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## **PACIFICORP DEMAND-SIDE RESOURCE POTENTIAL ASSESSMENT FOR 2015-2034**

*Volume 4: Appendix A through G to Class 2 DSM Analysis*

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Applied Energy Group  
500 Ygnacio Valley Road  
Suite 450  
Walnut Creek, CA 94596  
925.482.2000  
[www.appliedenergygroup.com](http://www.appliedenergygroup.com)

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PacifiCorp

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This report was prepared by

Applied Energy Group  
500 Ygnacio Valley Blvd., Suite 450  
Walnut Creek, CA 94596

I. Rohmund, Project Director  
D. Costenaro, Project Manager  
S. Yoshida  
D. Ghosh  
K. Kolnowski  
K. Walter  
C. Carrera

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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, 2012. 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 2012 was 41,169 GWh at the generator. Excluding sales to special contract customers from the industrial sectors, the portion of load applicable to this study is 38,146 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 2012 (MWh)**

State	Residential	Commercial	Industrial	Irrigation	Street Lighting	Total
California	388,990	244,850	51,060	96,750	2,360	<b>784,010</b>
Washington	1,612,600	1,444,120	811,710	152,430	10,310	<b>4,031,170</b>
Idaho	693,750	431,480	251,033	653,210	2,650	<b>2,032,123</b>
Utah	6,696,800	7,970,800	6,733,353	229,500	79,220	<b>21,709,673</b>
Wyoming	1,063,970	1,551,750	6,934,304	28,010	11,920	<b>9,589,954</b>
<b>Total</b>	<b>10,456,110</b>	<b>11,643,000</b>	<b>14,781,460</b>	<b>1,159,900</b>	<b>106,460</b>	<b>38,146,930</b>

### Market Profile Framework

As described in the Analysis Approach chapter above, 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 Cooling
Space Heating	Electric Resistance
Space Heating	Electric Furnace
Space Heating	Air-Source Heat Pump
Space Heating	Geothermal Heat Pump
Water Heating	Water Heater ≤ 55 Gal
Water Heating	Water Heater > 55 Gal
Interior Lighting	Screw-in
Interior Lighting	Linear Fluorescent
Interior Lighting	Specialty
Exterior Lighting	Screw-in
Appliances	Clothes Washer
Appliances	Clothes Dryer
Appliances	Dishwasher
Appliances	Refrigerator
Appliances	Freezer
Appliances	Second Refrigerator
Appliances	Stove
Appliances	Microwave
Electronics	Personal Computers
Electronics	Monitor
Electronics	Laptops
Electronics	TVs
Electronics	Printer/Fax/Copier
Electronics	Set-top Boxes/DVR
Electronics	Devices and Gadgets
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	Evaporative AC
Cooling	Air-Source Heat Pump
Cooling	Geothermal Heat Pump
Heating	Electric Furnace
Heating	Electric Zonal Heating
Heating	Air-Source Heat Pump
Heating	Geothermal Heat Pump
Ventilation	Ventilation
Water Heating	Water Heating
Interior Lighting	Screw-in
Interior Lighting	High-Bay Fixtures
Interior Lighting	Linear Fluorescent
Exterior Lighting	Screw-in
Exterior Lighting	HID
Exterior Lighting	Linear Fluorescent
Refrigeration	Walk-in Refrigerator
Refrigeration	Reach-in Refrigerator
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
Office Equipment	Desktop Computer
Office Equipment	Laptop
Office Equipment	Server
Office Equipment	Monitor
Office Equipment	Printer/Copier/Fax
Office Equipment	POS Terminal
Miscellaneous	Non-HVAC Motors
Miscellaneous	Pool Pump
Miscellaneous	Pool Heater
Miscellaneous	Other 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	Air-Cooled Chiller
Cooling	Water-Cooled Chiller
Cooling	RTU
Cooling	Air-Source Heat Pump
Cooling	Geothermal Heat Pump
Heating	Electric Furnace
Heating	Electric Zonal Heating
Heating	Air-Source Heat Pump
Heating	Geothermal Heat Pump
Ventilation	Ventilation
Interior Lighting	Screw-in
Interior Lighting	High-Bay Fixtures
Interior Lighting	Linear Fluorescent
Exterior Lighting	Screw-in
Exterior Lighting	HID
Exterior Lighting	Linear Fluorescent
Motors	Pumps
Motors	Fans & Blowers
Motors	Compressed Air
Motors	Conveyors
Motors	Other Motors
Process	Process Heating
Process	Process Cooling
Process	Process Refrigeration
Process	Process Electro-Chemical
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 electricity use by sector, segment, end use and technology in the base year of the study (2012). 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 2012 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 2012 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 2012.

**Usage** is the 2012 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.

**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	9.5%	1,367	130	3,234
Cooling	Room AC	13.9%	539	75	1,863
Cooling	Air-Source Heat Pump	16.3%	1,409	229	5,714
Cooling	Geothermal Heat Pump	0.0%	1,199	0	0
Cooling	Evaporative Cooling	7.8%	647	50	1,257
Space Heating	Electric Resistance	10.1%	7,199	730	18,208
Space Heating	Electric Furnace	5.9%	8,119	482	12,019
Space Heating	Air-Source Heat Pump	16.3%	4,222	686	17,115
Space Heating	Geothermal Heat Pump	0.0%	2,413	0	0
Water Heating	Water Heater <= 55 Gal	72.8%	3,042	2,213	55,202
Water Heating	Water Heater > 55 Gal	9.6%	3,216	310	7,733
Interior Lighting	Screw-in	100.0%	968	968	24,145
Interior Lighting	Linear Fluorescent	100.0%	136	136	3,397
Interior Lighting	Specialty	100.0%	364	364	9,068
Exterior Lighting	Screw-in	100.0%	444	444	11,079
Appliances	Clothes Washer	96.9%	97	94	2,348
Appliances	Clothes Dryer	92.9%	751	697	17,391
Appliances	Dishwasher	73.9%	355	262	6,546
Appliances	Refrigerator	100.0%	599	599	14,947
Appliances	Freezer	60.4%	511	309	7,696
Appliances	Second Refrigerator	29.7%	1,153	343	8,552
Appliances	Stove	84.0%	443	372	9,276
Appliances	Microwave	97.5%	129	126	3,138
Electronics	Personal Computers	109.9%	262	288	7,191
Electronics	Monitor	109.9%	52	57	1,431
Electronics	Laptops	33.9%	113	38	954
Electronics	TVs	228.0%	220	502	12,508
Electronics	Printer/Fax/Copier	107.6%	40	43	1,078
Electronics	Set-top Boxes/DVR	167.2%	107	179	4,464
Electronics	Devices and Gadgets	100.0%	50	50	1,247
Miscellaneous	Pool Pump	3.1%	1,500	46	1,158
Miscellaneous	Pool Heater	0.8%	4,981	39	961
Miscellaneous	Hot Tub / Spa	16.0%	950	152	3,791
Miscellaneous	Furnace Fan	7.7%	309	24	593
Miscellaneous	Well pump	34.1%	561	191	4,776
Miscellaneous	Miscellaneous	100.0%	225	225	5,619
<b>Total</b>				<b>11,455</b>	<b>285,697</b>

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

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	23.7%	1,289	306
Cooling	Room AC	4.2%	723	30
Cooling	Air-Source Heat Pump	16.3%	1,227	200
Cooling	Geothermal Heat Pump	0.0%	1,156	-
Cooling	Evaporative Cooling	0.0%	733	-
Space Heating	Electric Resistance	12.2%	6,303	767
Space Heating	Electric Furnace	14.8%	7,108	1,055
Space Heating	Air-Source Heat Pump	16.3%	2,764	449
Space Heating	Geothermal Heat Pump	0.0%	2,062	-
Water Heating	Water Heater <= 55 Gal	43.7%	3,016	1,317
Water Heating	Water Heater > 55 Gal	5.8%	3,188	184
Interior Lighting	Screw-in	100.0%	1,082	1,082
Interior Lighting	Linear Fluorescent	100.0%	120	120
Interior Lighting	Specialty	100.0%	575	575
Exterior Lighting	Screw-in	100.0%	483	483
Appliances	Clothes Washer	96.9%	91	89
Appliances	Clothes Dryer	92.9%	740	688
Appliances	Dishwasher	88.7%	348	309
Appliances	Refrigerator	100.0%	729	729
Appliances	Freezer	60.4%	528	318
Appliances	Second Refrigerator	14.9%	1,404	209
Appliances	Stove	71.4%	440	314
Appliances	Microwave	97.5%	126	122
Electronics	Personal Computers	76.9%	262	202
Electronics	Monitor	76.9%	52	40
Electronics	Laptops	49.1%	113	55
Electronics	TVs	239.4%	220	527
Electronics	Printer/Fax/Copier	123.7%	40	50
Electronics	Set-top Boxes/DVR	175.6%	108	190
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	3.1%	1,500	46
Miscellaneous	Pool Heater	0.8%	4,981	39
Miscellaneous	Hot Tub / Spa	19.2%	950	182
Miscellaneous	Furnace Fan	7.7%	309	24
Miscellaneous	Well pump	30.7%	561	172
Miscellaneous	Miscellaneous	100.0%	249	249

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

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	4.7%	548	26	121
Cooling	Room AC	27.6%	440	122	568
Cooling	Air-Source Heat Pump	27.0%	548	148	691
Cooling	Geothermal Heat Pump	0.0%	466	0	0
Cooling	Evaporative Cooling	0.0%	267	0	0
Space Heating	Electric Resistance	66.2%	1,099	727	3,395
Space Heating	Electric Furnace	4.8%	1,239	59	276
Space Heating	Air-Source Heat Pump	27.0%	624	169	787
Space Heating	Geothermal Heat Pump	0.0%	357	0	0
Water Heating	Water Heater <= 55 Gal	91.2%	2,534	2,309	10,780
Water Heating	Water Heater > 55 Gal	7.0%	2,679	187	871
Interior Lighting	Screw-in	100.0%	540	540	2,521
Interior Lighting	Linear Fluorescent	100.0%	38	38	177
Interior Lighting	Specialty	100.0%	31	31	145
Exterior Lighting	Screw-in	100.0%	174	174	812
Appliances	Clothes Washer	46.9%	97	45	212
Appliances	Clothes Dryer	46.7%	594	277	1,294
Appliances	Dishwasher	78.4%	406	318	1,486
Appliances	Refrigerator	100.0%	599	599	2,797
Appliances	Freezer	4.0%	511	20	96
Appliances	Second Refrigerator	3.0%	1,153	35	163
Appliances	Stove	96.9%	357	346	1,613
Appliances	Microwave	96.8%	129	125	583
Electronics	Personal Computers	59.2%	262	155	724
Electronics	Monitor	59.2%	52	31	144
Electronics	Laptops	11.8%	113	13	62
Electronics	TVs	152.0%	269	409	1,908
Electronics	Printer/Fax/Copier	66.9%	40	27	125
Electronics	Set-top Boxes/DVR	116.0%	107	124	580
Electronics	Devices and Gadgets	100.0%	50	50	233
Miscellaneous	Pool Pump	0.0%	1,500	0	0
Miscellaneous	Pool Heater	0.0%	4,981	0	0
Miscellaneous	Hot Tub / Spa	0.0%	950	0	0
Miscellaneous	Furnace Fan	4.6%	105	5	23
Miscellaneous	Well pump	0.0%	556	0	0
Miscellaneous	Miscellaneous	100.0%	584	584	2,726
<b>Total</b>				<b>7,694</b>	<b>35,915</b>

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

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	4.7%	414	20
Cooling	Room AC	27.6%	441	122
Cooling	Air-Source Heat Pump	24.3%	477	116
Cooling	Geothermal Heat Pump	0.0%	449	-
Cooling	Evaporative Cooling	0.0%	302	-
Space Heating	Electric Resistance	23.2%	427	99
Space Heating	Electric Furnace	4.8%	481	23
Space Heating	Air-Source Heat Pump	24.3%	408	99
Space Heating	Geothermal Heat Pump	0.0%	305	-
Water Heating	Water Heater <= 55 Gal	68.4%	2,517	1,721
Water Heating	Water Heater > 55 Gal	5.2%	2,661	139
Interior Lighting	Screw-in	100.0%	673	673
Interior Lighting	Linear Fluorescent	100.0%	42	42
Interior Lighting	Specialty	100.0%	55	55
Exterior Lighting	Screw-in	100.0%	193	193
Appliances	Clothes Washer	23.5%	91	21
Appliances	Clothes Dryer	23.3%	586	137
Appliances	Dishwasher	15.7%	397	62
Appliances	Refrigerator	100.0%	729	729
Appliances	Freezer	4.0%	528	21
Appliances	Second Refrigerator	3.0%	1,404	42
Appliances	Stove	82.3%	355	292
Appliances	Microwave	96.8%	126	121
Electronics	Personal Computers	41.4%	262	109
Electronics	Monitor	41.4%	52	22
Electronics	Laptops	23.7%	113	27
Electronics	TVs	136.8%	269	368
Electronics	Printer/Fax/Copier	113.7%	40	46
Electronics	Set-top Boxes/DVR	104.4%	108	113
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-
Miscellaneous	Furnace Fan	4.6%	105	5
Miscellaneous	Well pump	0.0%	556	-
Miscellaneous	Miscellaneous	100.0%	654	654



**Table A-11 California Manufactured Home Existing Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	10.1%	1,291	130	773
Cooling	Room AC	5.4%	514	28	166
Cooling	Air-Source Heat Pump	8.8%	1,291	114	675
Cooling	Geothermal Heat Pump	0.0%	1,098	0	0
Cooling	Evaporative Cooling	16.3%	554	91	538
Space Heating	Electric Resistance	3.3%	5,575	184	1,092
Space Heating	Electric Furnace	46.3%	6,287	2,912	17,304
Space Heating	Air-Source Heat Pump	8.8%	3,955	348	2,066
Space Heating	Geothermal Heat Pump	0.0%	2,069	0	0
Water Heating	Water Heater <= 55 Gal	90.2%	2,480	2,236	13,289
Water Heating	Water Heater > 55 Gal	1.3%	2,622	35	206
Interior Lighting	Screw-in	100.0%	701	701	4,168
Interior Lighting	Linear Fluorescent	100.0%	82	82	490
Interior Lighting	Specialty	100.0%	130	130	773
Exterior Lighting	Screw-in	100.0%	170	170	1,010
Appliances	Clothes Washer	96.2%	97	93	555
Appliances	Clothes Dryer	93.5%	630	589	3,502
Appliances	Dishwasher	68.5%	406	278	1,651
Appliances	Refrigerator	100.0%	599	599	3,561
Appliances	Freezer	52.3%	511	267	1,588
Appliances	Second Refrigerator	21.2%	1,153	244	1,451
Appliances	Stove	87.0%	537	467	2,776
Appliances	Microwave	98.7%	129	127	757
Electronics	Personal Computers	66.8%	262	175	1,041
Electronics	Monitor	66.8%	52	35	207
Electronics	Laptops	17.2%	113	19	115
Electronics	TVs	205.0%	202	415	2,466
Electronics	Printer/Fax/Copier	77.9%	40	31	186
Electronics	Set-top Boxes/DVR	157.6%	107	169	1,003
Electronics	Devices and Gadgets	100.0%	50	50	297
Miscellaneous	Pool Pump	0.0%	1,500	0	0
Miscellaneous	Pool Heater	0.0%	4,981	0	0
Miscellaneous	Hot Tub / Spa	6.3%	950	60	357
Miscellaneous	Furnace Fan	48.9%	228	111	661
Miscellaneous	Well pump	30.5%	451	138	818
Miscellaneous	Miscellaneous	100.0%	309	309	1,837
<b>Total</b>				<b>11,338</b>	<b>67,378</b>

**Table A-12 California Manufactured Home New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	10.1%	1,100	111
Cooling	Room AC	5.4%	629	34
Cooling	Air-Source Heat Pump	8.8%	1,189	104
Cooling	Geothermal Heat Pump	0.0%	1,087	-
Cooling	Evaporative Cooling	16.3%	628	103
Space Heating	Electric Resistance	3.3%	5,368	177
Space Heating	Electric Furnace	60.2%	6,054	3,645
Space Heating	Air-Source Heat Pump	8.8%	2,663	234
Space Heating	Geothermal Heat Pump	0.0%	2,016	-
Water Heating	Water Heater <= 55 Gal	90.2%	2,458	2,217
Water Heating	Water Heater > 55 Gal	1.3%	2,599	34
Interior Lighting	Screw-in	100.0%	790	790
Interior Lighting	Linear Fluorescent	100.0%	82	82
Interior Lighting	Specialty	100.0%	209	209
Exterior Lighting	Screw-in	100.0%	184	184
Appliances	Clothes Washer	95.8%	91	87
Appliances	Clothes Dryer	93.5%	621	581
Appliances	Dishwasher	82.2%	397	327
Appliances	Refrigerator	100.0%	729	729
Appliances	Freezer	57.5%	528	303
Appliances	Second Refrigerator	21.2%	1,404	297
Appliances	Stove	87.0%	534	465
Appliances	Microwave	98.7%	126	124
Electronics	Personal Computers	46.7%	262	123
Electronics	Monitor	46.7%	52	24
Electronics	Laptops	24.9%	113	28
Electronics	TVs	205.0%	202	415
Electronics	Printer/Fax/Copier	89.6%	40	36
Electronics	Set-top Boxes/DVR	157.6%	108	171
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	6.3%	950	60
Miscellaneous	Furnace Fan	48.9%	228	111
Miscellaneous	Well pump	30.5%	451	138
Miscellaneous	Miscellaneous	100.0%	333	333

Table A-13 Idaho Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	15.6%	1,418	221	9,700
Cooling	Room AC	14.7%	724	106	4,657
Cooling	Air-Source Heat Pump	2.1%	1,480	31	1,342
Cooling	Geothermal Heat Pump	0.0%	1,259	0	0
Cooling	Evaporative Cooling	5.3%	647	34	1,493
Space Heating	Electric Resistance	20.0%	13,593	2,714	118,996
Space Heating	Electric Furnace	6.2%	15,329	946	41,478
Space Heating	Air-Source Heat Pump	2.1%	13,305	275	12,064
Space Heating	Geothermal Heat Pump	0.0%	4,650	0	0
Water Heating	Water Heater <= 55 Gal	43.0%	3,238	1,392	61,043
Water Heating	Water Heater > 55 Gal	5.7%	3,423	195	8,551
Interior Lighting	Screw-in	100.0%	1,184	1,184	51,938
Interior Lighting	Linear Fluorescent	100.0%	158	158	6,931
Interior Lighting	Specialty	100.0%	327	327	14,359
Exterior Lighting	Screw-in	100.0%	441	441	19,329
Appliances	Clothes Washer	99.1%	100	99	4,329
Appliances	Clothes Dryer	82.9%	733	607	26,639
Appliances	Dishwasher	75.6%	355	268	11,772
Appliances	Refrigerator	100.0%	602	602	26,382
Appliances	Freezer	76.9%	515	396	17,349
Appliances	Second Refrigerator	29.5%	1,022	301	13,215
Appliances	Stove	79.0%	438	346	15,174
Appliances	Microwave	97.2%	130	126	5,525
Electronics	Personal Computers	103.1%	262	271	11,863
Electronics	Monitor	103.1%	52	54	2,361
Electronics	Laptops	35.3%	113	40	1,748
Electronics	TVs	231.0%	229	528	23,148
Electronics	Printer/Fax/Copier	103.0%	40	41	1,816
Electronics	Set-top Boxes/DVR	161.6%	107	173	7,587
Electronics	Devices and Gadgets	100.0%	50	50	2,193
Miscellaneous	Pool Pump	2.6%	1,500	39	1,695
Miscellaneous	Pool Heater	0.6%	4,981	32	1,407
Miscellaneous	Hot Tub / Spa	9.4%	950	89	3,906
Miscellaneous	Furnace Fan	51.5%	660	340	14,927
Miscellaneous	Well pump	42.4%	561	238	10,421
Miscellaneous	Miscellaneous	100.0%	185	185	8,098
<b>Total</b>				<b>12,849</b>	<b>563,434</b>

**Table A-14 Idaho Single Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	21.8%	1,388	303
Cooling	Room AC	3.3%	863	29
Cooling	Air-Source Heat Pump	2.4%	1,214	29
Cooling	Geothermal Heat Pump	0.0%	1,174	-
Cooling	Evaporative Cooling	0.0%	712	-
Space Heating	Electric Resistance	4.3%	12,090	521
Space Heating	Electric Furnace	7.9%	13,634	1,070
Space Heating	Air-Source Heat Pump	2.4%	7,891	189
Space Heating	Geothermal Heat Pump	0.0%	3,828	-
Water Heating	Water Heater <= 55 Gal	26.0%	3,210	834
Water Heating	Water Heater > 55 Gal	5.0%	3,394	169
Interior Lighting	Screw-in	100.0%	1,312	1,312
Interior Lighting	Linear Fluorescent	100.0%	154	154
Interior Lighting	Specialty	100.0%	378	378
Exterior Lighting	Screw-in	100.0%	479	479
Appliances	Clothes Washer	100.2%	94	94
Appliances	Clothes Dryer	81.7%	723	591
Appliances	Dishwasher	90.7%	355	322
Appliances	Refrigerator	100.0%	600	600
Appliances	Freezer	59.6%	531	316
Appliances	Second Refrigerator	22.2%	1,020	227
Appliances	Stove	65.6%	436	286
Appliances	Microwave	97.2%	126	123
Electronics	Personal Computers	84.4%	262	221
Electronics	Monitor	83.4%	52	44
Electronics	Laptops	58.4%	113	66
Electronics	TVs	288.8%	229	660
Electronics	Printer/Fax/Copier	151.7%	40	61
Electronics	Set-top Boxes/DVR	202.0%	61	124
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	2.6%	1,500	39
Miscellaneous	Pool Heater	0.6%	4,981	32
Miscellaneous	Hot Tub / Spa	9.5%	950	91
Miscellaneous	Furnace Fan	51.5%	660	340
Miscellaneous	Well pump	67.5%	561	379
Miscellaneous	Miscellaneous	100.0%	203	203

Table A-15 Idaho Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	21.4%	385	82	658
Cooling	Room AC	7.1%	405	29	231
Cooling	Air-Source Heat Pump	7.1%	385	27	219
Cooling	Geothermal Heat Pump	0.0%	327	0	0
Cooling	Evaporative Cooling	0.0%	267	0	0
Space Heating	Electric Resistance	53.3%	2,641	1,409	11,239
Space Heating	Electric Furnace	6.7%	2,979	199	1,584
Space Heating	Air-Source Heat Pump	7.1%	1,656	118	944
Space Heating	Geothermal Heat Pump	0.0%	579	0	0
Water Heating	Water Heater <= 55 Gal	52.2%	2,435	1,270	10,134
Water Heating	Water Heater > 55 Gal	4.1%	2,575	105	841
Interior Lighting	Screw-in	100.0%	543	543	4,333
Interior Lighting	Linear Fluorescent	100.0%	38	38	303
Interior Lighting	Specialty	100.0%	31	31	248
Exterior Lighting	Screw-in	100.0%	163	163	1,302
Appliances	Clothes Washer	50.6%	98	50	395
Appliances	Clothes Dryer	39.7%	785	311	2,484
Appliances	Dishwasher	45.8%	408	187	1,491
Appliances	Refrigerator	100.0%	602	602	4,800
Appliances	Freezer	18.7%	515	96	768
Appliances	Second Refrigerator	3.0%	1,022	31	245
Appliances	Stove	88.4%	317	280	2,231
Appliances	Microwave	100.0%	130	130	1,035
Electronics	Personal Computers	35.5%	262	93	743
Electronics	Monitor	35.5%	52	19	148
Electronics	Laptops	35.5%	113	40	320
Electronics	TVs	152.0%	223	339	2,707
Electronics	Printer/Fax/Copier	52.8%	40	21	169
Electronics	Set-top Boxes/DVR	116.0%	107	124	991
Electronics	Devices and Gadgets	100.0%	50	50	399
Miscellaneous	Pool Pump	0.0%	1,500	0	0
Miscellaneous	Pool Heater	0.0%	4,981	0	0
Miscellaneous	Hot Tub / Spa	0.0%	950	0	0
Miscellaneous	Furnace Fan	40.0%	229	92	731
Miscellaneous	Well pump	0.0%	556	0	0
Miscellaneous	Miscellaneous	100.0%	104	104	829
<b>Total</b>				<b>6,583</b>	<b>52,522</b>

**Table A-16 Idaho Multi Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	59.7%	308	184
Cooling	Room AC	6.3%	430	27
Cooling	Air-Source Heat Pump	0.8%	316	3
Cooling	Geothermal Heat Pump	0.0%	305	-
Cooling	Evaporative Cooling	0.0%	294	-
Space Heating	Electric Resistance	51.2%	1,814	929
Space Heating	Electric Furnace	19.1%	2,045	390
Space Heating	Air-Source Heat Pump	0.0%	982	-
Space Heating	Geothermal Heat Pump	0.0%	476	-
Water Heating	Water Heater <= 55 Gal	30.9%	2,420	748
Water Heating	Water Heater > 55 Gal	4.1%	2,558	105
Interior Lighting	Screw-in	100.0%	669	669
Interior Lighting	Linear Fluorescent	100.0%	42	42
Interior Lighting	Specialty	100.0%	40	40
Exterior Lighting	Screw-in	100.0%	200	200
Appliances	Clothes Washer	50.6%	92	47
Appliances	Clothes Dryer	63.7%	774	493
Appliances	Dishwasher	55.0%	408	224
Appliances	Refrigerator	100.0%	600	600
Appliances	Freezer	2.4%	531	13
Appliances	Second Refrigerator	9.0%	1,020	92
Appliances	Stove	77.4%	315	244
Appliances	Microwave	100.0%	126	126
Electronics	Personal Computers	46.8%	262	123
Electronics	Monitor	50.7%	52	26
Electronics	Laptops	51.4%	113	58
Electronics	TVs	190.0%	223	424
Electronics	Printer/Fax/Copier	69.7%	40	28
Electronics	Set-top Boxes/DVR	145.0%	61	89
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-
Miscellaneous	Furnace Fan	40.0%	229	92
Miscellaneous	Well pump	0.0%	556	-
Miscellaneous	Miscellaneous	100.0%	114	114

Table A-17 Idaho Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	9.5%	1,296	123	773
Cooling	Room AC	23.8%	662	158	987
Cooling	Air-Source Heat Pump	0.0%	1,296	0	0
Cooling	Geothermal Heat Pump	0.0%	1,103	0	0
Cooling	Evaporative Cooling	20.2%	554	112	702
Space Heating	Electric Resistance	4.8%	9,054	431	2,698
Space Heating	Electric Furnace	46.4%	10,210	4,740	29,660
Space Heating	Air-Source Heat Pump	0.0%	10,019	0	0
Space Heating	Geothermal Heat Pump	0.0%	3,517	0	0
Water Heating	Water Heater <= 55 Gal	57.6%	2,924	1,683	10,533
Water Heating	Water Heater > 55 Gal	0.8%	3,091	26	164
Interior Lighting	Screw-in	100.0%	713	713	4,464
Interior Lighting	Linear Fluorescent	100.0%	58	58	362
Interior Lighting	Specialty	100.0%	151	151	943
Exterior Lighting	Screw-in	100.0%	165	165	1,034
Appliances	Clothes Washer	97.8%	99	97	605
Appliances	Clothes Dryer	85.4%	652	557	3,483
Appliances	Dishwasher	74.2%	408	303	1,894
Appliances	Refrigerator	100.0%	602	602	3,764
Appliances	Freezer	69.7%	515	359	2,244
Appliances	Second Refrigerator	21.0%	1,022	215	1,343
Appliances	Stove	59.6%	312	186	1,162
Appliances	Microwave	97.8%	130	127	793
Electronics	Personal Computers	60.7%	262	159	996
Electronics	Monitor	60.7%	52	32	198
Electronics	Laptops	10.1%	113	11	71
Electronics	TVs	220.0%	210	463	2,895
Electronics	Printer/Fax/Copier	77.9%	40	31	196
Electronics	Set-top Boxes/DVR	172.7%	107	185	1,157
Electronics	Devices and Gadgets	100.0%	50	50	313
Miscellaneous	Pool Pump	0.0%	1,500	0	0
Miscellaneous	Pool Heater	0.0%	4,981	0	0
Miscellaneous	Hot Tub / Spa	7.9%	950	75	468
Miscellaneous	Furnace Fan	78.6%	359	282	1,767
Miscellaneous	Well pump	48.3%	451	218	1,363
Miscellaneous	Miscellaneous	100.0%	122	122	764
<b>Total</b>				<b>12,433</b>	<b>77,793</b>

**Table A-18 Idaho Manufactured Home New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	9.9%	1,012	100
Cooling	Room AC	18.0%	752	135
Cooling	Air-Source Heat Pump	0.0%	1,002	-
Cooling	Geothermal Heat Pump	0.0%	946	-
Cooling	Evaporative Cooling	19.2%	609	117
Space Heating	Electric Resistance	4.1%	8,464	350
Space Heating	Electric Furnace	49.1%	9,545	4,689
Space Heating	Air-Source Heat Pump	0.0%	6,272	-
Space Heating	Geothermal Heat Pump	0.0%	3,132	-
Water Heating	Water Heater <= 55 Gal	62.0%	2,898	1,797
Water Heating	Water Heater > 55 Gal	0.8%	3,064	26
Interior Lighting	Screw-in	100.0%	799	799
Interior Lighting	Linear Fluorescent	100.0%	56	56
Interior Lighting	Specialty	100.0%	178	178
Exterior Lighting	Screw-in	100.0%	179	179
Appliances	Clothes Washer	97.3%	93	91
Appliances	Clothes Dryer	93.0%	642	597
Appliances	Dishwasher	89.0%	408	363
Appliances	Refrigerator	100.0%	600	600
Appliances	Freezer	109.2%	531	580
Appliances	Second Refrigerator	32.5%	1,020	331
Appliances	Stove	60.9%	310	189
Appliances	Microwave	97.8%	126	123
Electronics	Personal Computers	66.9%	262	175
Electronics	Monitor	65.6%	52	34
Electronics	Laptops	14.6%	113	16
Electronics	TVs	277.5%	210	584
Electronics	Printer/Fax/Copier	85.9%	40	35
Electronics	Set-top Boxes/DVR	217.9%	61	134
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	11.8%	950	112
Miscellaneous	Furnace Fan	78.6%	359	282
Miscellaneous	Well pump	71.2%	451	321
Miscellaneous	Miscellaneous	100.0%	134	134



Table A-19 Utah Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	67.5%	2,625	1,773	958,279
Cooling	Room AC	2.9%	776	23	12,325
Cooling	Air-Source Heat Pump	2.6%	2,717	70	37,600
Cooling	Geothermal Heat Pump	0.2%	2,312	4	2,411
Cooling	Evaporative Cooling	15.8%	647	102	55,151
Space Heating	Electric Resistance	0.5%	11,965	56	30,312
Space Heating	Electric Furnace	6.2%	13,493	842	455,295
Space Heating	Air-Source Heat Pump	2.6%	8,084	207	111,860
Space Heating	Geothermal Heat Pump	0.2%	3,970	8	4,141
Water Heating	Water Heater <= 55 Gal	8.1%	3,238	261	141,083
Water Heating	Water Heater > 55 Gal	1.1%	3,423	37	19,763
Interior Lighting	Screw-in	100.0%	883	883	477,221
Interior Lighting	Linear Fluorescent	100.0%	81	81	43,917
Interior Lighting	Specialty	100.0%	245	245	132,657
Exterior Lighting	Screw-in	100.0%	393	393	212,488
Appliances	Clothes Washer	99.3%	100	99	53,489
Appliances	Clothes Dryer	74.5%	733	546	295,242
Appliances	Dishwasher	91.8%	355	326	176,199
Appliances	Refrigerator	100.0%	602	602	325,253
Appliances	Freezer	64.6%	515	333	179,859
Appliances	Second Refrigerator	41.5%	1,153	478	258,645
Appliances	Stove	69.6%	438	305	164,789
Appliances	Microwave	98.6%	130	128	69,115
Electronics	Personal Computers	96.4%	262	253	136,644
Electronics	Monitor	96.4%	52	50	27,193
Electronics	Laptops	128.1%	113	145	78,254
Electronics	TVs	244.8%	229	559	302,404
Electronics	Printer/Fax/Copier	103.0%	40	41	22,384
Electronics	Set-top Boxes/DVR	65.2%	107	70	37,733
Electronics	Devices and Gadgets	100.0%	50	50	27,032
Miscellaneous	Pool Pump	2.6%	1,500	39	20,902
Miscellaneous	Pool Heater	0.6%	4,981	32	17,352
Miscellaneous	Hot Tub / Spa	7.3%	950	69	37,436
Miscellaneous	Furnace Fan	89.8%	660	593	320,666
Miscellaneous	Well pump	4.8%	561	27	14,582
Miscellaneous	Miscellaneous	100.0%	663	663	358,677
<b>Total</b>				<b>10,392</b>	<b>5,618,352</b>

**Table A-20 Utah Single Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	94.4%	2,217	2,092
Cooling	Room AC	2.9%	794	23
Cooling	Air-Source Heat Pump	2.6%	2,124	54
Cooling	Geothermal Heat Pump	0.2%	2,000	4
Cooling	Evaporative Cooling	3.2%	733	23
Space Heating	Electric Resistance	0.5%	9,698	45
Space Heating	Electric Furnace	12.5%	10,936	1,365
Space Heating	Air-Source Heat Pump	2.6%	5,035	129
Space Heating	Geothermal Heat Pump	0.2%	3,185	6
Water Heating	Water Heater <= 55 Gal	7.3%	3,217	233
Water Heating	Water Heater > 55 Gal	1.0%	3,401	33
Interior Lighting	Screw-in	100.0%	1,064	1,064
Interior Lighting	Linear Fluorescent	100.0%	79	79
Interior Lighting	Specialty	100.0%	418	418
Exterior Lighting	Screw-in	100.0%	504	504
Appliances	Clothes Washer	99.3%	97	96
Appliances	Clothes Dryer	74.5%	723	539
Appliances	Dishwasher	91.8%	348	319
Appliances	Refrigerator	100.0%	732	732
Appliances	Freezer	48.5%	535	259
Appliances	Second Refrigerator	31.3%	1,404	439
Appliances	Stove	62.6%	436	273
Appliances	Microwave	98.6%	126	124
Electronics	Personal Computers	96.4%	262	253
Electronics	Monitor	96.4%	52	50
Electronics	Laptops	96.1%	113	109
Electronics	TVs	244.8%	229	559
Electronics	Printer/Fax/Copier	103.0%	40	41
Electronics	Set-top Boxes/DVR	65.2%	108	71
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	2.6%	1,500	39
Miscellaneous	Pool Heater	0.6%	4,981	32
Miscellaneous	Hot Tub / Spa	7.3%	950	69
Miscellaneous	Furnace Fan	89.8%	660	593
Miscellaneous	Well pump	4.8%	561	27
Miscellaneous	Miscellaneous	100.0%	730	730

Table A-21 Utah Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	69.7%	991	690	112,543
Cooling	Room AC	4.7%	676	32	5,169
Cooling	Air-Source Heat Pump	3.9%	991	39	6,374
Cooling	Geothermal Heat Pump	0.2%	843	1	228
Cooling	Evaporative Cooling	5.2%	267	14	2,282
Space Heating	Electric Resistance	3.8%	2,626	99	16,180
Space Heating	Electric Furnace	11.2%	2,773	312	50,786
Space Heating	Air-Source Heat Pump	3.9%	1,546	61	9,947
Space Heating	Geothermal Heat Pump	0.2%	759	1	205
Water Heating	Water Heater <= 55 Gal	18.0%	2,165	391	63,668
Water Heating	Water Heater > 55 Gal	1.4%	2,289	32	5,284
Interior Lighting	Screw-in	100.0%	558	558	91,037
Interior Lighting	Linear Fluorescent	100.0%	43	43	7,081
Interior Lighting	Specialty	100.0%	32	32	5,266
Exterior Lighting	Screw-in	100.0%	171	171	27,892
Appliances	Clothes Washer	88.6%	98	87	14,120
Appliances	Clothes Dryer	78.3%	594	465	75,790
Appliances	Dishwasher	92.4%	355	328	53,478
Appliances	Refrigerator	100.0%	598	598	97,488
Appliances	Freezer	19.7%	514	101	16,488
Appliances	Second Refrigerator	9.1%	1,153	105	17,063
Appliances	Stove	82.3%	317	260	42,443
Appliances	Microwave	97.4%	130	126	20,595
Electronics	Personal Computers	63.4%	262	166	27,089
Electronics	Monitor	63.4%	52	33	5,391
Electronics	Laptops	109.9%	113	124	20,245
Electronics	TVs	188.6%	229	431	70,256
Electronics	Printer/Fax/Copier	52.8%	40	21	3,462
Electronics	Set-top Boxes/DVR	43.7%	107	47	7,623
Electronics	Devices and Gadgets	100.0%	50	50	8,151
Miscellaneous	Pool Pump	0.0%	1,500	-	-
Miscellaneous	Pool Heater	0.0%	4,981	-	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-	-
Miscellaneous	Furnace Fan	85.5%	229	196	31,919
Miscellaneous	Well pump	0.0%	556	-	-
Miscellaneous	Miscellaneous	100.0%	68	68	11,040
<b>Total</b>				<b>5,684</b>	<b>926,581</b>

**Table A-22 Utah Multi Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	97.4%	875	852
Cooling	Room AC	4.7%	782	37
Cooling	Air-Source Heat Pump	3.9%	773	30
Cooling	Geothermal Heat Pump	0.2%	729	1
Cooling	Evaporative Cooling	1.0%	302	3
Space Heating	Electric Resistance	3.8%	1,729	65
Space Heating	Electric Furnace	22.5%	1,826	410
Space Heating	Air-Source Heat Pump	3.9%	961	38
Space Heating	Geothermal Heat Pump	0.2%	609	1
Water Heating	Water Heater <= 55 Gal	16.2%	2,153	349
Water Heating	Water Heater > 55 Gal	1.3%	2,276	29
Interior Lighting	Screw-in	100.0%	803	803
Interior Lighting	Linear Fluorescent	100.0%	48	48
Interior Lighting	Specialty	100.0%	65	65
Exterior Lighting	Screw-in	100.0%	258	258
Appliances	Clothes Washer	88.6%	95	84
Appliances	Clothes Dryer	78.3%	586	459
Appliances	Dishwasher	92.4%	348	321
Appliances	Refrigerator	100.0%	728	728
Appliances	Freezer	14.8%	534	79
Appliances	Second Refrigerator	6.8%	1,404	96
Appliances	Stove	74.0%	315	233
Appliances	Microwave	97.4%	126	123
Electronics	Personal Computers	63.4%	262	166
Electronics	Monitor	63.4%	52	33
Electronics	Laptops	82.4%	113	93
Electronics	TVs	188.6%	229	431
Electronics	Printer/Fax/Copier	52.8%	40	21
Electronics	Set-top Boxes/DVR	43.7%	108	47
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-
Miscellaneous	Furnace Fan	85.5%	229	196
Miscellaneous	Well pump	0.0%	556	-
Miscellaneous	Miscellaneous	100.0%	74	74

**Table A-23 Utah Manufactured Home Existing Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	34.8%	2,107	733	14,572
Cooling	Room AC	6.9%	1,125	78	1,542
Cooling	Air-Source Heat Pump	2.9%	2,107	61	1,209
Cooling	Geothermal Heat Pump	0.2%	1,792	3	57
Cooling	Evaporative Cooling	42.9%	554	238	4,733
Space Heating	Electric Resistance	0.6%	8,393	54	1,070
Space Heating	Electric Furnace	7.9%	9,299	730	14,525
Space Heating	Air-Source Heat Pump	2.9%	7,164	207	4,111
Space Heating	Geothermal Heat Pump	0.2%	3,073	5	98
Water Heating	Water Heater <= 55 Gal	15.2%	2,600	394	7,840
Water Heating	Water Heater > 55 Gal	0.2%	2,748	6	122
Interior Lighting	Screw-in	100.0%	396	396	7,885
Interior Lighting	Linear Fluorescent	100.0%	53	53	1,049
Interior Lighting	Specialty	100.0%	85	85	1,681
Exterior Lighting	Screw-in	100.0%	185	185	3,676
Appliances	Clothes Washer	98.6%	99	98	1,940
Appliances	Clothes Dryer	79.0%	829	655	13,024
Appliances	Dishwasher	79.5%	355	282	5,613
Appliances	Refrigerator	100.0%	602	602	11,967
Appliances	Freezer	64.1%	515	330	6,564
Appliances	Second Refrigerator	22.4%	1,153	259	5,146
Appliances	Stove	37.8%	312	118	2,343
Appliances	Microwave	98.9%	130	128	2,550
Electronics	Personal Computers	79.6%	262	209	4,156
Electronics	Monitor	79.6%	52	42	827
Electronics	Laptops	96.2%	113	109	2,161
Electronics	TVs	215.1%	314	676	13,438
Electronics	Printer/Fax/Copier	77.9%	40	31	623
Electronics	Set-top Boxes/DVR	55.8%	107	60	1,188
Electronics	Devices and Gadgets	100.0%	50	50	995
Miscellaneous	Pool Pump	0.0%	1,500	-	-
Miscellaneous	Pool Heater	0.0%	4,981	-	-
Miscellaneous	Hot Tub / Spa	2.1%	950	20	394
Miscellaneous	Furnace Fan	76.0%	359	273	5,431
Miscellaneous	Well pump	12.5%	451	56	1,121
Miscellaneous	Miscellaneous	100.0%	413	413	8,217
<b>Total</b>				<b>7,635</b>	<b>151,867</b>

**Table A-24 Utah Manufactured Home New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	48.6%	1,737	844
Cooling	Room AC	6.9%	1,248	86
Cooling	Air-Source Heat Pump	2.9%	1,730	50
Cooling	Geothermal Heat Pump	0.2%	1,589	3
Cooling	Evaporative Cooling	8.6%	628	54
Space Heating	Electric Resistance	0.6%	7,698	49
Space Heating	Electric Furnace	15.7%	8,529	1,340
Space Heating	Air-Source Heat Pump	2.9%	4,446	128
Space Heating	Geothermal Heat Pump	0.2%	2,799	4
Water Heating	Water Heater <= 55 Gal	13.6%	2,582	352
Water Heating	Water Heater > 55 Gal	0.2%	2,729	5
Interior Lighting	Screw-in	100.0%	534	534
Interior Lighting	Linear Fluorescent	100.0%	51	51
Interior Lighting	Specialty	100.0%	162	162
Exterior Lighting	Screw-in	100.0%	233	233
Appliances	Clothes Washer	98.6%	96	95
Appliances	Clothes Dryer	79.0%	817	646
Appliances	Dishwasher	79.5%	348	276
Appliances	Refrigerator	100.0%	732	732
Appliances	Freezer	48.1%	535	257
Appliances	Second Refrigerator	16.9%	1,404	237
Appliances	Stove	34.0%	310	105
Appliances	Microwave	98.9%	126	125
Electronics	Personal Computers	79.6%	262	209
Electronics	Monitor	79.6%	52	42
Electronics	Laptops	72.1%	113	81
Electronics	TVs	215.1%	314	676
Electronics	Printer/Fax/Copier	77.9%	40	31
Electronics	Set-top Boxes/DVR	55.8%	108	60
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	2.1%	950	20
Miscellaneous	Furnace Fan	76.0%	359	273
Miscellaneous	Well pump	12.5%	451	56
Miscellaneous	Miscellaneous	100.0%	454	454

Table A-25 Washington Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	46.4%	1,593	740	53,400
Cooling	Room AC	19.9%	539	107	7,746
Cooling	Air-Source Heat Pump	26.9%	1,329	357	25,800
Cooling	Geothermal Heat Pump	0.4%	1,240	5	376
Cooling	Evaporative Cooling	2.7%	647	18	1,267
Space Heating	Electric Resistance	16.9%	9,300	1,567	113,141
Space Heating	Electric Furnace	14.8%	10,487	1,554	112,195
Space Heating	Air-Source Heat Pump	26.9%	6,928	1,863	134,480
Space Heating	Geothermal Heat Pump	0.4%	3,382	14	1,025
Water Heating	Water Heater <= 55 Gal	66.5%	3,238	2,152	155,355
Water Heating	Water Heater > 55 Gal	5.4%	3,423	185	13,365
Interior Lighting	Screw-in	100.0%	1,083	1,083	78,212
Interior Lighting	Linear Fluorescent	100.0%	136	136	9,833
Interior Lighting	Specialty	100.0%	406	406	29,325
Exterior Lighting	Screw-in	100.0%	444	444	32,073
Appliances	Clothes Washer	98.1%	98	96	6,961
Appliances	Clothes Dryer	93.8%	751	704	50,846
Appliances	Dishwasher	75.9%	355	270	19,460
Appliances	Refrigerator	100.0%	599	599	43,247
Appliances	Freezer	66.3%	539	357	25,791
Appliances	Second Refrigerator	31.6%	1,153	364	26,305
Appliances	Stove	79.1%	443	350	25,299
Appliances	Microwave	95.1%	129	123	8,858
Electronics	Personal Computers	131.0%	262	344	24,812
Electronics	Monitor	131.0%	52	68	4,938
Electronics	Laptops	34.2%	113	39	2,790
Electronics	TVs	234.0%	202	472	34,063
Electronics	Printer/Fax/Copier	88.3%	40	35	2,563
Electronics	Set-top Boxes/DVR	180.7%	107	193	13,967
Electronics	Devices and Gadgets	100.0%	50	50	3,610
Miscellaneous	Pool Pump	3.1%	1,500	46	3,351
Miscellaneous	Pool Heater	0.8%	4,981	39	2,782
Miscellaneous	Hot Tub / Spa	11.9%	950	113	8,157
Miscellaneous	Furnace Fan	63.1%	309	195	14,085
Miscellaneous	Well pump	28.6%	561	161	11,604
Miscellaneous	Miscellaneous	100.0%	1,209	1,209	87,299
<b>Total</b>				<b>16,460</b>	<b>1,188,381</b>

**Table A-26 Washington Single Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	64.9%	1,396	906
Cooling	Room AC	4.5%	461	21
Cooling	Air-Source Heat Pump	31.1%	1,189	370
Cooling	Geothermal Heat Pump	0.3%	1,219	4
Cooling	Evaporative Cooling	0.0%	712	-
Space Heating	Electric Resistance	3.6%	7,987	290
Space Heating	Electric Furnace	18.9%	9,008	1,698
Space Heating	Air-Source Heat Pump	31.1%	4,526	1,408
Space Heating	Geothermal Heat Pump	0.3%	2,784	9
Water Heating	Water Heater <= 55 Gal	40.2%	3,210	1,289
Water Heating	Water Heater > 55 Gal	4.7%	3,393	160
Interior Lighting	Screw-in	100.0%	1,200	1,200
Interior Lighting	Linear Fluorescent	100.0%	133	133
Interior Lighting	Specialty	100.0%	469	469
Exterior Lighting	Screw-in	100.0%	483	483
Appliances	Clothes Washer	99.2%	92	92
Appliances	Clothes Dryer	92.5%	740	685
Appliances	Dishwasher	91.1%	355	323
Appliances	Refrigerator	100.0%	598	598
Appliances	Freezer	51.4%	556	286
Appliances	Second Refrigerator	23.8%	1,150	274
Appliances	Stove	65.8%	440	290
Appliances	Microwave	95.1%	126	119
Electronics	Personal Computers	107.2%	262	281
Electronics	Monitor	105.9%	52	55
Electronics	Laptops	56.6%	113	64
Electronics	TVs	292.5%	202	590
Electronics	Printer/Fax/Copier	130.0%	40	52
Electronics	Set-top Boxes/DVR	225.9%	61	139
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	3.1%	1,500	46
Miscellaneous	Pool Heater	0.8%	4,981	39
Miscellaneous	Hot Tub / Spa	12.1%	950	115
Miscellaneous	Furnace Fan	63.1%	309	195
Miscellaneous	Well pump	45.7%	561	256
Miscellaneous	Miscellaneous	100.0%	1,330	1,330



Table A-27 Washington Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	9.7%	450	44	861
Cooling	Room AC	81.4%	424	345	6,814
Cooling	Air-Source Heat Pump	3.2%	376	12	237
Cooling	Geothermal Heat Pump	0.0%	351	-	-
Cooling	Evaporative Cooling	0.0%	267	-	-
Space Heating	Electric Resistance	91.5%	2,426	2,219	43,789
Space Heating	Electric Furnace	2.2%	2,735	60	1,190
Space Heating	Air-Source Heat Pump	3.2%	1,340	43	845
Space Heating	Geothermal Heat Pump	0.0%	654	-	-
Water Heating	Water Heater <= 55 Gal	91.5%	2,472	2,263	44,647
Water Heating	Water Heater > 55 Gal	7.0%	2,614	182	3,594
Interior Lighting	Screw-in	100.0%	856	856	16,880
Interior Lighting	Linear Fluorescent	100.0%	60	60	1,174
Interior Lighting	Specialty	100.0%	49	49	969
Exterior Lighting	Screw-in	100.0%	157	157	3,097
Appliances	Clothes Washer	47.0%	97	46	898
Appliances	Clothes Dryer	46.7%	594	277	5,469
Appliances	Dishwasher	78.4%	406	318	6,279
Appliances	Refrigerator	100.0%	599	599	11,818
Appliances	Freezer	4.0%	539	22	426
Appliances	Second Refrigerator	3.0%	1,153	35	688
Appliances	Stove	96.9%	357	346	6,817
Appliances	Microwave	96.8%	129	125	2,464
Electronics	Personal Computers	61.7%	262	162	3,195
Electronics	Monitor	61.7%	52	32	636
Electronics	Laptops	9.3%	113	10	206
Electronics	TVs	152.0%	269	409	8,065
Electronics	Printer/Fax/Copier	55.1%	40	22	437
Electronics	Set-top Boxes/DVR	116.0%	107	124	2,450
Electronics	Devices and Gadgets	100.0%	50	50	986
Miscellaneous	Pool Pump	0.0%	1,500	-	-
Miscellaneous	Pool Heater	0.0%	4,981	-	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-	-
Miscellaneous	Furnace Fan	6.4%	105	7	133
Miscellaneous	Well pump	0.0%	556	-	-
Miscellaneous	Miscellaneous	100.0%	850	850	16,774
<b>Total</b>				<b>9,724</b>	<b>191,838</b>

**Table A-28 Washington Multi Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	27.0%	360	97
Cooling	Room AC	71.6%	368	264
Cooling	Air-Source Heat Pump	0.4%	336	1
Cooling	Geothermal Heat Pump	0.0%	345	-
Cooling	Evaporative Cooling	0.0%	294	-
Space Heating	Electric Resistance	87.9%	1,993	1,753
Space Heating	Electric Furnace	6.3%	2,248	142
Space Heating	Air-Source Heat Pump	0.0%	875	-
Space Heating	Geothermal Heat Pump	0.0%	538	-
Water Heating	Water Heater <= 55 Gal	54.3%	2,456	1,333
Water Heating	Water Heater > 55 Gal	7.0%	2,597	181
Interior Lighting	Screw-in	100.0%	1,054	1,054
Interior Lighting	Linear Fluorescent	100.0%	65	65
Interior Lighting	Specialty	100.0%	63	63
Exterior Lighting	Screw-in	100.0%	193	193
Appliances	Clothes Washer	47.0%	91	43
Appliances	Clothes Dryer	74.9%	586	439
Appliances	Dishwasher	94.1%	406	382
Appliances	Refrigerator	100.0%	598	598
Appliances	Freezer	0.5%	556	3
Appliances	Second Refrigerator	9.1%	1,150	104
Appliances	Stove	84.8%	355	301
Appliances	Microwave	96.8%	126	121
Electronics	Personal Computers	81.4%	262	214
Electronics	Monitor	88.2%	52	46
Electronics	Laptops	13.4%	113	15
Electronics	TVs	190.0%	269	511
Electronics	Printer/Fax/Copier	72.6%	40	29
Electronics	Set-top Boxes/DVR	145.0%	61	89
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-
Miscellaneous	Furnace Fan	6.4%	105	7
Miscellaneous	Well pump	0.0%	556	-
Miscellaneous	Miscellaneous	100.0%	935	935

Table A-29 Washington Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	46.3%	1,999	927	12,036
Cooling	Room AC	26.0%	802	208	2,705
Cooling	Air-Source Heat Pump	15.7%	1,772	278	3,609
Cooling	Geothermal Heat Pump	0.0%	-	-	-
Cooling	Evaporative Cooling	3.6%	554	20	258
Space Heating	Electric Resistance	1.5%	9,641	145	1,879
Space Heating	Electric Furnace	51.3%	10,872	5,579	72,471
Space Heating	Air-Source Heat Pump	15.7%	8,332	1,306	16,969
Space Heating	Geothermal Heat Pump	0.0%	3,750	-	-
Water Heating	Water Heater <= 55 Gal	94.4%	2,968	2,802	36,400
Water Heating	Water Heater > 55 Gal	1.4%	3,138	44	565
Interior Lighting	Screw-in	100.0%	913	913	11,866
Interior Lighting	Linear Fluorescent	100.0%	110	110	1,429
Interior Lighting	Specialty	100.0%	169	169	2,200
Exterior Lighting	Screw-in	100.0%	170	170	2,207
Appliances	Clothes Washer	98.9%	97	96	1,248
Appliances	Clothes Dryer	90.6%	936	847	11,007
Appliances	Dishwasher	77.4%	406	314	4,079
Appliances	Refrigerator	100.0%	599	599	7,781
Appliances	Freezer	42.9%	539	231	3,003
Appliances	Second Refrigerator	21.2%	1,153	244	3,171
Appliances	Stove	89.7%	537	481	6,254
Appliances	Microwave	96.9%	129	125	1,624
Electronics	Personal Computers	84.3%	262	221	2,874
Electronics	Monitor	84.3%	52	44	572
Electronics	Laptops	12.7%	113	14	186
Electronics	TVs	201.0%	287	577	7,497
Electronics	Printer/Fax/Copier	71.7%	40	29	374
Electronics	Set-top Boxes/DVR	132.0%	107	141	1,836
Electronics	Devices and Gadgets	100.0%	50	50	650
Miscellaneous	Pool Pump	0.0%	1,500	-	-
Miscellaneous	Pool Heater	0.0%	4,981	-	-
Miscellaneous	Hot Tub / Spa	10.9%	950	104	1,350
Miscellaneous	Furnace Fan	71.2%	228	162	2,105
Miscellaneous	Well pump	23.4%	451	106	1,373
Miscellaneous	Miscellaneous	100.0%	831	831	10,801
<b>Total</b>				<b>17,889</b>	<b>232,380</b>

**Table A-30** *Washington Manufactured Home New Construction Market Profile*

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>UEC (kWh)</b>	<b>Intensity (kWh/HH)</b>
Cooling	Central AC	48.3%	1,358	656
Cooling	Room AC	19.6%	706	139
Cooling	Air-Source Heat Pump	15.9%	1,344	214
Cooling	Geothermal Heat Pump	0.0%	-	-
Cooling	Evaporative Cooling	3.4%	609	21
Space Heating	Electric Resistance	1.3%	7,975	104
Space Heating	Electric Furnace	54.3%	8,993	4,882
Space Heating	Air-Source Heat Pump	15.9%	4,937	785
Space Heating	Geothermal Heat Pump	0.0%	3,128	-
Water Heating	Water Heater <= 55 Gal	101.7%	2,942	2,991
Water Heating	Water Heater > 55 Gal	1.4%	3,111	43
Interior Lighting	Screw-in	100.0%	1,023	1,023
Interior Lighting	Linear Fluorescent	100.0%	107	107
Interior Lighting	Specialty	100.0%	200	200
Exterior Lighting	Screw-in	100.0%	184	184
Appliances	Clothes Washer	98.5%	91	90
Appliances	Clothes Dryer	98.6%	922	909
Appliances	Dishwasher	92.9%	406	377
Appliances	Refrigerator	100.0%	598	598
Appliances	Freezer	67.3%	556	374
Appliances	Second Refrigerator	32.7%	1,150	377
Appliances	Stove	91.6%	534	489
Appliances	Microwave	96.9%	126	122
Electronics	Personal Computers	93.0%	262	244
Electronics	Monitor	91.2%	52	48
Electronics	Laptops	18.3%	113	21
Electronics	TVs	253.6%	287	728
Electronics	Printer/Fax/Copier	79.0%	40	32
Electronics	Set-top Boxes/DVR	166.5%	61	102
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	16.4%	950	156
Miscellaneous	Furnace Fan	71.2%	228	162
Miscellaneous	Well pump	34.6%	451	156
Miscellaneous	Miscellaneous	100.0%	915	915

Table A-31 Wyoming Single Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	23.8%	1,257	299	23,017
Cooling	Room AC	11.9%	724	86	6,630
Cooling	Air-Source Heat Pump	0.8%	1,317	11	861
Cooling	Geothermal Heat Pump	0.2%	1,120	2	183
Cooling	Evaporative Cooling	21.7%	647	140	10,778
Space Heating	Electric Resistance	8.6%	14,487	1,241	95,440
Space Heating	Electric Furnace	4.1%	15,539	644	49,535
Space Heating	Air-Source Heat Pump	0.8%	15,225	129	9,954
Space Heating	Geothermal Heat Pump	0.2%	5,174	11	847
Water Heating	Water Heater <= 55 Gal	19.4%	3,238	629	48,351
Water Heating	Water Heater > 55 Gal	2.6%	3,423	88	6,773
Interior Lighting	Screw-in	100.0%	1,215	1,215	93,508
Interior Lighting	Linear Fluorescent	100.0%	158	158	12,160
Interior Lighting	Specialty	100.0%	336	336	25,846
Exterior Lighting	Screw-in	100.0%	441	441	33,909
Appliances	Clothes Washer	100.0%	100	100	7,661
Appliances	Clothes Dryer	93.2%	733	684	52,587
Appliances	Dishwasher	84.2%	355	299	23,008
Appliances	Refrigerator	100.0%	602	602	46,282
Appliances	Freezer	78.1%	515	402	30,915
Appliances	Second Refrigerator	25.0%	1,130	283	21,733
Appliances	Stove	81.4%	438	356	27,422
Appliances	Microwave	100.0%	130	130	9,975
Electronics	Personal Computers	94.0%	262	247	18,970
Electronics	Monitor	94.0%	52	49	3,775
Electronics	Laptops	120.5%	113	136	10,478
Electronics	TVs	231.0%	229	528	40,610
Electronics	Printer/Fax/Copier	103.0%	40	41	3,185
Electronics	Set-top Boxes/DVR	161.6%	107	173	13,311
Electronics	Devices and Gadgets	100.0%	50	50	3,847
Miscellaneous	Pool Pump	2.6%	1,500	39	2,974
Miscellaneous	Pool Heater	0.6%	4,981	32	2,469
Miscellaneous	Hot Tub / Spa	9.5%	950	90	6,921
Miscellaneous	Furnace Fan	69.8%	660	461	35,481
Miscellaneous	Well pump	21.4%	561	120	9,218
Miscellaneous	Miscellaneous	100.0%	223	223	17,145
<b>Total</b>				<b>8,855</b>	<b>137,285</b>

**Table A-32 Wyoming Single Family New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	47.6%	1,242	591
Cooling	Room AC	11.9%	867	103
Cooling	Air-Source Heat Pump	0.8%	1,090	9
Cooling	Geothermal Heat Pump	0.2%	1,049	2
Cooling	Evaporative Cooling	26.0%	712	185
Space Heating	Electric Resistance	4.3%	13,656	585
Space Heating	Electric Furnace	8.3%	14,648	1,214
Space Heating	Air-Source Heat Pump	0.8%	9,787	83
Space Heating	Geothermal Heat Pump	0.2%	4,442	9
Water Heating	Water Heater <= 55 Gal	19.4%	3,210	623
Water Heating	Water Heater > 55 Gal	2.6%	3,394	87
Interior Lighting	Screw-in	100.0%	1,346	1,346
Interior Lighting	Linear Fluorescent	100.0%	154	154
Interior Lighting	Specialty	100.0%	388	388
Exterior Lighting	Screw-in	100.0%	479	479
Appliances	Clothes Washer	90.0%	94	84
Appliances	Clothes Dryer	93.2%	723	674
Appliances	Dishwasher	84.2%	355	299
Appliances	Refrigerator	100.0%	600	600
Appliances	Freezer	78.1%	531	415
Appliances	Second Refrigerator	25.0%	1,127	282
Appliances	Stove	81.4%	436	355
Appliances	Microwave	100.0%	126	126
Electronics	Personal Computers	94.0%	262	247
Electronics	Monitor	94.0%	52	49
Electronics	Laptops	120.5%	113	136
Electronics	TVs	231.0%	229	528
Electronics	Printer/Fax/Copier	103.0%	40	41
Electronics	Set-top Boxes/DVR	161.6%	61	99
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	2.6%	1,500	39
Miscellaneous	Pool Heater	0.6%	4,981	32
Miscellaneous	Hot Tub / Spa	9.5%	950	90
Miscellaneous	Furnace Fan	69.8%	660	461
Miscellaneous	Well pump	21.4%	561	120
Miscellaneous	Miscellaneous	100.0%	245	245

Table A-33 Wyoming Multi Family Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	13.3%	353	47	887
Cooling	Room AC	13.3%	277	37	696
Cooling	Air-Source Heat Pump	0.0%	354	-	-
Cooling	Geothermal Heat Pump	0.0%	301	-	-
Cooling	Evaporative Cooling	9.0%	267	24	454
Space Heating	Electric Resistance	47.1%	2,716	1,278	24,072
Space Heating	Electric Furnace	0.0%	2,913	-	-
Space Heating	Air-Source Heat Pump	0.0%	1,754	-	-
Space Heating	Geothermal Heat Pump	0.0%	596	-	-
Water Heating	Water Heater <= 55 Gal	54.5%	1,827	997	18,772
Water Heating	Water Heater > 55 Gal	4.3%	1,932	83	1,558
Interior Lighting	Screw-in	100.0%	544	544	10,252
Interior Lighting	Linear Fluorescent	100.0%	38	38	715
Interior Lighting	Specialty	100.0%	31	31	588
Exterior Lighting	Screw-in	100.0%	160	160	3,016
Appliances	Clothes Washer	65.5%	98	64	1,207
Appliances	Clothes Dryer	66.1%	785	519	9,778
Appliances	Dishwasher	67.6%	408	276	5,196
Appliances	Refrigerator	100.0%	602	602	11,333
Appliances	Freezer	31.8%	515	164	3,085
Appliances	Second Refrigerator	3.0%	1,130	34	641
Appliances	Stove	81.8%	317	259	4,878
Appliances	Microwave	97.4%	130	126	2,379
Electronics	Personal Computers	62.1%	262	163	3,070
Electronics	Monitor	62.1%	52	32	611
Electronics	Laptops	108.0%	113	122	2,299
Electronics	TVs	164.7%	223	368	6,925
Electronics	Printer/Fax/Copier	52.8%	40	21	400
Electronics	Set-top Boxes/DVR	116.0%	107	124	2,339
Electronics	Devices and Gadgets	100.0%	50	50	942
Miscellaneous	Pool Pump	0.0%	1,500	-	-
Miscellaneous	Pool Heater	0.0%	4,981	-	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-	-
Miscellaneous	Furnace Fan	43.6%	229	100	1,880
Miscellaneous	Well pump	0.0%	556	-	-
Miscellaneous	Miscellaneous	100.0%	157	157	2,954
<b>Total</b>				<b>6,420</b>	<b>120,925</b>

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

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	26.7%	294	79
Cooling	Room AC	13.3%	307	41
Cooling	Air-Source Heat Pump	0.0%	293	-
Cooling	Geothermal Heat Pump	0.0%	282	-
Cooling	Evaporative Cooling	10.8%	294	32
Space Heating	Electric Resistance	47.1%	2,203	1,036
Space Heating	Electric Furnace	0.0%	2,363	-
Space Heating	Air-Source Heat Pump	0.0%	1,127	-
Space Heating	Geothermal Heat Pump	0.0%	512	-
Water Heating	Water Heater <= 55 Gal	54.5%	1,815	990
Water Heating	Water Heater > 55 Gal	4.3%	1,919	82
Interior Lighting	Screw-in	100.0%	670	670
Interior Lighting	Linear Fluorescent	100.0%	42	42
Interior Lighting	Specialty	100.0%	40	40
Exterior Lighting	Screw-in	100.0%	196	196
Appliances	Clothes Washer	59.0%	92	54
Appliances	Clothes Dryer	66.1%	774	512
Appliances	Dishwasher	67.6%	408	276
Appliances	Refrigerator	100.0%	600	600
Appliances	Freezer	31.8%	531	169
Appliances	Second Refrigerator	3.0%	1,127	34
Appliances	Stove	81.8%	315	258
Appliances	Microwave	97.4%	126	123
Electronics	Personal Computers	62.1%	262	163
Electronics	Monitor	62.1%	52	32
Electronics	Laptops	108.0%	113	122
Electronics	TVs	164.7%	223	368
Electronics	Printer/Fax/Copier	52.8%	40	21
Electronics	Set-top Boxes/DVR	116.0%	61	71
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	0.0%	950	-
Miscellaneous	Furnace Fan	43.6%	229	100
Miscellaneous	Well pump	0.0%	556	-
Miscellaneous	Miscellaneous	100.0%	173	173



Table A-35 Wyoming Manufactured Home Existing Market Profile

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)	Usage (MWh)
Cooling	Central AC	16.4%	1,088	178	2,760
Cooling	Room AC	16.4%	839	137	2,129
Cooling	Air-Source Heat Pump	0.0%	1,088	-	-
Cooling	Geothermal Heat Pump	0.0%	925	-	-
Cooling	Evaporative Cooling	36.9%	554	204	3,169
Space Heating	Electric Resistance	4.0%	8,978	359	5,567
Space Heating	Electric Furnace	18.0%	9,630	1,733	26,873
Space Heating	Air-Source Heat Pump	0.0%	10,358	-	-
Space Heating	Geothermal Heat Pump	0.0%	3,598	-	-
Water Heating	Water Heater <= 55 Gal	28.7%	2,925	839	13,001
Water Heating	Water Heater > 55 Gal	0.4%	3,092	13	202
Interior Lighting	Screw-in	100.0%	713	713	11,062
Interior Lighting	Linear Fluorescent	100.0%	58	58	897
Interior Lighting	Specialty	100.0%	151	151	2,336
Exterior Lighting	Screw-in	100.0%	165	165	2,563
Appliances	Clothes Washer	99.4%	99	98	1,525
Appliances	Clothes Dryer	94.4%	829	783	12,134
Appliances	Dishwasher	70.3%	408	287	4,446
Appliances	Refrigerator	100.0%	602	602	9,327
Appliances	Freezer	60.1%	515	309	4,796
Appliances	Second Refrigerator	21.1%	1,130	238	3,692
Appliances	Stove	29.7%	312	93	1,437
Appliances	Microwave	99.6%	130	129	2,003
Electronics	Personal Computers	75.4%	262	198	3,068
Electronics	Monitor	75.4%	52	39	611
Electronics	Laptops	49.2%	113	56	862
Electronics	TVs	220.0%	210	463	7,173
Electronics	Printer/Fax/Copier	77.9%	40	31	486
Electronics	Set-top Boxes/DVR	172.7%	107	185	2,867
Electronics	Devices and Gadgets	100.0%	50	50	775
Miscellaneous	Pool Pump	0.0%	1,500	-	-
Miscellaneous	Pool Heater	0.0%	4,981	-	-
Miscellaneous	Hot Tub / Spa	11.4%	950	108	1,677
Miscellaneous	Furnace Fan	88.9%	359	319	4,951
Miscellaneous	Well pump	20.1%	451	91	1,408
Miscellaneous	Miscellaneous	100.0%	225	225	3,492
<b>Total</b>				<b>8,855</b>	<b>137,285</b>

**Table A-36 Wyoming Manufactured Home New Construction Market Profile**

End Use	Technology	Saturation	UEC (kWh)	Intensity (kWh/HH)
Cooling	Central AC	32.7%	852	279
Cooling	Room AC	16.4%	945	155
Cooling	Air-Source Heat Pump	0.0%	846	-
Cooling	Geothermal Heat Pump	0.0%	794	-
Cooling	Evaporative Cooling	44.3%	609	270
Space Heating	Electric Resistance	2.0%	9,046	181
Space Heating	Electric Furnace	36.0%	9,703	3,493
Space Heating	Air-Source Heat Pump	0.0%	7,155	-
Space Heating	Geothermal Heat Pump	0.0%	3,420	-
Water Heating	Water Heater <= 55 Gal	28.7%	2,900	831
Water Heating	Water Heater > 55 Gal	0.4%	3,065	13
Interior Lighting	Screw-in	100.0%	799	799
Interior Lighting	Linear Fluorescent	100.0%	56	56
Interior Lighting	Specialty	100.0%	178	178
Exterior Lighting	Screw-in	100.0%	179	179
Appliances	Clothes Washer	89.5%	93	83
Appliances	Clothes Dryer	94.4%	817	771
Appliances	Dishwasher	70.3%	408	287
Appliances	Refrigerator	100.0%	600	600
Appliances	Freezer	60.1%	531	319
Appliances	Second Refrigerator	21.1%	1,127	238
Appliances	Stove	29.7%	310	92
Appliances	Microwave	99.6%	126	126
Electronics	Personal Computers	75.4%	262	198
Electronics	Monitor	75.4%	52	39
Electronics	Laptops	49.2%	113	56
Electronics	TVs	220.0%	210	463
Electronics	Printer/Fax/Copier	77.9%	40	31
Electronics	Set-top Boxes/DVR	172.7%	61	106
Electronics	Devices and Gadgets	100.0%	55	55
Miscellaneous	Pool Pump	0.0%	1,500	-
Miscellaneous	Pool Heater	0.0%	4,981	-
Miscellaneous	Hot Tub / Spa	11.4%	950	108
Miscellaneous	Furnace Fan	88.9%	359	319
Miscellaneous	Well pump	20.1%	451	91
Miscellaneous	Miscellaneous	100.0%	248	248

## 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*

Segment	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
Miscellaneous	15,000

**Table A-38 California Large Office Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.9%	3.19	0.57	101
Cooling	Water-Cooled Chiller	17.9%	3.27	0.58	103
Cooling	RTU	43.1%	3.44	1.48	262
Cooling	PTAC	0.6%	3.66	0.02	4
Cooling	Evaporative AC	0.0%	1.38	-	-
Cooling	Air-Source Heat Pump	6.8%	3.44	0.23	41
Cooling	Geothermal Heat Pump	5.8%	2.10	0.12	21
Heating	Electric Furnace	57.1%	4.06	2.32	410
Heating	Electric Zonal Heating	2.9%	4.26	0.12	22
Heating	Air-Source Heat Pump	6.8%	3.80	0.26	46
Heating	Geothermal Heat Pump	5.8%	3.46	0.20	35
Ventilation	Ventilation	100.0%	3.02	3.02	534
Water Heating	Water Heating	75.6%	1.01	0.76	135
Interior Lighting	Screw-in	100.0%	0.83	0.83	147
Interior Lighting	High-Bay Fixtures	100.0%	0.39	0.39	69
Interior Lighting	Linear Fluorescent	100.0%	2.68	2.68	473
Exterior Lighting	Screw-in	100.0%	0.09	0.09	15
Exterior Lighting	HID	100.0%	0.23	0.23	41
Exterior Lighting	Linear Fluorescent	100.0%	0.14	0.14	25
Refrigeration	Walk-in Refrigerator	2.0%	0.22	0.00	1
Refrigeration	Reach-in Refrigerator	14.0%	0.06	0.01	1
Refrigeration	Glass Door Display	77.4%	0.10	0.07	13
Refrigeration	Open Display Case	77.4%	0.08	0.06	11
Refrigeration	Icemaker	44.9%	0.07	0.03	5
Refrigeration	Vending Machine	44.9%	0.10	0.05	8
Food Preparation	Oven	66.0%	0.12	0.08	14
Food Preparation	Fryer	76.4%	0.10	0.08	13
Food Preparation	Dishwasher	43.1%	0.27	0.12	21
Food Preparation	Hot Food Container	43.1%	0.03	0.01	3
Office Equipment	Desktop Computer	100.0%	2.02	2.02	356
Office Equipment	Laptop	100.0%	0.40	0.40	71
Office Equipment	Server	100.0%	0.25	0.25	43
Office Equipment	Monitor	100.0%	0.56	0.56	98
Office Equipment	Printer/Copier/Fax	100.0%	0.24	0.24	42
Office Equipment	POS Terminal	40.0%	0.03	0.01	2
Miscellaneous	Non-HVAC Motors	89.6%	0.28	0.25	44
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.13	1.13	200
<b>Total</b>				<b>19.42</b>	<b>3,433</b>

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

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.1%	2.68	0.59
Cooling	Water-Cooled Chiller	22.1%	2.80	0.62
Cooling	RTU	53.1%	2.25	1.19
Cooling	PTAC	0.7%	2.74	0.02
Cooling	Evaporative AC	0.0%	1.38	-
Cooling	Air-Source Heat Pump	8.2%	2.78	0.23
Cooling	Geothermal Heat Pump	6.9%	1.37	0.09
Heating	Electric Furnace	57.1%	4.06	2.32
Heating	Electric Zonal Heating	2.9%	4.26	0.12
Heating	Air-Source Heat Pump	7.5%	2.91	0.22
Heating	Geothermal Heat Pump	6.4%	2.73	0.17
Ventilation	Ventilation	100.0%	1.98	1.98
Water Heating	Water Heating	75.6%	1.00	0.758
Interior Lighting	Screw-in	100.0%	0.48	0.48
Interior Lighting	High-Bay Fixtures	100.0%	0.41	0.41
Interior Lighting	Linear Fluorescent	100.0%	2.49	2.49
Exterior Lighting	Screw-in	100.0%	0.05	0.05
Exterior Lighting	HID	100.0%	0.20	0.20
Exterior Lighting	Linear Fluorescent	100.0%	0.13	0.13
Refrigeration	Walk-in Refrigerator	2.4%	0.22	0.01
Refrigeration	Reach-in Refrigerator	16.8%	0.06	0.01
Refrigeration	Glass Door Display	92.9%	0.10	0.09
Refrigeration	Open Display Case	92.9%	0.09	0.08
Refrigeration	Icemaker	53.9%	0.04	0.02
Refrigeration	Vending Machine	53.9%	0.10	0.05
Food Preparation	Oven	79.2%	0.11	0.09
Food Preparation	Fryer	91.7%	0.10	0.09
Food Preparation	Dishwasher	51.7%	0.16	0.08
Food Preparation	Hot Food Container	51.7%	0.01	0.01
Office Equipment	Desktop Computer	100.0%	1.64	1.64
Office Equipment	Laptop	100.0%	0.33	0.33
Office Equipment	Server	100.0%	0.23	0.23
Office Equipment	Monitor	100.0%	0.46	0.46
Office Equipment	Printer/Copier/Fax	100.0%	0.13	0.13
Office Equipment	POS Terminal	44.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.28	0.28
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.13	1.13

**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%	4.00	-	-
Cooling	Water-Cooled Chiller	0.0%	4.21	-	-
Cooling	RTU	70.6%	4.60	3.25	11,685
Cooling	PTAC	0.8%	4.90	0.04	144
Cooling	Evaporative AC	0.0%	1.84	-	-
Cooling	Air-Source Heat Pump	10.3%	4.60	0.47	1,700
Cooling	Geothermal Heat Pump	8.8%	2.80	0.25	885
Heating	Electric Furnace	30.4%	6.06	1.84	6,624
Heating	Electric Zonal Heating	1.5%	6.36	0.10	349
Heating	Air-Source Heat Pump	10.3%	5.60	0.58	2,069
Heating	Geothermal Heat Pump	8.8%	4.85	0.43	1,530
Ventilation	Ventilation	100.0%	1.46	1.46	5,240
Water Heating	Water Heating	66.7%	1.09	0.73	2,624
Interior Lighting	Screw-in	100.0%	0.57	0.57	2,034
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	1,799
Interior Lighting	Linear Fluorescent	100.0%	2.58	2.58	9,291
Exterior Lighting	Screw-in	100.0%	0.19	0.19	688
Exterior Lighting	HID	100.0%	0.27	0.27	960
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10	348
Refrigeration	Walk-in Refrigerator	0.0%	0.44	-	-
Refrigeration	Reach-in Refrigerator	14.9%	0.12	0.02	63
Refrigeration	Glass Door Display	2.1%	0.20	0.00	15
Refrigeration	Open Display Case	2.1%	0.16	0.00	12
Refrigeration	Icemaker	5.1%	0.13	0.01	25
Refrigeration	Vending Machine	5.1%	0.10	0.01	19
Food Preparation	Oven	3.6%	0.32	0.01	42
Food Preparation	Fryer	3.6%	0.25	0.01	33
Food Preparation	Dishwasher	3.6%	0.70	0.03	91
Food Preparation	Hot Food Container	3.6%	0.09	0.00	11
Office Equipment	Desktop Computer	100.0%	1.27	1.27	4,552
Office Equipment	Laptop	100.0%	0.25	0.25	910
Office Equipment	Server	100.0%	0.46	0.46	1,661
Office Equipment	Monitor	100.0%	0.35	0.35	1,257
Office Equipment	Printer/Copier/Fax	100.0%	0.22	0.22	807
Office Equipment	POS Terminal	20.0%	0.13	0.03	93
Miscellaneous	Non-HVAC Motors	22.0%	0.24	0.05	192
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.04	1.04	3,729
<b>Total</b>				<b>17.10</b>	<b>61,484</b>

**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%	3.51	-
Cooling	Water-Cooled Chiller	0.0%	3.60	-
Cooling	RTU	91.6%	2.88	2.64
Cooling	PTAC	1.1%	3.66	0.04
Cooling	Evaporative AC	0.0%	1.84	-
Cooling	Air-Source Heat Pump	13.3%	3.56	0.47
Cooling	Geothermal Heat Pump	11.4%	1.75	0.20
Heating	Electric Furnace	30.4%	6.06	1.84
Heating	Electric Zonal Heating	1.5%	6.36	0.10
Heating	Air-Source Heat Pump	12.3%	4.24	0.52
Heating	Geothermal Heat Pump	10.5%	3.83	0.40
Ventilation	Ventilation	100.0%	0.74	0.74
Water Heating	Water Heating	66.7%	1.09	0.726
Interior Lighting	Screw-in	100.0%	0.51	0.51
Interior Lighting	High-Bay Fixtures	100.0%	0.53	0.53
Interior Lighting	Linear Fluorescent	100.0%	2.39	2.39
Exterior Lighting	Screw-in	100.0%	0.18	0.18
Exterior Lighting	HID	100.0%	0.28	0.28
Exterior Lighting	Linear Fluorescent	100.0%	0.09	0.09
Refrigeration	Walk-in Refrigerator	0.0%	0.44	-
Refrigeration	Reach-in Refrigerator	17.9%	0.12	0.02
Refrigeration	Glass Door Display	2.6%	0.20	0.01
Refrigeration	Open Display Case	2.6%	0.18	0.00
Refrigeration	Icemaker	6.1%	0.08	0.00
Refrigeration	Vending Machine	6.1%	0.10	0.01
Food Preparation	Oven	4.6%	0.29	0.01
Food Preparation	Fryer	4.6%	0.25	0.01
Food Preparation	Dishwasher	4.6%	0.42	0.02
Food Preparation	Hot Food Container	4.6%	0.03	0.00
Office Equipment	Desktop Computer	100.0%	1.03	1.03
Office Equipment	Laptop	100.0%	0.21	0.21
Office Equipment	Server	100.0%	0.42	0.42
Office Equipment	Monitor	100.0%	0.29	0.29
Office Equipment	Printer/Copier/Fax	100.0%	0.12	0.12
Office Equipment	POS Terminal	22.0%	0.12	0.03
Miscellaneous	Non-HVAC Motors	24.2%	0.24	0.06
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.04	1.04

**Table A-42 California Large Retail Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	12.4%	3.44	0.43	146
Cooling	Water-Cooled Chiller	3.1%	3.62	0.11	38
Cooling	RTU	70.6%	3.96	2.79	961
Cooling	PTAC	1.1%	4.22	0.05	16
Cooling	Evaporative AC	2.5%	1.58	0.04	14
Cooling	Air-Source Heat Pump	2.3%	3.96	0.09	31
Cooling	Geothermal Heat Pump	1.8%	2.41	0.04	15
Heating	Electric Furnace	39.6%	5.54	2.19	755
Heating	Electric Zonal Heating	3.4%	5.81	0.20	68
Heating	Air-Source Heat Pump	2.3%	4.96	0.11	38
Heating	Geothermal Heat Pump	1.8%	4.23	0.08	26
Ventilation	Ventilation	100.0%	1.46	1.46	503
Water Heating	Water Heating	61.2%	1.18	0.72	249
Interior Lighting	Screw-in	100.0%	1.88	1.88	647
Interior Lighting	High-Bay Fixtures	100.0%	1.99	1.99	685
Interior Lighting	Linear Fluorescent	100.0%	5.06	5.06	1,742
Exterior Lighting	Screw-in	100.0%	0.26	0.26	90
Exterior Lighting	HID	100.0%	0.65	0.65	225
Exterior Lighting	Linear Fluorescent	100.0%	0.33	0.33	113
Refrigeration	Walk-in Refrigerator	2.0%	0.75	0.02	5
Refrigeration	Reach-in Refrigerator	14.0%	0.20	0.03	10
Refrigeration	Glass Door Display	81.7%	0.34	0.27	94
Refrigeration	Open Display Case	81.7%	0.28	0.23	78
Refrigeration	Icemaker	52.4%	0.45	0.24	82
Refrigeration	Vending Machine	52.4%	0.35	0.18	63
Food Preparation	Oven	48.9%	0.34	0.16	57
Food Preparation	Fryer	45.2%	0.27	0.12	42
Food Preparation	Dishwasher	39.6%	0.74	0.29	101
Food Preparation	Hot Food Container	39.6%	0.09	0.04	12
Office Equipment	Desktop Computer	100.0%	0.39	0.39	133
Office Equipment	Laptop	100.0%	0.08	0.08	27
Office Equipment	Server	82.0%	0.07	0.06	20
Office Equipment	Monitor	100.0%	0.11	0.11	37
Office Equipment	Printer/Copier/Fax	100.0%	0.07	0.07	24
Office Equipment	POS Terminal	100.0%	0.01	0.01	4
Miscellaneous	Non-HVAC Motors	40.2%	0.36	0.14	49
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.34	1.34	462
<b>Total</b>				<b>22.26</b>	<b>7,661</b>



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

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	17.3%	2.71	0.47
Cooling	Water-Cooled Chiller	4.3%	2.78	0.12
Cooling	RTU	98.8%	2.86	2.83
Cooling	PTAC	1.6%	3.14	0.05
Cooling	Evaporative AC	3.5%	1.58	0.06
Cooling	Air-Source Heat Pump	3.2%	2.92	0.09
Cooling	Geothermal Heat Pump	2.5%	1.72	0.04
Heating	Electric Furnace	39.6%	5.54	2.19
Heating	Electric Zonal Heating	3.4%	5.81	0.20
Heating	Air-Source Heat Pump	2.9%	3.49	0.10
Heating	Geothermal Heat Pump	2.3%	2.46	0.06
Ventilation	Ventilation	100.0%	0.76	0.76
Water Heating	Water Heating	61.2%	1.18	0.721
Interior Lighting	Screw-in	100.0%	1.10	1.10
Interior Lighting	High-Bay Fixtures	100.0%	1.83	1.83
Interior Lighting	Linear Fluorescent	100.0%	4.54	4.54
Exterior Lighting	Screw-in	100.0%	0.14	0.14
Exterior Lighting	HID	100.0%	0.55	0.55
Exterior Lighting	Linear Fluorescent	100.0%	0.29	0.29
Refrigeration	Walk-in Refrigerator	3.0%	0.75	0.02
Refrigeration	Reach-in Refrigerator	21.0%	0.20	0.04
Refrigeration	Glass Door Display	100.0%	0.34	0.34
Refrigeration	Open Display Case	100.0%	0.30	0.30
Refrigeration	Icemaker	78.6%	0.26	0.20
Refrigeration	Vending Machine	78.6%	0.32	0.25
Food Preparation	Oven	73.4%	0.30	0.22
Food Preparation	Fryer	67.8%	0.26	0.18
Food Preparation	Dishwasher	59.4%	0.45	0.26
Food Preparation	Hot Food Container	59.4%	0.03	0.02
Office Equipment	Desktop Computer	100.0%	0.31	0.31
Office Equipment	Laptop	100.0%	0.06	0.06
Office Equipment	Server	98.4%	0.06	0.06
Office Equipment	Monitor	100.0%	0.09	0.09
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	48.2%	0.36	0.17
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.34	1.34

**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%	3.53	-	-
Cooling	Water-Cooled Chiller	0.0%	3.71	-	-
Cooling	RTU	56.1%	4.07	2.28	3,045
Cooling	PTAC	2.7%	4.33	0.12	155
Cooling	Evaporative AC	6.0%	1.63	0.10	131
Cooling	Air-Source Heat Pump	5.4%	4.07	0.22	291
Cooling	Geothermal Heat Pump	4.2%	2.48	0.11	140
Heating	Electric Furnace	13.0%	5.19	0.68	902
Heating	Electric Zonal Heating	1.1%	5.45	0.06	81
Heating	Air-Source Heat Pump	5.4%	4.80	0.26	343
Heating	Geothermal Heat Pump	4.2%	4.16	0.18	235
Ventilation	Ventilation	100.0%	1.25	1.25	1,662
Water Heating	Water Heating	60.0%	0.94	0.56	749
Interior Lighting	Screw-in	100.0%	1.08	1.08	1,436
Interior Lighting	High-Bay Fixtures	100.0%	1.14	1.14	1,520
Interior Lighting	Linear Fluorescent	100.0%	2.90	2.90	3,865
Exterior Lighting	Screw-in	100.0%	0.18	0.18	241
Exterior Lighting	HID	100.0%	0.45	0.45	601
Exterior Lighting	Linear Fluorescent	100.0%	0.23	0.23	303
Refrigeration	Walk-in Refrigerator	0.0%	0.30	-	-
Refrigeration	Reach-in Refrigerator	6.5%	0.08	0.01	7
Refrigeration	Glass Door Display	4.3%	0.13	0.01	8
Refrigeration	Open Display Case	4.3%	0.11	0.00	6
Refrigeration	Icemaker	5.1%	0.18	0.01	12
Refrigeration	Vending Machine	5.1%	0.14	0.01	9
Food Preparation	Oven	3.6%	0.27	0.01	13
Food Preparation	Fryer	3.6%	0.22	0.01	10
Food Preparation	Dishwasher	3.6%	0.59	0.02	29
Food Preparation	Hot Food Container	3.6%	0.07	0.00	4
Office Equipment	Desktop Computer	100.0%	0.09	0.09	115
Office Equipment	Laptop	100.0%	0.02	0.02	23
Office Equipment	Server	100.0%	0.13	0.13	168
Office Equipment	Monitor	100.0%	0.02	0.02	32
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	16
Office Equipment	POS Terminal	100.0%	0.04	0.04	47
Miscellaneous	Non-HVAC Motors	22.0%	0.18	0.04	52
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.76	0.76	1,013
<b>Total</b>				<b>12.94</b>	<b>17,265</b>

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

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	0.0%	2.79	-
Cooling	Water-Cooled Chiller	0.0%	2.86	-
Cooling	RTU	78.6%	3.01	2.37
Cooling	PTAC	3.8%	3.22	0.12
Cooling	Evaporative AC	8.4%	1.63	0.14
Cooling	Air-Source Heat Pump	7.5%	3.08	0.23
Cooling	Geothermal Heat Pump	5.9%	1.81	0.11
Heating	Electric Furnace	13.0%	5.19	0.68
Heating	Electric Zonal Heating	1.1%	5.45	0.06
Heating	Air-Source Heat Pump	7.0%	2.92	0.20
Heating	Geothermal Heat Pump	5.5%	2.42	0.13
Ventilation	Ventilation	100.0%	0.74	0.74
Water Heating	Water Heating	60.0%	0.90	0.538
Interior Lighting	Screw-in	100.0%	0.63	0.63
Interior Lighting	High-Bay Fixtures	100.0%	1.05	1.05
Interior Lighting	Linear Fluorescent	100.0%	2.60	2.60
Exterior Lighting	Screw-in	100.0%	0.09	0.09
Exterior Lighting	HID	100.0%	0.38	0.38
Exterior Lighting	Linear Fluorescent	100.0%	0.20	0.20
Refrigeration	Walk-in Refrigerator	0.0%	0.30	-
Refrigeration	Reach-in Refrigerator	9.8%	0.08	0.01
Refrigeration	Glass Door Display	6.5%	0.13	0.01
Refrigeration	Open Display Case	6.5%	0.12	0.01
Refrigeration	Icemaker	7.7%	0.10	0.01
Refrigeration	Vending Machine	7.7%	0.13	0.01
Food Preparation	Oven	5.5%	0.24	0.01
Food Preparation	Fryer	5.5%	0.21	0.01
Food Preparation	Dishwasher	5.5%	0.36	0.02
Food Preparation	Hot Food Container	5.5%	0.03	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.12	0.12
Office Equipment	Monitor	100.0%	0.02	0.02
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	26.4%	0.18	0.05
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.76	0.76

**Table A-46 California Restaurant Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.3%	4.31	0.01	5
Cooling	Water-Cooled Chiller	0.0%	4.22	-	-
Cooling	RTU	77.3%	4.89	3.78	1,460
Cooling	PTAC	0.1%	5.21	0.00	2
Cooling	Evaporative AC	6.6%	1.96	0.13	50
Cooling	Air-Source Heat Pump	6.6%	4.89	0.32	125
Cooling	Geothermal Heat Pump	3.3%	2.98	0.10	38
Heating	Electric Furnace	2.2%	4.60	0.10	38
Heating	Electric Zonal Heating	23.8%	4.83	1.15	445
Heating	Air-Source Heat Pump	6.6%	3.24	0.22	83
Heating	Geothermal Heat Pump	3.3%	2.46	0.08	32
Ventilation	Ventilation	100.0%	2.38	2.38	918
Water Heating	Water Heating	56.3%	7.04	3.96	1,531
Interior Lighting	Screw-in	100.0%	2.66	2.66	1,030
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	194
Interior Lighting	Linear Fluorescent	100.0%	4.32	4.32	1,669
Exterior Lighting	Screw-in	100.0%	0.27	0.27	106
Exterior Lighting	HID	100.0%	1.95	1.95	752
Exterior Lighting	Linear Fluorescent	100.0%	0.56	0.56	217
Refrigeration	Walk-in Refrigerator	74.0%	7.48	5.54	2,140
Refrigeration	Reach-in Refrigerator	7.0%	3.95	0.28	107
Refrigeration	Glass Door Display	5.2%	3.32	0.17	67
Refrigeration	Open Display Case	5.2%	2.74	0.14	55
Refrigeration	Icemaker	97.3%	2.26	2.19	848
Refrigeration	Vending Machine	97.3%	1.74	1.70	655
Food Preparation	Oven	15.2%	10.64	1.62	625
Food Preparation	Fryer	8.9%	8.46	0.75	291
Food Preparation	Dishwasher	52.5%	11.68	6.13	2,370
Food Preparation	Hot Food Container	52.5%	1.43	0.75	291
Office Equipment	Desktop Computer	100.0%	0.27	0.27	104
Office Equipment	Laptop	100.0%	0.04	0.04	17
Office Equipment	Server	50.0%	0.39	0.20	76
Office Equipment	Monitor	100.0%	0.07	0.07	29
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	30
Office Equipment	POS Terminal	100.0%	0.11	0.11	42
Miscellaneous	Non-HVAC Motors	20.0%	0.53	0.11	41
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.14	2.14	827
<b>Total</b>				<b>44.80</b>	<b>17,310</b>

**Table A-47 California Restaurant New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	0.4%	4.03	0.01
Cooling	Water-Cooled Chiller	0.0%	3.80	-
Cooling	RTU	92.7%	3.62	3.36
Cooling	PTAC	0.1%	3.63	0.00
Cooling	Evaporative AC	8.6%	1.96	0.17
Cooling	Air-Source Heat Pump	8.6%	3.70	0.32
Cooling	Geothermal Heat Pump	4.3%	2.21	0.10
Heating	Electric Furnace	2.2%	4.60	0.10
Heating	Electric Zonal Heating	23.8%	4.83	1.15
Heating	Air-Source Heat Pump	8.0%	2.82	0.22
Heating	Geothermal Heat Pump	4.0%	2.20	0.09
Ventilation	Ventilation	100.0%	1.70	1.70
Water Heating	Water Heating	59.1%	7.01	4.142
Interior Lighting	Screw-in	100.0%	1.78	1.78
Interior Lighting	High-Bay Fixtures	100.0%	0.57	0.57
Interior Lighting	Linear Fluorescent	100.0%	3.74	3.74
Exterior Lighting	Screw-in	100.0%	0.22	0.22
Exterior Lighting	HID	100.0%	1.72	1.72
Exterior Lighting	Linear Fluorescent	100.0%	0.49	0.49
Refrigeration	Walk-in Refrigerator	76.1%	7.46	5.68
Refrigeration	Reach-in Refrigerator	7.2%	3.95	0.28
Refrigeration	Glass Door Display	5.3%	3.32	0.18
Refrigeration	Open Display Case	5.3%	3.02	0.16
Refrigeration	Icemaker	100.0%	1.28	1.28
Refrigeration	Vending Machine	100.0%	1.58	1.58
Food Preparation	Oven	28.9%	9.60	2.78
Food Preparation	Fryer	16.9%	8.24	1.40
Food Preparation	Dishwasher	100.0%	7.05	7.05
Food Preparation	Hot Food Container	100.0%	0.51	0.51
Office Equipment	Desktop Computer	100.0%	0.22	0.22
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	55.0%	0.36	0.20
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.10	0.10
Miscellaneous	Non-HVAC Motors	24.0%	0.53	0.13
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.14	2.14

