.07	res-hrv-7p_v1p	
All Residential	Central Heat Pump - Controls and Commissioning	Cooling	Household	0.64	0.66	RTF ResHeatingCoolingCommissioningControlsSizingSF-3.6	
All Residential	Central Heat Pump - Controls and Commissioning	Space Heating	Household	621.75	629.40	RTF ResHeatingCoolingCommissioningControlsSizingSF-3.6	
All Residential	Thermostat - Connected	Cooling	Household	7.48	7.68	RTF ResConnectedTstats-1.3	
All Residential	Thermostat - Connected	Space Heating	Household	427.79	434.34	RTF ResConnectedTstats-1.3	
All Residential	Water Heater - Drainwater Heat Recovery	Water Heating	Installation	230.44	238.83	res-gfx-7p_v3	

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Residential	Water Heater - Faucet Aerators	Water Heating	Aerator	110.66	114.69	Res-Aerator-7P_v5	
All Residential	Water Heater - Low-Flow Showerheads	Water Heating	Showerhead	91.68	95.02	RTF Showerheads-3.1	
All Residential	Water Heater - Solar System	Water Heating	Installation	1,161.68	1,204.00	res-swh-7p_v1p	
All Residential	Circulation Pump - High Efficiency	Water Heating	Installation	322.82	334.58	RTF ComResCirculatorPumps-1.2	
All Residential	Circulation Pump - High Efficiency	Space Heating	Installation	(57.64)	(58.52)	RTF ComResCirculatorPumps-1.2	
All Residential	Advanced Power Strips - Load or Occupancy	Electronics	Installation	39.35	40.68	RTF ResAdvancedPowerStrips-2.4	

Table F-345   Comparison of 7ᵗʰ Plan and RTF Commercial Measures in Washington

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Commercial	Water Heater	Water Heating	Installation	61.40	120.99	RTF ComDHWEfficientTank-4.4	Savings for a 50-gallon tank.
All Commercial	General Service Lighting	Interior Lighting	Lamp	53.10	28.91	RTF NonResLightingMidstream-1.2	CPA reports average lumens, RTF is a range.
All Commercial	Exempted Lighting	Interior Lighting	Fixture	63.66	54.37	RTF NonResLightingMidstream-1.2	CPA reports average lumens, RTF is a range. Displaying directional 2017-2019 (625-1099 lm)
All Commercial	Linear Lighting	Interior Lighting	Fixture	18.40	25.48	RTF NonResLightingMidstream-1.2	CPA reports average lumens, RTF is a range.
All Commercial	High-Bay Lighting	Interior Lighting	Fixture	232.88	248.13	Com-LightingInterior-7P_v41	
All Commercial	Area Lighting	Exterior Lighting	Fixture	1,011.39	1,298.10	Com-ExteriorLighting-7P_V14	
All Commercial	Fryer	Food Preparation	Installation	2,448.94	2,881.11	RTF ComCookingFryer-2.3	
All Commercial	Hot Food Container	Food Preparation	Installation	1,247.18	1,247.18	RTF ComCookingHotFoodCabinet-2.3	
All Commercial	Steamer	Food Preparation	Installation	45,097.45	45,097.45	RTF ComCookingSteamer-2.4	
All Commercial	Oven	Food Preparation	Installation	15,157.34	15,157.34	COM-Cooking-7P_V5	
All Commercial	Desktop Computer	Office Equipment	Installation	123.52	123.52	COM-Computers-7P_V3	
All Commercial	Laptop	Office Equipment	Installation	36.86	36.86	COM-Computers-7P_V3	
All Commercial	Monitor	Office Equipment	Installation	30.65	30.65	COM-Computers-7P_V3	
All Commercial	Windows - High Efficiency Glazing	Cooling	square foot	6.06	2.28	Com-WindowSGS-7P_V5	

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Commercial	Windows - High Efficiency Glazing	Heating	square foot	20.29	25.98	Com-WindowSGS-7P_V5	
All Commercial	Windows - High Efficiency Glazing	Ventilation	square foot	7.26	8.72	Com-WindowSGS-7P_V5	
All Commercial	Ventilation - ECM on VAV Boxes	Ventilation	square foot	0.58	0.59	COM-ECM-VAV-7P_V4	
All Commercial	Ventilation - Demand Controlled	Ventilation	square foot	0.03	0.04	Com-DCV-7P_V5	
All Commercial	HVAC - Dedicated Outdoor Air System (DOAS)	Heating	square foot	0.78	0.55		
All Commercial	HVAC - Dedicated Outdoor Air System (DOAS)	Ventilation	square foot	1.26	1.29		
All Commercial	RTU - Advanced Controls	Cooling	square foot	316.82	319.27	RTF ComRTUControllers-1.1	
All Commercial	Thermostat - Wi-Fi/Interactive	Cooling	square foot	0.49	0.70	COM-WEPT-7P_V2	
All Commercial	Thermostat - Wi-Fi/Interactive	Heating	square foot	0.78	0.84	COM-WEPT-7P_V2	
All Commercial	Thermostat - Wi-Fi/Interactive	Ventilation	square foot	0.49	0.16	COM-WEPT-7P_V2	
All Commercial	Water Heater - Low-Flow Showerheads	Water Heating	Installation	156.41	159.01	RTF Showerheads-3.1	
All Commercial	Water Heater - Pre-Rinse Spray Valve	Water Heating	Installation	534.51	548.60	RTF ComCookingPreRinseSprayValve-2.4	
All Commercial	Interior Lighting - Embedded Fixture Controls	Interior Lighting	square foot	0.39	0.40	Com-InteriorLightingControls-7P_V10	
All Commercial	Interior Lighting - Networked Fixture Controls	Interior Lighting	square foot	0.55	0.56	Com-InteriorLightingControls-7P_V10	Numbers very similar, difference is different due to rounding (.546 and .56)
All Commercial	Interior Lighting - LEC Exit Lighting	Interior Lighting	Installation	147.76	59.66	Com-ExitSign-7P_V3	CPA baseline includes less efficient signs, increasing savings.

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Commercial	Interior Fluorescent - Bi-Level Stairwell Fixture	Interior Lighting	Installation	286.92	294.34	Com-Bi-Level Stairwell-7P_V4	Unit is per 1,000 square feet
Grocery	Refrigeration - Anti-Sweat Heater Controls	Refrigeration	Fridge Feet	291.91	305.37	RTF ComGroceryAntiSweatHeaterControls-3.1	
Grocery	Refrigeration - Evaporator Fan Controls	Refrigeration	Fridge Case	246.76	256.21	RTF ComGroceryWalkinEvapFanECMController-2.3	
Grocery	Refrigeration - Floating Head Pressure	Refrigeration	Fridge HP	698.42	687.58	RTF ComGroceryFHPCSingleCompressor-1.6	MT, SCU for Yakima, WA
Grocery	Refrigeration - Strip Curtain	Refrigeration	WalkIn Door	134.47	122.89	RTF ComGroceryStripCurtain-1.7	Refrigerator,food sales
Grocery	Refrigeration - Door Gasket Replacement	Refrigeration	Display Door	235.04	215.73	RTF ComGroceryDoorGasketReplacement-1.3	Low Temp, CPA value converted from door perimiter feet to door (2.5'x5' door)
Grocery	Refrigeration - ECM Compressor Head Fan Motor	Refrigeration	Fridge Motor	731.21	765.64	RTF ComGroceryCompressorECM-2.1	Average size
Grocery	Grocery - Display Case - LED Lighting	Refrigeration	Fridge Ltg Ft	58.63	61.14	RTF ComGroceryCaseLED-1.1	
Grocery	Grocery - Display Case Motion Sensors	Refrigeration	Fridge Feet	13.43	14.00	RTF ComGroceryDisplayCaseMotionSensors-3.3	
Restaurant	Cooking - Exhaust Hoods with Sensor Control	Ventilation	Installation	5,015.75	5,035.50	COM-DCV-KitchenVent-7P_V3	
All Commercial	Office Equipment - Advanced Power Strips	Office Equipment	Installation	117.38	118.47	RTF ComSmartPlugPowerStrips-3.4	Value not changed since 7th Plan
Data Center	Data Center - Best Practice Measures	Office Equipment	square foot	22.10%	22.10%	Com-DataCenters-7P_V6	Wtd. Avg. of decommissioning, virtualization, power management, and efficient data storage
Data Center	Data Center - Commercially Available Measures	Cooling	square foot	0.26%	0.26%	Com-DataCenters-7P_V6	Wtd. Avg. of air & water economizer, in-row cooling, and misters

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
Data Center	Data Center - Commercially Available Measures	Ventilation	square foot	0.25%	0.25%	Com-DataCenters-7P_V6	Wtd. Avg. of hot/cold aisle w/ and w/o containment, variable speed fans, and premium efficiency motors
Data Center	Data Center - Commercially Available Measures	Interior Lighting	square foot	1.05%	1.05%	Com-DataCenters-7P_V6	Efficient lighting
Data Center	Data Center - Commercially Available Measures	Office Equipment	square foot	5.24%	5.24%	Com-DataCenters-7P_V6	Wtd. Avg. of efficient servers, MAID, efficient network topology, efficient transformers, and efficient UPSs
Data Center	Data Center - Cutting Edge Measures	Cooling	square foot	1.20%	1.20%	Com-DataCenters-7P_V6	Direct liquid cooling of chips
Data Center	Data Center - Cutting Edge Measures	Office Equipment	square foot	1.77%	1.77%	Com-DataCenters-7P_V6	Wtd. Avg. of Solid state storage and DC racks
All Commercial	Optimized Variable Volume Lab Hood Design	Ventilation	Installation	8,320.58	8,500.00	COM-FumeHood-7P_V2	
All Commercial	ENERGY STAR Water Cooler	Miscellaneous	Installation	25.93%	25.93%	Com-WaterCooler-7P_V6	% savings from Seventh Plan
All Commercial	Retrocommissioning	HVAC	square foot	0.66	0.30	Com-EM-7P_V5	AEG used data from the PacifiCorp study on Retrocommissioning completed in 2012