**Table A-48 California Grocery Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	6.2%	3.57	0.22	136
Cooling	Water-Cooled Chiller	0.0%	3.75	-	-
Cooling	RTU	81.7%	4.11	3.36	2,055
Cooling	PTAC	0.0%	4.38	-	-
Cooling	Evaporative AC	0.0%	1.64	-	-
Cooling	Air-Source Heat Pump	3.7%	3.76	0.14	84
Cooling	Geothermal Heat Pump	0.0%	1.36	-	-
Heating	Electric Furnace	2.4%	4.13	0.10	61
Heating	Electric Zonal Heating	13.0%	4.34	0.57	346
Heating	Air-Source Heat Pump	3.7%	2.05	0.08	46
Heating	Geothermal Heat Pump	0.0%	1.44	-	-
Ventilation	Ventilation	100.0%	1.83	1.83	1,121
Water Heating	Water Heating	65.0%	1.92	1.25	765
Interior Lighting	Screw-in	100.0%	1.47	1.47	900
Interior Lighting	High-Bay Fixtures	100.0%	1.92	1.92	1,176
Interior Lighting	Linear Fluorescent	100.0%	5.89	5.89	3,603
Exterior Lighting	Screw-in	100.0%	0.06	0.06	39
Exterior Lighting	HID	100.0%	0.66	0.66	405
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28	171
Refrigeration	Walk-in Refrigerator	16.0%	8.29	1.33	812
Refrigeration	Reach-in Refrigerator	83.1%	0.63	0.52	318
Refrigeration	Glass Door Display	94.9%	10.52	9.99	6,111
Refrigeration	Open Display Case	94.9%	8.68	8.24	5,040
Refrigeration	Icemaker	98.9%	0.36	0.35	216
Refrigeration	Vending Machine	98.9%	0.55	0.55	334
Food Preparation	Oven	54.4%	0.66	0.36	221
Food Preparation	Fryer	61.0%	0.53	0.32	197
Food Preparation	Dishwasher	54.9%	1.46	0.80	489
Food Preparation	Hot Food Container	54.9%	0.18	0.10	60
Office Equipment	Desktop Computer	100.0%	0.11	0.11	70
Office Equipment	Laptop	64.0%	0.02	0.01	9
Office Equipment	Server	100.0%	0.08	0.08	51
Office Equipment	Monitor	100.0%	0.03	0.03	19
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	10
Office Equipment	POS Terminal	100.0%	0.06	0.06	36
Miscellaneous	Non-HVAC Motors	34.6%	0.51	0.18	109
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.63	1.63	998
<b>Total</b>				<b>42.50</b>	<b>26,005</b>

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

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	7.2%	2.83	0.20
Cooling	Water-Cooled Chiller	0.0%	2.89	-
Cooling	RTU	94.0%	2.11	1.98
Cooling	PTAC	0.0%	3.05	-
Cooling	Evaporative AC	0.0%	1.64	-
Cooling	Air-Source Heat Pump	4.0%	1.79	0.07
Cooling	Geothermal Heat Pump	0.0%	0.27	-
Heating	Electric Furnace	2.4%	4.13	0.10
Heating	Electric Zonal Heating	13.0%	4.34	0.57
Heating	Air-Source Heat Pump	3.7%	1.54	0.06
Heating	Geothermal Heat Pump	0.0%	1.12	-
Ventilation	Ventilation	100.0%	1.26	1.26
Water Heating	Water Heating	65.0%	1.91	1.244
Interior Lighting	Screw-in	100.0%	1.27	1.27
Interior Lighting	High-Bay Fixtures	100.0%	1.79	1.79
Interior Lighting	Linear Fluorescent	100.0%	5.22	5.22
Exterior Lighting	Screw-in	100.0%	0.08	0.08
Exterior Lighting	HID	100.0%	0.60	0.60
Exterior Lighting	Linear Fluorescent	100.0%	0.25	0.25
Refrigeration	Walk-in Refrigerator	16.2%	8.27	1.34
Refrigeration	Reach-in Refrigerator	84.0%	0.63	0.53
Refrigeration	Glass Door Display	96.0%	10.52	10.10
Refrigeration	Open Display Case	96.0%	9.55	9.17
Refrigeration	Icemaker	100.0%	0.24	0.24
Refrigeration	Vending Machine	100.0%	0.54	0.54
Food Preparation	Oven	76.2%	0.60	0.46
Food Preparation	Fryer	85.4%	0.51	0.44
Food Preparation	Dishwasher	76.8%	0.88	0.67
Food Preparation	Hot Food Container	76.8%	0.06	0.05
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	70.4%	0.02	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	41.6%	0.51	0.21
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.63	1.63

**Table A-50 California Health Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.2%	6.57	1.13	486
Cooling	Water-Cooled Chiller	68.7%	7.93	5.45	2,347
Cooling	RTU	11.3%	6.87	0.77	334
Cooling	PTAC	0.4%	7.31	0.03	12
Cooling	Evaporative AC	0.0%	2.75	-	-
Cooling	Air-Source Heat Pump	0.6%	6.85	0.04	18
Cooling	Geothermal Heat Pump	0.9%	4.17	0.04	16
Heating	Electric Furnace	0.1%	13.45	0.01	5
Heating	Electric Zonal Heating	3.9%	14.12	0.56	239
Heating	Air-Source Heat Pump	0.6%	8.40	0.05	22
Heating	Geothermal Heat Pump	0.9%	6.21	0.06	24
Ventilation	Ventilation	100.0%	5.25	5.25	2,261
Water Heating	Water Heating	22.3%	5.24	1.17	504
Interior Lighting	Screw-in	100.0%	1.91	1.91	821
Interior Lighting	High-Bay Fixtures	100.0%	0.49	0.49	210
Interior Lighting	Linear Fluorescent	100.0%	4.56	4.56	1,965
Exterior Lighting	Screw-in	100.0%	0.02	0.02	9
Exterior Lighting	HID	100.0%	0.25	0.25	110
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08	35
Refrigeration	Walk-in Refrigerator	33.0%	0.42	0.14	60
Refrigeration	Reach-in Refrigerator	50.0%	0.11	0.06	24
Refrigeration	Glass Door Display	90.4%	0.19	0.17	73
Refrigeration	Open Display Case	90.4%	0.15	0.14	60
Refrigeration	Icemaker	90.4%	0.25	0.23	99
Refrigeration	Vending Machine	90.4%	0.20	0.18	77
Food Preparation	Oven	69.7%	1.07	0.75	321
Food Preparation	Fryer	80.7%	0.85	0.69	295
Food Preparation	Dishwasher	53.5%	2.35	1.25	541
Food Preparation	Hot Food Container	53.5%	0.29	0.15	66
Office Equipment	Desktop Computer	100.0%	0.57	0.57	244
Office Equipment	Laptop	100.0%	0.05	0.05	20
Office Equipment	Server	100.0%	0.08	0.08	36
Office Equipment	Monitor	100.0%	0.16	0.16	67
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	35
Office Equipment	POS Terminal	100.0%	0.06	0.06	25
Miscellaneous	Non-HVAC Motors	74.1%	0.60	0.44	191
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	4.66	4.66	2,009
<b>Total</b>				<b>31.70</b>	<b>13,661</b>



**Table A-51 California Health New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	18.9%	4.47	0.84
Cooling	Water-Cooled Chiller	75.5%	3.94	2.97
Cooling	RTU	12.4%	5.65	0.70
Cooling	PTAC	0.4%	5.47	0.02
Cooling	Evaporative AC	0.0%	2.75	-
Cooling	Air-Source Heat Pump	0.7%	6.99	0.05
Cooling	Geothermal Heat Pump	1.0%	3.45	0.03
Heating	Electric Furnace	0.1%	13.45	0.01
Heating	Electric Zonal Heating	3.9%	14.12	0.56
Heating	Air-Source Heat Pump	0.6%	3.19	0.02
Heating	Geothermal Heat Pump	0.9%	2.06	0.02
Ventilation	Ventilation	100.0%	2.26	2.26
Water Heating	Water Heating	22.3%	5.22	1.163
Interior Lighting	Screw-in	100.0%	1.46	1.46
Interior Lighting	High-Bay Fixtures	100.0%	0.54	0.54
Interior Lighting	Linear Fluorescent	100.0%	4.20	4.20
Exterior Lighting	Screw-in	100.0%	0.01	0.01
Exterior Lighting	HID	100.0%	0.22	0.22
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08
Refrigeration	Walk-in Refrigerator	36.3%	0.42	0.15
Refrigeration	Reach-in Refrigerator	55.0%	0.11	0.06
Refrigeration	Glass Door Display	99.4%	0.19	0.19
Refrigeration	Open Display Case	99.4%	0.17	0.17
Refrigeration	Icemaker	99.4%	0.14	0.14
Refrigeration	Vending Machine	99.4%	0.20	0.20
Food Preparation	Oven	97.6%	0.96	0.94
Food Preparation	Fryer	100.0%	0.83	0.83
Food Preparation	Dishwasher	74.9%	1.42	1.06
Food Preparation	Hot Food Container	74.9%	0.10	0.08
Office Equipment	Desktop Computer	100.0%	0.46	0.46
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.13	0.13
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	88.9%	0.60	0.53
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	4.66	4.66

**Table A-52 California College Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	46.3%	4.23	1.96	624
Cooling	Water-Cooled Chiller	11.6%	5.16	0.60	190
Cooling	RTU	27.3%	2.86	0.78	249
Cooling	PTAC	0.0%	3.04	-	-
Cooling	Evaporative AC	0.0%	1.14	-	-
Cooling	Air-Source Heat Pump	4.8%	2.85	0.14	44
Cooling	Geothermal Heat Pump	0.0%	1.74	-	-
Heating	Electric Furnace	29.9%	7.93	2.37	756
Heating	Electric Zonal Heating	0.0%	8.32	-	-
Heating	Air-Source Heat Pump	4.8%	5.16	0.25	80
Heating	Geothermal Heat Pump	0.0%	4.09	-	-
Ventilation	Ventilation	100.0%	1.62	1.62	516
Water Heating	Water Heating	63.3%	2.21	1.40	445
Interior Lighting	Screw-in	100.0%	0.33	0.33	106
Interior Lighting	High-Bay Fixtures	100.0%	0.29	0.29	92
Interior Lighting	Linear Fluorescent	100.0%	1.82	1.82	579
Exterior Lighting	Screw-in	100.0%	0.00	0.00	1
Exterior Lighting	HID	100.0%	0.08	0.08	24
Exterior Lighting	Linear Fluorescent	100.0%	0.27	0.27	86
Refrigeration	Walk-in Refrigerator	7.7%	0.23	0.02	6
Refrigeration	Reach-in Refrigerator	13.4%	0.12	0.02	5
Refrigeration	Glass Door Display	26.6%	0.10	0.03	9
Refrigeration	Open Display Case	26.6%	0.08	0.02	7
Refrigeration	Icemaker	26.6%	0.14	0.04	12
Refrigeration	Vending Machine	26.6%	0.11	0.03	9
Food Preparation	Oven	21.0%	0.36	0.08	24
Food Preparation	Fryer	21.0%	0.29	0.06	19
Food Preparation	Dishwasher	21.0%	0.80	0.17	54
Food Preparation	Hot Food Container	21.0%	0.10	0.02	7
Office Equipment	Desktop Computer	100.0%	0.45	0.45	142
Office Equipment	Laptop	100.0%	0.03	0.03	9
Office Equipment	Server	100.0%	0.07	0.07	21
Office Equipment	Monitor	100.0%	0.12	0.12	39
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	25
Office Equipment	POS Terminal	100.0%	0.02	0.02	7
Miscellaneous	Non-HVAC Motors	88.8%	0.16	0.14	45
Miscellaneous	Pool Pump	90.3%	0.02	0.01	5
Miscellaneous	Pool Heater	36.2%	0.03	0.01	4
Miscellaneous	Other Miscellaneous	100.0%	0.71	0.71	225
<b>Total</b>				<b>14.00</b>	<b>4,465</b>

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

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	57.1%	2.31	1.32
Cooling	Water-Cooled Chiller	14.3%	2.29	0.33
Cooling	RTU	33.7%	2.01	0.68
Cooling	PTAC	0.0%	2.29	-
Cooling	Evaporative AC	0.0%	1.14	-
Cooling	Air-Source Heat Pump	6.0%	2.05	0.12
Cooling	Geothermal Heat Pump	0.0%	1.23	-
Heating	Electric Furnace	29.9%	7.93	2.37
Heating	Electric Zonal Heating	0.0%	8.32	-
Heating	Air-Source Heat Pump	5.5%	4.02	0.22
Heating	Geothermal Heat Pump	0.0%	3.23	-
Ventilation	Ventilation	100.0%	0.78	0.78
Water Heating	Water Heating	63.3%	2.20	1.390
Interior Lighting	Screw-in	100.0%	0.19	0.19
Interior Lighting	High-Bay Fixtures	100.0%	0.30	0.30
Interior Lighting	Linear Fluorescent	100.0%	1.63	1.63
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.07	0.07
Exterior Lighting	Linear Fluorescent	100.0%	0.24	0.24
Refrigeration	Walk-in Refrigerator	10.8%	0.23	0.02
Refrigeration	Reach-in Refrigerator	18.7%	0.12	0.02
Refrigeration	Glass Door Display	37.2%	0.10	0.04
Refrigeration	Open Display Case	37.2%	0.09	0.03
Refrigeration	Icemaker	37.2%	0.08	0.03
Refrigeration	Vending Machine	37.2%	0.10	0.04
Food Preparation	Oven	29.5%	0.33	0.10
Food Preparation	Fryer	29.5%	0.28	0.08
Food Preparation	Dishwasher	29.5%	0.48	0.14
Food Preparation	Hot Food Container	29.5%	0.04	0.01
Office Equipment	Desktop Computer	100.0%	0.36	0.36
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Monitor	100.0%	0.10	0.10
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.16	0.16
Miscellaneous	Pool Pump	100.0%	0.02	0.02
Miscellaneous	Pool Heater	43.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.71	0.71

Table A-54 California School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	41.8%	2.03	0.85	1,196
Cooling	Water-Cooled Chiller	10.4%	2.48	0.26	365
Cooling	RTU	28.1%	1.38	0.39	544
Cooling	PTAC	0.0%	1.47	-	-
Cooling	Evaporative AC	0.0%	0.55	-	-
Cooling	Air-Source Heat Pump	5.4%	1.37	0.07	104
Cooling	Geothermal Heat Pump	4.3%	0.84	0.04	51
Heating	Electric Furnace	25.5%	4.28	1.09	1,538
Heating	Electric Zonal Heating	0.0%	4.49	-	-
Heating	Air-Source Heat Pump	5.4%	2.79	0.15	212
Heating	Geothermal Heat Pump	4.3%	2.20	0.10	134
Ventilation	Ventilation	100.0%	0.73	0.73	1,021
Water Heating	Water Heating	91.7%	1.01	0.93	1,303
Interior Lighting	Screw-in	100.0%	0.32	0.32	447
Interior Lighting	High-Bay Fixtures	100.0%	0.28	0.28	399
Interior Lighting	Linear Fluorescent	100.0%	2.09	2.09	2,947
Exterior Lighting	Screw-in	100.0%	0.00	0.00	4
Exterior Lighting	HID	100.0%	0.12	0.12	165
Exterior Lighting	Linear Fluorescent	100.0%	0.66	0.66	931
Refrigeration	Walk-in Refrigerator	19.0%	0.23	0.04	60
Refrigeration	Reach-in Refrigerator	33.0%	0.12	0.04	55
Refrigeration	Glass Door Display	65.7%	0.10	0.07	93
Refrigeration	Open Display Case	65.7%	0.08	0.05	77
Refrigeration	Icemaker	65.7%	0.14	0.09	126
Refrigeration	Vending Machine	65.7%	0.11	0.07	97
Food Preparation	Oven	64.8%	0.16	0.11	148
Food Preparation	Fryer	58.6%	0.13	0.08	106
Food Preparation	Dishwasher	52.3%	0.36	0.19	263
Food Preparation	Hot Food Container	52.3%	0.04	0.02	32
Office Equipment	Desktop Computer	100.0%	0.26	0.26	368
Office Equipment	Laptop	100.0%	0.02	0.02	29
Office Equipment	Server	100.0%	0.08	0.08	107
Office Equipment	Monitor	100.0%	0.07	0.07	102
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	52
Office Equipment	POS Terminal	36.0%	0.01	0.00	5
Miscellaneous	Non-HVAC Motors	43.7%	0.12	0.05	73
Miscellaneous	Pool Pump	6.0%	0.02	0.00	2
Miscellaneous	Pool Heater	1.0%	0.02	0.00	0
Miscellaneous	Other Miscellaneous	100.0%	0.55	0.55	781
<b>Total</b>				<b>9.90</b>	<b>13,941</b>

**Table A-55 California School New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	48.0%	1.11	0.53
Cooling	Water-Cooled Chiller	12.0%	1.10	0.13
Cooling	RTU	33.7%	0.97	0.33
Cooling	PTAC	0.0%	1.10	-
Cooling	Evaporative AC	0.0%	0.55	-
Cooling	Air-Source Heat Pump	7.0%	0.99	0.07
Cooling	Geothermal Heat Pump	5.6%	0.59	0.03
Heating	Electric Furnace	25.5%	4.28	1.09
Heating	Electric Zonal Heating	0.0%	4.49	-
Heating	Air-Source Heat Pump	6.5%	2.17	0.14
Heating	Geothermal Heat Pump	5.2%	1.74	0.09
Ventilation	Ventilation	100.0%	0.35	0.35
Water Heating	Water Heating	91.7%	1.01	0.921
Interior Lighting	Screw-in	100.0%	0.15	0.15
Interior Lighting	High-Bay Fixtures	100.0%	0.30	0.30
Interior Lighting	Linear Fluorescent	100.0%	1.90	1.90
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.12	0.12
Exterior Lighting	Linear Fluorescent	100.0%	0.60	0.60
Refrigeration	Walk-in Refrigerator	26.6%	0.23	0.06
Refrigeration	Reach-in Refrigerator	46.2%	0.12	0.06
Refrigeration	Glass Door Display	92.0%	0.10	0.09
Refrigeration	Open Display Case	92.0%	0.09	0.08
Refrigeration	Icemaker	92.0%	0.08	0.07
Refrigeration	Vending Machine	92.0%	0.10	0.09
Food Preparation	Oven	90.7%	0.15	0.13
Food Preparation	Fryer	82.0%	0.13	0.10
Food Preparation	Dishwasher	73.3%	0.22	0.16
Food Preparation	Hot Food Container	73.3%	0.02	0.01
Office Equipment	Desktop Computer	100.0%	0.21	0.21
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.07	0.07
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	48.0%	0.12	0.06
Miscellaneous	Pool Pump	7.2%	0.02	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.55	0.55

Table A-56 California Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.0%	1.01	0.05	72
Cooling	Water-Cooled Chiller	20.0%	1.23	0.25	351
Cooling	RTU	11.1%	3.19	0.35	507
Cooling	PTAC	30.9%	3.40	1.05	1,503
Cooling	Evaporative AC	0.0%	1.28	-	-
Cooling	Air-Source Heat Pump	17.8%	3.19	0.57	812
Cooling	Geothermal Heat Pump	2.8%	3.01	0.08	121
Heating	Electric Furnace	42.4%	3.75	1.59	2,274
Heating	Electric Zonal Heating	1.1%	3.93	0.04	64
Heating	Air-Source Heat Pump	17.8%	3.69	0.66	940
Heating	Geothermal Heat Pump	2.8%	2.38	0.07	95
Ventilation	Ventilation	100.0%	1.53	1.53	2,192
Water Heating	Water Heating	45.5%	5.19	2.36	3,379
Interior Lighting	Screw-in	100.0%	3.95	3.95	5,664
Interior Lighting	High-Bay Fixtures	100.0%	0.29	0.29	411
Interior Lighting	Linear Fluorescent	100.0%	1.10	1.10	1,582
Exterior Lighting	Screw-in	100.0%	0.20	0.20	284
Exterior Lighting	HID	100.0%	0.77	0.77	1,107
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05	77
Refrigeration	Walk-in Refrigerator	3.0%	0.91	0.03	39
Refrigeration	Reach-in Refrigerator	19.0%	0.24	0.05	66
Refrigeration	Glass Door Display	58.9%	0.41	0.24	342
Refrigeration	Open Display Case	58.9%	0.33	0.20	282
Refrigeration	Icemaker	58.9%	0.27	0.16	232
Refrigeration	Vending Machine	58.9%	0.42	0.25	358
Food Preparation	Oven	13.8%	0.62	0.09	123
Food Preparation	Fryer	21.0%	0.49	0.10	149
Food Preparation	Dishwasher	30.0%	1.37	0.41	588
Food Preparation	Hot Food Container	30.0%	0.17	0.05	72
Office Equipment	Desktop Computer	100.0%	0.12	0.12	166
Office Equipment	Laptop	100.0%	0.02	0.02	33
Office Equipment	Server	100.0%	0.08	0.08	122
Office Equipment	Monitor	100.0%	0.03	0.03	46
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	24
Office Equipment	POS Terminal	58.0%	0.02	0.01	20
Miscellaneous	Non-HVAC Motors	91.3%	0.21	0.19	272
Miscellaneous	Pool Pump	76.0%	0.01	0.01	15
Miscellaneous	Pool Heater	27.0%	0.03	0.01	11
Miscellaneous	Other Miscellaneous	100.0%	0.97	0.97	1,387
<b>Total</b>				<b>18.00</b>	<b>25,780</b>

**Table A-57 California Lodging New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	6.5%	0.84	0.05
Cooling	Water-Cooled Chiller	25.9%	1.04	0.27
Cooling	RTU	14.4%	3.14	0.45
Cooling	PTAC	40.1%	2.54	1.02
Cooling	Evaporative AC	0.0%	1.28	-
Cooling	Air-Source Heat Pump	22.4%	3.26	0.73
Cooling	Geothermal Heat Pump	3.5%	2.49	0.09
Heating	Electric Furnace	42.4%	3.75	1.59
Heating	Electric Zonal Heating	1.1%	3.93	0.04
Heating	Air-Source Heat Pump	20.6%	1.40	0.29
Heating	Geothermal Heat Pump	3.2%	0.79	0.03
Ventilation	Ventilation	100.0%	1.05	1.05
Water Heating	Water Heating	45.5%	5.17	2.348
Interior Lighting	Screw-in	100.0%	2.67	2.67
Interior Lighting	High-Bay Fixtures	100.0%	0.29	0.29
Interior Lighting	Linear Fluorescent	100.0%	0.99	0.99
Exterior Lighting	Screw-in	100.0%	0.16	0.16
Exterior Lighting	HID	100.0%	0.69	0.69
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05
Refrigeration	Walk-in Refrigerator	3.9%	0.91	0.04
Refrigeration	Reach-in Refrigerator	24.7%	0.24	0.06
Refrigeration	Glass Door Display	76.6%	0.41	0.31
Refrigeration	Open Display Case	76.6%	0.37	0.28
Refrigeration	Icemaker	76.6%	0.16	0.12
Refrigeration	Vending Machine	76.6%	0.41	0.32
Food Preparation	Oven	17.9%	0.56	0.10
Food Preparation	Fryer	27.3%	0.48	0.13
Food Preparation	Dishwasher	39.0%	0.83	0.32
Food Preparation	Hot Food Container	39.0%	0.06	0.02
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	63.8%	0.02	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.21	0.21
Miscellaneous	Pool Pump	91.2%	0.01	0.01
Miscellaneous	Pool Heater	32.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.97	0.97

**Table A-58 California Warehouse Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	3.1%	2.05	0.06	76
Cooling	Water-Cooled Chiller	0.3%	1.93	0.01	8
Cooling	RTU	9.0%	2.28	0.21	244
Cooling	PTAC	1.5%	2.43	0.04	43
Cooling	Evaporative AC	0.1%	0.91	0.00	2
Cooling	Air-Source Heat Pump	2.3%	2.28	0.05	63
Cooling	Geothermal Heat Pump	0.0%	1.39	-	-
Heating	Electric Furnace	15.4%	7.13	1.10	1,298
Heating	Electric Zonal Heating	2.8%	7.49	0.21	252
Heating	Air-Source Heat Pump	2.3%	6.72	0.16	185
Heating	Geothermal Heat Pump	0.0%	5.87	-	-
Ventilation	Ventilation	100.0%	0.30	0.30	353
Water Heating	Water Heating	76.9%	0.30	0.23	276
Interior Lighting	Screw-in	100.0%	0.25	0.25	296
Interior Lighting	High-Bay Fixtures	100.0%	1.22	1.22	1,449
Interior Lighting	Linear Fluorescent	100.0%	0.94	0.94	1,117
Exterior Lighting	Screw-in	100.0%	0.17	0.17	203
Exterior Lighting	HID	100.0%	0.16	0.16	187
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	144
Refrigeration	Walk-in Refrigerator	1.1%	0.87	0.01	11
Refrigeration	Reach-in Refrigerator	2.0%	0.23	0.00	5
Refrigeration	Glass Door Display	10.1%	0.39	0.04	46
Refrigeration	Open Display Case	10.1%	0.32	0.03	38
Refrigeration	Icemaker	10.1%	0.26	0.03	31
Refrigeration	Vending Machine	10.1%	0.20	0.02	24
Food Preparation	Oven	2.3%	0.06	0.00	2
Food Preparation	Fryer	2.3%	0.05	0.00	1
Food Preparation	Dishwasher	2.3%	0.13	0.00	3
Food Preparation	Hot Food Container	2.3%	0.02	0.00	0
Office Equipment	Desktop Computer	100.0%	0.09	0.09	102
Office Equipment	Laptop	100.0%	0.01	0.01	16
Office Equipment	Server	89.0%	0.13	0.11	132
Office Equipment	Monitor	100.0%	0.02	0.02	28
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	14
Office Equipment	POS Terminal	77.0%	0.03	0.03	32
Miscellaneous	Non-HVAC Motors	49.9%	0.15	0.07	87
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.52	0.52	612
<b>Total</b>				<b>6.23</b>	<b>7,383</b>



Table A-59 California Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	3.4%	1.62	0.06
Cooling	Water-Cooled Chiller	0.4%	1.49	0.01
Cooling	RTU	9.9%	1.65	0.16
Cooling	PTAC	1.6%	1.82	0.03
Cooling	Evaporative AC	0.2%	0.91	0.00
Cooling	Air-Source Heat Pump	2.6%	2.04	0.05
Cooling	Geothermal Heat Pump	0.0%	0.82	-
Heating	Electric Furnace	15.4%	7.13	1.10
Heating	Electric Zonal Heating	2.8%	7.49	0.21
Heating	Air-Source Heat Pump	2.3%	4.82	0.11
Heating	Geothermal Heat Pump	0.0%	3.04	-
Ventilation	Ventilation	100.0%	0.15	0.15
Water Heating	Water Heating	76.9%	0.30	0.232
Interior Lighting	Screw-in	100.0%	0.17	0.17
Interior Lighting	High-Bay Fixtures	100.0%	1.14	1.14
Interior Lighting	Linear Fluorescent	100.0%	0.84	0.84
Exterior Lighting	Screw-in	100.0%	0.14	0.14
Exterior Lighting	HID	100.0%	0.13	0.13
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator	1.3%	0.87	0.01
Refrigeration	Reach-in Refrigerator	2.4%	0.23	0.01
Refrigeration	Glass Door Display	12.1%	0.39	0.05
Refrigeration	Open Display Case	12.1%	0.35	0.04
Refrigeration	Icemaker	12.1%	0.17	0.02
Refrigeration	Vending Machine	12.1%	0.20	0.02
Food Preparation	Oven	2.7%	0.05	0.00
Food Preparation	Fryer	2.5%	0.05	0.00
Food Preparation	Dishwasher	2.7%	0.08	0.00
Food Preparation	Hot Food Container	2.5%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.12	0.12
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	84.7%	0.03	0.03
Miscellaneous	Non-HVAC Motors	59.8%	0.15	0.09
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.52	0.52

**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	13.0%	1.50	0.19	26
Cooling	Water-Cooled Chiller	1.4%	1.41	0.02	3
Cooling	RTU	17.0%	1.67	0.28	37
Cooling	PTAC	1.0%	1.77	0.02	2
Cooling	Evaporative AC	0.1%	0.67	0.00	0
Cooling	Air-Source Heat Pump	1.6%	1.67	0.03	4
Cooling	Geothermal Heat Pump	0.0%	1.01	-	-
Heating	Electric Furnace	11.5%	5.48	0.63	83
Heating	Electric Zonal Heating	2.1%	5.76	0.12	16
Heating	Air-Source Heat Pump	1.6%	5.17	0.08	11
Heating	Geothermal Heat Pump	0.0%	4.51	-	-
Ventilation	Ventilation	100.0%	0.80	0.80	106
Water Heating	Water Heating	76.9%	0.46	0.35	47
Interior Lighting	Screw-in	100.0%	0.24	0.24	31
Interior Lighting	High-Bay Fixtures	100.0%	1.17	1.17	154
Interior Lighting	Linear Fluorescent	100.0%	0.90	0.90	119
Exterior Lighting	Screw-in	100.0%	0.16	0.16	22
Exterior Lighting	HID	100.0%	0.15	0.15	20
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	15
Refrigeration	Walk-in Refrigerator	91.7%	17.41	15.96	2,101
Refrigeration	Reach-in Refrigerator	2.0%	0.92	0.02	2
Refrigeration	Glass Door Display	10.1%	1.55	0.16	21
Refrigeration	Open Display Case	10.1%	1.28	0.13	17
Refrigeration	Icemaker	91.7%	1.05	0.96	127
Refrigeration	Vending Machine	91.7%	0.81	0.74	98
Food Preparation	Oven	40.8%	0.09	0.04	5
Food Preparation	Fryer	40.8%	0.07	0.03	4
Food Preparation	Dishwasher	40.8%	0.20	0.08	11
Food Preparation	Hot Food Container	40.8%	0.02	0.01	1
Office Equipment	Desktop Computer	100.0%	0.06	0.06	8
Office Equipment	Laptop	100.0%	0.01	0.01	1
Office Equipment	Server	89.0%	0.09	0.08	10
Office Equipment	Monitor	100.0%	0.02	0.02	2
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	1
Office Equipment	POS Terminal	77.0%	0.02	0.02	2
Miscellaneous	Non-HVAC Motors	79.5%	0.51	0.41	54
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.80	1.80	237
<b>Total</b>				<b>25.81</b>	<b>3,398</b>

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

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.3%	1.19	0.17
Cooling	Water-Cooled Chiller	1.6%	1.09	0.02
Cooling	RTU	18.7%	1.20	0.23
Cooling	PTAC	1.1%	1.33	0.01
Cooling	Evaporative AC	0.1%	0.67	0.00
Cooling	Air-Source Heat Pump	1.8%	1.49	0.03
Cooling	Geothermal Heat Pump	0.0%	0.60	-
Heating	Electric Furnace	11.5%	5.48	0.63
Heating	Electric Zonal Heating	2.1%	5.76	0.12
Heating	Air-Source Heat Pump	1.6%	3.70	0.06
Heating	Geothermal Heat Pump	0.0%	2.33	-
Ventilation	Ventilation	100.0%	0.40	0.40
Water Heating	Water Heating	76.9%	0.46	0.352
Interior Lighting	Screw-in	100.0%	0.14	0.14
Interior Lighting	High-Bay Fixtures	100.0%	1.19	1.19
Interior Lighting	Linear Fluorescent	100.0%	0.80	0.80
Exterior Lighting	Screw-in	100.0%	0.12	0.12
Exterior Lighting	HID	100.0%	0.15	0.15
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	100.0%	17.36	17.36
Refrigeration	Reach-in Refrigerator	2.4%	0.92	0.02
Refrigeration	Glass Door Display	12.1%	1.55	0.19
Refrigeration	Open Display Case	12.1%	1.40	0.17
Refrigeration	Icemaker	100.0%	0.70	0.70
Refrigeration	Vending Machine	100.0%	0.79	0.79
Food Preparation	Oven	49.0%	0.08	0.04
Food Preparation	Fryer	44.9%	0.07	0.03
Food Preparation	Dishwasher	49.0%	0.12	0.06
Food Preparation	Hot Food Container	44.9%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.05	0.05
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Printer/Copier/Fax	100.0%	0.00	0.00
Office Equipment	POS Terminal	84.7%	0.02	0.02
Miscellaneous	Non-HVAC Motors	95.4%	0.51	0.49
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.80	1.80

**Table A-62 California Miscellaneous Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.1%	2.63	0.13	413
Cooling	Water-Cooled Chiller	20.4%	2.76	0.56	1,737
Cooling	RTU	42.4%	3.02	1.28	3,943
Cooling	PTAC	4.2%	3.22	0.14	419
Cooling	Evaporative AC	1.8%	1.21	0.02	68
Cooling	Air-Source Heat Pump	7.6%	3.02	0.23	702
Cooling	Geothermal Heat Pump	1.4%	1.84	0.03	80
Heating	Electric Furnace	16.0%	5.43	0.87	2,676
Heating	Electric Zonal Heating	13.5%	5.71	0.77	2,367
Heating	Air-Source Heat Pump	7.6%	4.87	0.37	1,130
Heating	Geothermal Heat Pump	1.4%	4.15	0.06	180
Ventilation	Ventilation	100.0%	1.06	1.06	3,261
Water Heating	Water Heating	52.9%	2.02	1.07	3,282
Interior Lighting	Screw-in	100.0%	1.03	1.03	3,155
Interior Lighting	High-Bay Fixtures	100.0%	0.46	0.46	1,410
Interior Lighting	Linear Fluorescent	100.0%	2.50	2.50	7,700
Exterior Lighting	Screw-in	100.0%	0.50	0.50	1,527
Exterior Lighting	HID	100.0%	1.04	1.04	3,208
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08	231
Refrigeration	Walk-in Refrigerator	6.6%	0.85	0.06	172
Refrigeration	Reach-in Refrigerator	14.8%	0.22	0.03	102
Refrigeration	Glass Door Display	8.2%	0.38	0.03	95
Refrigeration	Open Display Case	8.2%	0.31	0.03	79
Refrigeration	Icemaker	21.6%	0.26	0.06	170
Refrigeration	Vending Machine	21.6%	0.40	0.09	263
Food Preparation	Oven	58.9%	0.16	0.09	290
Food Preparation	Fryer	29.9%	0.13	0.04	117
Food Preparation	Dishwasher	15.4%	0.35	0.05	166
Food Preparation	Hot Food Container	15.4%	0.04	0.01	20
Office Equipment	Desktop Computer	100.0%	0.25	0.25	765
Office Equipment	Laptop	100.0%	0.05	0.05	153
Office Equipment	Server	66.0%	0.18	0.12	369
Office Equipment	Monitor	100.0%	0.07	0.07	211
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	108
Office Equipment	POS Terminal	28.0%	0.05	0.01	44
Miscellaneous	Non-HVAC Motors	59.9%	0.18	0.11	326
Miscellaneous	Pool Pump	4.0%	0.01	0.00	1
Miscellaneous	Pool Heater	1.0%	0.02	0.00	1
Miscellaneous	Other Miscellaneous	100.0%	0.69	0.69	2,124
<b>Total</b>				<b>14.00</b>	<b>43,064</b>

**Table A-63 California Miscellaneous New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	7.5%	1.96	0.15
Cooling	Water-Cooled Chiller	29.8%	2.13	0.63
Cooling	RTU	61.8%	2.24	1.38
Cooling	PTAC	6.2%	2.41	0.15
Cooling	Evaporative AC	2.7%	1.21	0.03
Cooling	Air-Source Heat Pump	11.0%	2.77	0.31
Cooling	Geothermal Heat Pump	2.1%	1.37	0.03
Heating	Electric Furnace	16.0%	5.43	0.87
Heating	Electric Zonal Heating	13.5%	5.71	0.77
Heating	Air-Source Heat Pump	10.3%	3.11	0.32
Heating	Geothermal Heat Pump	1.9%	2.45	0.05
Ventilation	Ventilation	100.0%	0.59	0.59
Water Heating	Water Heating	52.9%	2.01	1.062
Interior Lighting	Screw-in	100.0%	0.77	0.77
Interior Lighting	High-Bay Fixtures	100.0%	0.47	0.47
Interior Lighting	Linear Fluorescent	100.0%	2.27	2.27
Exterior Lighting	Screw-in	100.0%	0.25	0.25
Exterior Lighting	HID	100.0%	0.88	0.88
Exterior Lighting	Linear Fluorescent	100.0%	0.07	0.07
Refrigeration	Walk-in Refrigerator	9.2%	0.85	0.08
Refrigeration	Reach-in Refrigerator	20.7%	0.22	0.05
Refrigeration	Glass Door Display	11.5%	0.38	0.04
Refrigeration	Open Display Case	11.5%	0.34	0.04
Refrigeration	Icemaker	30.2%	0.17	0.05
Refrigeration	Vending Machine	30.2%	0.38	0.12
Food Preparation	Oven	82.5%	0.14	0.12
Food Preparation	Fryer	41.9%	0.12	0.05
Food Preparation	Dishwasher	21.6%	0.21	0.05
Food Preparation	Hot Food Container	21.6%	0.02	0.00
Office Equipment	Desktop Computer	100.0%	0.20	0.20
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	82.5%	0.17	0.14
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	33.6%	0.05	0.02
Miscellaneous	Non-HVAC Motors	71.9%	0.18	0.13
Miscellaneous	Pool Pump	4.6%	0.01	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.69	0.69

**Table A-64 Idaho Large Office Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.2%	2.97	0.51	750
Cooling	Water-Cooled Chiller	17.2%	3.04	0.52	768
Cooling	RTU	48.5%	3.09	1.50	2,202
Cooling	PTAC	0.5%	3.40	0.02	27
Cooling	Evaporative AC	0.0%	1.24	-	-
Cooling	Air-Source Heat Pump	3.0%	3.09	0.09	138
Cooling	Geothermal Heat Pump	2.1%	1.88	0.04	57
Heating	Electric Furnace	28.6%	5.61	1.60	2,354
Heating	Electric Zonal Heating	1.1%	5.89	0.06	92
Heating	Air-Source Heat Pump	3.0%	5.17	0.16	230
Heating	Geothermal Heat Pump	2.1%	3.90	0.08	118
Ventilation	Ventilation	100.0%	3.46	3.46	5,071
Water Heating	Water Heating	51.9%	1.15	0.60	878
Interior Lighting	Screw-in	100.0%	0.95	0.95	1,398
Interior Lighting	High-Bay Fixtures	100.0%	0.45	0.45	654
Interior Lighting	Linear Fluorescent	100.0%	3.06	3.06	4,496
Exterior Lighting	Screw-in	100.0%	0.10	0.10	144
Exterior Lighting	HID	100.0%	0.27	0.27	389
Exterior Lighting	Linear Fluorescent	100.0%	0.16	0.16	239
Refrigeration	Walk-in Refrigerator	2.0%	0.25	0.00	7
Refrigeration	Reach-in Refrigerator	14.0%	0.07	0.01	13
Refrigeration	Glass Door Display	77.4%	0.11	0.09	125
Refrigeration	Open Display Case	77.4%	0.09	0.07	103
Refrigeration	Icemaker	44.9%	0.07	0.03	49
Refrigeration	Vending Machine	44.9%	0.12	0.05	76
Food Preparation	Oven	66.0%	0.14	0.09	137
Food Preparation	Fryer	76.4%	0.11	0.09	126
Food Preparation	Dishwasher	43.1%	0.31	0.13	197
Food Preparation	Hot Food Container	43.1%	0.04	0.02	24
Office Equipment	Desktop Computer	100.0%	2.31	2.31	3,385
Office Equipment	Laptop	100.0%	0.46	0.46	677
Office Equipment	Server	100.0%	0.28	0.28	412
Office Equipment	Monitor	100.0%	0.64	0.64	935
Office Equipment	Printer/Copier/Fax	100.0%	0.27	0.27	400
Office Equipment	POS Terminal	40.0%	0.04	0.02	23
Miscellaneous	Non-HVAC Motors	89.6%	0.25	0.22	327
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.01	1.01	1,478
<b>Total</b>				<b>19.42</b>	<b>28,497</b>

**Table A-65 Idaho Large Office New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	21.3%	2.49	0.53
Cooling	Water-Cooled Chiller	21.3%	2.60	0.55
Cooling	RTU	59.8%	2.08	1.24
Cooling	PTAC	0.6%	2.57	0.02
Cooling	Evaporative AC	0.0%	1.24	-
Cooling	Air-Source Heat Pump	3.6%	2.57	0.09
Cooling	Geothermal Heat Pump	2.5%	1.27	0.03
Heating	Electric Furnace	28.6%	5.61	1.60
Heating	Electric Zonal Heating	1.1%	5.89	0.06
Heating	Air-Source Heat Pump	3.3%	4.58	0.15
Heating	Geothermal Heat Pump	2.3%	2.49	0.06
Ventilation	Ventilation	100.0%	2.30	2.30
Water Heating	Water Heating	51.9%	1.15	0.596
Interior Lighting	Screw-in	100.0%	0.54	0.54
Interior Lighting	High-Bay Fixtures	100.0%	0.47	0.47
Interior Lighting	Linear Fluorescent	100.0%	2.85	2.85
Exterior Lighting	Screw-in	100.0%	0.06	0.06
Exterior Lighting	HID	100.0%	0.23	0.23
Exterior Lighting	Linear Fluorescent	100.0%	0.15	0.15
Refrigeration	Walk-in Refrigerator	2.4%	0.25	0.01
Refrigeration	Reach-in Refrigerator	16.8%	0.07	0.01
Refrigeration	Glass Door Display	92.9%	0.11	0.10
Refrigeration	Open Display Case	92.9%	0.10	0.09
Refrigeration	Icemaker	53.9%	0.04	0.02
Refrigeration	Vending Machine	53.9%	0.11	0.06
Food Preparation	Oven	79.2%	0.13	0.10
Food Preparation	Fryer	91.7%	0.11	0.10
Food Preparation	Dishwasher	51.7%	0.19	0.10
Food Preparation	Hot Food Container	51.7%	0.01	0.01
Office Equipment	Desktop Computer	100.0%	1.87	1.87
Office Equipment	Laptop	100.0%	0.38	0.38
Office Equipment	Server	100.0%	0.26	0.26
Office Equipment	Monitor	100.0%	0.52	0.52
Office Equipment	Printer/Copier/Fax	100.0%	0.15	0.15
Office Equipment	POS Terminal	44.0%	0.04	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.25	0.25
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.01	1.01

**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%	3.81	-	-
Cooling	Water-Cooled Chiller	0.0%	3.88	-	-
Cooling	RTU	75.0%	4.23	3.18	17,649
Cooling	PTAC	0.8%	4.65	0.04	204
Cooling	Evaporative AC	2.0%	1.69	0.03	188
Cooling	Air-Source Heat Pump	5.4%	4.23	0.23	1,265
Cooling	Geothermal Heat Pump	3.9%	2.58	0.10	564
Heating	Electric Furnace	14.8%	8.77	1.30	7,224
Heating	Electric Zonal Heating	0.3%	9.20	0.02	128
Heating	Air-Source Heat Pump	5.4%	8.15	0.44	2,435
Heating	Geothermal Heat Pump	3.9%	5.76	0.23	1,258
Ventilation	Ventilation	100.0%	1.72	1.72	9,554
Water Heating	Water Heating	45.8%	1.29	0.59	3,286
Interior Lighting	Screw-in	100.0%	0.67	0.67	3,709
Interior Lighting	High-Bay Fixtures	100.0%	0.59	0.59	3,281
Interior Lighting	Linear Fluorescent	100.0%	3.05	3.05	16,941
Exterior Lighting	Screw-in	100.0%	0.23	0.23	1,255
Exterior Lighting	HID	100.0%	0.32	0.32	1,751
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11	634
Refrigeration	Walk-in Refrigerator	0.0%	0.86	-	-
Refrigeration	Reach-in Refrigerator	9.0%	0.23	0.02	113
Refrigeration	Glass Door Display	0.0%	0.38	-	-
Refrigeration	Open Display Case	0.0%	0.32	-	-
Refrigeration	Icemaker	5.1%	0.26	0.01	74
Refrigeration	Vending Machine	5.1%	0.20	0.01	57
Food Preparation	Oven	3.6%	0.37	0.01	76
Food Preparation	Fryer	3.6%	0.30	0.01	60
Food Preparation	Dishwasher	3.6%	0.82	0.03	166
Food Preparation	Hot Food Container	3.6%	0.10	0.00	20
Office Equipment	Desktop Computer	100.0%	1.49	1.49	8,300
Office Equipment	Laptop	100.0%	0.30	0.30	1,659
Office Equipment	Server	100.0%	0.54	0.54	3,029
Office Equipment	Monitor	100.0%	0.41	0.41	2,291
Office Equipment	Printer/Copier/Fax	100.0%	0.26	0.26	1,471
Office Equipment	POS Terminal	20.0%	0.15	0.03	169
Miscellaneous	Non-HVAC Motors	22.0%	0.25	0.05	305
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.07	1.07	5,929
<b>Total</b>				<b>17.10</b>	<b>95,045</b>



**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%	3.35	-
Cooling	Water-Cooled Chiller	0.0%	3.32	-
Cooling	RTU	97.3%	2.71	2.63
Cooling	PTAC	1.0%	3.51	0.04
Cooling	Evaporative AC	2.6%	1.69	0.04
Cooling	Air-Source Heat Pump	7.0%	3.35	0.23
Cooling	Geothermal Heat Pump	5.1%	1.65	0.08
Heating	Electric Furnace	14.8%	8.77	1.30
Heating	Electric Zonal Heating	0.3%	9.20	0.02
Heating	Air-Source Heat Pump	6.4%	6.96	0.45
Heating	Geothermal Heat Pump	4.7%	3.67	0.17
Ventilation	Ventilation	100.0%	0.88	0.88
Water Heating	Water Heating	45.8%	1.29	0.588
Interior Lighting	Screw-in	100.0%	0.60	0.60
Interior Lighting	High-Bay Fixtures	100.0%	0.63	0.63
Interior Lighting	Linear Fluorescent	100.0%	2.81	2.81
Exterior Lighting	Screw-in	100.0%	0.21	0.21
Exterior Lighting	HID	100.0%	0.33	0.33
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator	0.0%	0.86	-
Refrigeration	Reach-in Refrigerator	10.7%	0.23	0.02
Refrigeration	Glass Door Display	0.0%	0.38	-
Refrigeration	Open Display Case	0.0%	0.35	-
Refrigeration	Icemaker	6.1%	0.15	0.01
Refrigeration	Vending Machine	6.1%	0.19	0.01
Food Preparation	Oven	4.6%	0.34	0.02
Food Preparation	Fryer	4.6%	0.29	0.01
Food Preparation	Dishwasher	4.6%	0.50	0.02
Food Preparation	Hot Food Container	4.6%	0.04	0.00
Office Equipment	Desktop Computer	100.0%	1.21	1.21
Office Equipment	Laptop	100.0%	0.24	0.24
Office Equipment	Server	100.0%	0.50	0.50
Office Equipment	Monitor	100.0%	0.34	0.34
Office Equipment	Printer/Copier/Fax	100.0%	0.15	0.15
Office Equipment	POS Terminal	22.0%	0.14	0.03
Miscellaneous	Non-HVAC Motors	24.2%	0.25	0.06
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.07	1.07

**Table A-68 Idaho Large Retail Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	10.9%	3.21	0.35	210
Cooling	Water-Cooled Chiller	2.7%	3.27	0.09	53
Cooling	RTU	62.3%	3.57	2.22	1,331
Cooling	PTAC	1.0%	3.92	0.04	23
Cooling	Evaporative AC	2.2%	1.43	0.03	19
Cooling	Air-Source Heat Pump	2.0%	3.57	0.07	42
Cooling	Geothermal Heat Pump	1.6%	2.18	0.03	20
Heating	Electric Furnace	32.0%	7.02	2.25	1,346
Heating	Electric Zonal Heating	2.7%	7.37	0.20	121
Heating	Air-Source Heat Pump	2.0%	6.53	0.13	78
Heating	Geothermal Heat Pump	1.6%	4.69	0.07	44
Ventilation	Ventilation	100.0%	1.54	1.54	923
Water Heating	Water Heating	50.3%	1.25	0.63	376
Interior Lighting	Screw-in	100.0%	1.98	1.98	1,187
Interior Lighting	High-Bay Fixtures	100.0%	2.10	2.10	1,257
Interior Lighting	Linear Fluorescent	100.0%	5.34	5.34	3,196
Exterior Lighting	Screw-in	100.0%	0.28	0.28	166
Exterior Lighting	HID	100.0%	0.69	0.69	412
Exterior Lighting	Linear Fluorescent	100.0%	0.35	0.35	208
Refrigeration	Walk-in Refrigerator	2.0%	0.80	0.02	10
Refrigeration	Reach-in Refrigerator	14.0%	0.21	0.03	18
Refrigeration	Glass Door Display	81.7%	0.35	0.29	173
Refrigeration	Open Display Case	81.7%	0.29	0.24	143
Refrigeration	Icemaker	52.4%	0.48	0.25	150
Refrigeration	Vending Machine	52.4%	0.37	0.19	116
Food Preparation	Oven	48.9%	0.36	0.17	104
Food Preparation	Fryer	45.2%	0.28	0.13	76
Food Preparation	Dishwasher	39.6%	0.78	0.31	185
Food Preparation	Hot Food Container	39.6%	0.10	0.04	23
Office Equipment	Desktop Computer	100.0%	0.41	0.41	244
Office Equipment	Laptop	100.0%	0.08	0.08	49
Office Equipment	Server	82.0%	0.07	0.06	37
Office Equipment	Monitor	100.0%	0.11	0.11	67
Office Equipment	Printer/Copier/Fax	100.0%	0.07	0.07	43
Office Equipment	POS Terminal	100.0%	0.01	0.01	7
Miscellaneous	Non-HVAC Motors	40.2%	0.35	0.14	83
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.31	1.31	783
<b>Total</b>				<b>22.26</b>	<b>13,324</b>

**Table A-69 Idaho Large Retail New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	15.3%	2.75	0.42
Cooling	Water-Cooled Chiller	3.8%	2.75	0.10
Cooling	RTU	87.2%	2.69	2.35
Cooling	PTAC	1.4%	2.95	0.04
Cooling	Evaporative AC	3.1%	1.43	0.04
Cooling	Air-Source Heat Pump	2.8%	2.75	0.08
Cooling	Geothermal Heat Pump	2.2%	1.62	0.04
Heating	Electric Furnace	32.0%	7.02	2.25
Heating	Electric Zonal Heating	2.7%	7.37	0.20
Heating	Air-Source Heat Pump	2.6%	4.51	0.12
Heating	Geothermal Heat Pump	2.0%	1.87	0.04
Ventilation	Ventilation	100.0%	0.82	0.82
Water Heating	Water Heating	50.3%	1.24	0.625
Interior Lighting	Screw-in	100.0%	1.16	1.16
Interior Lighting	High-Bay Fixtures	100.0%	1.94	1.94
Interior Lighting	Linear Fluorescent	100.0%	4.79	4.79
Exterior Lighting	Screw-in	100.0%	0.15	0.15
Exterior Lighting	HID	100.0%	0.58	0.58
Exterior Lighting	Linear Fluorescent	100.0%	0.31	0.31
Refrigeration	Walk-in Refrigerator	3.0%	0.79	0.02
Refrigeration	Reach-in Refrigerator	21.0%	0.21	0.04
Refrigeration	Glass Door Display	100.0%	0.35	0.35
Refrigeration	Open Display Case	100.0%	0.32	0.32
Refrigeration	Icemaker	78.6%	0.27	0.21
Refrigeration	Vending Machine	78.6%	0.34	0.27
Food Preparation	Oven	73.4%	0.32	0.23
Food Preparation	Fryer	67.8%	0.28	0.19
Food Preparation	Dishwasher	59.4%	0.47	0.28
Food Preparation	Hot Food Container	59.4%	0.03	0.02
Office Equipment	Desktop Computer	100.0%	0.33	0.33
Office Equipment	Laptop	100.0%	0.07	0.07
Office Equipment	Server	98.4%	0.07	0.07
Office Equipment	Monitor	100.0%	0.09	0.09
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	48.2%	0.35	0.17
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.31	1.31

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%	3.35	-	-
Cooling	Water-Cooled Chiller	0.0%	3.42	-	-
Cooling	RTU	51.3%	3.73	1.91	6,699
Cooling	PTAC	2.9%	3.85	0.11	395
Cooling	Evaporative AC	18.6%	1.49	0.28	970
Cooling	Air-Source Heat Pump	4.9%	3.72	0.18	633
Cooling	Geothermal Heat Pump	3.6%	2.27	0.08	289
Heating	Electric Furnace	17.0%	6.38	1.08	3,795
Heating	Electric Zonal Heating	1.3%	6.70	0.09	301
Heating	Air-Source Heat Pump	4.9%	5.49	0.27	934
Heating	Geothermal Heat Pump	3.6%	3.50	0.13	446
Ventilation	Ventilation	100.0%	1.23	1.23	4,317
Water Heating	Water Heating	49.3%	0.93	0.46	1,599
Interior Lighting	Screw-in	100.0%	1.06	1.06	3,728
Interior Lighting	High-Bay Fixtures	100.0%	1.13	1.13	3,946
Interior Lighting	Linear Fluorescent	100.0%	2.87	2.87	10,035
Exterior Lighting	Screw-in	100.0%	0.18	0.18	627
Exterior Lighting	HID	100.0%	0.45	0.45	1,560
Exterior Lighting	Linear Fluorescent	100.0%	0.22	0.22	786
Refrigeration	Walk-in Refrigerator	0.0%	0.33	-	-
Refrigeration	Reach-in Refrigerator	10.5%	0.09	0.01	32
Refrigeration	Glass Door Display	1.8%	0.14	0.00	9
Refrigeration	Open Display Case	1.8%	0.12	0.00	7
Refrigeration	Icemaker	5.1%	0.20	0.01	35
Refrigeration	Vending Machine	5.1%	0.15	0.01	27
Food Preparation	Oven	3.6%	0.27	0.01	34
Food Preparation	Fryer	3.6%	0.21	0.01	27
Food Preparation	Dishwasher	3.6%	0.59	0.02	75
Food Preparation	Hot Food Container	3.6%	0.07	0.00	9
Office Equipment	Desktop Computer	100.0%	0.09	0.09	300
Office Equipment	Laptop	100.0%	0.02	0.02	60
Office Equipment	Server	100.0%	0.12	0.12	437
Office Equipment	Monitor	100.0%	0.02	0.02	83
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	42
Office Equipment	POS Terminal	100.0%	0.03	0.03	122
Miscellaneous	Non-HVAC Motors	22.0%	0.19	0.04	143
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.79	0.79	2,781
<b>Total</b>				<b>12.94</b>	<b>45,285</b>

**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%	2.88	-
Cooling	Water-Cooled Chiller	0.0%	2.87	-
Cooling	RTU	71.9%	2.84	2.04
Cooling	PTAC	4.1%	2.90	0.12
Cooling	Evaporative AC	26.0%	1.49	0.39
Cooling	Air-Source Heat Pump	6.8%	2.89	0.20
Cooling	Geothermal Heat Pump	5.1%	1.70	0.09
Heating	Electric Furnace	17.0%	6.38	1.08
Heating	Electric Zonal Heating	1.3%	6.70	0.09
Heating	Air-Source Heat Pump	6.3%	3.18	0.20
Heating	Geothermal Heat Pump	4.7%	1.40	0.07
Ventilation	Ventilation	100.0%	0.72	0.72
Water Heating	Water Heating	49.3%	0.89	0.437
Interior Lighting	Screw-in	100.0%	0.62	0.62
Interior Lighting	High-Bay Fixtures	100.0%	1.04	1.04
Interior Lighting	Linear Fluorescent	100.0%	2.57	2.57
Exterior Lighting	Screw-in	100.0%	0.09	0.09
Exterior Lighting	HID	100.0%	0.37	0.37
Exterior Lighting	Linear Fluorescent	100.0%	0.20	0.20
Refrigeration	Walk-in Refrigerator	0.0%	0.33	-
Refrigeration	Reach-in Refrigerator	15.8%	0.09	0.01
Refrigeration	Glass Door Display	2.6%	0.14	0.00
Refrigeration	Open Display Case	2.6%	0.13	0.00
Refrigeration	Icemaker	7.7%	0.11	0.01
Refrigeration	Vending Machine	7.7%	0.14	0.01
Food Preparation	Oven	5.5%	0.24	0.01
Food Preparation	Fryer	5.5%	0.21	0.01
Food Preparation	Dishwasher	5.5%	0.36	0.02
Food Preparation	Hot Food Container	5.5%	0.03	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Monitor	100.0%	0.02	0.02
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	26.4%	0.19	0.05
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.79	0.79

Table A-72 Idaho Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.3%	3.67	0.01	4
Cooling	Water-Cooled Chiller	0.0%	3.67	-	-
Cooling	RTU	77.3%	4.43	3.42	1,425
Cooling	PTAC	4.1%	4.87	0.20	83
Cooling	Evaporative AC	6.6%	1.77	0.12	49
Cooling	Air-Source Heat Pump	4.6%	4.43	0.21	86
Cooling	Geothermal Heat Pump	1.3%	2.70	0.04	15
Heating	Electric Furnace	0.1%	6.22	0.01	2
Heating	Electric Zonal Heating	5.0%	6.53	0.32	135
Heating	Air-Source Heat Pump	4.6%	5.00	0.23	96
Heating	Geothermal Heat Pump	1.3%	3.34	0.04	18
Ventilation	Ventilation	100.0%	2.54	2.54	1,055
Water Heating	Water Heating	35.2%	7.04	2.48	1,031
Interior Lighting	Screw-in	100.0%	2.84	2.84	1,182
Interior Lighting	High-Bay Fixtures	100.0%	0.54	0.54	223
Interior Lighting	Linear Fluorescent	100.0%	4.61	4.61	1,917
Exterior Lighting	Screw-in	100.0%	0.29	0.29	121
Exterior Lighting	HID	100.0%	2.08	2.08	863
Exterior Lighting	Linear Fluorescent	100.0%	0.60	0.60	249
Refrigeration	Walk-in Refrigerator	74.0%	7.98	5.91	2,457
Refrigeration	Reach-in Refrigerator	7.0%	4.21	0.29	123
Refrigeration	Glass Door Display	5.2%	3.55	0.18	77
Refrigeration	Open Display Case	5.2%	2.93	0.15	63
Refrigeration	Icemaker	97.3%	2.41	2.34	974
Refrigeration	Vending Machine	97.3%	1.86	1.81	752
Food Preparation	Oven	15.2%	11.35	1.73	718
Food Preparation	Fryer	8.9%	9.02	0.80	334
Food Preparation	Dishwasher	52.5%	12.46	6.54	2,721
Food Preparation	Hot Food Container	52.5%	1.53	0.80	334
Office Equipment	Desktop Computer	100.0%	0.29	0.29	120
Office Equipment	Laptop	100.0%	0.05	0.05	19
Office Equipment	Server	50.0%	0.42	0.21	88
Office Equipment	Monitor	100.0%	0.08	0.08	33
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	34
Office Equipment	POS Terminal	100.0%	0.12	0.12	49
Miscellaneous	Non-HVAC Motors	20.0%	0.68	0.14	56
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.71	2.71	1,129
<b>Total</b>				<b>44.80</b>	<b>18,635</b>

**Table A-73 Idaho Restaurant New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.4%	3.49	0.01
Cooling	Water-Cooled Chiller	0.0%	3.31	-
Cooling	RTU	92.7%	3.35	3.11
Cooling	PTAC	5.3%	3.42	0.18
Cooling	Evaporative AC	8.6%	1.77	0.15
Cooling	Air-Source Heat Pump	6.0%	3.42	0.21
Cooling	Geothermal Heat Pump	1.7%	2.05	0.04
Heating	Electric Furnace	0.1%	6.22	0.01
Heating	Electric Zonal Heating	5.0%	6.53	0.32
Heating	Air-Source Heat Pump	5.6%	4.29	0.24
Heating	Geothermal Heat Pump	1.6%	2.33	0.04
Ventilation	Ventilation	100.0%	1.81	1.81
Water Heating	Water Heating	37.0%	7.01	2.592
Interior Lighting	Screw-in	100.0%	1.89	1.89
Interior Lighting	High-Bay Fixtures	100.0%	0.61	0.61
Interior Lighting	Linear Fluorescent	100.0%	3.99	3.99
Exterior Lighting	Screw-in	100.0%	0.24	0.24
Exterior Lighting	HID	100.0%	1.84	1.84
Exterior Lighting	Linear Fluorescent	100.0%	0.52	0.52
Refrigeration	Walk-in Refrigerator	76.1%	7.96	6.05
Refrigeration	Reach-in Refrigerator	7.2%	4.21	0.30
Refrigeration	Glass Door Display	5.3%	3.55	0.19
Refrigeration	Open Display Case	5.3%	3.22	0.17
Refrigeration	Icemaker	100.0%	1.36	1.36
Refrigeration	Vending Machine	100.0%	1.68	1.68
Food Preparation	Oven	28.9%	10.24	2.96
Food Preparation	Fryer	16.9%	8.79	1.49
Food Preparation	Dishwasher	100.0%	7.52	7.52
Food Preparation	Hot Food Container	100.0%	0.55	0.55
Office Equipment	Desktop Computer	100.0%	0.23	0.23
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	55.0%	0.39	0.21
Office Equipment	Monitor	100.0%	0.07	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.11	0.11
Miscellaneous	Non-HVAC Motors	24.0%	0.68	0.16
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.71	2.71

Table A-74 Idaho Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	6.2%	3.61	0.23	124
Cooling	Water-Cooled Chiller	0.0%	3.68	-	-
Cooling	RTU	71.7%	4.01	2.88	1,588
Cooling	PTAC	0.0%	4.41	-	-
Cooling	Evaporative AC	10.0%	1.61	0.16	89
Cooling	Air-Source Heat Pump	3.7%	3.72	0.14	75
Cooling	Geothermal Heat Pump	0.0%	1.34	-	-
Heating	Electric Furnace	1.7%	4.97	0.08	47
Heating	Electric Zonal Heating	9.3%	5.22	0.48	267
Heating	Air-Source Heat Pump	3.7%	3.03	0.11	61
Heating	Geothermal Heat Pump	0.0%	2.05	-	-
Ventilation	Ventilation	100.0%	1.83	1.83	1,010
Water Heating	Water Heating	52.4%	1.92	1.01	556
Interior Lighting	Screw-in	100.0%	1.47	1.47	811
Interior Lighting	High-Bay Fixtures	100.0%	1.92	1.92	1,061
Interior Lighting	Linear Fluorescent	100.0%	5.89	5.89	3,248
Exterior Lighting	Screw-in	100.0%	0.06	0.06	35
Exterior Lighting	HID	100.0%	0.66	0.66	365
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28	154
Refrigeration	Walk-in Refrigerator	16.0%	8.29	1.33	732
Refrigeration	Reach-in Refrigerator	83.1%	0.63	0.52	286
Refrigeration	Glass Door Display	94.9%	10.52	9.99	5,509
Refrigeration	Open Display Case	94.9%	8.68	8.24	4,544
Refrigeration	Icemaker	98.9%	0.36	0.35	195
Refrigeration	Vending Machine	98.9%	0.55	0.55	301
Food Preparation	Oven	54.4%	0.66	0.36	199
Food Preparation	Fryer	61.0%	0.53	0.32	177
Food Preparation	Dishwasher	54.9%	1.46	0.80	440
Food Preparation	Hot Food Container	54.9%	0.18	0.10	54
Office Equipment	Desktop Computer	100.0%	0.11	0.11	63
Office Equipment	Laptop	64.0%	0.02	0.01	8
Office Equipment	Server	100.0%	0.08	0.08	46
Office Equipment	Monitor	100.0%	0.03	0.03	17
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	9
Office Equipment	POS Terminal	100.0%	0.06	0.06	32
Miscellaneous	Non-HVAC Motors	34.6%	0.53	0.18	102
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.24	2.24	1,238
<b>Total</b>				<b>42.50</b>	<b>23,445</b>



Table A-75 Idaho Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	7.2%	3.11	0.22
Cooling	Water-Cooled Chiller	0.0%	3.09	-
Cooling	RTU	82.5%	2.00	1.65
Cooling	PTAC	0.0%	3.10	-
Cooling	Evaporative AC	11.0%	1.61	0.18
Cooling	Air-Source Heat Pump	4.0%	1.78	0.07
Cooling	Geothermal Heat Pump	0.0%	0.27	-
Heating	Electric Furnace	1.7%	4.97	0.08
Heating	Electric Zonal Heating	9.3%	5.22	0.48
Heating	Air-Source Heat Pump	3.7%	2.22	0.08
Heating	Geothermal Heat Pump	0.0%	1.36	-
Ventilation	Ventilation	100.0%	1.29	1.29
Water Heating	Water Heating	52.4%	1.91	1.003
Interior Lighting	Screw-in	100.0%	1.27	1.27
Interior Lighting	High-Bay Fixtures	100.0%	1.79	1.79
Interior Lighting	Linear Fluorescent	100.0%	5.22	5.22
Exterior Lighting	Screw-in	100.0%	0.08	0.08
Exterior Lighting	HID	100.0%	0.60	0.60
Exterior Lighting	Linear Fluorescent	100.0%	0.25	0.25
Refrigeration	Walk-in Refrigerator	16.2%	8.27	1.34
Refrigeration	Reach-in Refrigerator	84.0%	0.63	0.53
Refrigeration	Glass Door Display	96.0%	10.52	10.10
Refrigeration	Open Display Case	96.0%	9.55	9.17
Refrigeration	Icemaker	100.0%	0.24	0.24
Refrigeration	Vending Machine	100.0%	0.54	0.54
Food Preparation	Oven	76.2%	0.60	0.46
Food Preparation	Fryer	85.4%	0.51	0.44
Food Preparation	Dishwasher	76.8%	0.88	0.67
Food Preparation	Hot Food Container	76.8%	0.06	0.05
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	70.4%	0.02	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	41.6%	0.53	0.22
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.24	2.24

Table A-76 Idaho Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.2%	6.57	1.13	671
Cooling	Water-Cooled Chiller	63.7%	7.49	4.77	2,833
Cooling	RTU	11.3%	6.33	0.71	425
Cooling	PTAC	0.4%	6.95	0.03	16
Cooling	Evaporative AC	5.0%	2.53	0.13	75
Cooling	Air-Source Heat Pump	0.6%	6.32	0.04	22
Cooling	Geothermal Heat Pump	0.9%	3.84	0.03	20
Heating	Electric Furnace	0.0%	18.91	0.01	4
Heating	Electric Zonal Heating	1.9%	19.85	0.37	222
Heating	Air-Source Heat Pump	0.6%	14.51	0.09	51
Heating	Geothermal Heat Pump	0.9%	10.19	0.09	54
Ventilation	Ventilation	100.0%	5.57	5.57	3,308
Water Heating	Water Heating	22.3%	5.56	1.24	737
Interior Lighting	Screw-in	100.0%	2.02	2.02	1,201
Interior Lighting	High-Bay Fixtures	100.0%	0.52	0.52	307
Interior Lighting	Linear Fluorescent	100.0%	4.84	4.84	2,874
Exterior Lighting	Screw-in	100.0%	0.02	0.02	13
Exterior Lighting	HID	100.0%	0.27	0.27	160
Exterior Lighting	Linear Fluorescent	100.0%	0.09	0.09	51
Refrigeration	Walk-in Refrigerator	33.0%	0.45	0.15	88
Refrigeration	Reach-in Refrigerator	50.0%	0.12	0.06	35
Refrigeration	Glass Door Display	90.4%	0.20	0.18	107
Refrigeration	Open Display Case	90.4%	0.16	0.15	88
Refrigeration	Icemaker	90.4%	0.27	0.24	145
Refrigeration	Vending Machine	90.4%	0.21	0.19	112
Food Preparation	Oven	69.7%	1.13	0.79	470
Food Preparation	Fryer	80.7%	0.90	0.73	432
Food Preparation	Dishwasher	53.5%	2.49	1.33	791
Food Preparation	Hot Food Container	53.5%	0.31	0.16	97
Office Equipment	Desktop Computer	100.0%	0.60	0.60	357
Office Equipment	Laptop	100.0%	0.05	0.05	29
Office Equipment	Server	100.0%	0.09	0.09	52
Office Equipment	Monitor	100.0%	0.17	0.17	99
Office Equipment	Printer/Copier/Fax	100.0%	0.09	0.09	51
Office Equipment	POS Terminal	100.0%	0.06	0.06	36
Miscellaneous	Non-HVAC Motors	74.1%	0.41	0.31	181
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	4.41	4.41	2,621
<b>Total</b>				<b>31.70</b>	<b>18,837</b>

**Table A-77 Idaho Health New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	18.9%	4.41	0.83
Cooling	Water-Cooled Chiller	70.0%	3.66	2.56
Cooling	RTU	12.4%	5.22	0.65
Cooling	PTAC	0.4%	5.25	0.02
Cooling	Evaporative AC	5.5%	2.53	0.14
Cooling	Air-Source Heat Pump	0.7%	6.46	0.04
Cooling	Geothermal Heat Pump	1.0%	3.19	0.03
Heating	Electric Furnace	0.0%	18.91	0.01
Heating	Electric Zonal Heating	1.9%	19.85	0.37
Heating	Air-Source Heat Pump	0.6%	7.57	0.04
Heating	Geothermal Heat Pump	0.9%	3.72	0.03
Ventilation	Ventilation	100.0%	2.45	2.45
Water Heating	Water Heating	22.3%	5.53	1.234
Interior Lighting	Screw-in	100.0%	1.55	1.55
Interior Lighting	High-Bay Fixtures	100.0%	0.57	0.57
Interior Lighting	Linear Fluorescent	100.0%	4.46	4.46
Exterior Lighting	Screw-in	100.0%	0.01	0.01
Exterior Lighting	HID	100.0%	0.23	0.23
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08
Refrigeration	Walk-in Refrigerator	36.3%	0.45	0.16
Refrigeration	Reach-in Refrigerator	55.0%	0.12	0.07
Refrigeration	Glass Door Display	99.4%	0.20	0.20
Refrigeration	Open Display Case	99.4%	0.18	0.18
Refrigeration	Icemaker	99.4%	0.15	0.15
Refrigeration	Vending Machine	99.4%	0.21	0.21
Food Preparation	Oven	97.6%	1.02	1.00
Food Preparation	Fryer	100.0%	0.88	0.88
Food Preparation	Dishwasher	74.9%	1.50	1.13
Food Preparation	Hot Food Container	74.9%	0.11	0.08
Office Equipment	Desktop Computer	100.0%	0.49	0.49
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.14	0.14
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	88.9%	0.41	0.37
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	4.41	4.41

Table A-78 Idaho College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	46.7%	4.12	1.92	7,907
Cooling	Water-Cooled Chiller	12.4%	5.34	0.66	2,731
Cooling	RTU	27.4%	2.59	0.71	2,915
Cooling	PTAC	0.0%	2.84	-	-
Cooling	Evaporative AC	5.0%	1.04	0.05	213
Cooling	Air-Source Heat Pump	5.2%	2.59	0.13	553
Cooling	Geothermal Heat Pump	0.0%	1.57	-	-
Heating	Electric Furnace	15.2%	11.40	1.73	7,128
Heating	Electric Zonal Heating	0.0%	11.97	-	-
Heating	Air-Source Heat Pump	5.2%	8.79	0.46	1,877
Heating	Geothermal Heat Pump	0.0%	6.50	-	-
Ventilation	Ventilation	100.0%	1.92	1.92	7,899
Water Heating	Water Heating	26.3%	2.62	0.69	2,836
Interior Lighting	Screw-in	100.0%	0.40	0.40	1,631
Interior Lighting	High-Bay Fixtures	100.0%	0.34	0.34	1,405
Interior Lighting	Linear Fluorescent	100.0%	2.16	2.16	8,878
Exterior Lighting	Screw-in	100.0%	0.00	0.00	10
Exterior Lighting	HID	100.0%	0.09	0.09	374
Exterior Lighting	Linear Fluorescent	100.0%	0.32	0.32	1,317
Refrigeration	Walk-in Refrigerator	7.7%	0.27	0.02	86
Refrigeration	Reach-in Refrigerator	13.4%	0.14	0.02	79
Refrigeration	Glass Door Display	26.6%	0.12	0.03	132
Refrigeration	Open Display Case	26.6%	0.10	0.03	109
Refrigeration	Icemaker	26.6%	0.16	0.04	179
Refrigeration	Vending Machine	26.6%	0.13	0.03	138
Food Preparation	Oven	21.0%	0.43	0.09	374
Food Preparation	Fryer	21.0%	0.34	0.07	297
Food Preparation	Dishwasher	21.0%	0.95	0.20	821
Food Preparation	Hot Food Container	21.0%	0.12	0.02	101
Office Equipment	Desktop Computer	100.0%	0.53	0.53	2,181
Office Equipment	Laptop	100.0%	0.03	0.03	131
Office Equipment	Server	100.0%	0.08	0.08	318
Office Equipment	Monitor	100.0%	0.15	0.15	602
Office Equipment	Printer/Copier/Fax	100.0%	0.09	0.09	387
Office Equipment	POS Terminal	100.0%	0.03	0.03	111
Miscellaneous	Non-HVAC Motors	88.8%	0.14	0.12	494
Miscellaneous	Pool Pump	90.3%	0.02	0.02	64
Miscellaneous	Pool Heater	36.2%	0.03	0.01	49
Miscellaneous	Other Miscellaneous	100.0%	0.79	0.79	3,231
<b>Total</b>				<b>14.00</b>	<b>57,556</b>

Table A-79 Idaho College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	57.6%	2.34	1.35
Cooling	Water-Cooled Chiller	15.3%	2.44	0.37
Cooling	RTU	33.8%	1.85	0.62
Cooling	PTAC	0.0%	2.23	-
Cooling	Evaporative AC	5.5%	1.04	0.06
Cooling	Air-Source Heat Pump	6.4%	1.89	0.12
Cooling	Geothermal Heat Pump	0.0%	1.13	-
Heating	Electric Furnace	15.2%	11.40	1.73
Heating	Electric Zonal Heating	0.0%	11.97	-
Heating	Air-Source Heat Pump	5.9%	7.01	0.41
Heating	Geothermal Heat Pump	0.0%	4.14	-
Ventilation	Ventilation	100.0%	1.00	1.00
Water Heating	Water Heating	26.3%	2.61	0.687
Interior Lighting	Screw-in	100.0%	0.23	0.23
Interior Lighting	High-Bay Fixtures	100.0%	0.36	0.36
Interior Lighting	Linear Fluorescent	100.0%	1.94	1.94
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.09	0.09
Exterior Lighting	Linear Fluorescent	100.0%	0.29	0.29
Refrigeration	Walk-in Refrigerator	10.8%	0.27	0.03
Refrigeration	Reach-in Refrigerator	18.7%	0.14	0.03
Refrigeration	Glass Door Display	37.2%	0.12	0.04
Refrigeration	Open Display Case	37.2%	0.11	0.04
Refrigeration	Icemaker	37.2%	0.09	0.03
Refrigeration	Vending Machine	37.2%	0.12	0.05
Food Preparation	Oven	29.5%	0.39	0.11
Food Preparation	Fryer	29.5%	0.33	0.10
Food Preparation	Dishwasher	29.5%	0.57	0.17
Food Preparation	Hot Food Container	29.5%	0.04	0.01
Office Equipment	Desktop Computer	100.0%	0.43	0.43
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.07	0.07
Office Equipment	Monitor	100.0%	0.12	0.12
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.14	0.14
Miscellaneous	Pool Pump	100.0%	0.02	0.02
Miscellaneous	Pool Heater	43.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.79	0.79

**Table A-80 Idaho School Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	38.8%	1.88	0.73	1,703
Cooling	Water-Cooled Chiller	10.4%	2.44	0.25	595
Cooling	RTU	28.1%	1.18	0.33	776
Cooling	PTAC	0.0%	1.30	-	-
Cooling	Evaporative AC	5.0%	0.47	0.02	55
Cooling	Air-Source Heat Pump	4.4%	1.18	0.05	121
Cooling	Geothermal Heat Pump	3.3%	0.72	0.02	56
Heating	Electric Furnace	13.0%	6.01	0.78	1,826
Heating	Electric Zonal Heating	0.0%	6.31	-	-
Heating	Air-Source Heat Pump	4.4%	4.63	0.20	477
Heating	Geothermal Heat Pump	3.3%	3.42	0.11	266
Ventilation	Ventilation	100.0%	0.85	0.85	1,981
Water Heating	Water Heating	38.1%	1.18	0.45	1,051
Interior Lighting	Screw-in	100.0%	0.37	0.37	867
Interior Lighting	High-Bay Fixtures	100.0%	0.33	0.33	773
Interior Lighting	Linear Fluorescent	100.0%	2.44	2.44	5,716
Exterior Lighting	Screw-in	100.0%	0.00	0.00	8
Exterior Lighting	HID	100.0%	0.14	0.14	321
Exterior Lighting	Linear Fluorescent	100.0%	0.77	0.77	1,807
Refrigeration	Walk-in Refrigerator	19.0%	0.26	0.05	117
Refrigeration	Reach-in Refrigerator	33.0%	0.14	0.05	107
Refrigeration	Glass Door Display	65.7%	0.12	0.08	180
Refrigeration	Open Display Case	65.7%	0.10	0.06	148
Refrigeration	Icemaker	65.7%	0.16	0.10	244
Refrigeration	Vending Machine	65.7%	0.12	0.08	189
Food Preparation	Oven	64.8%	0.19	0.12	287
Food Preparation	Fryer	58.6%	0.15	0.09	207
Food Preparation	Dishwasher	52.3%	0.42	0.22	509
Food Preparation	Hot Food Container	52.3%	0.05	0.03	62
Office Equipment	Desktop Computer	100.0%	0.31	0.31	714
Office Equipment	Laptop	100.0%	0.02	0.02	57
Office Equipment	Server	100.0%	0.09	0.09	208
Office Equipment	Monitor	100.0%	0.08	0.08	197
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	101
Office Equipment	POS Terminal	36.0%	0.01	0.00	10
Miscellaneous	Non-HVAC Motors	43.7%	0.09	0.04	96
Miscellaneous	Pool Pump	6.0%	0.02	0.00	3
Miscellaneous	Pool Heater	1.0%	0.02	0.00	1
Miscellaneous	Other Miscellaneous	100.0%	0.57	0.57	1,339
<b>Total</b>				<b>9.90</b>	<b>23,179</b>

**Table A-81 Idaho School New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	44.6%	1.06	0.47
Cooling	Water-Cooled Chiller	12.0%	1.11	0.13
Cooling	RTU	33.7%	0.84	0.28
Cooling	PTAC	0.0%	1.02	-
Cooling	Evaporative AC	5.5%	0.47	0.03
Cooling	Air-Source Heat Pump	5.7%	0.86	0.05
Cooling	Geothermal Heat Pump	4.3%	0.51	0.02
Heating	Electric Furnace	13.0%	6.01	0.78
Heating	Electric Zonal Heating	0.0%	6.31	-
Heating	Air-Source Heat Pump	5.3%	3.69	0.19
Heating	Geothermal Heat Pump	4.0%	2.18	0.09
Ventilation	Ventilation	100.0%	0.44	0.44
Water Heating	Water Heating	38.1%	1.17	0.447
Interior Lighting	Screw-in	100.0%	0.18	0.18
Interior Lighting	High-Bay Fixtures	100.0%	0.35	0.35
Interior Lighting	Linear Fluorescent	100.0%	2.21	2.21
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.14	0.14
Exterior Lighting	Linear Fluorescent	100.0%	0.70	0.70
Refrigeration	Walk-in Refrigerator	26.6%	0.26	0.07
Refrigeration	Reach-in Refrigerator	46.2%	0.14	0.06
Refrigeration	Glass Door Display	92.0%	0.12	0.11
Refrigeration	Open Display Case	92.0%	0.11	0.10
Refrigeration	Icemaker	92.0%	0.09	0.08
Refrigeration	Vending Machine	92.0%	0.12	0.11
Food Preparation	Oven	90.7%	0.17	0.15
Food Preparation	Fryer	82.0%	0.15	0.12
Food Preparation	Dishwasher	73.3%	0.25	0.18
Food Preparation	Hot Food Container	73.3%	0.02	0.01
Office Equipment	Desktop Computer	100.0%	0.25	0.25
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.07	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	48.0%	0.09	0.05
Miscellaneous	Pool Pump	7.2%	0.02	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.57	0.57

**Table A-82 Idaho Lodging Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.0%	0.95	0.05	14
Cooling	Water-Cooled Chiller	20.0%	1.20	0.24	70
Cooling	RTU	19.1%	2.91	0.56	163
Cooling	PTAC	30.9%	3.19	0.99	290
Cooling	Evaporative AC	0.0%	1.16	-	-
Cooling	Air-Source Heat Pump	9.8%	2.91	0.28	84
Cooling	Geothermal Heat Pump	2.8%	2.74	0.08	23
Heating	Electric Furnace	36.7%	4.55	1.67	491
Heating	Electric Zonal Heating	0.8%	4.78	0.04	11
Heating	Air-Source Heat Pump	9.8%	4.38	0.43	126
Heating	Geothermal Heat Pump	2.8%	2.95	0.08	24
Ventilation	Ventilation	100.0%	1.54	1.54	453
Water Heating	Water Heating	50.0%	5.22	2.61	768
Interior Lighting	Screw-in	100.0%	3.98	3.98	1,170
Interior Lighting	High-Bay Fixtures	100.0%	0.29	0.29	85
Interior Lighting	Linear Fluorescent	100.0%	1.11	1.11	327
Exterior Lighting	Screw-in	100.0%	0.20	0.20	59
Exterior Lighting	HID	100.0%	0.78	0.78	229
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05	16
Refrigeration	Walk-in Refrigerator	3.0%	0.92	0.03	8
Refrigeration	Reach-in Refrigerator	19.0%	0.24	0.05	14
Refrigeration	Glass Door Display	58.9%	0.41	0.24	71
Refrigeration	Open Display Case	58.9%	0.34	0.20	58
Refrigeration	Icemaker	58.9%	0.28	0.16	48
Refrigeration	Vending Machine	58.9%	0.43	0.25	74
Food Preparation	Oven	13.8%	0.63	0.09	25
Food Preparation	Fryer	21.0%	0.50	0.10	31
Food Preparation	Dishwasher	30.0%	1.38	0.41	122
Food Preparation	Hot Food Container	30.0%	0.17	0.05	15
Office Equipment	Desktop Computer	100.0%	0.12	0.12	34
Office Equipment	Laptop	100.0%	0.02	0.02	7
Office Equipment	Server	100.0%	0.09	0.09	25
Office Equipment	Monitor	100.0%	0.03	0.03	9
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	5
Office Equipment	POS Terminal	58.0%	0.02	0.01	4
Miscellaneous	Non-HVAC Motors	91.3%	0.21	0.19	55
Miscellaneous	Pool Pump	76.0%	0.01	0.01	3
Miscellaneous	Pool Heater	27.0%	0.03	0.01	2
Miscellaneous	Other Miscellaneous	100.0%	0.96	0.96	282
<b>Total</b>				<b>18.00</b>	<b>5,294</b>



**Table A-83 Idaho Lodging New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	6.5%	0.80	0.05
Cooling	Water-Cooled Chiller	25.9%	1.03	0.27
Cooling	RTU	24.8%	2.87	0.71
Cooling	PTAC	40.1%	2.41	0.97
Cooling	Evaporative AC	0.0%	1.16	-
Cooling	Air-Source Heat Pump	12.3%	2.97	0.37
Cooling	Geothermal Heat Pump	3.5%	2.27	0.08
Heating	Electric Furnace	36.7%	4.55	1.67
Heating	Electric Zonal Heating	0.8%	4.78	0.04
Heating	Air-Source Heat Pump	11.3%	2.28	0.26
Heating	Geothermal Heat Pump	3.2%	1.08	0.03
Ventilation	Ventilation	100.0%	1.06	1.06
Water Heating	Water Heating	50.0%	5.20	2.599
Interior Lighting	Screw-in	100.0%	2.69	2.69
Interior Lighting	High-Bay Fixtures	100.0%	0.29	0.29
Interior Lighting	Linear Fluorescent	100.0%	0.99	0.99
Exterior Lighting	Screw-in	100.0%	0.16	0.16
Exterior Lighting	HID	100.0%	0.69	0.69
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05
Refrigeration	Walk-in Refrigerator	3.9%	0.92	0.04
Refrigeration	Reach-in Refrigerator	24.7%	0.24	0.06
Refrigeration	Glass Door Display	76.6%	0.41	0.31
Refrigeration	Open Display Case	76.6%	0.37	0.28
Refrigeration	Icemaker	76.6%	0.16	0.12
Refrigeration	Vending Machine	76.6%	0.41	0.32
Food Preparation	Oven	17.9%	0.57	0.10
Food Preparation	Fryer	27.3%	0.49	0.13
Food Preparation	Dishwasher	39.0%	0.83	0.32
Food Preparation	Hot Food Container	39.0%	0.06	0.02
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	63.8%	0.02	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.21	0.21
Miscellaneous	Pool Pump	91.2%	0.01	0.01
Miscellaneous	Pool Heater	32.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.96	0.96

**Table A-84 Idaho Warehouse Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	3.1%	1.88	0.06	178
Cooling	Water-Cooled Chiller	0.3%	1.90	0.01	20
Cooling	RTU	9.0%	2.01	0.18	552
Cooling	PTAC	1.5%	2.21	0.03	99
Cooling	Evaporative AC	0.1%	0.81	0.00	4
Cooling	Air-Source Heat Pump	2.3%	2.01	0.05	142
Cooling	Geothermal Heat Pump	0.0%	1.23	-	-
Heating	Electric Furnace	14.4%	8.53	1.23	3,730
Heating	Electric Zonal Heating	2.7%	8.96	0.24	724
Heating	Air-Source Heat Pump	2.3%	8.16	0.19	574
Heating	Geothermal Heat Pump	0.0%	6.72	-	-
Ventilation	Ventilation	100.0%	0.30	0.30	904
Water Heating	Water Heating	52.9%	0.30	0.16	486
Interior Lighting	Screw-in	100.0%	0.25	0.25	757
Interior Lighting	High-Bay Fixtures	100.0%	1.22	1.22	3,710
Interior Lighting	Linear Fluorescent	100.0%	0.94	0.94	2,859
Exterior Lighting	Screw-in	100.0%	0.17	0.17	520
Exterior Lighting	HID	100.0%	0.16	0.16	480
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	369
Refrigeration	Walk-in Refrigerator	1.1%	0.87	0.01	29
Refrigeration	Reach-in Refrigerator	2.0%	0.23	0.00	14
Refrigeration	Glass Door Display	10.1%	0.39	0.04	118
Refrigeration	Open Display Case	10.1%	0.32	0.03	98
Refrigeration	Icemaker	10.1%	0.26	0.03	80
Refrigeration	Vending Machine	10.1%	0.20	0.02	62
Food Preparation	Oven	2.3%	0.06	0.00	4
Food Preparation	Fryer	2.3%	0.05	0.00	3
Food Preparation	Dishwasher	2.3%	0.13	0.00	9
Food Preparation	Hot Food Container	2.3%	0.02	0.00	1
Office Equipment	Desktop Computer	100.0%	0.09	0.09	261
Office Equipment	Laptop	100.0%	0.01	0.01	42
Office Equipment	Server	89.0%	0.13	0.11	339
Office Equipment	Monitor	100.0%	0.02	0.02	72
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	37
Office Equipment	POS Terminal	77.0%	0.03	0.03	82
Miscellaneous	Non-HVAC Motors	49.9%	0.11	0.06	171
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.45	0.45	1,370
<b>Total</b>				<b>6.23</b>	<b>18,899</b>

**Table A-85 Idaho Warehouse New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	3.4%	1.61	0.06
Cooling	Water-Cooled Chiller	0.4%	1.59	0.01
Cooling	RTU	9.9%	1.52	0.15
Cooling	PTAC	1.6%	1.67	0.03
Cooling	Evaporative AC	0.2%	0.81	0.00
Cooling	Air-Source Heat Pump	2.6%	1.88	0.05
Cooling	Geothermal Heat Pump	0.0%	0.71	-
Heating	Electric Furnace	14.4%	8.53	1.23
Heating	Electric Zonal Heating	2.7%	8.96	0.24
Heating	Air-Source Heat Pump	2.3%	5.77	0.13
Heating	Geothermal Heat Pump	0.0%	3.63	-
Ventilation	Ventilation	100.0%	0.15	0.15
Water Heating	Water Heating	52.9%	0.30	0.159
Interior Lighting	Screw-in	100.0%	0.17	0.17
Interior Lighting	High-Bay Fixtures	100.0%	1.14	1.14
Interior Lighting	Linear Fluorescent	100.0%	0.84	0.84
Exterior Lighting	Screw-in	100.0%	0.14	0.14
Exterior Lighting	HID	100.0%	0.13	0.13
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator	1.3%	0.87	0.01
Refrigeration	Reach-in Refrigerator	2.4%	0.23	0.01
Refrigeration	Glass Door Display	12.1%	0.39	0.05
Refrigeration	Open Display Case	12.1%	0.35	0.04
Refrigeration	Icemaker	12.1%	0.17	0.02
Refrigeration	Vending Machine	12.1%	0.20	0.02
Food Preparation	Oven	2.7%	0.05	0.00
Food Preparation	Fryer	2.5%	0.05	0.00
Food Preparation	Dishwasher	2.7%	0.08	0.00
Food Preparation	Hot Food Container	2.5%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.12	0.12
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	84.7%	0.03	0.03
Miscellaneous	Non-HVAC Motors	59.8%	0.11	0.07
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.45	0.45

**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	13.0%	1.40	0.18	174
Cooling	Water-Cooled Chiller	1.4%	1.41	0.02	20
Cooling	RTU	17.0%	1.50	0.26	246
Cooling	PTAC	1.0%	1.65	0.02	16
Cooling	Evaporative AC	0.1%	0.60	0.00	1
Cooling	Air-Source Heat Pump	1.6%	1.50	0.02	23
Cooling	Geothermal Heat Pump	0.0%	0.91	-	-
Heating	Electric Furnace	10.8%	6.62	0.71	686
Heating	Electric Zonal Heating	2.0%	6.95	0.14	133
Heating	Air-Source Heat Pump	1.6%	6.33	0.10	98
Heating	Geothermal Heat Pump	0.0%	5.21	-	-
Ventilation	Ventilation	100.0%	0.81	0.81	779
Water Heating	Water Heating	52.9%	0.46	0.25	236
Interior Lighting	Screw-in	100.0%	0.24	0.24	231
Interior Lighting	High-Bay Fixtures	100.0%	1.18	1.18	1,134
Interior Lighting	Linear Fluorescent	100.0%	0.91	0.91	874
Exterior Lighting	Screw-in	100.0%	0.17	0.17	159
Exterior Lighting	HID	100.0%	0.15	0.15	147
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	113
Refrigeration	Walk-in Refrigerator	91.7%	17.56	16.11	15,472
Refrigeration	Reach-in Refrigerator	2.0%	0.93	0.02	18
Refrigeration	Glass Door Display	10.1%	1.56	0.16	151
Refrigeration	Open Display Case	10.1%	1.29	0.13	125
Refrigeration	Icemaker	91.7%	1.06	0.97	933
Refrigeration	Vending Machine	91.7%	0.82	0.75	721
Food Preparation	Oven	40.8%	0.09	0.04	36
Food Preparation	Fryer	40.8%	0.07	0.03	28
Food Preparation	Dishwasher	40.8%	0.20	0.08	79
Food Preparation	Hot Food Container	40.8%	0.02	0.01	10
Office Equipment	Desktop Computer	100.0%	0.06	0.06	59
Office Equipment	Laptop	100.0%	0.01	0.01	9
Office Equipment	Server	89.0%	0.09	0.08	76
Office Equipment	Monitor	100.0%	0.02	0.02	16
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	8
Office Equipment	POS Terminal	77.0%	0.02	0.02	18
Miscellaneous	Non-HVAC Motors	79.5%	0.41	0.33	315
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.72	1.72	1,650
<b>Total</b>				<b>25.81</b>	<b>24,793</b>

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

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.3%	1.20	0.17
Cooling	Water-Cooled Chiller	1.6%	1.19	0.02
Cooling	RTU	18.7%	1.13	0.21
Cooling	PTAC	1.1%	1.25	0.01
Cooling	Evaporative AC	0.1%	0.60	0.00
Cooling	Air-Source Heat Pump	1.8%	1.40	0.02
Cooling	Geothermal Heat Pump	0.0%	0.53	-
Heating	Electric Furnace	10.8%	6.62	0.71
Heating	Electric Zonal Heating	2.0%	6.95	0.14
Heating	Air-Source Heat Pump	1.6%	4.47	0.07
Heating	Geothermal Heat Pump	0.0%	2.81	-
Ventilation	Ventilation	100.0%	0.41	0.41
Water Heating	Water Heating	52.9%	0.46	0.244
Interior Lighting	Screw-in	100.0%	0.14	0.14
Interior Lighting	High-Bay Fixtures	100.0%	1.20	1.20
Interior Lighting	Linear Fluorescent	100.0%	0.81	0.81
Exterior Lighting	Screw-in	100.0%	0.13	0.13
Exterior Lighting	HID	100.0%	0.16	0.16
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	100.0%	17.52	17.52
Refrigeration	Reach-in Refrigerator	2.4%	0.93	0.02
Refrigeration	Glass Door Display	12.1%	1.56	0.19
Refrigeration	Open Display Case	12.1%	1.42	0.17
Refrigeration	Icemaker	100.0%	0.70	0.70
Refrigeration	Vending Machine	100.0%	0.79	0.79
Food Preparation	Oven	49.0%	0.08	0.04
Food Preparation	Fryer	44.9%	0.07	0.03
Food Preparation	Dishwasher	49.0%	0.12	0.06
Food Preparation	Hot Food Container	44.9%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.05	0.05
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Printer/Copier/Fax	100.0%	0.00	0.00
Office Equipment	POS Terminal	84.7%	0.02	0.02
Miscellaneous	Non-HVAC Motors	95.4%	0.41	0.39
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.72	1.72

**Table A-88 Idaho Miscellaneous Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	4.6%	2.46	0.11	476
Cooling	Water-Cooled Chiller	18.5%	2.50	0.46	1,937
Cooling	RTU	40.3%	2.73	1.10	4,612
Cooling	PTAC	3.8%	3.00	0.11	481
Cooling	Evaporative AC	1.7%	1.09	0.02	75
Cooling	Air-Source Heat Pump	4.8%	2.73	0.13	552
Cooling	Geothermal Heat Pump	1.3%	1.66	0.02	89
Heating	Electric Furnace	9.5%	7.29	0.69	2,912
Heating	Electric Zonal Heating	8.2%	7.66	0.63	2,626
Heating	Air-Source Heat Pump	4.8%	6.79	0.33	1,373
Heating	Geothermal Heat Pump	1.3%	4.87	0.06	260
Ventilation	Ventilation	100.0%	1.18	1.18	4,965
Water Heating	Water Heating	36.5%	2.25	0.82	3,444
Interior Lighting	Screw-in	100.0%	1.15	1.15	4,805
Interior Lighting	High-Bay Fixtures	100.0%	0.51	0.51	2,148
Interior Lighting	Linear Fluorescent	100.0%	2.80	2.80	11,724
Exterior Lighting	Screw-in	100.0%	0.55	0.55	2,324
Exterior Lighting	HID	100.0%	1.17	1.17	4,885
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08	351
Refrigeration	Walk-in Refrigerator	6.7%	1.10	0.07	309
Refrigeration	Reach-in Refrigerator	16.7%	0.29	0.05	204
Refrigeration	Glass Door Display	1.7%	0.49	0.01	34
Refrigeration	Open Display Case	1.7%	0.40	0.01	28
Refrigeration	Icemaker	21.6%	0.33	0.07	301
Refrigeration	Vending Machine	21.6%	0.51	0.11	466
Food Preparation	Oven	58.9%	0.18	0.11	441
Food Preparation	Fryer	29.9%	0.14	0.04	178
Food Preparation	Dishwasher	15.4%	0.39	0.06	253
Food Preparation	Hot Food Container	15.4%	0.05	0.01	31
Office Equipment	Desktop Computer	100.0%	0.28	0.28	1,165
Office Equipment	Laptop	100.0%	0.06	0.06	233
Office Equipment	Server	66.0%	0.20	0.13	561
Office Equipment	Monitor	100.0%	0.08	0.08	322
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	165
Office Equipment	POS Terminal	28.0%	0.06	0.02	66
Miscellaneous	Non-HVAC Motors	59.9%	0.18	0.11	462
Miscellaneous	Pool Pump	4.0%	0.01	0.00	2
Miscellaneous	Pool Heater	1.0%	0.02	0.00	1
Miscellaneous	Other Miscellaneous	100.0%	0.82	0.82	3,431
<b>Total</b>				<b>14.00</b>	<b>58,690</b>