Table F-346   Comparison of 7th Plan and RTF Industrial Measures in Washington

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Industrial	Interior Lighting - Embedded Fixture Controls	Interior Lighting		29.3%	28.2%	Industrial_tool_7thPlan v05p	
All Industrial	Interior Lighting - Networked Fixture Controls	Interior Lighting		41.0%	51.0%	Industrial_tool_7thPlan v05p	Utilized more conservative savings value from commercial
All Industrial	Strategic Energy Management	All		4.3%	12%-50%	Industrial_tool_7thPlan v05p	AEG used data from the PacifiCorp study on Strategic Energy Management completed in 2012
All Industrial	Pumping System - Equipment Upgrade	Pumps		20.0%	20.0%	Industrial_tool_7thPlan v05p	
All Industrial	Pumping System - System Optimization	Pumps		15.0%	50.0%	Industrial_tool_7thPlan v05p	AEG utilized UNIDO industrial projects study
All Industrial	Fan System - Equipment Upgrade	Fans & Blowers		11.0%	35.0%	Industrial_tool_7thPlan v05p	AEG utilized UNIDO industrial projects study
All Industrial	Fan System - Flow Optimization	Fans & Blowers		13.0%	50.0%	Industrial_tool_7thPlan v05p	AEG utilized UNIDO industrial projects study
All Industrial	Compressed Air - Equipment Upgrade	Compressed Air		35.0%	35.0%	Industrial_tool_7thPlan v05p	
All Industrial	Compressed Air - System Controls	Compressed Air		8.0%	50.0%	Industrial_tool_7thPlan v05p	AEG utilized UNIDO industrial projects study
All Industrial	Compressed Air - Leak Management Program	Compressed Air		20.0%	20.0%	Industrial_tool_7thPlan v05p	
All Industrial	Material Handling - Variable Speed Drive	Material Handling		18.7%	18.7%	Industrial_tool_7thPlan v05p	
All Industrial	Motors - Green Rewind (<100 HP)	All Motors		0.9%	0.9%	Industrial_tool_7thPlan v05p	
All Industrial	Motors - Green Rewind (100 HP+)	All Motors		0.5%	0.5%	Industrial_tool_7thPlan v05p	
All Industrial	Motors - Synchronous Belts	All Motors		2.0%	2.0%	Industrial_tool_7thPlan v05p	
All Industrial	Clean Room: Change Filter Strategy	Process		40.0%	40.0%	Industrial_tool_7thPlan v05p	

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Industrial	Clean Room: Chiller Optimize	Process		14.8%	14.8%	Industrial_tool_7thPlan v05p	
All Industrial	Clean Room: Clean Room HVAC	Process		9.0%	9.0%	Industrial_tool_7thPlan v05p	
All Industrial	Elec Chip Fab: Solidstate Chiller	Process		9.0%	90.0%	Industrial_tool_7thPlan v05p	90% savings is not at the end use level
All Industrial	Elec Chip Fab: Eliminate Exhaust	Process		5.0%	5.0%	Industrial_tool_7thPlan v05p	
All Industrial	Elec Chip Fab: Alternative Exhaust Injector	Process		10.0%	100.0%	Industrial_tool_7thPlan v05p	100% savings is not at the end use level
All Industrial	Elec Chip Fab: Reduce Process Gas Pressure	Process		10.0%	10.0%	Industrial_tool_7thPlan v05p	
All Industrial	Panel: Hydraulic Press	Process		28.0%	28.0%	Industrial_tool_7thPlan v05p	
All Industrial	Wood: Replace Pneumatic Conveyor	Process		29.0%	29.0%	Industrial_tool_7thPlan v05p	
All Industrial	Metal: New Arc Furnace	Process		45.0%	45.0%	Industrial_tool_7thPlan v05p	
All Industrial	Paper: Premium Control Large Material	Process		18.7%	18.7%	Industrial_tool_7thPlan v05p	
All Industrial	Paper: Efficient Pulp Screen	Process		15.0%	15.0%	Industrial_tool_7thPlan v05p	
All Industrial	Kraft: Effluent Treatment System	Process		15.0%	15.0%	Industrial_tool_7thPlan v05p	
All Industrial	Kraft: Efficient Agitator	Process		50.0%	50.0%	Industrial_tool_7thPlan v05p	
All Industrial	Mech Pulp: Premium Process	Process		0.2%	0.2%	Industrial_tool_7thPlan v05p	
All Industrial	Mech Pulp: Refiner Plate Improvement	Process		0.4%	0.4%	Industrial_tool_7thPlan v05p	
All Industrial	Transformer - High Efficiency	All		0.00%	1.5%	Industrial_tool_7thPlan v05p	Removed from CPA per 7th Plan notes on Federal standard.