**Table A-89 Idaho Miscellaneous New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	6.7%	1.99	0.13
Cooling	Water-Cooled Chiller	26.9%	2.10	0.57
Cooling	RTU	58.8%	2.08	1.22
Cooling	PTAC	5.6%	2.26	0.13
Cooling	Evaporative AC	2.4%	1.09	0.03
Cooling	Air-Source Heat Pump	7.0%	2.57	0.18
Cooling	Geothermal Heat Pump	1.9%	1.27	0.02
Heating	Electric Furnace	9.5%	7.29	0.69
Heating	Electric Zonal Heating	8.2%	7.66	0.63
Heating	Air-Source Heat Pump	6.6%	4.11	0.27
Heating	Geothermal Heat Pump	1.7%	1.98	0.03
Ventilation	Ventilation	100.0%	0.66	0.66
Water Heating	Water Heating	36.5%	2.24	0.818
Interior Lighting	Screw-in	100.0%	0.86	0.86
Interior Lighting	High-Bay Fixtures	100.0%	0.52	0.52
Interior Lighting	Linear Fluorescent	100.0%	2.53	2.53
Exterior Lighting	Screw-in	100.0%	0.28	0.28
Exterior Lighting	HID	100.0%	0.98	0.98
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08
Refrigeration	Walk-in Refrigerator	9.3%	1.10	0.10
Refrigeration	Reach-in Refrigerator	23.3%	0.29	0.07
Refrigeration	Glass Door Display	2.3%	0.49	0.01
Refrigeration	Open Display Case	2.3%	0.45	0.01
Refrigeration	Icemaker	30.2%	0.22	0.07
Refrigeration	Vending Machine	30.2%	0.50	0.15
Food Preparation	Oven	82.5%	0.16	0.13
Food Preparation	Fryer	41.9%	0.14	0.06
Food Preparation	Dishwasher	21.6%	0.24	0.05
Food Preparation	Hot Food Container	21.6%	0.02	0.00
Office Equipment	Desktop Computer	100.0%	0.23	0.23
Office Equipment	Laptop	100.0%	0.05	0.05
Office Equipment	Server	82.5%	0.19	0.15
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	33.6%	0.05	0.02
Miscellaneous	Non-HVAC Motors	71.9%	0.18	0.13
Miscellaneous	Pool Pump	4.6%	0.01	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.82	0.82

**Table A-90 Utah Large Office Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.4%	5.41	0.94	68,802
Cooling	Water-Cooled Chiller	17.4%	5.26	0.92	66,939
Cooling	RTU	49.0%	5.83	2.86	208,637
Cooling	PTAC	0.5%	6.55	0.04	2,583
Cooling	Evaporative AC	0.0%	2.33	-	-
Cooling	Air-Source Heat Pump	3.1%	5.83	0.18	13,280
Cooling	Geothermal Heat Pump	2.1%	3.55	0.08	5,521
Heating	Electric Furnace	27.7%	4.30	1.19	86,846
Heating	Electric Zonal Heating	1.0%	4.52	0.05	3,364
Heating	Air-Source Heat Pump	3.1%	3.95	0.12	8,998
Heating	Geothermal Heat Pump	2.1%	3.43	0.07	5,333
Ventilation	Ventilation	100.0%	2.96	2.96	215,939
Water Heating	Water Heating	32.4%	0.98	0.32	23,249
Interior Lighting	Screw-in	100.0%	0.86	0.86	62,633
Interior Lighting	High-Bay Fixtures	100.0%	0.40	0.40	29,300
Interior Lighting	Linear Fluorescent	100.0%	2.76	2.76	201,502
Exterior Lighting	Screw-in	100.0%	0.09	0.09	6,465
Exterior Lighting	HID	100.0%	0.24	0.24	17,447
Exterior Lighting	Linear Fluorescent	100.0%	0.15	0.15	10,723
Refrigeration	Walk-in Refrigerator	2.0%	0.22	0.00	315
Refrigeration	Reach-in Refrigerator	14.0%	0.06	0.01	582
Refrigeration	Glass Door Display	77.4%	0.10	0.07	5,417
Refrigeration	Open Display Case	77.4%	0.08	0.06	4,468
Refrigeration	Icemaker	44.9%	0.07	0.03	2,132
Refrigeration	Vending Machine	44.9%	0.10	0.05	3,294
Food Preparation	Oven	66.0%	0.07	0.05	3,601
Food Preparation	Fryer	76.4%	0.06	0.05	3,311
Food Preparation	Dishwasher	20.0%	0.16	0.03	2,399
Food Preparation	Hot Food Container	20.0%	0.02	0.00	294
Office Equipment	Desktop Computer	100.0%	2.08	2.08	151,720
Office Equipment	Laptop	100.0%	0.42	0.42	30,330
Office Equipment	Server	100.0%	0.25	0.25	18,453
Office Equipment	Monitor	100.0%	0.57	0.57	41,884
Office Equipment	Printer/Copier/Fax	100.0%	0.25	0.25	17,922
Office Equipment	POS Terminal	40.0%	0.04	0.01	1,029
Miscellaneous	Non-HVAC Motors	89.6%	0.28	0.25	18,246
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.02	1.02	74,736
<b>Total</b>				<b>19.42</b>	<b>1,417,695</b>



**Table A-91 Utah Large Office New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	21.5%	4.29	0.92
Cooling	Water-Cooled Chiller	21.5%	4.29	0.92
Cooling	RTU	60.4%	3.86	2.33
Cooling	PTAC	0.6%	5.00	0.03
Cooling	Evaporative AC	0.0%	2.33	-
Cooling	Air-Source Heat Pump	3.7%	4.77	0.18
Cooling	Geothermal Heat Pump	2.6%	2.35	0.06
Heating	Electric Furnace	27.7%	4.30	1.19
Heating	Electric Zonal Heating	1.0%	4.52	0.05
Heating	Air-Source Heat Pump	3.4%	2.97	0.10
Heating	Geothermal Heat Pump	2.3%	2.48	0.06
Ventilation	Ventilation	100.0%	1.92	1.92
Water Heating	Water Heating	32.4%	0.98	0.317
Interior Lighting	Screw-in	100.0%	0.49	0.49
Interior Lighting	High-Bay Fixtures	100.0%	0.58	0.58
Interior Lighting	Linear Fluorescent	100.0%	2.57	2.57
Exterior Lighting	Screw-in	100.0%	0.05	0.05
Exterior Lighting	HID	100.0%	0.29	0.29
Exterior Lighting	Linear Fluorescent	100.0%	0.14	0.14
Refrigeration	Walk-in Refrigerator	2.4%	0.22	0.01
Refrigeration	Reach-in Refrigerator	16.8%	0.06	0.01
Refrigeration	Glass Door Display	92.9%	0.10	0.09
Refrigeration	Open Display Case	92.9%	0.09	0.08
Refrigeration	Icemaker	53.9%	0.04	0.02
Refrigeration	Vending Machine	53.9%	0.10	0.05
Food Preparation	Oven	79.2%	0.07	0.05
Food Preparation	Fryer	91.7%	0.06	0.05
Food Preparation	Dishwasher	24.0%	0.10	0.02
Food Preparation	Hot Food Container	24.0%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	1.69	1.69
Office Equipment	Laptop	100.0%	0.34	0.34
Office Equipment	Server	100.0%	0.23	0.23
Office Equipment	Monitor	100.0%	0.47	0.47
Office Equipment	Printer/Copier/Fax	100.0%	0.14	0.14
Office Equipment	POS Terminal	44.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.28	0.28
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.02	1.02

**Table A-92 Utah Small Office Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	6.48	-	-
Cooling	Water-Cooled Chiller	0.0%	6.24	-	-
Cooling	RTU	76.2%	7.21	5.50	428,421
Cooling	PTAC	0.8%	8.09	0.06	5,059
Cooling	Evaporative AC	2.0%	2.89	0.06	4,495
Cooling	Air-Source Heat Pump	5.6%	7.21	0.40	31,265
Cooling	Geothermal Heat Pump	4.1%	4.40	0.18	14,016
Heating	Electric Furnace	13.9%	6.26	0.87	67,980
Heating	Electric Zonal Heating	0.2%	6.57	0.01	1,048
Heating	Air-Source Heat Pump	5.6%	5.65	0.31	24,486
Heating	Geothermal Heat Pump	4.1%	4.55	0.19	14,525
Ventilation	Ventilation	100.0%	1.36	1.36	106,131
Water Heating	Water Heating	28.6%	1.01	0.29	22,516
Interior Lighting	Screw-in	100.0%	0.56	0.56	43,696
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	38,650
Interior Lighting	Linear Fluorescent	100.0%	2.56	2.56	199,569
Exterior Lighting	Screw-in	100.0%	0.19	0.19	14,779
Exterior Lighting	HID	100.0%	0.26	0.26	20,627
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10	7,469
Refrigeration	Walk-in Refrigerator	0.0%	0.52	-	-
Refrigeration	Reach-in Refrigerator	15.8%	0.14	0.02	1,677
Refrigeration	Glass Door Display	0.0%	0.23	-	-
Refrigeration	Open Display Case	0.0%	0.19	-	-
Refrigeration	Icemaker	5.1%	0.16	0.01	618
Refrigeration	Vending Machine	5.1%	0.12	0.01	478
Food Preparation	Oven	1.5%	0.29	0.00	344
Food Preparation	Fryer	1.5%	0.23	0.00	273
Food Preparation	Dishwasher	1.5%	0.65	0.01	754
Food Preparation	Hot Food Container	1.5%	0.08	0.00	93
Office Equipment	Desktop Computer	100.0%	1.26	1.26	97,781
Office Equipment	Laptop	100.0%	0.25	0.25	19,547
Office Equipment	Server	100.0%	0.46	0.46	35,678
Office Equipment	Monitor	100.0%	0.35	0.35	26,993
Office Equipment	Printer/Copier/Fax	100.0%	0.22	0.22	17,326
Office Equipment	POS Terminal	20.0%	0.13	0.03	1,989
Miscellaneous	Non-HVAC Motors	22.0%	0.24	0.05	4,081
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.02	1.02	79,631
<b>Total</b>				<b>17.10</b>	<b>1,331,993</b>

**Table A-93 Utah Small Office New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	5.40	-
Cooling	Water-Cooled Chiller	0.0%	5.10	-
Cooling	RTU	98.9%	4.60	4.55
Cooling	PTAC	1.0%	6.18	0.06
Cooling	Evaporative AC	2.6%	2.89	0.07
Cooling	Air-Source Heat Pump	7.2%	4.69	0.34
Cooling	Geothermal Heat Pump	5.3%	2.81	0.15
Heating	Electric Furnace	13.9%	6.26	0.87
Heating	Electric Zonal Heating	0.2%	6.57	0.01
Heating	Air-Source Heat Pump	6.7%	4.28	0.29
Heating	Geothermal Heat Pump	4.9%	3.30	0.16
Ventilation	Ventilation	100.0%	0.72	0.72
Water Heating	Water Heating	28.6%	1.01	0.288
Interior Lighting	Screw-in	100.0%	0.51	0.51
Interior Lighting	High-Bay Fixtures	100.0%	0.75	0.75
Interior Lighting	Linear Fluorescent	100.0%	2.37	2.37
Exterior Lighting	Screw-in	100.0%	0.18	0.18
Exterior Lighting	HID	100.0%	0.39	0.39
Exterior Lighting	Linear Fluorescent	100.0%	0.09	0.09
Refrigeration	Walk-in Refrigerator	0.0%	0.52	-
Refrigeration	Reach-in Refrigerator	18.9%	0.14	0.03
Refrigeration	Glass Door Display	0.0%	0.23	-
Refrigeration	Open Display Case	0.0%	0.21	-
Refrigeration	Icemaker	6.1%	0.09	0.01
Refrigeration	Vending Machine	6.1%	0.12	0.01
Food Preparation	Oven	1.9%	0.26	0.00
Food Preparation	Fryer	1.9%	0.23	0.00
Food Preparation	Dishwasher	1.9%	0.39	0.01
Food Preparation	Hot Food Container	1.9%	0.03	0.00
Office Equipment	Desktop Computer	100.0%	1.02	1.02
Office Equipment	Laptop	100.0%	0.20	0.20
Office Equipment	Server	100.0%	0.42	0.42
Office Equipment	Monitor	100.0%	0.29	0.29
Office Equipment	Printer/Copier/Fax	100.0%	0.12	0.12
Office Equipment	POS Terminal	22.0%	0.12	0.03
Miscellaneous	Non-HVAC Motors	24.2%	0.24	0.06
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.02	1.02

**Table A-94 Utah Large Retail Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	12.5%	5.49	0.68	16,764
Cooling	Water-Cooled Chiller	3.1%	5.29	0.16	4,040
Cooling	RTU	71.0%	6.12	4.35	106,523
Cooling	PTAC	1.1%	6.87	0.08	1,905
Cooling	Evaporative AC	2.5%	2.45	0.06	1,528
Cooling	Air-Source Heat Pump	2.3%	6.12	0.14	3,395
Cooling	Geothermal Heat Pump	1.8%	3.73	0.07	1,638
Heating	Electric Furnace	19.7%	5.61	1.11	27,123
Heating	Electric Zonal Heating	1.7%	5.89	0.10	2,435
Heating	Air-Source Heat Pump	2.3%	5.09	0.12	2,823
Heating	Geothermal Heat Pump	1.8%	4.14	0.07	1,821
Ventilation	Ventilation	100.0%	1.34	1.34	32,721
Water Heating	Water Heating	38.5%	1.07	0.41	10,128
Interior Lighting	Screw-in	100.0%	1.88	1.88	46,080
Interior Lighting	High-Bay Fixtures	100.0%	1.99	1.99	48,783
Interior Lighting	Linear Fluorescent	100.0%	5.06	5.06	124,053
Exterior Lighting	Screw-in	100.0%	0.26	0.26	6,427
Exterior Lighting	HID	100.0%	0.65	0.65	15,994
Exterior Lighting	Linear Fluorescent	100.0%	0.33	0.33	8,061
Refrigeration	Walk-in Refrigerator	2.0%	0.72	0.01	351
Refrigeration	Reach-in Refrigerator	14.0%	0.19	0.03	648
Refrigeration	Glass Door Display	81.7%	0.32	0.26	6,366
Refrigeration	Open Display Case	81.7%	0.26	0.21	5,251
Refrigeration	Icemaker	52.4%	0.43	0.23	5,540
Refrigeration	Vending Machine	52.4%	0.33	0.17	4,281
Food Preparation	Oven	48.9%	0.20	0.10	2,419
Food Preparation	Fryer	45.2%	0.16	0.07	1,776
Food Preparation	Dishwasher	18.5%	0.44	0.08	2,007
Food Preparation	Hot Food Container	18.5%	0.05	0.01	246
Office Equipment	Desktop Computer	100.0%	0.39	0.39	9,478
Office Equipment	Laptop	100.0%	0.08	0.08	1,895
Office Equipment	Server	82.0%	0.07	0.06	1,418
Office Equipment	Monitor	100.0%	0.11	0.11	2,616
Office Equipment	Printer/Copier/Fax	100.0%	0.07	0.07	1,679
Office Equipment	POS Terminal	100.0%	0.01	0.01	289
Miscellaneous	Non-HVAC Motors	40.2%	0.39	0.16	3,836
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.36	1.36	33,329
<b>Total</b>				<b>22.26</b>	<b>545,669</b>

**Table A-95 Utah Large Retail New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	17.4%	4.49	0.78
Cooling	Water-Cooled Chiller	4.4%	4.21	0.18
Cooling	RTU	99.5%	4.50	4.48
Cooling	PTAC	1.6%	5.20	0.08
Cooling	Evaporative AC	3.6%	2.45	0.09
Cooling	Air-Source Heat Pump	3.2%	4.60	0.15
Cooling	Geothermal Heat Pump	2.5%	2.70	0.07
Heating	Electric Furnace	19.7%	5.61	1.11
Heating	Electric Zonal Heating	1.7%	5.89	0.10
Heating	Air-Source Heat Pump	2.9%	3.34	0.10
Heating	Geothermal Heat Pump	2.3%	2.11	0.05
Ventilation	Ventilation	100.0%	0.73	0.73
Water Heating	Water Heating	38.5%	1.07	0.411
Interior Lighting	Screw-in	100.0%	1.10	1.10
Interior Lighting	High-Bay Fixtures	100.0%	2.37	2.37
Interior Lighting	Linear Fluorescent	100.0%	4.54	4.54
Exterior Lighting	Screw-in	100.0%	0.14	0.14
Exterior Lighting	HID	100.0%	0.71	0.71
Exterior Lighting	Linear Fluorescent	100.0%	0.30	0.30
Refrigeration	Walk-in Refrigerator	3.0%	0.71	0.02
Refrigeration	Reach-in Refrigerator	21.0%	0.19	0.04
Refrigeration	Glass Door Display	100.0%	0.32	0.32
Refrigeration	Open Display Case	100.0%	0.29	0.29
Refrigeration	Icemaker	78.6%	0.25	0.20
Refrigeration	Vending Machine	78.6%	0.32	0.25
Food Preparation	Oven	73.4%	0.18	0.13
Food Preparation	Fryer	67.8%	0.16	0.11
Food Preparation	Dishwasher	27.7%	0.27	0.07
Food Preparation	Hot Food Container	27.7%	0.02	0.01
Office Equipment	Desktop Computer	100.0%	0.31	0.31
Office Equipment	Laptop	100.0%	0.06	0.06
Office Equipment	Server	98.4%	0.06	0.06
Office Equipment	Monitor	100.0%	0.09	0.09
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	48.2%	0.39	0.19
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.36	1.36

**Table A-96 Utah Small Retail Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	5.35	-	-
Cooling	Water-Cooled Chiller	0.0%	5.15	-	-
Cooling	RTU	60.4%	5.95	3.60	192,447
Cooling	PTAC	3.4%	6.68	0.22	12,019
Cooling	Evaporative AC	19.6%	2.38	0.47	24,940
Cooling	Air-Source Heat Pump	5.7%	5.95	0.34	18,232
Cooling	Geothermal Heat Pump	4.3%	3.63	0.16	8,391
Heating	Electric Furnace	7.3%	4.72	0.34	18,419
Heating	Electric Zonal Heating	0.5%	4.96	0.02	1,200
Heating	Air-Source Heat Pump	5.7%	4.26	0.24	13,053
Heating	Geothermal Heat Pump	4.3%	3.44	0.15	7,949
Ventilation	Ventilation	100.0%	1.00	1.00	53,443
Water Heating	Water Heating	37.8%	0.74	0.28	14,991
Interior Lighting	Screw-in	100.0%	0.91	0.91	48,940
Interior Lighting	High-Bay Fixtures	100.0%	0.97	0.97	51,811
Interior Lighting	Linear Fluorescent	100.0%	2.46	2.46	131,752
Exterior Lighting	Screw-in	100.0%	0.15	0.15	8,229
Exterior Lighting	HID	100.0%	0.38	0.38	20,478
Exterior Lighting	Linear Fluorescent	100.0%	0.19	0.19	10,321
Refrigeration	Walk-in Refrigerator	0.0%	0.17	-	-
Refrigeration	Reach-in Refrigerator	15.0%	0.04	0.01	357
Refrigeration	Glass Door Display	7.5%	0.07	0.01	300
Refrigeration	Open Display Case	7.5%	0.06	0.00	248
Refrigeration	Icemaker	5.1%	0.10	0.01	277
Refrigeration	Vending Machine	5.1%	0.08	0.00	214
Food Preparation	Oven	1.5%	0.22	0.00	173
Food Preparation	Fryer	1.5%	0.17	0.00	137
Food Preparation	Dishwasher	1.5%	0.47	0.01	380
Food Preparation	Hot Food Container	1.5%	0.06	0.00	47
Office Equipment	Desktop Computer	100.0%	0.07	0.07	3,934
Office Equipment	Laptop	100.0%	0.01	0.01	786
Office Equipment	Server	100.0%	0.11	0.11	5,742
Office Equipment	Monitor	100.0%	0.02	0.02	1,086
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	558
Office Equipment	POS Terminal	100.0%	0.03	0.03	1,600
Miscellaneous	Non-HVAC Motors	22.0%	0.17	0.04	1,951
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.71	0.71	38,058
<b>Total</b>				<b>12.94</b>	<b>692,462</b>

**Table A-97 Utah Small Retail New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	4.37	-
Cooling	Water-Cooled Chiller	0.0%	4.10	-
Cooling	RTU	84.5%	4.38	3.70
Cooling	PTAC	4.7%	5.06	0.24
Cooling	Evaporative AC	27.4%	2.38	0.65
Cooling	Air-Source Heat Pump	8.0%	4.47	0.36
Cooling	Geothermal Heat Pump	6.0%	2.63	0.16
Heating	Electric Furnace	7.3%	4.72	0.34
Heating	Electric Zonal Heating	0.5%	4.96	0.02
Heating	Air-Source Heat Pump	7.4%	2.45	0.18
Heating	Geothermal Heat Pump	5.6%	1.75	0.10
Ventilation	Ventilation	100.0%	0.59	0.59
Water Heating	Water Heating	37.8%	0.74	0.279
Interior Lighting	Screw-in	100.0%	0.54	0.54
Interior Lighting	High-Bay Fixtures	100.0%	1.15	1.15
Interior Lighting	Linear Fluorescent	100.0%	2.21	2.21
Exterior Lighting	Screw-in	100.0%	0.08	0.08
Exterior Lighting	HID	100.0%	0.41	0.41
Exterior Lighting	Linear Fluorescent	100.0%	0.17	0.17
Refrigeration	Walk-in Refrigerator	0.0%	0.17	-
Refrigeration	Reach-in Refrigerator	22.5%	0.04	0.01
Refrigeration	Glass Door Display	11.3%	0.07	0.01
Refrigeration	Open Display Case	11.3%	0.07	0.01
Refrigeration	Icemaker	7.7%	0.06	0.00
Refrigeration	Vending Machine	7.7%	0.08	0.01
Food Preparation	Oven	2.3%	0.19	0.00
Food Preparation	Fryer	2.3%	0.17	0.00
Food Preparation	Dishwasher	2.3%	0.29	0.01
Food Preparation	Hot Food Container	2.3%	0.02	0.00
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.10	0.10
Office Equipment	Monitor	100.0%	0.02	0.02
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	26.4%	0.17	0.04
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.71	0.71

**Table A-98 Utah Restaurant Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.3%	7.58	0.02	199
Cooling	Water-Cooled Chiller	0.0%	7.39	-	-
Cooling	RTU	77.3%	8.94	6.91	64,276
Cooling	PTAC	4.1%	10.04	0.41	3,822
Cooling	Evaporative AC	6.6%	3.58	0.24	2,194
Cooling	Air-Source Heat Pump	4.6%	8.94	0.41	3,860
Cooling	Geothermal Heat Pump	1.3%	5.45	0.07	669
Heating	Electric Furnace	0.2%	6.04	0.01	135
Heating	Electric Zonal Heating	6.6%	6.34	0.42	3,920
Heating	Air-Source Heat Pump	4.6%	4.48	0.21	1,932
Heating	Geothermal Heat Pump	1.3%	3.20	0.04	393
Ventilation	Ventilation	100.0%	2.66	2.66	24,735
Water Heating	Water Heating	35.2%	7.52	2.65	24,620
Interior Lighting	Screw-in	100.0%	2.78	2.78	25,823
Interior Lighting	High-Bay Fixtures	100.0%	0.52	0.52	4,873
Interior Lighting	Linear Fluorescent	100.0%	4.50	4.50	41,861
Exterior Lighting	Screw-in	100.0%	0.29	0.29	2,653
Exterior Lighting	HID	100.0%	2.03	2.03	18,851
Exterior Lighting	Linear Fluorescent	100.0%	0.59	0.59	5,447
Refrigeration	Walk-in Refrigerator	74.0%	8.02	5.93	55,199
Refrigeration	Reach-in Refrigerator	7.0%	4.23	0.30	2,756
Refrigeration	Glass Door Display	5.2%	3.56	0.19	1,723
Refrigeration	Open Display Case	5.2%	2.94	0.15	1,421
Refrigeration	Icemaker	97.3%	2.42	2.35	21,873
Refrigeration	Vending Machine	97.3%	1.87	1.82	16,902
Food Preparation	Oven	15.2%	9.91	1.51	14,009
Food Preparation	Fryer	8.9%	7.87	0.70	6,516
Food Preparation	Dishwasher	31.7%	10.87	3.45	32,102
Food Preparation	Hot Food Container	31.7%	1.33	0.42	3,938
Office Equipment	Desktop Computer	100.0%	0.28	0.28	2,619
Office Equipment	Laptop	100.0%	0.05	0.05	419
Office Equipment	Server	50.0%	0.41	0.21	1,911
Office Equipment	Monitor	100.0%	0.08	0.08	723
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	742
Office Equipment	POS Terminal	100.0%	0.11	0.11	1,065
Miscellaneous	Non-HVAC Motors	20.0%	0.67	0.13	1,239
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.29	2.29	21,314
<b>Total</b>				<b>44.80</b>	<b>416,736</b>



Table A-99 Utah Restaurant New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.4%	7.15	0.03
Cooling	Water-Cooled Chiller	0.0%	6.59	-
Cooling	RTU	92.7%	6.69	6.21
Cooling	PTAC	5.3%	7.15	0.38
Cooling	Evaporative AC	8.6%	3.58	0.31
Cooling	Air-Source Heat Pump	6.0%	8.28	0.50
Cooling	Geothermal Heat Pump	1.7%	4.09	0.07
Heating	Electric Furnace	0.2%	6.04	0.01
Heating	Electric Zonal Heating	6.6%	6.34	0.42
Heating	Air-Source Heat Pump	5.6%	4.01	0.22
Heating	Geothermal Heat Pump	1.6%	2.63	0.04
Ventilation	Ventilation	100.0%	1.86	1.86
Water Heating	Water Heating	37.0%	7.48	2.766
Interior Lighting	Screw-in	100.0%	1.83	1.83
Interior Lighting	High-Bay Fixtures	100.0%	1.24	1.24
Interior Lighting	Linear Fluorescent	100.0%	3.85	3.85
Exterior Lighting	Screw-in	100.0%	0.23	0.23
Exterior Lighting	HID	100.0%	3.74	3.74
Exterior Lighting	Linear Fluorescent	100.0%	0.50	0.50
Refrigeration	Walk-in Refrigerator	76.1%	8.00	6.08
Refrigeration	Reach-in Refrigerator	7.2%	4.23	0.30
Refrigeration	Glass Door Display	5.3%	3.56	0.19
Refrigeration	Open Display Case	5.3%	3.23	0.17
Refrigeration	Icemaker	100.0%	1.37	1.37
Refrigeration	Vending Machine	100.0%	1.81	1.81
Food Preparation	Oven	28.9%	8.93	2.59
Food Preparation	Fryer	16.9%	7.67	1.30
Food Preparation	Dishwasher	60.4%	6.56	3.97
Food Preparation	Hot Food Container	60.4%	0.48	0.29
Office Equipment	Desktop Computer	100.0%	0.23	0.23
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	55.0%	0.38	0.21
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.10	0.10
Miscellaneous	Non-HVAC Motors	24.0%	0.67	0.16
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.29	2.29

Table A-100 Utah Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	6.2%	6.27	0.39	2,710
Cooling	Water-Cooled Chiller	0.0%	6.05	-	-
Cooling	RTU	71.7%	6.99	5.01	34,747
Cooling	PTAC	0.0%	7.84	-	-
Cooling	Evaporative AC	10.0%	2.80	0.28	1,938
Cooling	Air-Source Heat Pump	3.7%	6.63	0.24	1,685
Cooling	Geothermal Heat Pump	0.0%	2.56	-	-
Heating	Electric Furnace	1.8%	4.16	0.08	529
Heating	Electric Zonal Heating	10.0%	4.36	0.44	3,016
Heating	Air-Source Heat Pump	3.7%	2.25	0.08	571
Heating	Geothermal Heat Pump	0.0%	1.53	-	-
Ventilation	Ventilation	100.0%	1.69	1.69	11,722
Water Heating	Water Heating	38.2%	1.76	0.67	4,669
Interior Lighting	Screw-in	100.0%	1.47	1.47	10,196
Interior Lighting	High-Bay Fixtures	100.0%	1.92	1.92	13,331
Interior Lighting	Linear Fluorescent	100.0%	5.89	5.89	40,829
Exterior Lighting	Screw-in	100.0%	0.06	0.06	442
Exterior Lighting	HID	100.0%	0.66	0.66	4,586
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28	1,934
Refrigeration	Walk-in Refrigerator	16.0%	7.91	1.26	8,770
Refrigeration	Reach-in Refrigerator	83.1%	0.60	0.50	3,433
Refrigeration	Glass Door Display	94.9%	10.03	9.52	66,027
Refrigeration	Open Display Case	94.9%	8.28	7.85	54,460
Refrigeration	Icemaker	98.9%	0.34	0.34	2,334
Refrigeration	Vending Machine	98.9%	0.53	0.52	3,607
Food Preparation	Oven	54.4%	0.42	0.23	1,568
Food Preparation	Fryer	61.0%	0.33	0.20	1,397
Food Preparation	Dishwasher	25.3%	0.91	0.23	1,603
Food Preparation	Hot Food Container	25.3%	0.11	0.03	197
Office Equipment	Desktop Computer	100.0%	0.11	0.11	791
Office Equipment	Laptop	64.0%	0.02	0.01	101
Office Equipment	Server	100.0%	0.08	0.08	578
Office Equipment	Monitor	100.0%	0.03	0.03	218
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	112
Office Equipment	POS Terminal	100.0%	0.06	0.06	402
Miscellaneous	Non-HVAC Motors	34.6%	0.64	0.22	1,548
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.11	2.11	14,616
<b>Total</b>				<b>42.50</b>	<b>294,667</b>

Table A-101 Utah Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	7.2%	5.14	0.37
Cooling	Water-Cooled Chiller	0.0%	4.81	-
Cooling	RTU	82.5%	3.54	2.92
Cooling	PTAC	0.0%	5.58	-
Cooling	Evaporative AC	11.0%	2.80	0.31
Cooling	Air-Source Heat Pump	4.0%	3.27	0.13
Cooling	Geothermal Heat Pump	0.0%	0.59	-
Heating	Electric Furnace	1.8%	4.16	0.08
Heating	Electric Zonal Heating	10.0%	4.36	0.44
Heating	Air-Source Heat Pump	3.7%	1.64	0.06
Heating	Geothermal Heat Pump	0.0%	1.12	-
Ventilation	Ventilation	100.0%	1.16	1.16
Water Heating	Water Heating	38.2%	1.75	0.670
Interior Lighting	Screw-in	100.0%	1.23	1.23
Interior Lighting	High-Bay Fixtures	100.0%	2.10	2.10
Interior Lighting	Linear Fluorescent	100.0%	5.22	5.22
Exterior Lighting	Screw-in	100.0%	0.08	0.08
Exterior Lighting	HID	100.0%	0.70	0.70
Exterior Lighting	Linear Fluorescent	100.0%	0.25	0.25
Refrigeration	Walk-in Refrigerator	16.2%	7.88	1.28
Refrigeration	Reach-in Refrigerator	84.0%	0.60	0.50
Refrigeration	Glass Door Display	96.0%	10.03	9.63
Refrigeration	Open Display Case	96.0%	9.11	8.74
Refrigeration	Icemaker	100.0%	0.23	0.23
Refrigeration	Vending Machine	100.0%	0.51	0.51
Food Preparation	Oven	76.2%	0.37	0.29
Food Preparation	Fryer	85.4%	0.32	0.27
Food Preparation	Dishwasher	35.5%	0.55	0.20
Food Preparation	Hot Food Container	35.5%	0.04	0.01
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	70.4%	0.02	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	41.6%	0.64	0.27
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.11	2.11

Table A-102 Utah Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.2%	9.96	1.71	20,550
Cooling	Water-Cooled Chiller	68.7%	10.56	7.25	87,127
Cooling	RTU	11.3%	10.05	1.13	13,633
Cooling	PTAC	0.4%	11.28	0.04	537
Cooling	Evaporative AC	0.0%	4.02	-	-
Cooling	Air-Source Heat Pump	0.6%	10.04	0.06	717
Cooling	Geothermal Heat Pump	0.9%	6.11	0.05	655
Heating	Electric Furnace	0.1%	12.89	0.01	114
Heating	Electric Zonal Heating	3.6%	13.53	0.48	5,826
Heating	Air-Source Heat Pump	0.6%	8.83	0.05	630
Heating	Geothermal Heat Pump	0.9%	6.20	0.06	664
Ventilation	Ventilation	100.0%	4.22	4.22	50,749
Water Heating	Water Heating	13.6%	4.19	0.57	6,871
Interior Lighting	Screw-in	100.0%	2.02	2.02	24,293
Interior Lighting	High-Bay Fixtures	100.0%	0.52	0.52	6,211
Interior Lighting	Linear Fluorescent	100.0%	4.84	4.84	58,111
Exterior Lighting	Screw-in	100.0%	0.02	0.02	266
Exterior Lighting	HID	100.0%	0.27	0.27	3,244
Exterior Lighting	Linear Fluorescent	100.0%	0.09	0.09	1,039
Refrigeration	Walk-in Refrigerator	33.0%	0.38	0.13	1,517
Refrigeration	Reach-in Refrigerator	50.0%	0.10	0.05	607
Refrigeration	Glass Door Display	90.4%	0.17	0.15	1,847
Refrigeration	Open Display Case	90.4%	0.14	0.13	1,523
Refrigeration	Icemaker	90.4%	0.23	0.21	2,505
Refrigeration	Vending Machine	90.4%	0.18	0.16	1,936
Food Preparation	Oven	69.7%	0.64	0.44	5,319
Food Preparation	Fryer	80.7%	0.50	0.41	4,893
Food Preparation	Dishwasher	30.9%	1.39	0.43	5,172
Food Preparation	Hot Food Container	30.9%	0.17	0.05	634
Office Equipment	Desktop Computer	100.0%	0.60	0.60	7,228
Office Equipment	Laptop	100.0%	0.05	0.05	578
Office Equipment	Server	100.0%	0.09	0.09	1,055
Office Equipment	Monitor	100.0%	0.17	0.17	1,995
Office Equipment	Printer/Copier/Fax	100.0%	0.09	0.09	1,025
Office Equipment	POS Terminal	100.0%	0.06	0.06	735
Miscellaneous	Non-HVAC Motors	74.1%	0.68	0.50	6,063
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	4.58	4.58	55,032
<b>Total</b>				<b>31.70</b>	<b>380,898</b>

Table A-103 Utah Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	18.9%	6.31	1.19
Cooling	Water-Cooled Chiller	75.5%	5.03	3.80
Cooling	RTU	12.4%	7.50	0.93
Cooling	PTAC	0.4%	8.62	0.04
Cooling	Evaporative AC	0.0%	4.02	-
Cooling	Air-Source Heat Pump	0.7%	9.27	0.06
Cooling	Geothermal Heat Pump	1.0%	4.58	0.04
Heating	Electric Furnace	0.1%	12.89	0.01
Heating	Electric Zonal Heating	3.6%	13.53	0.48
Heating	Air-Source Heat Pump	0.6%	3.60	0.02
Heating	Geothermal Heat Pump	0.9%	1.93	0.02
Ventilation	Ventilation	100.0%	1.80	1.80
Water Heating	Water Heating	13.6%	4.18	0.569
Interior Lighting	Screw-in	100.0%	1.54	1.54
Interior Lighting	High-Bay Fixtures	100.0%	0.71	0.71
Interior Lighting	Linear Fluorescent	100.0%	4.46	4.46
Exterior Lighting	Screw-in	100.0%	0.01	0.01
Exterior Lighting	HID	100.0%	0.29	0.29
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08
Refrigeration	Walk-in Refrigerator	36.3%	0.38	0.14
Refrigeration	Reach-in Refrigerator	55.0%	0.10	0.06
Refrigeration	Glass Door Display	99.4%	0.17	0.17
Refrigeration	Open Display Case	99.4%	0.15	0.15
Refrigeration	Icemaker	99.4%	0.13	0.13
Refrigeration	Vending Machine	99.4%	0.18	0.18
Food Preparation	Oven	97.6%	0.57	0.56
Food Preparation	Fryer	100.0%	0.49	0.49
Food Preparation	Dishwasher	43.2%	0.84	0.36
Food Preparation	Hot Food Container	43.2%	0.06	0.03
Office Equipment	Desktop Computer	100.0%	0.49	0.49
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.14	0.14
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	88.9%	0.68	0.61
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	4.58	4.58

Table A-104 Utah College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	48.7%	6.29	3.06	80,643
Cooling	Water-Cooled Chiller	12.2%	7.64	0.93	24,495
Cooling	RTU	28.8%	4.21	1.21	31,942
Cooling	PTAC	0.0%	4.73	-	-
Cooling	Evaporative AC	0.0%	1.69	-	-
Cooling	Air-Source Heat Pump	5.1%	4.21	0.21	5,644
Cooling	Geothermal Heat Pump	0.0%	2.56	-	-
Heating	Electric Furnace	10.4%	9.62	1.00	26,384
Heating	Electric Zonal Heating	0.0%	10.10	-	-
Heating	Air-Source Heat Pump	5.1%	6.68	0.34	8,958
Heating	Geothermal Heat Pump	0.0%	5.03	-	-
Ventilation	Ventilation	100.0%	1.65	1.65	43,510
Water Heating	Water Heating	26.3%	2.24	0.59	15,541
Interior Lighting	Screw-in	100.0%	0.35	0.35	9,284
Interior Lighting	High-Bay Fixtures	100.0%	0.30	0.30	7,994
Interior Lighting	Linear Fluorescent	100.0%	1.92	1.92	50,524
Exterior Lighting	Screw-in	100.0%	0.00	0.00	57
Exterior Lighting	HID	100.0%	0.08	0.08	2,129
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28	7,498
Refrigeration	Walk-in Refrigerator	7.7%	0.24	0.02	479
Refrigeration	Reach-in Refrigerator	13.4%	0.12	0.02	439
Refrigeration	Glass Door Display	26.6%	0.11	0.03	735
Refrigeration	Open Display Case	26.6%	0.09	0.02	607
Refrigeration	Icemaker	26.6%	0.14	0.04	998
Refrigeration	Vending Machine	26.6%	0.11	0.03	771
Food Preparation	Oven	9.4%	0.37	0.04	922
Food Preparation	Fryer	9.4%	0.30	0.03	733
Food Preparation	Dishwasher	9.4%	0.82	0.08	2,024
Food Preparation	Hot Food Container	9.4%	0.10	0.01	248
Office Equipment	Desktop Computer	100.0%	0.47	0.47	12,415
Office Equipment	Laptop	100.0%	0.03	0.03	745
Office Equipment	Server	100.0%	0.07	0.07	1,812
Office Equipment	Monitor	100.0%	0.13	0.13	3,427
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	2,200
Office Equipment	POS Terminal	100.0%	0.02	0.02	631
Miscellaneous	Non-HVAC Motors	88.8%	0.13	0.12	3,149
Miscellaneous	Pool Pump	90.3%	0.02	0.02	547
Miscellaneous	Pool Heater	36.2%	0.04	0.02	420
Miscellaneous	Other Miscellaneous	100.0%	0.78	0.78	20,587
<b>Total</b>				<b>14.00</b>	<b>368,489</b>

**Table A-105 Utah College New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	60.1%	3.53	2.12
Cooling	Water-Cooled Chiller	15.0%	3.51	0.53
Cooling	RTU	35.5%	3.01	1.07
Cooling	PTAC	0.0%	3.67	-
Cooling	Evaporative AC	0.0%	1.69	-
Cooling	Air-Source Heat Pump	6.3%	3.07	0.19
Cooling	Geothermal Heat Pump	0.0%	1.84	-
Heating	Electric Furnace	10.4%	9.62	1.00
Heating	Electric Zonal Heating	0.0%	10.10	-
Heating	Air-Source Heat Pump	5.8%	5.23	0.30
Heating	Geothermal Heat Pump	0.0%	3.64	-
Ventilation	Ventilation	100.0%	0.83	0.83
Water Heating	Water Heating	26.3%	2.23	0.588
Interior Lighting	Screw-in	100.0%	0.21	0.21
Interior Lighting	High-Bay Fixtures	100.0%	0.44	0.44
Interior Lighting	Linear Fluorescent	100.0%	1.72	1.72
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.11	0.11
Exterior Lighting	Linear Fluorescent	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator	10.8%	0.24	0.03
Refrigeration	Reach-in Refrigerator	18.7%	0.12	0.02
Refrigeration	Glass Door Display	37.2%	0.11	0.04
Refrigeration	Open Display Case	37.2%	0.10	0.04
Refrigeration	Icemaker	37.2%	0.09	0.03
Refrigeration	Vending Machine	37.2%	0.11	0.04
Food Preparation	Oven	13.2%	0.33	0.04
Food Preparation	Fryer	13.2%	0.29	0.04
Food Preparation	Dishwasher	13.2%	0.49	0.06
Food Preparation	Hot Food Container	13.2%	0.04	0.00
Office Equipment	Desktop Computer	100.0%	0.38	0.38
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.06	0.06
Office Equipment	Monitor	100.0%	0.11	0.11
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.13	0.13
Miscellaneous	Pool Pump	100.0%	0.02	0.02
Miscellaneous	Pool Heater	43.4%	0.04	0.02
Miscellaneous	Other Miscellaneous	100.0%	0.78	0.78

Table A-106 Utah School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	39.7%	3.25	1.29	45,891
Cooling	Water-Cooled Chiller	9.7%	3.94	0.38	13,588
Cooling	RTU	27.0%	2.18	0.59	20,939
Cooling	PTAC	0.0%	2.44	-	-
Cooling	Evaporative AC	0.0%	0.87	-	-
Cooling	Air-Source Heat Pump	4.0%	2.17	0.09	3,099
Cooling	Geothermal Heat Pump	3.0%	1.32	0.04	1,415
Heating	Electric Furnace	8.7%	5.74	0.50	17,893
Heating	Electric Zonal Heating	0.0%	6.03	-	-
Heating	Air-Source Heat Pump	4.0%	3.99	0.16	5,685
Heating	Geothermal Heat Pump	3.0%	3.00	0.09	3,211
Ventilation	Ventilation	100.0%	0.81	0.81	28,860
Water Heating	Water Heating	38.1%	1.12	0.43	15,254
Interior Lighting	Screw-in	100.0%	0.35	0.35	12,416
Interior Lighting	High-Bay Fixtures	100.0%	0.31	0.31	11,077
Interior Lighting	Linear Fluorescent	100.0%	2.30	2.30	81,895
Exterior Lighting	Screw-in	100.0%	0.00	0.00	117
Exterior Lighting	HID	100.0%	0.13	0.13	4,594
Exterior Lighting	Linear Fluorescent	100.0%	0.73	0.73	25,887
Refrigeration	Walk-in Refrigerator	19.0%	0.25	0.05	1,691
Refrigeration	Reach-in Refrigerator	33.0%	0.13	0.04	1,550
Refrigeration	Glass Door Display	65.7%	0.11	0.07	2,597
Refrigeration	Open Display Case	65.7%	0.09	0.06	2,142
Refrigeration	Icemaker	65.7%	0.15	0.10	3,524
Refrigeration	Vending Machine	65.7%	0.12	0.08	2,723
Food Preparation	Oven	64.8%	0.12	0.08	2,727
Food Preparation	Fryer	58.6%	0.09	0.05	1,959
Food Preparation	Dishwasher	24.5%	0.26	0.06	2,259
Food Preparation	Hot Food Container	24.5%	0.03	0.01	277
Office Equipment	Desktop Computer	100.0%	0.29	0.29	10,233
Office Equipment	Laptop	100.0%	0.02	0.02	818
Office Equipment	Server	100.0%	0.08	0.08	2,987
Office Equipment	Monitor	100.0%	0.08	0.08	2,825
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	1,451
Office Equipment	POS Terminal	36.0%	0.01	0.00	150
Miscellaneous	Non-HVAC Motors	43.7%	0.11	0.05	1,636
Miscellaneous	Pool Pump	6.0%	0.03	0.00	58
Miscellaneous	Pool Heater	1.0%	0.03	0.00	9
Miscellaneous	Other Miscellaneous	100.0%	0.55	0.55	19,427
<b>Total</b>				<b>9.90</b>	<b>352,860</b>



Table A-107 Utah School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	45.6%	1.82	0.83
Cooling	Water-Cooled Chiller	11.1%	1.81	0.20
Cooling	RTU	32.4%	1.56	0.50
Cooling	PTAC	0.0%	1.90	-
Cooling	Evaporative AC	0.0%	0.87	-
Cooling	Air-Source Heat Pump	5.2%	1.59	0.08
Cooling	Geothermal Heat Pump	3.9%	0.95	0.04
Heating	Electric Furnace	8.7%	5.74	0.50
Heating	Electric Zonal Heating	0.0%	6.03	-
Heating	Air-Source Heat Pump	4.8%	3.12	0.15
Heating	Geothermal Heat Pump	3.6%	2.17	0.08
Ventilation	Ventilation	100.0%	0.40	0.40
Water Heating	Water Heating	38.1%	1.12	0.426
Interior Lighting	Screw-in	100.0%	0.16	0.16
Interior Lighting	High-Bay Fixtures	100.0%	0.46	0.46
Interior Lighting	Linear Fluorescent	100.0%	2.08	2.08
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.18	0.18
Exterior Lighting	Linear Fluorescent	100.0%	0.66	0.66
Refrigeration	Walk-in Refrigerator	26.6%	0.25	0.07
Refrigeration	Reach-in Refrigerator	46.2%	0.13	0.06
Refrigeration	Glass Door Display	92.0%	0.11	0.10
Refrigeration	Open Display Case	92.0%	0.10	0.09
Refrigeration	Icemaker	92.0%	0.09	0.08
Refrigeration	Vending Machine	92.0%	0.11	0.10
Food Preparation	Oven	90.7%	0.11	0.10
Food Preparation	Fryer	82.0%	0.09	0.08
Food Preparation	Dishwasher	34.2%	0.16	0.05
Food Preparation	Hot Food Container	34.2%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.23	0.23
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.07	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	48.0%	0.11	0.05
Miscellaneous	Pool Pump	7.2%	0.03	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.55	0.55

Table A-108 Utah Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.0%	1.92	0.10	1,464
Cooling	Water-Cooled Chiller	20.0%	2.20	0.44	6,699
Cooling	RTU	24.1%	5.72	1.38	21,098
Cooling	PTAC	30.9%	6.42	1.98	30,343
Cooling	Evaporative AC	0.0%	2.29	-	-
Cooling	Air-Source Heat Pump	4.8%	5.72	0.27	4,180
Cooling	Geothermal Heat Pump	2.8%	5.39	0.15	2,310
Heating	Electric Furnace	52.5%	3.08	1.61	24,691
Heating	Electric Zonal Heating	1.1%	3.23	0.03	522
Heating	Air-Source Heat Pump	4.8%	2.92	0.14	2,135
Heating	Geothermal Heat Pump	2.8%	2.12	0.06	909
Ventilation	Ventilation	100.0%	1.42	1.42	21,721
Water Heating	Water Heating	31.5%	4.78	1.51	23,032
Interior Lighting	Screw-in	100.0%	3.91	3.91	59,751
Interior Lighting	High-Bay Fixtures	100.0%	0.28	0.28	4,331
Interior Lighting	Linear Fluorescent	100.0%	1.09	1.09	16,686
Exterior Lighting	Screw-in	100.0%	0.20	0.20	2,991
Exterior Lighting	HID	100.0%	0.76	0.76	11,682
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05	812
Refrigeration	Walk-in Refrigerator	3.0%	0.87	0.03	399
Refrigeration	Reach-in Refrigerator	19.0%	0.23	0.04	666
Refrigeration	Glass Door Display	58.9%	0.39	0.23	3,476
Refrigeration	Open Display Case	58.9%	0.32	0.19	2,867
Refrigeration	Icemaker	58.9%	0.26	0.15	2,358
Refrigeration	Vending Machine	58.9%	0.40	0.24	3,644
Food Preparation	Oven	13.8%	0.46	0.06	963
Food Preparation	Fryer	21.0%	0.36	0.08	1,164
Food Preparation	Dishwasher	15.3%	1.00	0.15	2,338
Food Preparation	Hot Food Container	15.3%	0.12	0.02	287
Office Equipment	Desktop Computer	100.0%	0.11	0.11	1,756
Office Equipment	Laptop	100.0%	0.02	0.02	351
Office Equipment	Server	100.0%	0.08	0.08	1,282
Office Equipment	Monitor	100.0%	0.03	0.03	485
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	249
Office Equipment	POS Terminal	58.0%	0.02	0.01	207
Miscellaneous	Non-HVAC Motors	91.3%	0.20	0.19	2,834
Miscellaneous	Pool Pump	76.0%	0.02	0.01	193
Miscellaneous	Pool Heater	27.0%	0.03	0.01	132
Miscellaneous	Other Miscellaneous	100.0%	0.94	0.94	14,335
<b>Total</b>				<b>18.00</b>	<b>275,344</b>

Table A-109 Utah Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	6.5%	1.64	0.11
Cooling	Water-Cooled Chiller	25.9%	1.87	0.48
Cooling	RTU	31.3%	5.59	1.75
Cooling	PTAC	40.1%	4.91	1.97
Cooling	Evaporative AC	0.0%	2.29	-
Cooling	Air-Source Heat Pump	6.0%	5.28	0.32
Cooling	Geothermal Heat Pump	3.5%	2.39	0.08
Heating	Electric Furnace	52.5%	3.08	1.61
Heating	Electric Zonal Heating	1.1%	3.23	0.03
Heating	Air-Source Heat Pump	5.5%	1.19	0.07
Heating	Geothermal Heat Pump	3.2%	0.51	0.02
Ventilation	Ventilation	100.0%	0.99	0.99
Water Heating	Water Heating	31.5%	4.76	1.499
Interior Lighting	Screw-in	100.0%	2.64	2.64
Interior Lighting	High-Bay Fixtures	100.0%	0.37	0.37
Interior Lighting	Linear Fluorescent	100.0%	0.98	0.98
Exterior Lighting	Screw-in	100.0%	0.16	0.16
Exterior Lighting	HID	100.0%	0.88	0.88
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05
Refrigeration	Walk-in Refrigerator	3.9%	0.87	0.03
Refrigeration	Reach-in Refrigerator	24.7%	0.23	0.06
Refrigeration	Glass Door Display	76.6%	0.39	0.30
Refrigeration	Open Display Case	76.6%	0.35	0.27
Refrigeration	Icemaker	76.6%	0.15	0.12
Refrigeration	Vending Machine	76.6%	0.40	0.31
Food Preparation	Oven	17.9%	0.41	0.07
Food Preparation	Fryer	27.3%	0.35	0.10
Food Preparation	Dishwasher	19.8%	0.60	0.12
Food Preparation	Hot Food Container	19.8%	0.04	0.01
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	63.8%	0.02	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.20	0.20
Miscellaneous	Pool Pump	91.2%	0.02	0.01
Miscellaneous	Pool Heater	32.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.94	0.94

Table A-110 Utah Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	3.1%	3.23	0.10	11,483
Cooling	Water-Cooled Chiller	0.3%	3.05	0.01	1,203
Cooling	RTU	9.1%	3.60	0.33	36,934
Cooling	PTAC	1.5%	4.04	0.06	6,794
Cooling	Evaporative AC	0.1%	1.44	0.00	242
Cooling	Air-Source Heat Pump	2.3%	3.60	0.08	9,483
Cooling	Geothermal Heat Pump	0.0%	2.19	-	-
Heating	Electric Furnace	11.2%	7.27	0.81	91,671
Heating	Electric Zonal Heating	2.1%	7.63	0.16	17,795
Heating	Air-Source Heat Pump	2.3%	6.85	0.16	18,053
Heating	Geothermal Heat Pump	0.0%	5.98	-	-
Ventilation	Ventilation	100.0%	0.28	0.28	31,432
Water Heating	Water Heating	31.3%	0.28	0.09	9,925
Interior Lighting	Screw-in	100.0%	0.27	0.27	30,694
Interior Lighting	High-Bay Fixtures	100.0%	1.33	1.33	150,346
Interior Lighting	Linear Fluorescent	100.0%	1.02	1.02	115,873
Exterior Lighting	Screw-in	100.0%	0.19	0.19	21,060
Exterior Lighting	HID	100.0%	0.17	0.17	19,451
Exterior Lighting	Linear Fluorescent	100.0%	0.13	0.13	14,965
Refrigeration	Walk-in Refrigerator	1.1%	0.82	0.01	1,023
Refrigeration	Reach-in Refrigerator	2.0%	0.22	0.00	491
Refrigeration	Glass Door Display	10.1%	0.37	0.04	4,177
Refrigeration	Open Display Case	10.1%	0.30	0.03	3,445
Refrigeration	Icemaker	10.1%	0.25	0.03	2,833
Refrigeration	Vending Machine	10.1%	0.19	0.02	2,189
Food Preparation	Oven	0.9%	0.05	0.00	53
Food Preparation	Fryer	0.9%	0.04	0.00	42
Food Preparation	Dishwasher	0.9%	0.12	0.00	116
Food Preparation	Hot Food Container	0.9%	0.01	0.00	14
Office Equipment	Desktop Computer	100.0%	0.09	0.09	10,577
Office Equipment	Laptop	100.0%	0.01	0.01	1,691
Office Equipment	Server	89.0%	0.14	0.12	13,739
Office Equipment	Monitor	100.0%	0.03	0.03	2,920
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	1,499
Office Equipment	POS Terminal	77.0%	0.04	0.03	3,313
Miscellaneous	Non-HVAC Motors	49.9%	0.15	0.07	8,448
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.54	0.54	60,698
<b>Total</b>				<b>6.23</b>	<b>704,673</b>

Table A-111 Utah Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	3.5%	2.65	0.09
Cooling	Water-Cooled Chiller	0.4%	2.42	0.01
Cooling	RTU	10.0%	2.65	0.26
Cooling	PTAC	1.6%	3.09	0.05
Cooling	Evaporative AC	0.2%	1.44	0.00
Cooling	Air-Source Heat Pump	2.6%	3.27	0.08
Cooling	Geothermal Heat Pump	0.0%	1.31	-
Heating	Electric Furnace	11.2%	7.27	0.81
Heating	Electric Zonal Heating	2.1%	7.63	0.16
Heating	Air-Source Heat Pump	2.3%	4.59	0.11
Heating	Geothermal Heat Pump	0.0%	3.49	-
Ventilation	Ventilation	100.0%	0.14	0.14
Water Heating	Water Heating	31.3%	0.28	0.087
Interior Lighting	Screw-in	100.0%	0.18	0.18
Interior Lighting	High-Bay Fixtures	100.0%	1.57	1.57
Interior Lighting	Linear Fluorescent	100.0%	0.92	0.92
Exterior Lighting	Screw-in	100.0%	0.15	0.15
Exterior Lighting	HID	100.0%	0.18	0.18
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12
Refrigeration	Walk-in Refrigerator	1.3%	0.82	0.01
Refrigeration	Reach-in Refrigerator	2.4%	0.22	0.01
Refrigeration	Glass Door Display	12.1%	0.37	0.04
Refrigeration	Open Display Case	12.1%	0.33	0.04
Refrigeration	Icemaker	12.1%	0.16	0.02
Refrigeration	Vending Machine	12.1%	0.19	0.02
Food Preparation	Oven	1.0%	0.05	0.00
Food Preparation	Fryer	0.9%	0.04	0.00
Food Preparation	Dishwasher	1.0%	0.07	0.00
Food Preparation	Hot Food Container	0.9%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.08	0.08
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.13	0.13
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	84.7%	0.03	0.03
Miscellaneous	Non-HVAC Motors	59.8%	0.15	0.09
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.54	0.54

**Table A-112 Utah Warehouse, Controlled Atmosphere Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.0%	2.56	0.33	747
Cooling	Water-Cooled Chiller	1.4%	2.41	0.03	78
Cooling	RTU	17.0%	2.85	0.48	1,089
Cooling	PTAC	1.0%	3.19	0.03	74
Cooling	Evaporative AC	0.1%	1.14	0.00	3
Cooling	Air-Source Heat Pump	1.6%	2.85	0.05	103
Cooling	Geothermal Heat Pump	0.0%	1.73	-	-
Heating	Electric Furnace	7.9%	5.64	0.45	1,000
Heating	Electric Zonal Heating	1.5%	5.93	0.09	194
Heating	Air-Source Heat Pump	1.6%	5.32	0.09	192
Heating	Geothermal Heat Pump	0.0%	4.64	-	-
Ventilation	Ventilation	100.0%	0.78	0.78	1,757
Water Heating	Water Heating	31.3%	0.45	0.14	314
Interior Lighting	Screw-in	100.0%	0.25	0.25	561
Interior Lighting	High-Bay Fixtures	100.0%	1.22	1.22	2,747
Interior Lighting	Linear Fluorescent	100.0%	0.94	0.94	2,117
Exterior Lighting	Screw-in	100.0%	0.17	0.17	385
Exterior Lighting	HID	100.0%	0.16	0.16	355
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	273
Refrigeration	Walk-in Refrigerator	91.7%	17.39	15.94	35,818
Refrigeration	Reach-in Refrigerator	2.0%	0.92	0.02	41
Refrigeration	Glass Door Display	10.1%	1.54	0.16	351
Refrigeration	Open Display Case	10.1%	1.27	0.13	289
Refrigeration	Icemaker	91.7%	1.05	0.96	2,159
Refrigeration	Vending Machine	91.7%	0.81	0.74	1,668
Food Preparation	Oven	19.8%	0.09	0.02	39
Food Preparation	Fryer	19.8%	0.07	0.01	31
Food Preparation	Dishwasher	19.8%	0.19	0.04	86
Food Preparation	Hot Food Container	19.8%	0.02	0.00	11
Office Equipment	Desktop Computer	100.0%	0.06	0.06	142
Office Equipment	Laptop	100.0%	0.01	0.01	23
Office Equipment	Server	89.0%	0.09	0.08	184
Office Equipment	Monitor	100.0%	0.02	0.02	39
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	20
Office Equipment	POS Terminal	77.0%	0.03	0.02	44
Miscellaneous	Non-HVAC Motors	79.5%	0.52	0.42	933
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.83	1.83	4,117
<b>Total</b>				<b>25.81</b>	<b>57,986</b>

**Table A-113 Utah Warehouse, Controlled Atmosphere New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.3%	2.10	0.30
Cooling	Water-Cooled Chiller	1.6%	1.92	0.03
Cooling	RTU	18.7%	2.09	0.39
Cooling	PTAC	1.1%	2.44	0.03
Cooling	Evaporative AC	0.1%	1.14	0.00
Cooling	Air-Source Heat Pump	1.8%	2.59	0.05
Cooling	Geothermal Heat Pump	0.0%	1.03	-
Heating	Electric Furnace	7.9%	5.64	0.45
Heating	Electric Zonal Heating	1.5%	5.93	0.09
Heating	Air-Source Heat Pump	1.6%	3.56	0.06
Heating	Geothermal Heat Pump	0.0%	2.71	-
Ventilation	Ventilation	100.0%	0.40	0.40
Water Heating	Water Heating	31.3%	0.44	0.139
Interior Lighting	Screw-in	100.0%	0.15	0.15
Interior Lighting	High-Bay Fixtures	100.0%	1.57	1.57
Interior Lighting	Linear Fluorescent	100.0%	0.84	0.84
Exterior Lighting	Screw-in	100.0%	0.13	0.13
Exterior Lighting	HID	100.0%	0.20	0.20
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator	100.0%	17.34	17.34
Refrigeration	Reach-in Refrigerator	2.4%	0.92	0.02
Refrigeration	Glass Door Display	12.1%	1.54	0.19
Refrigeration	Open Display Case	12.1%	1.40	0.17
Refrigeration	Icemaker	100.0%	0.70	0.70
Refrigeration	Vending Machine	100.0%	0.81	0.81
Food Preparation	Oven	23.7%	0.08	0.02
Food Preparation	Fryer	21.8%	0.07	0.01
Food Preparation	Dishwasher	23.7%	0.12	0.03
Food Preparation	Hot Food Container	21.8%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.05	0.05
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Printer/Copier/Fax	100.0%	0.00	0.00
Office Equipment	POS Terminal	84.7%	0.02	0.02
Miscellaneous	Non-HVAC Motors	95.4%	0.52	0.50
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.83	1.83

**Table A-114 Utah Data Center Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	19.1%	38.44	7.33	8,810
Cooling	Water-Cooled Chiller	19.1%	37.40	7.13	8,571
Cooling	RTU	52.8%	41.48	21.90	26,344
Cooling	PTAC	0.6%	46.54	0.28	331
Cooling	Evaporative AC	0.0%	16.59	-	-
Cooling	Air-Source Heat Pump	3.8%	41.47	1.57	1,886
Cooling	Geothermal Heat Pump	2.7%	25.27	0.68	820
Heating	Electric Furnace	38.6%	3.05	1.18	1,416
Heating	Electric Zonal Heating	1.6%	3.20	0.05	61
Heating	Air-Source Heat Pump	3.8%	2.80	0.11	127
Heating	Geothermal Heat Pump	2.7%	2.43	0.07	79
Ventilation	Ventilation	100.0%	27.31	27.31	32,838
Water Heating	Water Heating	32.4%	0.70	0.23	272
Interior Lighting	Screw-in	100.0%	1.21	1.21	1,454
Interior Lighting	High-Bay Fixtures	100.0%	0.57	0.57	680
Interior Lighting	Linear Fluorescent	100.0%	3.89	3.89	4,679
Exterior Lighting	Screw-in	100.0%	0.06	0.06	76
Exterior Lighting	HID	100.0%	0.17	0.17	204
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10	125
Refrigeration	Walk-in Refrigerator	2.0%	0.14	0.00	3
Refrigeration	Reach-in Refrigerator	14.0%	0.04	0.01	6
Refrigeration	Glass Door Display	5.1%	0.06	0.00	4
Refrigeration	Open Display Case	5.1%	0.05	0.00	3
Refrigeration	Icemaker	5.1%	0.04	0.00	3
Refrigeration	Vending Machine	5.1%	0.03	0.00	2
Food Preparation	Oven	1.5%	0.11	0.00	2
Food Preparation	Fryer	1.5%	0.09	0.00	2
Food Preparation	Dishwasher	1.5%	0.24	0.00	4
Food Preparation	Hot Food Container	1.5%	0.03	0.00	1
Office Equipment	Desktop Computer	100.0%	4.73	4.73	5,693
Office Equipment	Laptop	100.0%	0.38	0.38	455
Office Equipment	Server	100.0%	69.09	69.09	83,093
Office Equipment	Monitor	100.0%	1.31	1.31	1,572
Office Equipment	Printer/Copier/Fax	100.0%	0.67	0.67	807
Office Equipment	POS Terminal	40.0%	0.19	0.08	93
Miscellaneous	Non-HVAC Motors	89.6%	6.44	5.77	6,937
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	19.62	19.62	23,595
<b>Total</b>				<b>175.49</b>	<b>211,048</b>



Table A-115 Utah Data Center New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	19.7%	32.05	6.33
Cooling	Water-Cooled Chiller	23.4%	30.53	7.14
Cooling	RTU	54.7%	26.43	14.46
Cooling	PTAC	0.6%	35.52	0.22
Cooling	Evaporative AC	0.0%	16.59	-
Cooling	Air-Source Heat Pump	4.8%	26.98	1.30
Cooling	Geothermal Heat Pump	3.4%	16.13	0.56
Heating	Electric Furnace	38.6%	3.05	1.18
Heating	Electric Zonal Heating	1.6%	3.20	0.05
Heating	Air-Source Heat Pump	4.4%	2.12	0.09
Heating	Geothermal Heat Pump	3.2%	1.76	0.06
Ventilation	Ventilation	100.0%	14.44	14.44
Water Heating	Water Heating	32.4%	0.70	0.225
Interior Lighting	Screw-in	100.0%	0.69	0.69
Interior Lighting	High-Bay Fixtures	100.0%	0.87	0.87
Interior Lighting	Linear Fluorescent	100.0%	3.62	3.62
Exterior Lighting	Screw-in	100.0%	0.04	0.04
Exterior Lighting	HID	100.0%	0.22	0.22
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	2.2%	0.14	0.00
Refrigeration	Reach-in Refrigerator	15.4%	0.04	0.01
Refrigeration	Glass Door Display	5.6%	0.06	0.00
Refrigeration	Open Display Case	5.6%	0.06	0.00
Refrigeration	Icemaker	5.6%	0.03	0.00
Refrigeration	Vending Machine	5.6%	0.03	0.00
Food Preparation	Oven	1.7%	0.10	0.00
Food Preparation	Fryer	1.7%	0.08	0.00
Food Preparation	Dishwasher	1.7%	0.15	0.00
Food Preparation	Hot Food Container	1.7%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	3.84	3.84
Office Equipment	Laptop	100.0%	0.31	0.31
Office Equipment	Server	100.0%	63.42	63.42
Office Equipment	Monitor	100.0%	1.08	1.08
Office Equipment	Printer/Copier/Fax	100.0%	0.37	0.37
Office Equipment	POS Terminal	44.0%	0.17	0.08
Miscellaneous	Non-HVAC Motors	100.0%	6.44	6.44
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	19.62	19.62

Table A-116 Utah Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.2%	4.42	0.23	15,099
Cooling	Water-Cooled Chiller	20.8%	4.26	0.89	58,213
Cooling	RTU	45.2%	4.92	2.22	145,980
Cooling	PTAC	4.3%	5.52	0.24	15,625
Cooling	Evaporative AC	1.9%	1.97	0.04	2,403
Cooling	Air-Source Heat Pump	5.7%	4.92	0.28	18,378
Cooling	Geothermal Heat Pump	1.4%	3.00	0.04	2,828
Heating	Electric Furnace	11.1%	5.43	0.60	39,483
Heating	Electric Zonal Heating	9.5%	5.70	0.54	35,506
Heating	Air-Source Heat Pump	5.7%	4.92	0.28	18,393
Heating	Geothermal Heat Pump	1.4%	4.01	0.06	3,784
Ventilation	Ventilation	100.0%	0.98	0.98	64,739
Water Heating	Water Heating	8.5%	1.86	0.16	10,419
Interior Lighting	Screw-in	100.0%	1.04	1.04	68,361
Interior Lighting	High-Bay Fixtures	100.0%	0.46	0.46	30,558
Interior Lighting	Linear Fluorescent	100.0%	2.54	2.54	166,812
Exterior Lighting	Screw-in	100.0%	0.50	0.50	33,073
Exterior Lighting	HID	100.0%	1.06	1.06	69,499
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08	5,001
Refrigeration	Walk-in Refrigerator	2.3%	1.08	0.03	1,655
Refrigeration	Reach-in Refrigerator	18.6%	0.29	0.05	3,494
Refrigeration	Glass Door Display	2.3%	0.48	0.01	735
Refrigeration	Open Display Case	2.3%	0.40	0.01	606
Refrigeration	Icemaker	21.6%	0.33	0.07	4,632
Refrigeration	Vending Machine	21.6%	0.50	0.11	7,158
Food Preparation	Oven	58.9%	0.09	0.05	3,306
Food Preparation	Fryer	29.9%	0.07	0.02	1,333
Food Preparation	Dishwasher	7.3%	0.19	0.01	901
Food Preparation	Hot Food Container	7.3%	0.02	0.00	110
Office Equipment	Desktop Computer	100.0%	0.25	0.25	16,577
Office Equipment	Laptop	100.0%	0.05	0.05	3,314
Office Equipment	Server	66.0%	0.18	0.12	7,984
Office Equipment	Monitor	100.0%	0.07	0.07	4,576
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	2,350
Office Equipment	POS Terminal	28.0%	0.05	0.01	944
Miscellaneous	Non-HVAC Motors	59.9%	0.21	0.12	8,122
Miscellaneous	Pool Pump	4.0%	0.01	0.00	31
Miscellaneous	Pool Heater	1.0%	0.02	0.00	15
Miscellaneous	Other Miscellaneous	100.0%	0.73	0.73	48,284
<b>Total</b>				<b>14.00</b>	<b>920,281</b>

Table A-117 Utah Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	7.6%	3.46	0.26
Cooling	Water-Cooled Chiller	30.3%	3.38	1.03
Cooling	RTU	65.8%	3.62	2.38
Cooling	PTAC	6.3%	4.22	0.26
Cooling	Evaporative AC	2.7%	1.97	0.05
Cooling	Air-Source Heat Pump	8.3%	4.47	0.37
Cooling	Geothermal Heat Pump	2.1%	2.21	0.05
Heating	Electric Furnace	11.1%	5.43	0.60
Heating	Electric Zonal Heating	9.5%	5.70	0.54
Heating	Air-Source Heat Pump	7.7%	2.97	0.23
Heating	Geothermal Heat Pump	1.9%	2.07	0.04
Ventilation	Ventilation	100.0%	0.56	0.56
Water Heating	Water Heating	8.5%	1.85	0.158
Interior Lighting	Screw-in	100.0%	0.78	0.78
Interior Lighting	High-Bay Fixtures	100.0%	0.62	0.62
Interior Lighting	Linear Fluorescent	100.0%	2.30	2.30
Exterior Lighting	Screw-in	100.0%	0.25	0.25
Exterior Lighting	HID	100.0%	1.17	1.17
Exterior Lighting	Linear Fluorescent	100.0%	0.07	0.07
Refrigeration	Walk-in Refrigerator	3.3%	1.08	0.04
Refrigeration	Reach-in Refrigerator	26.0%	0.29	0.07
Refrigeration	Glass Door Display	3.3%	0.48	0.02
Refrigeration	Open Display Case	3.3%	0.44	0.01
Refrigeration	Icemaker	30.2%	0.22	0.07
Refrigeration	Vending Machine	30.2%	0.49	0.15
Food Preparation	Oven	82.5%	0.08	0.06
Food Preparation	Fryer	41.9%	0.07	0.03
Food Preparation	Dishwasher	10.2%	0.11	0.01
Food Preparation	Hot Food Container	10.2%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.20	0.20
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	82.5%	0.17	0.14
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	33.6%	0.05	0.02
Miscellaneous	Non-HVAC Motors	71.9%	0.21	0.15
Miscellaneous	Pool Pump	4.6%	0.01	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.73	0.73

**Table A-118 Washington Large Office Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	18.5%	3.00	0.56	2,334
Cooling	Water-Cooled Chiller	18.5%	3.28	0.61	2,552
Cooling	RTU	43.6%	3.14	1.37	5,742
Cooling	PTAC	0.6%	3.70	0.02	89
Cooling	Evaporative AC	0.0%	1.26	-	-
Cooling	Air-Source Heat Pump	7.6%	3.14	0.24	997
Cooling	Geothermal Heat Pump	6.5%	1.91	0.12	523
Heating	Electric Furnace	45.0%	5.05	2.27	9,516
Heating	Electric Zonal Heating	2.3%	5.30	0.12	519
Heating	Air-Source Heat Pump	7.6%	4.48	0.34	1,423
Heating	Geothermal Heat Pump	6.5%	3.62	0.24	988
Ventilation	Ventilation	100.0%	3.05	3.05	12,789
Water Heating	Water Heating	68.0%	1.02	0.69	2,904
Interior Lighting	Screw-in	100.0%	0.84	0.84	3,525
Interior Lighting	High-Bay Fixtures	100.0%	0.39	0.39	1,649
Interior Lighting	Linear Fluorescent	100.0%	2.71	2.71	11,340
Exterior Lighting	Screw-in	100.0%	0.09	0.09	364
Exterior Lighting	HID	100.0%	0.23	0.23	982
Exterior Lighting	Linear Fluorescent	100.0%	0.14	0.14	603
Refrigeration	Walk-in Refrigerator	2.0%	0.22	0.00	18
Refrigeration	Reach-in Refrigerator	14.0%	0.06	0.01	34
Refrigeration	Glass Door Display	77.4%	0.10	0.08	315
Refrigeration	Open Display Case	77.4%	0.08	0.06	260
Refrigeration	Icemaker	44.9%	0.07	0.03	124
Refrigeration	Vending Machine	44.9%	0.10	0.05	192
Food Preparation	Oven	66.0%	0.13	0.08	346
Food Preparation	Fryer	76.4%	0.10	0.08	319
Food Preparation	Dishwasher	43.1%	0.27	0.12	496
Food Preparation	Hot Food Container	43.1%	0.03	0.01	61
Office Equipment	Desktop Computer	100.0%	2.04	2.04	8,538
Office Equipment	Laptop	100.0%	0.41	0.41	1,707
Office Equipment	Server	100.0%	0.25	0.25	1,038
Office Equipment	Monitor	100.0%	0.56	0.56	2,357
Office Equipment	Printer/Copier/Fax	100.0%	0.24	0.24	1,009
Office Equipment	POS Terminal	40.0%	0.03	0.01	58
Miscellaneous	Non-HVAC Motors	89.6%	0.27	0.25	1,032
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.11	1.11	4,669
<b>Total</b>				<b>19.42</b>	<b>81,411</b>

Table A-119 Washington Large Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	21.0%	2.70	0.57
Cooling	Water-Cooled Chiller	21.0%	2.94	0.62
Cooling	RTU	49.4%	2.12	1.05
Cooling	PTAC	0.6%	2.81	0.02
Cooling	Evaporative AC	0.0%	1.26	-
Cooling	Air-Source Heat Pump	8.3%	2.62	0.22
Cooling	Geothermal Heat Pump	7.2%	1.29	0.09
Heating	Electric Furnace	45.0%	5.05	2.27
Heating	Electric Zonal Heating	2.3%	5.30	0.12
Heating	Air-Source Heat Pump	8.3%	4.07	0.34
Heating	Geothermal Heat Pump	7.2%	2.66	0.19
Ventilation	Ventilation	100.0%	2.03	2.03
Water Heating	Water Heating	68.0%	1.01	0.690
Interior Lighting	Screw-in	100.0%	0.42	0.42
Interior Lighting	High-Bay Fixtures	100.0%	0.40	0.40
Interior Lighting	Linear Fluorescent	100.0%	2.28	2.28
Exterior Lighting	Screw-in	100.0%	0.05	0.05
Exterior Lighting	HID	100.0%	0.19	0.19
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12
Refrigeration	Walk-in Refrigerator	2.4%	0.22	0.01
Refrigeration	Reach-in Refrigerator	16.8%	0.06	0.01
Refrigeration	Glass Door Display	92.9%	0.10	0.09
Refrigeration	Open Display Case	92.9%	0.09	0.08
Refrigeration	Icemaker	53.9%	0.04	0.02
Refrigeration	Vending Machine	53.9%	0.10	0.05
Food Preparation	Oven	79.2%	0.11	0.09
Food Preparation	Fryer	91.7%	0.10	0.09
Food Preparation	Dishwasher	51.7%	0.17	0.09
Food Preparation	Hot Food Container	51.7%	0.01	0.01
Office Equipment	Desktop Computer	100.0%	1.63	1.63
Office Equipment	Laptop	100.0%	0.33	0.33
Office Equipment	Server	100.0%	0.22	0.22
Office Equipment	Monitor	100.0%	0.46	0.46
Office Equipment	Printer/Copier/Fax	100.0%	0.13	0.13
Office Equipment	POS Terminal	44.0%	0.03	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.25	0.25
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.11	1.11

Table A-120 Washington Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.78	-	-
Cooling	Water-Cooled Chiller	0.0%	4.11	-	-
Cooling	RTU	72.1%	4.30	3.10	38,415
Cooling	PTAC	0.8%	5.07	0.04	532
Cooling	Evaporative AC	0.0%	1.72	-	-
Cooling	Air-Source Heat Pump	11.2%	4.30	0.48	5,946
Cooling	Geothermal Heat Pump	9.6%	2.62	0.25	3,118
Heating	Electric Furnace	21.2%	7.74	1.64	20,309
Heating	Electric Zonal Heating	1.1%	8.13	0.09	1,107
Heating	Air-Source Heat Pump	11.2%	6.83	0.76	9,444
Heating	Geothermal Heat Pump	9.6%	5.29	0.51	6,289
Ventilation	Ventilation	100.0%	1.47	1.47	18,194
Water Heating	Water Heating	60.0%	1.10	0.66	8,200
Interior Lighting	Screw-in	100.0%	0.57	0.57	7,063
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	6,248
Interior Lighting	Linear Fluorescent	100.0%	2.61	2.61	32,261
Exterior Lighting	Screw-in	100.0%	0.19	0.19	2,389
Exterior Lighting	HID	100.0%	0.27	0.27	3,334
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10	1,207
Refrigeration	Walk-in Refrigerator	0.0%	0.74	-	-
Refrigeration	Reach-in Refrigerator	8.8%	0.20	0.02	213
Refrigeration	Glass Door Display	0.0%	0.33	-	-
Refrigeration	Open Display Case	0.0%	0.27	-	-
Refrigeration	Icemaker	5.1%	0.22	0.01	142
Refrigeration	Vending Machine	5.1%	0.17	0.01	109
Food Preparation	Oven	3.6%	0.32	0.01	144
Food Preparation	Fryer	3.6%	0.25	0.01	115
Food Preparation	Dishwasher	3.6%	0.70	0.03	317
Food Preparation	Hot Food Container	3.6%	0.09	0.00	39
Office Equipment	Desktop Computer	100.0%	1.28	1.28	15,806
Office Equipment	Laptop	100.0%	0.26	0.26	3,160
Office Equipment	Server	100.0%	0.47	0.47	5,767
Office Equipment	Monitor	100.0%	0.35	0.35	4,363
Office Equipment	Printer/Copier/Fax	100.0%	0.23	0.23	2,801
Office Equipment	POS Terminal	20.0%	0.13	0.03	321
Miscellaneous	Non-HVAC Motors	22.0%	0.26	0.06	701
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.10	1.10	13,614
<b>Total</b>				<b>17.10</b>	<b>211,668</b>

Table A-121 Washington Small Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	3.57	-
Cooling	Water-Cooled Chiller	0.0%	3.68	-
Cooling	RTU	86.3%	2.75	2.38
Cooling	PTAC	1.0%	3.84	0.04
Cooling	Evaporative AC	0.0%	1.72	-
Cooling	Air-Source Heat Pump	13.4%	3.40	0.45
Cooling	Geothermal Heat Pump	11.5%	1.67	0.19
Heating	Electric Furnace	21.2%	7.74	1.64
Heating	Electric Zonal Heating	1.1%	8.13	0.09
Heating	Air-Source Heat Pump	13.4%	4.88	0.65
Heating	Geothermal Heat Pump	11.5%	2.99	0.34
Ventilation	Ventilation	100.0%	0.72	0.72
Water Heating	Water Heating	60.0%	1.10	0.659
Interior Lighting	Screw-in	100.0%	0.32	0.32
Interior Lighting	High-Bay Fixtures	100.0%	0.38	0.38
Interior Lighting	Linear Fluorescent	100.0%	1.64	1.64
Exterior Lighting	Screw-in	100.0%	0.16	0.16
Exterior Lighting	HID	100.0%	0.26	0.26
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08
Refrigeration	Walk-in Refrigerator	0.0%	0.74	-
Refrigeration	Reach-in Refrigerator	10.5%	0.20	0.02
Refrigeration	Glass Door Display	0.0%	0.33	-
Refrigeration	Open Display Case	0.0%	0.30	-
Refrigeration	Icemaker	6.1%	0.13	0.01
Refrigeration	Vending Machine	6.1%	0.17	0.01
Food Preparation	Oven	4.6%	0.29	0.01
Food Preparation	Fryer	4.6%	0.25	0.01
Food Preparation	Dishwasher	4.6%	0.42	0.02
Food Preparation	Hot Food Container	4.6%	0.03	0.00
Office Equipment	Desktop Computer	100.0%	1.02	1.02
Office Equipment	Laptop	100.0%	0.20	0.20
Office Equipment	Server	100.0%	0.42	0.42
Office Equipment	Monitor	100.0%	0.29	0.29
Office Equipment	Printer/Copier/Fax	100.0%	0.12	0.12
Office Equipment	POS Terminal	22.0%	0.12	0.03
Miscellaneous	Non-HVAC Motors	24.2%	0.23	0.06
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.10	1.10

Table A-122 Washington Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	12.4%	3.16	0.39	1,229
Cooling	Water-Cooled Chiller	3.1%	3.44	0.11	334
Cooling	RTU	70.6%	3.60	2.54	7,979
Cooling	PTAC	1.1%	4.24	0.05	150
Cooling	Evaporative AC	2.5%	1.44	0.04	114
Cooling	Air-Source Heat Pump	2.3%	3.60	0.08	254
Cooling	Geothermal Heat Pump	1.8%	2.19	0.04	123
Heating	Electric Furnace	39.6%	6.56	2.60	8,167
Heating	Electric Zonal Heating	3.4%	6.89	0.23	733
Heating	Air-Source Heat Pump	2.3%	5.78	0.13	409
Heating	Geothermal Heat Pump	1.8%	4.52	0.08	253
Ventilation	Ventilation	100.0%	1.44	1.44	4,529
Water Heating	Water Heating	63.0%	1.17	0.74	2,310
Interior Lighting	Screw-in	100.0%	1.85	1.85	5,825
Interior Lighting	High-Bay Fixtures	100.0%	1.96	1.96	6,166
Interior Lighting	Linear Fluorescent	100.0%	4.99	4.99	15,681
Exterior Lighting	Screw-in	100.0%	0.26	0.26	812
Exterior Lighting	HID	100.0%	0.64	0.64	2,022
Exterior Lighting	Linear Fluorescent	100.0%	0.32	0.32	1,019
Refrigeration	Walk-in Refrigerator	2.0%	0.74	0.01	47
Refrigeration	Reach-in Refrigerator	14.0%	0.20	0.03	86
Refrigeration	Glass Door Display	81.7%	0.33	0.27	848
Refrigeration	Open Display Case	81.7%	0.27	0.22	700
Refrigeration	Icemaker	52.4%	0.45	0.24	738
Refrigeration	Vending Machine	52.4%	0.35	0.18	570
Food Preparation	Oven	48.9%	0.33	0.16	510
Food Preparation	Fryer	45.2%	0.26	0.12	375
Food Preparation	Dishwasher	39.6%	0.73	0.29	906
Food Preparation	Hot Food Container	39.6%	0.09	0.04	111
Office Equipment	Desktop Computer	100.0%	0.38	0.38	1,198
Office Equipment	Laptop	100.0%	0.08	0.08	239
Office Equipment	Server	82.0%	0.07	0.06	179
Office Equipment	Monitor	100.0%	0.11	0.11	331
Office Equipment	Printer/Copier/Fax	100.0%	0.07	0.07	212
Office Equipment	POS Terminal	100.0%	0.01	0.01	37
Miscellaneous	Non-HVAC Motors	40.2%	0.36	0.14	455
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.36	1.36	4,286
<b>Total</b>				<b>22.26</b>	<b>69,939</b>



**Table A-123 Washington Large Retail New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.1%	2.63	0.42
Cooling	Water-Cooled Chiller	4.0%	2.79	0.11
Cooling	RTU	91.8%	2.73	2.50
Cooling	PTAC	1.5%	3.20	0.05
Cooling	Evaporative AC	3.3%	1.44	0.05
Cooling	Air-Source Heat Pump	2.9%	2.78	0.08
Cooling	Geothermal Heat Pump	2.3%	1.64	0.04
Heating	Electric Furnace	39.6%	6.56	2.60
Heating	Electric Zonal Heating	3.4%	6.89	0.23
Heating	Air-Source Heat Pump	2.9%	3.26	0.10
Heating	Geothermal Heat Pump	2.3%	2.17	0.05
Ventilation	Ventilation	100.0%	0.72	0.72
Water Heating	Water Heating	63.0%	1.16	0.732
Interior Lighting	Screw-in	100.0%	0.82	0.82
Interior Lighting	High-Bay Fixtures	100.0%	1.48	1.48
Interior Lighting	Linear Fluorescent	100.0%	3.61	3.61
Exterior Lighting	Screw-in	100.0%	0.12	0.12
Exterior Lighting	HID	100.0%	0.52	0.52
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28
Refrigeration	Walk-in Refrigerator	3.0%	0.74	0.02
Refrigeration	Reach-in Refrigerator	21.0%	0.20	0.04
Refrigeration	Glass Door Display	100.0%	0.33	0.33
Refrigeration	Open Display Case	100.0%	0.30	0.30
Refrigeration	Icemaker	78.6%	0.25	0.20
Refrigeration	Vending Machine	78.6%	0.32	0.25
Food Preparation	Oven	73.4%	0.30	0.22
Food Preparation	Fryer	67.8%	0.26	0.17
Food Preparation	Dishwasher	59.4%	0.44	0.26
Food Preparation	Hot Food Container	59.4%	0.03	0.02
Office Equipment	Desktop Computer	100.0%	0.30	0.30
Office Equipment	Laptop	100.0%	0.06	0.06
Office Equipment	Server	98.4%	0.06	0.06
Office Equipment	Monitor	100.0%	0.09	0.09
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	48.2%	0.32	0.16
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.36	1.36

Table A-124 Washington Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.00	-	-
Cooling	Water-Cooled Chiller	0.0%	3.26	-	-
Cooling	RTU	69.5%	3.41	2.37	20,351
Cooling	PTAC	3.3%	4.01	0.13	1,144
Cooling	Evaporative AC	7.5%	1.36	0.10	875
Cooling	Air-Source Heat Pump	6.6%	3.41	0.23	1,943
Cooling	Geothermal Heat Pump	5.3%	2.08	0.11	937
Heating	Electric Furnace	19.3%	5.79	1.12	9,588
Heating	Electric Zonal Heating	1.6%	6.08	0.10	861
Heating	Air-Source Heat Pump	6.6%	5.11	0.34	2,912
Heating	Geothermal Heat Pump	5.3%	3.95	0.21	1,784
Ventilation	Ventilation	100.0%	1.13	1.13	9,731
Water Heating	Water Heating	61.8%	0.85	0.53	4,515
Interior Lighting	Screw-in	100.0%	0.98	0.98	8,403
Interior Lighting	High-Bay Fixtures	100.0%	1.04	1.04	8,896
Interior Lighting	Linear Fluorescent	100.0%	2.64	2.64	22,621
Exterior Lighting	Screw-in	100.0%	0.16	0.16	1,413
Exterior Lighting	HID	100.0%	0.41	0.41	3,516
Exterior Lighting	Linear Fluorescent	100.0%	0.21	0.21	1,772
Refrigeration	Walk-in Refrigerator	0.0%	0.26	-	-
Refrigeration	Reach-in Refrigerator	5.4%	0.07	0.00	31
Refrigeration	Glass Door Display	5.4%	0.11	0.01	53
Refrigeration	Open Display Case	5.4%	0.09	0.01	44
Refrigeration	Icemaker	5.1%	0.16	0.01	68
Refrigeration	Vending Machine	5.1%	0.12	0.01	53
Food Preparation	Oven	3.6%	0.25	0.01	77
Food Preparation	Fryer	3.6%	0.20	0.01	61
Food Preparation	Dishwasher	3.6%	0.54	0.02	169
Food Preparation	Hot Food Container	3.6%	0.07	0.00	21
Office Equipment	Desktop Computer	100.0%	0.08	0.08	675
Office Equipment	Laptop	100.0%	0.02	0.02	135
Office Equipment	Server	100.0%	0.11	0.11	986
Office Equipment	Monitor	100.0%	0.02	0.02	186
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	96
Office Equipment	POS Terminal	100.0%	0.03	0.03	275
Miscellaneous	Non-HVAC Motors	22.0%	0.18	0.04	336
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.76	0.76	6,526
<b>Total</b>				<b>12.94</b>	<b>111,051</b>

Table A-125 Washington Small Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	2.49	-
Cooling	Water-Cooled Chiller	0.0%	2.65	-
Cooling	RTU	90.4%	2.61	2.36
Cooling	PTAC	4.3%	3.03	0.13
Cooling	Evaporative AC	9.7%	1.36	0.13
Cooling	Air-Source Heat Pump	8.6%	2.67	0.23
Cooling	Geothermal Heat Pump	6.8%	1.57	0.11
Heating	Electric Furnace	19.3%	5.79	1.12
Heating	Electric Zonal Heating	1.6%	6.08	0.10
Heating	Air-Source Heat Pump	8.6%	2.49	0.21
Heating	Geothermal Heat Pump	6.8%	1.63	0.11
Ventilation	Ventilation	100.0%	0.63	0.63
Water Heating	Water Heating	61.8%	0.81	0.503
Interior Lighting	Screw-in	100.0%	0.51	0.51
Interior Lighting	High-Bay Fixtures	100.0%	0.92	0.92
Interior Lighting	Linear Fluorescent	100.0%	2.24	2.24
Exterior Lighting	Screw-in	100.0%	0.08	0.08
Exterior Lighting	HID	100.0%	0.33	0.33
Exterior Lighting	Linear Fluorescent	100.0%	0.18	0.18
Refrigeration	Walk-in Refrigerator	0.0%	0.26	-
Refrigeration	Reach-in Refrigerator	8.0%	0.07	0.01
Refrigeration	Glass Door Display	8.0%	0.11	0.01
Refrigeration	Open Display Case	8.0%	0.10	0.01
Refrigeration	Icemaker	7.7%	0.09	0.01
Refrigeration	Vending Machine	7.7%	0.11	0.01
Food Preparation	Oven	5.5%	0.22	0.01
Food Preparation	Fryer	5.5%	0.19	0.01
Food Preparation	Dishwasher	5.5%	0.32	0.02
Food Preparation	Hot Food Container	5.5%	0.02	0.00
Office Equipment	Desktop Computer	100.0%	0.06	0.06
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.10	0.10
Office Equipment	Monitor	100.0%	0.02	0.02
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	26.4%	0.16	0.04
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.76	0.76

Table A-126 Washington Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.3%	3.97	0.01	17
Cooling	Water-Cooled Chiller	0.0%	3.99	-	-
Cooling	RTU	77.3%	4.53	3.50	5,316
Cooling	PTAC	0.1%	5.33	0.01	8
Cooling	Evaporative AC	6.6%	1.81	0.12	181
Cooling	Air-Source Heat Pump	6.6%	4.53	0.30	457
Cooling	Geothermal Heat Pump	3.3%	2.76	0.09	139
Heating	Electric Furnace	2.2%	5.48	0.12	184
Heating	Electric Zonal Heating	24.3%	5.76	1.40	2,128
Heating	Air-Source Heat Pump	6.6%	4.01	0.27	404
Heating	Geothermal Heat Pump	3.3%	2.84	0.09	143
Ventilation	Ventilation	100.0%	2.38	2.38	3,612
Water Heating	Water Heating	57.9%	7.04	4.08	6,197
Interior Lighting	Screw-in	100.0%	2.66	2.66	4,049
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	764
Interior Lighting	Linear Fluorescent	100.0%	4.32	4.32	6,564
Exterior Lighting	Screw-in	100.0%	0.27	0.27	416
Exterior Lighting	HID	100.0%	1.95	1.95	2,956
Exterior Lighting	Linear Fluorescent	100.0%	0.56	0.56	854
Refrigeration	Walk-in Refrigerator	74.0%	7.48	5.54	8,415
Refrigeration	Reach-in Refrigerator	7.0%	3.95	0.28	420
Refrigeration	Glass Door Display	5.2%	3.32	0.17	263
Refrigeration	Open Display Case	5.2%	2.74	0.14	217
Refrigeration	Icemaker	97.3%	2.26	2.19	3,334
Refrigeration	Vending Machine	97.3%	1.74	1.70	2,577
Food Preparation	Oven	15.2%	10.64	1.62	2,458
Food Preparation	Fryer	8.9%	8.46	0.75	1,143
Food Preparation	Dishwasher	52.5%	11.68	6.13	9,319
Food Preparation	Hot Food Container	52.5%	1.43	0.75	1,143
Office Equipment	Desktop Computer	100.0%	0.27	0.27	411
Office Equipment	Laptop	100.0%	0.04	0.04	66
Office Equipment	Server	50.0%	0.39	0.20	300
Office Equipment	Monitor	100.0%	0.07	0.07	113
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	116
Office Equipment	POS Terminal	100.0%	0.11	0.11	167
Miscellaneous	Non-HVAC Motors	20.0%	0.50	0.10	153
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.02	2.02	3,067
<b>Total</b>				<b>44.80</b>	<b>68,070</b>

**Table A-127 Washington Restaurant New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.3%	3.76	0.01
Cooling	Water-Cooled Chiller	0.0%	3.64	-
Cooling	RTU	92.5%	3.43	3.17
Cooling	PTAC	0.1%	3.77	0.00
Cooling	Evaporative AC	7.9%	1.81	0.14
Cooling	Air-Source Heat Pump	8.0%	3.50	0.28
Cooling	Geothermal Heat Pump	4.0%	2.09	0.08
Heating	Electric Furnace	2.2%	5.48	0.12
Heating	Electric Zonal Heating	24.3%	5.76	1.40
Heating	Air-Source Heat Pump	8.0%	3.22	0.26
Heating	Geothermal Heat Pump	4.0%	2.12	0.08
Ventilation	Ventilation	100.0%	1.65	1.65
Water Heating	Water Heating	60.8%	7.01	4.263
Interior Lighting	Screw-in	100.0%	1.18	1.18
Interior Lighting	High-Bay Fixtures	100.0%	0.43	0.43
Interior Lighting	Linear Fluorescent	100.0%	2.83	2.83
Exterior Lighting	Screw-in	100.0%	0.20	0.20
Exterior Lighting	HID	100.0%	1.63	1.63
Exterior Lighting	Linear Fluorescent	100.0%	0.46	0.46
Refrigeration	Walk-in Refrigerator	76.1%	7.46	5.68
Refrigeration	Reach-in Refrigerator	7.2%	3.95	0.28
Refrigeration	Glass Door Display	5.3%	3.32	0.18
Refrigeration	Open Display Case	5.3%	3.02	0.16
Refrigeration	Icemaker	100.0%	1.28	1.28
Refrigeration	Vending Machine	100.0%	1.60	1.60
Food Preparation	Oven	28.9%	9.53	2.76
Food Preparation	Fryer	16.9%	8.24	1.40
Food Preparation	Dishwasher	100.0%	7.02	7.02
Food Preparation	Hot Food Container	100.0%	0.51	0.51
Office Equipment	Desktop Computer	100.0%	0.22	0.22
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Server	55.0%	0.35	0.19
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.10	0.10
Miscellaneous	Non-HVAC Motors	24.0%	0.45	0.11
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.02	2.02