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Industrial	Interior Lighting - Embedded Fixture Controls	Interior Lighting		29.3%	28.2%	Industrial_tool_7thPlan v05p	

Table F-347   Comparison of 7th Plan and RTF Irrigation Measures in Washington

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Irrigation	Wheel/Hand - Flow Control Nozzle Replacement	Motors	per acre	70.8	70.9	ag-irr_hardware-7p_v4p	
All Irrigation	Wheel/Hand - Nozzle Replacement	Motors	per acre	70.8	70.9	ag-irr_hardware-7p_v4p	
All Irrigation	Wheel/Hand - Impact Sprinkler Maintenance	Motors	per acre	62.3	62.3	ag-irr_hardware-7p_v4p	
All Irrigation	Wheel/Hand - Gasket Replacement	Motors	per acre	372.6	372.9	ag-irr_hardware-7p_v4p	
All Irrigation	Wheel/Hand - Drain Replacement	Motors	per acre	386.2	386.5	ag-irr_hardware-7p_v4p	
All Irrigation	Wheel/Hand - Pipe Maintenance	Motors	per acre	185.4	185.6	ag-irr_hardware-7p_v4p	
All Irrigation	Thunderbird - Hub Replacement	Motors	per acre	320.9	321.2	ag-irr_hardware-7p_v4p	
All Irrigation	Wheel Line - Leveler Maintenance	Motors	per acre	92.4	92.5	ag-irr_hardware-7p_v4p	
All Irrigation	Center Pivot/Linear - New Sprinkler Package	Motors	per acre	122.5	122.6	ag-irr_hardware-7p_v4p	

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Irrigation	Center Pivot/Linear - New Goosenecks	Motors	per acre	9.3	9.4	ag-irr_hardware-7p_v4p	
All Irrigation	Center Pivot/Linear - New Drop Tubes	Motors	per acre	9.3	9.4	ag-irr_hardware-7p_v4p	
All Irrigation	Center Pivot/Linear - Boot Gasket Replacement	Motors	per acre	15.6	15.6	ag-irr_hardware-7p_v4p	
All Irrigation	Center Pivot/Linear - Tower Gasket Replacement	Motors	per acre	3.9	3.9	ag-irr_hardware-7p_v4p	
All Irrigation	Center Pivot - Low Energy Spray Application	Motors	per acre	625.3	36.60%	ag-irr_eff-7p_v2p	
All Irrigation	Low Pressure Regulators	Motors	per acre	481.9	482.3	ag-convert_p_irr-7p_v3p	Average of four applications
All Irrigation	Scientific Irrigation Practices	Motors	per acre	0.0	10.00%	ag-irr_water-mgmt-7p_v2	Removed measure from CPA per RTF note that this is standard practice
All Irrigation	Green Motor Rewind	Motors	motor	1038.7	1,039.50	ag-irr_motor-7p_v3p	

Table F-348   Comparison of 7th Plan and RTF Street Lighting Measures in Washington

Segment	Measure Name	End Use	Unit Definition	Average Savings per Unit (Annual kWh @meter)	7th Plan/RTF Savings per Unit (Annual kWh @meter)	Reference 7PP/RTF Workbook	Notes
All Street Lighting	100W Fixture	Street Lighting	fixture	258.65	305.30	com-streetlight-7p_v9p	This group includes fixtures with less than 100W baseline power draw, lowering savings
All Street Lighting	150W Fixture	Street Lighting	fixture	285.98	350.50	com-streetlight-7p_v9p	Average of 150W and 200W
All Street Lighting	250W Fixture	Street Lighting	fixture	688.17	666.50	com-streetlight-7p_v9p	
All Street Lighting	400W Fixture	Street Lighting	fixture	1,009.66	1,152.40	com-streetlight-7p_v9p	
All Street Lighting	1000W Fixture	Street Lighting	fixture	1,267.90	2,919.70	com-streetlight-7p_v9p	Average wattage in PacifiCorp's service territory is significantly lower than 1000W, lowering savings

APPENDIX | G

STATE-LEVEL ADMINISTRATIVE COST ANALYSIS AND FINDINGS

As part of PacifiCorp's 2019 Potential Assessment, AEG was tasked with assessing the utility cost required to administer Class 2 DSM programs within PacifiCorp's Washington, California, Idaho, Utah, and Wyoming service territories. There was particular interest surrounding the following question: "Are there differences between admin costs in larger, more urban, territories compared to smaller, rural ones?" To address this question, AEG analyzed data from PacifiCorp's DSM Annual Reports for 2014 through 2016 and compared it with information reported by similar utilities within the western United States. This memo describes the high-level outcome, approach and results from this analysis.

Summary of Results

We have three key findings:

- The analysis of PacifiCorp program costs reveals that admin costs are substantially lower in Utah compared with the other states.

- Benchmarking savings and costs is a difficult task. Not only is it challenging to identify a peer group, the available data are also incomplete. Nevertheless, we were able to ascertain that the average cost for gross first-year savings is higher for utilities in rural areas than it is for utilities in larger, more urban areas.

- AEG recommends PacifiCorp consider varying administrative cost values as percent of incremental customer costs by state. AEG recommends using a value of 18% of Utah, 35% of Washington, 44% for California, 36% for Idaho, and 27% for Wyoming.

We present the analysis approach and results in more detail below.

Approach

To assess these impacts, AEG defined two metrics to analyze:

- Administrative cost as % of incremental customer cost represents the utility costs required to administer Class 2 DSM programs divided by total incremental customer costs. The standard planning assumption in the region, as well as throughout the country, is a value of 20%. That means that for every $100 a customer spends; the utility must pay an additional $20, not including customer incentives. This is the metric and value that we have used in past potential studies and refining this estimate is the primary focus of this analysis.

- Total utility spending per gross first-year kWh saved incorporates all utility spending on Class 2 DSM programs (including incentives) divided by all gross energy saved as a result of this spending. As an example, a value of $0.20/kWh would imply that the utility must spend $20 to realize 100 kWh of savings. This metric was chosen due to the data available in E Source's "DSM Dat" database[1], which includes program-level data on first-year energy savings as well as total utility spending for many utilities within the Western United States. We used this data for benchmarking purposes.

AEG utilized data from PacifiCorp's Annual Reports[2] for the five states of interest to quantify utility spending on Class 2 DSM programs or the years of 2014 through 2016, the most recent years with evaluated data available. Among other things, the annual reports include data on utility administrative spending, incentives, and gross customer costs at the state, program, and even measure category level. AEG constructed a database containing this data from all reports and then we rolled the data up at the state-level to quantify the impacts. We began by identifying the non-incentive administrative costs to include in the analysis. Within the non-incentive administrative costs, AEG included:

- Portfolio Costs
- Engineering Costs
- Utility Admin Costs
- Program Development Costs
- Program Delivery Costs

We excluded costs for NEEA payments as well as costs for low-income programs and school education. We removed NEEA costs because they have been considered separately of other DSM programs in the past. Low-income program costs were excluded since those programs are administered for reasons that go beyond achieving energy savings, which makes them costlier to run. Finally, energy savings are not always associated with educational programs, so we excluded these as well.

The second step was to exclude specific programs from the analysis.

- Home Energy Reports (HER) were excluded since the program is administered separate from other programs and the cost to the customer is $0, which is not representative of non-behavioral programs. Additionally, a large majority of HER potential is captured within the potential study baseline since these programs have already matured and expanded within the territory.

- "See Ya Later Refrigerator", PacifiCorp's appliance recycling program, was cancelled in 2016 due to high measure costs and is no longer offered to customers. Since potential from recycling measures will not be captured within the potential study, we excluded these programs as well.

All other PacifiCorp programs namely Home Energy Savings (HES) and Wattsmart Business, were included in the analysis.

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[1] A description of E Source's "DSM Dat" database may be found online at: https://www.esource.com/about-dsmdat

[2] Please see "Reports and Program Evaluations by Jurisdiction" for the publicly available data used to conduct this analysis at: http://www.pacificorp.com/es/dsm.html.

California reports have not been published but were provided to AEG for this analysis.

Analysis of PacifiCorp Data

Results of this analysis for each state and year are presented below. Cells shaded grey were analyzed, but ultimately excluded from this analysis as non-representative of typical years:

Table G-1   Utility Administrative Costs as Percent of Incremental Measure Cost for PacifiCorp's Service Territory, 2014-2016

Admin % Customer	Utah	Washington	California	Idaho	Wyoming
2014	17%	34%	46%	*60%*	*49%*
2015	19%	34%	30%	36%	*41%*
2016	19%	37%	42%	36%	27%
All Years	**18%**	**35%**	**44%**	**36%**	**27%**

From this analysis, a few conclusions may be drawn:

- It is cheaper for PacifiCorp to administer Class 2 DSM programs in Utah. PacifiCorp's Utah market is substantially larger than PacifiCorp's markets in the other states. In addition, the Utah market has more high-use customers, which are less expensive to serve because a relatively few transactions yields substantial savings. In addition, the service territory is more urban, and the higher density makes it easier for PacifiCorp and its trade allies to serve. The fact that Utah is more urban, while the other service territories are more rural, leads us to a recommendation to quantify administrative costs for Utah separately from PacifiCorp's four more rural territories.