Table A-128 Washington Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	6.2%	3.34	0.21	435
Cooling	Water-Cooled Chiller	0.0%	3.63	-	-
Cooling	RTU	81.7%	3.80	3.11	6,498
Cooling	PTAC	0.0%	4.48	-	-
Cooling	Evaporative AC	0.0%	1.52	-	-
Cooling	Air-Source Heat Pump	3.7%	3.48	0.13	267
Cooling	Geothermal Heat Pump	0.0%	1.18	-	-
Heating	Electric Furnace	2.1%	4.96	0.11	222
Heating	Electric Zonal Heating	11.6%	5.20	0.60	1,263
Heating	Air-Source Heat Pump	3.7%	2.67	0.10	205
Heating	Geothermal Heat Pump	0.0%	1.86	-	-
Ventilation	Ventilation	100.0%	1.83	1.83	3,831
Water Heating	Water Heating	62.5%	1.92	1.20	2,515
Interior Lighting	Screw-in	100.0%	1.47	1.47	3,076
Interior Lighting	High-Bay Fixtures	100.0%	1.92	1.92	4,022
Interior Lighting	Linear Fluorescent	100.0%	5.89	5.89	12,320
Exterior Lighting	Screw-in	100.0%	0.06	0.06	133
Exterior Lighting	HID	100.0%	0.66	0.66	1,384
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28	584
Refrigeration	Walk-in Refrigerator	16.0%	8.29	1.33	2,775
Refrigeration	Reach-in Refrigerator	83.1%	0.63	0.52	1,086
Refrigeration	Glass Door Display	94.9%	10.52	9.99	20,893
Refrigeration	Open Display Case	94.9%	8.68	8.24	17,233
Refrigeration	Icemaker	98.9%	0.36	0.35	739
Refrigeration	Vending Machine	98.9%	0.55	0.55	1,141
Food Preparation	Oven	54.4%	0.66	0.36	755
Food Preparation	Fryer	61.0%	0.53	0.32	672
Food Preparation	Dishwasher	54.9%	1.46	0.80	1,670
Food Preparation	Hot Food Container	54.9%	0.18	0.10	205
Office Equipment	Desktop Computer	100.0%	0.11	0.11	239
Office Equipment	Laptop	64.0%	0.02	0.01	31
Office Equipment	Server	100.0%	0.08	0.08	174
Office Equipment	Monitor	100.0%	0.03	0.03	66
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	34
Office Equipment	POS Terminal	100.0%	0.06	0.06	121
Miscellaneous	Non-HVAC Motors	34.6%	0.59	0.20	426
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.86	1.86	3,897
<b>Total</b>				<b>42.50</b>	<b>88,912</b>

**Table A-129 Washington Grocery New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	6.5%	2.79	0.18
Cooling	Water-Cooled Chiller	0.0%	2.95	-
Cooling	RTU	85.8%	1.86	1.60
Cooling	PTAC	0.0%	3.16	-
Cooling	Evaporative AC	0.0%	1.52	-
Cooling	Air-Source Heat Pump	3.7%	1.56	0.06
Cooling	Geothermal Heat Pump	0.0%	0.19	-
Heating	Electric Furnace	2.1%	4.96	0.11
Heating	Electric Zonal Heating	11.6%	5.20	0.60
Heating	Air-Source Heat Pump	3.7%	1.94	0.07
Heating	Geothermal Heat Pump	0.0%	1.32	-
Ventilation	Ventilation	100.0%	1.25	1.25
Water Heating	Water Heating	62.5%	1.91	1.197
Interior Lighting	Screw-in	100.0%	1.13	1.13
Interior Lighting	High-Bay Fixtures	100.0%	1.71	1.71
Interior Lighting	Linear Fluorescent	100.0%	4.84	4.84
Exterior Lighting	Screw-in	100.0%	0.07	0.07
Exterior Lighting	HID	100.0%	0.57	0.57
Exterior Lighting	Linear Fluorescent	100.0%	0.23	0.23
Refrigeration	Walk-in Refrigerator	16.2%	8.27	1.34
Refrigeration	Reach-in Refrigerator	84.0%	0.63	0.53
Refrigeration	Glass Door Display	96.0%	10.52	10.10
Refrigeration	Open Display Case	96.0%	9.55	9.17
Refrigeration	Icemaker	100.0%	0.24	0.24
Refrigeration	Vending Machine	100.0%	0.54	0.54
Food Preparation	Oven	76.2%	0.59	0.45
Food Preparation	Fryer	85.4%	0.51	0.44
Food Preparation	Dishwasher	76.8%	0.87	0.67
Food Preparation	Hot Food Container	76.8%	0.06	0.05
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	70.4%	0.02	0.01
Office Equipment	Server	100.0%	0.07	0.07
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	41.6%	0.53	0.22
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.86	1.86

Table A-130 Washington Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.2%	5.88	1.01	3,095
Cooling	Water-Cooled Chiller	68.7%	7.48	5.14	15,759
Cooling	RTU	11.3%	5.85	0.66	2,025
Cooling	PTAC	0.4%	6.89	0.03	84
Cooling	Evaporative AC	0.0%	2.34	-	-
Cooling	Air-Source Heat Pump	0.6%	5.84	0.03	106
Cooling	Geothermal Heat Pump	0.9%	3.55	0.03	97
Heating	Electric Furnace	0.1%	16.07	0.01	37
Heating	Electric Zonal Heating	3.6%	16.87	0.61	1,883
Heating	Air-Source Heat Pump	0.6%	10.99	0.07	200
Heating	Geothermal Heat Pump	0.9%	7.75	0.07	212
Ventilation	Ventilation	100.0%	5.38	5.38	16,511
Water Heating	Water Heating	22.3%	5.38	1.20	3,676
Interior Lighting	Screw-in	100.0%	1.96	1.96	5,996
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	1,533
Interior Lighting	Linear Fluorescent	100.0%	4.68	4.68	14,344
Exterior Lighting	Screw-in	100.0%	0.02	0.02	66
Exterior Lighting	HID	100.0%	0.26	0.26	801
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08	256
Refrigeration	Walk-in Refrigerator	33.0%	0.43	0.14	438
Refrigeration	Reach-in Refrigerator	50.0%	0.11	0.06	175
Refrigeration	Glass Door Display	90.4%	0.19	0.17	533
Refrigeration	Open Display Case	90.4%	0.16	0.14	440
Refrigeration	Icemaker	90.4%	0.26	0.24	724
Refrigeration	Vending Machine	90.4%	0.20	0.18	559
Food Preparation	Oven	69.7%	1.10	0.76	2,345
Food Preparation	Fryer	80.7%	0.87	0.70	2,157
Food Preparation	Dishwasher	53.5%	2.41	1.29	3,948
Food Preparation	Hot Food Container	53.5%	0.30	0.16	484
Office Equipment	Desktop Computer	100.0%	0.58	0.58	1,784
Office Equipment	Laptop	100.0%	0.05	0.05	143
Office Equipment	Server	100.0%	0.08	0.08	260
Office Equipment	Monitor	100.0%	0.16	0.16	492
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	253
Office Equipment	POS Terminal	100.0%	0.06	0.06	181
Miscellaneous	Non-HVAC Motors	74.1%	0.60	0.44	1,357
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	4.65	4.65	14,249
<b>Total</b>				<b>31.70</b>	<b>97,205</b>



**Table A-131** *Washington Health New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	17.2%	3.90	0.67
Cooling	Water-Cooled Chiller	68.7%	5.32	3.66
Cooling	RTU	11.3%	5.06	0.57
Cooling	PTAC	0.4%	5.23	0.02
Cooling	Evaporative AC	0.0%	2.34	-
Cooling	Air-Source Heat Pump	0.6%	6.25	0.04
Cooling	Geothermal Heat Pump	0.9%	3.09	0.03
Heating	Electric Furnace	0.1%	16.07	0.01
Heating	Electric Zonal Heating	3.6%	16.87	0.61
Heating	Air-Source Heat Pump	0.6%	5.16	0.03
Heating	Geothermal Heat Pump	0.9%	2.79	0.02
Ventilation	Ventilation	100.0%	2.40	2.40
Water Heating	Water Heating	22.3%	5.35	1.193
Interior Lighting	Screw-in	100.0%	1.26	1.26
Interior Lighting	High-Bay Fixtures	100.0%	0.49	0.49
Interior Lighting	Linear Fluorescent	100.0%	3.83	3.83
Exterior Lighting	Screw-in	100.0%	0.01	0.01
Exterior Lighting	HID	100.0%	0.21	0.21
Exterior Lighting	Linear Fluorescent	100.0%	0.07	0.07
Refrigeration	Walk-in Refrigerator	36.3%	0.43	0.16
Refrigeration	Reach-in Refrigerator	55.0%	0.11	0.06
Refrigeration	Glass Door Display	99.4%	0.19	0.19
Refrigeration	Open Display Case	99.4%	0.17	0.17
Refrigeration	Icemaker	99.4%	0.15	0.15
Refrigeration	Vending Machine	99.4%	0.20	0.20
Food Preparation	Oven	97.6%	0.98	0.96
Food Preparation	Fryer	100.0%	0.85	0.85
Food Preparation	Dishwasher	74.9%	1.45	1.08
Food Preparation	Hot Food Container	74.9%	0.10	0.08
Office Equipment	Desktop Computer	100.0%	0.46	0.46
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.13	0.13
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	88.9%	0.54	0.48
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	4.65	4.65

Table A-132 Washington College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	48.7%	4.10	2.00	6,177
Cooling	Water-Cooled Chiller	12.2%	5.15	0.63	1,939
Cooling	RTU	28.8%	2.40	0.69	2,137
Cooling	PTAC	0.0%	2.83	-	-
Cooling	Evaporative AC	0.0%	0.96	-	-
Cooling	Air-Source Heat Pump	5.1%	2.40	0.12	378
Cooling	Geothermal Heat Pump	0.0%	1.46	-	-
Heating	Electric Furnace	19.5%	9.99	1.95	6,031
Heating	Electric Zonal Heating	0.0%	10.49	-	-
Heating	Air-Source Heat Pump	5.1%	7.00	0.36	1,101
Heating	Geothermal Heat Pump	0.0%	5.26	-	-
Ventilation	Ventilation	100.0%	1.86	1.86	5,745
Water Heating	Water Heating	34.5%	2.54	0.88	2,707
Interior Lighting	Screw-in	100.0%	0.38	0.38	1,187
Interior Lighting	High-Bay Fixtures	100.0%	0.33	0.33	1,022
Interior Lighting	Linear Fluorescent	100.0%	2.09	2.09	6,457
Exterior Lighting	Screw-in	100.0%	0.00	0.00	7
Exterior Lighting	HID	100.0%	0.09	0.09	272
Exterior Lighting	Linear Fluorescent	100.0%	0.31	0.31	958
Refrigeration	Walk-in Refrigerator	7.7%	0.26	0.02	62
Refrigeration	Reach-in Refrigerator	13.4%	0.14	0.02	57
Refrigeration	Glass Door Display	26.6%	0.12	0.03	96
Refrigeration	Open Display Case	26.6%	0.10	0.03	79
Refrigeration	Icemaker	26.6%	0.16	0.04	130
Refrigeration	Vending Machine	26.6%	0.12	0.03	100
Food Preparation	Oven	21.0%	0.42	0.09	272
Food Preparation	Fryer	21.0%	0.33	0.07	216
Food Preparation	Dishwasher	21.0%	0.92	0.19	597
Food Preparation	Hot Food Container	21.0%	0.11	0.02	73
Office Equipment	Desktop Computer	100.0%	0.51	0.51	1,587
Office Equipment	Laptop	100.0%	0.03	0.03	95
Office Equipment	Server	100.0%	0.07	0.07	232
Office Equipment	Monitor	100.0%	0.14	0.14	438
Office Equipment	Printer/Copier/Fax	100.0%	0.09	0.09	281
Office Equipment	POS Terminal	100.0%	0.03	0.03	81
Miscellaneous	Non-HVAC Motors	88.8%	0.16	0.14	439
Miscellaneous	Pool Pump	90.3%	0.02	0.01	46
Miscellaneous	Pool Heater	36.2%	0.03	0.01	35
Miscellaneous	Other Miscellaneous	100.0%	0.71	0.71	2,200
<b>Total</b>				<b>14.00</b>	<b>43,234</b>

Table A-133 Washington College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	55.2%	2.16	1.20
Cooling	Water-Cooled Chiller	13.8%	2.20	0.30
Cooling	RTU	32.6%	1.71	0.56
Cooling	PTAC	0.0%	2.18	-
Cooling	Evaporative AC	0.0%	0.96	-
Cooling	Air-Source Heat Pump	5.8%	1.75	0.10
Cooling	Geothermal Heat Pump	0.0%	1.04	-
Heating	Electric Furnace	19.5%	9.99	1.95
Heating	Electric Zonal Heating	0.0%	10.49	-
Heating	Air-Source Heat Pump	5.8%	5.31	0.31
Heating	Geothermal Heat Pump	0.0%	3.57	-
Ventilation	Ventilation	100.0%	0.94	0.94
Water Heating	Water Heating	34.5%	2.53	0.873
Interior Lighting	Screw-in	100.0%	0.20	0.20
Interior Lighting	High-Bay Fixtures	100.0%	0.34	0.34
Interior Lighting	Linear Fluorescent	100.0%	1.74	1.74
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.08	0.08
Exterior Lighting	Linear Fluorescent	100.0%	0.26	0.26
Refrigeration	Walk-in Refrigerator	10.8%	0.26	0.03
Refrigeration	Reach-in Refrigerator	18.7%	0.14	0.03
Refrigeration	Glass Door Display	37.2%	0.12	0.04
Refrigeration	Open Display Case	37.2%	0.11	0.04
Refrigeration	Icemaker	37.2%	0.09	0.03
Refrigeration	Vending Machine	37.2%	0.12	0.04
Food Preparation	Oven	29.5%	0.37	0.11
Food Preparation	Fryer	29.5%	0.32	0.10
Food Preparation	Dishwasher	29.5%	0.55	0.16
Food Preparation	Hot Food Container	29.5%	0.04	0.01
Office Equipment	Desktop Computer	100.0%	0.41	0.41
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.07	0.07
Office Equipment	Monitor	100.0%	0.12	0.12
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.14	0.14
Miscellaneous	Pool Pump	100.0%	0.02	0.02
Miscellaneous	Pool Heater	43.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.71	0.71

Table A-134 Washington School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	38.7%	1.87	0.72	6,292
Cooling	Water-Cooled Chiller	9.7%	2.35	0.23	1,975
Cooling	RTU	26.0%	1.10	0.29	2,477
Cooling	PTAC	0.0%	1.29	-	-
Cooling	Evaporative AC	0.0%	0.44	-	-
Cooling	Air-Source Heat Pump	5.0%	1.10	0.05	476
Cooling	Geothermal Heat Pump	4.0%	0.67	0.03	232
Heating	Electric Furnace	16.0%	5.93	0.95	8,236
Heating	Electric Zonal Heating	0.0%	6.23	-	-
Heating	Air-Source Heat Pump	5.0%	4.15	0.21	1,802
Heating	Geothermal Heat Pump	4.0%	3.12	0.12	1,084
Ventilation	Ventilation	100.0%	0.82	0.82	7,099
Water Heating	Water Heating	50.0%	1.14	0.57	4,942
Interior Lighting	Screw-in	100.0%	0.36	0.36	3,105
Interior Lighting	High-Bay Fixtures	100.0%	0.32	0.32	2,770
Interior Lighting	Linear Fluorescent	100.0%	2.36	2.36	20,483
Exterior Lighting	Screw-in	100.0%	0.00	0.00	29
Exterior Lighting	HID	100.0%	0.13	0.13	1,149
Exterior Lighting	Linear Fluorescent	100.0%	0.75	0.75	6,475
Refrigeration	Walk-in Refrigerator	19.0%	0.25	0.05	420
Refrigeration	Reach-in Refrigerator	33.0%	0.13	0.04	385
Refrigeration	Glass Door Display	65.7%	0.11	0.07	645
Refrigeration	Open Display Case	65.7%	0.09	0.06	532
Refrigeration	Icemaker	65.7%	0.15	0.10	875
Refrigeration	Vending Machine	65.7%	0.12	0.08	676
Food Preparation	Oven	64.8%	0.18	0.12	1,030
Food Preparation	Fryer	58.6%	0.15	0.09	740
Food Preparation	Dishwasher	52.3%	0.40	0.21	1,826
Food Preparation	Hot Food Container	52.3%	0.05	0.03	224
Office Equipment	Desktop Computer	100.0%	0.29	0.29	2,559
Office Equipment	Laptop	100.0%	0.02	0.02	205
Office Equipment	Server	100.0%	0.09	0.09	747
Office Equipment	Monitor	100.0%	0.08	0.08	707
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	363
Office Equipment	POS Terminal	36.0%	0.01	0.00	37
Miscellaneous	Non-HVAC Motors	43.7%	0.12	0.05	457
Miscellaneous	Pool Pump	6.0%	0.02	0.00	13
Miscellaneous	Pool Heater	1.0%	0.02	0.00	2
Miscellaneous	Other Miscellaneous	100.0%	0.56	0.56	4,883
<b>Total</b>				<b>9.90</b>	<b>85,953</b>

Table A-135 Washington School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	40.6%	0.99	0.40
Cooling	Water-Cooled Chiller	10.2%	1.00	0.10
Cooling	RTU	28.6%	0.78	0.22
Cooling	PTAC	0.0%	1.00	-
Cooling	Evaporative AC	0.0%	0.44	-
Cooling	Air-Source Heat Pump	6.0%	0.80	0.05
Cooling	Geothermal Heat Pump	4.8%	0.48	0.02
Heating	Electric Furnace	16.0%	5.93	0.95
Heating	Electric Zonal Heating	0.0%	6.23	-
Heating	Air-Source Heat Pump	6.0%	3.15	0.19
Heating	Geothermal Heat Pump	4.8%	2.12	0.10
Ventilation	Ventilation	100.0%	0.41	0.41
Water Heating	Water Heating	50.0%	1.13	0.567
Interior Lighting	Screw-in	100.0%	0.14	0.14
Interior Lighting	High-Bay Fixtures	100.0%	0.29	0.29
Interior Lighting	Linear Fluorescent	100.0%	1.75	1.75
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.13	0.13
Exterior Lighting	Linear Fluorescent	100.0%	0.63	0.63
Refrigeration	Walk-in Refrigerator	26.6%	0.25	0.07
Refrigeration	Reach-in Refrigerator	46.2%	0.13	0.06
Refrigeration	Glass Door Display	92.0%	0.11	0.10
Refrigeration	Open Display Case	92.0%	0.10	0.09
Refrigeration	Icemaker	92.0%	0.09	0.08
Refrigeration	Vending Machine	92.0%	0.12	0.11
Food Preparation	Oven	90.7%	0.16	0.15
Food Preparation	Fryer	82.0%	0.14	0.12
Food Preparation	Dishwasher	73.3%	0.24	0.18
Food Preparation	Hot Food Container	73.3%	0.02	0.01
Office Equipment	Desktop Computer	100.0%	0.24	0.24
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.07	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	48.0%	0.11	0.05
Miscellaneous	Pool Pump	7.2%	0.02	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.56	0.56

Table A-136 Washington Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.0%	0.86	0.04	67
Cooling	Water-Cooled Chiller	20.0%	1.09	0.22	342
Cooling	RTU	9.1%	2.68	0.24	383
Cooling	PTAC	30.9%	3.16	0.97	1,528
Cooling	Evaporative AC	0.0%	1.07	-	-
Cooling	Air-Source Heat Pump	19.8%	2.68	0.53	831
Cooling	Geothermal Heat Pump	2.8%	2.53	0.07	111
Heating	Electric Furnace	46.6%	4.35	2.03	3,176
Heating	Electric Zonal Heating	1.3%	4.56	0.06	94
Heating	Air-Source Heat Pump	19.8%	4.06	0.80	1,259
Heating	Geothermal Heat Pump	2.8%	2.87	0.08	126
Ventilation	Ventilation	100.0%	1.46	1.46	2,296
Water Heating	Water Heating	50.0%	4.97	2.48	3,892
Interior Lighting	Screw-in	100.0%	3.78	3.78	5,932
Interior Lighting	High-Bay Fixtures	100.0%	0.27	0.27	430
Interior Lighting	Linear Fluorescent	100.0%	1.06	1.06	1,657
Exterior Lighting	Screw-in	100.0%	0.19	0.19	297
Exterior Lighting	HID	100.0%	0.74	0.74	1,160
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05	81
Refrigeration	Walk-in Refrigerator	3.0%	0.87	0.03	41
Refrigeration	Reach-in Refrigerator	19.0%	0.23	0.04	69
Refrigeration	Glass Door Display	58.9%	0.39	0.23	358
Refrigeration	Open Display Case	58.9%	0.32	0.19	295
Refrigeration	Icemaker	58.9%	0.26	0.15	243
Refrigeration	Vending Machine	58.9%	0.41	0.24	375
Food Preparation	Oven	13.8%	0.60	0.08	129
Food Preparation	Fryer	21.0%	0.47	0.10	156
Food Preparation	Dishwasher	30.0%	1.31	0.39	616
Food Preparation	Hot Food Container	30.0%	0.16	0.05	76
Office Equipment	Desktop Computer	100.0%	0.11	0.11	174
Office Equipment	Laptop	100.0%	0.02	0.02	35
Office Equipment	Server	100.0%	0.08	0.08	127
Office Equipment	Monitor	100.0%	0.03	0.03	48
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	25
Office Equipment	POS Terminal	58.0%	0.02	0.01	21
Miscellaneous	Non-HVAC Motors	91.3%	0.20	0.18	285
Miscellaneous	Pool Pump	76.0%	0.01	0.01	16
Miscellaneous	Pool Heater	27.0%	0.03	0.01	11
Miscellaneous	Other Miscellaneous	100.0%	0.93	0.93	1,457
<b>Total</b>				<b>18.00</b>	<b>28,220</b>

**Table A-137** *Washington Lodging New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	6.0%	0.72	0.04
Cooling	Water-Cooled Chiller	23.9%	0.93	0.22
Cooling	RTU	10.9%	2.67	0.29
Cooling	PTAC	37.0%	2.40	0.89
Cooling	Evaporative AC	0.0%	1.07	-
Cooling	Air-Source Heat Pump	22.9%	2.72	0.62
Cooling	Geothermal Heat Pump	3.2%	2.55	0.08
Heating	Electric Furnace	46.6%	4.35	2.03
Heating	Electric Zonal Heating	1.3%	4.56	0.06
Heating	Air-Source Heat Pump	22.9%	3.33	0.76
Heating	Geothermal Heat Pump	3.2%	4.81	0.16
Ventilation	Ventilation	100.0%	0.99	0.99
Water Heating	Water Heating	50.0%	4.94	2.471
Interior Lighting	Screw-in	100.0%	2.16	2.16
Interior Lighting	High-Bay Fixtures	100.0%	0.26	0.26
Interior Lighting	Linear Fluorescent	100.0%	0.90	0.90
Exterior Lighting	Screw-in	100.0%	0.13	0.13
Exterior Lighting	HID	100.0%	0.63	0.63
Exterior Lighting	Linear Fluorescent	100.0%	0.04	0.04
Refrigeration	Walk-in Refrigerator	3.9%	0.87	0.03
Refrigeration	Reach-in Refrigerator	24.7%	0.23	0.06
Refrigeration	Glass Door Display	76.6%	0.39	0.30
Refrigeration	Open Display Case	76.6%	0.35	0.27
Refrigeration	Icemaker	76.6%	0.15	0.11
Refrigeration	Vending Machine	76.6%	0.39	0.30
Food Preparation	Oven	17.9%	0.53	0.10
Food Preparation	Fryer	27.3%	0.46	0.13
Food Preparation	Dishwasher	39.0%	0.79	0.31
Food Preparation	Hot Food Container	39.0%	0.06	0.02
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.07	0.07
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	63.8%	0.02	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.18	0.18
Miscellaneous	Pool Pump	91.2%	0.01	0.01
Miscellaneous	Pool Heater	32.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.93	0.93

**Table A-138 Washington Warehouse Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	3.1%	1.82	0.06	768
Cooling	Water-Cooled Chiller	0.3%	1.92	0.01	90
Cooling	RTU	9.0%	2.03	0.18	2,474
Cooling	PTAC	1.5%	2.39	0.04	477
Cooling	Evaporative AC	0.1%	0.81	0.00	16
Cooling	Air-Source Heat Pump	2.3%	2.03	0.05	635
Cooling	Geothermal Heat Pump	0.0%	1.24	-	-
Heating	Electric Furnace	14.4%	8.35	1.20	16,222
Heating	Electric Zonal Heating	2.7%	8.76	0.23	3,149
Heating	Air-Source Heat Pump	2.3%	7.69	0.18	2,407
Heating	Geothermal Heat Pump	0.0%	6.64	-	-
Ventilation	Ventilation	100.0%	0.29	0.29	3,917
Water Heating	Water Heating	76.9%	0.29	0.23	3,056
Interior Lighting	Screw-in	100.0%	0.24	0.24	3,280
Interior Lighting	High-Bay Fixtures	100.0%	1.19	1.19	16,067
Interior Lighting	Linear Fluorescent	100.0%	0.92	0.92	12,383
Exterior Lighting	Screw-in	100.0%	0.17	0.17	2,251
Exterior Lighting	HID	100.0%	0.15	0.15	2,079
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	1,599
Refrigeration	Walk-in Refrigerator	1.1%	0.85	0.01	125
Refrigeration	Reach-in Refrigerator	2.0%	0.22	0.00	60
Refrigeration	Glass Door Display	10.1%	0.38	0.04	512
Refrigeration	Open Display Case	10.1%	0.31	0.03	423
Refrigeration	Icemaker	10.1%	0.26	0.03	348
Refrigeration	Vending Machine	10.1%	0.20	0.02	269
Food Preparation	Oven	2.3%	0.06	0.00	17
Food Preparation	Fryer	2.3%	0.05	0.00	14
Food Preparation	Dishwasher	2.3%	0.12	0.00	38
Food Preparation	Hot Food Container	2.3%	0.02	0.00	5
Office Equipment	Desktop Computer	100.0%	0.08	0.08	1,130
Office Equipment	Laptop	100.0%	0.01	0.01	181
Office Equipment	Server	89.0%	0.12	0.11	1,468
Office Equipment	Monitor	100.0%	0.02	0.02	312
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	160
Office Equipment	POS Terminal	77.0%	0.03	0.03	354
Miscellaneous	Non-HVAC Motors	49.9%	0.14	0.07	970
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.50	0.50	6,791
<b>Total</b>				<b>6.23</b>	<b>84,047</b>



**Table A-139 Washington Warehouse New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	3.1%	1.52	0.05
Cooling	Water-Cooled Chiller	0.3%	1.56	0.01
Cooling	RTU	9.0%	1.54	0.14
Cooling	PTAC	1.5%	1.82	0.03
Cooling	Evaporative AC	0.1%	0.81	0.00
Cooling	Air-Source Heat Pump	2.3%	1.90	0.04
Cooling	Geothermal Heat Pump	0.0%	0.94	-
Heating	Electric Furnace	14.4%	8.35	1.20
Heating	Electric Zonal Heating	2.7%	8.76	0.23
Heating	Air-Source Heat Pump	2.3%	4.45	0.10
Heating	Geothermal Heat Pump	0.0%	3.20	-
Ventilation	Ventilation	100.0%	0.14	0.14
Water Heating	Water Heating	76.9%	0.29	0.226
Interior Lighting	Screw-in	100.0%	0.10	0.10
Interior Lighting	High-Bay Fixtures	100.0%	0.75	0.75
Interior Lighting	Linear Fluorescent	100.0%	0.66	0.66
Exterior Lighting	Screw-in	100.0%	0.12	0.12
Exterior Lighting	HID	100.0%	0.12	0.12
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	1.3%	0.84	0.01
Refrigeration	Reach-in Refrigerator	2.4%	0.22	0.01
Refrigeration	Glass Door Display	12.1%	0.38	0.05
Refrigeration	Open Display Case	12.1%	0.34	0.04
Refrigeration	Icemaker	12.1%	0.17	0.02
Refrigeration	Vending Machine	12.1%	0.19	0.02
Food Preparation	Oven	2.7%	0.05	0.00
Food Preparation	Fryer	2.5%	0.04	0.00
Food Preparation	Dishwasher	2.7%	0.07	0.00
Food Preparation	Hot Food Container	2.5%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	84.7%	0.03	0.03
Miscellaneous	Non-HVAC Motors	59.8%	0.13	0.08
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.50	0.50

**Table A-140** *Washington Warehouse, Controlled Atmosphere Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.0%	1.37	0.18	2,100
Cooling	Water-Cooled Chiller	1.4%	1.45	0.02	246
Cooling	RTU	17.0%	1.53	0.26	3,069
Cooling	PTAC	1.0%	1.80	0.02	218
Cooling	Evaporative AC	0.1%	0.61	0.00	7
Cooling	Air-Source Heat Pump	1.6%	1.53	0.02	290
Cooling	Geothermal Heat Pump	0.0%	0.93	-	-
Heating	Electric Furnace	10.8%	6.58	0.71	8,365
Heating	Electric Zonal Heating	2.0%	6.91	0.14	1,624
Heating	Air-Source Heat Pump	1.6%	6.07	0.10	1,148
Heating	Geothermal Heat Pump	0.0%	5.23	-	-
Ventilation	Ventilation	100.0%	0.80	0.80	9,457
Water Heating	Water Heating	76.9%	0.46	0.35	4,163
Interior Lighting	Screw-in	100.0%	0.24	0.24	2,810
Interior Lighting	High-Bay Fixtures	100.0%	1.17	1.17	13,766
Interior Lighting	Linear Fluorescent	100.0%	0.90	0.90	10,610
Exterior Lighting	Screw-in	100.0%	0.16	0.16	1,928
Exterior Lighting	HID	100.0%	0.15	0.15	1,781
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	1,370
Refrigeration	Walk-in Refrigerator	91.7%	17.41	15.96	187,858
Refrigeration	Reach-in Refrigerator	2.0%	0.92	0.02	216
Refrigeration	Glass Door Display	10.1%	1.55	0.16	1,838
Refrigeration	Open Display Case	10.1%	1.28	0.13	1,516
Refrigeration	Icemaker	91.7%	1.05	0.96	11,323
Refrigeration	Vending Machine	91.7%	0.81	0.74	8,750
Food Preparation	Oven	40.8%	0.09	0.04	435
Food Preparation	Fryer	40.8%	0.07	0.03	345
Food Preparation	Dishwasher	40.8%	0.20	0.08	954
Food Preparation	Hot Food Container	40.8%	0.02	0.01	117
Office Equipment	Desktop Computer	100.0%	0.06	0.06	711
Office Equipment	Laptop	100.0%	0.01	0.01	114
Office Equipment	Server	89.0%	0.09	0.08	923
Office Equipment	Monitor	100.0%	0.02	0.02	196
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	101
Office Equipment	POS Terminal	77.0%	0.02	0.02	223
Miscellaneous	Non-HVAC Motors	79.5%	0.50	0.39	4,639
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.75	1.75	20,549
<b>Total</b>				<b>25.81</b>	<b>303,762</b>

Table A-141 *Washington Warehouse, Controlled Atmosphere New Construction Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	13.0%	1.15	0.15
Cooling	Water-Cooled Chiller	1.4%	1.18	0.02
Cooling	RTU	17.0%	1.16	0.20
Cooling	PTAC	1.0%	1.37	0.01
Cooling	Evaporative AC	0.1%	0.61	0.00
Cooling	Air-Source Heat Pump	1.6%	1.43	0.02
Cooling	Geothermal Heat Pump	0.0%	0.71	-
Heating	Electric Furnace	10.8%	6.58	0.71
Heating	Electric Zonal Heating	2.0%	6.91	0.14
Heating	Air-Source Heat Pump	1.6%	3.51	0.06
Heating	Geothermal Heat Pump	0.0%	2.53	-
Ventilation	Ventilation	100.0%	0.38	0.38
Water Heating	Water Heating	76.9%	0.46	0.352
Interior Lighting	Screw-in	100.0%	0.09	0.09
Interior Lighting	High-Bay Fixtures	100.0%	0.77	0.77
Interior Lighting	Linear Fluorescent	100.0%	0.66	0.66
Exterior Lighting	Screw-in	100.0%	0.11	0.11
Exterior Lighting	HID	100.0%	0.14	0.14
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	100.0%	17.36	17.36
Refrigeration	Reach-in Refrigerator	2.4%	0.92	0.02
Refrigeration	Glass Door Display	12.1%	1.55	0.19
Refrigeration	Open Display Case	12.1%	1.40	0.17
Refrigeration	Icemaker	100.0%	0.70	0.70
Refrigeration	Vending Machine	100.0%	0.79	0.79
Food Preparation	Oven	49.0%	0.08	0.04
Food Preparation	Fryer	44.9%	0.07	0.03
Food Preparation	Dishwasher	49.0%	0.12	0.06
Food Preparation	Hot Food Container	44.9%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.05	0.05
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Printer/Copier/Fax	100.0%	0.00	0.00
Office Equipment	POS Terminal	84.7%	0.02	0.02
Miscellaneous	Non-HVAC Motors	95.4%	0.45	0.43
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.75	1.75

Table A-142 Washington Data Center Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	19.1%	38.62	7.36	34
Cooling	Water-Cooled Chiller	19.1%	42.22	8.05	37
Cooling	RTU	44.8%	40.40	18.11	83
Cooling	PTAC	0.6%	47.56	0.28	1
Cooling	Evaporative AC	0.0%	16.16	-	-
Cooling	Air-Source Heat Pump	7.8%	40.40	3.14	14
Cooling	Geothermal Heat Pump	6.7%	24.62	1.65	8
Heating	Electric Furnace	44.6%	3.61	1.61	7
Heating	Electric Zonal Heating	2.3%	3.79	0.09	0
Heating	Air-Source Heat Pump	7.8%	3.21	0.25	1
Heating	Geothermal Heat Pump	6.7%	2.59	0.17	1
Ventilation	Ventilation	100.0%	28.33	28.33	130
Water Heating	Water Heating	68.0%	0.73	0.49	2
Interior Lighting	Screw-in	100.0%	1.19	1.19	5
Interior Lighting	High-Bay Fixtures	100.0%	0.56	0.56	3
Interior Lighting	Linear Fluorescent	100.0%	3.84	3.84	18
Exterior Lighting	Screw-in	100.0%	0.06	0.06	0
Exterior Lighting	HID	100.0%	0.17	0.17	1
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10	0
Refrigeration	Walk-in Refrigerator	2.0%	0.15	0.00	0
Refrigeration	Reach-in Refrigerator	14.0%	0.04	0.01	0
Refrigeration	Glass Door Display	5.1%	0.06	0.00	0
Refrigeration	Open Display Case	5.1%	0.05	0.00	0
Refrigeration	Icemaker	5.1%	0.04	0.00	0
Refrigeration	Vending Machine	5.1%	0.03	0.00	0
Food Preparation	Oven	3.6%	0.11	0.00	0
Food Preparation	Fryer	3.6%	0.09	0.00	0
Food Preparation	Dishwasher	3.6%	0.25	0.01	0
Food Preparation	Hot Food Container	3.6%	0.03	0.00	0
Office Equipment	Desktop Computer	100.0%	4.67	4.67	21
Office Equipment	Laptop	100.0%	0.37	0.37	2
Office Equipment	Server	100.0%	68.12	68.12	312
Office Equipment	Monitor	100.0%	1.29	1.29	6
Office Equipment	Printer/Copier/Fax	100.0%	0.66	0.66	3
Office Equipment	POS Terminal	40.0%	0.19	0.08	0
Miscellaneous	Non-HVAC Motors	89.6%	5.75	5.15	24
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	19.66	19.66	90
<b>Total</b>				<b>175.49</b>	<b>803</b>

**Table A-143** *Washington Data Center New Construction Market Profile*

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Sqft)</b>
Cooling	Air-Cooled Chiller	17.8%	36.43	6.50
Cooling	Water-Cooled Chiller	21.5%	37.79	8.12
Cooling	RTU	41.9%	25.84	10.83
Cooling	PTAC	0.6%	36.08	0.20
Cooling	Evaporative AC	0.0%	16.16	-
Cooling	Air-Source Heat Pump	9.1%	31.94	2.92
Cooling	Geothermal Heat Pump	7.9%	15.72	1.24
Heating	Electric Furnace	44.6%	3.61	1.61
Heating	Electric Zonal Heating	2.3%	3.79	0.09
Heating	Air-Source Heat Pump	9.1%	2.29	0.21
Heating	Geothermal Heat Pump	7.9%	1.46	0.12
Ventilation	Ventilation	100.0%	13.85	13.85
Water Heating	Water Heating	68.0%	0.72	0.492
Interior Lighting	Screw-in	100.0%	0.48	0.48
Interior Lighting	High-Bay Fixtures	100.0%	0.49	0.49
Interior Lighting	Linear Fluorescent	100.0%	2.65	2.65
Exterior Lighting	Screw-in	100.0%	0.03	0.03
Exterior Lighting	HID	100.0%	0.14	0.14
Exterior Lighting	Linear Fluorescent	100.0%	0.09	0.09
Refrigeration	Walk-in Refrigerator	2.2%	0.14	0.00
Refrigeration	Reach-in Refrigerator	15.4%	0.04	0.01
Refrigeration	Glass Door Display	5.6%	0.06	0.00
Refrigeration	Open Display Case	5.6%	0.06	0.00
Refrigeration	Icemaker	5.6%	0.02	0.00
Refrigeration	Vending Machine	5.6%	0.03	0.00
Food Preparation	Oven	4.0%	0.10	0.00
Food Preparation	Fryer	4.0%	0.09	0.00
Food Preparation	Dishwasher	4.0%	0.15	0.01
Food Preparation	Hot Food Container	4.0%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	3.72	3.72
Office Equipment	Laptop	100.0%	0.30	0.30
Office Equipment	Server	100.0%	60.81	60.81
Office Equipment	Monitor	100.0%	1.06	1.06
Office Equipment	Printer/Copier/Fax	100.0%	0.36	0.36
Office Equipment	POS Terminal	44.0%	0.17	0.08
Miscellaneous	Non-HVAC Motors	100.0%	5.18	5.18
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	19.66	19.66

Table A-144 Washington Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.3%	2.38	0.13	1,527
Cooling	Water-Cooled Chiller	21.1%	2.59	0.55	6,640
Cooling	RTU	43.8%	2.71	1.19	14,414
Cooling	PTAC	4.4%	3.19	0.14	1,694
Cooling	Evaporative AC	1.9%	1.09	0.02	248
Cooling	Air-Source Heat Pump	7.8%	2.71	0.21	2,567
Cooling	Geothermal Heat Pump	1.5%	1.65	0.02	292
Heating	Electric Furnace	14.7%	6.48	0.95	11,564
Heating	Electric Zonal Heating	12.4%	6.80	0.84	10,226
Heating	Air-Source Heat Pump	7.8%	5.71	0.45	5,402
Heating	Geothermal Heat Pump	1.5%	4.47	0.07	790
Ventilation	Ventilation	100.0%	1.05	1.05	12,684
Water Heating	Water Heating	53.0%	1.99	1.05	12,787
Interior Lighting	Screw-in	100.0%	1.01	1.01	12,273
Interior Lighting	High-Bay Fixtures	100.0%	0.45	0.45	5,486
Interior Lighting	Linear Fluorescent	100.0%	2.47	2.47	29,949
Exterior Lighting	Screw-in	100.0%	0.49	0.49	5,938
Exterior Lighting	HID	100.0%	1.03	1.03	12,478
Exterior Lighting	Linear Fluorescent	100.0%	0.07	0.07	898
Refrigeration	Walk-in Refrigerator	10.3%	0.86	0.09	1,078
Refrigeration	Reach-in Refrigerator	12.1%	0.23	0.03	332
Refrigeration	Glass Door Display	3.4%	0.38	0.01	160
Refrigeration	Open Display Case	3.4%	0.31	0.01	132
Refrigeration	Icemaker	21.6%	0.26	0.06	678
Refrigeration	Vending Machine	21.6%	0.40	0.09	1,049
Food Preparation	Oven	58.9%	0.16	0.09	1,126
Food Preparation	Fryer	29.9%	0.13	0.04	454
Food Preparation	Dishwasher	15.4%	0.35	0.05	647
Food Preparation	Hot Food Container	15.4%	0.04	0.01	79
Office Equipment	Desktop Computer	100.0%	0.25	0.25	2,976
Office Equipment	Laptop	100.0%	0.05	0.05	595
Office Equipment	Server	66.0%	0.18	0.12	1,433
Office Equipment	Monitor	100.0%	0.07	0.07	822
Office Equipment	Printer/Copier/Fax	100.0%	0.03	0.03	422
Office Equipment	POS Terminal	28.0%	0.05	0.01	169
Miscellaneous	Non-HVAC Motors	59.9%	0.18	0.11	1,307
Miscellaneous	Pool Pump	4.0%	0.01	0.00	4
Miscellaneous	Pool Heater	1.0%	0.02	0.00	2
Miscellaneous	Other Miscellaneous	100.0%	0.70	0.70	8,523
<b>Total</b>				<b>14.00</b>	<b>169,845</b>

Table A-145 Washington Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	7.2%	1.89	0.14
Cooling	Water-Cooled Chiller	28.7%	2.11	0.60
Cooling	RTU	59.5%	2.08	1.24
Cooling	PTAC	5.9%	2.43	0.14
Cooling	Evaporative AC	2.6%	1.09	0.03
Cooling	Air-Source Heat Pump	10.6%	2.57	0.27
Cooling	Geothermal Heat Pump	2.0%	1.27	0.03
Heating	Electric Furnace	14.7%	6.48	0.95
Heating	Electric Zonal Heating	12.4%	6.80	0.84
Heating	Air-Source Heat Pump	10.6%	2.93	0.31
Heating	Geothermal Heat Pump	2.0%	1.87	0.04
Ventilation	Ventilation	100.0%	0.55	0.55
Water Heating	Water Heating	53.0%	1.98	1.049
Interior Lighting	Screw-in	100.0%	0.54	0.54
Interior Lighting	High-Bay Fixtures	100.0%	0.35	0.35
Interior Lighting	Linear Fluorescent	100.0%	1.68	1.68
Exterior Lighting	Screw-in	100.0%	0.22	0.22
Exterior Lighting	HID	100.0%	0.83	0.83
Exterior Lighting	Linear Fluorescent	100.0%	0.06	0.06
Refrigeration	Walk-in Refrigerator	14.5%	0.86	0.12
Refrigeration	Reach-in Refrigerator	16.9%	0.23	0.04
Refrigeration	Glass Door Display	4.8%	0.38	0.02
Refrigeration	Open Display Case	4.8%	0.35	0.02
Refrigeration	Icemaker	30.2%	0.17	0.05
Refrigeration	Vending Machine	30.2%	0.39	0.12
Food Preparation	Oven	82.5%	0.14	0.12
Food Preparation	Fryer	41.9%	0.12	0.05
Food Preparation	Dishwasher	21.6%	0.21	0.04
Food Preparation	Hot Food Container	21.6%	0.02	0.00
Office Equipment	Desktop Computer	100.0%	0.20	0.20
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	82.5%	0.16	0.13
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	33.6%	0.04	0.02
Miscellaneous	Non-HVAC Motors	71.9%	0.16	0.12
Miscellaneous	Pool Pump	4.6%	0.01	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.70	0.70

Table A-146 Wyoming Large Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	18.0%	2.93	0.53	2,741
Cooling	Water-Cooled Chiller	18.0%	3.05	0.55	2,853
Cooling	RTU	52.3%	3.10	1.62	8,419
Cooling	PTAC	0.6%	3.92	0.02	113
Cooling	Evaporative AC	0.0%	1.24	-	-
Cooling	Air-Source Heat Pump	2.4%	3.10	0.07	378
Cooling	Geothermal Heat Pump	1.3%	1.89	0.03	130
Heating	Electric Furnace	26.3%	6.33	1.66	8,630
Heating	Electric Zonal Heating	0.8%	6.64	0.06	291
Heating	Air-Source Heat Pump	2.4%	5.82	0.14	710
Heating	Geothermal Heat Pump	1.3%	4.48	0.06	308
Ventilation	Ventilation	100.0%	3.46	3.46	17,927
Water Heating	Water Heating	39.8%	1.15	0.46	2,383
Interior Lighting	Screw-in	100.0%	0.95	0.95	4,941
Interior Lighting	High-Bay Fixtures	100.0%	0.45	0.45	2,311
Interior Lighting	Linear Fluorescent	100.0%	3.06	3.06	15,896
Exterior Lighting	Screw-in	100.0%	0.10	0.10	510
Exterior Lighting	HID	100.0%	0.27	0.27	1,376
Exterior Lighting	Linear Fluorescent	100.0%	0.16	0.16	846
Refrigeration	Walk-in Refrigerator	2.0%	0.25	0.00	26
Refrigeration	Reach-in Refrigerator	14.0%	0.07	0.01	47
Refrigeration	Glass Door Display	77.4%	0.11	0.09	441
Refrigeration	Open Display Case	77.4%	0.09	0.07	364
Refrigeration	Icemaker	44.9%	0.07	0.03	174
Refrigeration	Vending Machine	44.9%	0.12	0.05	268
Food Preparation	Oven	66.0%	0.14	0.09	486
Food Preparation	Fryer	76.4%	0.11	0.09	447
Food Preparation	Dishwasher	43.1%	0.31	0.13	695
Food Preparation	Hot Food Container	43.1%	0.04	0.02	85
Office Equipment	Desktop Computer	100.0%	2.31	2.31	11,969
Office Equipment	Laptop	100.0%	0.46	0.46	2,393
Office Equipment	Server	100.0%	0.28	0.28	1,456
Office Equipment	Monitor	100.0%	0.64	0.64	3,304
Office Equipment	Printer/Copier/Fax	100.0%	0.27	0.27	1,414
Office Equipment	POS Terminal	40.0%	0.04	0.02	81
Miscellaneous	Non-HVAC Motors	89.6%	0.25	0.22	1,148
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.00	1.00	5,192
<b>Total</b>				<b>19.42</b>	<b>100,755</b>



Table A-147 Wyoming Large Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	22.2%	2.47	0.55
Cooling	Water-Cooled Chiller	22.2%	2.60	0.58
Cooling	RTU	64.6%	2.07	1.33
Cooling	PTAC	0.7%	2.99	0.02
Cooling	Evaporative AC	0.0%	1.24	-
Cooling	Air-Source Heat Pump	2.8%	2.55	0.07
Cooling	Geothermal Heat Pump	1.6%	1.26	0.02
Heating	Electric Furnace	26.3%	6.33	1.66
Heating	Electric Zonal Heating	0.8%	6.64	0.06
Heating	Air-Source Heat Pump	2.6%	4.92	0.13
Heating	Geothermal Heat Pump	1.5%	2.80	0.04
Ventilation	Ventilation	100.0%	2.27	2.27
Water Heating	Water Heating	39.8%	1.15	0.46
Interior Lighting	Screw-in	100.0%	0.54	0.54
Interior Lighting	High-Bay Fixtures	100.0%	0.47	0.47
Interior Lighting	Linear Fluorescent	100.0%	2.85	2.85
Exterior Lighting	Screw-in	100.0%	0.06	0.06
Exterior Lighting	HID	100.0%	0.23	0.23
Exterior Lighting	Linear Fluorescent	100.0%	0.15	0.15
Refrigeration	Walk-in Refrigerator	2.4%	0.25	0.01
Refrigeration	Reach-in Refrigerator	16.8%	0.07	0.01
Refrigeration	Glass Door Display	92.9%	0.11	0.10
Refrigeration	Open Display Case	92.9%	0.10	0.09
Refrigeration	Icemaker	53.9%	0.04	0.02
Refrigeration	Vending Machine	53.9%	0.11	0.06
Food Preparation	Oven	79.2%	0.13	0.10
Food Preparation	Fryer	91.7%	0.11	0.10
Food Preparation	Dishwasher	51.7%	0.19	0.10
Food Preparation	Hot Food Container	51.7%	0.01	0.01
Office Equipment	Desktop Computer	100.0%	1.87	1.87
Office Equipment	Laptop	100.0%	0.38	0.38
Office Equipment	Server	100.0%	0.26	0.26
Office Equipment	Monitor	100.0%	0.52	0.52
Office Equipment	Printer/Copier/Fax	100.0%	0.15	0.15
Office Equipment	POS Terminal	44.0%	0.04	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.25	0.25
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.00	1.00

Table A-148 Wyoming Small Office Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.84	-	-
Cooling	Water-Cooled Chiller	0.0%	3.97	-	-
Cooling	RTU	78.0%	4.28	3.34	63,152
Cooling	PTAC	2.8%	5.41	0.15	2,887
Cooling	Evaporative AC	6.0%	1.71	0.10	1,942
Cooling	Air-Source Heat Pump	2.8%	4.28	0.12	2,300
Cooling	Geothermal Heat Pump	1.3%	2.61	0.03	657
Heating	Electric Furnace	17.4%	9.25	1.61	30,407
Heating	Electric Zonal Heating	0.1%	9.72	0.01	131
Heating	Air-Source Heat Pump	2.8%	8.60	0.24	4,622
Heating	Geothermal Heat Pump	1.3%	6.10	0.08	1,539
Ventilation	Ventilation	100.0%	1.72	1.72	32,511
Water Heating	Water Heating	35.1%	1.29	0.45	8,581
Interior Lighting	Screw-in	100.0%	0.67	0.67	12,622
Interior Lighting	High-Bay Fixtures	100.0%	0.59	0.59	11,164
Interior Lighting	Linear Fluorescent	100.0%	3.05	3.05	57,647
Exterior Lighting	Screw-in	100.0%	0.23	0.23	4,269
Exterior Lighting	HID	100.0%	0.32	0.32	5,958
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11	2,157
Refrigeration	Walk-in Refrigerator	0.0%	0.63	-	-
Refrigeration	Reach-in Refrigerator	11.3%	0.17	0.02	353
Refrigeration	Glass Door Display	1.6%	0.28	0.00	85
Refrigeration	Open Display Case	1.6%	0.23	0.00	70
Refrigeration	Icemaker	5.1%	0.19	0.01	182
Refrigeration	Vending Machine	5.1%	0.15	0.01	141
Food Preparation	Oven	3.6%	0.37	0.01	258
Food Preparation	Fryer	3.6%	0.30	0.01	205
Food Preparation	Dishwasher	3.6%	0.82	0.03	566
Food Preparation	Hot Food Container	3.6%	0.10	0.00	69
Office Equipment	Desktop Computer	100.0%	1.49	1.49	28,245
Office Equipment	Laptop	100.0%	0.30	0.30	5,646
Office Equipment	Server	100.0%	0.54	0.54	10,306
Office Equipment	Monitor	100.0%	0.41	0.41	7,797
Office Equipment	Printer/Copier/Fax	100.0%	0.26	0.26	5,005
Office Equipment	POS Terminal	20.0%	0.15	0.03	574
Miscellaneous	Non-HVAC Motors	22.0%	0.25	0.06	1,046
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.07	1.07	20,323
<b>Total</b>				<b>17.10</b>	<b>323,417</b>

Table A-149 Wyoming Small Office New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	3.37	-
Cooling	Water-Cooled Chiller	0.0%	3.38	-
Cooling	RTU	100.0%	2.74	2.74
Cooling	PTAC	3.7%	4.12	0.15
Cooling	Evaporative AC	7.8%	1.71	0.13
Cooling	Air-Source Heat Pump	3.7%	3.39	0.13
Cooling	Geothermal Heat Pump	1.7%	1.67	0.03
Heating	Electric Furnace	17.4%	9.25	1.61
Heating	Electric Zonal Heating	0.1%	9.72	0.01
Heating	Air-Source Heat Pump	3.4%	7.18	0.24
Heating	Geothermal Heat Pump	1.6%	3.81	0.06
Ventilation	Ventilation	100.0%	0.91	0.91
Water Heating	Water Heating	35.1%	1.29	0.45
Interior Lighting	Screw-in	100.0%	0.60	0.60
Interior Lighting	High-Bay Fixtures	100.0%	0.63	0.63
Interior Lighting	Linear Fluorescent	100.0%	2.81	2.81
Exterior Lighting	Screw-in	100.0%	0.21	0.21
Exterior Lighting	HID	100.0%	0.33	0.33
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator	0.0%	0.62	-
Refrigeration	Reach-in Refrigerator	13.5%	0.17	0.02
Refrigeration	Glass Door Display	1.9%	0.28	0.01
Refrigeration	Open Display Case	1.9%	0.25	0.00
Refrigeration	Icemaker	6.1%	0.11	0.01
Refrigeration	Vending Machine	6.1%	0.14	0.01
Food Preparation	Oven	4.6%	0.34	0.02
Food Preparation	Fryer	4.6%	0.29	0.01
Food Preparation	Dishwasher	4.6%	0.50	0.02
Food Preparation	Hot Food Container	4.6%	0.04	0.00
Office Equipment	Desktop Computer	100.0%	1.21	1.21
Office Equipment	Laptop	100.0%	0.24	0.24
Office Equipment	Server	100.0%	0.50	0.50
Office Equipment	Monitor	100.0%	0.34	0.34
Office Equipment	Printer/Copier/Fax	100.0%	0.15	0.15
Office Equipment	POS Terminal	22.0%	0.14	0.03
Miscellaneous	Non-HVAC Motors	24.2%	0.25	0.06
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.07	1.07

Table A-150 Wyoming Large Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	11.7%	3.19	0.37	1,050
Cooling	Water-Cooled Chiller	2.9%	3.30	0.10	271
Cooling	RTU	68.8%	3.56	2.45	6,875
Cooling	PTAC	1.1%	4.50	0.05	134
Cooling	Evaporative AC	2.4%	1.42	0.03	96
Cooling	Air-Source Heat Pump	1.1%	3.56	0.04	113
Cooling	Geothermal Heat Pump	0.7%	2.17	0.01	42
Heating	Electric Furnace	25.3%	8.53	2.15	6,044
Heating	Electric Zonal Heating	2.0%	8.95	0.18	500
Heating	Air-Source Heat Pump	1.1%	7.83	0.09	248
Heating	Geothermal Heat Pump	0.7%	5.70	0.04	110
Ventilation	Ventilation	100.0%	1.54	1.54	4,328
Water Heating	Water Heating	45.2%	1.25	0.56	1,583
Interior Lighting	Screw-in	100.0%	1.98	1.98	5,566
Interior Lighting	High-Bay Fixtures	100.0%	2.10	2.10	5,893
Interior Lighting	Linear Fluorescent	100.0%	5.34	5.34	14,985
Exterior Lighting	Screw-in	100.0%	0.28	0.28	776
Exterior Lighting	HID	100.0%	0.69	0.69	1,932
Exterior Lighting	Linear Fluorescent	100.0%	0.35	0.35	974
Refrigeration	Walk-in Refrigerator	2.0%	0.80	0.02	45
Refrigeration	Reach-in Refrigerator	14.0%	0.21	0.03	83
Refrigeration	Glass Door Display	81.7%	0.35	0.29	811
Refrigeration	Open Display Case	81.7%	0.29	0.24	669
Refrigeration	Icemaker	52.4%	0.48	0.25	705
Refrigeration	Vending Machine	52.4%	0.37	0.19	545
Food Preparation	Oven	48.9%	0.36	0.17	487
Food Preparation	Fryer	45.2%	0.28	0.13	358
Food Preparation	Dishwasher	39.6%	0.78	0.31	866
Food Preparation	Hot Food Container	39.6%	0.10	0.04	106
Office Equipment	Desktop Computer	100.0%	0.41	0.41	1,145
Office Equipment	Laptop	100.0%	0.08	0.08	229
Office Equipment	Server	82.0%	0.07	0.06	171
Office Equipment	Monitor	100.0%	0.11	0.11	316
Office Equipment	Printer/Copier/Fax	100.0%	0.07	0.07	203
Office Equipment	POS Terminal	100.0%	0.01	0.01	35
Miscellaneous	Non-HVAC Motors	40.2%	0.36	0.14	401
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.35	1.35	3,774
<b>Total</b>				<b>22.26</b>	<b>62,468</b>

**Table A-151 Wyoming Large Retail New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	16.4%	2.78	0.46
Cooling	Water-Cooled Chiller	4.1%	2.81	0.12
Cooling	RTU	96.4%	2.72	2.62
Cooling	PTAC	1.5%	3.41	0.05
Cooling	Evaporative AC	3.4%	1.42	0.05
Cooling	Air-Source Heat Pump	1.6%	2.78	0.04
Cooling	Geothermal Heat Pump	1.0%	1.63	0.02
Heating	Electric Furnace	25.3%	8.53	2.15
Heating	Electric Zonal Heating	2.0%	8.95	0.18
Heating	Air-Source Heat Pump	1.5%	5.38	0.08
Heating	Geothermal Heat Pump	0.9%	2.21	0.02
Ventilation	Ventilation	100.0%	0.83	0.83
Water Heating	Water Heating	45.2%	1.24	0.56
Interior Lighting	Screw-in	100.0%	1.16	1.16
Interior Lighting	High-Bay Fixtures	100.0%	1.94	1.94
Interior Lighting	Linear Fluorescent	100.0%	4.79	4.79
Exterior Lighting	Screw-in	100.0%	0.15	0.15
Exterior Lighting	HID	100.0%	0.58	0.58
Exterior Lighting	Linear Fluorescent	100.0%	0.31	0.31
Refrigeration	Walk-in Refrigerator	3.0%	0.79	0.02
Refrigeration	Reach-in Refrigerator	21.0%	0.21	0.04
Refrigeration	Glass Door Display	100.0%	0.35	0.35
Refrigeration	Open Display Case	100.0%	0.32	0.32
Refrigeration	Icemaker	78.6%	0.27	0.21
Refrigeration	Vending Machine	78.6%	0.34	0.27
Food Preparation	Oven	73.4%	0.32	0.23
Food Preparation	Fryer	67.8%	0.28	0.19
Food Preparation	Dishwasher	59.4%	0.47	0.28
Food Preparation	Hot Food Container	59.4%	0.03	0.02
Office Equipment	Desktop Computer	100.0%	0.33	0.33
Office Equipment	Laptop	100.0%	0.07	0.07
Office Equipment	Server	98.4%	0.07	0.07
Office Equipment	Monitor	100.0%	0.09	0.09
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	48.2%	0.36	0.17
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.35	1.35

Table A-152 Wyoming Small Retail Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.0%	3.24	-	-
Cooling	Water-Cooled Chiller	0.0%	3.35	-	-
Cooling	RTU	63.8%	3.61	2.30	26,980
Cooling	PTAC	3.1%	3.71	0.12	1,366
Cooling	Evaporative AC	17.1%	1.44	0.25	2,887
Cooling	Air-Source Heat Pump	2.3%	3.60	0.08	965
Cooling	Geothermal Heat Pump	1.0%	2.20	0.02	251
Heating	Electric Furnace	16.3%	7.35	1.20	14,063
Heating	Electric Zonal Heating	0.7%	7.72	0.05	644
Heating	Air-Source Heat Pump	2.3%	6.30	0.14	1,685
Heating	Geothermal Heat Pump	1.0%	3.97	0.04	453
Ventilation	Ventilation	100.0%	1.23	1.23	14,450
Water Heating	Water Heating	44.3%	0.93	0.41	4,807
Interior Lighting	Screw-in	100.0%	1.06	1.06	12,478
Interior Lighting	High-Bay Fixtures	100.0%	1.13	1.13	13,210
Interior Lighting	Linear Fluorescent	100.0%	2.87	2.87	33,591
Exterior Lighting	Screw-in	100.0%	0.18	0.18	2,098
Exterior Lighting	HID	100.0%	0.45	0.45	5,221
Exterior Lighting	Linear Fluorescent	100.0%	0.22	0.22	2,631
Refrigeration	Walk-in Refrigerator	0.0%	0.30	-	-
Refrigeration	Reach-in Refrigerator	13.8%	0.08	0.01	128
Refrigeration	Glass Door Display	1.7%	0.13	0.00	27
Refrigeration	Open Display Case	1.7%	0.11	0.00	22
Refrigeration	Icemaker	5.1%	0.18	0.01	108
Refrigeration	Vending Machine	5.1%	0.14	0.01	84
Food Preparation	Oven	3.6%	0.27	0.01	115
Food Preparation	Fryer	3.6%	0.21	0.01	91
Food Preparation	Dishwasher	3.6%	0.59	0.02	251
Food Preparation	Hot Food Container	3.6%	0.07	0.00	31
Office Equipment	Desktop Computer	100.0%	0.09	0.09	1,003
Office Equipment	Laptop	100.0%	0.02	0.02	201
Office Equipment	Server	100.0%	0.12	0.12	1,464
Office Equipment	Monitor	100.0%	0.02	0.02	277
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	142
Office Equipment	POS Terminal	100.0%	0.03	0.03	408
Miscellaneous	Non-HVAC Motors	22.0%	0.18	0.04	463
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.77	0.77	8,990
<b>Total</b>				<b>12.94</b>	<b>151,583</b>

Table A-153 Wyoming Small Retail New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.0%	2.82	-
Cooling	Water-Cooled Chiller	0.0%	2.85	-
Cooling	RTU	89.3%	2.75	2.45
Cooling	PTAC	4.4%	2.82	0.12
Cooling	Evaporative AC	23.9%	1.44	0.34
Cooling	Air-Source Heat Pump	3.2%	2.80	0.09
Cooling	Geothermal Heat Pump	1.4%	1.65	0.02
Heating	Electric Furnace	16.3%	7.35	1.20
Heating	Electric Zonal Heating	0.7%	7.72	0.05
Heating	Air-Source Heat Pump	3.0%	3.66	0.11
Heating	Geothermal Heat Pump	1.3%	1.54	0.02
Ventilation	Ventilation	100.0%	0.72	0.72
Water Heating	Water Heating	44.3%	0.92	0.41
Interior Lighting	Screw-in	100.0%	0.62	0.62
Interior Lighting	High-Bay Fixtures	100.0%	1.04	1.04
Interior Lighting	Linear Fluorescent	100.0%	2.57	2.57
Exterior Lighting	Screw-in	100.0%	0.09	0.09
Exterior Lighting	HID	100.0%	0.37	0.37
Exterior Lighting	Linear Fluorescent	100.0%	0.20	0.20
Refrigeration	Walk-in Refrigerator	0.0%	0.30	-
Refrigeration	Reach-in Refrigerator	20.7%	0.08	0.02
Refrigeration	Glass Door Display	2.6%	0.13	0.00
Refrigeration	Open Display Case	2.6%	0.12	0.00
Refrigeration	Icemaker	7.7%	0.10	0.01
Refrigeration	Vending Machine	7.7%	0.13	0.01
Food Preparation	Oven	5.5%	0.24	0.01
Food Preparation	Fryer	5.5%	0.21	0.01
Food Preparation	Dishwasher	5.5%	0.36	0.02
Food Preparation	Hot Food Container	5.5%	0.03	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.11	0.11
Office Equipment	Monitor	100.0%	0.02	0.02
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	26.4%	0.18	0.05
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.77	0.77

Table A-154 Wyoming Restaurant Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	0.3%	3.65	0.01	22
Cooling	Water-Cooled Chiller	0.0%	3.69	-	-
Cooling	RTU	74.3%	4.49	3.34	7,181
Cooling	PTAC	5.1%	5.68	0.29	622
Cooling	Evaporative AC	9.6%	1.80	0.17	371
Cooling	Air-Source Heat Pump	3.6%	4.49	0.16	352
Cooling	Geothermal Heat Pump	1.3%	2.74	0.04	78
Heating	Electric Furnace	1.0%	7.93	0.08	171
Heating	Electric Zonal Heating	16.1%	8.33	1.34	2,876
Heating	Air-Source Heat Pump	3.6%	6.35	0.23	497
Heating	Geothermal Heat Pump	1.3%	4.16	0.05	118
Ventilation	Ventilation	100.0%	2.54	2.54	5,455
Water Heating	Water Heating	19.0%	7.04	1.34	2,887
Interior Lighting	Screw-in	100.0%	2.84	2.84	6,116
Interior Lighting	High-Bay Fixtures	100.0%	0.54	0.54	1,154
Interior Lighting	Linear Fluorescent	100.0%	4.61	4.61	9,914
Exterior Lighting	Screw-in	100.0%	0.29	0.29	628
Exterior Lighting	HID	100.0%	2.08	2.08	4,465
Exterior Lighting	Linear Fluorescent	100.0%	0.60	0.60	1,290
Refrigeration	Walk-in Refrigerator	74.0%	7.98	5.91	12,709
Refrigeration	Reach-in Refrigerator	7.0%	4.21	0.29	635
Refrigeration	Glass Door Display	5.2%	3.55	0.18	397
Refrigeration	Open Display Case	5.2%	2.93	0.15	327
Refrigeration	Icemaker	97.3%	2.41	2.34	5,036
Refrigeration	Vending Machine	97.3%	1.86	1.81	3,892
Food Preparation	Oven	15.2%	11.35	1.73	3,713
Food Preparation	Fryer	8.9%	9.02	0.80	1,727
Food Preparation	Dishwasher	52.5%	12.46	6.54	14,074
Food Preparation	Hot Food Container	52.5%	1.53	0.80	1,726
Office Equipment	Desktop Computer	100.0%	0.29	0.29	620
Office Equipment	Laptop	100.0%	0.05	0.05	99
Office Equipment	Server	50.0%	0.42	0.21	453
Office Equipment	Monitor	100.0%	0.08	0.08	171
Office Equipment	Printer/Copier/Fax	100.0%	0.08	0.08	176
Office Equipment	POS Terminal	100.0%	0.12	0.12	252
Miscellaneous	Non-HVAC Motors	20.0%	0.68	0.14	294
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.74	2.74	5,886
<b>Total</b>				<b>44.80</b>	<b>96,384</b>



**Table A-155 Wyoming Restaurant New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	0.4%	3.49	0.01
Cooling	Water-Cooled Chiller	0.0%	3.33	-
Cooling	RTU	89.1%	3.42	3.05
Cooling	PTAC	6.6%	4.03	0.27
Cooling	Evaporative AC	12.4%	1.80	0.22
Cooling	Air-Source Heat Pump	4.7%	3.49	0.17
Cooling	Geothermal Heat Pump	1.7%	2.09	0.04
Heating	Electric Furnace	1.0%	7.93	0.08
Heating	Electric Zonal Heating	16.1%	8.33	1.34
Heating	Air-Source Heat Pump	4.4%	5.51	0.24
Heating	Geothermal Heat Pump	1.6%	2.77	0.04
Ventilation	Ventilation	100.0%	1.82	1.82
Water Heating	Water Heating	20.0%	7.01	1.40
Interior Lighting	Screw-in	100.0%	1.89	1.89
Interior Lighting	High-Bay Fixtures	100.0%	0.61	0.61
Interior Lighting	Linear Fluorescent	100.0%	3.99	3.99
Exterior Lighting	Screw-in	100.0%	0.24	0.24
Exterior Lighting	HID	100.0%	1.84	1.84
Exterior Lighting	Linear Fluorescent	100.0%	0.52	0.52
Refrigeration	Walk-in Refrigerator	76.1%	7.96	6.05
Refrigeration	Reach-in Refrigerator	7.2%	4.21	0.30
Refrigeration	Glass Door Display	5.3%	3.55	0.19
Refrigeration	Open Display Case	5.3%	3.22	0.17
Refrigeration	Icemaker	100.0%	1.36	1.36
Refrigeration	Vending Machine	100.0%	1.68	1.68
Food Preparation	Oven	28.9%	10.24	2.96
Food Preparation	Fryer	16.9%	8.79	1.49
Food Preparation	Dishwasher	100.0%	7.52	7.52
Food Preparation	Hot Food Container	100.0%	0.55	0.55
Office Equipment	Desktop Computer	100.0%	0.23	0.23
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	55.0%	0.39	0.21
Office Equipment	Monitor	100.0%	0.07	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.11	0.11
Miscellaneous	Non-HVAC Motors	24.0%	0.68	0.16
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.74	2.74

Table A-156 Wyoming Grocery Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	6.2%	3.62	0.23	379
Cooling	Water-Cooled Chiller	0.0%	3.74	-	-
Cooling	RTU	73.7%	4.03	2.97	4,996
Cooling	PTAC	0.0%	5.09	-	-
Cooling	Evaporative AC	10.0%	1.61	0.16	271
Cooling	Air-Source Heat Pump	1.7%	3.77	0.06	106
Cooling	Geothermal Heat Pump	0.0%	1.34	-	-
Heating	Electric Furnace	1.0%	6.82	0.07	117
Heating	Electric Zonal Heating	7.5%	7.16	0.54	905
Heating	Air-Source Heat Pump	1.7%	4.13	0.07	115
Heating	Geothermal Heat Pump	0.0%	2.71	-	-
Ventilation	Ventilation	100.0%	1.83	1.83	3,078
Water Heating	Water Heating	50.0%	1.92	0.96	1,616
Interior Lighting	Screw-in	100.0%	1.47	1.47	2,472
Interior Lighting	High-Bay Fixtures	100.0%	1.92	1.92	3,232
Interior Lighting	Linear Fluorescent	100.0%	5.89	5.89	9,898
Exterior Lighting	Screw-in	100.0%	0.06	0.06	107
Exterior Lighting	HID	100.0%	0.66	0.66	1,112
Exterior Lighting	Linear Fluorescent	100.0%	0.28	0.28	469
Refrigeration	Walk-in Refrigerator	16.0%	8.29	1.33	2,230
Refrigeration	Reach-in Refrigerator	83.1%	0.63	0.52	873
Refrigeration	Glass Door Display	94.9%	10.52	9.99	16,786
Refrigeration	Open Display Case	94.9%	8.68	8.24	13,846
Refrigeration	Icemaker	98.9%	0.36	0.35	593
Refrigeration	Vending Machine	98.9%	0.55	0.55	917
Food Preparation	Oven	54.4%	0.66	0.36	606
Food Preparation	Fryer	61.0%	0.53	0.32	540
Food Preparation	Dishwasher	54.9%	1.46	0.80	1,342
Food Preparation	Hot Food Container	54.9%	0.18	0.10	165
Office Equipment	Desktop Computer	100.0%	0.11	0.11	192
Office Equipment	Laptop	64.0%	0.02	0.01	25
Office Equipment	Server	100.0%	0.08	0.08	140
Office Equipment	Monitor	100.0%	0.03	0.03	53
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	27
Office Equipment	POS Terminal	100.0%	0.06	0.06	98
Miscellaneous	Non-HVAC Motors	34.6%	0.54	0.19	314
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	2.27	2.27	3,818
<b>Total</b>				<b>42.50</b>	<b>71,436</b>

Table A-157 Wyoming Grocery New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	7.2%	3.16	0.23
Cooling	Water-Cooled Chiller	0.0%	3.19	-
Cooling	RTU	84.8%	2.04	1.73
Cooling	PTAC	0.0%	3.62	-
Cooling	Evaporative AC	11.0%	1.61	0.18
Cooling	Air-Source Heat Pump	1.8%	1.85	0.03
Cooling	Geothermal Heat Pump	0.0%	0.27	-
Heating	Electric Furnace	1.0%	6.82	0.07
Heating	Electric Zonal Heating	7.5%	7.16	0.54
Heating	Air-Source Heat Pump	1.7%	3.02	0.05
Heating	Geothermal Heat Pump	0.0%	1.78	-
Ventilation	Ventilation	100.0%	1.31	1.31
Water Heating	Water Heating	50.0%	1.91	0.96
Interior Lighting	Screw-in	100.0%	1.27	1.27
Interior Lighting	High-Bay Fixtures	100.0%	1.79	1.79
Interior Lighting	Linear Fluorescent	100.0%	5.22	5.22
Exterior Lighting	Screw-in	100.0%	0.08	0.08
Exterior Lighting	HID	100.0%	0.60	0.60
Exterior Lighting	Linear Fluorescent	100.0%	0.25	0.25
Refrigeration	Walk-in Refrigerator	16.2%	8.27	1.34
Refrigeration	Reach-in Refrigerator	84.0%	0.63	0.53
Refrigeration	Glass Door Display	96.0%	10.52	10.10
Refrigeration	Open Display Case	96.0%	9.55	9.17
Refrigeration	Icemaker	100.0%	0.24	0.24
Refrigeration	Vending Machine	100.0%	0.54	0.54
Food Preparation	Oven	76.2%	0.60	0.46
Food Preparation	Fryer	85.4%	0.51	0.44
Food Preparation	Dishwasher	76.8%	0.88	0.67
Food Preparation	Hot Food Container	76.8%	0.06	0.05
Office Equipment	Desktop Computer	100.0%	0.09	0.09
Office Equipment	Laptop	70.4%	0.02	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	100.0%	0.05	0.05
Miscellaneous	Non-HVAC Motors	41.6%	0.54	0.22
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	2.27	2.27

Table A-158 Wyoming Health Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	17.2%	6.21	1.07	3,837
Cooling	Water-Cooled Chiller	68.7%	7.31	5.02	18,070
Cooling	RTU	11.3%	6.09	0.69	2,476
Cooling	PTAC	0.4%	7.70	0.03	110
Cooling	Evaporative AC	0.0%	2.44	-	-
Cooling	Air-Source Heat Pump	0.6%	6.08	0.04	130
Cooling	Geothermal Heat Pump	0.9%	3.70	0.03	119
Heating	Electric Furnace	0.1%	18.32	0.01	39
Heating	Electric Zonal Heating	2.9%	19.24	0.56	2,006
Heating	Air-Source Heat Pump	0.6%	13.95	0.08	298
Heating	Geothermal Heat Pump	0.9%	9.32	0.08	299
Ventilation	Ventilation	100.0%	5.57	5.57	20,050
Water Heating	Water Heating	22.3%	5.56	1.24	4,464
Interior Lighting	Screw-in	100.0%	2.02	2.02	7,281
Interior Lighting	High-Bay Fixtures	100.0%	0.52	0.52	1,862
Interior Lighting	Linear Fluorescent	100.0%	4.84	4.84	17,418
Exterior Lighting	Screw-in	100.0%	0.02	0.02	80
Exterior Lighting	HID	100.0%	0.27	0.27	972
Exterior Lighting	Linear Fluorescent	100.0%	0.09	0.09	311
Refrigeration	Walk-in Refrigerator	33.0%	0.45	0.15	532
Refrigeration	Reach-in Refrigerator	50.0%	0.12	0.06	213
Refrigeration	Glass Door Display	90.4%	0.20	0.18	648
Refrigeration	Open Display Case	90.4%	0.16	0.15	534
Refrigeration	Icemaker	90.4%	0.27	0.24	879
Refrigeration	Vending Machine	90.4%	0.21	0.19	679
Food Preparation	Oven	69.7%	1.13	0.79	2,848
Food Preparation	Fryer	80.7%	0.90	0.73	2,619
Food Preparation	Dishwasher	53.5%	2.49	1.33	4,794
Food Preparation	Hot Food Container	53.5%	0.31	0.16	588
Office Equipment	Desktop Computer	100.0%	0.60	0.60	2,166
Office Equipment	Laptop	100.0%	0.05	0.05	173
Office Equipment	Server	100.0%	0.09	0.09	316
Office Equipment	Monitor	100.0%	0.17	0.17	598
Office Equipment	Printer/Copier/Fax	100.0%	0.09	0.09	307
Office Equipment	POS Terminal	100.0%	0.06	0.06	220
Miscellaneous	Non-HVAC Motors	74.1%	0.43	0.32	1,140
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	4.19	4.19	15,091
<b>Total</b>				<b>31.70</b>	<b>114,167</b>

Table A-159 Wyoming Health New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	18.9%	4.21	0.79
Cooling	Water-Cooled Chiller	75.5%	3.59	2.71
Cooling	RTU	12.4%	4.97	0.62
Cooling	PTAC	0.4%	5.87	0.03
Cooling	Evaporative AC	0.0%	2.44	-
Cooling	Air-Source Heat Pump	0.7%	6.15	0.04
Cooling	Geothermal Heat Pump	1.0%	3.04	0.03
Heating	Electric Furnace	0.1%	18.32	0.01
Heating	Electric Zonal Heating	2.9%	19.24	0.56
Heating	Air-Source Heat Pump	0.6%	7.48	0.04
Heating	Geothermal Heat Pump	0.9%	3.45	0.03
Ventilation	Ventilation	100.0%	2.44	2.44
Water Heating	Water Heating	22.3%	5.53	1.23
Interior Lighting	Screw-in	100.0%	1.55	1.55
Interior Lighting	High-Bay Fixtures	100.0%	0.57	0.57
Interior Lighting	Linear Fluorescent	100.0%	4.46	4.46
Exterior Lighting	Screw-in	100.0%	0.01	0.01
Exterior Lighting	HID	100.0%	0.23	0.23
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08
Refrigeration	Walk-in Refrigerator	36.3%	0.45	0.16
Refrigeration	Reach-in Refrigerator	55.0%	0.12	0.07
Refrigeration	Glass Door Display	99.4%	0.20	0.20
Refrigeration	Open Display Case	99.4%	0.18	0.18
Refrigeration	Icemaker	99.4%	0.15	0.15
Refrigeration	Vending Machine	99.4%	0.21	0.21
Food Preparation	Oven	97.6%	1.02	1.00
Food Preparation	Fryer	100.0%	0.88	0.88
Food Preparation	Dishwasher	74.9%	1.50	1.13
Food Preparation	Hot Food Container	74.9%	0.11	0.08
Office Equipment	Desktop Computer	100.0%	0.49	0.49
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.14	0.14
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.06	0.06
Miscellaneous	Non-HVAC Motors	88.9%	0.43	0.38
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	4.19	4.19

Table A-160 Wyoming College Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	49.4%	4.12	2.04	20,366
Cooling	Water-Cooled Chiller	12.4%	5.36	0.66	6,623
Cooling	RTU	31.2%	2.26	0.71	7,050
Cooling	PTAC	0.0%	2.86	-	-
Cooling	Evaporative AC	0.0%	0.90	-	-
Cooling	Air-Source Heat Pump	3.2%	2.25	0.07	713
Cooling	Geothermal Heat Pump	0.0%	1.37	-	-
Heating	Electric Furnace	17.2%	12.82	2.21	22,094
Heating	Electric Zonal Heating	0.0%	13.46	-	-
Heating	Air-Source Heat Pump	3.2%	9.83	0.31	3,110
Heating	Geothermal Heat Pump	0.0%	7.01	-	-
Ventilation	Ventilation	100.0%	1.92	1.92	19,213
Water Heating	Water Heating	13.2%	2.62	0.34	3,449
Interior Lighting	Screw-in	100.0%	0.40	0.40	3,968
Interior Lighting	High-Bay Fixtures	100.0%	0.34	0.34	3,416
Interior Lighting	Linear Fluorescent	100.0%	2.16	2.16	21,593
Exterior Lighting	Screw-in	100.0%	0.00	0.00	24
Exterior Lighting	HID	100.0%	0.09	0.09	910
Exterior Lighting	Linear Fluorescent	100.0%	0.32	0.32	3,204
Refrigeration	Walk-in Refrigerator	7.7%	0.27	0.02	209
Refrigeration	Reach-in Refrigerator	13.4%	0.14	0.02	191
Refrigeration	Glass Door Display	26.6%	0.12	0.03	320
Refrigeration	Open Display Case	26.6%	0.10	0.03	264
Refrigeration	Icemaker	26.6%	0.16	0.04	435
Refrigeration	Vending Machine	26.6%	0.13	0.03	336
Food Preparation	Oven	21.0%	0.43	0.09	909
Food Preparation	Fryer	21.0%	0.34	0.07	722
Food Preparation	Dishwasher	21.0%	0.95	0.20	1,996
Food Preparation	Hot Food Container	21.0%	0.12	0.02	245
Office Equipment	Desktop Computer	100.0%	0.53	0.53	5,306
Office Equipment	Laptop	100.0%	0.03	0.03	318
Office Equipment	Server	100.0%	0.08	0.08	774
Office Equipment	Monitor	100.0%	0.15	0.15	1,465
Office Equipment	Printer/Copier/Fax	100.0%	0.09	0.09	940
Office Equipment	POS Terminal	100.0%	0.03	0.03	270
Miscellaneous	Non-HVAC Motors	88.8%	0.14	0.12	1,228
Miscellaneous	Pool Pump	90.3%	0.02	0.02	160
Miscellaneous	Pool Heater	36.2%	0.03	0.01	123
Miscellaneous	Other Miscellaneous	100.0%	0.80	0.80	8,040
<b>Total</b>				<b>14.00</b>	<b>139,986</b>

Table A-161 Wyoming College New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	60.9%	2.31	1.41
Cooling	Water-Cooled Chiller	15.2%	2.43	0.37
Cooling	RTU	38.5%	1.62	0.62
Cooling	PTAC	0.0%	2.22	-
Cooling	Evaporative AC	0.0%	0.90	-
Cooling	Air-Source Heat Pump	3.9%	1.65	0.06
Cooling	Geothermal Heat Pump	0.0%	0.98	-
Heating	Electric Furnace	17.2%	12.82	2.21
Heating	Electric Zonal Heating	0.0%	13.46	-
Heating	Air-Source Heat Pump	3.6%	8.00	0.29
Heating	Geothermal Heat Pump	0.0%	4.38	-
Ventilation	Ventilation	100.0%	1.00	1.00
Water Heating	Water Heating	13.2%	2.61	0.34
Interior Lighting	Screw-in	100.0%	0.23	0.23
Interior Lighting	High-Bay Fixtures	100.0%	0.36	0.36
Interior Lighting	Linear Fluorescent	100.0%	1.94	1.94
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.09	0.09
Exterior Lighting	Linear Fluorescent	100.0%	0.29	0.29
Refrigeration	Walk-in Refrigerator	10.8%	0.27	0.03
Refrigeration	Reach-in Refrigerator	18.7%	0.14	0.03
Refrigeration	Glass Door Display	37.2%	0.12	0.04
Refrigeration	Open Display Case	37.2%	0.11	0.04
Refrigeration	Icemaker	37.2%	0.09	0.03
Refrigeration	Vending Machine	37.2%	0.12	0.05
Food Preparation	Oven	29.5%	0.39	0.11
Food Preparation	Fryer	29.5%	0.33	0.10
Food Preparation	Dishwasher	29.5%	0.57	0.17
Food Preparation	Hot Food Container	29.5%	0.04	0.01
Office Equipment	Desktop Computer	100.0%	0.43	0.43
Office Equipment	Laptop	100.0%	0.03	0.03
Office Equipment	Server	100.0%	0.07	0.07
Office Equipment	Monitor	100.0%	0.12	0.12
Office Equipment	Printer/Copier/Fax	100.0%	0.05	0.05
Office Equipment	POS Terminal	100.0%	0.02	0.02
Miscellaneous	Non-HVAC Motors	100.0%	0.14	0.14
Miscellaneous	Pool Pump	100.0%	0.02	0.02
Miscellaneous	Pool Heater	43.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.80	0.80

Table A-162 Wyoming School Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	45.5%	1.87	0.85	8,236
Cooling	Water-Cooled Chiller	11.1%	2.43	0.27	2,619
Cooling	RTU	33.0%	1.02	0.34	3,267
Cooling	PTAC	0.0%	1.29	-	-
Cooling	Evaporative AC	0.0%	0.41	-	-
Cooling	Air-Source Heat Pump	3.8%	1.02	0.04	372
Cooling	Geothermal Heat Pump	2.6%	0.62	0.02	157
Heating	Electric Furnace	14.3%	6.43	0.92	8,928
Heating	Electric Zonal Heating	0.0%	6.75	-	-
Heating	Air-Source Heat Pump	3.8%	4.93	0.19	1,796
Heating	Geothermal Heat Pump	2.6%	3.51	0.09	888
Ventilation	Ventilation	100.0%	0.85	0.85	8,194
Water Heating	Water Heating	19.1%	1.18	0.22	2,173
Interior Lighting	Screw-in	100.0%	0.37	0.37	3,584
Interior Lighting	High-Bay Fixtures	100.0%	0.33	0.33	3,198
Interior Lighting	Linear Fluorescent	100.0%	2.44	2.44	23,641
Exterior Lighting	Screw-in	100.0%	0.00	0.00	34
Exterior Lighting	HID	100.0%	0.14	0.14	1,326
Exterior Lighting	Linear Fluorescent	100.0%	0.77	0.77	7,473
Refrigeration	Walk-in Refrigerator	19.0%	0.26	0.05	485
Refrigeration	Reach-in Refrigerator	33.0%	0.14	0.05	444
Refrigeration	Glass Door Display	65.7%	0.12	0.08	745
Refrigeration	Open Display Case	65.7%	0.10	0.06	614
Refrigeration	Icemaker	65.7%	0.16	0.10	1,010
Refrigeration	Vending Machine	65.7%	0.12	0.08	781
Food Preparation	Oven	64.8%	0.19	0.12	1,189
Food Preparation	Fryer	58.6%	0.15	0.09	854
Food Preparation	Dishwasher	52.3%	0.42	0.22	2,107
Food Preparation	Hot Food Container	52.3%	0.05	0.03	258
Office Equipment	Desktop Computer	100.0%	0.31	0.31	2,954
Office Equipment	Laptop	100.0%	0.02	0.02	236
Office Equipment	Server	100.0%	0.09	0.09	862
Office Equipment	Monitor	100.0%	0.08	0.08	815
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	419
Office Equipment	POS Terminal	36.0%	0.01	0.00	43
Miscellaneous	Non-HVAC Motors	43.7%	0.10	0.04	412
Miscellaneous	Pool Pump	6.0%	0.02	0.00	14
Miscellaneous	Pool Heater	1.0%	0.02	0.00	2
Miscellaneous	Other Miscellaneous	100.0%	0.59	0.59	5,740
<b>Total</b>				<b>9.90</b>	<b>95,871</b>



Table A-163 Wyoming School New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	52.4%	1.04	0.55
Cooling	Water-Cooled Chiller	12.8%	1.10	0.14
Cooling	RTU	39.5%	0.73	0.29
Cooling	PTAC	0.0%	1.01	-
Cooling	Evaporative AC	0.0%	0.41	-
Cooling	Air-Source Heat Pump	4.9%	0.75	0.04
Cooling	Geothermal Heat Pump	3.4%	0.45	0.02
Heating	Electric Furnace	14.3%	6.43	0.92
Heating	Electric Zonal Heating	0.0%	6.75	-
Heating	Air-Source Heat Pump	4.5%	4.02	0.18
Heating	Geothermal Heat Pump	3.1%	2.20	0.07
Ventilation	Ventilation	100.0%	0.44	0.44
Water Heating	Water Heating	19.1%	1.17	0.22
Interior Lighting	Screw-in	100.0%	0.18	0.18
Interior Lighting	High-Bay Fixtures	100.0%	0.35	0.35
Interior Lighting	Linear Fluorescent	100.0%	2.21	2.21
Exterior Lighting	Screw-in	100.0%	0.00	0.00
Exterior Lighting	HID	100.0%	0.14	0.14
Exterior Lighting	Linear Fluorescent	100.0%	0.70	0.70
Refrigeration	Walk-in Refrigerator	26.6%	0.26	0.07
Refrigeration	Reach-in Refrigerator	46.2%	0.14	0.06
Refrigeration	Glass Door Display	92.0%	0.12	0.11
Refrigeration	Open Display Case	92.0%	0.11	0.10
Refrigeration	Icemaker	92.0%	0.09	0.08
Refrigeration	Vending Machine	92.0%	0.12	0.11
Food Preparation	Oven	90.7%	0.17	0.15
Food Preparation	Fryer	82.0%	0.15	0.12
Food Preparation	Dishwasher	73.3%	0.25	0.18
Food Preparation	Hot Food Container	73.3%	0.02	0.01
Office Equipment	Desktop Computer	100.0%	0.25	0.25
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.07	0.07
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	36.0%	0.01	0.00
Miscellaneous	Non-HVAC Motors	48.0%	0.10	0.05
Miscellaneous	Pool Pump	7.2%	0.02	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.59	0.59

Table A-164 Wyoming Lodging Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.0%	0.97	0.05	301
Cooling	Water-Cooled Chiller	25.0%	1.22	0.31	1,907
Cooling	RTU	19.1%	2.94	0.56	3,508
Cooling	PTAC	30.9%	3.71	1.15	7,168
Cooling	Evaporative AC	5.0%	1.18	0.06	367
Cooling	Air-Source Heat Pump	1.8%	2.94	0.05	326
Cooling	Geothermal Heat Pump	0.8%	2.77	0.02	138
Heating	Electric Furnace	36.1%	8.22	2.97	18,558
Heating	Electric Zonal Heating	0.5%	8.63	0.04	245
Heating	Air-Source Heat Pump	1.8%	7.92	0.14	879
Heating	Geothermal Heat Pump	0.8%	5.33	0.04	266
Ventilation	Ventilation	100.0%	1.64	1.64	10,272
Water Heating	Water Heating	16.7%	5.57	0.93	5,805
Interior Lighting	Screw-in	100.0%	4.25	4.25	26,540
Interior Lighting	High-Bay Fixtures	100.0%	0.31	0.31	1,924
Interior Lighting	Linear Fluorescent	100.0%	1.19	1.19	7,412
Exterior Lighting	Screw-in	100.0%	0.21	0.21	1,328
Exterior Lighting	HID	100.0%	0.83	0.83	5,189
Exterior Lighting	Linear Fluorescent	100.0%	0.06	0.06	361
Refrigeration	Walk-in Refrigerator	3.0%	0.98	0.03	184
Refrigeration	Reach-in Refrigerator	19.0%	0.26	0.05	307
Refrigeration	Glass Door Display	58.9%	0.44	0.26	1,601
Refrigeration	Open Display Case	58.9%	0.36	0.21	1,321
Refrigeration	Icemaker	58.9%	0.30	0.17	1,086
Refrigeration	Vending Machine	58.9%	0.46	0.27	1,679
Food Preparation	Oven	13.8%	0.67	0.09	577
Food Preparation	Fryer	21.0%	0.53	0.11	697
Food Preparation	Dishwasher	30.0%	1.47	0.44	2,755
Food Preparation	Hot Food Container	30.0%	0.18	0.05	338
Office Equipment	Desktop Computer	100.0%	0.12	0.12	780
Office Equipment	Laptop	100.0%	0.02	0.02	156
Office Equipment	Server	100.0%	0.09	0.09	569
Office Equipment	Monitor	100.0%	0.03	0.03	215
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02	111
Office Equipment	POS Terminal	58.0%	0.03	0.01	92
Miscellaneous	Non-HVAC Motors	91.3%	0.21	0.19	1,209
Miscellaneous	Pool Pump	76.0%	0.01	0.01	69
Miscellaneous	Pool Heater	27.0%	0.03	0.01	47
Miscellaneous	Other Miscellaneous	100.0%	0.99	0.99	6,175
<b>Total</b>				<b>18.00</b>	<b>112,462</b>

Table A-165 Wyoming Lodging New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	6.5%	0.82	0.05
Cooling	Water-Cooled Chiller	32.4%	1.05	0.34
Cooling	RTU	24.8%	2.91	0.72
Cooling	PTAC	40.1%	2.83	1.14
Cooling	Evaporative AC	6.5%	1.18	0.08
Cooling	Air-Source Heat Pump	2.2%	2.97	0.07
Cooling	Geothermal Heat Pump	1.0%	2.27	0.02
Heating	Electric Furnace	36.1%	8.22	2.97
Heating	Electric Zonal Heating	0.5%	8.63	0.04
Heating	Air-Source Heat Pump	2.1%	4.25	0.09
Heating	Geothermal Heat Pump	0.9%	1.97	0.02
Ventilation	Ventilation	100.0%	1.14	1.14
Water Heating	Water Heating	16.7%	5.55	0.92
Interior Lighting	Screw-in	100.0%	2.87	2.87
Interior Lighting	High-Bay Fixtures	100.0%	0.31	0.31
Interior Lighting	Linear Fluorescent	100.0%	1.06	1.06
Exterior Lighting	Screw-in	100.0%	0.17	0.17
Exterior Lighting	HID	100.0%	0.74	0.74
Exterior Lighting	Linear Fluorescent	100.0%	0.05	0.05
Refrigeration	Walk-in Refrigerator	3.9%	0.98	0.04
Refrigeration	Reach-in Refrigerator	24.7%	0.26	0.06
Refrigeration	Glass Door Display	76.6%	0.44	0.33
Refrigeration	Open Display Case	76.6%	0.40	0.30
Refrigeration	Icemaker	76.6%	0.17	0.13
Refrigeration	Vending Machine	76.6%	0.44	0.34
Food Preparation	Oven	17.9%	0.60	0.11
Food Preparation	Fryer	27.3%	0.52	0.14
Food Preparation	Dishwasher	39.0%	0.89	0.35
Food Preparation	Hot Food Container	39.0%	0.06	0.03
Office Equipment	Desktop Computer	100.0%	0.10	0.10
Office Equipment	Laptop	100.0%	0.02	0.02
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.03	0.03
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	63.8%	0.02	0.01
Miscellaneous	Non-HVAC Motors	100.0%	0.21	0.21
Miscellaneous	Pool Pump	91.2%	0.01	0.01
Miscellaneous	Pool Heater	32.4%	0.03	0.01
Miscellaneous	Other Miscellaneous	100.0%	0.99	0.99

Table A-166 Wyoming Warehouse Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	3.1%	1.86	0.06	973
Cooling	Water-Cooled Chiller	0.3%	1.92	0.01	111
Cooling	RTU	9.0%	1.99	0.18	3,003
Cooling	PTAC	1.5%	2.51	0.04	622
Cooling	Evaporative AC	0.1%	0.80	0.00	20
Cooling	Air-Source Heat Pump	2.3%	1.99	0.05	771
Cooling	Geothermal Heat Pump	0.0%	1.21	-	-
Heating	Electric Furnace	8.8%	12.67	1.11	18,612
Heating	Electric Zonal Heating	1.6%	13.30	0.22	3,613
Heating	Air-Source Heat Pump	2.3%	12.04	0.28	4,665
Heating	Geothermal Heat Pump	0.0%	9.93	-	-
Ventilation	Ventilation	100.0%	0.30	0.30	4,982
Water Heating	Water Heating	64.0%	0.30	0.19	3,234
Interior Lighting	Screw-in	100.0%	0.25	0.25	4,172
Interior Lighting	High-Bay Fixtures	100.0%	1.22	1.22	20,436
Interior Lighting	Linear Fluorescent	100.0%	0.94	0.94	15,750
Exterior Lighting	Screw-in	100.0%	0.17	0.17	2,863
Exterior Lighting	HID	100.0%	0.16	0.16	2,644
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	2,034
Refrigeration	Walk-in Refrigerator	1.1%	0.87	0.01	160
Refrigeration	Reach-in Refrigerator	2.0%	0.23	0.00	77
Refrigeration	Glass Door Display	10.1%	0.39	0.04	652
Refrigeration	Open Display Case	10.1%	0.32	0.03	537
Refrigeration	Icemaker	10.1%	0.26	0.03	442
Refrigeration	Vending Machine	10.1%	0.20	0.02	342
Food Preparation	Oven	2.3%	0.06	0.00	22
Food Preparation	Fryer	2.3%	0.05	0.00	18
Food Preparation	Dishwasher	2.3%	0.13	0.00	48
Food Preparation	Hot Food Container	2.3%	0.02	0.00	6
Office Equipment	Desktop Computer	100.0%	0.09	0.09	1,438
Office Equipment	Laptop	100.0%	0.01	0.01	230
Office Equipment	Server	89.0%	0.13	0.11	1,867
Office Equipment	Monitor	100.0%	0.02	0.02	397
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	204
Office Equipment	POS Terminal	77.0%	0.03	0.03	450
Miscellaneous	Non-HVAC Motors	49.9%	0.12	0.06	968
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	0.46	0.46	7,749
<b>Total</b>				<b>6.23</b>	<b>104,110</b>