- 2014 was not a representative year in Idaho due to very high commercial costs. In 2014, administrative costs in Idaho were an outlier. This is apparent within the commercial "Wattsmart Business" program, where administrative costs were greater than 50% of incremental customer costs. It appears that this is due to lower than expected participation, but fixed administrative costs remained in a similar spot. As a result, we excluded this atypical Idaho data in 2014 from the final analysis.

- Costs in Wyoming decreased significantly between 2014 and 2016. Class 2 DSM programs within PacifiCorp's Wyoming territory have been ramping up between 2014 and 2016 as the program matures. Between these three years, savings for the Home Energy Savings and Wattsmart Business programs have increased by about 10,000 MWh per year. Because a significant portion of administrative costs are fixed, we expect cost per kWh saved to decrease. Accordingly, AEG concluded Wyoming data from 2014 and 2015 is not representative of current programs and excluded these years from the analysis.

Benchmarking Analysis

In addition to analyzing and comparing cost data within the PacifiCorp service areas, we also wanted to see if there were similar differences within a peer group of utilities. We compared utility spending with similar utilities in the western United States, using publicly available information from E Source. This dataset includes utilities from Washington, California, Idaho, and Utah as well as Oregon, Colorado, Nevada, Arizona, and New Mexico. To utilize this data, we first excluded programs considered to be dissimilar to PacifiCorp's Class 2 portfolio (e.g. demand response programs) as well as programs excluded from the main analysis above (e.g. low income and appliance recycling). AEG then assigned each utility to one of three categories:

- Rural utilities tend to cover smaller portions of a state and do not serve a major urban center. On average, total sales for these utilities is lower than those in the next category. Examples include Black Hills Energy in Colorado, Idaho Power in Oregon, and the Imperial Irrigation District in California.

- Large/Urban utilities tend to be larger in size and serve a major urban center, such as Salt Lake City or Los Angeles. Due to high population densities in urban areas, annual sales for these utilities are generally larger than their rural counterparts. Examples include Puget Sound Energy in Washington, NV Energy in Nevada, Los Angeles Department of Water and Power and San Diego Gas and Electric in California, Arizona Public Service in Arizona, and PNM in New Mexico.

Some utilities only reported net savings, rather than gross. In these cases, AEG converted these to gross savings using an average net-to-gross (NTG) ratio of roughly 0.85. This data was derived from a survey conducted by Synapse Energy Economics of 292 net-to-gross (NTG) ratios spanning all fifty states between 2011 and 2015[3].

The analysis revealed that the cost per gross kWh saved is about $0.18/kWh for larger utilities in more urban settings. Costs are higher, an at average of $0.23/kWh, for utilities with smaller, more rural service territories.

Final Results and Comparisons

The table below summarizes the final results of this analysis and the key findings are:

- The analysis of PacifiCorp program costs reveals that admin costs are substantially lower in Utah, a larger urban service territory, compared with the other states in the PacifiCorp system.

- Benchmarking results show a similar pattern: costs are lower in larger, more urban service territories.

Table G-2   Summary of Utility Administrative Costs and Comparison with Similar Utilities

PacifiCorp Territory	PacifiCorp Admin Cost as a % of Customer Cost	Benchmark Territory Type	Benchmark Results for Program Spending ($/Gross kWh Saved)
WA, CA, ID, and WY Average	34%	Smaller / Rural	$0.23
Utah	18%	Large / Urban	$0.18
Total PacifiCorp	**21%**	**Combined**	**$0.20**

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[3] "From Gross to Net: The True Impact of Energy Efficiency Resources", Presented at the 2017 ACEEE National Conference on Energy Efficiency as a Resource by Synapse Energy Economics, Inc. October 31, 2017
https://aceee.org/sites/default/files/pdf/conferences/eer/2017/Malone_Session1D_EER17_Oct_31.pdf

WASTE-HEAT-TO-POWER AND REGENEATIVE TECHNOLOGY ANALYSIS AND FINDINGS

Overview

In 2014, CLEAResult evaluated the potential for Waste Heat to Power (WHP) and Regenerative Technologies (RT) in PacifiCorp service territory. In 2018, AEG was tasked by PacifiCorp to update the findings from the 2014 WHP and RT potential evaluation study, using recent customer data and technology data. This appendix presents the methodology of AEG's analysis and subsequent results.