Table A-167 Wyoming Warehouse New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	3.4%	1.63	0.06
Cooling	Water-Cooled Chiller	0.4%	1.63	0.01
Cooling	RTU	9.9%	1.52	0.15
Cooling	PTAC	1.6%	1.92	0.03
Cooling	Evaporative AC	0.2%	0.80	0.00
Cooling	Air-Source Heat Pump	2.6%	1.88	0.05
Cooling	Geothermal Heat Pump	0.0%	0.72	-
Heating	Electric Furnace	8.8%	12.67	1.11
Heating	Electric Zonal Heating	1.6%	13.30	0.22
Heating	Air-Source Heat Pump	2.3%	8.44	0.20
Heating	Geothermal Heat Pump	0.0%	5.34	-
Ventilation	Ventilation	100.0%	0.15	0.15
Water Heating	Water Heating	64.0%	0.30	0.19
Interior Lighting	Screw-in	100.0%	0.17	0.17
Interior Lighting	High-Bay Fixtures	100.0%	1.14	1.14
Interior Lighting	Linear Fluorescent	100.0%	0.84	0.84
Exterior Lighting	Screw-in	100.0%	0.14	0.14
Exterior Lighting	HID	100.0%	0.13	0.13
Exterior Lighting	Linear Fluorescent	100.0%	0.11	0.11
Refrigeration	Walk-in Refrigerator	1.3%	0.87	0.01
Refrigeration	Reach-in Refrigerator	2.4%	0.23	0.01
Refrigeration	Glass Door Display	12.1%	0.39	0.05
Refrigeration	Open Display Case	12.1%	0.35	0.04
Refrigeration	Icemaker	12.1%	0.17	0.02
Refrigeration	Vending Machine	12.1%	0.20	0.02
Food Preparation	Oven	2.7%	0.05	0.00
Food Preparation	Fryer	2.5%	0.05	0.00
Food Preparation	Dishwasher	2.7%	0.08	0.00
Food Preparation	Hot Food Container	2.5%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.07	0.07
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.12	0.12
Office Equipment	Monitor	100.0%	0.02	0.02
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01
Office Equipment	POS Terminal	84.7%	0.03	0.03
Miscellaneous	Non-HVAC Motors	59.8%	0.12	0.07
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	0.46	0.46

**Table A-168 Wyoming Warehouse, Controlled Atmosphere Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	13.0%	1.40	0.18	28
Cooling	Water-Cooled Chiller	1.4%	1.44	0.02	3
Cooling	RTU	17.0%	1.50	0.25	39
Cooling	PTAC	1.0%	1.89	0.02	3
Cooling	Evaporative AC	0.1%	0.60	0.00	0
Cooling	Air-Source Heat Pump	1.6%	1.50	0.02	4
Cooling	Geothermal Heat Pump	0.0%	0.91	-	-
Heating	Electric Furnace	6.6%	9.58	0.63	97
Heating	Electric Zonal Heating	1.2%	10.06	0.12	19
Heating	Air-Source Heat Pump	1.6%	9.10	0.15	22
Heating	Geothermal Heat Pump	0.0%	7.51	-	-
Ventilation	Ventilation	100.0%	0.81	0.81	124
Water Heating	Water Heating	64.0%	0.46	0.30	45
Interior Lighting	Screw-in	100.0%	0.24	0.24	37
Interior Lighting	High-Bay Fixtures	100.0%	1.18	1.18	181
Interior Lighting	Linear Fluorescent	100.0%	0.91	0.91	139
Exterior Lighting	Screw-in	100.0%	0.17	0.17	25
Exterior Lighting	HID	100.0%	0.15	0.15	23
Exterior Lighting	Linear Fluorescent	100.0%	0.12	0.12	18
Refrigeration	Walk-in Refrigerator	91.7%	17.56	16.11	2,465
Refrigeration	Reach-in Refrigerator	2.0%	0.93	0.02	3
Refrigeration	Glass Door Display	10.1%	1.56	0.16	24
Refrigeration	Open Display Case	10.1%	1.29	0.13	20
Refrigeration	Icemaker	91.7%	1.06	0.97	149
Refrigeration	Vending Machine	91.7%	0.82	0.75	115
Food Preparation	Oven	40.8%	0.09	0.04	6
Food Preparation	Fryer	40.8%	0.07	0.03	5
Food Preparation	Dishwasher	40.8%	0.20	0.08	13
Food Preparation	Hot Food Container	40.8%	0.02	0.01	2
Office Equipment	Desktop Computer	100.0%	0.06	0.06	9
Office Equipment	Laptop	100.0%	0.01	0.01	1
Office Equipment	Server	89.0%	0.09	0.08	12
Office Equipment	Monitor	100.0%	0.02	0.02	3
Office Equipment	Printer/Copier/Fax	100.0%	0.01	0.01	1
Office Equipment	POS Terminal	77.0%	0.02	0.02	3
Miscellaneous	Non-HVAC Motors	79.5%	0.41	0.33	50
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	1.72	1.72	263
<b>Total</b>				<b>25.81</b>	<b>3,950</b>

**Table A-169 Wyoming Warehouse, Controlled Atmosphere New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	14.3%	1.23	0.18
Cooling	Water-Cooled Chiller	1.6%	1.23	0.02
Cooling	RTU	18.7%	1.14	0.21
Cooling	PTAC	1.1%	1.44	0.02
Cooling	Evaporative AC	0.1%	0.60	0.00
Cooling	Air-Source Heat Pump	1.8%	1.41	0.02
Cooling	Geothermal Heat Pump	0.0%	0.54	-
Heating	Electric Furnace	6.6%	9.58	0.63
Heating	Electric Zonal Heating	1.2%	10.06	0.12
Heating	Air-Source Heat Pump	1.6%	6.38	0.10
Heating	Geothermal Heat Pump	0.0%	4.03	-
Ventilation	Ventilation	100.0%	0.42	0.42
Water Heating	Water Heating	64.0%	0.46	0.30
Interior Lighting	Screw-in	100.0%	0.14	0.14
Interior Lighting	High-Bay Fixtures	100.0%	1.20	1.20
Interior Lighting	Linear Fluorescent	100.0%	0.81	0.81
Exterior Lighting	Screw-in	100.0%	0.13	0.13
Exterior Lighting	HID	100.0%	0.16	0.16
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	100.0%	17.52	17.52
Refrigeration	Reach-in Refrigerator	2.4%	0.93	0.02
Refrigeration	Glass Door Display	12.1%	1.56	0.19
Refrigeration	Open Display Case	12.1%	1.42	0.17
Refrigeration	Icemaker	100.0%	0.70	0.70
Refrigeration	Vending Machine	100.0%	0.79	0.79
Food Preparation	Oven	49.0%	0.08	0.04
Food Preparation	Fryer	44.9%	0.07	0.03
Food Preparation	Dishwasher	49.0%	0.12	0.06
Food Preparation	Hot Food Container	44.9%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	0.05	0.05
Office Equipment	Laptop	100.0%	0.01	0.01
Office Equipment	Server	100.0%	0.08	0.08
Office Equipment	Monitor	100.0%	0.01	0.01
Office Equipment	Printer/Copier/Fax	100.0%	0.00	0.00
Office Equipment	POS Terminal	84.7%	0.02	0.02
Miscellaneous	Non-HVAC Motors	95.4%	0.41	0.39
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	1.72	1.72

Table A-170 Wyoming Data Center Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	19.1%	37.54	7.15	2
Cooling	Water-Cooled Chiller	19.1%	39.07	7.45	2
Cooling	RTU	56.8%	39.67	22.54	7
Cooling	PTAC	0.6%	50.12	0.30	0
Cooling	Evaporative AC	0.0%	15.87	-	-
Cooling	Air-Source Heat Pump	1.8%	39.67	0.71	0
Cooling	Geothermal Heat Pump	0.7%	24.17	0.17	0
Heating	Electric Furnace	36.6%	3.98	1.45	0
Heating	Electric Zonal Heating	1.3%	4.17	0.05	0
Heating	Air-Source Heat Pump	1.8%	3.66	0.07	0
Heating	Geothermal Heat Pump	0.7%	2.81	0.02	0
Ventilation	Ventilation	100.0%	28.74	28.74	9
Water Heating	Water Heating	39.8%	0.74	0.29	0
Interior Lighting	Screw-in	100.0%	1.21	1.21	0
Interior Lighting	High-Bay Fixtures	100.0%	0.57	0.57	0
Interior Lighting	Linear Fluorescent	100.0%	3.89	3.89	1
Exterior Lighting	Screw-in	100.0%	0.06	0.06	0
Exterior Lighting	HID	100.0%	0.17	0.17	0
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10	0
Refrigeration	Walk-in Refrigerator	2.0%	0.15	0.00	0
Refrigeration	Reach-in Refrigerator	14.0%	0.04	0.01	0
Refrigeration	Glass Door Display	5.1%	0.07	0.00	0
Refrigeration	Open Display Case	5.1%	0.05	0.00	0
Refrigeration	Icemaker	5.1%	0.04	0.00	0
Refrigeration	Vending Machine	5.1%	0.03	0.00	0
Food Preparation	Oven	3.6%	0.12	0.00	0
Food Preparation	Fryer	3.6%	0.09	0.00	0
Food Preparation	Dishwasher	3.6%	0.25	0.01	0
Food Preparation	Hot Food Container	3.6%	0.03	0.00	0
Office Equipment	Desktop Computer	100.0%	4.73	4.73	2
Office Equipment	Laptop	100.0%	0.38	0.38	0
Office Equipment	Server	100.0%	69.09	69.09	22
Office Equipment	Monitor	100.0%	1.31	1.31	0
Office Equipment	Printer/Copier/Fax	100.0%	0.67	0.67	0
Office Equipment	POS Terminal	40.0%	0.19	0.08	0
Miscellaneous	Non-HVAC Motors	89.6%	5.26	4.71	2
Miscellaneous	Pool Pump	0.0%	0.01	-	-
Miscellaneous	Pool Heater	0.0%	0.02	-	-
Miscellaneous	Other Miscellaneous	100.0%	19.54	19.54	6
<b>Total</b>				<b>175.49</b>	<b>56</b>



Table A-171 Wyoming Data Center New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	19.7%	32.99	6.51
Cooling	Water-Cooled Chiller	23.4%	33.28	7.79
Cooling	RTU	58.8%	25.45	14.97
Cooling	PTAC	0.6%	38.20	0.23
Cooling	Evaporative AC	0.0%	15.87	-
Cooling	Air-Source Heat Pump	2.3%	31.46	0.71
Cooling	Geothermal Heat Pump	0.9%	15.52	0.14
Heating	Electric Furnace	36.6%	3.98	1.45
Heating	Electric Zonal Heating	1.3%	4.17	0.05
Heating	Air-Source Heat Pump	2.1%	3.06	0.06
Heating	Geothermal Heat Pump	0.8%	1.76	0.01
Ventilation	Ventilation	100.0%	15.22	15.22
Water Heating	Water Heating	39.8%	0.73	0.29
Interior Lighting	Screw-in	100.0%	0.69	0.69
Interior Lighting	High-Bay Fixtures	100.0%	0.62	0.62
Interior Lighting	Linear Fluorescent	100.0%	3.62	3.62
Exterior Lighting	Screw-in	100.0%	0.04	0.04
Exterior Lighting	HID	100.0%	0.15	0.15
Exterior Lighting	Linear Fluorescent	100.0%	0.10	0.10
Refrigeration	Walk-in Refrigerator	2.2%	0.15	0.00
Refrigeration	Reach-in Refrigerator	15.4%	0.04	0.01
Refrigeration	Glass Door Display	5.6%	0.07	0.00
Refrigeration	Open Display Case	5.6%	0.06	0.00
Refrigeration	Icemaker	5.6%	0.03	0.00
Refrigeration	Vending Machine	5.6%	0.03	0.00
Food Preparation	Oven	4.0%	0.10	0.00
Food Preparation	Fryer	4.0%	0.09	0.00
Food Preparation	Dishwasher	4.0%	0.15	0.01
Food Preparation	Hot Food Container	4.0%	0.01	0.00
Office Equipment	Desktop Computer	100.0%	3.84	3.84
Office Equipment	Laptop	100.0%	0.31	0.31
Office Equipment	Server	100.0%	63.42	63.42
Office Equipment	Monitor	100.0%	1.08	1.08
Office Equipment	Printer/Copier/Fax	100.0%	0.37	0.37
Office Equipment	POS Terminal	44.0%	0.17	0.08
Miscellaneous	Non-HVAC Motors	100.0%	5.26	5.26
Miscellaneous	Pool Pump	0.0%	0.01	-
Miscellaneous	Pool Heater	0.0%	0.02	-
Miscellaneous	Other Miscellaneous	100.0%	19.54	19.54

Table A-172 Wyoming Miscellaneous Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)	Usage (MWh)
Cooling	Air-Cooled Chiller	4.8%	2.55	0.12	1,520
Cooling	Water-Cooled Chiller	19.1%	2.64	0.50	6,289
Cooling	RTU	38.5%	2.84	1.10	13,701
Cooling	PTAC	3.9%	3.59	0.14	1,773
Cooling	Evaporative AC	7.7%	1.14	0.09	1,096
Cooling	Air-Source Heat Pump	2.0%	2.84	0.06	725
Cooling	Geothermal Heat Pump	1.3%	1.73	0.02	285
Heating	Electric Furnace	11.4%	7.28	0.83	10,399
Heating	Electric Zonal Heating	9.1%	7.64	0.69	8,693
Heating	Air-Source Heat Pump	2.0%	6.68	0.14	1,703
Heating	Geothermal Heat Pump	1.3%	4.86	0.06	800
Ventilation	Ventilation	100.0%	1.16	1.16	14,449
Water Heating	Water Heating	44.1%	2.20	0.97	12,118
Interior Lighting	Screw-in	100.0%	1.12	1.12	13,981
Interior Lighting	High-Bay Fixtures	100.0%	0.50	0.50	6,249
Interior Lighting	Linear Fluorescent	100.0%	2.73	2.73	34,115
Exterior Lighting	Screw-in	100.0%	0.54	0.54	6,764
Exterior Lighting	HID	100.0%	1.14	1.14	14,213
Exterior Lighting	Linear Fluorescent	100.0%	0.08	0.08	1,023
Refrigeration	Walk-in Refrigerator	7.3%	1.05	0.08	958
Refrigeration	Reach-in Refrigerator	16.4%	0.28	0.05	569
Refrigeration	Glass Door Display	1.8%	0.47	0.01	106
Refrigeration	Open Display Case	1.8%	0.39	0.01	88
Refrigeration	Icemaker	21.6%	0.32	0.07	858
Refrigeration	Vending Machine	21.6%	0.49	0.11	1,326
Food Preparation	Oven	58.9%	0.17	0.10	1,283
Food Preparation	Fryer	29.9%	0.14	0.04	517
Food Preparation	Dishwasher	15.4%	0.38	0.06	737
Food Preparation	Hot Food Container	15.4%	0.05	0.01	90
Office Equipment	Desktop Computer	100.0%	0.27	0.27	3,390
Office Equipment	Laptop	100.0%	0.05	0.05	678
Office Equipment	Server	66.0%	0.20	0.13	1,633
Office Equipment	Monitor	100.0%	0.07	0.07	936
Office Equipment	Printer/Copier/Fax	100.0%	0.04	0.04	481
Office Equipment	POS Terminal	28.0%	0.06	0.02	193
Miscellaneous	Non-HVAC Motors	59.9%	0.18	0.11	1,347
Miscellaneous	Pool Pump	4.0%	0.01	0.00	5
Miscellaneous	Pool Heater	1.0%	0.02	0.00	2
Miscellaneous	Other Miscellaneous	100.0%	0.80	0.80	10,012
<b>Total</b>				<b>14.00</b>	<b>175,104</b>

Table A-173 Wyoming Miscellaneous New Construction Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Sqft)
Cooling	Air-Cooled Chiller	6.9%	2.11	0.15
Cooling	Water-Cooled Chiller	27.8%	2.25	0.62
Cooling	RTU	56.2%	2.16	1.22
Cooling	PTAC	5.8%	2.74	0.16
Cooling	Evaporative AC	11.2%	1.14	0.13
Cooling	Air-Source Heat Pump	3.0%	2.68	0.08
Cooling	Geothermal Heat Pump	1.9%	1.32	0.03
Heating	Electric Furnace	11.4%	7.28	0.83
Heating	Electric Zonal Heating	9.1%	7.64	0.69
Heating	Air-Source Heat Pump	2.8%	4.02	0.11
Heating	Geothermal Heat Pump	1.8%	1.92	0.03
Ventilation	Ventilation	100.0%	0.64	0.64
Water Heating	Water Heating	44.1%	2.19	0.96
Interior Lighting	Screw-in	100.0%	0.84	0.84
Interior Lighting	High-Bay Fixtures	100.0%	0.51	0.51
Interior Lighting	Linear Fluorescent	100.0%	2.47	2.47
Exterior Lighting	Screw-in	100.0%	0.27	0.27
Exterior Lighting	HID	100.0%	0.95	0.95
Exterior Lighting	Linear Fluorescent	100.0%	0.07	0.07
Refrigeration	Walk-in Refrigerator	10.2%	1.05	0.11
Refrigeration	Reach-in Refrigerator	22.9%	0.28	0.06
Refrigeration	Glass Door Display	2.5%	0.47	0.01
Refrigeration	Open Display Case	2.5%	0.43	0.01
Refrigeration	Icemaker	30.2%	0.21	0.06
Refrigeration	Vending Machine	30.2%	0.48	0.14
Food Preparation	Oven	82.5%	0.16	0.13
Food Preparation	Fryer	41.9%	0.13	0.06
Food Preparation	Dishwasher	21.6%	0.23	0.05
Food Preparation	Hot Food Container	21.6%	0.02	0.00
Office Equipment	Desktop Computer	100.0%	0.22	0.22
Office Equipment	Laptop	100.0%	0.04	0.04
Office Equipment	Server	82.5%	0.18	0.15
Office Equipment	Monitor	100.0%	0.06	0.06
Office Equipment	Printer/Copier/Fax	100.0%	0.02	0.02
Office Equipment	POS Terminal	33.6%	0.05	0.02
Miscellaneous	Non-HVAC Motors	71.9%	0.18	0.13
Miscellaneous	Pool Pump	4.6%	0.01	0.00
Miscellaneous	Pool Heater	1.2%	0.02	0.00
Miscellaneous	Other Miscellaneous	100.0%	0.80	0.80

## Industrial Market Profiles

**Table A-174 California Agriculture Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,161	178	35
Cooling	Water-Cooled Chiller	2.8%	2,981	85	17
Cooling	RTU	4.7%	3,517	164	33
Cooling	Air-Source Heat Pump	2.3%	3,517	82	16
Cooling	Geothermal Heat Pump	0.0%	2,346	-	-
Heating	Electric Furnace	2.8%	11,557	328	65
Heating	Electric Zonal Heating	15.4%	11,007	1,690	335
Heating	Air-Source Heat Pump	2.3%	10,371	240	48
Heating	Geothermal Heat Pump	0.0%	6,917	-	-
Ventilation	Ventilation	100.0%	460	460	91
Interior Lighting	Screw-in	100.0%	237	237	47
Interior Lighting	High-Bay Fixtures	100.0%	1,162	1,162	230
Interior Lighting	Linear Fluorescent	100.0%	896	896	178
Exterior Lighting	Screw-in	100.0%	163	163	32
Exterior Lighting	HID	100.0%	150	150	30
Exterior Lighting	Linear Fluorescent	100.0%	116	116	23
Motors	Pumps	100.0%	3,011	3,011	597
Motors	Fans & Blowers	100.0%	5,429	5,429	1,076
Motors	Compressed Air	100.0%	2,509	2,509	497
Motors	Conveyors	100.0%	6,387	6,387	1,266
Motors	Other Motors	0.0%	1,888	-	-
Process	Process Heating	100.0%	2,855	2,855	566
Process	Process Cooling	100.0%	4,805	4,805	952
Process	Process Refrigeration	100.0%	4,805	4,805	952
Process	Process Electro-Chemical	100.0%	92	92	18
Process	Process Other	100.0%	357	357	71
Miscellaneous	Miscellaneous	100.0%	1,888	1,888	374
<b>Total</b>				<b>38,091</b>	<b>7,550</b>

**Table A-175 California Agriculture New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,015	113
Cooling	Water-Cooled Chiller	2.8%	1,812	52
Cooling	RTU	4.7%	1,631	76
Cooling	Air-Source Heat Pump	2.3%	2,587	60
Cooling	Geothermal Heat Pump	0.0%	1,398	-
Heating	Electric Furnace	2.8%	11,557	328
Heating	Electric Zonal Heating	15.4%	11,007	1,690
Heating	Air-Source Heat Pump	2.3%	6,472	150
Heating	Geothermal Heat Pump	0.0%	4,034	-
Ventilation	Ventilation	100.0%	150	150
Interior Lighting	Screw-in	100.0%	138	138
Interior Lighting	High-Bay Fixtures	100.0%	1,484	1,484
Interior Lighting	Linear Fluorescent	100.0%	793	793
Exterior Lighting	Screw-in	100.0%	123	123
Exterior Lighting	HID	100.0%	193	193
Exterior Lighting	Linear Fluorescent	100.0%	102	102
Motors	Pumps	100.0%	3,011	3,011
Motors	Fans & Blowers	100.0%	5,429	5,429
Motors	Compressed Air	100.0%	2,509	2,509
Motors	Conveyors	100.0%	6,387	6,387
Motors	Other Motors	100.0%	1,888	1,888
Process	Process Heating	100.0%	2,855	2,855
Process	Process Cooling	100.0%	4,805	4,805
Process	Process Refrigeration	100.0%	4,805	4,805
Process	Process Electro-Chemical	100.0%	92	92
Process	Process Other	0.0%	357	-
Miscellaneous	Miscellaneous	100.0%	1,888	1,888

**Table A-176 California Mining and Extraction Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,022	170	3
Cooling	Water-Cooled Chiller	2.8%	2,850	81	1
Cooling	RTU	4.7%	3,363	157	2
Cooling	Air-Source Heat Pump	2.3%	3,362	78	1
Cooling	Geothermal Heat Pump	0.0%	2,242	-	-
Heating	Electric Furnace	2.8%	11,049	314	5
Heating	Electric Zonal Heating	15.4%	10,523	1,616	24
Heating	Air-Source Heat Pump	2.3%	9,915	230	3
Heating	Geothermal Heat Pump	0.0%	6,613	-	-
Ventilation	Ventilation	100.0%	440	440	7
Interior Lighting	Screw-in	100.0%	345	345	5
Interior Lighting	High-Bay Fixtures	100.0%	1,692	1,692	25
Interior Lighting	Linear Fluorescent	100.0%	1,304	1,304	20
Exterior Lighting	Screw-in	100.0%	237	237	4
Exterior Lighting	HID	100.0%	219	219	3
Exterior Lighting	Linear Fluorescent	100.0%	168	168	3
Motors	Pumps	100.0%	30,141	30,141	452
Motors	Fans & Blowers	100.0%	8,373	8,373	126
Motors	Compressed Air	100.0%	12,559	12,559	188
Motors	Conveyors	100.0%	8,791	8,791	132
Motors	Other Motors	100.0%	23,862	23,862	358
Process	Process Heating	100.0%	881	881	13
Process	Process Cooling	0.0%	881	-	-
Process	Process Refrigeration	0.0%	881	-	-
Process	Process Electro-Chemical	100.0%	881	881	13
Process	Process Other	100.0%	4,847	4,847	73
Miscellaneous	Miscellaneous	100.0%	881	881	13
<b>Total</b>				<b>98,267</b>	<b>1,474</b>

**Table A-177 California Mining and Extraction New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,926	108
Cooling	Water-Cooled Chiller	2.8%	1,732	49
Cooling	RTU	4.7%	1,559	73
Cooling	Air-Source Heat Pump	2.3%	2,473	57
Cooling	Geothermal Heat Pump	0.0%	1,337	-
Heating	Electric Furnace	2.8%	11,049	314
Heating	Electric Zonal Heating	15.4%	10,523	1,616
Heating	Air-Source Heat Pump	2.3%	6,187	143
Heating	Geothermal Heat Pump	0.0%	3,856	-
Ventilation	Ventilation	100.0%	144	144
Interior Lighting	Screw-in	100.0%	202	202
Interior Lighting	High-Bay Fixtures	100.0%	2,160	2,160
Interior Lighting	Linear Fluorescent	100.0%	1,155	1,155
Exterior Lighting	Screw-in	100.0%	179	179
Exterior Lighting	HID	100.0%	281	281
Exterior Lighting	Linear Fluorescent	100.0%	149	149
Motors	Pumps	100.0%	30,141	30,141
Motors	Fans & Blowers	0.0%	8,373	-
Motors	Compressed Air	0.0%	12,559	-
Motors	Conveyors	100.0%	8,791	8,791
Motors	Other Motors	100.0%	23,862	23,862
Process	Process Heating	100.0%	881	881
Process	Process Cooling	100.0%	881	881
Process	Process Refrigeration	100.0%	881	881
Process	Process Electro-Chemical	100.0%	881	881
Process	Process Other	100.0%	4,847	4,847
Miscellaneous	Miscellaneous	100.0%	881	881

**Table A-178 California Food Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	9,366	527	105
Cooling	Water-Cooled Chiller	2.8%	8,831	251	50
Cooling	RTU	4.7%	10,421	486	97
Cooling	Air-Source Heat Pump	2.3%	10,418	242	48
Cooling	Geothermal Heat Pump	0.0%	6,949	-	-
Heating	Electric Furnace	2.8%	34,241	972	194
Heating	Electric Zonal Heating	15.4%	32,610	5,007	1,001
Heating	Air-Source Heat Pump	2.3%	30,726	712	142
Heating	Geothermal Heat Pump	0.0%	20,494	-	-
Ventilation	Ventilation	100.0%	1,363	1,363	273
Interior Lighting	Screw-in	100.0%	703	703	141
Interior Lighting	High-Bay Fixtures	100.0%	3,444	3,444	689
Interior Lighting	Linear Fluorescent	100.0%	2,654	2,654	531
Exterior Lighting	Screw-in	100.0%	482	482	96
Exterior Lighting	HID	100.0%	446	446	89
Exterior Lighting	Linear Fluorescent	100.0%	343	343	69
Motors	Pumps	100.0%	14,238	14,238	2,848
Motors	Fans & Blowers	100.0%	10,240	10,240	2,048
Motors	Compressed Air	100.0%	5,771	5,771	1,154
Motors	Conveyors	100.0%	21,116	21,116	4,223
Motors	Other Motors	0.0%	5,593	-	-
Process	Process Heating	100.0%	8,460	8,460	1,692
Process	Process Cooling	100.0%	14,236	14,236	2,847
Process	Process Refrigeration	100.0%	14,236	14,236	2,847
Process	Process Electro-Chemical	100.0%	272	272	54
Process	Process Other	100.0%	1,058	1,058	212
Miscellaneous	Miscellaneous	100.0%	5,593	5,593	1,119
	<b>Total</b>			<b>112,851</b>	<b>22,570</b>



**Table A-179 California Food Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	5,970	336
Cooling	Water-Cooled Chiller	2.8%	5,368	153
Cooling	RTU	4.7%	4,831	225
Cooling	Air-Source Heat Pump	2.3%	7,664	178
Cooling	Geothermal Heat Pump	0.0%	4,143	-
Heating	Electric Furnace	2.8%	34,241	972
Heating	Electric Zonal Heating	15.4%	32,610	5,007
Heating	Air-Source Heat Pump	2.3%	19,174	445
Heating	Geothermal Heat Pump	0.0%	11,950	-
Ventilation	Ventilation	100.0%	446	446
Interior Lighting	Screw-in	100.0%	410	410
Interior Lighting	High-Bay Fixtures	100.0%	4,396	4,396
Interior Lighting	Linear Fluorescent	100.0%	2,350	2,350
Exterior Lighting	Screw-in	100.0%	365	365
Exterior Lighting	HID	100.0%	573	573
Exterior Lighting	Linear Fluorescent	100.0%	304	304
Motors	Pumps	100.0%	14,238	14,238
Motors	Fans & Blowers	100.0%	10,240	10,240
Motors	Compressed Air	100.0%	5,771	5,771
Motors	Conveyors	100.0%	21,116	21,116
Motors	Other Motors	100.0%	5,593	5,593
Process	Process Heating	100.0%	8,460	8,460
Process	Process Cooling	100.0%	14,236	14,236
Process	Process Refrigeration	100.0%	14,236	14,236
Process	Process Electro-Chemical	100.0%	272	272
Process	Process Other	0.0%	1,058	-
Miscellaneous	Miscellaneous	100.0%	5,593	5,593

**Table A-180 California Paper Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	53	3	0
Cooling	Water-Cooled Chiller	2.8%	50	1	0
Cooling	RTU	4.7%	59	3	0
Cooling	Air-Source Heat Pump	2.3%	59	1	0
Cooling	Geothermal Heat Pump	0.0%	39	-	-
Heating	Electric Furnace	2.8%	193	5	0
Heating	Electric Zonal Heating	15.4%	184	28	0
Heating	Air-Source Heat Pump	2.3%	174	4	0
Heating	Geothermal Heat Pump	0.0%	116	-	-
Ventilation	Ventilation	100.0%	8	8	0
Interior Lighting	Screw-in	100.0%	4	4	0
Interior Lighting	High-Bay Fixtures	100.0%	21	21	0
Interior Lighting	Linear Fluorescent	100.0%	16	16	0
Exterior Lighting	Screw-in	100.0%	3	3	0
Exterior Lighting	HID	100.0%	3	3	0
Exterior Lighting	Linear Fluorescent	100.0%	2	2	0
Motors	Pumps	100.0%	263	263	1
Motors	Fans & Blowers	100.0%	141	141	1
Motors	Compressed Air	100.0%	71	71	0
Motors	Conveyors	100.0%	343	343	2
Motors	Other Motors	100.0%	111	111	1
Process	Process Heating	100.0%	91	91	0
Process	Process Cooling	100.0%	9	9	0
Process	Process Refrigeration	100.0%	9	9	0
Process	Process Electro-Chemical	100.0%	16	16	0
Process	Process Other	100.0%	18	18	0
Miscellaneous	Miscellaneous	100.0%	31	31	0
<b>Total</b>				<b>1,207</b>	<b>6</b>

**Table A-181 California Paper Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	34	2
Cooling	Water-Cooled Chiller	2.8%	30	1
Cooling	RTU	4.7%	27	1
Cooling	Air-Source Heat Pump	2.3%	43	1
Cooling	Geothermal Heat Pump	0.0%	23	-
Heating	Electric Furnace	2.8%	193	5
Heating	Electric Zonal Heating	15.4%	184	28
Heating	Air-Source Heat Pump	2.3%	108	3
Heating	Geothermal Heat Pump	0.0%	67	-
Ventilation	Ventilation	100.0%	3	3
Interior Lighting	Screw-in	100.0%	3	3
Interior Lighting	High-Bay Fixtures	100.0%	27	27
Interior Lighting	Linear Fluorescent	100.0%	14	14
Exterior Lighting	Screw-in	100.0%	2	2
Exterior Lighting	HID	100.0%	4	4
Exterior Lighting	Linear Fluorescent	100.0%	2	2
Motors	Pumps	100.0%	263	263
Motors	Fans & Blowers	100.0%	141	141
Motors	Compressed Air	100.0%	71	71
Motors	Conveyors	100.0%	343	343
Motors	Other Motors	100.0%	111	111
Process	Process Heating	100.0%	91	91
Process	Process Cooling	100.0%	9	9
Process	Process Refrigeration	100.0%	9	9
Process	Process Electro-Chemical	100.0%	16	16
Process	Process Other	100.0%	18	18
Miscellaneous	Miscellaneous	100.0%	31	31

**Table A-182 California Petroleum Refining Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	503	28	0
Cooling	Water-Cooled Chiller	2.8%	475	14	0
Cooling	RTU	4.7%	560	26	0
Cooling	Air-Source Heat Pump	2.3%	560	13	0
Cooling	Geothermal Heat Pump	0.0%	373	-	-
Heating	Electric Furnace	2.8%	1,840	52	0
Heating	Electric Zonal Heating	15.4%	1,752	269	1
Heating	Air-Source Heat Pump	2.3%	1,651	38	0
Heating	Geothermal Heat Pump	0.0%	1,101	-	-
Ventilation	Ventilation	100.0%	73	73	0
Interior Lighting	Screw-in	100.0%	30	30	0
Interior Lighting	High-Bay Fixtures	100.0%	145	145	1
Interior Lighting	Linear Fluorescent	100.0%	112	112	1
Exterior Lighting	Screw-in	100.0%	20	20	0
Exterior Lighting	HID	100.0%	19	19	0
Exterior Lighting	Linear Fluorescent	100.0%	14	14	0
Motors	Pumps	100.0%	3,745	3,745	19
Motors	Fans & Blowers	100.0%	1,489	1,489	7
Motors	Compressed Air	100.0%	1,717	1,717	9
Motors	Conveyors	100.0%	4,037	4,037	20
Motors	Other Motors	100.0%	807	807	4
Process	Process Heating	100.0%	591	591	3
Process	Process Cooling	100.0%	360	360	2
Process	Process Refrigeration	100.0%	360	360	2
Process	Process Electro-Chemical	100.0%	14	14	0
Process	Process Other	100.0%	110	110	1
Miscellaneous	Miscellaneous	100.0%	154	154	1
	<b>Total</b>			<b>14,239</b>	<b>71</b>

**Table A-183 California Petroleum Refining New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	321	18
Cooling	Water-Cooled Chiller	2.8%	288	8
Cooling	RTU	4.7%	260	12
Cooling	Air-Source Heat Pump	2.3%	412	10
Cooling	Geothermal Heat Pump	0.0%	223	-
Heating	Electric Furnace	2.8%	1,840	52
Heating	Electric Zonal Heating	15.4%	1,752	269
Heating	Air-Source Heat Pump	2.3%	1,030	24
Heating	Geothermal Heat Pump	0.0%	642	-
Ventilation	Ventilation	100.0%	24	24
Interior Lighting	Screw-in	100.0%	17	17
Interior Lighting	High-Bay Fixtures	100.0%	186	186
Interior Lighting	Linear Fluorescent	100.0%	99	99
Exterior Lighting	Screw-in	100.0%	15	15
Exterior Lighting	HID	100.0%	24	24
Exterior Lighting	Linear Fluorescent	100.0%	13	13
Motors	Pumps	100.0%	3,745	3,745
Motors	Fans & Blowers	100.0%	1,489	1,489
Motors	Compressed Air	100.0%	1,717	1,717
Motors	Conveyors	100.0%	4,037	4,037
Motors	Other Motors	100.0%	807	807
Process	Process Heating	100.0%	591	591
Process	Process Cooling	100.0%	360	360
Process	Process Refrigeration	100.0%	360	360
Process	Process Electro-Chemical	100.0%	14	14
Process	Process Other	100.0%	110	110
Miscellaneous	Miscellaneous	100.0%	154	154

**Table A-184 California Stone Clay Glass Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	813	46	1
Cooling	Water-Cooled Chiller	2.8%	766	22	0
Cooling	RTU	4.7%	904	42	1
Cooling	Air-Source Heat Pump	2.3%	904	21	0
Cooling	Geothermal Heat Pump	0.0%	603	-	-
Heating	Electric Furnace	2.8%	2,971	84	1
Heating	Electric Zonal Heating	15.4%	2,829	434	6
Heating	Air-Source Heat Pump	2.3%	2,666	62	1
Heating	Geothermal Heat Pump	0.0%	1,778	-	-
Ventilation	Ventilation	100.0%	118	118	2
Interior Lighting	Screw-in	100.0%	59	59	1
Interior Lighting	High-Bay Fixtures	100.0%	287	287	4
Interior Lighting	Linear Fluorescent	100.0%	221	221	3
Exterior Lighting	Screw-in	100.0%	40	40	1
Exterior Lighting	HID	100.0%	37	37	1
Exterior Lighting	Linear Fluorescent	100.0%	29	29	0
Motors	Pumps	100.0%	875	875	13
Motors	Fans & Blowers	100.0%	1,231	1,231	18
Motors	Compressed Air	100.0%	222	222	3
Motors	Conveyors	100.0%	5,098	5,098	73
Motors	Other Motors	100.0%	80	80	1
Process	Process Heating	100.0%	2,685	2,685	39
Process	Process Cooling	100.0%	165	165	2
Process	Process Refrigeration	100.0%	165	165	2
Process	Process Electro-Chemical	100.0%	46	46	1
Process	Process Other	100.0%	548	548	8
Miscellaneous	Miscellaneous	100.0%	427	427	6
<b>Total</b>				<b>13,045</b>	<b>187</b>

**Table A-185 California Stone Clay Glass Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	518	29
Cooling	Water-Cooled Chiller	2.8%	466	13
Cooling	RTU	4.7%	419	20
Cooling	Air-Source Heat Pump	2.3%	665	15
Cooling	Geothermal Heat Pump	0.0%	359	-
Heating	Electric Furnace	2.8%	2,971	84
Heating	Electric Zonal Heating	15.4%	2,829	434
Heating	Air-Source Heat Pump	2.3%	1,664	39
Heating	Geothermal Heat Pump	0.0%	1,037	-
Ventilation	Ventilation	100.0%	39	39
Interior Lighting	Screw-in	100.0%	34	34
Interior Lighting	High-Bay Fixtures	100.0%	367	367
Interior Lighting	Linear Fluorescent	100.0%	196	196
Exterior Lighting	Screw-in	100.0%	30	30
Exterior Lighting	HID	100.0%	48	48
Exterior Lighting	Linear Fluorescent	100.0%	25	25
Motors	Pumps	100.0%	875	875
Motors	Fans & Blowers	100.0%	1,231	1,231
Motors	Compressed Air	100.0%	222	222
Motors	Conveyors	100.0%	5,098	5,098
Motors	Other Motors	100.0%	80	80
Process	Process Heating	100.0%	2,685	2,685
Process	Process Cooling	100.0%	165	165
Process	Process Refrigeration	100.0%	165	165
Process	Process Electro-Chemical	100.0%	46	46
Process	Process Other	100.0%	548	548
Miscellaneous	Miscellaneous	100.0%	427	427

**Table A-186 California Transportation Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,656	93	1
Cooling	Water-Cooled Chiller	2.8%	1,561	44	1
Cooling	RTU	4.7%	1,842	86	1
Cooling	Air-Source Heat Pump	2.3%	1,842	43	1
Cooling	Geothermal Heat Pump	0.0%	1,228	-	-
Heating	Electric Furnace	2.8%	6,052	172	2
Heating	Electric Zonal Heating	15.4%	5,764	885	12
Heating	Air-Source Heat Pump	2.3%	5,431	126	2
Heating	Geothermal Heat Pump	0.0%	3,622	-	-
Ventilation	Ventilation	100.0%	241	241	3
Interior Lighting	Screw-in	100.0%	106	106	1
Interior Lighting	High-Bay Fixtures	100.0%	519	519	7
Interior Lighting	Linear Fluorescent	100.0%	400	400	5
Exterior Lighting	Screw-in	100.0%	73	73	1
Exterior Lighting	HID	100.0%	67	67	1
Exterior Lighting	Linear Fluorescent	100.0%	52	52	1
Motors	Pumps	0.0%	501	-	-
Motors	Fans & Blowers	100.0%	353	353	5
Motors	Compressed Air	100.0%	118	118	2
Motors	Conveyors	100.0%	2,414	2,414	32
Motors	Other Motors	100.0%	177	177	2
Process	Process Heating	100.0%	1,139	1,139	15
Process	Process Cooling	100.0%	251	251	3
Process	Process Refrigeration	100.0%	251	251	3
Process	Process Electro-Chemical	100.0%	137	137	2
Process	Process Other	100.0%	307	307	4
Miscellaneous	Miscellaneous	100.0%	501	501	7
	<b>Total</b>			<b>8,553</b>	<b>114</b>



**Table A-187 California Transportation Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,055	59
Cooling	Water-Cooled Chiller	2.8%	949	27
Cooling	RTU	4.7%	854	40
Cooling	Air-Source Heat Pump	2.3%	1,355	31
Cooling	Geothermal Heat Pump	0.0%	732	-
Heating	Electric Furnace	2.8%	6,052	172
Heating	Electric Zonal Heating	15.4%	5,764	885
Heating	Air-Source Heat Pump	2.3%	3,389	79
Heating	Geothermal Heat Pump	0.0%	2,112	-
Ventilation	Ventilation	100.0%	79	79
Interior Lighting	Screw-in	100.0%	62	62
Interior Lighting	High-Bay Fixtures	100.0%	662	662
Interior Lighting	Linear Fluorescent	100.0%	354	354
Exterior Lighting	Screw-in	100.0%	55	55
Exterior Lighting	HID	100.0%	86	86
Exterior Lighting	Linear Fluorescent	100.0%	46	46
Motors	Pumps	100.0%	501	501
Motors	Fans & Blowers	100.0%	353	353
Motors	Compressed Air	100.0%	118	118
Motors	Conveyors	100.0%	2,414	2,414
Motors	Other Motors	100.0%	177	177
Process	Process Heating	100.0%	1,139	1,139
Process	Process Cooling	0.0%	251	-
Process	Process Refrigeration	100.0%	251	251
Process	Process Electro-Chemical	100.0%	137	137
Process	Process Other	100.0%	307	307
Miscellaneous	Miscellaneous	100.0%	501	501

**Table A-188 California Wastewater Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,953	222	4
Cooling	Water-Cooled Chiller	2.8%	3,727	106	2
Cooling	RTU	4.7%	4,398	205	4
Cooling	Air-Source Heat Pump	2.3%	4,397	102	2
Cooling	Geothermal Heat Pump	0.0%	2,932	-	-
Heating	Electric Furnace	2.8%	14,449	410	7
Heating	Electric Zonal Heating	15.4%	13,761	2,113	36
Heating	Air-Source Heat Pump	2.3%	12,966	301	5
Heating	Geothermal Heat Pump	0.0%	8,649	-	-
Ventilation	Ventilation	100.0%	575	575	10
Interior Lighting	Screw-in	100.0%	324	324	6
Interior Lighting	High-Bay Fixtures	100.0%	1,585	1,585	27
Interior Lighting	Linear Fluorescent	100.0%	1,222	1,222	21
Exterior Lighting	Screw-in	100.0%	222	222	4
Exterior Lighting	HID	100.0%	205	205	4
Exterior Lighting	Linear Fluorescent	100.0%	158	158	3
Motors	Pumps	0.0%	19,947	19,947	342
Motors	Fans & Blowers	100.0%	49,110	49,110	843
Motors	Compressed Air	100.0%	1,051	1,051	18
Motors	Conveyors	100.0%	4,693	4,693	81
Motors	Other Motors	100.0%	1,471	1,471	25
Process	Process Heating	100.0%	2,298	-	-
Process	Process Cooling	100.0%	2,298	-	-
Process	Process Refrigeration	100.0%	2,298	-	-
Process	Process Electro-Chemical	100.0%	2,298	-	-
Process	Process Other	100.0%	3,889	3,889	67
Miscellaneous	Miscellaneous	100.0%	2,298	2,298	39
	<b>Total</b>			<b>90,208</b>	<b>1,549</b>

**Table A-189 California Wastewater New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,519	142
Cooling	Water-Cooled Chiller	2.8%	2,265	64
Cooling	RTU	4.7%	2,039	95
Cooling	Air-Source Heat Pump	2.3%	3,234	75
Cooling	Geothermal Heat Pump	0.0%	1,748	-
Heating	Electric Furnace	2.8%	14,449	410
Heating	Electric Zonal Heating	15.4%	13,761	2,113
Heating	Air-Source Heat Pump	2.3%	8,091	188
Heating	Geothermal Heat Pump	0.0%	5,043	-
Ventilation	Ventilation	100.0%	188	188
Interior Lighting	Screw-in	100.0%	189	189
Interior Lighting	High-Bay Fixtures	100.0%	2,024	2,024
Interior Lighting	Linear Fluorescent	100.0%	1,082	1,082
Exterior Lighting	Screw-in	100.0%	168	168
Exterior Lighting	HID	100.0%	264	264
Exterior Lighting	Linear Fluorescent	100.0%	140	140
Motors	Pumps	0.0%	19,947	-
Motors	Fans & Blowers	0.0%	49,110	-
Motors	Compressed Air	0.0%	1,051	-
Motors	Conveyors	0.0%	4,693	-
Motors	Other Motors	100.0%	1,471	1,471
Process	Process Heating	100.0%	2,298	2,298
Process	Process Cooling	100.0%	2,298	2,298
Process	Process Refrigeration	100.0%	2,298	2,298
Process	Process Electro-Chemical	100.0%	2,298	2,298
Process	Process Other	100.0%	3,889	3,889
Miscellaneous	Miscellaneous	100.0%	2,298	2,298

**Table A-190 California Water Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,570	88	6
Cooling	Water-Cooled Chiller	2.8%	1,481	42	3
Cooling	RTU	4.7%	1,747	81	5
Cooling	Air-Source Heat Pump	2.3%	1,747	41	3
Cooling	Geothermal Heat Pump	0.0%	1,165	-	-
Heating	Electric Furnace	2.8%	5,741	163	10
Heating	Electric Zonal Heating	15.4%	5,467	839	53
Heating	Air-Source Heat Pump	2.3%	5,152	119	8
Heating	Geothermal Heat Pump	0.0%	3,436	-	-
Ventilation	Ventilation	100.0%	228	228	15
Interior Lighting	Screw-in	100.0%	129	129	8
Interior Lighting	High-Bay Fixtures	100.0%	630	630	40
Interior Lighting	Linear Fluorescent	100.0%	485	485	31
Exterior Lighting	Screw-in	100.0%	88	88	6
Exterior Lighting	HID	100.0%	81	81	5
Exterior Lighting	Linear Fluorescent	100.0%	63	63	4
Motors	Pumps	0.0%	28,630	28,630	1,819
Motors	Fans & Blowers	100.0%	913	-	-
Motors	Compressed Air	100.0%	417	417	27
Motors	Conveyors	100.0%	1,242	1,242	79
Motors	Other Motors	100.0%	14	14	1
Process	Process Heating	100.0%	913	-	-
Process	Process Cooling	100.0%	913	-	-
Process	Process Refrigeration	100.0%	913	-	-
Process	Process Electro-Chemical	100.0%	913	-	-
Process	Process Other	100.0%	1,545	1,545	98
Miscellaneous	Miscellaneous	100.0%	913	913	58
<b>Total</b>				<b>35,840</b>	<b>2,277</b>

**Table A-191 California Water New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,001	56
Cooling	Water-Cooled Chiller	2.8%	900	26
Cooling	RTU	4.7%	810	38
Cooling	Air-Source Heat Pump	2.3%	1,285	30
Cooling	Geothermal Heat Pump	0.0%	695	-
Heating	Electric Furnace	2.8%	5,741	163
Heating	Electric Zonal Heating	15.4%	5,467	839
Heating	Air-Source Heat Pump	2.3%	3,215	75
Heating	Geothermal Heat Pump	0.0%	2,004	-
Ventilation	Ventilation	100.0%	75	75
Interior Lighting	Screw-in	100.0%	75	75
Interior Lighting	High-Bay Fixtures	100.0%	804	804
Interior Lighting	Linear Fluorescent	100.0%	430	430
Exterior Lighting	Screw-in	100.0%	67	67
Exterior Lighting	HID	100.0%	105	105
Exterior Lighting	Linear Fluorescent	100.0%	56	56
Motors	Pumps	0.0%	28,630	-
Motors	Fans & Blowers	0.0%	913	-
Motors	Compressed Air	0.0%	417	-
Motors	Conveyors	0.0%	1,242	-
Motors	Other Motors	100.0%	14	14
Process	Process Heating	0.0%	913	-
Process	Process Cooling	100.0%	913	913
Process	Process Refrigeration	100.0%	913	913
Process	Process Electro-Chemical	100.0%	913	913
Process	Process Other	100.0%	1,545	1,545
Miscellaneous	Miscellaneous	100.0%	913	913

**Table A-192 California Chemical Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	423	24	0
Cooling	Water-Cooled Chiller	2.8%	399	11	0
Cooling	RTU	4.7%	471	22	0
Cooling	Air-Source Heat Pump	2.3%	471	11	0
Cooling	Geothermal Heat Pump	0.0%	314	-	-
Heating	Electric Furnace	2.8%	1,548	44	0
Heating	Electric Zonal Heating	15.4%	1,474	226	2
Heating	Air-Source Heat Pump	2.3%	1,389	32	0
Heating	Geothermal Heat Pump	0.0%	926	-	-
Ventilation	Ventilation	100.0%	62	62	1
Interior Lighting	Screw-in	100.0%	24	24	0
Interior Lighting	High-Bay Fixtures	100.0%	116	116	1
Interior Lighting	Linear Fluorescent	100.0%	89	89	1
Exterior Lighting	Screw-in	100.0%	16	16	0
Exterior Lighting	HID	100.0%	15	15	0
Exterior Lighting	Linear Fluorescent	100.0%	12	12	0
Motors	Pumps	100.0%	898	898	9
Motors	Fans & Blowers	100.0%	249	249	2
Motors	Compressed Air	100.0%	998	998	10
Motors	Conveyors	100.0%	1,746	1,746	17
Motors	Other Motors	100.0%	150	150	1
Process	Process Heating	100.0%	472	472	5
Process	Process Cooling	100.0%	265	265	3
Process	Process Refrigeration	100.0%	265	265	3
Process	Process Electro-Chemical	100.0%	1,357	1,357	14
Process	Process Other	100.0%	84	84	1
Miscellaneous	Miscellaneous	100.0%	209	209	2
<b>Total</b>				<b>7,398</b>	<b>74</b>

**Table A-193 California Chemical Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	270	15
Cooling	Water-Cooled Chiller	2.8%	243	7
Cooling	RTU	4.7%	218	10
Cooling	Air-Source Heat Pump	2.3%	346	8
Cooling	Geothermal Heat Pump	0.0%	187	-
Heating	Electric Furnace	2.8%	1,548	44
Heating	Electric Zonal Heating	15.4%	1,474	226
Heating	Air-Source Heat Pump	2.3%	867	20
Heating	Geothermal Heat Pump	0.0%	540	-
Ventilation	Ventilation	100.0%	20	20
Interior Lighting	Screw-in	100.0%	14	14
Interior Lighting	High-Bay Fixtures	100.0%	148	148
Interior Lighting	Linear Fluorescent	100.0%	79	79
Exterior Lighting	Screw-in	100.0%	12	12
Exterior Lighting	HID	100.0%	19	19
Exterior Lighting	Linear Fluorescent	100.0%	10	10
Motors	Pumps	100.0%	898	898
Motors	Fans & Blowers	100.0%	249	249
Motors	Compressed Air	100.0%	998	998
Motors	Conveyors	100.0%	1,746	1,746
Motors	Other Motors	100.0%	150	150
Process	Process Heating	100.0%	472	472
Process	Process Cooling	100.0%	265	265
Process	Process Refrigeration	100.0%	265	265
Process	Process Electro-Chemical	100.0%	1,357	1,357
Process	Process Other	100.0%	84	84
Miscellaneous	Miscellaneous	100.0%	209	209

**Table A-194 California Electronic Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	22,345	1,256	19
Cooling	Water-Cooled Chiller	2.8%	21,067	600	9
Cooling	RTU	4.7%	24,860	1,159	18
Cooling	Air-Source Heat Pump	2.3%	24,854	576	9
Cooling	Geothermal Heat Pump	0.0%	16,578	-	-
Heating	Electric Furnace	2.8%	81,684	2,319	36
Heating	Electric Zonal Heating	15.4%	77,794	11,944	184
Heating	Air-Source Heat Pump	2.3%	73,300	1,700	26
Heating	Geothermal Heat Pump	0.0%	48,891	-	-
Ventilation	Ventilation	100.0%	3,251	3,251	50
Interior Lighting	Screw-in	100.0%	809	809	12
Interior Lighting	High-Bay Fixtures	100.0%	3,963	3,963	61
Interior Lighting	Linear Fluorescent	100.0%	3,054	3,054	47
Exterior Lighting	Screw-in	100.0%	555	555	9
Exterior Lighting	HID	100.0%	513	513	8
Exterior Lighting	Linear Fluorescent	100.0%	394	394	6
Motors	Pumps	100.0%	1,159	1,159	18
Motors	Fans & Blowers	100.0%	1,854	1,854	29
Motors	Compressed Air	100.0%	3,354	3,354	52
Motors	Conveyors	100.0%	10,485	10,485	162
Motors	Other Motors	100.0%	6,891	-	-
Process	Process Heating	100.0%	8,749	8,749	135
Process	Process Cooling	100.0%	4,063	4,063	63
Process	Process Refrigeration	100.0%	4,063	4,063	63
Process	Process Electro-Chemical	100.0%	1,527	1,527	24
Process	Process Other	100.0%	7,682	7,682	118
Miscellaneous	Miscellaneous	100.0%	6,891	6,891	106
	<b>Total</b>			<b>81,919</b>	<b>1,262</b>



**Table A-195 California Electronic Equipment Manufacturing New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	5.6%	14,241	801
Cooling	Water-Cooled Chiller	2.8%	12,805	365
Cooling	RTU	4.7%	11,525	537
Cooling	Air-Source Heat Pump	2.3%	18,284	424
Cooling	Geothermal Heat Pump	0.0%	9,883	-
Heating	Electric Furnace	2.8%	81,684	2,319
Heating	Electric Zonal Heating	15.4%	77,794	11,944
Heating	Air-Source Heat Pump	2.3%	45,741	1,061
Heating	Geothermal Heat Pump	0.0%	28,508	-
Ventilation	Ventilation	100.0%	1,064	1,064
Interior Lighting	Screw-in	100.0%	472	472
Interior Lighting	High-Bay Fixtures	100.0%	5,059	5,059
Interior Lighting	Linear Fluorescent	100.0%	2,705	2,705
Exterior Lighting	Screw-in	100.0%	420	420
Exterior Lighting	HID	100.0%	659	659
Exterior Lighting	Linear Fluorescent	100.0%	349	349
Motors	Pumps	100.0%	1,159	1,159
Motors	Fans & Blowers	100.0%	1,854	1,854
Motors	Compressed Air	100.0%	3,354	3,354
Motors	Conveyors	100.0%	10,485	10,485
Motors	Other Motors	100.0%	6,891	6,891
Process	Process Heating	100.0%	8,749	8,749
Process	Process Cooling	100.0%	4,063	4,063
Process	Process Refrigeration	100.0%	4,063	4,063
Process	Process Electro-Chemical	100.0%	1,527	1,527
Process	Process Other	100.0%	7,682	-
Miscellaneous	Miscellaneous	100.0%	6,891	6,891

**Table A-196 California Industrial Machinery Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,009	113	3
Cooling	Water-Cooled Chiller	2.8%	1,894	54	2
Cooling	RTU	4.7%	2,235	104	3
Cooling	Air-Source Heat Pump	2.3%	2,235	52	2
Cooling	Geothermal Heat Pump	0.0%	1,490	-	-
Heating	Electric Furnace	2.8%	7,344	208	6
Heating	Electric Zonal Heating	15.4%	6,994	1,074	31
Heating	Air-Source Heat Pump	2.3%	6,590	153	4
Heating	Geothermal Heat Pump	0.0%	4,396	-	-
Ventilation	Ventilation	100.0%	292	292	8
Interior Lighting	Screw-in	100.0%	109	109	3
Interior Lighting	High-Bay Fixtures	100.0%	532	532	15
Interior Lighting	Linear Fluorescent	100.0%	410	410	12
Exterior Lighting	Screw-in	100.0%	74	74	2
Exterior Lighting	HID	100.0%	69	69	2
Exterior Lighting	Linear Fluorescent	100.0%	53	53	2
Motors	Pumps	100.0%	453	453	13
Motors	Fans & Blowers	100.0%	1,055	1,055	31
Motors	Compressed Air	100.0%	898	898	26
Motors	Conveyors	100.0%	1,454	1,454	42
Motors	Other Motors	100.0%	629	-	-
Process	Process Heating	100.0%	601	601	17
Process	Process Cooling	100.0%	118	118	3
Process	Process Refrigeration	100.0%	118	118	3
Process	Process Electro-Chemical	100.0%	80	80	2
Process	Process Other	100.0%	268	268	8
Miscellaneous	Miscellaneous	100.0%	629	629	18
<b>Total</b>				<b>8,969</b>	<b>261</b>

**Table A-197 California Industrial Machinery New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,280	72
Cooling	Water-Cooled Chiller	2.8%	1,151	33
Cooling	RTU	4.7%	1,036	48
Cooling	Air-Source Heat Pump	2.3%	1,644	38
Cooling	Geothermal Heat Pump	0.0%	889	-
Heating	Electric Furnace	2.8%	7,344	208
Heating	Electric Zonal Heating	15.4%	6,994	1,074
Heating	Air-Source Heat Pump	2.3%	4,112	95
Heating	Geothermal Heat Pump	0.0%	2,563	-
Ventilation	Ventilation	100.0%	96	96
Interior Lighting	Screw-in	100.0%	63	63
Interior Lighting	High-Bay Fixtures	100.0%	679	679
Interior Lighting	Linear Fluorescent	100.0%	363	363
Exterior Lighting	Screw-in	100.0%	56	56
Exterior Lighting	HID	100.0%	88	88
Exterior Lighting	Linear Fluorescent	100.0%	47	47
Motors	Pumps	100.0%	453	453
Motors	Fans & Blowers	100.0%	1,055	1,055
Motors	Compressed Air	100.0%	898	898
Motors	Conveyors	100.0%	1,454	1,454
Motors	Other Motors	100.0%	629	629
Process	Process Heating	100.0%	601	601
Process	Process Cooling	100.0%	118	118
Process	Process Refrigeration	100.0%	118	118
Process	Process Electro-Chemical	100.0%	80	80
Process	Process Other	100.0%	268	-
Miscellaneous	Miscellaneous	100.0%	629	629

**Table A-198 California Lumber & Wood Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,531	199	28
Cooling	Water-Cooled Chiller	2.8%	3,329	95	13
Cooling	RTU	4.7%	3,928	183	26
Cooling	Air-Source Heat Pump	2.3%	3,927	91	13
Cooling	Geothermal Heat Pump	0.0%	2,619	-	-
Heating	Electric Furnace	2.8%	12,907	366	52
Heating	Electric Zonal Heating	15.4%	12,292	1,887	266
Heating	Air-Source Heat Pump	2.3%	11,582	269	38
Heating	Geothermal Heat Pump	0.0%	7,725	-	-
Ventilation	Ventilation	100.0%	514	514	72
Interior Lighting	Screw-in	100.0%	454	454	64
Interior Lighting	High-Bay Fixtures	100.0%	2,225	2,225	313
Interior Lighting	Linear Fluorescent	100.0%	1,715	1,715	241
Exterior Lighting	Screw-in	100.0%	312	312	44
Exterior Lighting	HID	100.0%	288	288	41
Exterior Lighting	Linear Fluorescent	100.0%	221	221	31
Motors	Pumps	100.0%	3,373	-	-
Motors	Fans & Blowers	100.0%	7,136	7,136	1,004
Motors	Compressed Air	100.0%	8,670	8,670	1,220
Motors	Conveyors	100.0%	36,977	36,977	5,204
Motors	Other Motors	100.0%	3,244	3,244	456
Process	Process Heating	100.0%	6,402	6,402	901
Process	Process Cooling	100.0%	475	475	67
Process	Process Refrigeration	100.0%	475	475	67
Process	Process Electro-Chemical	100.0%	552	552	78
Process	Process Other	100.0%	398	398	56
Miscellaneous	Miscellaneous	100.0%	3,373	3,373	475
	<b>Total</b>			<b>76,521</b>	<b>10,768</b>

**Table A-199 California Lumber & Wood Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,250	127
Cooling	Water-Cooled Chiller	2.8%	2,023	58
Cooling	RTU	4.7%	1,821	85
Cooling	Air-Source Heat Pump	2.3%	2,889	67
Cooling	Geothermal Heat Pump	0.0%	1,562	-
Heating	Electric Furnace	2.8%	12,907	366
Heating	Electric Zonal Heating	15.4%	12,292	1,887
Heating	Air-Source Heat Pump	2.3%	7,227	168
Heating	Geothermal Heat Pump	0.0%	4,505	-
Ventilation	Ventilation	100.0%	168	168
Interior Lighting	Screw-in	100.0%	265	265
Interior Lighting	High-Bay Fixtures	100.0%	2,840	2,840
Interior Lighting	Linear Fluorescent	100.0%	1,519	1,519
Exterior Lighting	Screw-in	100.0%	236	236
Exterior Lighting	HID	100.0%	370	370
Exterior Lighting	Linear Fluorescent	100.0%	196	196
Motors	Pumps	100.0%	3,373	3,373
Motors	Fans & Blowers	100.0%	7,136	7,136
Motors	Compressed Air	100.0%	8,670	8,670
Motors	Conveyors	100.0%	36,977	36,977
Motors	Other Motors	100.0%	3,244	3,244
Process	Process Heating	100.0%	6,402	6,402
Process	Process Cooling	100.0%	475	-
Process	Process Refrigeration	100.0%	475	475
Process	Process Electro-Chemical	100.0%	552	552
Process	Process Other	100.0%	398	398
Miscellaneous	Miscellaneous	100.0%	3,373	3,373

**Table A-200 California Metal Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	4,282	241	12
Cooling	Water-Cooled Chiller	2.8%	4,037	115	6
Cooling	RTU	4.7%	4,764	222	11
Cooling	Air-Source Heat Pump	2.3%	4,763	110	5
Cooling	Geothermal Heat Pump	0.0%	3,177	-	-
Heating	Electric Furnace	2.8%	15,653	444	22
Heating	Electric Zonal Heating	15.4%	14,907	2,289	113
Heating	Air-Source Heat Pump	2.3%	14,046	326	16
Heating	Geothermal Heat Pump	0.0%	9,369	-	-
Ventilation	Ventilation	100.0%	623	623	31
Interior Lighting	Screw-in	100.0%	342	342	17
Interior Lighting	High-Bay Fixtures	100.0%	1,676	1,676	83
Interior Lighting	Linear Fluorescent	100.0%	1,291	1,291	64
Exterior Lighting	Screw-in	100.0%	235	235	12
Exterior Lighting	HID	100.0%	217	217	11
Exterior Lighting	Linear Fluorescent	100.0%	167	167	8
Motors	Pumps	100.0%	1,620	-	-
Motors	Fans & Blowers	100.0%	2,362	2,362	117
Motors	Compressed Air	100.0%	787	787	39
Motors	Conveyors	100.0%	16,134	16,134	796
Motors	Other Motors	100.0%	1,181	1,181	58
Process	Process Heating	100.0%	7,942	7,942	392
Process	Process Cooling	100.0%	702	702	35
Process	Process Refrigeration	100.0%	702	702	35
Process	Process Electro-Chemical	100.0%	1,337	1,337	66
Process	Process Other	100.0%	1,714	1,714	85
Miscellaneous	Miscellaneous	100.0%	1,620	1,620	80
	<b>Total</b>			<b>42,779</b>	<b>2,112</b>

**Table A-201 California Metal Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,729	153
Cooling	Water-Cooled Chiller	2.8%	2,454	70
Cooling	RTU	4.7%	2,209	103
Cooling	Air-Source Heat Pump	2.3%	3,504	81
Cooling	Geothermal Heat Pump	0.0%	1,894	-
Heating	Electric Furnace	2.8%	15,653	444
Heating	Electric Zonal Heating	15.4%	14,907	2,289
Heating	Air-Source Heat Pump	2.3%	8,765	203
Heating	Geothermal Heat Pump	0.0%	5,463	-
Ventilation	Ventilation	100.0%	204	204
Interior Lighting	Screw-in	100.0%	200	200
Interior Lighting	High-Bay Fixtures	100.0%	2,139	2,139
Interior Lighting	Linear Fluorescent	100.0%	1,144	1,144
Exterior Lighting	Screw-in	100.0%	178	178
Exterior Lighting	HID	100.0%	279	279
Exterior Lighting	Linear Fluorescent	100.0%	148	148
Motors	Pumps	100.0%	1,620	1,620
Motors	Fans & Blowers	100.0%	2,362	2,362
Motors	Compressed Air	100.0%	787	787
Motors	Conveyors	100.0%	16,134	16,134
Motors	Other Motors	100.0%	1,181	1,181
Process	Process Heating	100.0%	7,942	7,942
Process	Process Cooling	100.0%	702	-
Process	Process Refrigeration	100.0%	702	702
Process	Process Electro-Chemical	100.0%	1,337	1,337
Process	Process Other	100.0%	1,714	1,714
Miscellaneous	Miscellaneous	100.0%	1,620	1,620

**Table A-202 California Miscellaneous Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,367	133	11
Cooling	Water-Cooled Chiller	2.8%	2,232	64	5
Cooling	RTU	4.7%	2,634	123	10
Cooling	Air-Source Heat Pump	2.3%	2,633	61	5
Cooling	Geothermal Heat Pump	0.0%	1,756	-	-
Heating	Electric Furnace	2.8%	8,655	246	20
Heating	Electric Zonal Heating	15.4%	8,242	1,265	103
Heating	Air-Source Heat Pump	2.3%	7,766	180	15
Heating	Geothermal Heat Pump	0.0%	5,180	-	-
Ventilation	Ventilation	100.0%	344	344	28
Interior Lighting	Screw-in	100.0%	138	138	11
Interior Lighting	High-Bay Fixtures	100.0%	674	674	55
Interior Lighting	Linear Fluorescent	100.0%	520	520	42
Exterior Lighting	Screw-in	100.0%	94	94	8
Exterior Lighting	HID	100.0%	87	87	7
Exterior Lighting	Linear Fluorescent	100.0%	67	67	5
Motors	Pumps	100.0%	615	615	50
Motors	Fans & Blowers	100.0%	738	738	60
Motors	Compressed Air	100.0%	597	597	49
Motors	Conveyors	100.0%	1,262	1,262	103
Motors	Other Motors	100.0%	21	21	2
Process	Process Heating	100.0%	1,039	1,039	85
Process	Process Cooling	100.0%	273	273	22
Process	Process Refrigeration	100.0%	273	273	22
Process	Process Electro-Chemical	100.0%	105	105	9
Process	Process Other	100.0%	114	114	9
Miscellaneous	Miscellaneous	100.0%	627	627	51
	<b>Total</b>			<b>9,661</b>	<b>786</b>



**Table A-203 California Miscellaneous Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,509	85
Cooling	Water-Cooled Chiller	2.8%	1,357	39
Cooling	RTU	4.7%	1,221	57
Cooling	Air-Source Heat Pump	2.3%	1,937	45
Cooling	Geothermal Heat Pump	0.0%	1,047	-
Heating	Electric Furnace	2.8%	8,655	246
Heating	Electric Zonal Heating	15.4%	8,242	1,265
Heating	Air-Source Heat Pump	2.3%	4,846	112
Heating	Geothermal Heat Pump	0.0%	3,021	-
Ventilation	Ventilation	100.0%	113	113
Interior Lighting	Screw-in	100.0%	80	80
Interior Lighting	High-Bay Fixtures	100.0%	861	861
Interior Lighting	Linear Fluorescent	100.0%	460	460
Exterior Lighting	Screw-in	100.0%	71	71
Exterior Lighting	HID	100.0%	112	112
Exterior Lighting	Linear Fluorescent	100.0%	59	59
Motors	Pumps	100.0%	615	615
Motors	Fans & Blowers	100.0%	738	738
Motors	Compressed Air	100.0%	597	597
Motors	Conveyors	100.0%	1,262	1,262
Motors	Other Motors	100.0%	21	21
Process	Process Heating	100.0%	1,039	1,039
Process	Process Cooling	100.0%	273	273
Process	Process Refrigeration	100.0%	273	273
Process	Process Electro-Chemical	100.0%	105	105
Process	Process Other	100.0%	114	114
Miscellaneous	Miscellaneous	100.0%	627	627

**Table A-204 Idaho Agriculture Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,439	137	169
Cooling	Water-Cooled Chiller	2.8%	2,470	70	86
Cooling	RTU	4.3%	2,620	114	140
Cooling	Air-Source Heat Pump	2.3%	2,620	61	75
Cooling	Geothermal Heat Pump	0.0%	1,747	-	-
Heating	Electric Furnace	2.7%	11,657	311	382
Heating	Electric Zonal Heating	14.4%	11,102	1,600	1,967
Heating	Air-Source Heat Pump	2.3%	10,610	246	302
Heating	Geothermal Heat Pump	0.0%	7,077	-	-
Ventilation	Ventilation	100.0%	388	388	477
Interior Lighting	Screw-in	100.0%	215	215	265
Interior Lighting	High-Bay Fixtures	100.0%	1,054	1,054	1,296
Interior Lighting	Linear Fluorescent	100.0%	812	812	999
Exterior Lighting	Screw-in	100.0%	148	148	182
Exterior Lighting	HID	100.0%	136	136	168
Exterior Lighting	Linear Fluorescent	100.0%	105	105	129
Motors	Pumps	100.0%	2,731	2,731	3,357
Motors	Fans & Blowers	100.0%	4,924	4,924	6,053
Motors	Compressed Air	100.0%	2,276	2,276	2,798
Motors	Conveyors	100.0%	5,793	5,793	7,121
Motors	Other Motors	0.0%	1,712	-	-
Process	Process Heating	100.0%	2,590	2,590	3,184
Process	Process Cooling	100.0%	4,357	4,357	5,357
Process	Process Refrigeration	100.0%	4,357	4,357	5,357
Process	Process Electro-Chemical	100.0%	83	83	103
Process	Process Other	100.0%	324	324	398
Miscellaneous	Miscellaneous	100.0%	1,712	1,712	2,105
	<b>Total</b>			<b>34,543</b>	<b>42,467</b>

**Table A-205 Idaho Agriculture New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,422	80
Cooling	Water-Cooled Chiller	2.8%	1,394	40
Cooling	RTU	4.3%	1,169	51
Cooling	Air-Source Heat Pump	2.3%	1,855	43
Cooling	Geothermal Heat Pump	0.0%	1,004	-
Heating	Electric Furnace	2.7%	11,657	311
Heating	Electric Zonal Heating	14.4%	11,102	1,600
Heating	Air-Source Heat Pump	2.3%	6,899	160
Heating	Geothermal Heat Pump	0.0%	3,818	-
Ventilation	Ventilation	100.0%	120	120
Interior Lighting	Screw-in	100.0%	126	126
Interior Lighting	High-Bay Fixtures	100.0%	1,345	1,345
Interior Lighting	Linear Fluorescent	100.0%	719	719
Exterior Lighting	Screw-in	100.0%	112	112
Exterior Lighting	HID	100.0%	175	175
Exterior Lighting	Linear Fluorescent	100.0%	93	93
Motors	Pumps	100.0%	2,731	2,731
Motors	Fans & Blowers	100.0%	4,924	4,924
Motors	Compressed Air	100.0%	2,276	2,276
Motors	Conveyors	100.0%	5,793	5,793
Motors	Other Motors	100.0%	1,712	1,712
Process	Process Heating	100.0%	2,590	2,590
Process	Process Cooling	100.0%	4,357	4,357
Process	Process Refrigeration	100.0%	4,357	4,357
Process	Process Electro-Chemical	100.0%	83	83
Process	Process Other	0.0%	324	-
Miscellaneous	Miscellaneous	100.0%	1,712	1,712

**Table A-206 Idaho Mining and Extraction Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	10,610	597	30
Cooling	Water-Cooled Chiller	2.8%	10,743	306	15
Cooling	RTU	4.3%	11,397	495	25
Cooling	Air-Source Heat Pump	2.3%	11,394	264	13
Cooling	Geothermal Heat Pump	0.0%	7,600	-	-
Heating	Electric Furnace	2.7%	50,700	1,351	68
Heating	Electric Zonal Heating	14.4%	48,286	6,958	348
Heating	Air-Source Heat Pump	2.3%	46,149	1,070	54
Heating	Geothermal Heat Pump	0.0%	30,781	-	-
Ventilation	Ventilation	100.0%	1,687	1,687	84
Interior Lighting	Screw-in	100.0%	1,425	1,425	71
Interior Lighting	High-Bay Fixtures	100.0%	6,981	6,981	349
Interior Lighting	Linear Fluorescent	100.0%	5,381	5,381	269
Exterior Lighting	Screw-in	100.0%	978	978	49
Exterior Lighting	HID	100.0%	903	903	45
Exterior Lighting	Linear Fluorescent	100.0%	695	695	35
Motors	Pumps	100.0%	124,360	124,360	6,218
Motors	Fans & Blowers	100.0%	34,544	34,544	1,727
Motors	Compressed Air	100.0%	51,817	51,817	2,591
Motors	Conveyors	100.0%	36,272	36,272	1,814
Motors	Other Motors	100.0%	98,451	98,451	4,923
Process	Process Heating	100.0%	3,636	3,636	182
Process	Process Cooling	0.0%	3,636	-	-
Process	Process Refrigeration	0.0%	3,636	-	-
Process	Process Electro-Chemical	100.0%	3,636	3,636	182
Process	Process Other	100.0%	19,999	19,999	1,000
Miscellaneous	Miscellaneous	100.0%	3,636	3,636	182
	<b>Total</b>			<b>405,441</b>	<b>20,272</b>

**Table A-207 Idaho Mining and Extraction New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	6,185	348
Cooling	Water-Cooled Chiller	2.8%	6,065	173
Cooling	RTU	4.3%	5,082	221
Cooling	Air-Source Heat Pump	2.3%	8,068	187
Cooling	Geothermal Heat Pump	0.0%	4,367	-
Heating	Electric Furnace	2.7%	50,700	1,351
Heating	Electric Zonal Heating	14.4%	48,286	6,958
Heating	Air-Source Heat Pump	2.3%	30,009	696
Heating	Geothermal Heat Pump	0.0%	16,608	-
Ventilation	Ventilation	100.0%	522	522
Interior Lighting	Screw-in	100.0%	832	832
Interior Lighting	High-Bay Fixtures	100.0%	8,911	8,911
Interior Lighting	Linear Fluorescent	100.0%	4,765	4,765
Exterior Lighting	Screw-in	100.0%	740	740
Exterior Lighting	HID	100.0%	1,161	1,161
Exterior Lighting	Linear Fluorescent	100.0%	615	615
Motors	Pumps	100.0%	124,360	124,360
Motors	Fans & Blowers	0.0%	34,544	-
Motors	Compressed Air	0.0%	51,817	-
Motors	Conveyors	100.0%	36,272	36,272
Motors	Other Motors	100.0%	98,451	98,451
Process	Process Heating	100.0%	3,636	3,636
Process	Process Cooling	100.0%	3,636	3,636
Process	Process Refrigeration	100.0%	3,636	3,636
Process	Process Electro-Chemical	100.0%	3,636	3,636
Process	Process Other	100.0%	19,999	19,999
Miscellaneous	Miscellaneous	100.0%	3,636	3,636

**Table A-208 Idaho Food Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	6,092	343	394
Cooling	Water-Cooled Chiller	2.8%	6,168	176	202
Cooling	RTU	4.3%	6,544	284	327
Cooling	Air-Source Heat Pump	2.3%	6,542	152	175
Cooling	Geothermal Heat Pump	0.0%	4,364	-	-
Heating	Electric Furnace	2.7%	29,110	775	893
Heating	Electric Zonal Heating	14.4%	27,724	3,995	4,598
Heating	Air-Source Heat Pump	2.3%	26,497	614	707
Heating	Geothermal Heat Pump	0.0%	17,673	-	-
Ventilation	Ventilation	100.0%	969	969	1,115
Interior Lighting	Screw-in	100.0%	537	537	619
Interior Lighting	High-Bay Fixtures	100.0%	2,632	2,632	3,030
Interior Lighting	Linear Fluorescent	100.0%	2,029	2,029	2,335
Exterior Lighting	Screw-in	100.0%	369	369	424
Exterior Lighting	HID	100.0%	341	341	392
Exterior Lighting	Linear Fluorescent	100.0%	262	262	302
Motors	Pumps	100.0%	10,884	10,884	12,527
Motors	Fans & Blowers	100.0%	7,828	7,828	9,010
Motors	Compressed Air	100.0%	4,412	4,412	5,078
Motors	Conveyors	100.0%	16,141	16,141	18,578
Motors	Other Motors	0.0%	4,276	-	-
Process	Process Heating	100.0%	6,467	6,467	7,443
Process	Process Cooling	100.0%	10,882	10,882	12,525
Process	Process Refrigeration	100.0%	10,882	10,882	12,525
Process	Process Electro-Chemical	100.0%	208	208	240
Process	Process Other	100.0%	809	809	931
Miscellaneous	Miscellaneous	100.0%	4,276	4,276	4,921
	<b>Total</b>			<b>86,265</b>	<b>99,288</b>

**Table A-209 Idaho Food Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	3,551	200
Cooling	Water-Cooled Chiller	2.8%	3,482	99
Cooling	RTU	4.3%	2,918	127
Cooling	Air-Source Heat Pump	2.3%	4,632	107
Cooling	Geothermal Heat Pump	0.0%	2,508	-
Heating	Electric Furnace	2.7%	29,110	775
Heating	Electric Zonal Heating	14.4%	27,724	3,995
Heating	Air-Source Heat Pump	2.3%	17,230	400
Heating	Geothermal Heat Pump	0.0%	9,536	-
Ventilation	Ventilation	100.0%	300	300
Interior Lighting	Screw-in	100.0%	314	314
Interior Lighting	High-Bay Fixtures	100.0%	3,360	3,360
Interior Lighting	Linear Fluorescent	100.0%	1,797	1,797
Exterior Lighting	Screw-in	100.0%	279	279
Exterior Lighting	HID	100.0%	438	438
Exterior Lighting	Linear Fluorescent	100.0%	232	232
Motors	Pumps	100.0%	10,884	10,884
Motors	Fans & Blowers	100.0%	7,828	7,828
Motors	Compressed Air	100.0%	4,412	4,412
Motors	Conveyors	100.0%	16,141	16,141
Motors	Other Motors	100.0%	4,276	4,276
Process	Process Heating	100.0%	6,467	6,467
Process	Process Cooling	100.0%	10,882	10,882
Process	Process Refrigeration	100.0%	10,882	10,882
Process	Process Electro-Chemical	100.0%	208	208
Process	Process Other	0.0%	809	-
Miscellaneous	Miscellaneous	100.0%	4,276	4,276

**Table A-210 Idaho Paper Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	89	5	0
Cooling	Water-Cooled Chiller	2.8%	90	3	0
Cooling	RTU	4.3%	96	4	0
Cooling	Air-Source Heat Pump	2.3%	96	2	0
Cooling	Geothermal Heat Pump	0.0%	64	-	-
Heating	Electric Furnace	2.7%	427	11	0
Heating	Electric Zonal Heating	14.4%	407	59	1
Heating	Air-Source Heat Pump	2.3%	389	9	0
Heating	Geothermal Heat Pump	0.0%	259	-	-
Ventilation	Ventilation	100.0%	14	14	0
Interior Lighting	Screw-in	100.0%	9	9	0
Interior Lighting	High-Bay Fixtures	100.0%	42	42	1
Interior Lighting	Linear Fluorescent	100.0%	32	32	1
Exterior Lighting	Screw-in	100.0%	6	6	0
Exterior Lighting	HID	100.0%	5	5	0
Exterior Lighting	Linear Fluorescent	100.0%	4	4	0
Motors	Pumps	100.0%	522	522	10
Motors	Fans & Blowers	100.0%	281	281	6
Motors	Compressed Air	100.0%	140	140	3
Motors	Conveyors	100.0%	682	682	14
Motors	Other Motors	100.0%	221	221	4
Process	Process Heating	100.0%	181	181	4
Process	Process Cooling	100.0%	18	18	0
Process	Process Refrigeration	100.0%	18	18	0
Process	Process Electro-Chemical	100.0%	32	32	1
Process	Process Other	100.0%	35	35	1
Miscellaneous	Miscellaneous	100.0%	61	61	1
<b>Total</b>				<b>2,397</b>	<b>48</b>



**Table A-211 Idaho Paper Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	52	3
Cooling	Water-Cooled Chiller	2.8%	51	1
Cooling	RTU	4.3%	43	2
Cooling	Air-Source Heat Pump	2.3%	68	2
Cooling	Geothermal Heat Pump	0.0%	37	-
Heating	Electric Furnace	2.7%	427	11
Heating	Electric Zonal Heating	14.4%	407	59
Heating	Air-Source Heat Pump	2.3%	253	6
Heating	Geothermal Heat Pump	0.0%	140	-
Ventilation	Ventilation	100.0%	4	4
Interior Lighting	Screw-in	100.0%	5	5
Interior Lighting	High-Bay Fixtures	100.0%	54	54
Interior Lighting	Linear Fluorescent	100.0%	29	29
Exterior Lighting	Screw-in	100.0%	4	4
Exterior Lighting	HID	100.0%	7	7
Exterior Lighting	Linear Fluorescent	100.0%	4	4
Motors	Pumps	100.0%	522	522
Motors	Fans & Blowers	100.0%	281	281
Motors	Compressed Air	100.0%	140	140
Motors	Conveyors	100.0%	682	682
Motors	Other Motors	100.0%	221	221
Process	Process Heating	100.0%	181	181
Process	Process Cooling	100.0%	18	18
Process	Process Refrigeration	100.0%	18	18
Process	Process Electro-Chemical	100.0%	32	32
Process	Process Other	100.0%	35	35
Miscellaneous	Miscellaneous	100.0%	61	61

**Table A-212 Idaho Petroleum Refining Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	666	37	0
Cooling	Water-Cooled Chiller	2.8%	674	19	0
Cooling	RTU	4.3%	715	31	0
Cooling	Air-Source Heat Pump	2.3%	715	17	0
Cooling	Geothermal Heat Pump	0.0%	477	-	-
Heating	Electric Furnace	2.7%	3,182	85	1
Heating	Electric Zonal Heating	14.4%	3,031	437	4
Heating	Air-Source Heat Pump	2.3%	2,896	67	1
Heating	Geothermal Heat Pump	0.0%	1,932	-	-
Ventilation	Ventilation	100.0%	106	106	1
Interior Lighting	Screw-in	100.0%	46	46	0
Interior Lighting	High-Bay Fixtures	100.0%	226	226	2
Interior Lighting	Linear Fluorescent	100.0%	174	174	2
Exterior Lighting	Screw-in	100.0%	32	32	0
Exterior Lighting	HID	100.0%	29	29	0
Exterior Lighting	Linear Fluorescent	100.0%	23	23	0
Motors	Pumps	100.0%	5,823	5,823	58
Motors	Fans & Blowers	100.0%	2,315	2,315	23
Motors	Compressed Air	100.0%	2,670	2,670	27
Motors	Conveyors	100.0%	6,278	6,278	63
Motors	Other Motors	100.0%	1,256	1,256	13
Process	Process Heating	100.0%	918	918	9
Process	Process Cooling	100.0%	560	560	6
Process	Process Refrigeration	100.0%	560	560	6
Process	Process Electro-Chemical	100.0%	23	23	0
Process	Process Other	100.0%	171	171	2
Miscellaneous	Miscellaneous	100.0%	239	239	2
	<b>Total</b>			<b>22,141</b>	<b>221</b>

**Table A-213 Idaho Petroleum Refining New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	5.6%	388	22
Cooling	Water-Cooled Chiller	2.8%	381	11
Cooling	RTU	4.3%	319	14
Cooling	Air-Source Heat Pump	2.3%	506	12
Cooling	Geothermal Heat Pump	0.0%	274	-
Heating	Electric Furnace	2.7%	3,182	85
Heating	Electric Zonal Heating	14.4%	3,031	437
Heating	Air-Source Heat Pump	2.3%	1,883	44
Heating	Geothermal Heat Pump	0.0%	1,042	-
Ventilation	Ventilation	100.0%	33	33
Interior Lighting	Screw-in	100.0%	27	27
Interior Lighting	High-Bay Fixtures	100.0%	289	289
Interior Lighting	Linear Fluorescent	100.0%	154	154
Exterior Lighting	Screw-in	100.0%	24	24
Exterior Lighting	HID	100.0%	38	38
Exterior Lighting	Linear Fluorescent	100.0%	20	20
Motors	Pumps	100.0%	5,823	5,823
Motors	Fans & Blowers	100.0%	2,315	2,315
Motors	Compressed Air	100.0%	2,670	2,670
Motors	Conveyors	100.0%	6,278	6,278
Motors	Other Motors	100.0%	1,256	1,256
Process	Process Heating	100.0%	918	918
Process	Process Cooling	100.0%	560	560
Process	Process Refrigeration	100.0%	560	560
Process	Process Electro-Chemical	100.0%	23	23
Process	Process Other	100.0%	171	171
Miscellaneous	Miscellaneous	100.0%	239	239

**Table A-214 Idaho Stone Clay Glass Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,815	214	21
Cooling	Water-Cooled Chiller	2.8%	3,863	110	11
Cooling	RTU	4.3%	4,098	178	18
Cooling	Air-Source Heat Pump	2.3%	4,097	95	9
Cooling	Geothermal Heat Pump	0.0%	2,733	-	-
Heating	Electric Furnace	2.7%	18,229	486	49
Heating	Electric Zonal Heating	14.4%	17,361	2,502	250
Heating	Air-Source Heat Pump	2.3%	16,593	385	38
Heating	Geothermal Heat Pump	0.0%	11,067	-	-
Ventilation	Ventilation	100.0%	606	606	61
Interior Lighting	Screw-in	100.0%	324	324	32
Interior Lighting	High-Bay Fixtures	100.0%	1,585	1,585	159
Interior Lighting	Linear Fluorescent	100.0%	1,222	1,222	122
Exterior Lighting	Screw-in	100.0%	222	222	22
Exterior Lighting	HID	100.0%	205	205	21
Exterior Lighting	Linear Fluorescent	100.0%	158	158	16
Motors	Pumps	100.0%	4,828	4,828	483
Motors	Fans & Blowers	100.0%	6,794	6,794	679
Motors	Compressed Air	100.0%	1,223	1,223	122
Motors	Conveyors	100.0%	28,128	28,128	2,813
Motors	Other Motors	100.0%	439	439	44
Process	Process Heating	100.0%	14,813	14,813	1,481
Process	Process Cooling	100.0%	909	909	91
Process	Process Refrigeration	100.0%	909	909	91
Process	Process Electro-Chemical	100.0%	255	255	25
Process	Process Other	100.0%	3,022	3,022	302
Miscellaneous	Miscellaneous	100.0%	2,358	2,358	236
	<b>Total</b>			<b>71,969</b>	<b>7,197</b>

**Table A-215 Idaho Stone Clay Glass Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,224	125
Cooling	Water-Cooled Chiller	2.8%	2,181	62
Cooling	RTU	4.3%	1,827	79
Cooling	Air-Source Heat Pump	2.3%	2,901	67
Cooling	Geothermal Heat Pump	0.0%	1,570	-
Heating	Electric Furnace	2.7%	18,229	486
Heating	Electric Zonal Heating	14.4%	17,361	2,502
Heating	Air-Source Heat Pump	2.3%	10,789	250
Heating	Geothermal Heat Pump	0.0%	5,971	-
Ventilation	Ventilation	100.0%	188	188
Interior Lighting	Screw-in	100.0%	189	189
Interior Lighting	High-Bay Fixtures	100.0%	2,024	2,024
Interior Lighting	Linear Fluorescent	100.0%	1,082	1,082
Exterior Lighting	Screw-in	100.0%	168	168
Exterior Lighting	HID	100.0%	264	264
Exterior Lighting	Linear Fluorescent	100.0%	140	140
Motors	Pumps	100.0%	4,828	4,828
Motors	Fans & Blowers	100.0%	6,794	6,794
Motors	Compressed Air	100.0%	1,223	1,223
Motors	Conveyors	100.0%	28,128	28,128
Motors	Other Motors	100.0%	439	439
Process	Process Heating	100.0%	14,813	14,813
Process	Process Cooling	100.0%	909	909
Process	Process Refrigeration	100.0%	909	909
Process	Process Electro-Chemical	100.0%	255	255
Process	Process Other	100.0%	3,022	3,022
Miscellaneous	Miscellaneous	100.0%	2,358	2,358

**Table A-216 Idaho Transportation Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,059	60	4
Cooling	Water-Cooled Chiller	2.8%	1,072	31	2
Cooling	RTU	4.3%	1,137	49	3
Cooling	Air-Source Heat Pump	2.3%	1,137	26	2
Cooling	Geothermal Heat Pump	0.0%	758	-	-
Heating	Electric Furnace	2.7%	5,059	135	8
Heating	Electric Zonal Heating	14.4%	4,818	694	41
Heating	Air-Source Heat Pump	2.3%	4,605	107	6
Heating	Geothermal Heat Pump	0.0%	3,072	-	-
Ventilation	Ventilation	100.0%	168	168	10
Interior Lighting	Screw-in	100.0%	80	80	5
Interior Lighting	High-Bay Fixtures	100.0%	390	390	23
Interior Lighting	Linear Fluorescent	100.0%	301	301	18
Exterior Lighting	Screw-in	100.0%	55	55	3
Exterior Lighting	HID	100.0%	50	50	3
Exterior Lighting	Linear Fluorescent	100.0%	39	39	2
Motors	Pumps	0.0%	376	-	-
Motors	Fans & Blowers	100.0%	266	266	16
Motors	Compressed Air	100.0%	89	89	5
Motors	Conveyors	100.0%	1,814	1,814	108
Motors	Other Motors	100.0%	133	133	8
Process	Process Heating	100.0%	856	856	51
Process	Process Cooling	100.0%	189	189	11
Process	Process Refrigeration	100.0%	189	189	11
Process	Process Electro-Chemical	100.0%	103	103	6
Process	Process Other	100.0%	231	231	14
Miscellaneous	Miscellaneous	100.0%	376	376	22
	<b>Total</b>			<b>6,429</b>	<b>382</b>

**Table A-217 Idaho Transportation Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	617	35
Cooling	Water-Cooled Chiller	2.8%	605	17
Cooling	RTU	4.3%	507	22
Cooling	Air-Source Heat Pump	2.3%	805	19
Cooling	Geothermal Heat Pump	0.0%	436	-
Heating	Electric Furnace	2.7%	5,059	135
Heating	Electric Zonal Heating	14.4%	4,818	694
Heating	Air-Source Heat Pump	2.3%	2,995	69
Heating	Geothermal Heat Pump	0.0%	1,657	-
Ventilation	Ventilation	100.0%	52	52
Interior Lighting	Screw-in	100.0%	46	46
Interior Lighting	High-Bay Fixtures	100.0%	498	498
Interior Lighting	Linear Fluorescent	100.0%	266	266
Exterior Lighting	Screw-in	100.0%	41	41
Exterior Lighting	HID	100.0%	65	65
Exterior Lighting	Linear Fluorescent	100.0%	34	34
Motors	Pumps	100.0%	376	376
Motors	Fans & Blowers	100.0%	266	266
Motors	Compressed Air	100.0%	89	89
Motors	Conveyors	100.0%	1,814	1,814
Motors	Other Motors	100.0%	133	133
Process	Process Heating	100.0%	856	856
Process	Process Cooling	0.0%	189	-
Process	Process Refrigeration	100.0%	189	189
Process	Process Electro-Chemical	100.0%	103	103
Process	Process Other	100.0%	231	231
Miscellaneous	Miscellaneous	100.0%	376	376

**Table A-218 Idaho Wastewater Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	4,434	249	12
Cooling	Water-Cooled Chiller	2.8%	4,490	128	6
Cooling	RTU	4.3%	4,763	207	10
Cooling	Air-Source Heat Pump	2.3%	4,762	110	6
Cooling	Geothermal Heat Pump	0.0%	3,176	-	-
Heating	Electric Furnace	2.7%	21,189	564	28
Heating	Electric Zonal Heating	14.4%	20,180	2,908	145
Heating	Air-Source Heat Pump	2.3%	19,287	447	22
Heating	Geothermal Heat Pump	0.0%	12,864	-	-
Ventilation	Ventilation	100.0%	705	705	35
Interior Lighting	Screw-in	100.0%	427	427	21
Interior Lighting	High-Bay Fixtures	100.0%	2,090	2,090	105
Interior Lighting	Linear Fluorescent	100.0%	1,611	1,611	81
Exterior Lighting	Screw-in	100.0%	293	293	15
Exterior Lighting	HID	100.0%	270	270	14
Exterior Lighting	Linear Fluorescent	100.0%	208	208	10
Motors	Pumps	100.0%	26,301	26,301	1,315
Motors	Fans & Blowers	100.0%	64,752	64,752	3,238
Motors	Compressed Air	100.0%	1,385	1,385	69
Motors	Conveyors	100.0%	6,188	6,188	309
Motors	Other Motors	100.0%	1,939	1,939	97
Process	Process Heating	0.0%	3,030	-	-
Process	Process Cooling	0.0%	3,030	-	-
Process	Process Refrigeration	0.0%	3,030	-	-
Process	Process Electro-Chemical	0.0%	3,030	-	-
Process	Process Other	100.0%	5,128	5,128	256
Miscellaneous	Miscellaneous	100.0%	3,030	3,030	151
	<b>Total</b>			<b>118,940</b>	<b>5,947</b>



**Table A-219 Idaho Wastewater New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,585	145
Cooling	Water-Cooled Chiller	2.8%	2,535	72
Cooling	RTU	4.3%	2,124	92
Cooling	Air-Source Heat Pump	2.3%	3,372	78
Cooling	Geothermal Heat Pump	0.0%	1,825	-
Heating	Electric Furnace	2.7%	21,189	564
Heating	Electric Zonal Heating	14.4%	20,180	2,908
Heating	Air-Source Heat Pump	2.3%	12,542	291
Heating	Geothermal Heat Pump	0.0%	6,941	-
Ventilation	Ventilation	100.0%	218	218
Interior Lighting	Screw-in	100.0%	249	249
Interior Lighting	High-Bay Fixtures	100.0%	2,668	2,668
Interior Lighting	Linear Fluorescent	100.0%	1,426	1,426
Exterior Lighting	Screw-in	100.0%	221	221
Exterior Lighting	HID	100.0%	348	348
Exterior Lighting	Linear Fluorescent	100.0%	184	184
Motors	Pumps	0.0%	26,301	-
Motors	Fans & Blowers	0.0%	64,752	-
Motors	Compressed Air	0.0%	1,385	-
Motors	Conveyors	0.0%	6,188	-
Motors	Other Motors	100.0%	1,939	1,939
Process	Process Heating	100.0%	3,030	3,030
Process	Process Cooling	100.0%	3,030	3,030
Process	Process Refrigeration	100.0%	3,030	3,030
Process	Process Electro-Chemical	100.0%	3,030	3,030
Process	Process Other	100.0%	5,128	5,128
Miscellaneous	Miscellaneous	100.0%	3,030	3,030