AEG staff reviewed the CLEAResult approach and made updates to assumptions used in the 2014 WHP and RT potential study. We describe these modifications and data updates below. We begin with the WHP technologies, followed by the elevator regenerative technology and concluding with the conveyor regenerative technology.

Waste Heat to Power Technology Updates:

- We replaced 2014 customer billing data with 2016 customer billing data.
- Because ten WY and UT customers had erroneous 2016 billing data (e.g., annual electric load factor >100%), we used 2014 customer billing data for these 10 customers.
- Like the 2014 WHP and RT potential study, we only considered commercial and industrial sites with an annual peak demand of at least 1 MW.
- We reviewed current and emerging WHP and RT technologies. In collaboration with PacifiCorp staff, we selected the following technologies for the 2016 WHP and RT potential update: Organic Rankine Cycle (ORC), Steam Rankine Cycle (SRC), Steam System Optimization, Elevator Regeneration, and Conveyor Regeneration.
- With the exception for Micro Hydro technology, which was removed to prevent double-counting of energy savings since it is studied separately by PacifiCorp, the five technologies listed above are the same as those included in the 2014 WHP and RT potential study.
- We updated the installed capital cost, O&M cost, and lifetime for the selected WHP technologies using recent data from ORNL[4], DOE[5], and EPA[6]. Table 1 summarizes the updated input values for the selected WHP technologies. All costs are reported in $2016 values. Revised estimates as well as information sources are documented in the new "Tech Inputs" tab in the WHP Market Estimator tool.
- Like the 2014 WHP and RT potential study, we assumed a maximum capacity limit of 1 MW for WHP systems to remove overlap with Qualifying Facilities.
- We reduced annual operating hours for WHP systems from 8,000 to 7,500 hours based on a reported value by EPA.[7]
- We reduced the waste heat to power efficiency for ORC systems from 15% to 10%. While an efficiency of 15-20% can be achieved in high-temperature ORC applications, an efficiency of 10% is more commonly found in low- to medium-temperature waste heat applications.[8] As such, we believe an efficiency of 10% is a better estimate for medium-temperature ORC applications considered in this potential assessment since SRC technology is typically employed for high-temperature waste heat applications.

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[4] ICF International, Waste Heat to Power Market Assessment, March 2015. Prepared for Oak Ridge National Laboratory.

[5] US DOE, Combined Heat and Power (CHP) Technical Potential in the United States, March 2016.

[6] US EPA, Waste Heat to Power Systems, May 30, 2012.

[7] Ibid.

[8] ICF International, Waste Heat to Power Market Assessment, March 2015. Prepared for Oak Ridge National Laboratory.

- We updated 2010 MEC Survey Data with 2014 MECS Survey Data.[9] [10]
- We included 2012 CBCES data to help identify commercial buildings with opportunities for WHP.[11] Example commercial candidates for WHP include larger campuses and hospitals that currently generate steam for onsite use.
- We reviewed the DOE CHP Database to identify commercial and industrial customers with existing WHP systems in CA, ID, UT, WA, and WY.[12]

Table H-1   Technology Costs and Measure Life for Selected WHP Technologies

Sector	Technology	System Size (kW)	Lifetime	2016$/kW Installed Capital Cost	Non-fuel 2016$/kWh Annual O&M Cost
C&I	Organic Rankine Cycle (100 kW)	100	15	$ 5,110	$ 0.0217
C&I	Organic Rankine Cycle (500 kW)	500	15	$ 4,227	$ 0.0175
C&I	Organic Rankine Cycle (1 MW)	1,000	15	$ 3,847	$ 0.0159
C&I	High Temp. Waste Heat (100 kW)	100	15	$ 3,370	$ 0.013
C&I	High Temp. Waste Heat (500 kW)	500	15	$ 2,725	$ 0.0113
C&I	High Temp. Waste Heat (1 MW)	1,000	15	$ 2,448	$ 0.0088
C&I	Steam System Optimization (1 MW)	1,000	20	$ 1,003	$ 0.010

Elevator Regeneration Technology Updates

- We updated the baseline electricity consumption (MWh) data for the offices segment in CA, ID, UT, WA, and WY based on more recent (2016) PacifiCorp customer data. This approach allowed for the removal of extraneous assumptions (incl. total demand (aMW), percentage of total demand for offices, and annual operating hours) from the analysis for these states.
- The assumption of elevator energy use being 5% of total building electricity use for offices was confirmed with a more recent source with an updated citation.[13]
- We updated the range of potential percent savings with corresponding source citations.[14] [15] [16,]
  1. Rather than reporting the overall measure savings as the highest possible savings percentage, we report savings using the average of the "low" and "high" estimates populated in the tool.
  2. We updated the "high" savings potential percentage from 40% to 45% of baseline elevator electricity use.