Table A-220 Idaho Water Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,708	209	27
Cooling	Water-Cooled Chiller	2.8%	3,755	107	14
Cooling	RTU	4.3%	3,983	173	22
Cooling	Air-Source Heat Pump	2.3%	3,982	92	12
Cooling	Geothermal Heat Pump	0.0%	2,656	-	-
Heating	Electric Furnace	2.7%	17,720	472	60
Heating	Electric Zonal Heating	14.4%	16,876	2,432	310
Heating	Air-Source Heat Pump	2.3%	16,129	374	48
Heating	Geothermal Heat Pump	0.0%	10,758	-	-
Ventilation	Ventilation	100.0%	590	590	75
Interior Lighting	Screw-in	100.0%	357	357	45
Interior Lighting	High-Bay Fixtures	100.0%	1,748	1,748	223
Interior Lighting	Linear Fluorescent	100.0%	1,347	1,347	172
Exterior Lighting	Screw-in	100.0%	245	245	31
Exterior Lighting	HID	100.0%	226	226	29
Exterior Lighting	Linear Fluorescent	100.0%	174	174	22
Motors	Pumps	100.0%	79,455	79,455	10,127
Motors	Fans & Blowers	0.0%	2,534	-	-
Motors	Compressed Air	100.0%	1,158	1,158	148
Motors	Conveyors	100.0%	3,447	3,447	439
Motors	Other Motors	100.0%	39	39	5
Process	Process Heating	0.0%	2,534	-	-
Process	Process Cooling	0.0%	2,534	-	-
Process	Process Refrigeration	0.0%	2,534	-	-
Process	Process Electro-Chemical	0.0%	2,534	-	-
Process	Process Other	100.0%	4,288	4,288	547
Miscellaneous	Miscellaneous	100.0%	2,534	2,534	323
<b>Total</b>				<b>99,466</b>	<b>12,678</b>

**Table A-221 Idaho Water New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,162	122
Cooling	Water-Cooled Chiller	2.8%	2,120	60
Cooling	RTU	4.3%	1,776	77
Cooling	Air-Source Heat Pump	2.3%	2,820	65
Cooling	Geothermal Heat Pump	0.0%	1,526	-
Heating	Electric Furnace	2.7%	17,720	472
Heating	Electric Zonal Heating	14.4%	16,876	2,432
Heating	Air-Source Heat Pump	2.3%	10,488	243
Heating	Geothermal Heat Pump	0.0%	5,805	-
Ventilation	Ventilation	100.0%	183	183
Interior Lighting	Screw-in	100.0%	208	208
Interior Lighting	High-Bay Fixtures	100.0%	2,231	2,231
Interior Lighting	Linear Fluorescent	100.0%	1,193	1,193
Exterior Lighting	Screw-in	100.0%	185	185
Exterior Lighting	HID	100.0%	291	291
Exterior Lighting	Linear Fluorescent	100.0%	154	154
Motors	Pumps	0.0%	79,455	-
Motors	Fans & Blowers	0.0%	2,534	-
Motors	Compressed Air	0.0%	1,158	-
Motors	Conveyors	0.0%	3,447	-
Motors	Other Motors	100.0%	39	39
Process	Process Heating	0.0%	2,534	-
Process	Process Cooling	100.0%	2,534	2,534
Process	Process Refrigeration	100.0%	2,534	2,534
Process	Process Electro-Chemical	100.0%	2,534	2,534
Process	Process Other	100.0%	4,288	4,288
Miscellaneous	Miscellaneous	100.0%	2,534	2,534

**Table A-222 Idaho Chemical Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	5,689	320	99
Cooling	Water-Cooled Chiller	2.8%	5,761	164	51
Cooling	RTU	4.3%	6,112	266	82
Cooling	Air-Source Heat Pump	2.3%	6,110	142	44
Cooling	Geothermal Heat Pump	0.0%	4,075	-	-
Heating	Electric Furnace	2.7%	27,188	724	224
Heating	Electric Zonal Heating	14.4%	25,893	3,731	1,154
Heating	Air-Source Heat Pump	2.3%	24,747	574	178
Heating	Geothermal Heat Pump	0.0%	16,506	-	-
Ventilation	Ventilation	100.0%	905	905	280
Interior Lighting	Screw-in	100.0%	374	374	116
Interior Lighting	High-Bay Fixtures	100.0%	1,831	1,831	566
Interior Lighting	Linear Fluorescent	100.0%	1,411	1,411	437
Exterior Lighting	Screw-in	100.0%	256	256	79
Exterior Lighting	HID	100.0%	237	237	73
Exterior Lighting	Linear Fluorescent	100.0%	182	182	56
Motors	Pumps	100.0%	14,187	14,187	4,390
Motors	Fans & Blowers	100.0%	3,941	3,941	1,219
Motors	Compressed Air	100.0%	15,764	15,764	4,877
Motors	Conveyors	100.0%	27,586	27,586	8,535
Motors	Other Motors	100.0%	2,365	2,365	732
Process	Process Heating	100.0%	7,463	7,463	2,309
Process	Process Cooling	100.0%	4,188	4,188	1,296
Process	Process Refrigeration	100.0%	4,188	4,188	1,296
Process	Process Electro-Chemical	100.0%	21,430	21,430	6,631
Process	Process Other	100.0%	1,334	1,334	413
Miscellaneous	Miscellaneous	100.0%	3,296	3,296	1,020
	<b>Total</b>			<b>116,856</b>	<b>36,156</b>

**Table A-223 Idaho Chemical Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	3,316	186
Cooling	Water-Cooled Chiller	2.8%	3,252	93
Cooling	RTU	4.3%	2,725	118
Cooling	Air-Source Heat Pump	2.3%	4,326	100
Cooling	Geothermal Heat Pump	0.0%	2,342	-
Heating	Electric Furnace	2.7%	27,188	724
Heating	Electric Zonal Heating	14.4%	25,893	3,731
Heating	Air-Source Heat Pump	2.3%	16,092	373
Heating	Geothermal Heat Pump	0.0%	8,906	-
Ventilation	Ventilation	100.0%	280	280
Interior Lighting	Screw-in	100.0%	218	218
Interior Lighting	High-Bay Fixtures	100.0%	2,337	2,337
Interior Lighting	Linear Fluorescent	100.0%	1,249	1,249
Exterior Lighting	Screw-in	100.0%	194	194
Exterior Lighting	HID	100.0%	305	305
Exterior Lighting	Linear Fluorescent	100.0%	161	161
Motors	Pumps	100.0%	14,187	14,187
Motors	Fans & Blowers	100.0%	3,941	3,941
Motors	Compressed Air	100.0%	15,764	15,764
Motors	Conveyors	100.0%	27,586	27,586
Motors	Other Motors	100.0%	2,365	2,365
Process	Process Heating	100.0%	7,463	7,463
Process	Process Cooling	100.0%	4,188	4,188
Process	Process Refrigeration	100.0%	4,188	4,188
Process	Process Electro-Chemical	100.0%	21,430	21,430
Process	Process Other	100.0%	1,334	1,334
Miscellaneous	Miscellaneous	100.0%	3,296	3,296

**Table A-224 Idaho Electronic Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	6,065	341	17
Cooling	Water-Cooled Chiller	2.8%	6,141	175	9
Cooling	RTU	4.3%	6,515	283	14
Cooling	Air-Source Heat Pump	2.3%	6,514	151	8
Cooling	Geothermal Heat Pump	0.0%	4,345	-	-
Heating	Electric Furnace	2.7%	28,984	772	39
Heating	Electric Zonal Heating	14.4%	27,603	3,977	199
Heating	Air-Source Heat Pump	2.3%	26,382	612	31
Heating	Geothermal Heat Pump	0.0%	17,597	-	-
Ventilation	Ventilation	100.0%	964	964	48
Interior Lighting	Screw-in	100.0%	258	258	13
Interior Lighting	High-Bay Fixtures	100.0%	1,264	1,264	63
Interior Lighting	Linear Fluorescent	100.0%	974	974	49
Exterior Lighting	Screw-in	100.0%	177	177	9
Exterior Lighting	HID	100.0%	164	164	8
Exterior Lighting	Linear Fluorescent	100.0%	126	126	6
Motors	Pumps	100.0%	370	370	18
Motors	Fans & Blowers	100.0%	591	591	30
Motors	Compressed Air	100.0%	1,070	1,070	53
Motors	Conveyors	100.0%	3,345	3,345	167
Motors	Other Motors	0.0%	2,199	-	-
Process	Process Heating	100.0%	2,791	2,791	140
Process	Process Cooling	100.0%	1,296	1,296	65
Process	Process Refrigeration	100.0%	1,296	1,296	65
Process	Process Electro-Chemical	100.0%	487	487	24
Process	Process Other	100.0%	2,451	2,451	123
Miscellaneous	Miscellaneous	100.0%	2,199	2,199	110
	<b>Total</b>			<b>26,135</b>	<b>1,307</b>

**Table A-225 Idaho Electronic Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	3,536	199
Cooling	Water-Cooled Chiller	2.8%	3,467	99
Cooling	RTU	4.3%	2,905	126
Cooling	Air-Source Heat Pump	2.3%	4,612	107
Cooling	Geothermal Heat Pump	0.0%	2,497	-
Heating	Electric Furnace	2.7%	28,984	772
Heating	Electric Zonal Heating	14.4%	27,603	3,977
Heating	Air-Source Heat Pump	2.3%	17,155	398
Heating	Geothermal Heat Pump	0.0%	9,494	-
Ventilation	Ventilation	100.0%	299	299
Interior Lighting	Screw-in	100.0%	151	151
Interior Lighting	High-Bay Fixtures	100.0%	1,614	1,614
Interior Lighting	Linear Fluorescent	100.0%	863	863
Exterior Lighting	Screw-in	100.0%	134	134
Exterior Lighting	HID	100.0%	210	210
Exterior Lighting	Linear Fluorescent	100.0%	111	111
Motors	Pumps	100.0%	370	370
Motors	Fans & Blowers	100.0%	591	591
Motors	Compressed Air	100.0%	1,070	1,070
Motors	Conveyors	100.0%	3,345	3,345
Motors	Other Motors	100.0%	2,199	2,199
Process	Process Heating	100.0%	2,791	2,791
Process	Process Cooling	100.0%	1,296	1,296
Process	Process Refrigeration	100.0%	1,296	1,296
Process	Process Electro-Chemical	100.0%	487	487
Process	Process Other	0.0%	2,451	-
Miscellaneous	Miscellaneous	100.0%	2,199	2,199

**Table A-226 Idaho Industrial Machinery Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,162	122	32
Cooling	Water-Cooled Chiller	2.8%	2,189	62	16
Cooling	RTU	4.3%	2,323	101	27
Cooling	Air-Source Heat Pump	2.3%	2,322	54	14
Cooling	Geothermal Heat Pump	0.0%	1,549	-	-
Heating	Electric Furnace	2.7%	10,333	275	73
Heating	Electric Zonal Heating	14.4%	9,841	1,418	375
Heating	Air-Source Heat Pump	2.3%	9,405	218	58
Heating	Geothermal Heat Pump	0.0%	6,273	-	-
Ventilation	Ventilation	100.0%	344	344	91
Interior Lighting	Screw-in	100.0%	137	137	36
Interior Lighting	High-Bay Fixtures	100.0%	673	673	178
Interior Lighting	Linear Fluorescent	100.0%	518	518	137
Exterior Lighting	Screw-in	100.0%	94	94	25
Exterior Lighting	HID	100.0%	87	87	23
Exterior Lighting	Linear Fluorescent	100.0%	67	67	18
Motors	Pumps	100.0%	573	573	152
Motors	Fans & Blowers	100.0%	1,334	1,334	353
Motors	Compressed Air	100.0%	1,136	1,136	300
Motors	Conveyors	100.0%	1,839	1,839	486
Motors	Other Motors	0.0%	796	-	-
Process	Process Heating	100.0%	760	760	201
Process	Process Cooling	100.0%	149	149	39
Process	Process Refrigeration	100.0%	149	149	39
Process	Process Electro-Chemical	100.0%	101	101	27
Process	Process Other	100.0%	339	339	90
Miscellaneous	Miscellaneous	100.0%	796	796	210
<b>Total</b>				<b>11,347</b>	<b>2,999</b>



**Table A-227 Idaho Industrial Machinery New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,260	71
Cooling	Water-Cooled Chiller	2.8%	1,236	35
Cooling	RTU	4.3%	1,036	45
Cooling	Air-Source Heat Pump	2.3%	1,644	38
Cooling	Geothermal Heat Pump	0.0%	890	-
Heating	Electric Furnace	2.7%	10,333	275
Heating	Electric Zonal Heating	14.4%	9,841	1,418
Heating	Air-Source Heat Pump	2.3%	6,116	142
Heating	Geothermal Heat Pump	0.0%	3,385	-
Ventilation	Ventilation	100.0%	106	106
Interior Lighting	Screw-in	100.0%	80	80
Interior Lighting	High-Bay Fixtures	100.0%	859	859
Interior Lighting	Linear Fluorescent	100.0%	459	459
Exterior Lighting	Screw-in	100.0%	71	71
Exterior Lighting	HID	100.0%	112	112
Exterior Lighting	Linear Fluorescent	100.0%	59	59
Motors	Pumps	100.0%	573	573
Motors	Fans & Blowers	100.0%	1,334	1,334
Motors	Compressed Air	100.0%	1,136	1,136
Motors	Conveyors	100.0%	1,839	1,839
Motors	Other Motors	100.0%	796	796
Process	Process Heating	100.0%	760	760
Process	Process Cooling	100.0%	149	149
Process	Process Refrigeration	100.0%	149	149
Process	Process Electro-Chemical	100.0%	101	101
Process	Process Other	0.0%	339	-
Miscellaneous	Miscellaneous	100.0%	796	796

**Table A-228 Idaho Lumber & Wood Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,849	104	10
Cooling	Water-Cooled Chiller	2.8%	1,872	53	5
Cooling	RTU	4.3%	1,986	86	9
Cooling	Air-Source Heat Pump	2.3%	1,985	46	5
Cooling	Geothermal Heat Pump	0.0%	1,324	-	-
Heating	Electric Furnace	2.7%	8,835	235	24
Heating	Electric Zonal Heating	14.4%	8,414	1,212	121
Heating	Air-Source Heat Pump	2.3%	8,041	186	19
Heating	Geothermal Heat Pump	0.0%	5,364	-	-
Ventilation	Ventilation	100.0%	294	294	29
Interior Lighting	Screw-in	100.0%	280	280	28
Interior Lighting	High-Bay Fixtures	100.0%	1,369	1,369	137
Interior Lighting	Linear Fluorescent	100.0%	1,055	1,055	106
Exterior Lighting	Screw-in	100.0%	192	192	19
Exterior Lighting	HID	100.0%	177	177	18
Exterior Lighting	Linear Fluorescent	100.0%	136	136	14
Motors	Pumps	0.0%	2,076	-	-
Motors	Fans & Blowers	100.0%	4,392	4,392	439
Motors	Compressed Air	100.0%	5,336	5,336	534
Motors	Conveyors	100.0%	22,758	22,758	2,276
Motors	Other Motors	100.0%	1,996	1,996	200
Process	Process Heating	100.0%	3,940	3,940	394
Process	Process Cooling	100.0%	292	292	29
Process	Process Refrigeration	100.0%	292	292	29
Process	Process Electro-Chemical	100.0%	340	340	34
Process	Process Other	100.0%	245	245	25
Miscellaneous	Miscellaneous	100.0%	2,076	2,076	208
	<b>Total</b>			<b>47,095</b>	<b>4,709</b>

**Table A-229 Idaho Lumber & Wood Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,078	61
Cooling	Water-Cooled Chiller	2.8%	1,057	30
Cooling	RTU	4.3%	886	38
Cooling	Air-Source Heat Pump	2.3%	1,406	33
Cooling	Geothermal Heat Pump	0.0%	761	-
Heating	Electric Furnace	2.7%	8,835	235
Heating	Electric Zonal Heating	14.4%	8,414	1,212
Heating	Air-Source Heat Pump	2.3%	5,229	121
Heating	Geothermal Heat Pump	0.0%	2,894	-
Ventilation	Ventilation	100.0%	91	91
Interior Lighting	Screw-in	100.0%	163	163
Interior Lighting	High-Bay Fixtures	100.0%	1,748	1,748
Interior Lighting	Linear Fluorescent	100.0%	935	935
Exterior Lighting	Screw-in	100.0%	145	145
Exterior Lighting	HID	100.0%	228	228
Exterior Lighting	Linear Fluorescent	100.0%	121	121
Motors	Pumps	100.0%	2,076	2,076
Motors	Fans & Blowers	100.0%	4,392	4,392
Motors	Compressed Air	100.0%	5,336	5,336
Motors	Conveyors	100.0%	22,758	22,758
Motors	Other Motors	100.0%	1,996	1,996
Process	Process Heating	100.0%	3,940	3,940
Process	Process Cooling	0.0%	292	-
Process	Process Refrigeration	100.0%	292	292
Process	Process Electro-Chemical	100.0%	340	340
Process	Process Other	100.0%	245	245
Miscellaneous	Miscellaneous	100.0%	2,076	2,076

**Table A-230 Idaho Metal Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	527	30	9
Cooling	Water-Cooled Chiller	2.8%	533	15	5
Cooling	RTU	4.3%	566	25	8
Cooling	Air-Source Heat Pump	2.3%	566	13	4
Cooling	Geothermal Heat Pump	0.0%	377	-	-
Heating	Electric Furnace	2.7%	2,517	67	21
Heating	Electric Zonal Heating	14.4%	2,398	345	107
Heating	Air-Source Heat Pump	2.3%	2,291	53	17
Heating	Geothermal Heat Pump	0.0%	1,528	-	-
Ventilation	Ventilation	100.0%	84	84	26
Interior Lighting	Screw-in	100.0%	49	49	15
Interior Lighting	High-Bay Fixtures	100.0%	242	242	75
Interior Lighting	Linear Fluorescent	100.0%	187	187	58
Exterior Lighting	Screw-in	100.0%	34	34	11
Exterior Lighting	HID	100.0%	31	31	10
Exterior Lighting	Linear Fluorescent	100.0%	24	24	8
Motors	Pumps	0.0%	234	-	-
Motors	Fans & Blowers	100.0%	341	341	106
Motors	Compressed Air	100.0%	114	114	35
Motors	Conveyors	100.0%	2,333	2,333	726
Motors	Other Motors	100.0%	171	171	53
Process	Process Heating	100.0%	1,148	1,148	357
Process	Process Cooling	100.0%	102	102	32
Process	Process Refrigeration	100.0%	102	102	32
Process	Process Electro-Chemical	100.0%	193	193	60
Process	Process Other	100.0%	248	248	77
Miscellaneous	Miscellaneous	100.0%	234	234	73
	<b>Total</b>			<b>6,186</b>	<b>1,925</b>

**Table A-231 Idaho Metal Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	307	17
Cooling	Water-Cooled Chiller	2.8%	301	9
Cooling	RTU	4.3%	252	11
Cooling	Air-Source Heat Pump	2.3%	401	9
Cooling	Geothermal Heat Pump	0.0%	217	-
Heating	Electric Furnace	2.7%	2,517	67
Heating	Electric Zonal Heating	14.4%	2,398	345
Heating	Air-Source Heat Pump	2.3%	1,490	35
Heating	Geothermal Heat Pump	0.0%	825	-
Ventilation	Ventilation	100.0%	26	26
Interior Lighting	Screw-in	100.0%	29	29
Interior Lighting	High-Bay Fixtures	100.0%	309	309
Interior Lighting	Linear Fluorescent	100.0%	165	165
Exterior Lighting	Screw-in	100.0%	26	26
Exterior Lighting	HID	100.0%	40	40
Exterior Lighting	Linear Fluorescent	100.0%	21	21
Motors	Pumps	100.0%	234	234
Motors	Fans & Blowers	100.0%	341	341
Motors	Compressed Air	100.0%	114	114
Motors	Conveyors	100.0%	2,333	2,333
Motors	Other Motors	100.0%	171	171
Process	Process Heating	100.0%	1,148	1,148
Process	Process Cooling	0.0%	102	-
Process	Process Refrigeration	100.0%	102	102
Process	Process Electro-Chemical	100.0%	193	193
Process	Process Other	100.0%	248	248
Miscellaneous	Miscellaneous	100.0%	234	234

**Table A-232 Idaho Miscellaneous Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	12,398	697	181
Cooling	Water-Cooled Chiller	2.8%	12,554	357	93
Cooling	RTU	4.3%	13,318	579	150
Cooling	Air-Source Heat Pump	2.3%	13,315	309	80
Cooling	Geothermal Heat Pump	0.0%	8,881	-	-
Heating	Electric Furnace	2.7%	59,248	1,578	410
Heating	Electric Zonal Heating	14.4%	56,426	8,131	2,110
Heating	Air-Source Heat Pump	2.3%	53,929	1,250	325
Heating	Geothermal Heat Pump	0.0%	35,971	-	-
Ventilation	Ventilation	100.0%	1,971	1,971	512
Interior Lighting	Screw-in	100.0%	847	847	220
Interior Lighting	High-Bay Fixtures	100.0%	4,151	4,151	1,077
Interior Lighting	Linear Fluorescent	100.0%	3,199	3,199	830
Exterior Lighting	Screw-in	100.0%	581	581	151
Exterior Lighting	HID	100.0%	537	537	139
Exterior Lighting	Linear Fluorescent	100.0%	413	413	107
Motors	Pumps	100.0%	3,783	3,783	982
Motors	Fans & Blowers	100.0%	4,544	4,544	1,179
Motors	Compressed Air	100.0%	3,674	3,674	954
Motors	Conveyors	100.0%	7,771	7,771	2,017
Motors	Other Motors	100.0%	130	130	34
Process	Process Heating	100.0%	6,397	6,397	1,661
Process	Process Cooling	100.0%	1,680	1,680	436
Process	Process Refrigeration	100.0%	1,680	1,680	436
Process	Process Electro-Chemical	100.0%	647	647	168
Process	Process Other	100.0%	702	702	182
Miscellaneous	Miscellaneous	100.0%	3,860	3,860	1,002
	<b>Total</b>			<b>59,468</b>	<b>15,436</b>

**Table A-233 Idaho Miscellaneous Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	7,227	406
Cooling	Water-Cooled Chiller	2.8%	7,087	202
Cooling	RTU	4.3%	5,939	258
Cooling	Air-Source Heat Pump	2.3%	9,428	219
Cooling	Geothermal Heat Pump	0.0%	5,104	-
Heating	Electric Furnace	2.7%	59,248	1,578
Heating	Electric Zonal Heating	14.4%	56,426	8,131
Heating	Air-Source Heat Pump	2.3%	35,068	813
Heating	Geothermal Heat Pump	0.0%	19,408	-
Ventilation	Ventilation	100.0%	610	610
Interior Lighting	Screw-in	100.0%	495	495
Interior Lighting	High-Bay Fixtures	100.0%	5,298	5,298
Interior Lighting	Linear Fluorescent	100.0%	2,833	2,833
Exterior Lighting	Screw-in	100.0%	440	440
Exterior Lighting	HID	100.0%	690	690
Exterior Lighting	Linear Fluorescent	100.0%	366	366
Motors	Pumps	100.0%	3,783	3,783
Motors	Fans & Blowers	100.0%	4,544	4,544
Motors	Compressed Air	100.0%	3,674	3,674
Motors	Conveyors	100.0%	7,771	7,771
Motors	Other Motors	100.0%	130	130
Process	Process Heating	100.0%	6,397	6,397
Process	Process Cooling	100.0%	1,680	1,680
Process	Process Refrigeration	100.0%	1,680	1,680
Process	Process Electro-Chemical	100.0%	647	647
Process	Process Other	100.0%	702	702
Miscellaneous	Miscellaneous	100.0%	3,860	3,860

**Table A-234 Utah Agriculture Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,298	186	784
Cooling	Water-Cooled Chiller	2.8%	3,110	89	374
Cooling	RTU	4.7%	3,670	173	729
Cooling	Air-Source Heat Pump	2.3%	3,669	86	361
Cooling	Geothermal Heat Pump	0.0%	2,447	-	-
Heating	Electric Furnace	2.1%	7,783	160	677
Heating	Electric Zonal Heating	11.2%	7,412	827	3,486
Heating	Air-Source Heat Pump	2.3%	6,984	163	687
Heating	Geothermal Heat Pump	0.0%	4,658	-	-
Ventilation	Ventilation	100.0%	283	283	1,195
Interior Lighting	Screw-in	100.0%	145	145	610
Interior Lighting	High-Bay Fixtures	100.0%	708	708	2,987
Interior Lighting	Linear Fluorescent	100.0%	546	546	2,302
Exterior Lighting	Screw-in	100.0%	99	99	418
Exterior Lighting	HID	100.0%	92	92	386
Exterior Lighting	Linear Fluorescent	100.0%	70	70	297
Motors	Pumps	100.0%	1,835	1,835	7,739
Motors	Fans & Blowers	100.0%	3,308	3,308	13,953
Motors	Compressed Air	100.0%	1,529	1,529	6,449
Motors	Conveyors	100.0%	3,892	3,892	16,416
Motors	Other Motors	0.0%	1,150	-	-
Process	Process Heating	100.0%	1,740	1,740	7,338
Process	Process Cooling	100.0%	2,928	2,928	12,349
Process	Process Refrigeration	100.0%	2,928	2,928	12,349
Process	Process Electro-Chemical	100.0%	56	56	236
Process	Process Other	100.0%	218	218	918
Miscellaneous	Miscellaneous	100.0%	1,150	1,150	4,852
	<b>Total</b>			<b>23,210</b>	<b>97,893</b>



**Table A-235 Utah Agriculture New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,102	119
Cooling	Water-Cooled Chiller	2.8%	1,890	54
Cooling	RTU	4.7%	1,701	80
Cooling	Air-Source Heat Pump	2.3%	2,699	63
Cooling	Geothermal Heat Pump	0.0%	1,459	-
Heating	Electric Furnace	2.1%	7,783	160
Heating	Electric Zonal Heating	11.2%	7,412	827
Heating	Air-Source Heat Pump	2.3%	4,358	102
Heating	Geothermal Heat Pump	0.0%	2,716	-
Ventilation	Ventilation	100.0%	93	93
Interior Lighting	Screw-in	100.0%	84	84
Interior Lighting	High-Bay Fixtures	100.0%	904	904
Interior Lighting	Linear Fluorescent	100.0%	483	483
Exterior Lighting	Screw-in	100.0%	75	75
Exterior Lighting	HID	100.0%	118	118
Exterior Lighting	Linear Fluorescent	100.0%	62	62
Motors	Pumps	100.0%	1,835	1,835
Motors	Fans & Blowers	100.0%	3,308	3,308
Motors	Compressed Air	100.0%	1,529	1,529
Motors	Conveyors	100.0%	3,892	3,892
Motors	Other Motors	100.0%	1,150	1,150
Process	Process Heating	100.0%	1,740	1,740
Process	Process Cooling	100.0%	2,928	2,928
Process	Process Refrigeration	100.0%	2,928	2,928
Process	Process Electro-Chemical	100.0%	56	56
Process	Process Other	0.0%	218	-
Miscellaneous	Miscellaneous	100.0%	1,150	1,150

**Table A-236 Utah Mining and Extraction Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Emp.)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	8,788	496	5,357
Cooling	Water-Cooled Chiller	2.8%	8,285	236	2,551
Cooling	RTU	4.7%	9,777	460	4,977
Cooling	Air-Source Heat Pump	2.3%	9,775	228	2,463
Cooling	Geothermal Heat Pump	0.0%	6,520	-	-
Heating	Electric Furnace	2.1%	20,736	427	4,621
Heating	Electric Zonal Heating	11.2%	19,748	2,202	23,805
Heating	Air-Source Heat Pump	2.3%	18,607	434	4,688
Heating	Geothermal Heat Pump	0.0%	12,411	-	-
Ventilation	Ventilation	100.0%	755	755	8,162
Interior Lighting	Screw-in	100.0%	587	587	6,341
Interior Lighting	High-Bay Fixtures	100.0%	2,873	2,873	31,061
Interior Lighting	Linear Fluorescent	100.0%	2,215	2,215	23,939
Exterior Lighting	Screw-in	100.0%	403	403	4,351
Exterior Lighting	HID	100.0%	372	372	4,018
Exterior Lighting	Linear Fluorescent	100.0%	286	286	3,092
Motors	Pumps	100.0%	51,186	51,186	553,296
Motors	Fans & Blowers	100.0%	14,218	14,218	153,693
Motors	Compressed Air	100.0%	21,328	21,328	230,540
Motors	Conveyors	100.0%	14,929	14,929	161,378
Motors	Other Motors	100.0%	40,522	40,522	438,026
Process	Process Heating	100.0%	1,497	1,497	16,178
Process	Process Cooling	0.0%	1,497	-	-
Process	Process Refrigeration	0.0%	1,497	-	-
Process	Process Electro-Chemical	100.0%	1,497	1,497	16,178
Process	Process Other	100.0%	8,232	8,232	88,980
Miscellaneous	Miscellaneous	100.0%	1,497	1,497	16,178
	<b>Total</b>			<b>166,879</b>	<b>1,803,874</b>

**Table A-237 Utah Mining and Extraction New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	5.6%	5,601	316
Cooling	Water-Cooled Chiller	2.8%	5,036	143
Cooling	RTU	4.7%	4,533	213
Cooling	Air-Source Heat Pump	2.3%	7,191	168
Cooling	Geothermal Heat Pump	0.0%	3,887	-
Heating	Electric Furnace	2.1%	20,736	427
Heating	Electric Zonal Heating	11.2%	19,748	2,202
Heating	Air-Source Heat Pump	2.3%	11,611	271
Heating	Geothermal Heat Pump	0.0%	7,237	-
Ventilation	Ventilation	100.0%	247	247
Interior Lighting	Screw-in	100.0%	342	342
Interior Lighting	High-Bay Fixtures	100.0%	3,668	3,668
Interior Lighting	Linear Fluorescent	100.0%	1,961	1,961
Exterior Lighting	Screw-in	100.0%	304	304
Exterior Lighting	HID	100.0%	478	478
Exterior Lighting	Linear Fluorescent	100.0%	253	253
Motors	Pumps	100.0%	51,186	51,186
Motors	Fans & Blowers	0.0%	14,218	-
Motors	Compressed Air	0.0%	21,328	-
Motors	Conveyors	100.0%	14,929	14,929
Motors	Other Motors	100.0%	40,522	40,522
Process	Process Heating	100.0%	1,497	1,497
Process	Process Cooling	100.0%	1,497	1,497
Process	Process Refrigeration	100.0%	1,497	1,497
Process	Process Electro-Chemical	100.0%	1,497	1,497
Process	Process Other	100.0%	8,232	8,232
Miscellaneous	Miscellaneous	100.0%	1,497	1,497

**Table A-238 Utah Food Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	5,969	337	4,446
Cooling	Water-Cooled Chiller	2.8%	5,628	160	2,117
Cooling	RTU	4.7%	6,641	313	4,131
Cooling	Air-Source Heat Pump	2.3%	6,639	155	2,044
Cooling	Geothermal Heat Pump	0.0%	4,428	-	-
Heating	Electric Furnace	2.1%	14,085	290	3,835
Heating	Electric Zonal Heating	11.2%	13,414	1,496	19,757
Heating	Air-Source Heat Pump	2.3%	12,639	295	3,891
Heating	Geothermal Heat Pump	0.0%	8,430	-	-
Ventilation	Ventilation	100.0%	513	513	6,774
Interior Lighting	Screw-in	100.0%	262	262	3,456
Interior Lighting	High-Bay Fixtures	100.0%	1,282	1,282	16,929
Interior Lighting	Linear Fluorescent	100.0%	988	988	13,047
Exterior Lighting	Screw-in	100.0%	180	180	2,371
Exterior Lighting	HID	100.0%	166	166	2,190
Exterior Lighting	Linear Fluorescent	100.0%	128	128	1,685
Motors	Pumps	100.0%	5,300	5,300	69,994
Motors	Fans & Blowers	100.0%	3,812	3,812	50,342
Motors	Compressed Air	100.0%	2,148	2,148	28,372
Motors	Conveyors	100.0%	7,860	7,860	103,807
Motors	Other Motors	0.0%	2,082	-	-
Process	Process Heating	100.0%	3,149	3,149	41,589
Process	Process Cooling	100.0%	5,299	5,299	69,982
Process	Process Refrigeration	100.0%	5,299	5,299	69,982
Process	Process Electro-Chemical	100.0%	101	101	1,340
Process	Process Other	100.0%	394	394	5,203
Miscellaneous	Miscellaneous	100.0%	2,082	2,082	27,497
	<b>Total</b>			<b>42,004</b>	<b>554,781</b>

**Table A-239 Utah Food Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	3,804	215
Cooling	Water-Cooled Chiller	2.8%	3,421	97
Cooling	RTU	4.7%	3,079	145
Cooling	Air-Source Heat Pump	2.3%	4,884	114
Cooling	Geothermal Heat Pump	0.0%	2,640	-
Heating	Electric Furnace	2.1%	14,085	290
Heating	Electric Zonal Heating	11.2%	13,414	1,496
Heating	Air-Source Heat Pump	2.3%	7,887	184
Heating	Geothermal Heat Pump	0.0%	4,916	-
Ventilation	Ventilation	100.0%	168	168
Interior Lighting	Screw-in	100.0%	153	153
Interior Lighting	High-Bay Fixtures	100.0%	1,636	1,636
Interior Lighting	Linear Fluorescent	100.0%	875	875
Exterior Lighting	Screw-in	100.0%	136	136
Exterior Lighting	HID	100.0%	213	213
Exterior Lighting	Linear Fluorescent	100.0%	113	113
Motors	Pumps	100.0%	5,300	5,300
Motors	Fans & Blowers	100.0%	3,812	3,812
Motors	Compressed Air	100.0%	2,148	2,148
Motors	Conveyors	100.0%	7,860	7,860
Motors	Other Motors	100.0%	2,082	2,082
Process	Process Heating	100.0%	3,149	3,149
Process	Process Cooling	100.0%	5,299	5,299
Process	Process Refrigeration	100.0%	5,299	5,299
Process	Process Electro-Chemical	100.0%	101	101
Process	Process Other	0.0%	394	-
Miscellaneous	Miscellaneous	100.0%	2,082	2,082

**Table A-240 Utah Paper Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	8,582	484	1,154
Cooling	Water-Cooled Chiller	2.8%	8,092	231	549
Cooling	RTU	4.7%	9,549	450	1,072
Cooling	Air-Source Heat Pump	2.3%	9,546	222	530
Cooling	Geothermal Heat Pump	0.0%	6,367	-	-
Heating	Electric Furnace	2.1%	20,251	418	995
Heating	Electric Zonal Heating	11.2%	19,287	2,151	5,126
Heating	Air-Source Heat Pump	2.3%	18,173	424	1,010
Heating	Geothermal Heat Pump	0.0%	12,121	-	-
Ventilation	Ventilation	100.0%	737	737	1,758
Interior Lighting	Screw-in	100.0%	410	410	978
Interior Lighting	High-Bay Fixtures	100.0%	2,010	2,010	4,792
Interior Lighting	Linear Fluorescent	100.0%	1,549	1,549	3,693
Exterior Lighting	Screw-in	100.0%	282	282	671
Exterior Lighting	HID	100.0%	260	260	620
Exterior Lighting	Linear Fluorescent	100.0%	200	200	477
Motors	Pumps	100.0%	24,894	24,894	59,335
Motors	Fans & Blowers	100.0%	13,404	13,404	31,950
Motors	Compressed Air	100.0%	6,702	6,702	15,975
Motors	Conveyors	100.0%	32,553	32,553	77,592
Motors	Other Motors	100.0%	10,532	10,532	25,103
Process	Process Heating	100.0%	8,642	8,642	20,600
Process	Process Cooling	100.0%	864	864	2,059
Process	Process Refrigeration	100.0%	864	864	2,059
Process	Process Electro-Chemical	100.0%	1,535	1,535	3,659
Process	Process Other	100.0%	1,669	1,669	3,979
Miscellaneous	Miscellaneous	100.0%	2,914	2,914	6,946
	<b>Total</b>			<b>2,397</b>	<b>48</b>

**Table A-241 Utah Paper Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	5,470	308
Cooling	Water-Cooled Chiller	2.8%	4,918	140
Cooling	RTU	4.7%	4,427	208
Cooling	Air-Source Heat Pump	2.3%	7,023	164
Cooling	Geothermal Heat Pump	0.0%	3,796	-
Heating	Electric Furnace	2.1%	20,251	418
Heating	Electric Zonal Heating	11.2%	19,287	2,151
Heating	Air-Source Heat Pump	2.3%	11,340	264
Heating	Geothermal Heat Pump	0.0%	7,068	-
Ventilation	Ventilation	100.0%	241	241
Interior Lighting	Screw-in	100.0%	240	240
Interior Lighting	High-Bay Fixtures	100.0%	2,566	2,566
Interior Lighting	Linear Fluorescent	100.0%	1,372	1,372
Exterior Lighting	Screw-in	100.0%	213	213
Exterior Lighting	HID	100.0%	334	334
Exterior Lighting	Linear Fluorescent	100.0%	177	177
Motors	Pumps	100.0%	24,894	24,894
Motors	Fans & Blowers	100.0%	13,404	13,404
Motors	Compressed Air	100.0%	6,702	6,702
Motors	Conveyors	100.0%	32,553	32,553
Motors	Other Motors	100.0%	10,532	10,532
Process	Process Heating	100.0%	8,642	8,642
Process	Process Cooling	100.0%	864	864
Process	Process Refrigeration	100.0%	864	864
Process	Process Electro-Chemical	100.0%	1,535	1,535
Process	Process Other	100.0%	1,669	1,669
Miscellaneous	Miscellaneous	100.0%	2,914	2,914

**Table A-242 Utah Petroleum Refining Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	24,150	1,362	1,569
Cooling	Water-Cooled Chiller	2.8%	22,769	649	747
Cooling	RTU	4.7%	26,868	1,265	1,458
Cooling	Air-Source Heat Pump	2.3%	26,862	626	721
Cooling	Geothermal Heat Pump	0.0%	17,917	-	-
Heating	Electric Furnace	2.1%	56,984	1,175	1,354
Heating	Electric Zonal Heating	11.2%	54,270	6,052	6,973
Heating	Air-Source Heat Pump	2.3%	51,135	1,192	1,373
Heating	Geothermal Heat Pump	0.0%	34,107	-	-
Ventilation	Ventilation	100.0%	2,075	2,075	2,391
Interior Lighting	Screw-in	100.0%	832	832	958
Interior Lighting	High-Bay Fixtures	100.0%	4,075	4,075	4,694
Interior Lighting	Linear Fluorescent	100.0%	3,140	3,140	3,618
Exterior Lighting	Screw-in	100.0%	571	571	658
Exterior Lighting	HID	100.0%	527	527	607
Exterior Lighting	Linear Fluorescent	100.0%	406	406	467
Motors	Pumps	100.0%	104,933	104,933	120,900
Motors	Fans & Blowers	100.0%	41,722	41,722	48,071
Motors	Compressed Air	100.0%	48,117	48,117	55,439
Motors	Conveyors	100.0%	113,140	113,140	130,356
Motors	Other Motors	100.0%	22,628	22,628	26,071
Process	Process Heating	100.0%	16,551	16,551	19,070
Process	Process Cooling	100.0%	10,091	10,091	11,626
Process	Process Refrigeration	100.0%	10,091	10,091	11,626
Process	Process Electro-Chemical	100.0%	406	406	468
Process	Process Other	100.0%	3,077	3,077	3,545
Miscellaneous	Miscellaneous	100.0%	4,311	4,311	4,967
	<b>Total</b>			<b>399,014</b>	<b>459,729</b>



**Table A-243 Utah Petroleum Refining New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	15,392	868
Cooling	Water-Cooled Chiller	2.8%	13,840	394
Cooling	RTU	4.7%	12,456	587
Cooling	Air-Source Heat Pump	2.3%	19,761	461
Cooling	Geothermal Heat Pump	0.0%	10,682	-
Heating	Electric Furnace	2.1%	56,984	1,175
Heating	Electric Zonal Heating	11.2%	54,270	6,052
Heating	Air-Source Heat Pump	2.3%	31,909	744
Heating	Geothermal Heat Pump	0.0%	19,888	-
Ventilation	Ventilation	100.0%	679	679
Interior Lighting	Screw-in	100.0%	485	485
Interior Lighting	High-Bay Fixtures	100.0%	5,201	5,201
Interior Lighting	Linear Fluorescent	100.0%	2,781	2,781
Exterior Lighting	Screw-in	100.0%	432	432
Exterior Lighting	HID	100.0%	678	678
Exterior Lighting	Linear Fluorescent	100.0%	359	359
Motors	Pumps	100.0%	104,933	104,933
Motors	Fans & Blowers	100.0%	41,722	41,722
Motors	Compressed Air	100.0%	48,117	48,117
Motors	Conveyors	100.0%	113,140	113,140
Motors	Other Motors	100.0%	22,628	22,628
Process	Process Heating	100.0%	16,551	16,551
Process	Process Cooling	100.0%	10,091	10,091
Process	Process Refrigeration	100.0%	10,091	10,091
Process	Process Electro-Chemical	100.0%	406	406
Process	Process Other	100.0%	3,077	3,077
Miscellaneous	Miscellaneous	100.0%	4,311	4,311

**Table A-244 Utah Stone Clay Glass Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	8,774	495	2,045
Cooling	Water-Cooled Chiller	2.8%	8,273	236	974
Cooling	RTU	4.7%	9,762	460	1,900
Cooling	Air-Source Heat Pump	2.3%	9,760	227	940
Cooling	Geothermal Heat Pump	0.0%	6,510	-	-
Heating	Electric Furnace	2.1%	20,704	427	1,764
Heating	Electric Zonal Heating	11.2%	19,718	2,199	9,087
Heating	Air-Source Heat Pump	2.3%	18,579	433	1,789
Heating	Geothermal Heat Pump	0.0%	12,392	-	-
Ventilation	Ventilation	100.0%	754	754	3,116
Interior Lighting	Screw-in	100.0%	370	370	1,529
Interior Lighting	High-Bay Fixtures	100.0%	1,812	1,812	7,488
Interior Lighting	Linear Fluorescent	100.0%	1,396	1,396	5,771
Exterior Lighting	Screw-in	100.0%	254	254	1,049
Exterior Lighting	HID	100.0%	234	234	969
Exterior Lighting	Linear Fluorescent	100.0%	180	180	745
Motors	Pumps	100.0%	5,518	5,518	22,805
Motors	Fans & Blowers	100.0%	7,766	7,766	32,092
Motors	Compressed Air	100.0%	1,398	1,398	5,777
Motors	Conveyors	100.0%	32,151	32,151	132,861
Motors	Other Motors	100.0%	502	502	2,073
Process	Process Heating	100.0%	16,931	16,931	69,967
Process	Process Cooling	100.0%	1,039	1,039	4,293
Process	Process Refrigeration	100.0%	1,039	1,039	4,293
Process	Process Electro-Chemical	100.0%	291	291	1,204
Process	Process Other	100.0%	3,454	3,454	14,272
Miscellaneous	Miscellaneous	100.0%	2,695	2,695	11,138
	<b>Total</b>			<b>82,261</b>	<b>339,940</b>

**Table A-245 Utah Stone Clay Glass Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	5,592	315
Cooling	Water-Cooled Chiller	2.8%	5,028	143
Cooling	RTU	4.7%	4,526	213
Cooling	Air-Source Heat Pump	2.3%	7,180	167
Cooling	Geothermal Heat Pump	0.0%	3,881	-
Heating	Electric Furnace	2.1%	20,704	427
Heating	Electric Zonal Heating	11.2%	19,718	2,199
Heating	Air-Source Heat Pump	2.3%	11,594	270
Heating	Geothermal Heat Pump	0.0%	7,226	-
Ventilation	Ventilation	100.0%	247	247
Interior Lighting	Screw-in	100.0%	216	216
Interior Lighting	High-Bay Fixtures	100.0%	2,313	2,313
Interior Lighting	Linear Fluorescent	100.0%	1,237	1,237
Exterior Lighting	Screw-in	100.0%	192	192
Exterior Lighting	HID	100.0%	301	301
Exterior Lighting	Linear Fluorescent	100.0%	160	160
Motors	Pumps	100.0%	5,518	5,518
Motors	Fans & Blowers	100.0%	7,766	7,766
Motors	Compressed Air	100.0%	1,398	1,398
Motors	Conveyors	100.0%	32,151	32,151
Motors	Other Motors	100.0%	502	502
Process	Process Heating	100.0%	16,931	16,931
Process	Process Cooling	100.0%	1,039	1,039
Process	Process Refrigeration	100.0%	1,039	1,039
Process	Process Electro-Chemical	100.0%	291	291
Process	Process Other	100.0%	3,454	3,454
Miscellaneous	Miscellaneous	100.0%	2,695	2,695

**Table A-246 Utah Transportation Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	17,022	960	9,196
Cooling	Water-Cooled Chiller	2.8%	16,048	457	4,380
Cooling	RTU	4.7%	18,938	892	8,545
Cooling	Air-Source Heat Pump	2.3%	18,933	441	4,228
Cooling	Geothermal Heat Pump	0.0%	12,628	-	-
Heating	Electric Furnace	2.1%	40,164	828	7,933
Heating	Electric Zonal Heating	11.2%	38,252	4,266	40,868
Heating	Air-Source Heat Pump	2.3%	36,042	840	8,048
Heating	Geothermal Heat Pump	0.0%	24,040	-	-
Ventilation	Ventilation	100.0%	1,463	1,463	14,013
Interior Lighting	Screw-in	100.0%	636	636	6,093
Interior Lighting	High-Bay Fixtures	100.0%	3,115	3,115	29,846
Interior Lighting	Linear Fluorescent	100.0%	2,401	2,401	23,002
Exterior Lighting	Screw-in	100.0%	436	436	4,181
Exterior Lighting	HID	100.0%	403	403	3,861
Exterior Lighting	Linear Fluorescent	100.0%	310	310	2,971
Motors	Pumps	0.0%	3,006	-	-
Motors	Fans & Blowers	100.0%	2,122	2,122	20,328
Motors	Compressed Air	100.0%	707	707	6,776
Motors	Conveyors	100.0%	14,496	14,496	138,878
Motors	Other Motors	100.0%	1,061	1,061	10,164
Process	Process Heating	100.0%	6,839	6,839	65,525
Process	Process Cooling	100.0%	1,510	1,510	14,463
Process	Process Refrigeration	100.0%	1,510	1,510	14,463
Process	Process Electro-Chemical	100.0%	820	820	7,861
Process	Process Other	100.0%	1,842	1,842	17,652
Miscellaneous	Miscellaneous	100.0%	3,006	3,006	28,795
	<b>Total</b>			<b>51,361</b>	<b>492,069</b>

**Table A-247 Utah Transportation Equipment Manufacturing New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	5.6%	10,849	612
Cooling	Water-Cooled Chiller	2.8%	9,755	278
Cooling	RTU	4.7%	8,780	413
Cooling	Air-Source Heat Pump	2.3%	13,928	325
Cooling	Geothermal Heat Pump	0.0%	7,529	-
Heating	Electric Furnace	2.1%	40,164	828
Heating	Electric Zonal Heating	11.2%	38,252	4,266
Heating	Air-Source Heat Pump	2.3%	22,491	524
Heating	Geothermal Heat Pump	0.0%	14,018	-
Ventilation	Ventilation	100.0%	479	479
Interior Lighting	Screw-in	100.0%	371	371
Interior Lighting	High-Bay Fixtures	100.0%	3,976	3,976
Interior Lighting	Linear Fluorescent	100.0%	2,126	2,126
Exterior Lighting	Screw-in	100.0%	330	330
Exterior Lighting	HID	100.0%	518	518
Exterior Lighting	Linear Fluorescent	100.0%	275	275
Motors	Pumps	100.0%	3,006	3,006
Motors	Fans & Blowers	100.0%	2,122	2,122
Motors	Compressed Air	100.0%	707	707
Motors	Conveyors	100.0%	14,496	14,496
Motors	Other Motors	100.0%	1,061	1,061
Process	Process Heating	100.0%	6,839	6,839
Process	Process Cooling	0.0%	1,510	-
Process	Process Refrigeration	100.0%	1,510	1,510
Process	Process Electro-Chemical	100.0%	820	820
Process	Process Other	100.0%	1,842	1,842
Miscellaneous	Miscellaneous	100.0%	3,006	3,006

**Table A-248 Utah Wastewater Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	14,463	816	450
Cooling	Water-Cooled Chiller	2.8%	13,637	388	214
Cooling	RTU	4.7%	16,092	758	418
Cooling	Air-Source Heat Pump	2.3%	16,088	375	207
Cooling	Geothermal Heat Pump	0.0%	10,731	-	-
Heating	Electric Furnace	2.1%	34,128	704	388
Heating	Electric Zonal Heating	11.2%	32,503	3,625	2,001
Heating	Air-Source Heat Pump	2.3%	30,625	714	394
Heating	Geothermal Heat Pump	0.0%	20,427	-	-
Ventilation	Ventilation	100.0%	1,243	1,243	686
Interior Lighting	Screw-in	100.0%	692	692	382
Interior Lighting	High-Bay Fixtures	100.0%	3,388	3,388	1,870
Interior Lighting	Linear Fluorescent	100.0%	2,611	2,611	1,442
Exterior Lighting	Screw-in	100.0%	475	475	262
Exterior Lighting	HID	100.0%	438	438	242
Exterior Lighting	Linear Fluorescent	100.0%	337	337	186
Motors	Pumps	100.0%	42,631	42,631	23,535
Motors	Fans & Blowers	100.0%	104,958	104,958	57,944
Motors	Compressed Air	100.0%	2,245	2,245	1,240
Motors	Conveyors	100.0%	10,030	10,030	5,537
Motors	Other Motors	100.0%	3,144	3,144	1,735
Process	Process Heating	0.0%	4,911	-	-
Process	Process Cooling	0.0%	4,911	-	-
Process	Process Refrigeration	0.0%	4,911	-	-
Process	Process Electro-Chemical	0.0%	4,911	-	-
Process	Process Other	100.0%	8,311	8,311	4,588
Miscellaneous	Miscellaneous	100.0%	4,911	4,911	2,711
	<b>Total</b>			<b>192,794</b>	<b>106,434</b>

**Table A-249 Utah Wastewater New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	9,218	520
Cooling	Water-Cooled Chiller	2.8%	8,289	236
Cooling	RTU	4.7%	7,460	351
Cooling	Air-Source Heat Pump	2.3%	11,835	276
Cooling	Geothermal Heat Pump	0.0%	6,397	-
Heating	Electric Furnace	2.1%	34,128	704
Heating	Electric Zonal Heating	11.2%	32,503	3,625
Heating	Air-Source Heat Pump	2.3%	19,111	445
Heating	Geothermal Heat Pump	0.0%	11,911	-
Ventilation	Ventilation	100.0%	407	407
Interior Lighting	Screw-in	100.0%	404	404
Interior Lighting	High-Bay Fixtures	100.0%	4,325	4,325
Interior Lighting	Linear Fluorescent	100.0%	2,312	2,312
Exterior Lighting	Screw-in	100.0%	359	359
Exterior Lighting	HID	100.0%	564	564
Exterior Lighting	Linear Fluorescent	100.0%	299	299
Motors	Pumps	0.0%	42,631	-
Motors	Fans & Blowers	0.0%	104,958	-
Motors	Compressed Air	0.0%	2,245	-
Motors	Conveyors	0.0%	10,030	-
Motors	Other Motors	100.0%	3,144	3,144
Process	Process Heating	100.0%	4,911	4,911
Process	Process Cooling	100.0%	4,911	4,911
Process	Process Refrigeration	100.0%	4,911	4,911
Process	Process Electro-Chemical	100.0%	4,911	4,911
Process	Process Other	100.0%	8,311	8,311
Miscellaneous	Miscellaneous	100.0%	4,911	4,911

**Table A-250 Utah Water Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	4,635	261	760
Cooling	Water-Cooled Chiller	2.8%	4,370	124	362
Cooling	RTU	4.7%	5,157	243	706
Cooling	Air-Source Heat Pump	2.3%	5,156	120	349
Cooling	Geothermal Heat Pump	0.0%	3,439	-	-
Heating	Electric Furnace	2.1%	10,937	225	655
Heating	Electric Zonal Heating	11.2%	10,416	1,162	3,376
Heating	Air-Source Heat Pump	2.3%	9,814	229	665
Heating	Geothermal Heat Pump	0.0%	6,546	-	-
Ventilation	Ventilation	100.0%	398	398	1,157
Interior Lighting	Screw-in	100.0%	222	222	644
Interior Lighting	High-Bay Fixtures	100.0%	1,086	1,086	3,155
Interior Lighting	Linear Fluorescent	100.0%	837	837	2,432
Exterior Lighting	Screw-in	100.0%	152	152	442
Exterior Lighting	HID	100.0%	140	140	408
Exterior Lighting	Linear Fluorescent	100.0%	108	108	314
Motors	Pumps	100.0%	49,353	49,353	143,428
Motors	Fans & Blowers	0.0%	1,574	-	-
Motors	Compressed Air	100.0%	720	720	2,091
Motors	Conveyors	100.0%	2,141	2,141	6,223
Motors	Other Motors	100.0%	24	24	70
Process	Process Heating	0.0%	1,574	-	-
Process	Process Cooling	0.0%	1,574	-	-
Process	Process Refrigeration	0.0%	1,574	-	-
Process	Process Electro-Chemical	0.0%	1,574	-	-
Process	Process Other	100.0%	2,664	2,664	7,741
Miscellaneous	Miscellaneous	100.0%	1,574	1,574	4,574
	<b>Total</b>			<b>61,783</b>	<b>179,552</b>



**Table A-251 Utah Water New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,954	167
Cooling	Water-Cooled Chiller	2.8%	2,656	76
Cooling	RTU	4.7%	2,391	113
Cooling	Air-Source Heat Pump	2.3%	3,793	88
Cooling	Geothermal Heat Pump	0.0%	2,050	-
Heating	Electric Furnace	2.1%	10,937	225
Heating	Electric Zonal Heating	11.2%	10,416	1,162
Heating	Air-Source Heat Pump	2.3%	6,124	143
Heating	Geothermal Heat Pump	0.0%	3,817	-
Ventilation	Ventilation	100.0%	130	130
Interior Lighting	Screw-in	100.0%	129	129
Interior Lighting	High-Bay Fixtures	100.0%	1,386	1,386
Interior Lighting	Linear Fluorescent	100.0%	741	741
Exterior Lighting	Screw-in	100.0%	115	115
Exterior Lighting	HID	100.0%	181	181
Exterior Lighting	Linear Fluorescent	100.0%	96	96
Motors	Pumps	0.0%	49,353	-
Motors	Fans & Blowers	0.0%	1,574	-
Motors	Compressed Air	0.0%	720	-
Motors	Conveyors	0.0%	2,141	-
Motors	Other Motors	100.0%	24	24
Process	Process Heating	0.0%	1,574	-
Process	Process Cooling	100.0%	1,574	1,574
Process	Process Refrigeration	100.0%	1,574	1,574
Process	Process Electro-Chemical	100.0%	1,574	1,574
Process	Process Other	100.0%	2,664	2,664
Miscellaneous	Miscellaneous	100.0%	1,574	1,574

**Table A-252 Utah Chemical Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	9,414	531	3,598
Cooling	Water-Cooled Chiller	2.8%	8,876	253	1,714
Cooling	RTU	4.7%	10,474	493	3,343
Cooling	Air-Source Heat Pump	2.3%	10,472	244	1,654
Cooling	Geothermal Heat Pump	0.0%	6,985	-	-
Heating	Electric Furnace	2.1%	22,214	458	3,104
Heating	Electric Zonal Heating	11.2%	21,156	2,359	15,991
Heating	Air-Source Heat Pump	2.3%	19,934	465	3,149
Heating	Geothermal Heat Pump	0.0%	13,296	-	-
Ventilation	Ventilation	100.0%	809	809	5,483
Interior Lighting	Screw-in	100.0%	307	307	2,083
Interior Lighting	High-Bay Fixtures	100.0%	1,505	1,505	10,203
Interior Lighting	Linear Fluorescent	100.0%	1,160	1,160	7,863
Exterior Lighting	Screw-in	100.0%	211	211	1,429
Exterior Lighting	HID	100.0%	195	195	1,320
Exterior Lighting	Linear Fluorescent	100.0%	150	150	1,016
Motors	Pumps	100.0%	11,666	11,666	79,069
Motors	Fans & Blowers	100.0%	3,241	3,241	21,964
Motors	Compressed Air	100.0%	12,962	12,962	87,855
Motors	Conveyors	100.0%	22,684	22,684	153,746
Motors	Other Motors	100.0%	1,944	1,944	13,178
Process	Process Heating	100.0%	6,136	6,136	41,591
Process	Process Cooling	100.0%	3,443	3,443	23,339
Process	Process Refrigeration	100.0%	3,443	3,443	23,339
Process	Process Electro-Chemical	100.0%	17,622	17,622	119,438
Process	Process Other	100.0%	1,097	1,097	7,432
Miscellaneous	Miscellaneous	100.0%	2,710	2,710	18,371
	<b>Total</b>			<b>96,089</b>	<b>651,271</b>

**Table A-253 Utah Chemical Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	6,000	338
Cooling	Water-Cooled Chiller	2.8%	5,395	154
Cooling	RTU	4.7%	4,856	229
Cooling	Air-Source Heat Pump	2.3%	7,704	180
Cooling	Geothermal Heat Pump	0.0%	4,164	-
Heating	Electric Furnace	2.1%	22,214	458
Heating	Electric Zonal Heating	11.2%	21,156	2,359
Heating	Air-Source Heat Pump	2.3%	12,439	290
Heating	Geothermal Heat Pump	0.0%	7,753	-
Ventilation	Ventilation	100.0%	265	265
Interior Lighting	Screw-in	100.0%	179	179
Interior Lighting	High-Bay Fixtures	100.0%	1,921	1,921
Interior Lighting	Linear Fluorescent	100.0%	1,027	1,027
Exterior Lighting	Screw-in	100.0%	159	159
Exterior Lighting	HID	100.0%	250	250
Exterior Lighting	Linear Fluorescent	100.0%	133	133
Motors	Pumps	100.0%	11,666	11,666
Motors	Fans & Blowers	100.0%	3,241	3,241
Motors	Compressed Air	100.0%	12,962	12,962
Motors	Conveyors	100.0%	22,684	22,684
Motors	Other Motors	100.0%	1,944	1,944
Process	Process Heating	100.0%	6,136	6,136
Process	Process Cooling	100.0%	3,443	3,443
Process	Process Refrigeration	100.0%	3,443	3,443
Process	Process Electro-Chemical	100.0%	17,622	17,622
Process	Process Other	100.0%	1,097	1,097
Miscellaneous	Miscellaneous	100.0%	2,710	2,710

**Table A-254 Utah Electronic Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	19,390	1,093	13,579
Cooling	Water-Cooled Chiller	2.8%	18,281	521	6,468
Cooling	RTU	4.7%	21,573	1,016	12,617
Cooling	Air-Source Heat Pump	2.3%	21,568	503	6,243
Cooling	Geothermal Heat Pump	0.0%	14,386	-	-
Heating	Electric Furnace	2.1%	45,753	943	11,714
Heating	Electric Zonal Heating	11.2%	43,574	4,859	60,346
Heating	Air-Source Heat Pump	2.3%	41,057	957	11,884
Heating	Geothermal Heat Pump	0.0%	27,385	-	-
Ventilation	Ventilation	100.0%	1,666	1,666	20,691
Interior Lighting	Screw-in	100.0%	410	410	5,093
Interior Lighting	High-Bay Fixtures	100.0%	2,009	2,009	24,945
Interior Lighting	Linear Fluorescent	100.0%	1,548	1,548	19,225
Exterior Lighting	Screw-in	100.0%	281	281	3,494
Exterior Lighting	HID	100.0%	260	260	3,227
Exterior Lighting	Linear Fluorescent	100.0%	200	200	2,483
Motors	Pumps	100.0%	587	587	7,293
Motors	Fans & Blowers	100.0%	940	940	11,668
Motors	Compressed Air	100.0%	1,700	1,700	21,110
Motors	Conveyors	100.0%	5,314	5,314	65,998
Motors	Other Motors	0.0%	3,493	-	-
Process	Process Heating	100.0%	4,434	4,434	55,069
Process	Process Cooling	100.0%	2,059	2,059	25,573
Process	Process Refrigeration	100.0%	2,059	2,059	25,573
Process	Process Electro-Chemical	100.0%	774	774	9,610
Process	Process Other	100.0%	3,893	3,893	48,351
Miscellaneous	Miscellaneous	100.0%	3,493	3,493	43,375
	<b>Total</b>			<b>41,520</b>	<b>515,627</b>

**Table A-255 Utah Electronic Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	12,358	697
Cooling	Water-Cooled Chiller	2.8%	11,112	317
Cooling	RTU	4.7%	10,001	471
Cooling	Air-Source Heat Pump	2.3%	15,866	370
Cooling	Geothermal Heat Pump	0.0%	8,577	-
Heating	Electric Furnace	2.1%	45,753	943
Heating	Electric Zonal Heating	11.2%	43,574	4,859
Heating	Air-Source Heat Pump	2.3%	25,620	597
Heating	Geothermal Heat Pump	0.0%	15,968	-
Ventilation	Ventilation	100.0%	545	545
Interior Lighting	Screw-in	100.0%	239	239
Interior Lighting	High-Bay Fixtures	100.0%	2,564	2,564
Interior Lighting	Linear Fluorescent	100.0%	1,371	1,371
Exterior Lighting	Screw-in	100.0%	213	213
Exterior Lighting	HID	100.0%	334	334
Exterior Lighting	Linear Fluorescent	100.0%	177	177
Motors	Pumps	100.0%	587	587
Motors	Fans & Blowers	100.0%	940	940
Motors	Compressed Air	100.0%	1,700	1,700
Motors	Conveyors	100.0%	5,314	5,314
Motors	Other Motors	100.0%	3,493	3,493
Process	Process Heating	100.0%	4,434	4,434
Process	Process Cooling	100.0%	2,059	2,059
Process	Process Refrigeration	100.0%	2,059	2,059
Process	Process Electro-Chemical	100.0%	774	774
Process	Process Other	0.0%	3,893	-
Miscellaneous	Miscellaneous	100.0%	3,493	3,493

**Table A-256 Utah Industrial Machinery Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	11,446	645	3,053
Cooling	Water-Cooled Chiller	2.8%	10,791	307	1,454
Cooling	RTU	4.7%	12,734	600	2,837
Cooling	Air-Source Heat Pump	2.3%	12,731	297	1,404
Cooling	Geothermal Heat Pump	0.0%	8,492	-	-
Heating	Electric Furnace	2.1%	27,008	557	2,634
Heating	Electric Zonal Heating	11.2%	25,722	2,868	13,568
Heating	Air-Source Heat Pump	2.3%	24,236	565	2,672
Heating	Geothermal Heat Pump	0.0%	16,165	-	-
Ventilation	Ventilation	100.0%	983	983	4,652
Interior Lighting	Screw-in	100.0%	361	361	1,709
Interior Lighting	High-Bay Fixtures	100.0%	1,769	1,769	8,369
Interior Lighting	Linear Fluorescent	100.0%	1,364	1,364	6,450
Exterior Lighting	Screw-in	100.0%	248	248	1,172
Exterior Lighting	HID	100.0%	229	229	1,083
Exterior Lighting	Linear Fluorescent	100.0%	176	176	833
Motors	Pumps	100.0%	1,508	1,508	7,133
Motors	Fans & Blowers	100.0%	3,509	3,509	16,600
Motors	Compressed Air	100.0%	2,989	2,989	14,136
Motors	Conveyors	100.0%	4,838	4,838	22,886
Motors	Other Motors	0.0%	2,094	-	-
Process	Process Heating	100.0%	1,999	1,999	9,455
Process	Process Cooling	100.0%	392	392	1,852
Process	Process Refrigeration	100.0%	392	392	1,852
Process	Process Electro-Chemical	100.0%	265	265	1,255
Process	Process Other	100.0%	892	892	4,218
Miscellaneous	Miscellaneous	100.0%	2,094	2,094	9,907
	<b>Total</b>			<b>29,848</b>	<b>141,183</b>

**Table A-257 Utah Industrial Machinery New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	7,295	411
Cooling	Water-Cooled Chiller	2.8%	6,559	187
Cooling	RTU	4.7%	5,904	278
Cooling	Air-Source Heat Pump	2.3%	9,366	218
Cooling	Geothermal Heat Pump	0.0%	5,063	-
Heating	Electric Furnace	2.1%	27,008	557
Heating	Electric Zonal Heating	11.2%	25,722	2,868
Heating	Air-Source Heat Pump	2.3%	15,124	352
Heating	Geothermal Heat Pump	0.0%	9,426	-
Ventilation	Ventilation	100.0%	322	322
Interior Lighting	Screw-in	100.0%	211	211
Interior Lighting	High-Bay Fixtures	100.0%	2,258	2,258
Interior Lighting	Linear Fluorescent	100.0%	1,208	1,208
Exterior Lighting	Screw-in	100.0%	187	187
Exterior Lighting	HID	100.0%	294	294
Exterior Lighting	Linear Fluorescent	100.0%	156	156
Motors	Pumps	100.0%	1,508	1,508
Motors	Fans & Blowers	100.0%	3,509	3,509
Motors	Compressed Air	100.0%	2,989	2,989
Motors	Conveyors	100.0%	4,838	4,838
Motors	Other Motors	100.0%	2,094	2,094
Process	Process Heating	100.0%	1,999	1,999
Process	Process Cooling	100.0%	392	392
Process	Process Refrigeration	100.0%	392	392
Process	Process Electro-Chemical	100.0%	265	265
Process	Process Other	0.0%	892	-
Miscellaneous	Miscellaneous	100.0%	2,094	2,094

**Table A-258 Utah Lumber & Wood Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,261	71	110
Cooling	Water-Cooled Chiller	2.8%	1,189	34	52
Cooling	RTU	4.7%	1,403	66	102
Cooling	Air-Source Heat Pump	2.3%	1,403	33	50
Cooling	Geothermal Heat Pump	0.0%	936	-	-
Heating	Electric Furnace	2.1%	2,976	61	95
Heating	Electric Zonal Heating	11.2%	2,834	316	488
Heating	Air-Source Heat Pump	2.3%	2,670	62	96
Heating	Geothermal Heat Pump	0.0%	1,781	-	-
Ventilation	Ventilation	100.0%	108	108	167
Interior Lighting	Screw-in	100.0%	95	95	146
Interior Lighting	High-Bay Fixtures	100.0%	464	464	716
Interior Lighting	Linear Fluorescent	100.0%	358	358	552
Exterior Lighting	Screw-in	100.0%	65	65	100
Exterior Lighting	HID	100.0%	60	60	93
Exterior Lighting	Linear Fluorescent	100.0%	46	46	71
Motors	Pumps	0.0%	704	-	-
Motors	Fans & Blowers	100.0%	1,489	1,489	2,297
Motors	Compressed Air	100.0%	1,809	1,809	2,791
Motors	Conveyors	100.0%	7,714	7,714	11,903
Motors	Other Motors	100.0%	677	677	1,044
Process	Process Heating	100.0%	1,336	1,336	2,061
Process	Process Cooling	100.0%	99	99	153
Process	Process Refrigeration	100.0%	99	99	153
Process	Process Electro-Chemical	100.0%	115	115	178
Process	Process Other	100.0%	83	83	128
Miscellaneous	Miscellaneous	100.0%	704	704	1,086
	<b>Total</b>			<b>15,963</b>	<b>24,633</b>



**Table A-259 Utah Lumber & Wood Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	804	45
Cooling	Water-Cooled Chiller	2.8%	723	21
Cooling	RTU	4.7%	650	31
Cooling	Air-Source Heat Pump	2.3%	1,032	24
Cooling	Geothermal Heat Pump	0.0%	558	-
Heating	Electric Furnace	2.1%	2,976	61
Heating	Electric Zonal Heating	11.2%	2,834	316
Heating	Air-Source Heat Pump	2.3%	1,666	39
Heating	Geothermal Heat Pump	0.0%	1,039	-
Ventilation	Ventilation	100.0%	35	35
Interior Lighting	Screw-in	100.0%	55	55
Interior Lighting	High-Bay Fixtures	100.0%	593	593
Interior Lighting	Linear Fluorescent	100.0%	317	317
Exterior Lighting	Screw-in	100.0%	49	49
Exterior Lighting	HID	100.0%	77	77
Exterior Lighting	Linear Fluorescent	100.0%	41	41
Motors	Pumps	100.0%	704	704
Motors	Fans & Blowers	100.0%	1,489	1,489
Motors	Compressed Air	100.0%	1,809	1,809
Motors	Conveyors	100.0%	7,714	7,714
Motors	Other Motors	100.0%	677	677
Process	Process Heating	100.0%	1,336	1,336
Process	Process Cooling	0.0%	99	-
Process	Process Refrigeration	100.0%	99	99
Process	Process Electro-Chemical	100.0%	115	115
Process	Process Other	100.0%	83	83
Miscellaneous	Miscellaneous	100.0%	704	704

**Table A-260 Utah Metal Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	5,059	285	4,083
Cooling	Water-Cooled Chiller	2.8%	4,770	136	1,945
Cooling	RTU	4.7%	5,629	265	3,794
Cooling	Air-Source Heat Pump	2.3%	5,628	131	1,877
Cooling	Geothermal Heat Pump	0.0%	3,754	-	-
Heating	Electric Furnace	2.1%	11,938	246	3,522
Heating	Electric Zonal Heating	11.2%	11,370	1,268	18,144
Heating	Air-Source Heat Pump	2.3%	10,713	250	3,573
Heating	Geothermal Heat Pump	0.0%	7,145	-	-
Ventilation	Ventilation	100.0%	435	435	6,221
Interior Lighting	Screw-in	100.0%	236	236	3,379
Interior Lighting	High-Bay Fixtures	100.0%	1,156	1,156	16,549
Interior Lighting	Linear Fluorescent	100.0%	891	891	12,755
Exterior Lighting	Screw-in	100.0%	162	162	2,318
Exterior Lighting	HID	100.0%	150	150	2,141
Exterior Lighting	Linear Fluorescent	100.0%	115	115	1,647
Motors	Pumps	0.0%	1,118	-	-
Motors	Fans & Blowers	100.0%	1,630	1,630	23,324
Motors	Compressed Air	100.0%	543	543	7,775
Motors	Conveyors	100.0%	11,135	11,135	159,347
Motors	Other Motors	100.0%	815	815	11,662
Process	Process Heating	100.0%	5,481	5,481	78,437
Process	Process Cooling	100.0%	485	485	6,936
Process	Process Refrigeration	100.0%	485	485	6,936
Process	Process Electro-Chemical	100.0%	923	923	13,207
Process	Process Other	100.0%	1,183	1,183	16,927
Miscellaneous	Miscellaneous	100.0%	1,118	1,118	16,003
	<b>Total</b>			<b>29,523</b>	<b>422,501</b>

**Table A-261 Utah Metal Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	3,225	182
Cooling	Water-Cooled Chiller	2.8%	2,899	83
Cooling	RTU	4.7%	2,610	123
Cooling	Air-Source Heat Pump	2.3%	4,140	96
Cooling	Geothermal Heat Pump	0.0%	2,238	-
Heating	Electric Furnace	2.1%	11,938	246
Heating	Electric Zonal Heating	11.2%	11,370	1,268
Heating	Air-Source Heat Pump	2.3%	6,685	156
Heating	Geothermal Heat Pump	0.0%	4,167	-
Ventilation	Ventilation	100.0%	142	142
Interior Lighting	Screw-in	100.0%	138	138
Interior Lighting	High-Bay Fixtures	100.0%	1,476	1,476
Interior Lighting	Linear Fluorescent	100.0%	789	789
Exterior Lighting	Screw-in	100.0%	122	122
Exterior Lighting	HID	100.0%	192	192
Exterior Lighting	Linear Fluorescent	100.0%	102	102
Motors	Pumps	100.0%	1,118	1,118
Motors	Fans & Blowers	100.0%	1,630	1,630
Motors	Compressed Air	100.0%	543	543
Motors	Conveyors	100.0%	11,135	11,135
Motors	Other Motors	100.0%	815	815
Process	Process Heating	100.0%	5,481	5,481
Process	Process Cooling	0.0%	485	-
Process	Process Refrigeration	100.0%	485	485
Process	Process Electro-Chemical	100.0%	923	923
Process	Process Other	100.0%	1,183	1,183
Miscellaneous	Miscellaneous	100.0%	1,118	1,118

**Table A-262 Utah Miscellaneous Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	9,545	538	15,879
Cooling	Water-Cooled Chiller	2.8%	8,999	256	7,563
Cooling	RTU	4.7%	10,619	500	14,754
Cooling	Air-Source Heat Pump	2.3%	10,617	247	7,300
Cooling	Geothermal Heat Pump	0.0%	7,081	-	-
Heating	Electric Furnace	2.1%	22,522	464	13,699
Heating	Electric Zonal Heating	11.2%	21,450	2,392	70,569
Heating	Air-Source Heat Pump	2.3%	20,210	471	13,897
Heating	Geothermal Heat Pump	0.0%	13,480	-	-
Ventilation	Ventilation	100.0%	820	820	24,196
Interior Lighting	Screw-in	100.0%	324	324	9,564
Interior Lighting	High-Bay Fixtures	100.0%	1,588	1,588	46,849
Interior Lighting	Linear Fluorescent	100.0%	1,224	1,224	36,107
Exterior Lighting	Screw-in	100.0%	222	222	6,563
Exterior Lighting	HID	100.0%	205	205	6,061
Exterior Lighting	Linear Fluorescent	100.0%	158	158	4,663
Motors	Pumps	100.0%	1,447	1,447	42,700
Motors	Fans & Blowers	100.0%	1,738	1,738	51,281
Motors	Compressed Air	100.0%	1,405	1,405	41,465
Motors	Conveyors	100.0%	2,973	2,973	87,702
Motors	Other Motors	100.0%	50	50	1,472
Process	Process Heating	100.0%	2,447	2,447	72,203
Process	Process Cooling	100.0%	643	643	18,957
Process	Process Refrigeration	100.0%	643	643	18,957
Process	Process Electro-Chemical	100.0%	247	247	7,297
Process	Process Other	100.0%	268	268	7,919
Miscellaneous	Miscellaneous	100.0%	1,477	1,477	43,565
	<b>Total</b>			<b>22,750</b>	<b>671,185</b>

**Table A-263 Utah Miscellaneous Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	6,083	343
Cooling	Water-Cooled Chiller	2.8%	5,470	156
Cooling	RTU	4.7%	4,923	232
Cooling	Air-Source Heat Pump	2.3%	7,810	182
Cooling	Geothermal Heat Pump	0.0%	4,222	-
Heating	Electric Furnace	2.1%	22,522	464
Heating	Electric Zonal Heating	11.2%	21,450	2,392
Heating	Air-Source Heat Pump	2.3%	12,612	294
Heating	Geothermal Heat Pump	0.0%	7,860	-
Ventilation	Ventilation	100.0%	268	268
Interior Lighting	Screw-in	100.0%	189	189
Interior Lighting	High-Bay Fixtures	100.0%	2,027	2,027
Interior Lighting	Linear Fluorescent	100.0%	1,084	1,084
Exterior Lighting	Screw-in	100.0%	168	168
Exterior Lighting	HID	100.0%	264	264
Exterior Lighting	Linear Fluorescent	100.0%	140	140
Motors	Pumps	100.0%	1,447	1,447
Motors	Fans & Blowers	100.0%	1,738	1,738
Motors	Compressed Air	100.0%	1,405	1,405
Motors	Conveyors	100.0%	2,973	2,973
Motors	Other Motors	100.0%	50	50
Process	Process Heating	100.0%	2,447	2,447
Process	Process Cooling	100.0%	643	643
Process	Process Refrigeration	100.0%	643	643
Process	Process Electro-Chemical	100.0%	247	247
Process	Process Other	100.0%	268	268
Miscellaneous	Miscellaneous	100.0%	1,477	1,477

**Table A-264 Washington Agriculture Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,628	148	329
Cooling	Water-Cooled Chiller	2.8%	2,768	79	176
Cooling	RTU	4.4%	2,929	130	289
Cooling	Air-Source Heat Pump	2.3%	2,928	68	151
Cooling	Geothermal Heat Pump	0.0%	1,953	-	-
Heating	Electric Furnace	2.7%	12,636	337	751
Heating	Electric Zonal Heating	14.4%	12,034	1,734	3,867
Heating	Air-Source Heat Pump	2.3%	11,096	257	574
Heating	Geothermal Heat Pump	0.0%	7,401	-	-
Ventilation	Ventilation	100.0%	419	419	934
Interior Lighting	Screw-in	100.0%	233	233	520
Interior Lighting	High-Bay Fixtures	100.0%	1,142	1,142	2,547
Interior Lighting	Linear Fluorescent	100.0%	880	880	1,963
Exterior Lighting	Screw-in	100.0%	160	160	357
Exterior Lighting	HID	100.0%	148	148	330
Exterior Lighting	Linear Fluorescent	100.0%	114	114	254
Motors	Pumps	100.0%	2,959	2,959	6,599
Motors	Fans & Blowers	100.0%	5,335	5,335	11,898
Motors	Compressed Air	100.0%	2,466	2,466	5,499
Motors	Conveyors	100.0%	6,277	6,277	13,997
Motors	Other Motors	0.0%	1,855	-	-
Process	Process Heating	100.0%	2,806	2,806	6,257
Process	Process Cooling	100.0%	4,722	4,722	10,529
Process	Process Refrigeration	100.0%	4,722	4,722	10,529
Process	Process Electro-Chemical	100.0%	90	90	202
Process	Process Other	100.0%	351	351	783
Miscellaneous	Miscellaneous	100.0%	1,855	1,855	4,137
	<b>Total</b>			<b>37,430</b>	<b>83,470</b>

**Table A-265 Washington Agriculture New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,581	89
Cooling	Water-Cooled Chiller	2.8%	1,649	47
Cooling	RTU	4.4%	1,281	57
Cooling	Air-Source Heat Pump	2.3%	2,032	47
Cooling	Geothermal Heat Pump	0.0%	1,099	-
Heating	Electric Furnace	2.7%	12,636	337
Heating	Electric Zonal Heating	14.4%	12,034	1,734
Heating	Air-Source Heat Pump	2.3%	5,066	117
Heating	Geothermal Heat Pump	0.0%	3,078	-
Ventilation	Ventilation	100.0%	114	114
Interior Lighting	Screw-in	100.0%	171	171
Interior Lighting	High-Bay Fixtures	100.0%	1,240	1,240
Interior Lighting	Linear Fluorescent	100.0%	783	783
Exterior Lighting	Screw-in	100.0%	86	86
Exterior Lighting	HID	100.0%	150	150
Exterior Lighting	Linear Fluorescent	100.0%	101	101
Motors	Pumps	100.0%	2,959	2,959
Motors	Fans & Blowers	100.0%	5,335	5,335
Motors	Compressed Air	100.0%	2,466	2,466
Motors	Conveyors	100.0%	6,277	6,277
Motors	Other Motors	100.0%	1,855	1,855
Process	Process Heating	100.0%	2,806	2,806
Process	Process Cooling	100.0%	4,722	4,722
Process	Process Refrigeration	100.0%	4,722	4,722
Process	Process Electro-Chemical	100.0%	90	90
Process	Process Other	0.0%	351	-
Miscellaneous	Miscellaneous	100.0%	1,855	1,855

**Table A-266 Washington Mining and Extraction Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	621	35	3
Cooling	Water-Cooled Chiller	2.8%	654	19	2
Cooling	RTU	4.4%	692	31	3
Cooling	Air-Source Heat Pump	2.3%	692	16	1
Cooling	Geothermal Heat Pump	0.0%	461	-	-
Heating	Electric Furnace	2.7%	2,986	80	7
Heating	Electric Zonal Heating	14.4%	2,844	410	37
Heating	Air-Source Heat Pump	2.3%	2,622	61	5
Heating	Geothermal Heat Pump	0.0%	1,749	-	-
Ventilation	Ventilation	100.0%	99	99	9
Interior Lighting	Screw-in	100.0%	84	84	8
Interior Lighting	High-Bay Fixtures	100.0%	411	411	37
Interior Lighting	Linear Fluorescent	100.0%	317	317	29
Exterior Lighting	Screw-in	100.0%	58	58	5
Exterior Lighting	HID	100.0%	53	53	5
Exterior Lighting	Linear Fluorescent	100.0%	41	41	4
Motors	Pumps	100.0%	7,321	7,321	659
Motors	Fans & Blowers	100.0%	2,034	2,034	183
Motors	Compressed Air	100.0%	3,050	3,050	275
Motors	Conveyors	100.0%	2,135	2,135	192
Motors	Other Motors	100.0%	5,796	5,796	522
Process	Process Heating	100.0%	214	214	19
Process	Process Cooling	0.0%	214	-	-
Process	Process Refrigeration	0.0%	214	-	-
Process	Process Electro-Chemical	100.0%	214	214	19
Process	Process Other	100.0%	1,177	1,177	106
Miscellaneous	Miscellaneous	100.0%	214	214	19
	<b>Total</b>			<b>23,868</b>	<b>2,148</b>



**Table A-267 Washington Mining and Extraction New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	374	21
Cooling	Water-Cooled Chiller	2.8%	390	11
Cooling	RTU	4.4%	303	13
Cooling	Air-Source Heat Pump	2.3%	480	11
Cooling	Geothermal Heat Pump	0.0%	260	-
Heating	Electric Furnace	2.7%	2,986	80
Heating	Electric Zonal Heating	14.4%	2,844	410
Heating	Air-Source Heat Pump	2.3%	1,197	28
Heating	Geothermal Heat Pump	0.0%	727	-
Ventilation	Ventilation	100.0%	27	27
Interior Lighting	Screw-in	100.0%	61	61
Interior Lighting	High-Bay Fixtures	100.0%	446	446
Interior Lighting	Linear Fluorescent	100.0%	282	282
Exterior Lighting	Screw-in	100.0%	31	31
Exterior Lighting	HID	100.0%	54	54
Exterior Lighting	Linear Fluorescent	100.0%	36	36
Motors	Pumps	100.0%	7,321	7,321
Motors	Fans & Blowers	0.0%	2,034	-
Motors	Compressed Air	0.0%	3,050	-
Motors	Conveyors	100.0%	2,135	2,135
Motors	Other Motors	100.0%	5,796	5,796
Process	Process Heating	100.0%	214	214
Process	Process Cooling	100.0%	214	214
Process	Process Refrigeration	100.0%	214	214
Process	Process Electro-Chemical	100.0%	214	214
Process	Process Other	100.0%	1,177	1,177
Miscellaneous	Miscellaneous	100.0%	214	214

**Table A-268** *Washington Food Manufacturing Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,736	154	615
Cooling	Water-Cooled Chiller	2.8%	2,882	82	328
Cooling	RTU	4.4%	3,050	135	540
Cooling	Air-Source Heat Pump	2.3%	3,049	71	283
Cooling	Geothermal Heat Pump	0.0%	2,034	-	-
Heating	Electric Furnace	2.7%	13,159	351	1,402
Heating	Electric Zonal Heating	14.4%	12,532	1,806	7,223
Heating	Air-Source Heat Pump	2.3%	11,555	268	1,072
Heating	Geothermal Heat Pump	0.0%	7,707	-	-
Ventilation	Ventilation	100.0%	436	436	1,744
Interior Lighting	Screw-in	100.0%	243	243	971
Interior Lighting	High-Bay Fixtures	100.0%	1,189	1,189	4,758
Interior Lighting	Linear Fluorescent	100.0%	917	917	3,667
Exterior Lighting	Screw-in	100.0%	167	167	666
Exterior Lighting	HID	100.0%	154	154	616
Exterior Lighting	Linear Fluorescent	100.0%	118	118	474
Motors	Pumps	100.0%	4,918	4,918	19,672
Motors	Fans & Blowers	100.0%	3,537	3,537	14,148
Motors	Compressed Air	100.0%	1,993	1,993	7,974
Motors	Conveyors	100.0%	7,294	7,294	29,175
Motors	Other Motors	0.0%	1,932	-	-
Process	Process Heating	100.0%	2,922	2,922	11,688
Process	Process Cooling	100.0%	4,917	4,917	19,668
Process	Process Refrigeration	100.0%	4,917	4,917	19,668
Process	Process Electro-Chemical	100.0%	94	94	376
Process	Process Other	100.0%	366	366	1,462
Miscellaneous	Miscellaneous	100.0%	1,932	1,932	7,728
	<b>Total</b>			<b>38,980</b>	<b>155,919</b>

**Table A-269** *Washington Food Manufacturing New Construction Market Profile*

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,647	93
Cooling	Water-Cooled Chiller	2.8%	1,718	49
Cooling	RTU	4.4%	1,334	59
Cooling	Air-Source Heat Pump	2.3%	2,116	49
Cooling	Geothermal Heat Pump	0.0%	1,144	-
Heating	Electric Furnace	2.7%	13,159	351
Heating	Electric Zonal Heating	14.4%	12,532	1,806
Heating	Air-Source Heat Pump	2.3%	5,276	122
Heating	Geothermal Heat Pump	0.0%	3,206	-
Ventilation	Ventilation	100.0%	118	118
Interior Lighting	Screw-in	100.0%	178	178
Interior Lighting	High-Bay Fixtures	100.0%	1,291	1,291
Interior Lighting	Linear Fluorescent	100.0%	815	815
Exterior Lighting	Screw-in	100.0%	90	90
Exterior Lighting	HID	100.0%	156	156
Exterior Lighting	Linear Fluorescent	100.0%	105	105
Motors	Pumps	100.0%	4,918	4,918
Motors	Fans & Blowers	100.0%	3,537	3,537
Motors	Compressed Air	100.0%	1,993	1,993
Motors	Conveyors	100.0%	7,294	7,294
Motors	Other Motors	100.0%	1,932	1,932
Process	Process Heating	100.0%	2,922	2,922
Process	Process Cooling	100.0%	4,917	4,917
Process	Process Refrigeration	100.0%	4,917	4,917
Process	Process Electro-Chemical	100.0%	94	94
Process	Process Other	0.0%	366	-
Miscellaneous	Miscellaneous	100.0%	1,932	1,932

**Table A-270** *Washington Paper Manufacturing Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	30,157	1,696	848
Cooling	Water-Cooled Chiller	2.8%	31,764	904	452
Cooling	RTU	4.4%	33,614	1,487	743
Cooling	Air-Source Heat Pump	2.3%	33,598	779	390
Cooling	Geothermal Heat Pump	0.0%	22,410	-	-
Heating	Electric Furnace	2.7%	145,017	3,863	1,932
Heating	Electric Zonal Heating	14.4%	138,112	19,901	9,950
Heating	Air-Source Heat Pump	2.3%	127,344	2,953	1,476
Heating	Geothermal Heat Pump	0.0%	84,938	-	-
Ventilation	Ventilation	100.0%	4,805	4,805	2,403
Interior Lighting	Screw-in	100.0%	2,919	2,919	1,460
Interior Lighting	High-Bay Fixtures	100.0%	14,299	14,299	7,150
Interior Lighting	Linear Fluorescent	100.0%	11,021	11,021	5,510
Exterior Lighting	Screw-in	100.0%	2,003	2,003	1,002
Exterior Lighting	HID	100.0%	1,850	1,850	925
Exterior Lighting	Linear Fluorescent	100.0%	1,423	1,423	712
Motors	Pumps	100.0%	177,059	177,059	88,530
Motors	Fans & Blowers	100.0%	95,340	95,340	47,670
Motors	Compressed Air	100.0%	47,670	47,670	23,835
Motors	Conveyors	100.0%	231,539	231,539	115,769
Motors	Other Motors	100.0%	74,910	74,910	37,455
Process	Process Heating	100.0%	61,470	61,470	30,735
Process	Process Cooling	100.0%	6,144	6,144	3,072
Process	Process Refrigeration	100.0%	6,144	6,144	3,072
Process	Process Electro-Chemical	100.0%	10,917	10,917	5,459
Process	Process Other	100.0%	11,874	11,874	5,937
Miscellaneous	Miscellaneous	100.0%	20,728	20,728	10,364
	<b>Total</b>			<b>813,698</b>	<b>406,849</b>

**Table A-271 Washington Paper Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	227	13
Cooling	Water-Cooled Chiller	2.8%	236	7
Cooling	RTU	4.4%	184	8
Cooling	Air-Source Heat Pump	2.3%	291	7
Cooling	Geothermal Heat Pump	0.0%	158	-
Heating	Electric Furnace	2.7%	1,811	48
Heating	Electric Zonal Heating	14.4%	1,725	249
Heating	Air-Source Heat Pump	2.3%	726	17
Heating	Geothermal Heat Pump	0.0%	441	-
Ventilation	Ventilation	100.0%	16	16
Interior Lighting	Screw-in	100.0%	19	19
Interior Lighting	High-Bay Fixtures	100.0%	140	140
Interior Lighting	Linear Fluorescent	100.0%	88	88
Exterior Lighting	Screw-in	100.0%	10	10
Exterior Lighting	HID	100.0%	17	17
Exterior Lighting	Linear Fluorescent	100.0%	11	11
Motors	Pumps	100.0%	3,313	3,313
Motors	Fans & Blowers	100.0%	1,317	1,317
Motors	Compressed Air	100.0%	1,519	1,519
Motors	Conveyors	100.0%	3,572	3,572
Motors	Other Motors	100.0%	714	714
Process	Process Heating	100.0%	523	523
Process	Process Cooling	100.0%	319	319
Process	Process Refrigeration	100.0%	319	319
Process	Process Electro-Chemical	100.0%	13	13
Process	Process Other	100.0%	97	97
Miscellaneous	Miscellaneous	100.0%	136	136

Table A-272 Washington Petroleum Refining Existing Market Profile

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	377	21	1
Cooling	Water-Cooled Chiller	2.8%	397	11	0
Cooling	RTU	4.4%	420	19	1
Cooling	Air-Source Heat Pump	2.3%	420	10	0
Cooling	Geothermal Heat Pump	0.0%	280	-	-
Heating	Electric Furnace	2.7%	1,811	48	1
Heating	Electric Zonal Heating	14.4%	1,725	249	7
Heating	Air-Source Heat Pump	2.3%	1,591	37	1
Heating	Geothermal Heat Pump	0.0%	1,061	-	-
Ventilation	Ventilation	100.0%	60	60	2
Interior Lighting	Screw-in	100.0%	26	26	1
Interior Lighting	High-Bay Fixtures	100.0%	129	129	4
Interior Lighting	Linear Fluorescent	100.0%	99	99	3
Exterior Lighting	Screw-in	100.0%	18	18	1
Exterior Lighting	HID	100.0%	17	17	0
Exterior Lighting	Linear Fluorescent	100.0%	13	13	0
Motors	Pumps	100.0%	3,313	3,313	99
Motors	Fans & Blowers	100.0%	1,317	1,317	40
Motors	Compressed Air	100.0%	1,519	1,519	46
Motors	Conveyors	100.0%	3,572	3,572	107
Motors	Other Motors	100.0%	714	714	21
Process	Process Heating	100.0%	523	523	16
Process	Process Cooling	100.0%	319	319	10
Process	Process Refrigeration	100.0%	319	319	10
Process	Process Electro-Chemical	100.0%	13	13	0
Process	Process Other	100.0%	97	97	3
Miscellaneous	Miscellaneous	100.0%	136	136	4
	<b>Total</b>			<b>12,598</b>	<b>378</b>

**Table A-273 Washington Petroleum Refining New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	227	13
Cooling	Water-Cooled Chiller	2.8%	236	7
Cooling	RTU	4.4%	184	8
Cooling	Air-Source Heat Pump	2.3%	291	7
Cooling	Geothermal Heat Pump	0.0%	158	-
Heating	Electric Furnace	2.7%	1,811	48
Heating	Electric Zonal Heating	14.4%	1,725	249
Heating	Air-Source Heat Pump	2.3%	726	17
Heating	Geothermal Heat Pump	0.0%	441	-
Ventilation	Ventilation	100.0%	16	16
Interior Lighting	Screw-in	100.0%	19	19
Interior Lighting	High-Bay Fixtures	100.0%	140	140
Interior Lighting	Linear Fluorescent	100.0%	88	88
Exterior Lighting	Screw-in	100.0%	10	10
Exterior Lighting	HID	100.0%	17	17
Exterior Lighting	Linear Fluorescent	100.0%	11	11
Motors	Pumps	100.0%	3,313	3,313
Motors	Fans & Blowers	100.0%	1,317	1,317
Motors	Compressed Air	100.0%	1,519	1,519
Motors	Conveyors	100.0%	3,572	3,572
Motors	Other Motors	100.0%	714	714
Process	Process Heating	100.0%	523	523
Process	Process Cooling	100.0%	319	319
Process	Process Refrigeration	100.0%	319	319
Process	Process Electro-Chemical	100.0%	13	13
Process	Process Other	100.0%	97	97
Miscellaneous	Miscellaneous	100.0%	136	136

**Table A-274 Washington Stone Clay Glass Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	4,759	268	13
Cooling	Water-Cooled Chiller	2.8%	5,013	143	7
Cooling	RTU	4.4%	5,304	235	12
Cooling	Air-Source Heat Pump	2.3%	5,302	123	6
Cooling	Geothermal Heat Pump	0.0%	3,536	-	-
Heating	Electric Furnace	2.7%	22,885	610	30
Heating	Electric Zonal Heating	14.4%	21,795	3,140	157
Heating	Air-Source Heat Pump	2.3%	20,096	466	23
Heating	Geothermal Heat Pump	0.0%	13,404	-	-
Ventilation	Ventilation	100.0%	758	758	38
Interior Lighting	Screw-in	100.0%	406	406	20
Interior Lighting	High-Bay Fixtures	100.0%	1,989	1,989	99
Interior Lighting	Linear Fluorescent	100.0%	1,533	1,533	77
Exterior Lighting	Screw-in	100.0%	279	279	14
Exterior Lighting	HID	100.0%	257	257	13
Exterior Lighting	Linear Fluorescent	100.0%	198	198	10
Motors	Pumps	100.0%	6,059	6,059	303
Motors	Fans & Blowers	100.0%	8,526	8,526	426
Motors	Compressed Air	100.0%	1,535	1,535	77
Motors	Conveyors	100.0%	35,298	35,298	1,765
Motors	Other Motors	100.0%	551	551	28
Process	Process Heating	100.0%	18,588	18,588	929
Process	Process Cooling	100.0%	1,141	1,141	57
Process	Process Refrigeration	100.0%	1,141	1,141	57
Process	Process Electro-Chemical	100.0%	320	320	16
Process	Process Other	100.0%	3,792	3,792	190
Miscellaneous	Miscellaneous	100.0%	2,959	2,959	148
	<b>Total</b>			<b>90,313</b>	<b>4,516</b>