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[9] US Energy Information Administration, 2014 Manufacturing Energy Consumption Survey, Table 3.3 Fuel Consumption.

[10] US Energy Information Administration, 2014 Manufacturing Energy Consumption Survey, Table 5.2 End Uses of Fuel Consumption.

[11] US Energy Information Administration, 2012 Consumer Building Energy Consumption Survey, Public Use Microdata File.

[12] US DOE Combined Heat and Power Installation Database, https://doe.icfwebservices.com/chpdb/

[13] Sachs, Harvey, Harry Misuriello, and Sameer Kwatra. "Advancing elevator energy efficiency." American Council for an Energy-Efficient Economy: Washington, DC, USA (2015).

[14] Data from E Source via "Elevators - Madison Gas and Electric" webpage (Table 1). URL: https://www.mge.com/saving-energy/business/bea/article_detail.htm?nid=1789

[15] S. Hackel, et al. Proven Energy-Saving Technologies for Commercial Properties. NREL Technical Report, 2014.

[16] NREL, Proven Energy-Saving Technologies for Commercial Properties, March 2012. https://www.nrel.gov/docs/fy15osti/63807.pdf

- We updated the percentage of applicable offices from 50% (previously intended to represent only high-rise offices) to 25% to reflect the percentage of all elevators that can be retrofit with regenerative drives (i.e., the percentage of non-hydraulic elevators).[17]
- Measure lifetime was estimated at 25 years, based on 20-30-year range reported in literature.[18]
- Measure costs estimated based on a quote by Otis Elevator for a confidential AEG client[19] and data for a mid-rise commercial building as reported by E Source[20]. Table 2 summarizes measure life and costs for the selected Regenerative Technologies. Costs are reported in $2016 values.

Table H-2   Technology Costs and Measure Life for Selected Regenerative Technologies

Sector	Technology	Lifetime	2016$/Unit Installed Capital Cost	Non-fuel 2016$/Unit Annual O&M Cost
Office	Elevator Regeneration	25	$ 21,000	$ n/a*
Mining	Conveyor Regeneration	20	$ 72,100	$ n/a*

*We were unable to find non-fuel annual O&M costs for the regenerative technologies. For the cost-effectiveness analyses, we assumed non-fuel O&M costs for an elevator/conveyor with regenerative braking equals that of an elevator/conveyor without regenerative braking.

Conveyor Regeneration Technology Updates

- No updates to CLEAResult's site-by-site assumptions and estimates have been made, due to the lack of reliable and more recent secondary data with which to assess typical savings. However, sites previously identified as having conveyor regeneration potential were confirmed to still be in the latest PacifiCorp customer usage dataset. The resulting savings potential for this potential is entirely due to updated baseline usage data for the applicable customers.
- Table 2 summarizes measure life and costs for the selected Regeneration Technologies. Costs are reported in $2016 values.

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[17] US DOE. Commercial Miscellaneous Electric Loads: Energy Use Characterization and Savings Potential in 2008 by Building Type (2010). URL: https://www.energy.gov/sites/prod/files/2016/07/f33/2010-05-26%20TIAX%20CMELs%20Final%20Report_0.pdf

[18] Sachs, Harvey, Harry Misuriello, and Sameer Kwatra. "Advancing elevator energy efficiency." American Council for an Energy-Efficient Economy: Washington, DC, USA (2015).

[19] Otis Elevator, Quote for an Otis Quattro PWM regenerative drive including installation, October 28, 2016.

[20] Data from E Source via "Elevators - Madison Gas and Electric" webpage (Table 1). URL: https://www.mge.com/saving-energy/business/bea/article_detail.htm?nid=1789

Results of Analysis

Table 3 and Table 4 below summarizes the 20-year technical achievable potential for Waste Heat to Power and Regenerative Technology measure categories respectively. Please note that this potential is included within the Class 2 potential in Volume 2, Section 4 of this report and is not incremental to it.

Table H-3   Cumulative WHP Potential by State and Measure in 2038 (MWh @generator)

WHP Measure	California	Idaho	Utah	Washington	Wyoming
Organic Rankine Cycle	0	0	84,814	4,332	13,104
High Temperature Waste Heat	0	2,415	45,266	0	10,260
Steam System Optimization	0	0	0	3,820	0
Total	**0**	**2,415**	**130,080**	**8,152**	**23,364**

Table H-4   Cumulative RT Potential by State and Measure in 2038 (MWh @generator)

RT Measure	California	Idaho	Utah	Washington	Wyoming
Elevator Regeneration	269	569	18,301	1,651	1,760
Conveyor Regeneration	0	0	2,318	4,975	2,391
Total	**269**	**569**	**20,618**	**6,626**	**4,151**