**Table A-275 Washington Stone Clay Glass Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,864	161
Cooling	Water-Cooled Chiller	2.8%	2,987	85
Cooling	RTU	4.4%	2,321	103
Cooling	Air-Source Heat Pump	2.3%	3,679	85
Cooling	Geothermal Heat Pump	0.0%	1,990	-
Heating	Electric Furnace	2.7%	22,885	610
Heating	Electric Zonal Heating	14.4%	21,795	3,140
Heating	Air-Source Heat Pump	2.3%	9,176	213
Heating	Geothermal Heat Pump	0.0%	5,575	-
Ventilation	Ventilation	100.0%	206	206
Interior Lighting	Screw-in	100.0%	297	297
Interior Lighting	High-Bay Fixtures	100.0%	2,159	2,159
Interior Lighting	Linear Fluorescent	100.0%	1,363	1,363
Exterior Lighting	Screw-in	100.0%	151	151
Exterior Lighting	HID	100.0%	261	261
Exterior Lighting	Linear Fluorescent	100.0%	176	176
Motors	Pumps	100.0%	6,059	6,059
Motors	Fans & Blowers	100.0%	8,526	8,526
Motors	Compressed Air	100.0%	1,535	1,535
Motors	Conveyors	100.0%	35,298	35,298
Motors	Other Motors	100.0%	551	551
Process	Process Heating	100.0%	18,588	18,588
Process	Process Cooling	100.0%	1,141	1,141
Process	Process Refrigeration	100.0%	1,141	1,141
Process	Process Electro-Chemical	100.0%	320	320
Process	Process Other	100.0%	3,792	3,792
Miscellaneous	Miscellaneous	100.0%	2,959	2,959

**Table A-276** *Washington Transportation Equipment Manufacturing Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,064	116	8
Cooling	Water-Cooled Chiller	2.8%	2,174	62	4
Cooling	RTU	4.4%	2,301	102	7
Cooling	Air-Source Heat Pump	2.3%	2,299	53	4
Cooling	Geothermal Heat Pump	0.0%	1,534	-	-
Heating	Electric Furnace	2.7%	9,925	264	19
Heating	Electric Zonal Heating	14.4%	9,452	1,362	95
Heating	Air-Source Heat Pump	2.3%	8,715	202	14
Heating	Geothermal Heat Pump	0.0%	5,813	-	-
Ventilation	Ventilation	100.0%	329	329	23
Interior Lighting	Screw-in	100.0%	156	156	11
Interior Lighting	High-Bay Fixtures	100.0%	765	765	54
Interior Lighting	Linear Fluorescent	100.0%	589	589	41
Exterior Lighting	Screw-in	100.0%	107	107	7
Exterior Lighting	HID	100.0%	99	99	7
Exterior Lighting	Linear Fluorescent	100.0%	76	76	5
Motors	Pumps	0.0%	738	-	-
Motors	Fans & Blowers	100.0%	521	521	36
Motors	Compressed Air	100.0%	174	174	12
Motors	Conveyors	100.0%	3,558	3,558	249
Motors	Other Motors	100.0%	260	260	18
Process	Process Heating	100.0%	1,679	1,679	118
Process	Process Cooling	100.0%	371	371	26
Process	Process Refrigeration	100.0%	371	371	26
Process	Process Electro-Chemical	100.0%	201	201	14
Process	Process Other	100.0%	452	452	32
Miscellaneous	Miscellaneous	100.0%	738	738	52
<b>Total</b>				<b>12,606</b>	<b>882</b>

**Table A-277** *Washington Transportation Equipment Manufacturing New Construction Market Profile*

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,242	70
Cooling	Water-Cooled Chiller	2.8%	1,295	37
Cooling	RTU	4.4%	1,006	45
Cooling	Air-Source Heat Pump	2.3%	1,596	37
Cooling	Geothermal Heat Pump	0.0%	863	-
Heating	Electric Furnace	2.7%	9,925	264
Heating	Electric Zonal Heating	14.4%	9,452	1,362
Heating	Air-Source Heat Pump	2.3%	3,979	92
Heating	Geothermal Heat Pump	0.0%	2,418	-
Ventilation	Ventilation	100.0%	89	89
Interior Lighting	Screw-in	100.0%	114	114
Interior Lighting	High-Bay Fixtures	100.0%	830	830
Interior Lighting	Linear Fluorescent	100.0%	524	524
Exterior Lighting	Screw-in	100.0%	58	58
Exterior Lighting	HID	100.0%	100	100
Exterior Lighting	Linear Fluorescent	100.0%	68	68
Motors	Pumps	100.0%	738	738
Motors	Fans & Blowers	100.0%	521	521
Motors	Compressed Air	100.0%	174	174
Motors	Conveyors	100.0%	3,558	3,558
Motors	Other Motors	100.0%	260	260
Process	Process Heating	100.0%	1,679	1,679
Process	Process Cooling	0.0%	371	-
Process	Process Refrigeration	100.0%	371	371
Process	Process Electro-Chemical	100.0%	201	201
Process	Process Other	100.0%	452	452
Miscellaneous	Miscellaneous	100.0%	738	738

**Table A-278** *Washington Wastewater Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	3,791	213	24
Cooling	Water-Cooled Chiller	2.8%	3,993	114	13
Cooling	RTU	4.4%	4,225	187	21
Cooling	Air-Source Heat Pump	2.3%	4,223	98	11
Cooling	Geothermal Heat Pump	0.0%	2,817	-	-
Heating	Electric Furnace	2.7%	18,228	486	54
Heating	Electric Zonal Heating	14.4%	17,360	2,502	280
Heating	Air-Source Heat Pump	2.3%	16,007	371	42
Heating	Geothermal Heat Pump	0.0%	10,677	-	-
Ventilation	Ventilation	100.0%	604	604	68
Interior Lighting	Screw-in	100.0%	367	367	41
Interior Lighting	High-Bay Fixtures	100.0%	1,797	1,797	201
Interior Lighting	Linear Fluorescent	100.0%	1,385	1,385	155
Exterior Lighting	Screw-in	100.0%	252	252	28
Exterior Lighting	HID	100.0%	233	233	26
Exterior Lighting	Linear Fluorescent	100.0%	179	179	20
Motors	Pumps	100.0%	22,617	22,617	2,533
Motors	Fans & Blowers	100.0%	55,682	55,682	6,236
Motors	Compressed Air	100.0%	1,191	1,191	133
Motors	Conveyors	100.0%	5,321	5,321	596
Motors	Other Motors	100.0%	1,668	1,668	187
Process	Process Heating	0.0%	2,606	-	-
Process	Process Cooling	0.0%	2,606	-	-
Process	Process Refrigeration	0.0%	2,606	-	-
Process	Process Electro-Chemical	0.0%	2,606	-	-
Process	Process Other	100.0%	4,409	4,409	494
Miscellaneous	Miscellaneous	100.0%	2,606	2,606	292
	<b>Total</b>			<b>102,281</b>	<b>11,455</b>

**Table A-279** *Washington Wastewater New Construction Market Profile*

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,281	128
Cooling	Water-Cooled Chiller	2.8%	2,379	68
Cooling	RTU	4.4%	1,848	82
Cooling	Air-Source Heat Pump	2.3%	2,931	68
Cooling	Geothermal Heat Pump	0.0%	1,585	-
Heating	Electric Furnace	2.7%	18,228	486
Heating	Electric Zonal Heating	14.4%	17,360	2,502
Heating	Air-Source Heat Pump	2.3%	7,309	169
Heating	Geothermal Heat Pump	0.0%	4,441	-
Ventilation	Ventilation	100.0%	164	164
Interior Lighting	Screw-in	100.0%	269	269
Interior Lighting	High-Bay Fixtures	100.0%	1,951	1,951
Interior Lighting	Linear Fluorescent	100.0%	1,231	1,231
Exterior Lighting	Screw-in	100.0%	136	136
Exterior Lighting	HID	100.0%	236	236
Exterior Lighting	Linear Fluorescent	100.0%	159	159
Motors	Pumps	0.0%	22,617	-
Motors	Fans & Blowers	0.0%	55,682	-
Motors	Compressed Air	0.0%	1,191	-
Motors	Conveyors	0.0%	5,321	-
Motors	Other Motors	100.0%	1,668	1,668
Process	Process Heating	100.0%	2,606	2,606
Process	Process Cooling	100.0%	2,606	2,606
Process	Process Refrigeration	100.0%	2,606	2,606
Process	Process Electro-Chemical	100.0%	2,606	2,606
Process	Process Other	100.0%	4,409	4,409
Miscellaneous	Miscellaneous	100.0%	2,606	2,606

**Table A-280** *Washington Water Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	871	49	38
Cooling	Water-Cooled Chiller	2.8%	918	26	20
Cooling	RTU	4.4%	971	43	33
Cooling	Air-Source Heat Pump	2.3%	971	23	17
Cooling	Geothermal Heat Pump	0.0%	647	-	-
Heating	Electric Furnace	2.7%	4,189	112	86
Heating	Electric Zonal Heating	14.4%	3,990	575	442
Heating	Air-Source Heat Pump	2.3%	3,679	85	66
Heating	Geothermal Heat Pump	0.0%	2,454	-	-
Ventilation	Ventilation	100.0%	139	139	107
Interior Lighting	Screw-in	100.0%	84	84	65
Interior Lighting	High-Bay Fixtures	100.0%	413	413	317
Interior Lighting	Linear Fluorescent	100.0%	318	318	245
Exterior Lighting	Screw-in	100.0%	58	58	44
Exterior Lighting	HID	100.0%	53	53	41
Exterior Lighting	Linear Fluorescent	100.0%	41	41	32
Motors	Pumps	100.0%	18,777	18,777	14,421
Motors	Fans & Blowers	0.0%	599	-	-
Motors	Compressed Air	100.0%	274	274	210
Motors	Conveyors	100.0%	815	815	626
Motors	Other Motors	100.0%	9	9	7
Process	Process Heating	0.0%	599	-	-
Process	Process Cooling	0.0%	599	-	-
Process	Process Refrigeration	0.0%	599	-	-
Process	Process Electro-Chemical	0.0%	599	-	-
Process	Process Other	100.0%	1,013	1,013	778
Miscellaneous	Miscellaneous	100.0%	599	599	460
	<b>Total</b>			<b>23,506</b>	<b>18,053</b>

**Table A-281 Washington Water New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	524	29
Cooling	Water-Cooled Chiller	2.8%	547	16
Cooling	RTU	4.4%	425	19
Cooling	Air-Source Heat Pump	2.3%	674	16
Cooling	Geothermal Heat Pump	0.0%	364	-
Heating	Electric Furnace	2.7%	4,189	112
Heating	Electric Zonal Heating	14.4%	3,990	575
Heating	Air-Source Heat Pump	2.3%	1,680	39
Heating	Geothermal Heat Pump	0.0%	1,021	-
Ventilation	Ventilation	100.0%	38	38
Interior Lighting	Screw-in	100.0%	62	62
Interior Lighting	High-Bay Fixtures	100.0%	448	448
Interior Lighting	Linear Fluorescent	100.0%	283	283
Exterior Lighting	Screw-in	100.0%	31	31
Exterior Lighting	HID	100.0%	54	54
Exterior Lighting	Linear Fluorescent	100.0%	37	37
Motors	Pumps	0.0%	18,777	-
Motors	Fans & Blowers	0.0%	599	-
Motors	Compressed Air	0.0%	274	-
Motors	Conveyors	0.0%	815	-
Motors	Other Motors	100.0%	9	9
Process	Process Heating	0.0%	599	-
Process	Process Cooling	100.0%	599	599
Process	Process Refrigeration	100.0%	599	599
Process	Process Electro-Chemical	100.0%	599	599
Process	Process Other	100.0%	1,013	1,013
Miscellaneous	Miscellaneous	100.0%	599	599

**Table A-282** *Washington Chemical Manufacturing Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	111	6	1
Cooling	Water-Cooled Chiller	2.8%	117	3	1
Cooling	RTU	4.4%	124	5	1
Cooling	Air-Source Heat Pump	2.3%	124	3	1
Cooling	Geothermal Heat Pump	0.0%	82	-	-
Heating	Electric Furnace	2.7%	533	14	3
Heating	Electric Zonal Heating	14.4%	508	73	15
Heating	Air-Source Heat Pump	2.3%	468	11	2
Heating	Geothermal Heat Pump	0.0%	312	-	-
Ventilation	Ventilation	100.0%	18	18	4
Interior Lighting	Screw-in	100.0%	7	7	1
Interior Lighting	High-Bay Fixtures	100.0%	36	36	7
Interior Lighting	Linear Fluorescent	100.0%	28	28	6
Exterior Lighting	Screw-in	100.0%	5	5	1
Exterior Lighting	HID	100.0%	5	5	1
Exterior Lighting	Linear Fluorescent	100.0%	4	4	1
Motors	Pumps	100.0%	278	278	56
Motors	Fans & Blowers	100.0%	77	77	15
Motors	Compressed Air	100.0%	309	309	62
Motors	Conveyors	100.0%	541	541	108
Motors	Other Motors	100.0%	46	46	9
Process	Process Heating	100.0%	146	146	29
Process	Process Cooling	100.0%	82	82	16
Process	Process Refrigeration	100.0%	82	82	16
Process	Process Electro-Chemical	100.0%	420	420	84
Process	Process Other	100.0%	26	26	5
Miscellaneous	Miscellaneous	100.0%	65	65	13
	<b>Total</b>			<b>2,292</b>	<b>458</b>



**Table A-283 Washington Chemical Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	67	4
Cooling	Water-Cooled Chiller	2.8%	70	2
Cooling	RTU	4.4%	54	2
Cooling	Air-Source Heat Pump	2.3%	86	2
Cooling	Geothermal Heat Pump	0.0%	46	-
Heating	Electric Furnace	2.7%	533	14
Heating	Electric Zonal Heating	14.4%	508	73
Heating	Air-Source Heat Pump	2.3%	214	5
Heating	Geothermal Heat Pump	0.0%	130	-
Ventilation	Ventilation	100.0%	5	5
Interior Lighting	Screw-in	100.0%	5	5
Interior Lighting	High-Bay Fixtures	100.0%	39	39
Interior Lighting	Linear Fluorescent	100.0%	25	25
Exterior Lighting	Screw-in	100.0%	3	3
Exterior Lighting	HID	100.0%	5	5
Exterior Lighting	Linear Fluorescent	100.0%	3	3
Motors	Pumps	100.0%	278	278
Motors	Fans & Blowers	100.0%	77	77
Motors	Compressed Air	100.0%	309	309
Motors	Conveyors	100.0%	541	541
Motors	Other Motors	100.0%	46	46
Process	Process Heating	100.0%	146	146
Process	Process Cooling	100.0%	82	82
Process	Process Refrigeration	100.0%	82	82
Process	Process Electro-Chemical	100.0%	420	420
Process	Process Other	100.0%	26	26
Miscellaneous	Miscellaneous	100.0%	65	65

**Table A-284 Washington Electronic Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,279	128	26
Cooling	Water-Cooled Chiller	2.8%	2,401	68	14
Cooling	RTU	4.4%	2,541	112	22
Cooling	Air-Source Heat Pump	2.3%	2,539	59	12
Cooling	Geothermal Heat Pump	0.0%	1,694	-	-
Heating	Electric Furnace	2.7%	10,961	292	58
Heating	Electric Zonal Heating	14.4%	10,439	1,504	301
Heating	Air-Source Heat Pump	2.3%	9,625	223	45
Heating	Geothermal Heat Pump	0.0%	6,420	-	-
Ventilation	Ventilation	100.0%	363	363	73
Interior Lighting	Screw-in	100.0%	98	98	20
Interior Lighting	High-Bay Fixtures	100.0%	478	478	96
Interior Lighting	Linear Fluorescent	100.0%	368	368	74
Exterior Lighting	Screw-in	100.0%	67	67	13
Exterior Lighting	HID	100.0%	62	62	12
Exterior Lighting	Linear Fluorescent	100.0%	48	48	10
Motors	Pumps	100.0%	140	140	28
Motors	Fans & Blowers	100.0%	224	224	45
Motors	Compressed Air	100.0%	404	404	81
Motors	Conveyors	100.0%	1,265	1,265	253
Motors	Other Motors	0.0%	831	-	-
Process	Process Heating	100.0%	1,055	1,055	211
Process	Process Cooling	100.0%	490	490	98
Process	Process Refrigeration	100.0%	490	490	98
Process	Process Electro-Chemical	100.0%	184	184	37
Process	Process Other	100.0%	926	926	185
Miscellaneous	Miscellaneous	100.0%	831	831	166
<b>Total</b>				<b>9,880</b>	<b>1,976</b>

**Table A-285 Washington Electronic Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,372	77
Cooling	Water-Cooled Chiller	2.8%	1,431	41
Cooling	RTU	4.4%	1,111	49
Cooling	Air-Source Heat Pump	2.3%	1,762	41
Cooling	Geothermal Heat Pump	0.0%	953	-
Heating	Electric Furnace	2.7%	10,961	292
Heating	Electric Zonal Heating	14.4%	10,439	1,504
Heating	Air-Source Heat Pump	2.3%	4,395	102
Heating	Geothermal Heat Pump	0.0%	2,670	-
Ventilation	Ventilation	100.0%	99	99
Interior Lighting	Screw-in	100.0%	71	71
Interior Lighting	High-Bay Fixtures	100.0%	519	519
Interior Lighting	Linear Fluorescent	100.0%	327	327
Exterior Lighting	Screw-in	100.0%	36	36
Exterior Lighting	HID	100.0%	63	63
Exterior Lighting	Linear Fluorescent	100.0%	42	42
Motors	Pumps	100.0%	140	140
Motors	Fans & Blowers	100.0%	224	224
Motors	Compressed Air	100.0%	404	404
Motors	Conveyors	100.0%	1,265	1,265
Motors	Other Motors	100.0%	831	831
Process	Process Heating	100.0%	1,055	1,055
Process	Process Cooling	100.0%	490	490
Process	Process Refrigeration	100.0%	490	490
Process	Process Electro-Chemical	100.0%	184	184
Process	Process Other	0.0%	926	-
Miscellaneous	Miscellaneous	100.0%	831	831

**Table A-286 Washington Industrial Machinery Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,803	158	110
Cooling	Water-Cooled Chiller	2.8%	2,952	84	59
Cooling	RTU	4.4%	3,124	138	97
Cooling	Air-Source Heat Pump	2.3%	3,123	72	51
Cooling	Geothermal Heat Pump	0.0%	2,083	-	-
Heating	Electric Furnace	2.7%	13,478	359	251
Heating	Electric Zonal Heating	14.4%	12,836	1,850	1,295
Heating	Air-Source Heat Pump	2.3%	11,835	274	192
Heating	Geothermal Heat Pump	0.0%	7,894	-	-
Ventilation	Ventilation	100.0%	447	447	313
Interior Lighting	Screw-in	100.0%	179	179	125
Interior Lighting	High-Bay Fixtures	100.0%	877	877	614
Interior Lighting	Linear Fluorescent	100.0%	676	676	473
Exterior Lighting	Screw-in	100.0%	123	123	86
Exterior Lighting	HID	100.0%	113	113	79
Exterior Lighting	Linear Fluorescent	100.0%	87	87	61
Motors	Pumps	100.0%	747	747	523
Motors	Fans & Blowers	100.0%	1,740	1,740	1,218
Motors	Compressed Air	100.0%	1,481	1,481	1,037
Motors	Conveyors	100.0%	2,398	2,398	1,679
Motors	Other Motors	0.0%	1,038	-	-
Process	Process Heating	100.0%	991	991	694
Process	Process Cooling	100.0%	194	194	136
Process	Process Refrigeration	100.0%	194	194	136
Process	Process Electro-Chemical	100.0%	131	131	92
Process	Process Other	100.0%	442	442	309
Miscellaneous	Miscellaneous	100.0%	1,038	1,038	727
	<b>Total</b>			<b>14,795</b>	<b>10,356</b>

**Table A-287 Washington Industrial Machinery New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,687	95
Cooling	Water-Cooled Chiller	2.8%	1,759	50
Cooling	RTU	4.4%	1,367	60
Cooling	Air-Source Heat Pump	2.3%	2,167	50
Cooling	Geothermal Heat Pump	0.0%	1,172	-
Heating	Electric Furnace	2.7%	13,478	359
Heating	Electric Zonal Heating	14.4%	12,836	1,850
Heating	Air-Source Heat Pump	2.3%	5,404	125
Heating	Geothermal Heat Pump	0.0%	3,284	-
Ventilation	Ventilation	100.0%	121	121
Interior Lighting	Screw-in	100.0%	131	131
Interior Lighting	High-Bay Fixtures	100.0%	952	952
Interior Lighting	Linear Fluorescent	100.0%	601	601
Exterior Lighting	Screw-in	100.0%	66	66
Exterior Lighting	HID	100.0%	115	115
Exterior Lighting	Linear Fluorescent	100.0%	78	78
Motors	Pumps	100.0%	747	747
Motors	Fans & Blowers	100.0%	1,740	1,740
Motors	Compressed Air	100.0%	1,481	1,481
Motors	Conveyors	100.0%	2,398	2,398
Motors	Other Motors	100.0%	1,038	1,038
Process	Process Heating	100.0%	991	991
Process	Process Cooling	100.0%	194	194
Process	Process Refrigeration	100.0%	194	194
Process	Process Electro-Chemical	100.0%	131	131
Process	Process Other	0.0%	442	-
Miscellaneous	Miscellaneous	100.0%	1,038	1,038

**Table A-288** *Washington Lumber & Wood Products Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,206	68	22
Cooling	Water-Cooled Chiller	2.8%	1,270	36	12
Cooling	RTU	4.4%	1,344	59	20
Cooling	Air-Source Heat Pump	2.3%	1,344	31	10
Cooling	Geothermal Heat Pump	0.0%	896	-	-
Heating	Electric Furnace	2.7%	5,800	155	51
Heating	Electric Zonal Heating	14.4%	5,524	796	263
Heating	Air-Source Heat Pump	2.3%	5,093	118	39
Heating	Geothermal Heat Pump	0.0%	3,397	-	-
Ventilation	Ventilation	100.0%	192	192	63
Interior Lighting	Screw-in	100.0%	183	183	61
Interior Lighting	High-Bay Fixtures	100.0%	899	899	297
Interior Lighting	Linear Fluorescent	100.0%	693	693	229
Exterior Lighting	Screw-in	100.0%	126	126	42
Exterior Lighting	HID	100.0%	116	116	38
Exterior Lighting	Linear Fluorescent	100.0%	89	89	30
Motors	Pumps	0.0%	1,363	-	-
Motors	Fans & Blowers	100.0%	2,882	2,882	951
Motors	Compressed Air	100.0%	3,502	3,502	1,156
Motors	Conveyors	100.0%	14,935	14,935	4,929
Motors	Other Motors	100.0%	1,310	1,310	432
Process	Process Heating	100.0%	2,586	2,586	853
Process	Process Cooling	100.0%	192	192	63
Process	Process Refrigeration	100.0%	192	192	63
Process	Process Electro-Chemical	100.0%	223	223	74
Process	Process Other	100.0%	161	161	53
Miscellaneous	Miscellaneous	100.0%	1,363	1,363	450
	<b>Total</b>			<b>30,908</b>	<b>10,199</b>

**Table A-289 Washington Lumber & Wood Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	726	41
Cooling	Water-Cooled Chiller	2.8%	757	22
Cooling	RTU	4.4%	588	26
Cooling	Air-Source Heat Pump	2.3%	933	22
Cooling	Geothermal Heat Pump	0.0%	504	-
Heating	Electric Furnace	2.7%	5,800	155
Heating	Electric Zonal Heating	14.4%	5,524	796
Heating	Air-Source Heat Pump	2.3%	2,326	54
Heating	Geothermal Heat Pump	0.0%	1,413	-
Ventilation	Ventilation	100.0%	52	52
Interior Lighting	Screw-in	100.0%	134	134
Interior Lighting	High-Bay Fixtures	100.0%	976	976
Interior Lighting	Linear Fluorescent	100.0%	616	616
Exterior Lighting	Screw-in	100.0%	68	68
Exterior Lighting	HID	100.0%	118	118
Exterior Lighting	Linear Fluorescent	100.0%	80	80
Motors	Pumps	100.0%	1,363	1,363
Motors	Fans & Blowers	100.0%	2,882	2,882
Motors	Compressed Air	100.0%	3,502	3,502
Motors	Conveyors	100.0%	14,935	14,935
Motors	Other Motors	100.0%	1,310	1,310
Process	Process Heating	100.0%	2,586	2,586
Process	Process Cooling	0.0%	192	-
Process	Process Refrigeration	100.0%	192	192
Process	Process Electro-Chemical	100.0%	223	223
Process	Process Other	100.0%	161	161
Miscellaneous	Miscellaneous	100.0%	1,363	1,363

**Table A-290 Washington Metal Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	1,347	76	50
Cooling	Water-Cooled Chiller	2.8%	1,418	40	27
Cooling	RTU	4.4%	1,501	66	44
Cooling	Air-Source Heat Pump	2.3%	1,500	35	23
Cooling	Geothermal Heat Pump	0.0%	1,001	-	-
Heating	Electric Furnace	2.7%	6,475	173	114
Heating	Electric Zonal Heating	14.4%	6,167	889	586
Heating	Air-Source Heat Pump	2.3%	5,686	132	87
Heating	Geothermal Heat Pump	0.0%	3,793	-	-
Ventilation	Ventilation	100.0%	215	215	142
Interior Lighting	Screw-in	100.0%	127	127	84
Interior Lighting	High-Bay Fixtures	100.0%	623	623	411
Interior Lighting	Linear Fluorescent	100.0%	480	480	317
Exterior Lighting	Screw-in	100.0%	87	87	58
Exterior Lighting	HID	100.0%	81	81	53
Exterior Lighting	Linear Fluorescent	100.0%	62	62	41
Motors	Pumps	0.0%	602	-	-
Motors	Fans & Blowers	100.0%	878	878	580
Motors	Compressed Air	100.0%	293	293	193
Motors	Conveyors	100.0%	5,999	5,999	3,959
Motors	Other Motors	100.0%	439	439	290
Process	Process Heating	100.0%	2,953	2,953	1,949
Process	Process Cooling	100.0%	261	261	172
Process	Process Refrigeration	100.0%	261	261	172
Process	Process Electro-Chemical	100.0%	497	497	328
Process	Process Other	100.0%	637	637	421
Miscellaneous	Miscellaneous	100.0%	602	602	398
	<b>Total</b>			<b>15,906</b>	<b>10,498</b>



**Table A-291 Washington Metal Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	810	46
Cooling	Water-Cooled Chiller	2.8%	845	24
Cooling	RTU	4.4%	657	29
Cooling	Air-Source Heat Pump	2.3%	1,041	24
Cooling	Geothermal Heat Pump	0.0%	563	-
Heating	Electric Furnace	2.7%	6,475	173
Heating	Electric Zonal Heating	14.4%	6,167	889
Heating	Air-Source Heat Pump	2.3%	2,596	60
Heating	Geothermal Heat Pump	0.0%	1,578	-
Ventilation	Ventilation	100.0%	58	58
Interior Lighting	Screw-in	100.0%	93	93
Interior Lighting	High-Bay Fixtures	100.0%	676	676
Interior Lighting	Linear Fluorescent	100.0%	427	427
Exterior Lighting	Screw-in	100.0%	47	47
Exterior Lighting	HID	100.0%	82	82
Exterior Lighting	Linear Fluorescent	100.0%	55	55
Motors	Pumps	100.0%	602	602
Motors	Fans & Blowers	100.0%	878	878
Motors	Compressed Air	100.0%	293	293
Motors	Conveyors	100.0%	5,999	5,999
Motors	Other Motors	100.0%	439	439
Process	Process Heating	100.0%	2,953	2,953
Process	Process Cooling	0.0%	261	-
Process	Process Refrigeration	100.0%	261	261
Process	Process Electro-Chemical	100.0%	497	497
Process	Process Other	100.0%	637	637
Miscellaneous	Miscellaneous	100.0%	602	602

**Table A-292** *Washington Miscellaneous Manufacturing Existing Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	26,483	1,489	1,102
Cooling	Water-Cooled Chiller	2.8%	27,894	794	588
Cooling	RTU	4.4%	29,518	1,306	966
Cooling	Air-Source Heat Pump	2.3%	29,505	684	506
Cooling	Geothermal Heat Pump	0.0%	19,680	-	-
Heating	Electric Furnace	2.7%	127,349	3,392	2,510
Heating	Electric Zonal Heating	14.4%	121,285	17,476	12,932
Heating	Air-Source Heat Pump	2.3%	111,829	2,593	1,919
Heating	Geothermal Heat Pump	0.0%	74,590	-	-
Ventilation	Ventilation	100.0%	4,220	4,220	3,123
Interior Lighting	Screw-in	100.0%	1,821	1,821	1,347
Interior Lighting	High-Bay Fixtures	100.0%	8,919	8,919	6,600
Interior Lighting	Linear Fluorescent	100.0%	6,874	6,874	5,086
Exterior Lighting	Screw-in	100.0%	1,249	1,249	924
Exterior Lighting	HID	100.0%	1,154	1,154	854
Exterior Lighting	Linear Fluorescent	100.0%	888	888	657
Motors	Pumps	100.0%	8,129	8,129	6,015
Motors	Fans & Blowers	100.0%	9,762	9,762	7,224
Motors	Compressed Air	100.0%	7,894	7,894	5,841
Motors	Conveyors	100.0%	16,696	16,696	12,355
Motors	Other Motors	100.0%	280	280	207
Process	Process Heating	100.0%	13,745	13,745	10,171
Process	Process Cooling	100.0%	3,609	3,609	2,671
Process	Process Refrigeration	100.0%	3,609	3,609	2,671
Process	Process Electro-Chemical	100.0%	1,389	1,389	1,028
Process	Process Other	100.0%	1,508	1,508	1,116
Miscellaneous	Miscellaneous	100.0%	8,293	8,293	6,137
	<b>Total</b>			<b>127,771</b>	<b>94,551</b>

**Table A-293 Washington Miscellaneous Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	15,936	896
Cooling	Water-Cooled Chiller	2.8%	16,622	473
Cooling	RTU	4.4%	12,914	571
Cooling	Air-Source Heat Pump	2.3%	20,475	475
Cooling	Geothermal Heat Pump	0.0%	11,075	-
Heating	Electric Furnace	2.7%	127,349	3,392
Heating	Electric Zonal Heating	14.4%	121,285	17,476
Heating	Air-Source Heat Pump	2.3%	51,060	1,184
Heating	Geothermal Heat Pump	0.0%	31,026	-
Ventilation	Ventilation	100.0%	1,145	1,145
Interior Lighting	Screw-in	100.0%	1,334	1,334
Interior Lighting	High-Bay Fixtures	100.0%	9,680	9,680
Interior Lighting	Linear Fluorescent	100.0%	6,111	6,111
Exterior Lighting	Screw-in	100.0%	675	675
Exterior Lighting	HID	100.0%	1,172	1,172
Exterior Lighting	Linear Fluorescent	100.0%	789	789
Motors	Pumps	100.0%	8,129	8,129
Motors	Fans & Blowers	100.0%	9,762	9,762
Motors	Compressed Air	100.0%	7,894	7,894
Motors	Conveyors	100.0%	16,696	16,696
Motors	Other Motors	100.0%	280	280
Process	Process Heating	100.0%	13,745	13,745
Process	Process Cooling	100.0%	3,609	3,609
Process	Process Refrigeration	100.0%	3,609	3,609
Process	Process Electro-Chemical	100.0%	1,389	1,389
Process	Process Other	100.0%	1,508	1,508
Miscellaneous	Miscellaneous	100.0%	8,293	8,293

**Table A-294 Wyoming Agriculture Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	2,526	142	40
Cooling	Water-Cooled Chiller	2.8%	2,601	74	21
Cooling	RTU	4.3%	2,696	115	33
Cooling	Air-Source Heat Pump	2.3%	2,696	63	18
Cooling	Geothermal Heat Pump	0.0%	1,798	-	-
Heating	Electric Furnace	1.6%	18,021	293	83
Heating	Electric Zonal Heating	8.8%	17,163	1,509	428
Heating	Air-Source Heat Pump	2.3%	16,311	378	107
Heating	Geothermal Heat Pump	0.0%	10,879	-	-
Ventilation	Ventilation	100.0%	404	404	115
Interior Lighting	Screw-in	100.0%	219	219	62
Interior Lighting	High-Bay Fixtures	100.0%	1,073	1,073	304
Interior Lighting	Linear Fluorescent	100.0%	827	827	234
Exterior Lighting	Screw-in	100.0%	150	150	43
Exterior Lighting	HID	100.0%	139	139	39
Exterior Lighting	Linear Fluorescent	100.0%	107	107	30
Motors	Pumps	100.0%	2,779	2,779	788
Motors	Fans & Blowers	100.0%	5,010	5,010	1,421
Motors	Compressed Air	100.0%	2,316	2,316	657
Motors	Conveyors	100.0%	5,894	5,894	1,672
Motors	Other Motors	100.0%	1,742	1,742	494
Process	Process Heating	100.0%	2,635	2,635	747
Process	Process Cooling	100.0%	4,434	4,434	1,258
Process	Process Refrigeration	100.0%	4,434	4,434	1,258
Process	Process Electro-Chemical	100.0%	85	85	24
Process	Process Other	100.0%	330	330	93
Miscellaneous	Miscellaneous	100.0%	1,742	1,742	494
<b>Total</b>				<b>36,893</b>	<b>10,465</b>

**Table A-295 Wyoming Agriculture New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	1,494	84
Cooling	Water-Cooled Chiller	2.8%	1,486	42
Cooling	RTU	4.3%	1,242	53
Cooling	Air-Source Heat Pump	2.3%	1,970	46
Cooling	Geothermal Heat Pump	0.0%	1,066	-
Heating	Electric Furnace	1.6%	18,021	293
Heating	Electric Zonal Heating	8.8%	17,163	1,509
Heating	Air-Source Heat Pump	2.3%	10,564	245
Heating	Geothermal Heat Pump	0.0%	5,847	-
Ventilation	Ventilation	100.0%	127	127
Interior Lighting	Screw-in	100.0%	128	128
Interior Lighting	High-Bay Fixtures	100.0%	1,369	1,369
Interior Lighting	Linear Fluorescent	100.0%	732	732
Exterior Lighting	Screw-in	100.0%	114	114
Exterior Lighting	HID	100.0%	178	178
Exterior Lighting	Linear Fluorescent	100.0%	95	95
Motors	Pumps	100.0%	2,779	2,779
Motors	Fans & Blowers	100.0%	5,010	5,010
Motors	Compressed Air	100.0%	2,316	2,316
Motors	Conveyors	100.0%	5,894	5,894
Motors	Other Motors	100.0%	1,742	1,742
Process	Process Heating	100.0%	2,635	2,635
Process	Process Cooling	100.0%	4,434	4,434
Process	Process Refrigeration	100.0%	4,434	4,434
Process	Process Electro-Chemical	100.0%	85	85
Process	Process Other	100.0%	330	330
Miscellaneous	Miscellaneous	100.0%	1,742	1,742

**Table A-296 Wyoming Mining and Extraction Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Emp.)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	67,391	3,789	8,636
Cooling	Water-Cooled Chiller	2.8%	69,392	1,976	4,502
Cooling	RTU	4.3%	71,934	3,075	7,007
Cooling	Air-Source Heat Pump	2.3%	71,917	1,668	3,800
Cooling	Geothermal Heat Pump	0.0%	47,968	-	-
Heating	Electric Furnace	1.6%	480,791	7,814	17,807
Heating	Electric Zonal Heating	8.8%	457,896	40,254	91,734
Heating	Air-Source Heat Pump	2.3%	435,165	10,090	22,995
Heating	Geothermal Heat Pump	0.0%	290,255	-	-
Ventilation	Ventilation	100.0%	10,775	10,775	24,556
Interior Lighting	Screw-in	100.0%	8,896	8,896	20,274
Interior Lighting	High-Bay Fixtures	100.0%	43,577	43,577	99,307
Interior Lighting	Linear Fluorescent	100.0%	33,585	33,585	76,537
Exterior Lighting	Screw-in	100.0%	6,104	6,104	13,911
Exterior Lighting	HID	100.0%	5,638	5,638	12,848
Exterior Lighting	Linear Fluorescent	100.0%	4,338	4,338	9,885
Motors	Pumps	100.0%	776,250	776,250	1,768,991
Motors	Fans & Blowers	100.0%	215,625	215,625	491,386
Motors	Compressed Air	100.0%	323,437	323,437	737,080
Motors	Conveyors	100.0%	226,406	226,406	515,956
Motors	Other Motors	100.0%	614,531	614,531	1,400,451
Process	Process Heating	100.0%	22,697	22,697	51,725
Process	Process Cooling	100.0%	22,697	22,697	51,725
Process	Process Refrigeration	100.0%	22,697	22,697	51,725
Process	Process Electro-Chemical	100.0%	22,697	22,697	51,725
Process	Process Other	100.0%	124,835	124,835	284,487
Miscellaneous	Miscellaneous	100.0%	22,697	22,697	51,725
	<b>Total</b>			<b>2,576,150</b>	<b>5,870,774</b>

**Table A-297 Wyoming Mining and Extraction New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	39,867	2,242
Cooling	Water-Cooled Chiller	2.8%	39,652	1,129
Cooling	RTU	4.3%	33,147	1,417
Cooling	Air-Source Heat Pump	2.3%	52,547	1,218
Cooling	Geothermal Heat Pump	0.0%	28,440	-
Heating	Electric Furnace	1.6%	480,791	7,814
Heating	Electric Zonal Heating	8.8%	457,896	40,254
Heating	Air-Source Heat Pump	2.3%	281,840	6,535
Heating	Geothermal Heat Pump	0.0%	155,997	-
Ventilation	Ventilation	100.0%	3,388	3,388
Interior Lighting	Screw-in	100.0%	5,192	5,192
Interior Lighting	High-Bay Fixtures	100.0%	55,624	55,624
Interior Lighting	Linear Fluorescent	100.0%	29,740	29,740
Exterior Lighting	Screw-in	100.0%	4,616	4,616
Exterior Lighting	HID	100.0%	7,249	7,249
Exterior Lighting	Linear Fluorescent	100.0%	3,841	3,841
Motors	Pumps	100.0%	776,250	776,250
Motors	Fans & Blowers	100.0%	215,625	215,625
Motors	Compressed Air	100.0%	323,437	323,437
Motors	Conveyors	100.0%	226,406	226,406
Motors	Other Motors	100.0%	614,531	614,531
Process	Process Heating	100.0%	22,697	22,697
Process	Process Cooling	100.0%	22,697	22,697
Process	Process Refrigeration	100.0%	22,697	22,697
Process	Process Electro-Chemical	100.0%	22,697	22,697
Process	Process Other	100.0%	124,835	124,835
Miscellaneous	Miscellaneous	100.0%	22,697	22,697

**Table A-298 Wyoming Food Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	18,105	1,018	102
Cooling	Water-Cooled Chiller	2.8%	18,643	531	53
Cooling	RTU	4.3%	19,326	826	83
Cooling	Air-Source Heat Pump	2.3%	19,321	448	45
Cooling	Geothermal Heat Pump	0.0%	12,887	-	-
Heating	Electric Furnace	1.6%	129,170	2,099	210
Heating	Electric Zonal Heating	8.8%	123,019	10,815	1,081
Heating	Air-Source Heat Pump	2.3%	116,912	2,711	271
Heating	Geothermal Heat Pump	0.0%	77,980	-	-
Ventilation	Ventilation	100.0%	2,895	2,895	289
Interior Lighting	Screw-in	100.0%	1,570	1,570	157
Interior Lighting	High-Bay Fixtures	100.0%	7,688	7,688	769
Interior Lighting	Linear Fluorescent	100.0%	5,925	5,925	593
Exterior Lighting	Screw-in	100.0%	1,077	1,077	108
Exterior Lighting	HID	100.0%	995	995	99
Exterior Lighting	Linear Fluorescent	100.0%	765	765	77
Motors	Pumps	100.0%	31,788	31,788	3,179
Motors	Fans & Blowers	100.0%	22,863	22,863	2,286
Motors	Compressed Air	100.0%	12,885	12,885	1,289
Motors	Conveyors	100.0%	47,144	47,144	4,714
Motors	Other Motors	0.0%	12,488	-	-
Process	Process Heating	100.0%	18,888	18,888	1,889
Process	Process Cooling	100.0%	31,783	31,783	3,178
Process	Process Refrigeration	100.0%	31,783	31,783	3,178
Process	Process Electro-Chemical	100.0%	608	608	61
Process	Process Other	100.0%	2,363	2,363	236
Miscellaneous	Miscellaneous	100.0%	12,488	12,488	1,249
	<b>Total</b>			<b>251,956</b>	<b>25,196</b>



**Table A-299 Wyoming Food Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	10,711	602
Cooling	Water-Cooled Chiller	2.8%	10,653	303
Cooling	RTU	4.3%	8,905	381
Cooling	Air-Source Heat Pump	2.3%	14,117	327
Cooling	Geothermal Heat Pump	0.0%	7,641	-
Heating	Electric Furnace	1.6%	129,170	2,099
Heating	Electric Zonal Heating	8.8%	123,019	10,815
Heating	Air-Source Heat Pump	2.3%	75,720	1,756
Heating	Geothermal Heat Pump	0.0%	41,910	-
Ventilation	Ventilation	100.0%	910	910
Interior Lighting	Screw-in	100.0%	916	916
Interior Lighting	High-Bay Fixtures	100.0%	9,814	9,814
Interior Lighting	Linear Fluorescent	100.0%	5,247	5,247
Exterior Lighting	Screw-in	100.0%	814	814
Exterior Lighting	HID	100.0%	1,279	1,279
Exterior Lighting	Linear Fluorescent	100.0%	678	678
Motors	Pumps	100.0%	31,788	31,788
Motors	Fans & Blowers	100.0%	22,863	22,863
Motors	Compressed Air	100.0%	12,885	12,885
Motors	Conveyors	100.0%	47,144	47,144
Motors	Other Motors	100.0%	12,488	12,488
Process	Process Heating	100.0%	18,888	18,888
Process	Process Cooling	100.0%	31,783	31,783
Process	Process Refrigeration	100.0%	31,783	31,783
Process	Process Electro-Chemical	100.0%	608	608
Process	Process Other	0.0%	2,363	-
Miscellaneous	Miscellaneous	100.0%	12,488	12,488

**Table A-300 Wyoming Paper Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	14	1	0
Cooling	Water-Cooled Chiller	2.8%	15	0	0
Cooling	RTU	4.3%	15	1	0
Cooling	Air-Source Heat Pump	2.3%	15	0	0
Cooling	Geothermal Heat Pump	0.0%	10	-	-
Heating	Electric Furnace	1.6%	103	2	0
Heating	Electric Zonal Heating	8.8%	98	9	0
Heating	Air-Source Heat Pump	2.3%	93	2	0
Heating	Geothermal Heat Pump	0.0%	62	-	-
Ventilation	Ventilation	100.0%	2	2	0
Interior Lighting	Screw-in	100.0%	1	1	0
Interior Lighting	High-Bay Fixtures	100.0%	7	7	0
Interior Lighting	Linear Fluorescent	100.0%	5	5	0
Exterior Lighting	Screw-in	100.0%	1	1	0
Exterior Lighting	HID	100.0%	1	1	0
Exterior Lighting	Linear Fluorescent	100.0%	1	1	0
Motors	Pumps	100.0%	83	83	2
Motors	Fans & Blowers	100.0%	45	45	1
Motors	Compressed Air	100.0%	22	22	0
Motors	Conveyors	100.0%	109	109	2
Motors	Other Motors	100.0%	35	35	1
Process	Process Heating	100.0%	29	29	1
Process	Process Cooling	100.0%	3	3	0
Process	Process Refrigeration	100.0%	3	3	0
Process	Process Electro-Chemical	100.0%	5	5	0
Process	Process Other	100.0%	6	6	0
Miscellaneous	Miscellaneous	100.0%	10	10	0
<b>Total</b>				<b>381</b>	<b>8</b>

**Table A-301 Wyoming Paper Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	9	0
Cooling	Water-Cooled Chiller	2.8%	9	0
Cooling	RTU	4.3%	7	0
Cooling	Air-Source Heat Pump	2.3%	11	0
Cooling	Geothermal Heat Pump	0.0%	6	-
Heating	Electric Furnace	1.6%	103	2
Heating	Electric Zonal Heating	8.8%	98	9
Heating	Air-Source Heat Pump	2.3%	61	1
Heating	Geothermal Heat Pump	0.0%	33	-
Ventilation	Ventilation	100.0%	1	1
Interior Lighting	Screw-in	100.0%	1	1
Interior Lighting	High-Bay Fixtures	100.0%	9	9
Interior Lighting	Linear Fluorescent	100.0%	5	5
Exterior Lighting	Screw-in	100.0%	1	1
Exterior Lighting	HID	100.0%	1	1
Exterior Lighting	Linear Fluorescent	100.0%	1	1
Motors	Pumps	100.0%	83	83
Motors	Fans & Blowers	100.0%	45	45
Motors	Compressed Air	100.0%	22	22
Motors	Conveyors	100.0%	109	109
Motors	Other Motors	100.0%	35	35
Process	Process Heating	100.0%	29	29
Process	Process Cooling	100.0%	3	3
Process	Process Refrigeration	100.0%	3	3
Process	Process Electro-Chemical	100.0%	5	5
Process	Process Other	100.0%	6	6
Miscellaneous	Miscellaneous	100.0%	10	10

**Table A-302 Wyoming Petroleum Refining Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	5.6%	85,501	4,808
Cooling	Water-Cooled Chiller	2.8%	2.8%	88,039	2,506
Cooling	RTU	4.4%	4.3%	91,264	3,901
Cooling	Air-Source Heat Pump	2.3%	2.3%	91,242	2,116
Cooling	Geothermal Heat Pump	0.0%	0.0%	60,859	-
Heating	Electric Furnace	2.7%	1.6%	609,991	9,914
Heating	Electric Zonal Heating	14.4%	8.8%	580,943	51,071
Heating	Air-Source Heat Pump	2.3%	2.3%	552,103	12,802
Heating	Geothermal Heat Pump	0.0%	0.0%	368,253	-
Ventilation	Ventilation	100.0%	100.0%	13,671	13,671
Interior Lighting	Screw-in	100.0%	100.0%	5,824	5,824
Interior Lighting	High-Bay Fixtures	100.0%	100.0%	28,527	28,527
Interior Lighting	Linear Fluorescent	100.0%	100.0%	21,986	21,986
Exterior Lighting	Screw-in	100.0%	100.0%	3,996	3,996
Exterior Lighting	HID	100.0%	100.0%	3,691	3,691
Exterior Lighting	Linear Fluorescent	100.0%	100.0%	2,840	2,840
Motors	Pumps	100.0%	100.0%	734,674	734,674
Motors	Fans & Blowers	100.0%	100.0%	292,112	292,112
Motors	Compressed Air	100.0%	100.0%	336,888	336,888
Motors	Conveyors	100.0%	100.0%	792,139	792,139
Motors	Other Motors	100.0%	100.0%	158,428	158,428
Process	Process Heating	100.0%	100.0%	115,883	115,883
Process	Process Cooling	100.0%	100.0%	70,651	70,651
Process	Process Refrigeration	100.0%	100.0%	70,651	70,651
Process	Process Electro-Chemical	100.0%	100.0%	2,843	2,843
Process	Process Other	100.0%	100.0%	21,543	21,543
Miscellaneous	Miscellaneous	100.0%	100.0%	30,180	30,180
	<b>Total</b>			<b>2,793,644</b>	<b>279,364</b>

**Table A-303 Wyoming Petroleum Refining New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	5.6%	50,580	2,844
Cooling	Water-Cooled Chiller	2.8%	50,308	1,432
Cooling	RTU	4.3%	42,055	1,798
Cooling	Air-Source Heat Pump	2.3%	66,668	1,546
Cooling	Geothermal Heat Pump	0.0%	36,083	-
Heating	Electric Furnace	1.6%	609,991	9,914
Heating	Electric Zonal Heating	8.8%	580,943	51,071
Heating	Air-Source Heat Pump	2.3%	357,576	8,291
Heating	Geothermal Heat Pump	0.0%	197,917	-
Ventilation	Ventilation	100.0%	4,298	4,298
Interior Lighting	Screw-in	100.0%	3,399	3,399
Interior Lighting	High-Bay Fixtures	100.0%	36,414	36,414
Interior Lighting	Linear Fluorescent	100.0%	19,469	19,469
Exterior Lighting	Screw-in	100.0%	3,022	3,022
Exterior Lighting	HID	100.0%	4,745	4,745
Exterior Lighting	Linear Fluorescent	100.0%	2,515	2,515
Motors	Pumps	100.0%	734,674	734,674
Motors	Fans & Blowers	100.0%	292,112	292,112
Motors	Compressed Air	100.0%	336,888	336,888
Motors	Conveyors	100.0%	792,139	792,139
Motors	Other Motors	100.0%	158,428	158,428
Process	Process Heating	100.0%	115,883	115,883
Process	Process Cooling	100.0%	70,651	70,651
Process	Process Refrigeration	100.0%	70,651	70,651
Process	Process Electro-Chemical	100.0%	2,843	2,843
Process	Process Other	100.0%	21,543	21,543
Miscellaneous	Miscellaneous	100.0%	30,180	30,180

**Table A-304 Wyoming Stone Clay Glass Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	81,256	4,569	457
Cooling	Water-Cooled Chiller	2.8%	83,668	2,382	238
Cooling	RTU	4.3%	86,733	3,707	371
Cooling	Air-Source Heat Pump	2.3%	86,712	2,011	201
Cooling	Geothermal Heat Pump	0.0%	57,837	-	-
Heating	Electric Furnace	1.6%	579,705	9,422	942
Heating	Electric Zonal Heating	8.8%	552,100	48,535	4,853
Heating	Air-Source Heat Pump	2.3%	524,692	12,166	1,217
Heating	Geothermal Heat Pump	0.0%	349,969	-	-
Ventilation	Ventilation	100.0%	12,992	12,992	1,299
Interior Lighting	Screw-in	100.0%	6,774	6,774	677
Interior Lighting	High-Bay Fixtures	100.0%	33,183	33,183	3,318
Interior Lighting	Linear Fluorescent	100.0%	25,574	25,574	2,557
Exterior Lighting	Screw-in	100.0%	4,648	4,648	465
Exterior Lighting	HID	100.0%	4,293	4,293	429
Exterior Lighting	Linear Fluorescent	100.0%	3,303	3,303	330
Motors	Pumps	100.0%	101,061	101,061	10,106
Motors	Fans & Blowers	100.0%	142,219	142,219	14,222
Motors	Compressed Air	100.0%	25,599	25,599	2,560
Motors	Conveyors	100.0%	588,786	588,786	58,879
Motors	Other Motors	100.0%	9,187	9,187	919
Process	Process Heating	100.0%	310,066	310,066	31,007
Process	Process Cooling	100.0%	19,027	19,027	1,903
Process	Process Refrigeration	100.0%	19,027	19,027	1,903
Process	Process Electro-Chemical	100.0%	5,336	5,336	534
Process	Process Other	100.0%	63,248	63,248	6,325
Miscellaneous	Miscellaneous	100.0%	49,360	49,360	4,936
	<b>Total</b>			<b>1,506,477</b>	<b>150,648</b>

**Table A-305 Wyoming Stone Clay Glass Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	48,068	2,703
Cooling	Water-Cooled Chiller	2.8%	47,810	1,361
Cooling	RTU	4.3%	39,967	1,708
Cooling	Air-Source Heat Pump	2.3%	63,358	1,469
Cooling	Geothermal Heat Pump	0.0%	34,291	-
Heating	Electric Furnace	1.6%	579,705	9,422
Heating	Electric Zonal Heating	8.8%	552,100	48,535
Heating	Air-Source Heat Pump	2.3%	339,823	7,880
Heating	Geothermal Heat Pump	0.0%	188,091	-
Ventilation	Ventilation	100.0%	4,085	4,085
Interior Lighting	Screw-in	100.0%	3,954	3,954
Interior Lighting	High-Bay Fixtures	100.0%	42,357	42,357
Interior Lighting	Linear Fluorescent	100.0%	22,647	22,647
Exterior Lighting	Screw-in	100.0%	3,515	3,515
Exterior Lighting	HID	100.0%	5,520	5,520
Exterior Lighting	Linear Fluorescent	100.0%	2,925	2,925
Motors	Pumps	100.0%	101,061	101,061
Motors	Fans & Blowers	100.0%	142,219	142,219
Motors	Compressed Air	100.0%	25,599	25,599
Motors	Conveyors	100.0%	588,786	588,786
Motors	Other Motors	100.0%	9,187	9,187
Process	Process Heating	100.0%	310,066	310,066
Process	Process Cooling	100.0%	19,027	19,027
Process	Process Refrigeration	100.0%	19,027	19,027
Process	Process Electro-Chemical	100.0%	5,336	5,336
Process	Process Other	100.0%	63,248	63,248
Miscellaneous	Miscellaneous	100.0%	49,360	49,360

**Table A-306 Wyoming Transportation Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	7,153	402	40
Cooling	Water-Cooled Chiller	2.8%	7,366	210	21
Cooling	RTU	4.3%	7,636	326	33
Cooling	Air-Source Heat Pump	2.3%	7,634	177	18
Cooling	Geothermal Heat Pump	0.0%	5,092	-	-
Heating	Electric Furnace	1.6%	51,035	829	83
Heating	Electric Zonal Heating	8.8%	48,604	4,273	427
Heating	Air-Source Heat Pump	2.3%	46,191	1,071	107
Heating	Geothermal Heat Pump	0.0%	30,810	-	-
Ventilation	Ventilation	100.0%	1,144	1,144	114
Interior Lighting	Screw-in	100.0%	529	529	53
Interior Lighting	High-Bay Fixtures	100.0%	2,589	2,589	259
Interior Lighting	Linear Fluorescent	100.0%	1,995	1,995	200
Exterior Lighting	Screw-in	100.0%	363	363	36
Exterior Lighting	HID	100.0%	335	335	33
Exterior Lighting	Linear Fluorescent	100.0%	258	258	26
Motors	Pumps	0.0%	2,498	-	-
Motors	Fans & Blowers	100.0%	1,763	1,763	176
Motors	Compressed Air	100.0%	588	588	59
Motors	Conveyors	100.0%	12,047	12,047	1,205
Motors	Other Motors	100.0%	882	882	88
Process	Process Heating	100.0%	5,684	5,684	568
Process	Process Cooling	100.0%	1,255	1,255	125
Process	Process Refrigeration	100.0%	1,255	1,255	125
Process	Process Electro-Chemical	100.0%	682	682	68
Process	Process Other	100.0%	1,531	1,531	153
Miscellaneous	Miscellaneous	100.0%	2,498	2,498	250
	<b>Total</b>			<b>42,684</b>	<b>4,268</b>



**Table A-307 Wyoming Transportation Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	4,232	238
Cooling	Water-Cooled Chiller	2.8%	4,209	120
Cooling	RTU	4.3%	3,518	150
Cooling	Air-Source Heat Pump	2.3%	5,578	129
Cooling	Geothermal Heat Pump	0.0%	3,019	-
Heating	Electric Furnace	1.6%	51,035	829
Heating	Electric Zonal Heating	8.8%	48,604	4,273
Heating	Air-Source Heat Pump	2.3%	29,916	694
Heating	Geothermal Heat Pump	0.0%	16,559	-
Ventilation	Ventilation	100.0%	360	360
Interior Lighting	Screw-in	100.0%	308	308
Interior Lighting	High-Bay Fixtures	100.0%	3,305	3,305
Interior Lighting	Linear Fluorescent	100.0%	1,767	1,767
Exterior Lighting	Screw-in	100.0%	274	274
Exterior Lighting	HID	100.0%	431	431
Exterior Lighting	Linear Fluorescent	100.0%	228	228
Motors	Pumps	100.0%	2,498	2,498
Motors	Fans & Blowers	100.0%	1,763	1,763
Motors	Compressed Air	100.0%	588	588
Motors	Conveyors	100.0%	12,047	12,047
Motors	Other Motors	100.0%	882	882
Process	Process Heating	100.0%	5,684	5,684
Process	Process Cooling	0.0%	1,255	-
Process	Process Refrigeration	100.0%	1,255	1,255
Process	Process Electro-Chemical	100.0%	682	682
Process	Process Other	100.0%	1,531	1,531
Miscellaneous	Miscellaneous	100.0%	2,498	2,498

**Table A-308 Wyoming Wastewater Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	9,095	511	51
Cooling	Water-Cooled Chiller	2.8%	9,365	267	27
Cooling	RTU	4.3%	9,708	415	41
Cooling	Air-Source Heat Pump	2.3%	9,706	225	23
Cooling	Geothermal Heat Pump	0.0%	6,474	-	-
Heating	Electric Furnace	1.6%	64,887	1,055	105
Heating	Electric Zonal Heating	8.8%	61,797	5,433	543
Heating	Air-Source Heat Pump	2.3%	58,729	1,362	136
Heating	Geothermal Heat Pump	0.0%	39,172	-	-
Ventilation	Ventilation	100.0%	1,454	1,454	145
Interior Lighting	Screw-in	100.0%	860	860	86
Interior Lighting	High-Bay Fixtures	100.0%	4,213	4,213	421
Interior Lighting	Linear Fluorescent	100.0%	3,247	3,247	325
Exterior Lighting	Screw-in	100.0%	590	590	59
Exterior Lighting	HID	100.0%	545	545	55
Exterior Lighting	Linear Fluorescent	100.0%	419	419	42
Motors	Pumps	100.0%	53,013	53,013	5,301
Motors	Fans & Blowers	100.0%	130,518	130,518	13,052
Motors	Compressed Air	100.0%	2,792	2,792	279
Motors	Conveyors	100.0%	12,472	12,472	1,247
Motors	Other Motors	100.0%	3,909	3,909	391
Process	Process Heating	0.0%	6,107	-	-
Process	Process Cooling	0.0%	6,107	-	-
Process	Process Refrigeration	0.0%	6,107	-	-
Process	Process Electro-Chemical	0.0%	6,107	-	-
Process	Process Other	100.0%	10,336	10,336	1,034
Miscellaneous	Miscellaneous	100.0%	6,107	6,107	611
	<b>Total</b>			<b>239,743</b>	<b>23,974</b>

**Table A-309 Wyoming Wastewater New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	5,380	303
Cooling	Water-Cooled Chiller	2.8%	5,351	152
Cooling	RTU	4.3%	4,474	191
Cooling	Air-Source Heat Pump	2.3%	7,092	164
Cooling	Geothermal Heat Pump	0.0%	3,838	-
Heating	Electric Furnace	1.6%	64,887	1,055
Heating	Electric Zonal Heating	8.8%	61,797	5,433
Heating	Air-Source Heat Pump	2.3%	38,037	882
Heating	Geothermal Heat Pump	0.0%	21,053	-
Ventilation	Ventilation	100.0%	457	457
Interior Lighting	Screw-in	100.0%	502	502
Interior Lighting	High-Bay Fixtures	100.0%	5,378	5,378
Interior Lighting	Linear Fluorescent	100.0%	2,875	2,875
Exterior Lighting	Screw-in	100.0%	446	446
Exterior Lighting	HID	100.0%	701	701
Exterior Lighting	Linear Fluorescent	100.0%	371	371
Motors	Pumps	0.0%	53,013	-
Motors	Fans & Blowers	0.0%	130,518	-
Motors	Compressed Air	0.0%	2,792	-
Motors	Conveyors	0.0%	12,472	-
Motors	Other Motors	100.0%	3,909	3,909
Process	Process Heating	100.0%	6,107	6,107
Process	Process Cooling	100.0%	6,107	6,107
Process	Process Refrigeration	100.0%	6,107	6,107
Process	Process Electro-Chemical	100.0%	6,107	6,107
Process	Process Other	100.0%	10,336	10,336
Miscellaneous	Miscellaneous	100.0%	6,107	6,107

**Table A-310 Wyoming Water Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	6,564	369	74
Cooling	Water-Cooled Chiller	2.8%	6,759	192	38
Cooling	RTU	4.3%	7,007	300	60
Cooling	Air-Source Heat Pump	2.3%	7,005	162	32
Cooling	Geothermal Heat Pump	0.0%	4,672	-	-
Heating	Electric Furnace	1.6%	46,831	761	152
Heating	Electric Zonal Heating	8.8%	44,601	3,921	784
Heating	Air-Source Heat Pump	2.3%	42,387	983	197
Heating	Geothermal Heat Pump	0.0%	28,272	-	-
Ventilation	Ventilation	100.0%	1,050	1,050	210
Interior Lighting	Screw-in	100.0%	621	621	124
Interior Lighting	High-Bay Fixtures	100.0%	3,041	3,041	608
Interior Lighting	Linear Fluorescent	100.0%	2,344	2,344	469
Exterior Lighting	Screw-in	100.0%	426	426	85
Exterior Lighting	HID	100.0%	393	393	79
Exterior Lighting	Linear Fluorescent	100.0%	303	303	61
Motors	Pumps	100.0%	138,221	138,221	27,644
Motors	Fans & Blowers	0.0%	4,408	-	-
Motors	Compressed Air	100.0%	2,015	2,015	403
Motors	Conveyors	100.0%	5,997	5,997	1,199
Motors	Other Motors	100.0%	67	67	13
Process	Process Heating	0.0%	4,408	-	-
Process	Process Cooling	0.0%	4,408	-	-
Process	Process Refrigeration	0.0%	4,408	-	-
Process	Process Electro-Chemical	0.0%	4,408	-	-
Process	Process Other	100.0%	7,460	7,460	1,492
Miscellaneous	Miscellaneous	100.0%	4,408	4,408	882
	<b>Total</b>			<b>173,033</b>	<b>34,607</b>

**Table A-311 Wyoming Water New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)
Cooling	Air-Cooled Chiller	5.6%	3,883	218
Cooling	Water-Cooled Chiller	2.8%	3,862	110
Cooling	RTU	4.3%	3,229	138
Cooling	Air-Source Heat Pump	2.3%	5,118	119
Cooling	Geothermal Heat Pump	0.0%	2,770	-
Heating	Electric Furnace	1.6%	46,831	761
Heating	Electric Zonal Heating	8.8%	44,601	3,921
Heating	Air-Source Heat Pump	2.3%	27,453	637
Heating	Geothermal Heat Pump	0.0%	15,195	-
Ventilation	Ventilation	100.0%	330	330
Interior Lighting	Screw-in	100.0%	362	362
Interior Lighting	High-Bay Fixtures	100.0%	3,881	3,881
Interior Lighting	Linear Fluorescent	100.0%	2,075	2,075
Exterior Lighting	Screw-in	100.0%	322	322
Exterior Lighting	HID	100.0%	506	506
Exterior Lighting	Linear Fluorescent	100.0%	268	268
Motors	Pumps	0.0%	138,221	-
Motors	Fans & Blowers	0.0%	4,408	-
Motors	Compressed Air	0.0%	2,015	-
Motors	Conveyors	0.0%	5,997	-
Motors	Other Motors	100.0%	67	67
Process	Process Heating	0.0%	4,408	-
Process	Process Cooling	100.0%	4,408	4,408
Process	Process Refrigeration	100.0%	4,408	4,408
Process	Process Electro-Chemical	100.0%	4,408	4,408
Process	Process Other	100.0%	7,460	7,460
Miscellaneous	Miscellaneous	100.0%	4,408	4,408

**Table A-312 Wyoming Chemical Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	78,589	4,419	1,177
Cooling	Water-Cooled Chiller	2.8%	80,922	2,304	613
Cooling	RTU	4.3%	83,886	3,586	955
Cooling	Air-Source Heat Pump	2.3%	83,866	1,945	518
Cooling	Geothermal Heat Pump	0.0%	55,939	-	-
Heating	Electric Furnace	1.6%	560,679	9,112	2,426
Heating	Electric Zonal Heating	8.8%	533,980	46,942	12,500
Heating	Air-Source Heat Pump	2.3%	507,471	11,767	3,133
Heating	Geothermal Heat Pump	0.0%	338,483	-	-
Ventilation	Ventilation	100.0%	12,566	12,566	3,346
Interior Lighting	Screw-in	100.0%	5,073	5,073	1,351
Interior Lighting	High-Bay Fixtures	100.0%	24,850	24,850	6,617
Interior Lighting	Linear Fluorescent	100.0%	19,152	19,152	5,100
Exterior Lighting	Screw-in	100.0%	3,481	3,481	927
Exterior Lighting	HID	100.0%	3,215	3,215	856
Exterior Lighting	Linear Fluorescent	100.0%	2,474	2,474	659
Motors	Pumps	100.0%	192,581	192,581	51,280
Motors	Fans & Blowers	100.0%	53,495	53,495	14,244
Motors	Compressed Air	100.0%	213,979	213,979	56,977
Motors	Conveyors	100.0%	374,462	374,462	99,710
Motors	Other Motors	100.0%	32,097	32,097	8,547
Process	Process Heating	100.0%	101,298	101,298	26,973
Process	Process Cooling	100.0%	56,845	56,845	15,136
Process	Process Refrigeration	100.0%	56,845	56,845	15,136
Process	Process Electro-Chemical	100.0%	290,902	290,902	77,460
Process	Process Other	100.0%	18,102	18,102	4,820
Miscellaneous	Miscellaneous	100.0%	44,744	44,744	11,914
	<b>Total</b>			<b>1,586,234</b>	<b>422,375</b>

**Table A-313 Wyoming Chemical Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	46,491	2,614
Cooling	Water-Cooled Chiller	2.8%	46,241	1,316
Cooling	RTU	4.3%	38,655	1,652
Cooling	Air-Source Heat Pump	2.3%	61,278	1,421
Cooling	Geothermal Heat Pump	0.0%	33,166	-
Heating	Electric Furnace	1.6%	560,679	9,112
Heating	Electric Zonal Heating	8.8%	533,980	46,942
Heating	Air-Source Heat Pump	2.3%	328,670	7,621
Heating	Geothermal Heat Pump	0.0%	181,917	-
Ventilation	Ventilation	100.0%	3,951	3,951
Interior Lighting	Screw-in	100.0%	2,961	2,961
Interior Lighting	High-Bay Fixtures	100.0%	31,720	31,720
Interior Lighting	Linear Fluorescent	100.0%	16,960	16,960
Exterior Lighting	Screw-in	100.0%	2,632	2,632
Exterior Lighting	HID	100.0%	4,134	4,134
Exterior Lighting	Linear Fluorescent	100.0%	2,190	2,190
Motors	Pumps	100.0%	192,581	192,581
Motors	Fans & Blowers	100.0%	53,495	53,495
Motors	Compressed Air	100.0%	213,979	213,979
Motors	Conveyors	100.0%	374,462	374,462
Motors	Other Motors	100.0%	32,097	32,097
Process	Process Heating	100.0%	101,298	101,298
Process	Process Cooling	100.0%	56,845	56,845
Process	Process Refrigeration	100.0%	56,845	56,845
Process	Process Electro-Chemical	100.0%	290,902	290,902
Process	Process Other	100.0%	18,102	18,102
Miscellaneous	Miscellaneous	100.0%	44,744	44,744

**Table A-314 Wyoming Electronic Equipment Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	41,542	2,336	175
Cooling	Water-Cooled Chiller	2.8%	42,775	1,218	91
Cooling	RTU	4.3%	44,342	1,895	142
Cooling	Air-Source Heat Pump	2.3%	44,331	1,028	77
Cooling	Geothermal Heat Pump	0.0%	29,569	-	-
Heating	Electric Furnace	1.6%	296,373	4,817	361
Heating	Electric Zonal Heating	8.8%	282,260	24,813	1,861
Heating	Air-Source Heat Pump	2.3%	268,248	6,220	467
Heating	Geothermal Heat Pump	0.0%	178,921	-	-
Ventilation	Ventilation	100.0%	6,642	6,642	498
Interior Lighting	Screw-in	100.0%	1,737	1,737	130
Interior Lighting	High-Bay Fixtures	100.0%	8,510	8,510	638
Interior Lighting	Linear Fluorescent	100.0%	6,559	6,559	492
Exterior Lighting	Screw-in	100.0%	1,192	1,192	89
Exterior Lighting	HID	100.0%	1,101	1,101	83
Exterior Lighting	Linear Fluorescent	100.0%	847	847	64
Motors	Pumps	100.0%	2,488	2,488	187
Motors	Fans & Blowers	100.0%	3,981	3,981	299
Motors	Compressed Air	100.0%	7,202	7,202	540
Motors	Conveyors	100.0%	22,516	22,516	1,689
Motors	Other Motors	0.0%	14,798	-	-
Process	Process Heating	100.0%	18,787	18,787	1,409
Process	Process Cooling	100.0%	8,724	8,724	654
Process	Process Refrigeration	100.0%	8,724	8,724	654
Process	Process Electro-Chemical	100.0%	3,278	3,278	246
Process	Process Other	100.0%	16,495	16,495	1,237
Miscellaneous	Miscellaneous	100.0%	14,798	14,798	1,110
	<b>Total</b>			<b>175,907</b>	<b>13,193</b>



**Table A-315 Wyoming Electronic Equipment Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	24,575	1,382
Cooling	Water-Cooled Chiller	2.8%	24,443	696
Cooling	RTU	4.3%	20,433	873
Cooling	Air-Source Heat Pump	2.3%	32,392	751
Cooling	Geothermal Heat Pump	0.0%	17,531	-
Heating	Electric Furnace	1.6%	296,373	4,817
Heating	Electric Zonal Heating	8.8%	282,260	24,813
Heating	Air-Source Heat Pump	2.3%	173,734	4,028
Heating	Geothermal Heat Pump	0.0%	96,161	-
Ventilation	Ventilation	100.0%	2,088	2,088
Interior Lighting	Screw-in	100.0%	1,014	1,014
Interior Lighting	High-Bay Fixtures	100.0%	10,863	10,863
Interior Lighting	Linear Fluorescent	100.0%	5,808	5,808
Exterior Lighting	Screw-in	100.0%	901	901
Exterior Lighting	HID	100.0%	1,416	1,416
Exterior Lighting	Linear Fluorescent	100.0%	750	750
Motors	Pumps	100.0%	2,488	2,488
Motors	Fans & Blowers	100.0%	3,981	3,981
Motors	Compressed Air	100.0%	7,202	7,202
Motors	Conveyors	100.0%	22,516	22,516
Motors	Other Motors	100.0%	14,798	14,798
Process	Process Heating	100.0%	18,787	18,787
Process	Process Cooling	100.0%	8,724	8,724
Process	Process Refrigeration	100.0%	8,724	8,724
Process	Process Electro-Chemical	100.0%	3,278	3,278
Process	Process Other	0.0%	16,495	-
Miscellaneous	Miscellaneous	100.0%	14,798	14,798

**Table A-316 Wyoming Industrial Machinery Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	11,329	637	191
Cooling	Water-Cooled Chiller	2.8%	11,665	332	100
Cooling	RTU	4.3%	12,093	517	155
Cooling	Air-Source Heat Pump	2.3%	12,090	280	84
Cooling	Geothermal Heat Pump	0.0%	8,064	-	-
Heating	Electric Furnace	1.6%	80,825	1,314	394
Heating	Electric Zonal Heating	8.8%	76,976	6,767	2,030
Heating	Air-Source Heat Pump	2.3%	73,155	1,696	509
Heating	Geothermal Heat Pump	0.0%	48,794	-	-
Ventilation	Ventilation	100.0%	1,811	1,811	543
Interior Lighting	Screw-in	100.0%	707	707	212
Interior Lighting	High-Bay Fixtures	100.0%	3,463	3,463	1,039
Interior Lighting	Linear Fluorescent	100.0%	2,669	2,669	801
Exterior Lighting	Screw-in	100.0%	485	485	146
Exterior Lighting	HID	100.0%	448	448	134
Exterior Lighting	Linear Fluorescent	100.0%	345	345	103
Motors	Pumps	100.0%	2,952	2,952	885
Motors	Fans & Blowers	100.0%	6,869	6,869	2,061
Motors	Compressed Air	100.0%	5,850	5,850	1,755
Motors	Conveyors	100.0%	9,470	9,470	2,841
Motors	Other Motors	0.0%	4,100	-	-
Process	Process Heating	100.0%	3,913	3,913	1,174
Process	Process Cooling	100.0%	766	766	230
Process	Process Refrigeration	100.0%	766	766	230
Process	Process Electro-Chemical	100.0%	519	519	156
Process	Process Other	100.0%	1,746	1,746	524
Miscellaneous	Miscellaneous	100.0%	4,100	4,100	1,230
	<b>Total</b>			<b>58,423</b>	<b>17,527</b>

**Table A-317 Wyoming Industrial Machinery New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	6,702	377
Cooling	Water-Cooled Chiller	2.8%	6,666	190
Cooling	RTU	4.3%	5,572	238
Cooling	Air-Source Heat Pump	2.3%	8,834	205
Cooling	Geothermal Heat Pump	0.0%	4,781	-
Heating	Electric Furnace	1.6%	80,825	1,314
Heating	Electric Zonal Heating	8.8%	76,976	6,767
Heating	Air-Source Heat Pump	2.3%	47,380	1,099
Heating	Geothermal Heat Pump	0.0%	26,224	-
Ventilation	Ventilation	100.0%	570	570
Interior Lighting	Screw-in	100.0%	413	413
Interior Lighting	High-Bay Fixtures	100.0%	4,421	4,421
Interior Lighting	Linear Fluorescent	100.0%	2,364	2,364
Exterior Lighting	Screw-in	100.0%	367	367
Exterior Lighting	HID	100.0%	576	576
Exterior Lighting	Linear Fluorescent	100.0%	305	305
Motors	Pumps	100.0%	2,952	2,952
Motors	Fans & Blowers	100.0%	6,869	6,869
Motors	Compressed Air	100.0%	5,850	5,850
Motors	Conveyors	100.0%	9,470	9,470
Motors	Other Motors	100.0%	4,100	4,100
Process	Process Heating	100.0%	3,913	3,913
Process	Process Cooling	100.0%	766	766
Process	Process Refrigeration	100.0%	766	766
Process	Process Electro-Chemical	100.0%	519	519
Process	Process Other	0.0%	1,746	-
Miscellaneous	Miscellaneous	100.0%	4,100	4,100

**Table A-318 Wyoming Lumber & Wood Products Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	4,521	254	25
Cooling	Water-Cooled Chiller	2.8%	4,656	133	13
Cooling	RTU	4.3%	4,826	206	21
Cooling	Air-Source Heat Pump	2.3%	4,825	112	11
Cooling	Geothermal Heat Pump	0.0%	3,218	-	-
Heating	Electric Furnace	1.6%	32,257	524	52
Heating	Electric Zonal Heating	8.8%	30,721	2,701	270
Heating	Air-Source Heat Pump	2.3%	29,196	677	68
Heating	Geothermal Heat Pump	0.0%	19,474	-	-
Ventilation	Ventilation	100.0%	723	723	72
Interior Lighting	Screw-in	100.0%	672	672	67
Interior Lighting	High-Bay Fixtures	100.0%	3,291	3,291	329
Interior Lighting	Linear Fluorescent	100.0%	2,537	2,537	254
Exterior Lighting	Screw-in	100.0%	461	461	46
Exterior Lighting	HID	100.0%	426	426	43
Exterior Lighting	Linear Fluorescent	100.0%	328	328	33
Motors	Pumps	0.0%	4,990	-	-
Motors	Fans & Blowers	100.0%	10,555	10,555	1,055
Motors	Compressed Air	100.0%	12,824	12,824	1,282
Motors	Conveyors	100.0%	54,694	54,694	5,469
Motors	Other Motors	100.0%	4,798	4,798	480
Process	Process Heating	100.0%	9,469	9,469	947
Process	Process Cooling	100.0%	703	703	70
Process	Process Refrigeration	100.0%	703	703	70
Process	Process Electro-Chemical	100.0%	817	817	82
Process	Process Other	100.0%	589	589	59
Miscellaneous	Miscellaneous	100.0%	4,990	4,990	499
	<b>Total</b>			<b>113,184</b>	<b>11,318</b>

**Table A-319 Wyoming Lumber & Wood Products New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	2,675	150
Cooling	Water-Cooled Chiller	2.8%	2,660	76
Cooling	RTU	4.3%	2,224	95
Cooling	Air-Source Heat Pump	2.3%	3,525	82
Cooling	Geothermal Heat Pump	0.0%	1,908	-
Heating	Electric Furnace	1.6%	32,257	524
Heating	Electric Zonal Heating	8.8%	30,721	2,701
Heating	Air-Source Heat Pump	2.3%	18,909	438
Heating	Geothermal Heat Pump	0.0%	10,466	-
Ventilation	Ventilation	100.0%	227	227
Interior Lighting	Screw-in	100.0%	392	392
Interior Lighting	High-Bay Fixtures	100.0%	4,201	4,201
Interior Lighting	Linear Fluorescent	100.0%	2,246	2,246
Exterior Lighting	Screw-in	100.0%	349	349
Exterior Lighting	HID	100.0%	547	547
Exterior Lighting	Linear Fluorescent	100.0%	290	290
Motors	Pumps	100.0%	4,990	4,990
Motors	Fans & Blowers	100.0%	10,555	10,555
Motors	Compressed Air	100.0%	12,824	12,824
Motors	Conveyors	100.0%	54,694	54,694
Motors	Other Motors	100.0%	4,798	4,798
Process	Process Heating	100.0%	9,469	9,469
Process	Process Cooling	0.0%	703	-
Process	Process Refrigeration	100.0%	703	703
Process	Process Electro-Chemical	100.0%	817	817
Process	Process Other	100.0%	589	589
Miscellaneous	Miscellaneous	100.0%	4,990	4,990

**Table A-320 Wyoming Metal Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	10,039	565	169
Cooling	Water-Cooled Chiller	2.8%	10,337	294	88
Cooling	RTU	4.3%	10,716	458	137
Cooling	Air-Source Heat Pump	2.3%	10,713	248	75
Cooling	Geothermal Heat Pump	0.0%	7,146	-	-
Heating	Electric Furnace	1.6%	71,624	1,164	349
Heating	Electric Zonal Heating	8.8%	68,213	5,997	1,799
Heating	Air-Source Heat Pump	2.3%	64,827	1,503	451
Heating	Geothermal Heat Pump	0.0%	43,239	-	-
Ventilation	Ventilation	100.0%	1,605	1,605	482
Interior Lighting	Screw-in	100.0%	926	926	278
Interior Lighting	High-Bay Fixtures	100.0%	4,538	4,538	1,361
Interior Lighting	Linear Fluorescent	100.0%	3,497	3,497	1,049
Exterior Lighting	Screw-in	100.0%	636	636	191
Exterior Lighting	HID	100.0%	587	587	176
Exterior Lighting	Linear Fluorescent	100.0%	452	452	136
Motors	Pumps	0.0%	4,388	-	-
Motors	Fans & Blowers	100.0%	6,395	6,395	1,919
Motors	Compressed Air	100.0%	2,132	2,132	640
Motors	Conveyors	100.0%	43,693	43,693	13,108
Motors	Other Motors	100.0%	3,198	3,198	959
Process	Process Heating	100.0%	21,507	21,507	6,452
Process	Process Cooling	100.0%	1,902	1,902	571
Process	Process Refrigeration	100.0%	1,902	1,902	571
Process	Process Electro-Chemical	100.0%	3,621	3,621	1,086
Process	Process Other	100.0%	4,641	4,641	1,392
Miscellaneous	Miscellaneous	100.0%	4,388	4,388	1,316
<b>Total</b>				<b>115,850</b>	<b>34,755</b>

**Table A-321 Wyoming Metal Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	5,939	334
Cooling	Water-Cooled Chiller	2.8%	5,907	168
Cooling	RTU	4.3%	4,938	211
Cooling	Air-Source Heat Pump	2.3%	7,828	182
Cooling	Geothermal Heat Pump	0.0%	4,237	-
Heating	Electric Furnace	1.6%	71,624	1,164
Heating	Electric Zonal Heating	8.8%	68,213	5,997
Heating	Air-Source Heat Pump	2.3%	41,986	974
Heating	Geothermal Heat Pump	0.0%	23,239	-
Ventilation	Ventilation	100.0%	505	505
Interior Lighting	Screw-in	100.0%	541	541
Interior Lighting	High-Bay Fixtures	100.0%	5,792	5,792
Interior Lighting	Linear Fluorescent	100.0%	3,097	3,097
Exterior Lighting	Screw-in	100.0%	481	481
Exterior Lighting	HID	100.0%	755	755
Exterior Lighting	Linear Fluorescent	100.0%	400	400
Motors	Pumps	100.0%	4,388	4,388
Motors	Fans & Blowers	100.0%	6,395	6,395
Motors	Compressed Air	100.0%	2,132	2,132
Motors	Conveyors	100.0%	43,693	43,693
Motors	Other Motors	100.0%	3,198	3,198
Process	Process Heating	100.0%	21,507	21,507
Process	Process Cooling	0.0%	1,902	-
Process	Process Refrigeration	100.0%	1,902	1,902
Process	Process Electro-Chemical	100.0%	3,621	3,621
Process	Process Other	100.0%	4,641	4,641
Miscellaneous	Miscellaneous	100.0%	4,388	4,388

**Table A-322 Wyoming Miscellaneous Manufacturing Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Employee)	Usage (MWh)
Cooling	Air-Cooled Chiller	5.6%	15,204	855	427
Cooling	Water-Cooled Chiller	2.8%	15,655	446	223
Cooling	RTU	4.3%	16,229	694	347
Cooling	Air-Source Heat Pump	2.3%	16,225	376	188
Cooling	Geothermal Heat Pump	0.0%	10,822	-	-
Heating	Electric Furnace	1.6%	108,471	1,763	881
Heating	Electric Zonal Heating	8.8%	103,305	9,082	4,541
Heating	Air-Source Heat Pump	2.3%	98,177	2,276	1,138
Heating	Geothermal Heat Pump	0.0%	65,484	-	-
Ventilation	Ventilation	100.0%	2,431	2,431	1,216
Interior Lighting	Screw-in	100.0%	1,021	1,021	511
Interior Lighting	High-Bay Fixtures	100.0%	5,002	5,002	2,501
Interior Lighting	Linear Fluorescent	100.0%	3,855	3,855	1,928
Exterior Lighting	Screw-in	100.0%	701	701	350
Exterior Lighting	HID	100.0%	647	647	324
Exterior Lighting	Linear Fluorescent	100.0%	498	498	249
Motors	Pumps	100.0%	4,559	4,559	2,280
Motors	Fans & Blowers	100.0%	5,475	5,475	2,738
Motors	Compressed Air	100.0%	4,427	4,427	2,214
Motors	Conveyors	100.0%	9,364	9,364	4,682
Motors	Other Motors	100.0%	157	157	79
Process	Process Heating	100.0%	7,709	7,709	3,855
Process	Process Cooling	100.0%	2,024	2,024	1,012
Process	Process Refrigeration	100.0%	2,024	2,024	1,012
Process	Process Electro-Chemical	100.0%	779	779	390
Process	Process Other	100.0%	846	846	423
Miscellaneous	Miscellaneous	100.0%	4,652	4,652	2,326
	<b>Total</b>			<b>71,663</b>	<b>35,832</b>



**Table A-323 Wyoming Miscellaneous Manufacturing New Construction Market Profile**

<b>End Use</b>	<b>Technology</b>	<b>Saturation</b>	<b>EUI (kWh)</b>	<b>Intensity (kWh/Employee)</b>
Cooling	Air-Cooled Chiller	5.6%	8,994	506
Cooling	Water-Cooled Chiller	2.8%	8,946	255
Cooling	RTU	4.3%	7,478	320
Cooling	Air-Source Heat Pump	2.3%	11,855	275
Cooling	Geothermal Heat Pump	0.0%	6,416	-
Heating	Electric Furnace	1.6%	108,471	1,763
Heating	Electric Zonal Heating	8.8%	103,305	9,082
Heating	Air-Source Heat Pump	2.3%	63,585	1,474
Heating	Geothermal Heat Pump	0.0%	35,194	-
Ventilation	Ventilation	100.0%	764	764
Interior Lighting	Screw-in	100.0%	596	596
Interior Lighting	High-Bay Fixtures	100.0%	6,385	6,385
Interior Lighting	Linear Fluorescent	100.0%	3,414	3,414
Exterior Lighting	Screw-in	100.0%	530	530
Exterior Lighting	HID	100.0%	832	832
Exterior Lighting	Linear Fluorescent	100.0%	441	441
Motors	Pumps	100.0%	4,559	4,559
Motors	Fans & Blowers	100.0%	5,475	5,475
Motors	Compressed Air	100.0%	4,427	4,427
Motors	Conveyors	100.0%	9,364	9,364
Motors	Other Motors	100.0%	157	157
Process	Process Heating	100.0%	7,709	7,709
Process	Process Cooling	100.0%	2,024	2,024
Process	Process Refrigeration	100.0%	2,024	2,024
Process	Process Electro-Chemical	100.0%	779	779
Process	Process Other	100.0%	846	846
Miscellaneous	Miscellaneous	100.0%	4,652	4,652

## Irrigation Market Profiles

**Table A-324 California Irrigation Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	100.0%	16,014.79	16,014.79	29.40
Motors	Pumps (100 HP+)	100.0%	36,464.16	36,464.16	66.95
Motors	Other Motors	100.0%	217.13	217.13	0.40
<b>Total</b>				<b>52,696.1</b>	<b>96.8</b>

**Table A-325 California Irrigation New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	100.0%	15,984.64	15,984.64
Motors	Pumps (100 HP+)	100.0%	36,124.78	36,124.78
Motors	Other Motors	100.0%	214.56	214.56

**Table A-326 Idaho Irrigation Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	100.0%	7,604.00	7,604.00	36.65
Motors	Pumps (100 HP+)	100.0%	127,688.17	127,688.17	615.50
Motors	Other Motors	100.0%	219.21	219.21	1.06
<b>Total</b>				<b>135,511.4</b>	<b>653.2</b>

**Table A-327 Idaho Irrigation New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	100.0%	7,589.68	7,589.68
Motors	Pumps (100 HP+)	100.0%	126,499.76	126,499.76
Motors	Other Motors	100.0%	216.61	216.61

**Table A-328 Utah Irrigation Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	100.0%	11,267.96	11,267.96	32.11
Motors	Pumps (100 HP+)	100.0%	69,057.57	69,057.57	196.82
Motors	Other Motors	100.0%	198.43	198.43	0.57
<b>Total</b>				<b>80,524.0</b>	<b>229.5</b>

**Table A-329 Utah Irrigation New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	100.0%	11,246.75	11,246.75
Motors	Pumps (100 HP+)	100.0%	68,414.84	68,414.84
Motors	Other Motors	100.0%	196.08	196.08

**Table A-330 Washington Irrigation Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	100.0%	19,963.52	19,963.52	103.09
Motors	Pumps (100 HP+)	100.0%	9,320.68	9,320.68	48.13
Motors	Other Motors	100.0%	232.66	232.66	1.20
<b>Total</b>				<b>29,516.9</b>	<b>152.4</b>

**Table A-331 Washington Irrigation New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	100.0%	19,925.95	19,925.95
Motors	Pumps (100 HP+)	100.0%	9,233.94	9,233.94
Motors	Other Motors	100.0%	229.90	229.90

**Table A-332 Wyoming Irrigation Existing Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)	Usage (GWh)
Motors	Pumps (< 100 HP)	100.0%	10,750.90	10,750.90	7.31
Motors	Pumps (100 HP+)	100.0%	30,288.40	30,288.40	20.60
Motors	Other Motors	100.0%	151.87	151.87	0.10
<b>Total</b>				<b>41,191.2</b>	<b>28.0</b>

**Table A-333 Wyoming Irrigation New Construction Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/SP)
Motors	Pumps (< 100 HP)	100.0%	10,730.67	10,730.67
Motors	Pumps (100 HP+)	100.0%	30,006.50	30,006.50
Motors	Other Motors	100.0%	150.07	150.07

## Street Lighting Market Profiles

**Table A-334 California Company Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	441.54	441.54	457
Street Lighting	150W Fixture	100%	1,005.75	1,005.75	212
Street Lighting	250W Fixture	100%	1,258.68	1,258.68	3
Street Lighting	400W Fixture	100%	2,013.89	2,013.89	6
Street Lighting	1000W Fixture	100%	-	-	-
<b>Total</b>				<b>4,719.86</b>	<b>678</b>

**Table A-335 California Customer Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	493.69	493.69	680
Street Lighting	150W Fixture	100%	955.00	955.00	488
Street Lighting	250W Fixture	100%	1,506.13	1,506.13	419
Street Lighting	400W Fixture	100%	2,136.78	2,136.78	96
Street Lighting	1000W Fixture	100%	-	-	-
<b>Total</b>				<b>5,091.6</b>	<b>1,683</b>

**Table A-336 Idaho Company Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	421.94	421.94	43
Street Lighting	150W Fixture	100%	646.34	646.34	3
Street Lighting	250W Fixture	100%	1,077.24	1,077.24	15
Street Lighting	400W Fixture	100%	1,723.58	1,723.58	9
Street Lighting	1000W Fixture	100%	-	-	-
<b>Total</b>					<b>70</b>

**Table A-337 Idaho Customer Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	426.54	426.54	1,347
Street Lighting	150W Fixture	100%	694.50	694.50	156
Street Lighting	250W Fixture	100%	1,157.50	1,157.50	497
Street Lighting	400W Fixture	100%	1,852.01	1,852.01	422
Street Lighting	1000W Fixture	100%	-	-	-
<b>Total</b>					<b>2,422</b>

**Table A-338 Idaho Other Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	150W Fixture	100%	625.05	625.05	159
<b>Total</b>					<b>159</b>

**Table A-339 Utah Company Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	467.53	467.53	9,943
Street Lighting	150W Fixture	100%	765.31	765.31	2,172
Street Lighting	250W Fixture	100%	1,218.54	1,218.54	2,762
Street Lighting	400W Fixture	100%	1,949.99	1,949.99	1,917
Street Lighting	1000W Fixture	100%	-	-	-
<b>Total</b>					<b>16,794</b>

**Table A-340 Utah Customer Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	423.62	423.62	1,347
Street Lighting	150W Fixture	100%	743.82	743.82	13,950
Street Lighting	250W Fixture	100%	1,225.68	1,225.68	9,825
Street Lighting	400W Fixture	100%	1,944.57	1,944.57	17,462
Street Lighting	1000W Fixture	100%	4,861.12	4,861.12	3,374
<b>Total</b>					<b>45,958</b>

**Table A-341 Utah Other Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	150W Fixture	100%	639.88	639.88	4,832
<b>Total</b>					<b>4,832</b>

**Table A-342** *Washington Company Owned Street Lighting Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	472.38	472.38	1,315
Street Lighting	150W Fixture	100%	1,015.98	1,015.98	3,397
Street Lighting	250W Fixture	100%	1,361.51	1,361.51	184
Street Lighting	400W Fixture	100%	2,171.13	2,171.13	1,053
Street Lighting	1000W Fixture	100%	-	-	-
<b>Total</b>					<b>5,949</b>

**Table A-343** *Washington Customer Owned Street Lighting Market Profile*

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	486.25	486.25	635
Street Lighting	150W Fixture	100%	1,047.31	1,047.31	1,762
Street Lighting	250W Fixture	100%	1,487.12	1,487.12	1,144
Street Lighting	400W Fixture	100%	2,169.73	2,169.73	645
Street Lighting	1000W Fixture	100%	5,340.88	5,340.88	175
<b>Total</b>					<b>4,361</b>



**Table A-344 Wyoming Company Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	426.76	426.76	3,020
Street Lighting	150W Fixture	100%	828.65	828.65	5,619
Street Lighting	250W Fixture	100%	1,140.13	1,140.13	673
Street Lighting	400W Fixture	100%	1,824.20	1,824.20	1,233
Street Lighting	1000W Fixture	100%	4,560.51	4,560.51	5
<b>Total</b>					<b>10,550</b>

**Table A-345 Wyoming Customer Owned Street Lighting Market Profile**

End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	100W Fixture	100%	404.17	404.17	19
Street Lighting	150W Fixture	100%	985.89	985.89	123
Street Lighting	250W Fixture	100%	1,418.13	1,418.13	258
Street Lighting	400W Fixture	100%	2,269.01	2,269.01	858
Street Lighting	1000W Fixture	100%	5,672.53	5,672.53	17
<b>Total</b>					<b>1,275</b>

**Table A-346 Wyoming Other Street Lighting Market Profile**

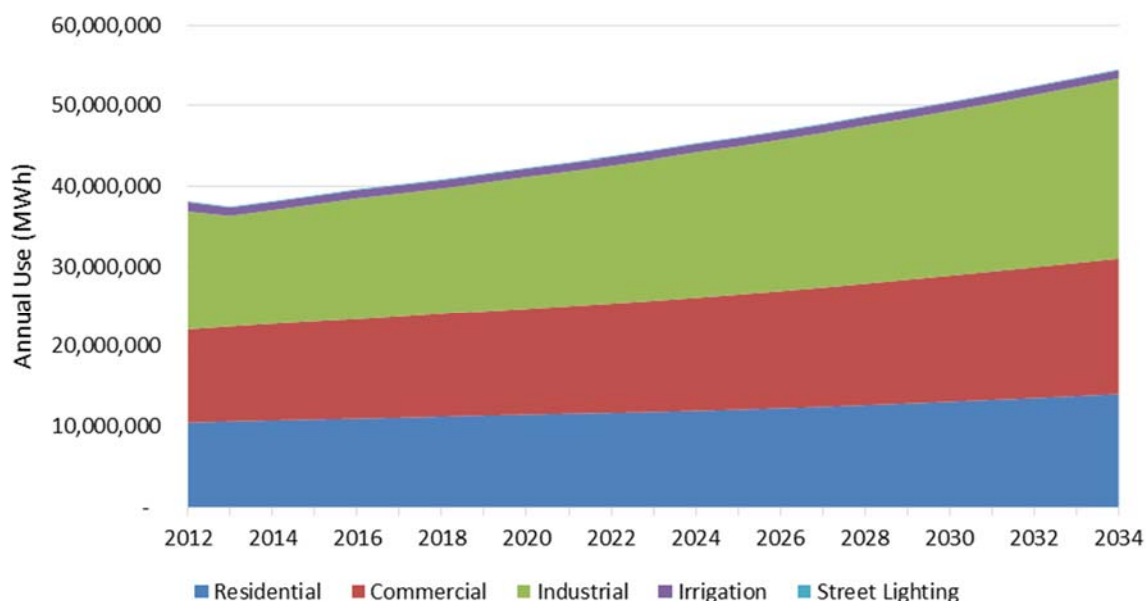
End Use	Technology	Saturation	EUI (kWh)	Intensity (kWh/Fixt)	Usage (MWh)
Street Lighting	150W Fixture	100%	756.55	756.55	95
<b>Total</b>					<b>95</b>

## Baseline Projections

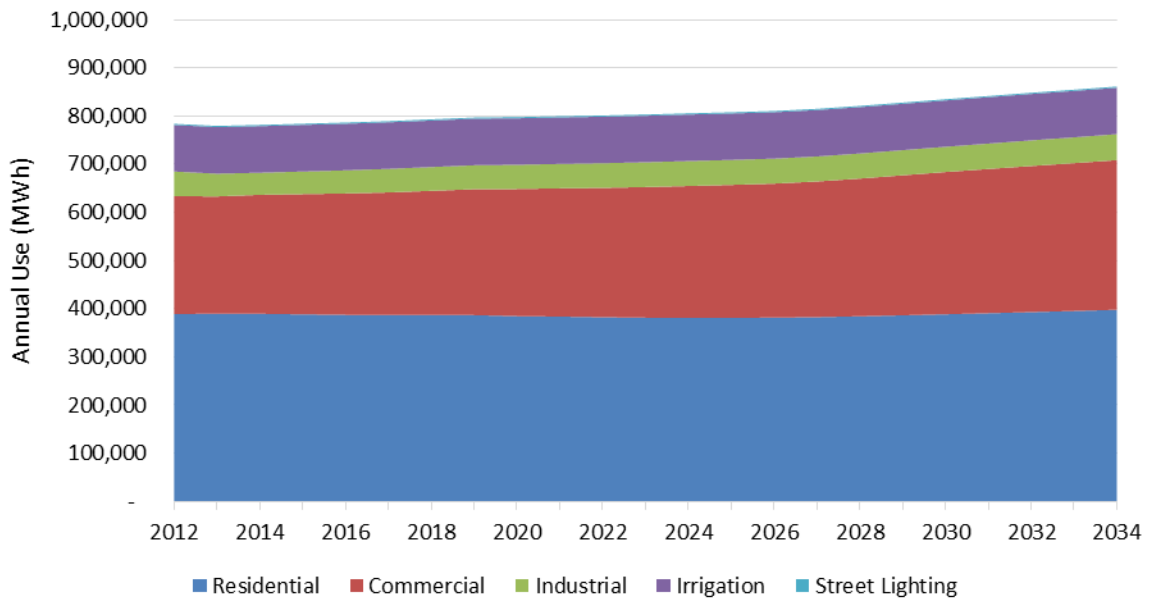
As mentioned in the analysis approach section of Volume 2 of this report, prior to developing estimates of energy-efficiency potential, AEG developed baseline projections of annual electricity use for 2012 through 2034 by state, sector, customer segment and end use without new utility DSM programs. These baseline projections are provided below.

### Baseline Projections by State and Sector

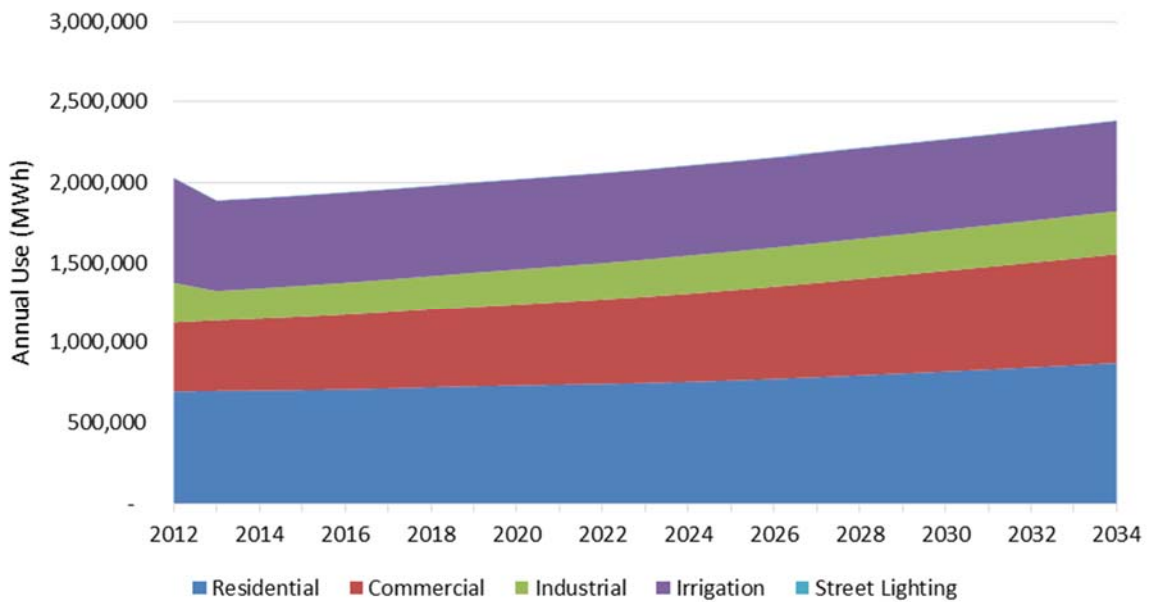
**Figure B-1 Overall Baseline Projection by Sector (MWh)**



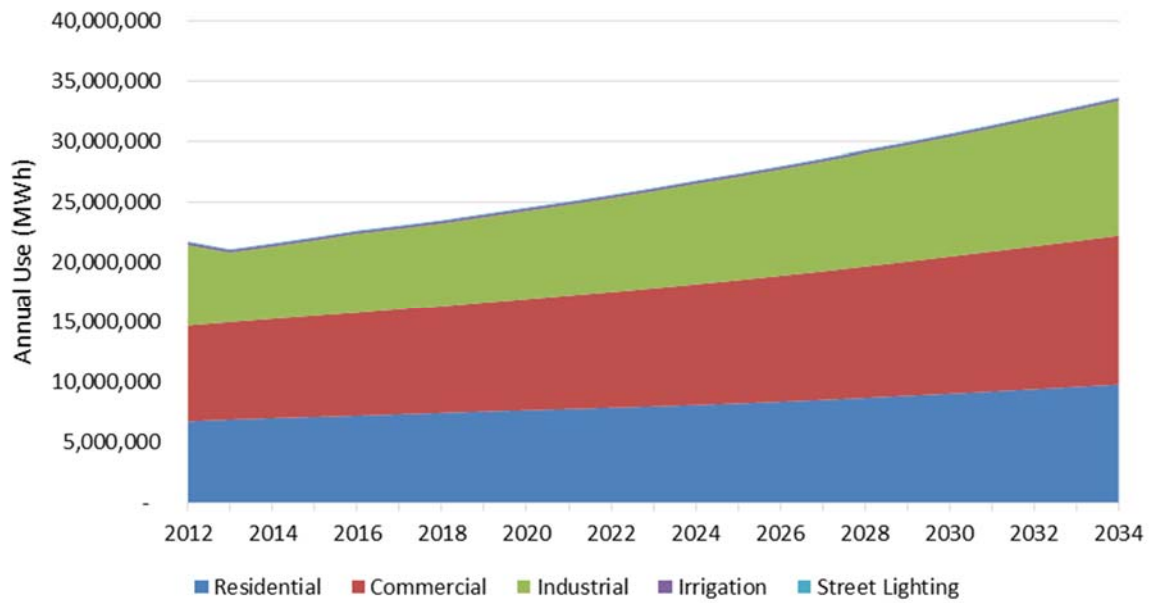
**Figure B-2 California Baseline Projection by Sector (MWh)**



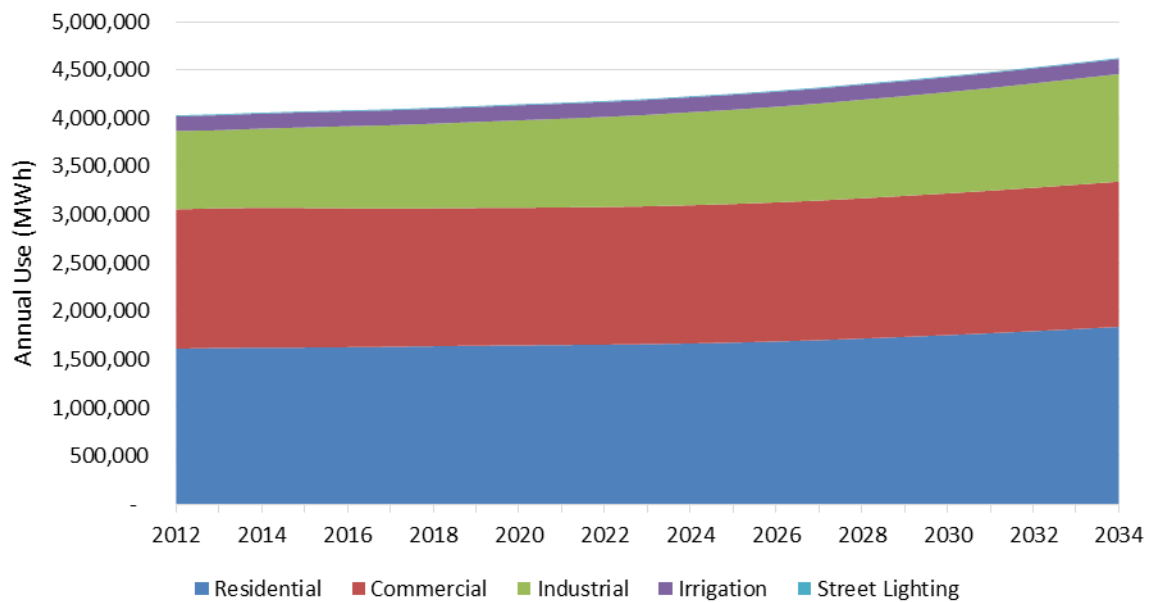
**Figure B-3 Idaho Baseline Projection by Sector (MWh)**



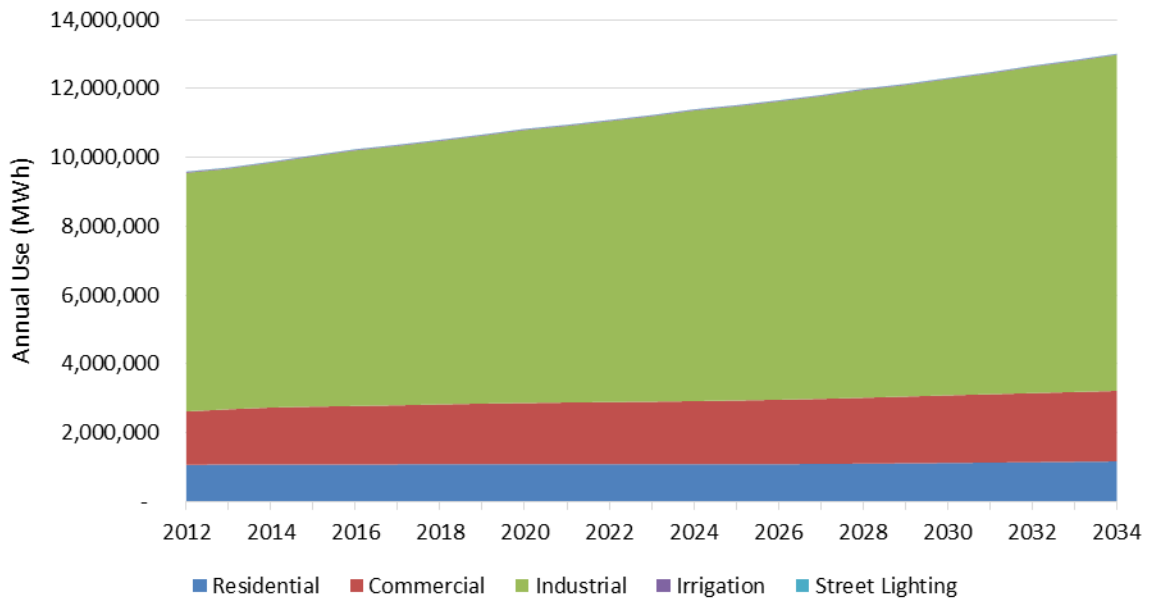
**Figure B-4 Utah Baseline Projection by Sector (MWh)**



**Figure B-5 Washington Baseline Projection by Sector (MWh)**

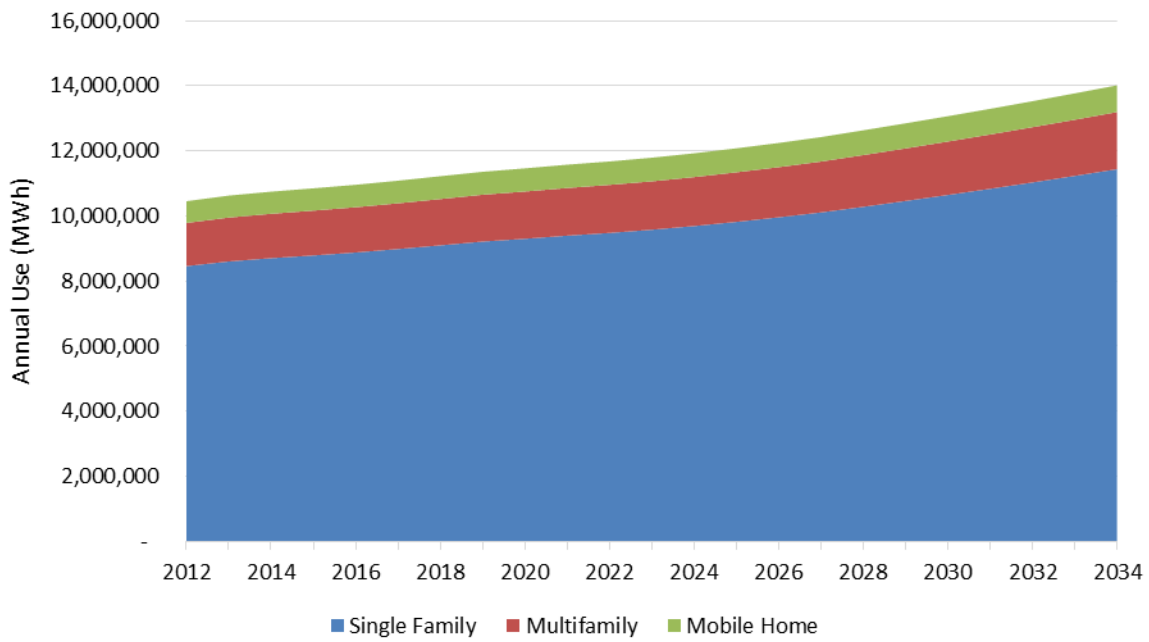


**Figure B-6 Wyoming Baseline Projection by Sector (MWh)**

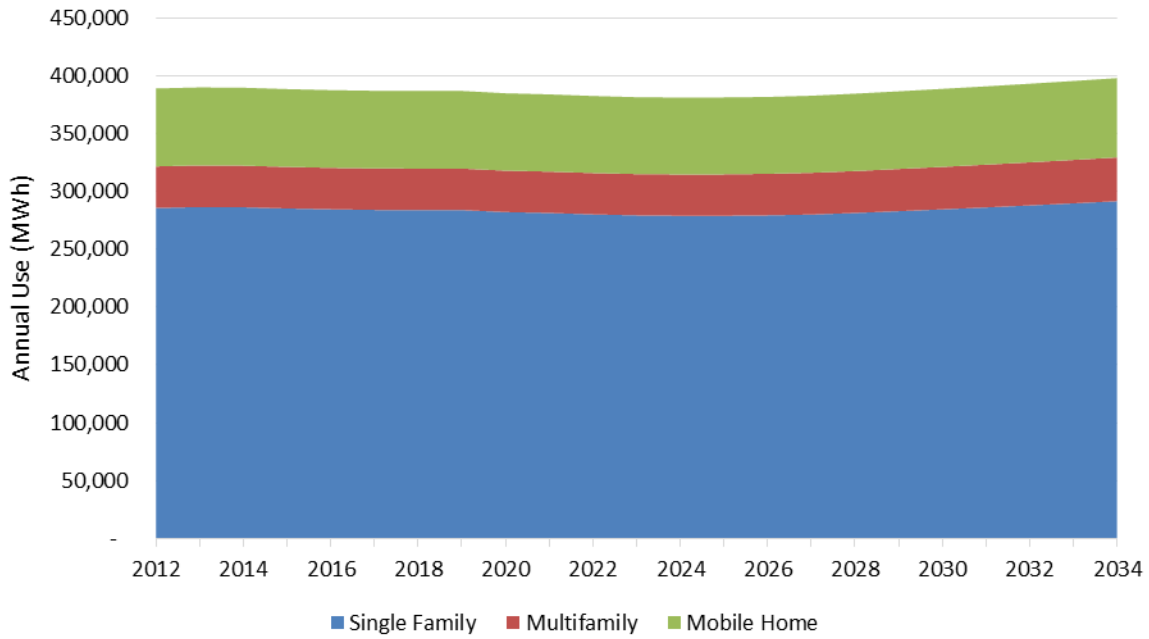


## Baseline Projections by State, Sector, and Segment

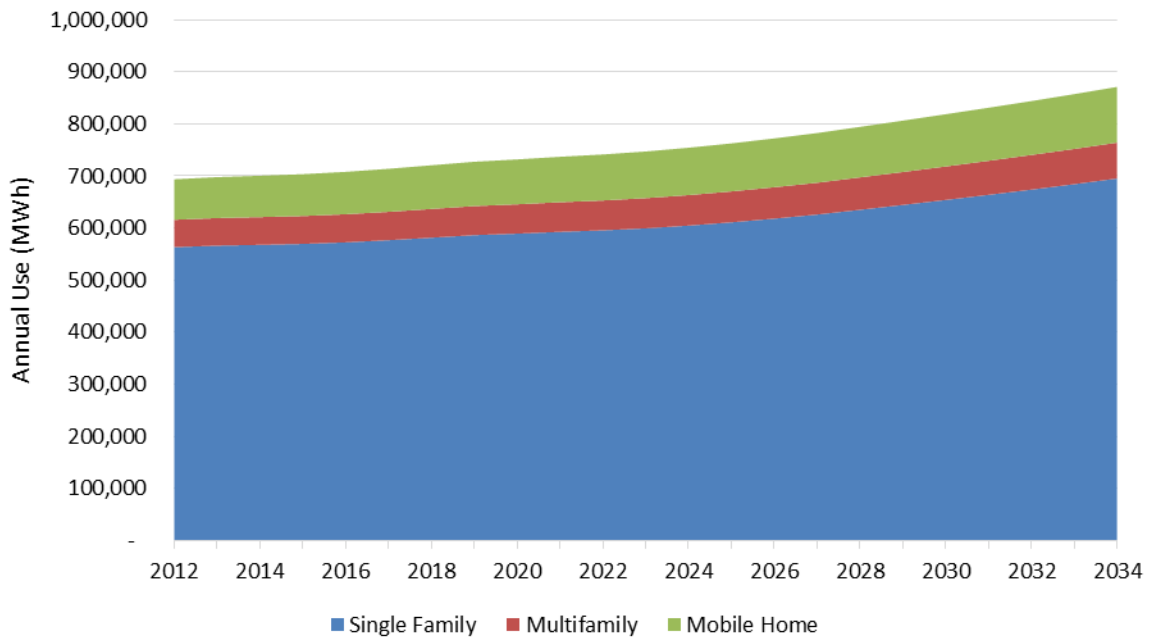
**Figure B-7 Overall Residential Baseline Projection by Segment (MWh)**



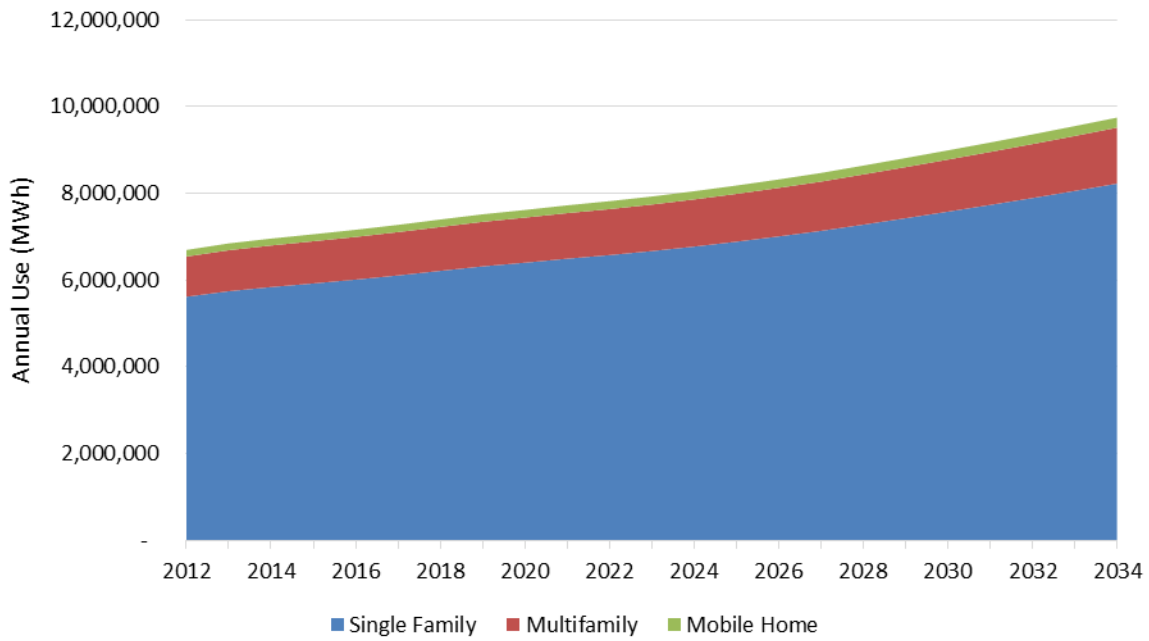
**Figure B-8 California Residential Baseline Projection by Segment (MWh)**



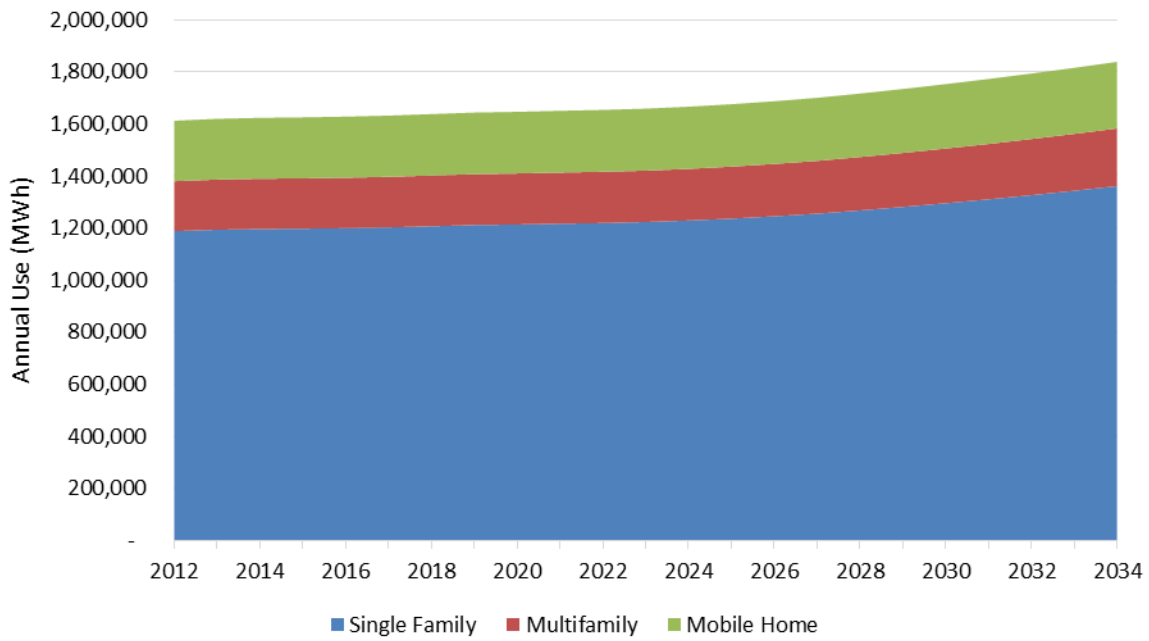
**Figure B-9 Idaho Residential Baseline Projection by Segment (MWh)**



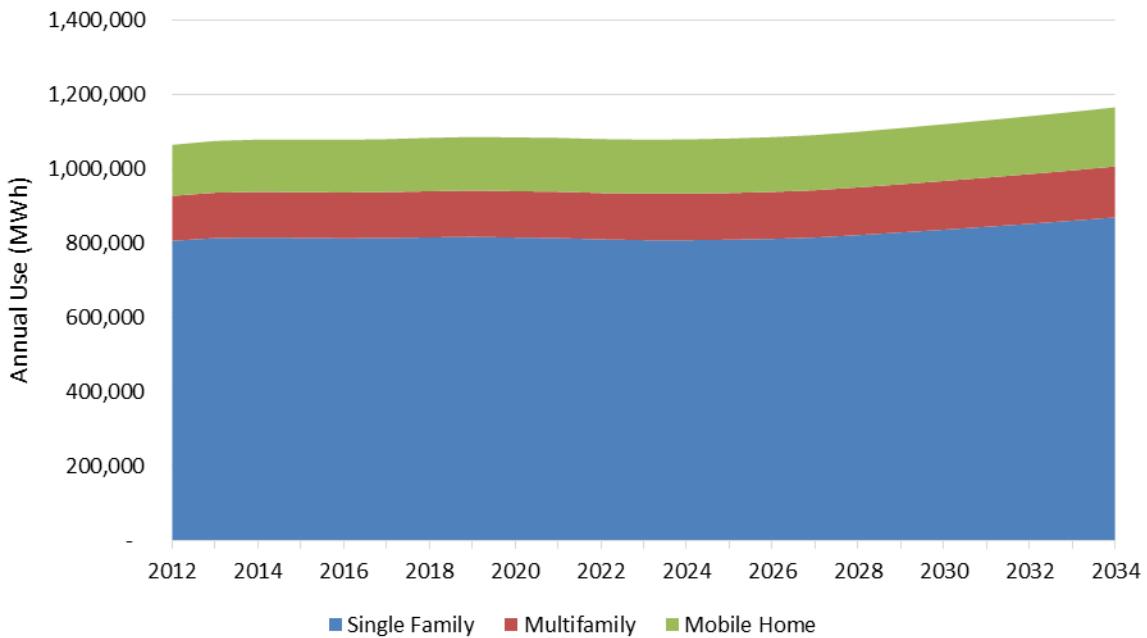
**Figure B-10 Utah Residential Baseline Projection by Segment (MWh)**



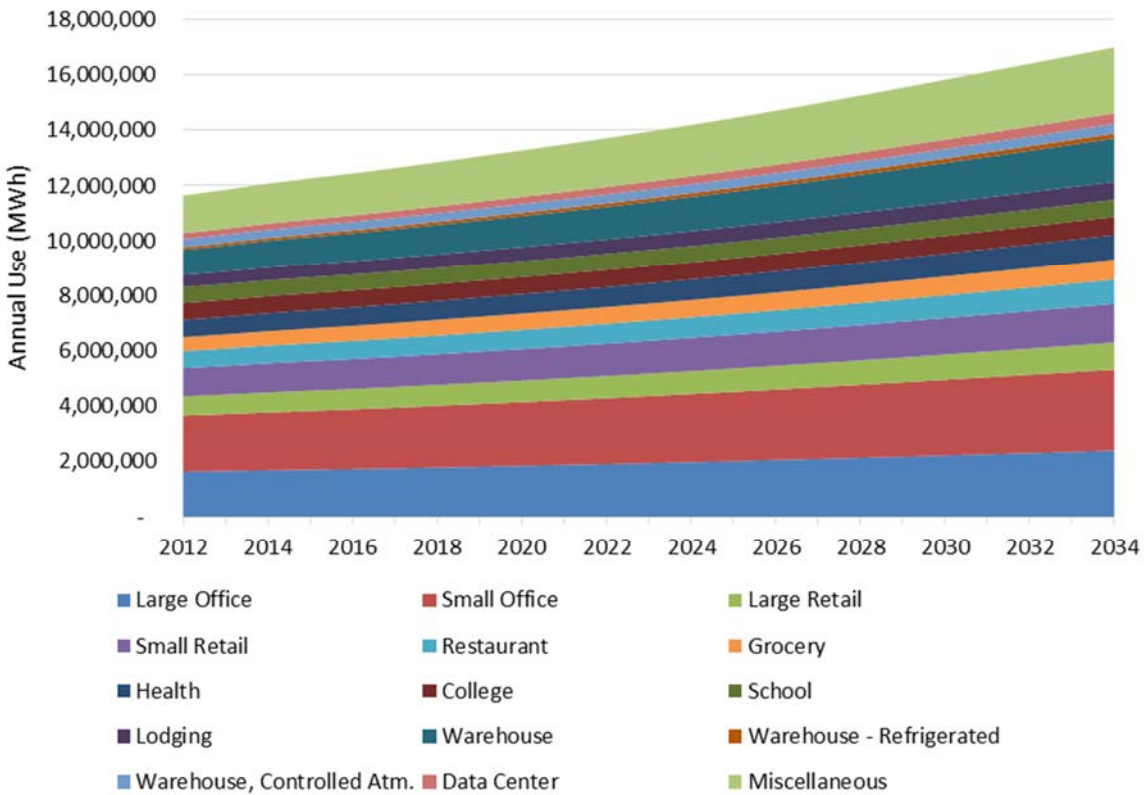
**Figure B-11 Washington Residential Baseline Projection by Segment (MWh)**



**Figure B-12 Wyoming Residential Baseline Projection by Segment (MWh)**

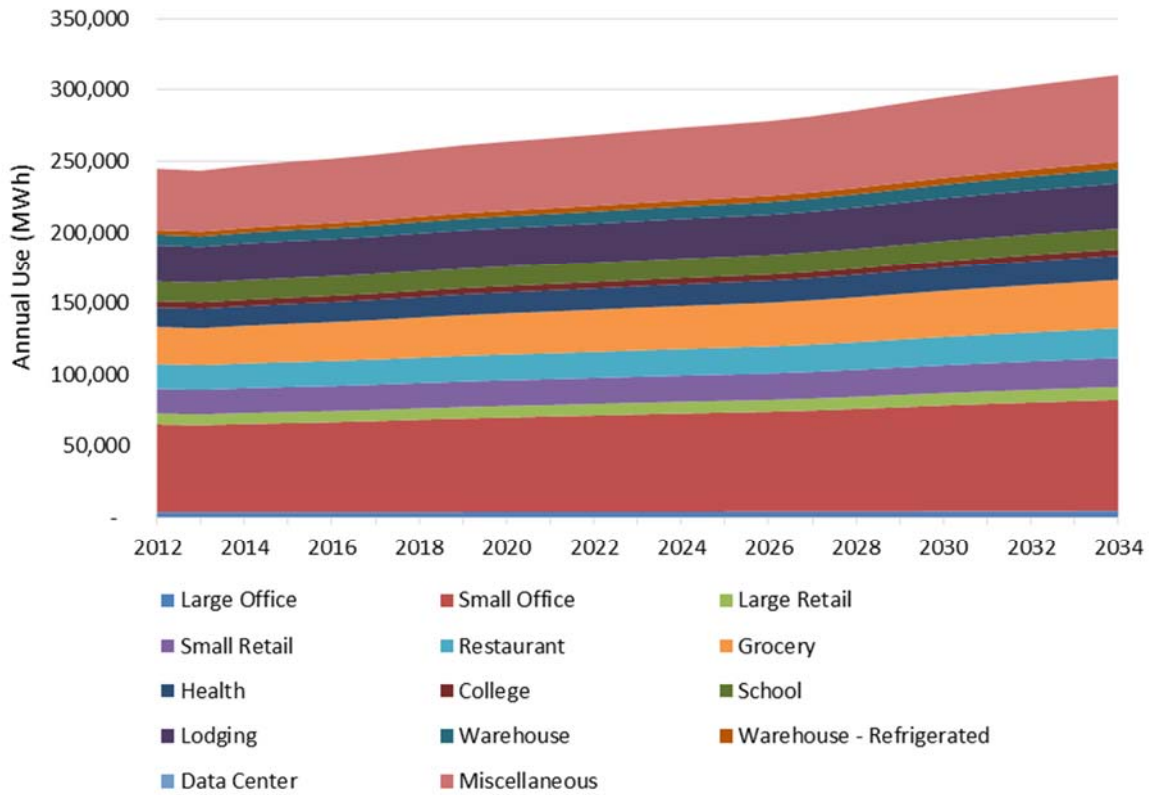


**Figure B-13 Overall Commercial Baseline Projection by Segment (MWh)**

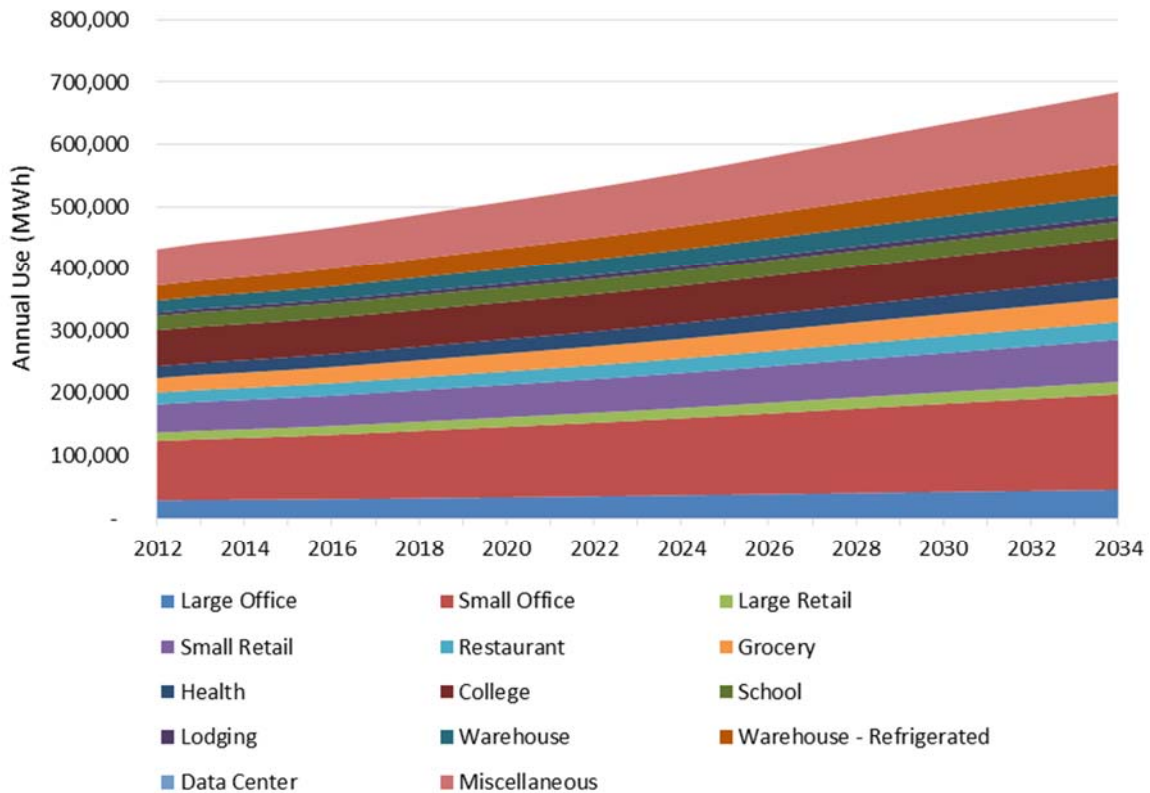




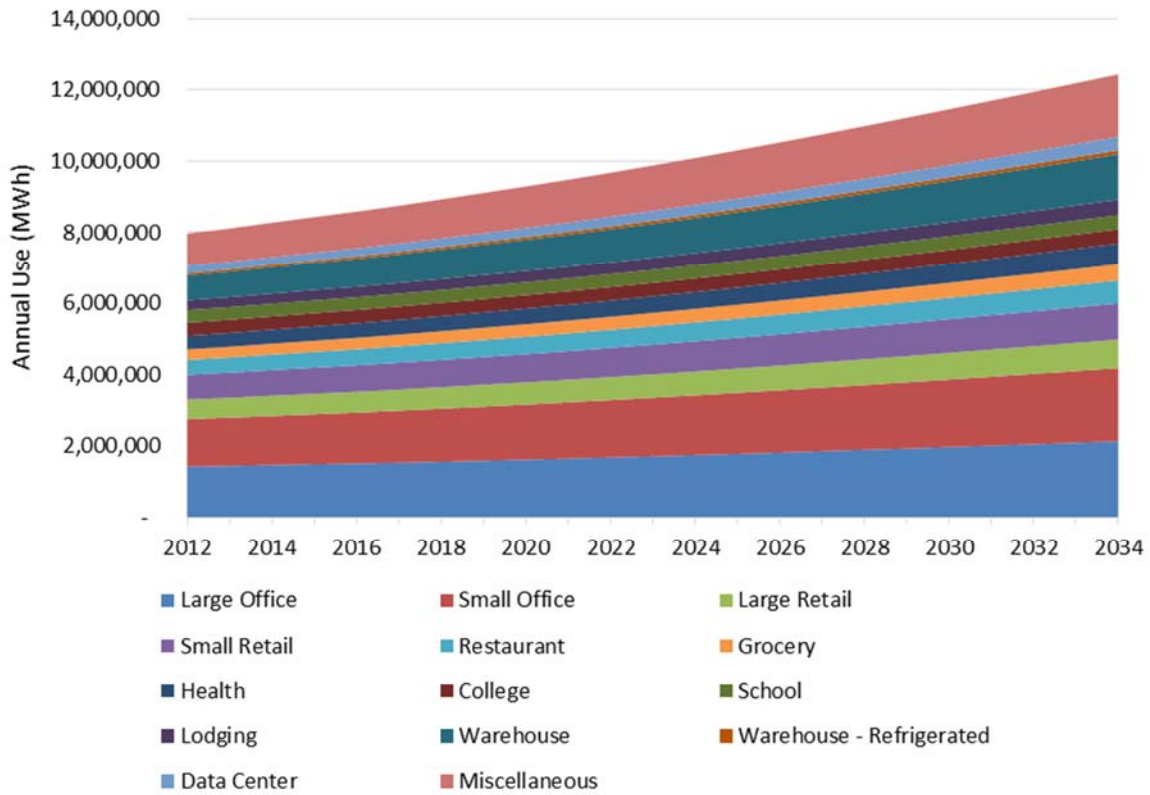
**Figure B-14 California Commercial Baseline Projection by Segment (MWh)**



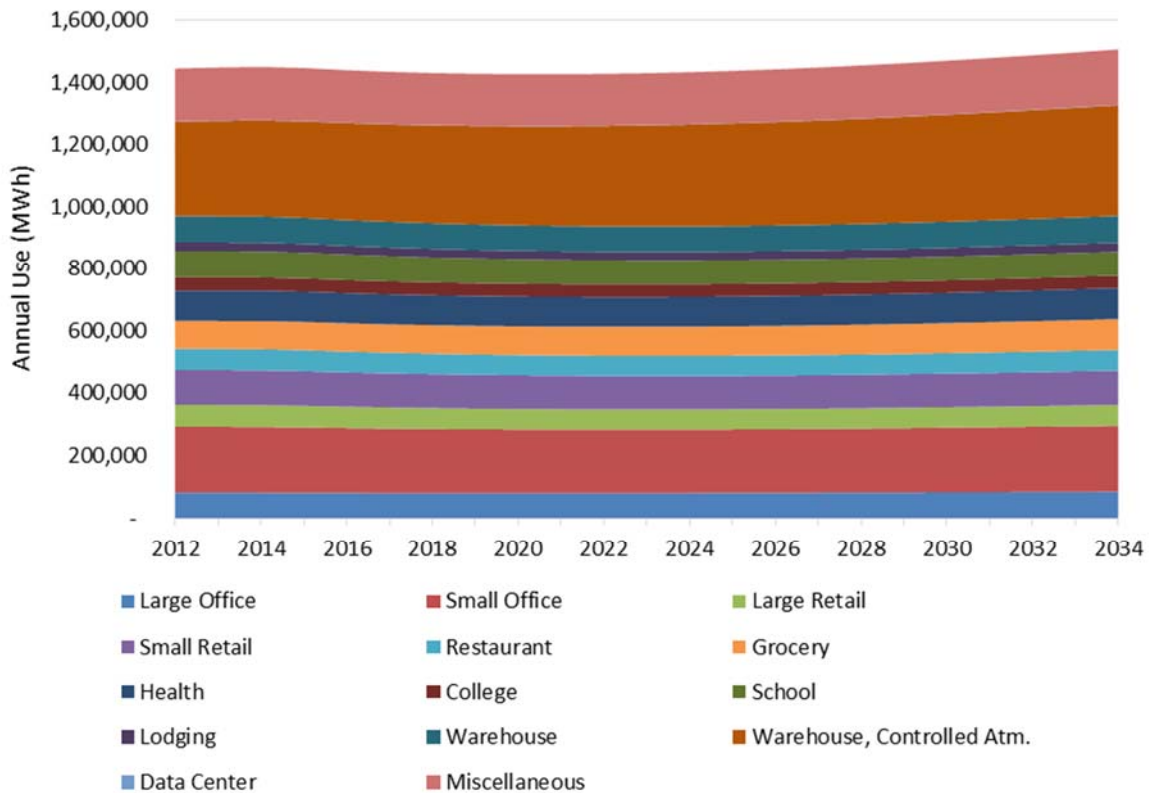
**Figure B-15 Idaho Commercial Baseline Projection by Segment (MWh)**



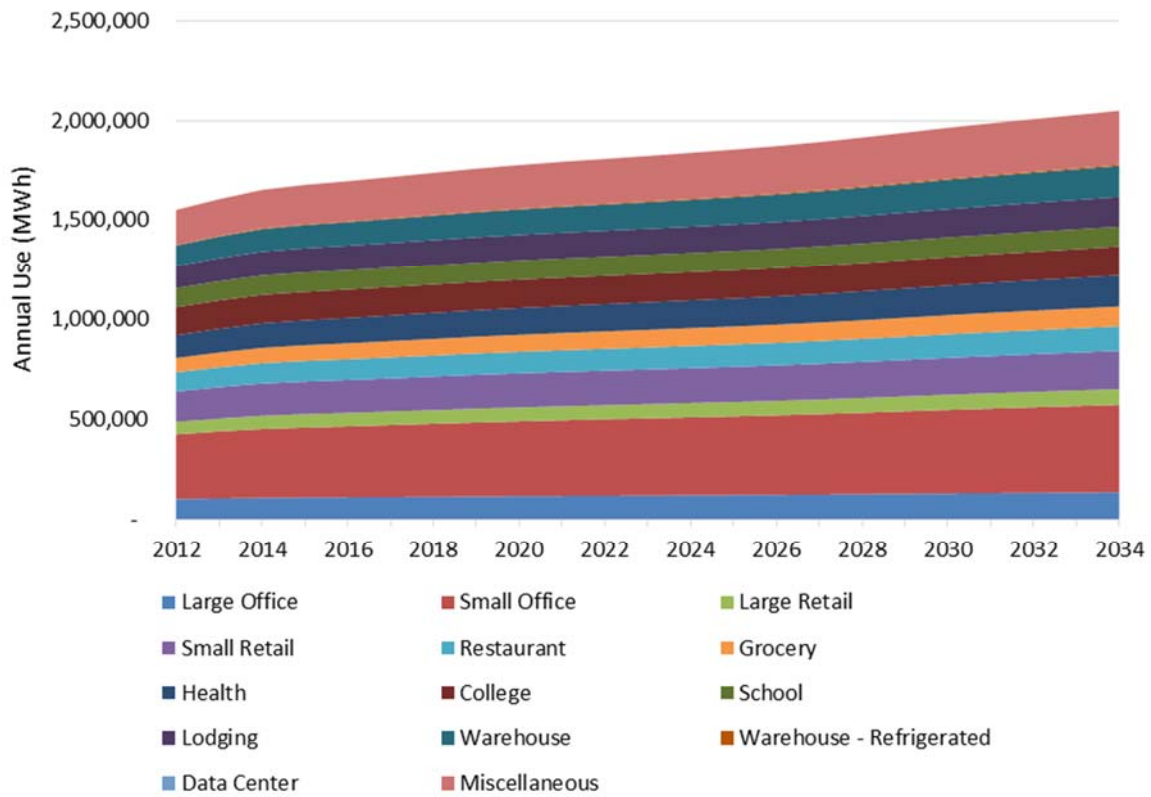
**Figure B-16 Utah Commercial Baseline Projection by Segment (MWh)**



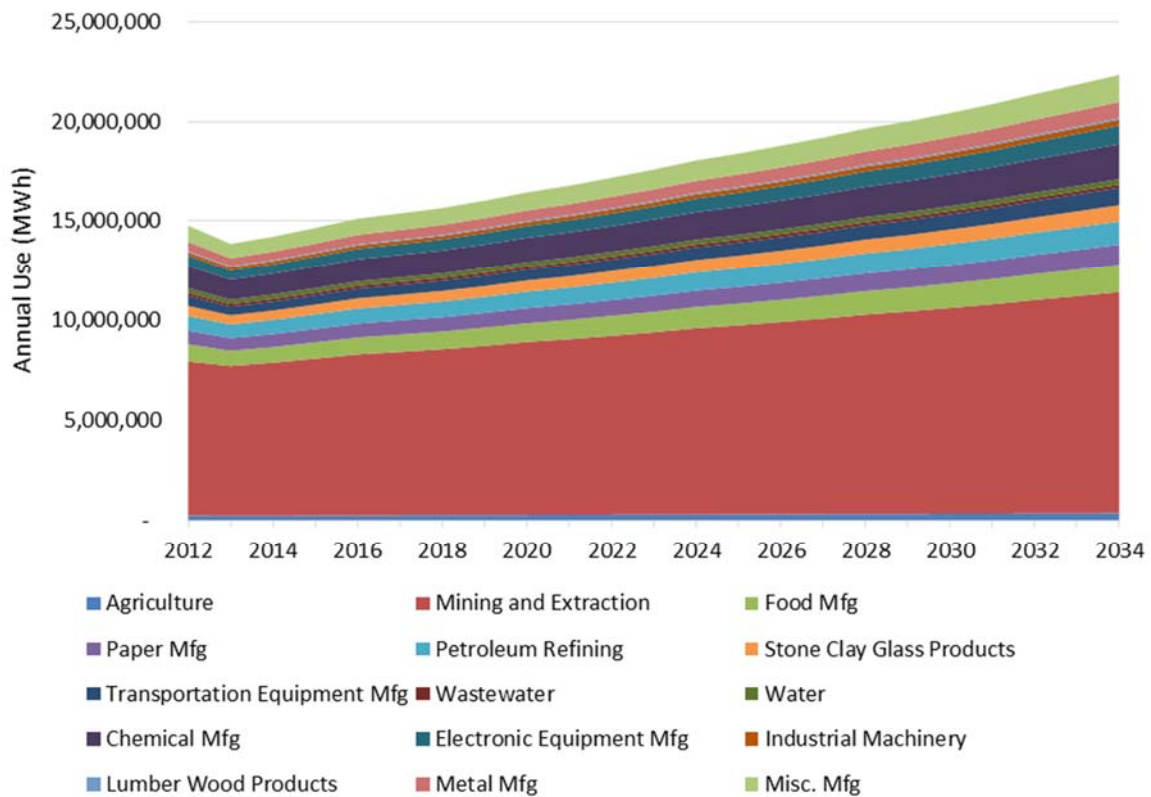
**Figure B-17 Washington Commercial Baseline Projection by Segment (MWh)**



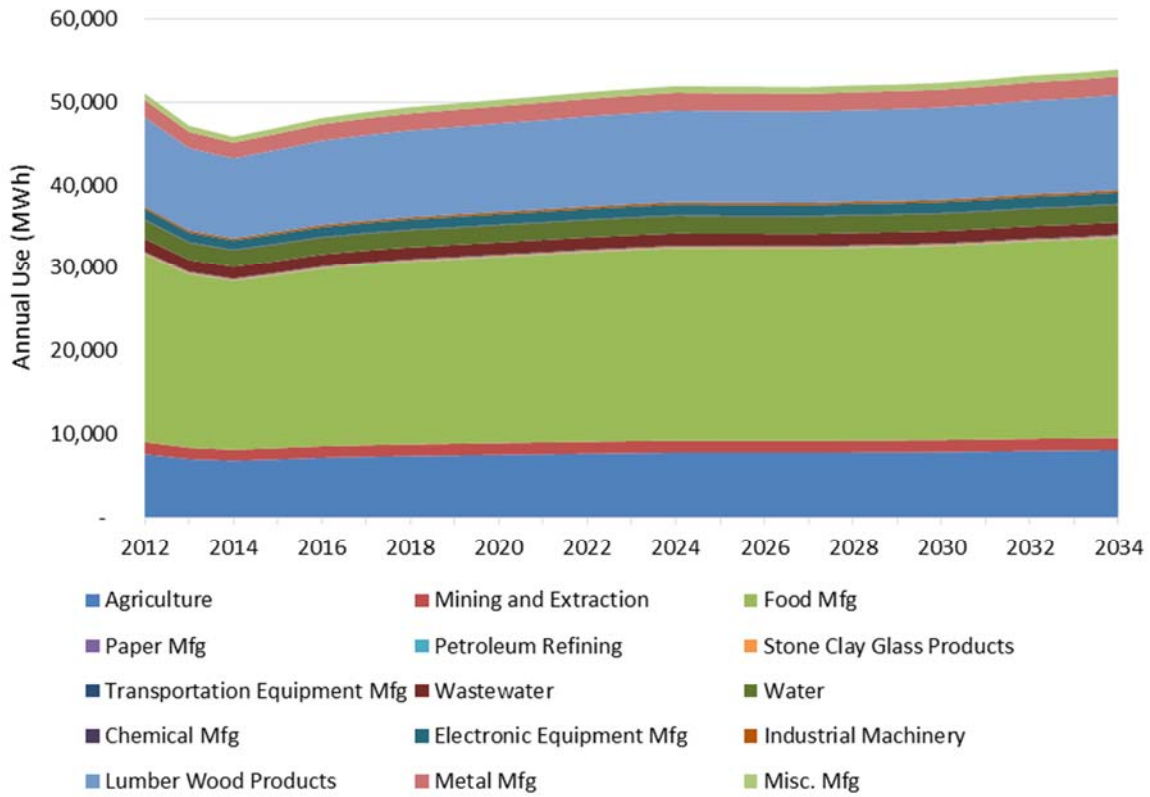
**Figure B-18 Wyoming Commercial Baseline Projection by Segment (MWh)**



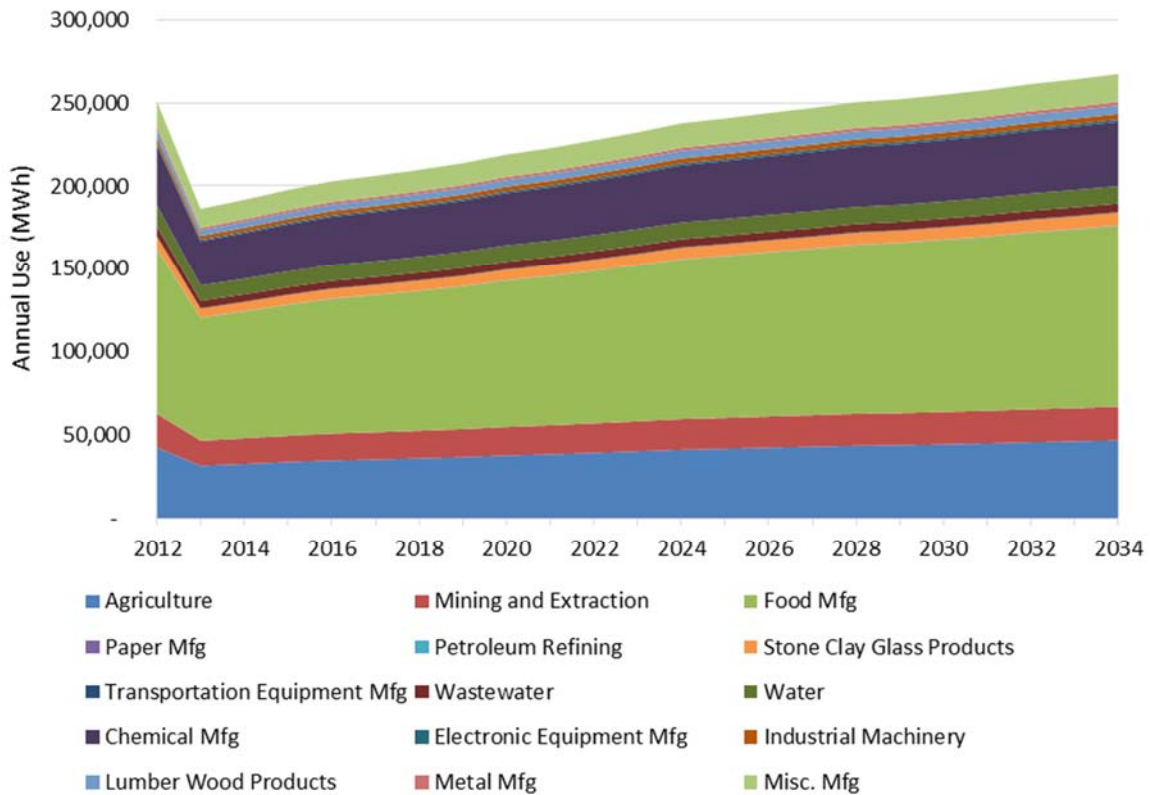
**Figure B-19 Overall Industrial Baseline Projection by Segment (MWh)**



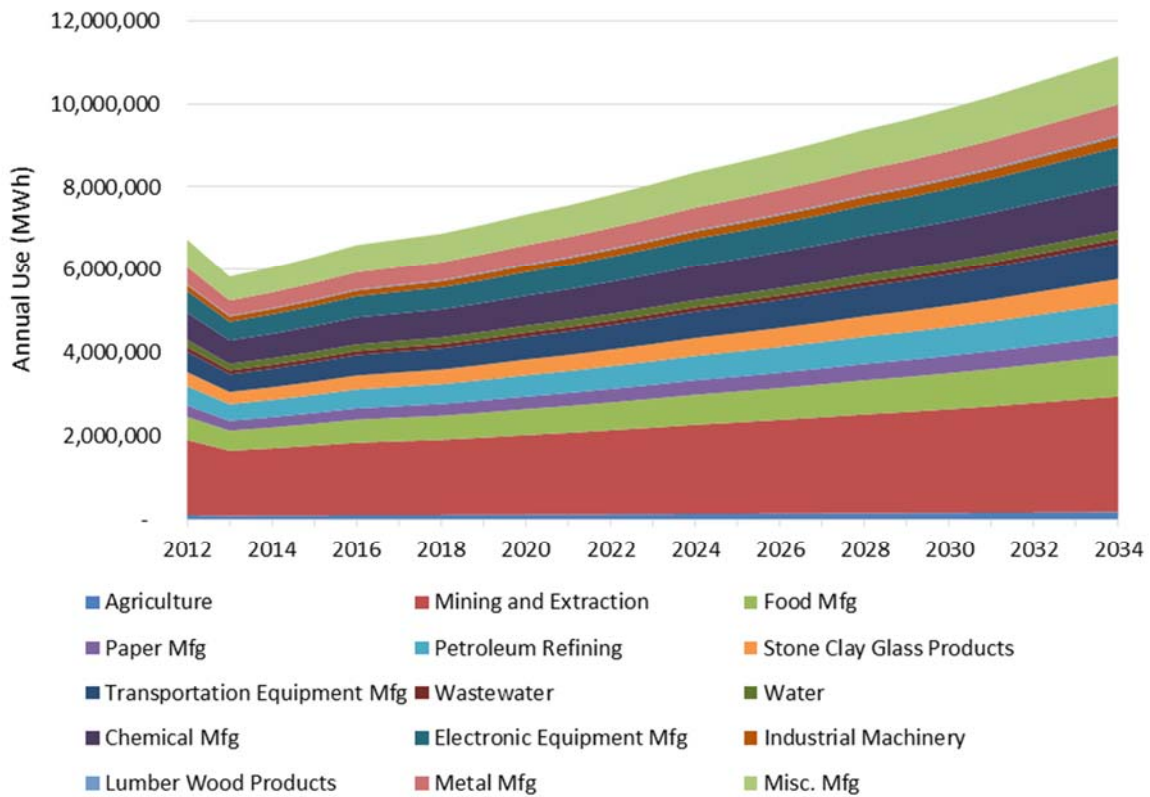
**Figure B-20 California Industrial Baseline Projection by Segment (MWh)**



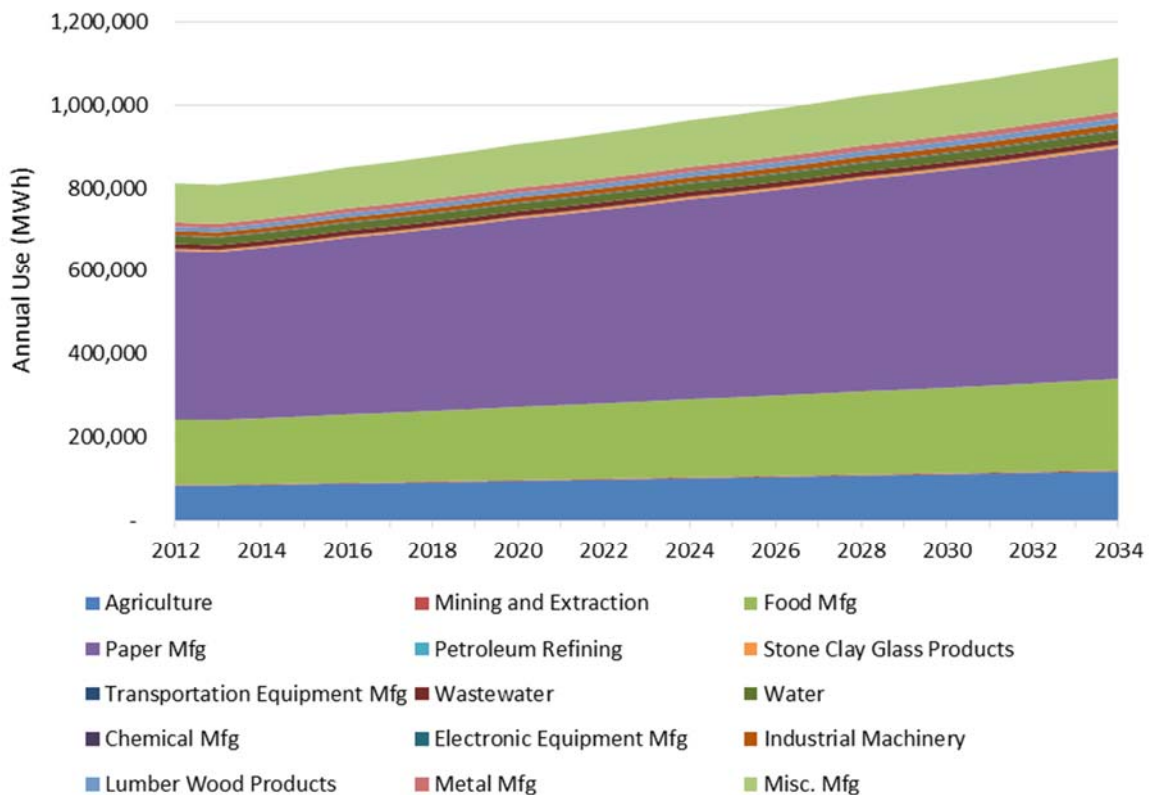
**Figure B-21 Idaho Industrial Baseline Projection by Segment (MWh)**



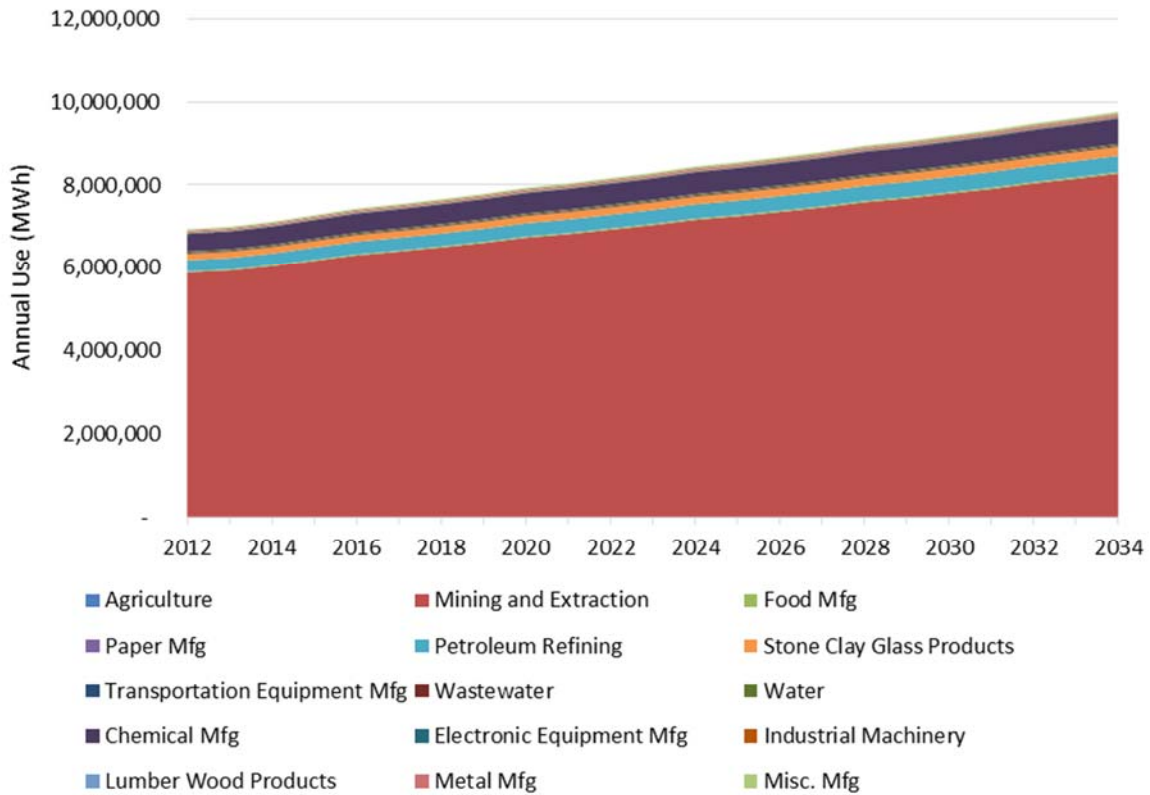
**Figure B-22 Utah Industrial Baseline Projection by Segment (MWh)**



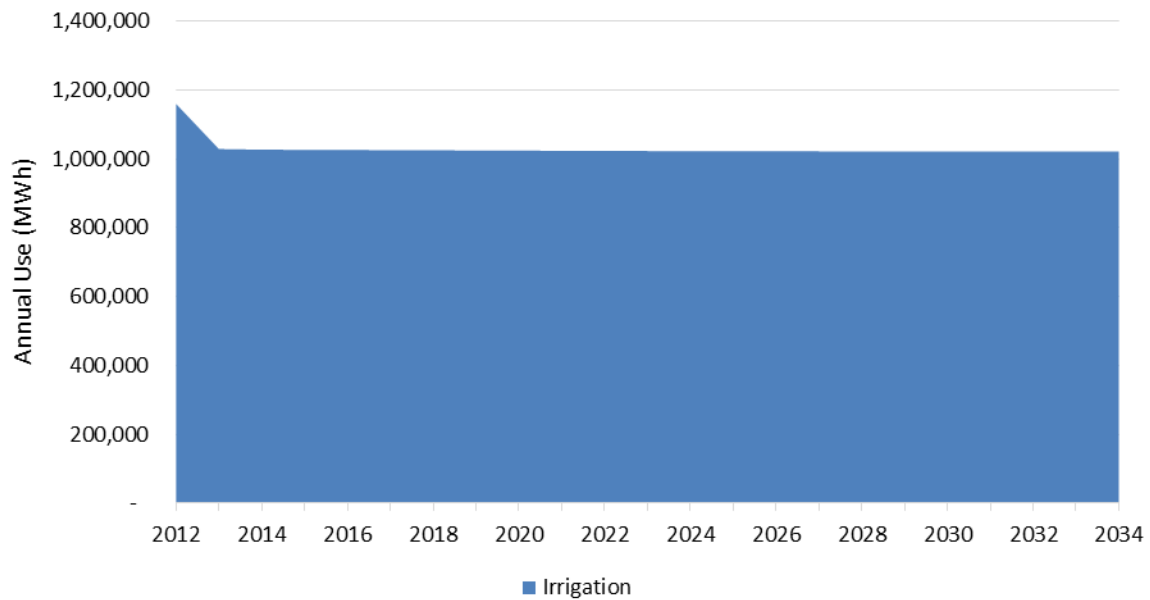
**Figure B-23 Washington Industrial Baseline Projection by Segment (MWh)**



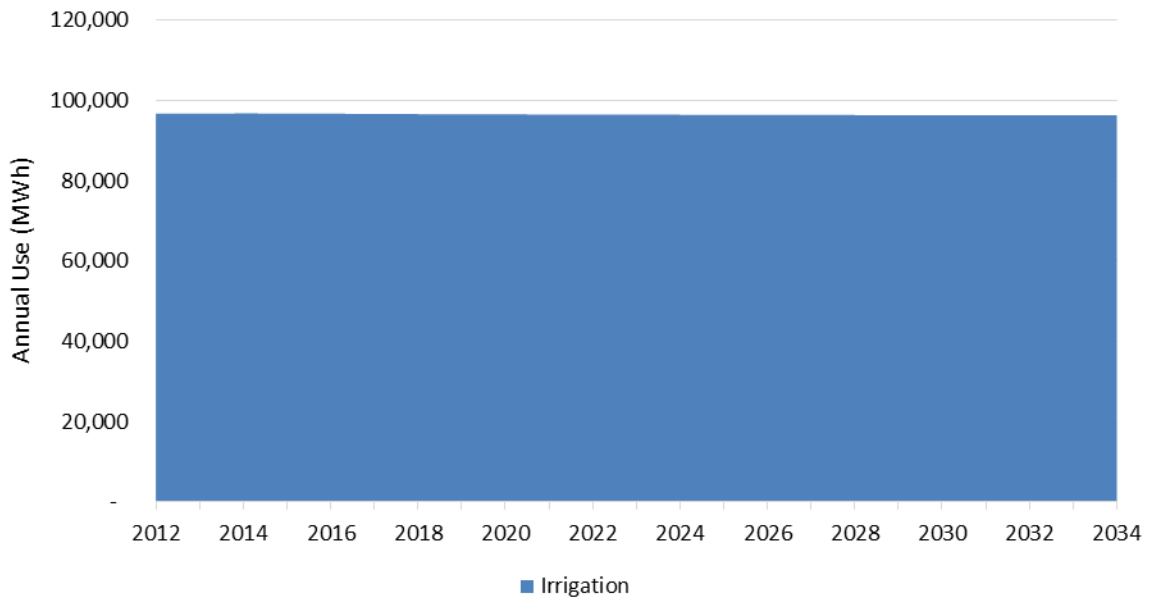
**Figure B-24 Wyoming Industrial Baseline Projection by Segment (MWh)**



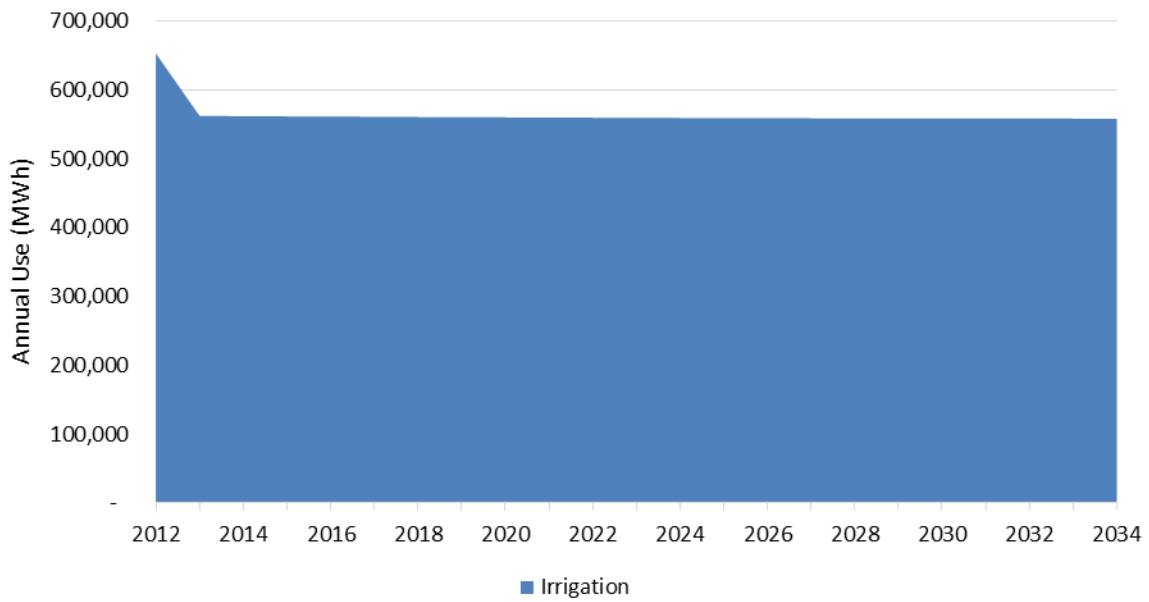
**Figure B-25 Overall Irrigation Baseline Projection by Segment (MWh)**



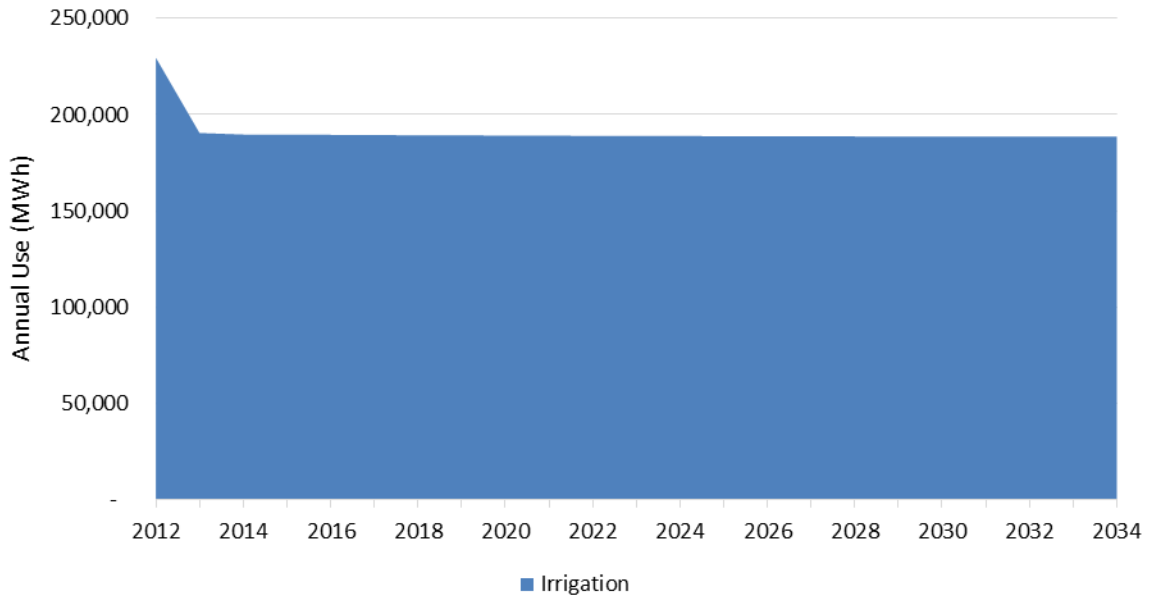
**Figure B-26** *California Irrigation Baseline Projection by Segment (MWh)*



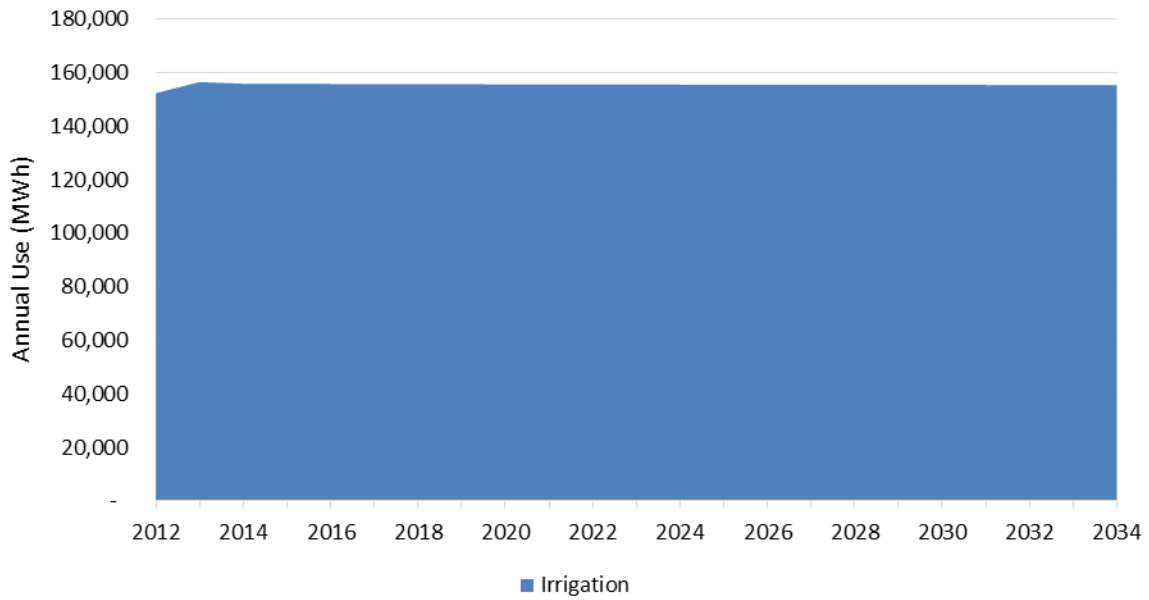
**Figure B-27** *Idaho Irrigation Baseline Projection by Segment (MWh)*



**Figure B-28 Utah Irrigation Baseline Projection by Segment (MWh)**

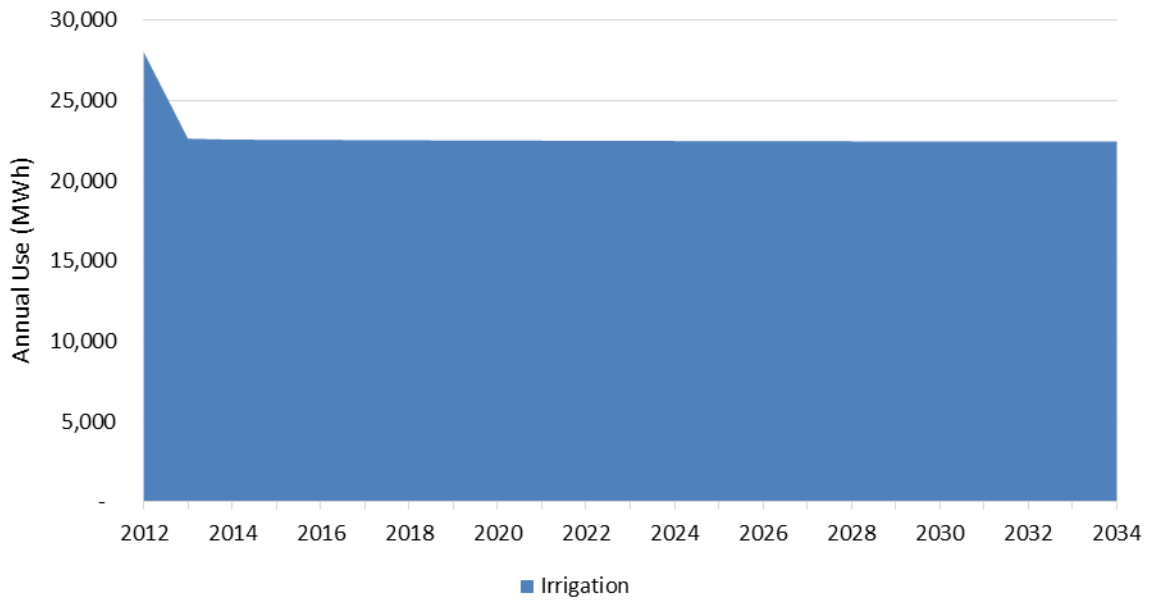


**Figure B-29 Washington Irrigation Baseline Projection by Segment (MWh)**

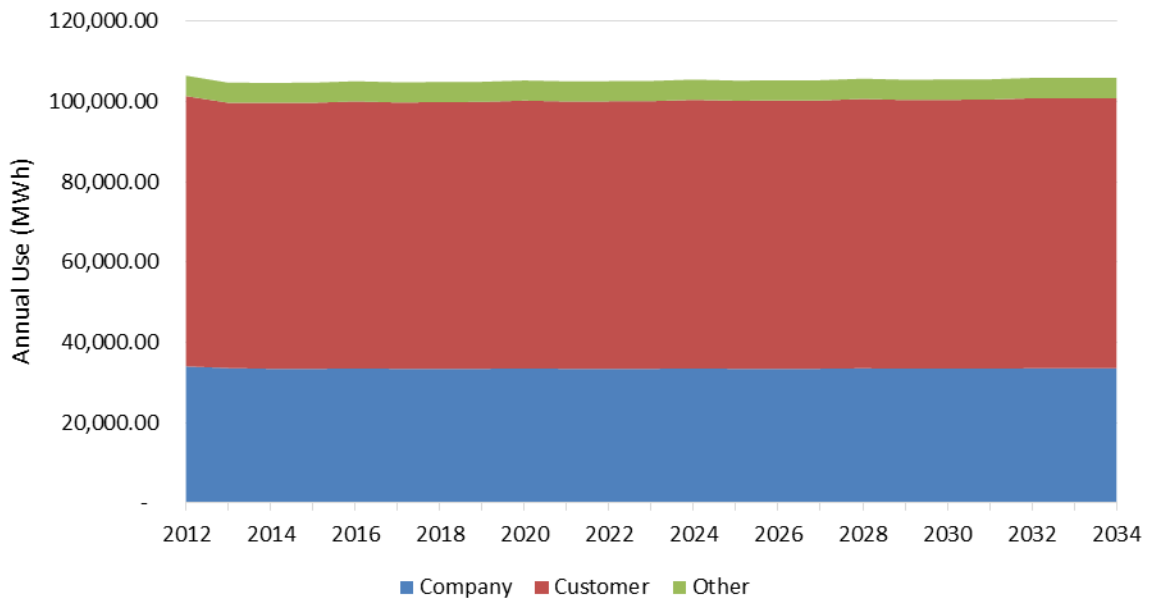




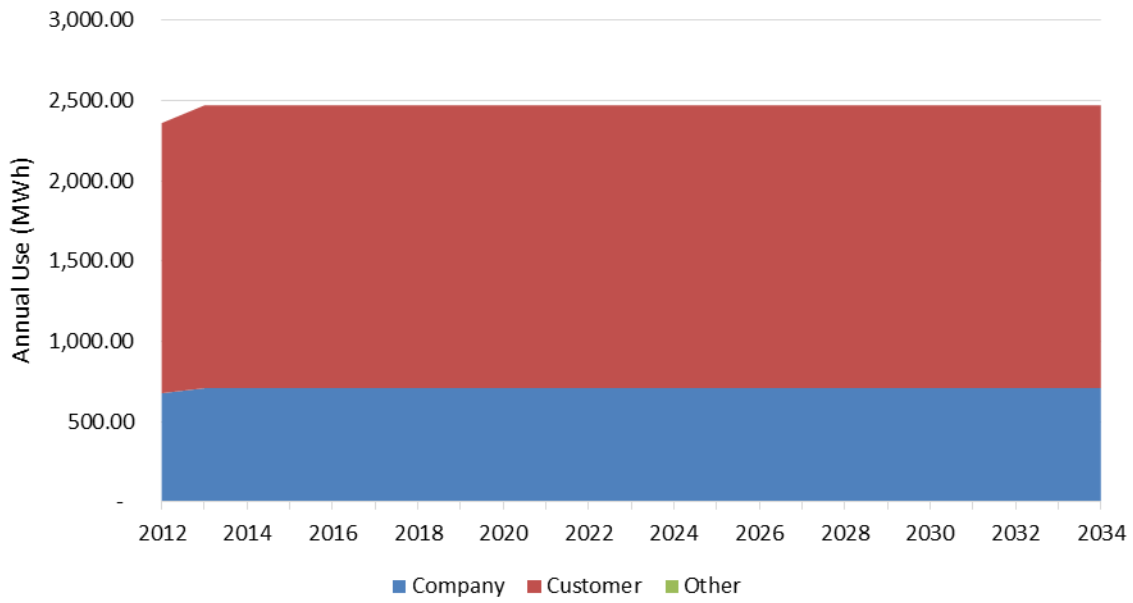
**Figure B-30 Wyoming Irrigation Baseline Projection by Segment (MWh)**



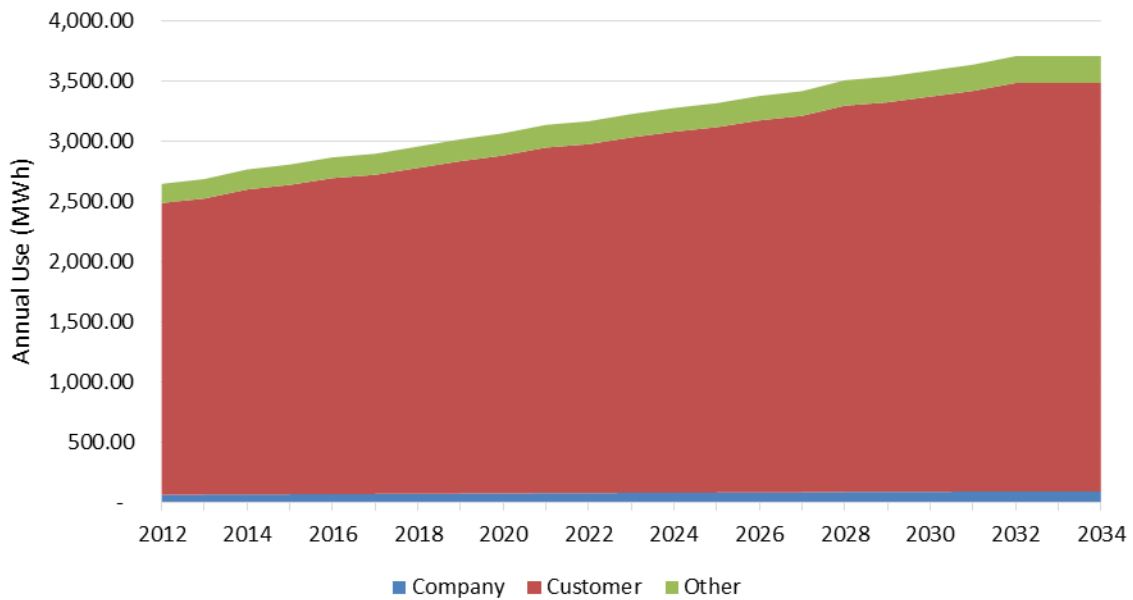
**Figure B-31 Overall Street Lighting Baseline Projection by Segment (MWh)**



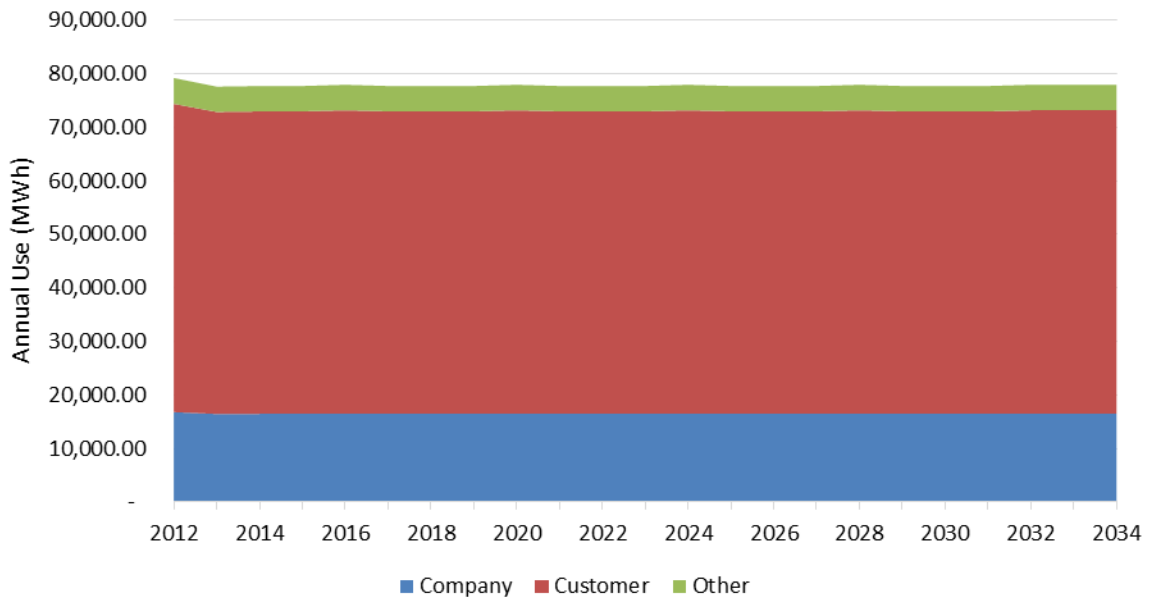
**Figure B-32 California Street Lighting Baseline Projection by Segment (MWh)**



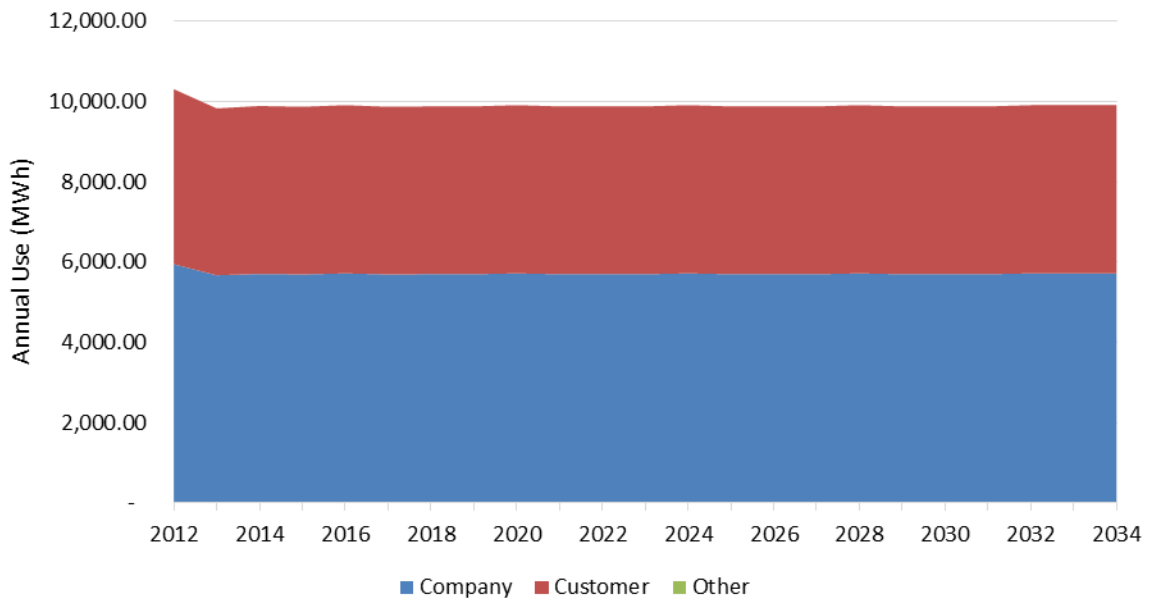
**Figure B-33 Idaho Street Lighting Baseline Projection by Segment (MWh)**



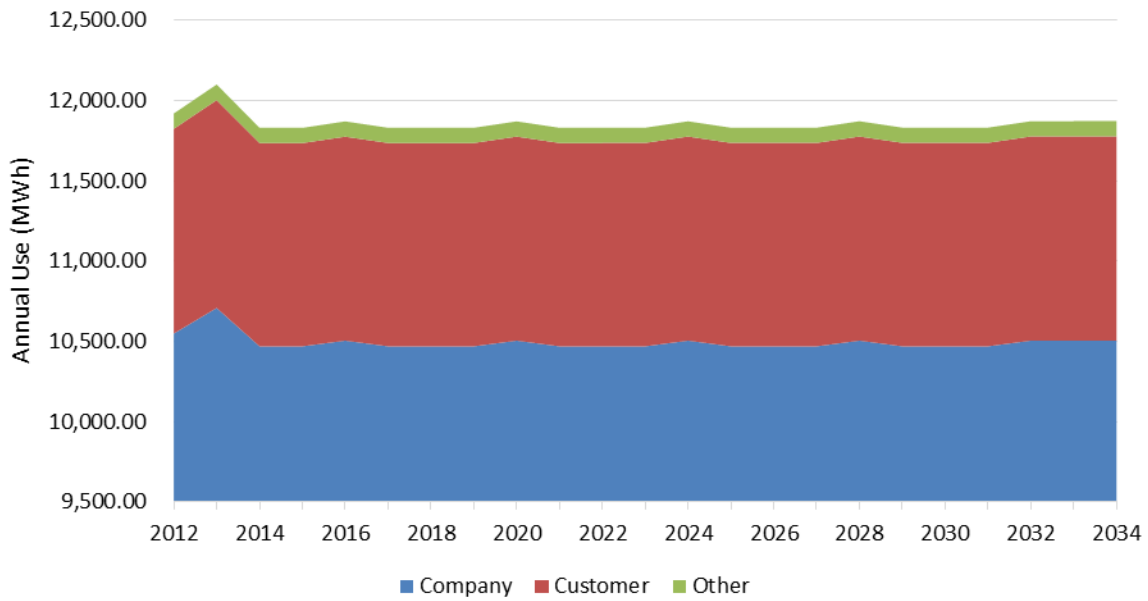
**Figure B-34 Utah Street Lighting Baseline Projection by Segment (MWh)**



**Figure B-35 Washington Street Lighting Baseline Projection by Segment (MWh)**



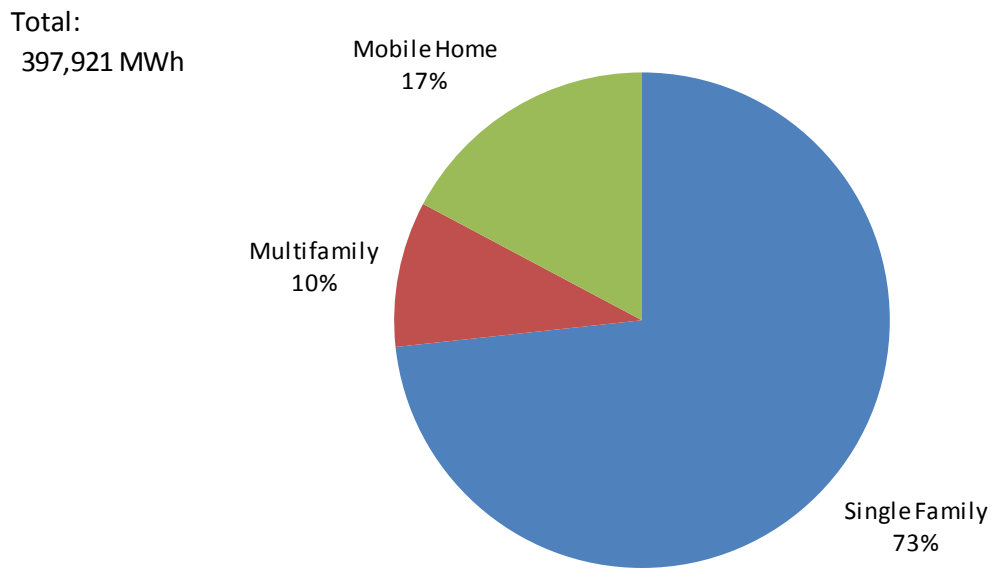
**Figure B-36 Wyoming Street Lighting Baseline Projection by Segment (MWh)**



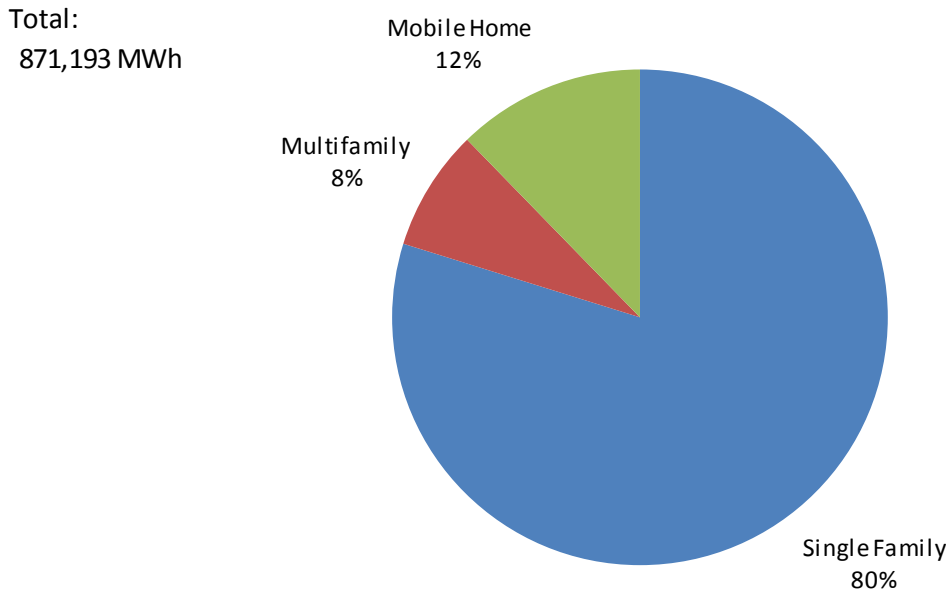
### Baseline Projection Pie Charts by State, Sector, and Segment

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 2034.

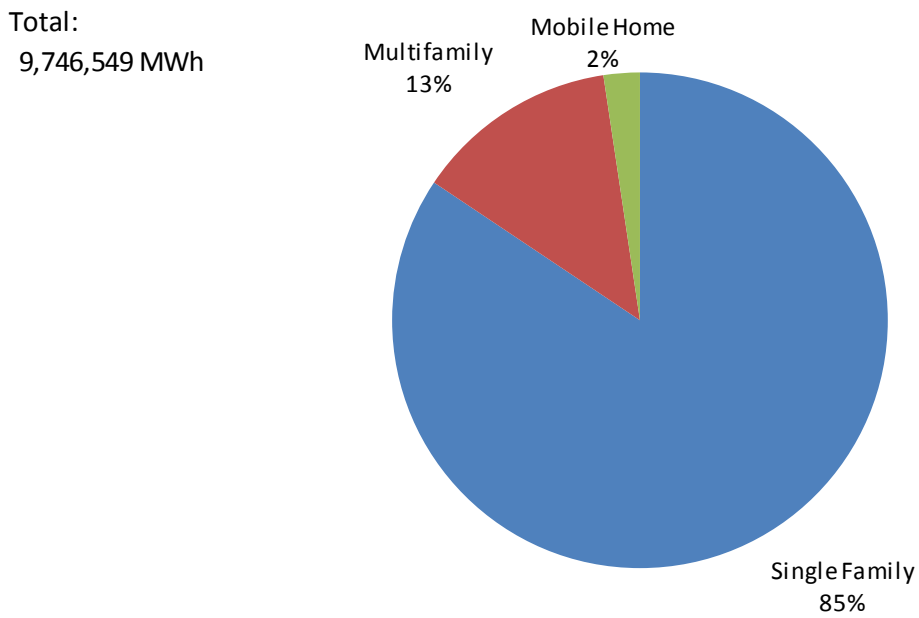
**Figure B-37 California Residential Baseline Projection by Segment, 2034**



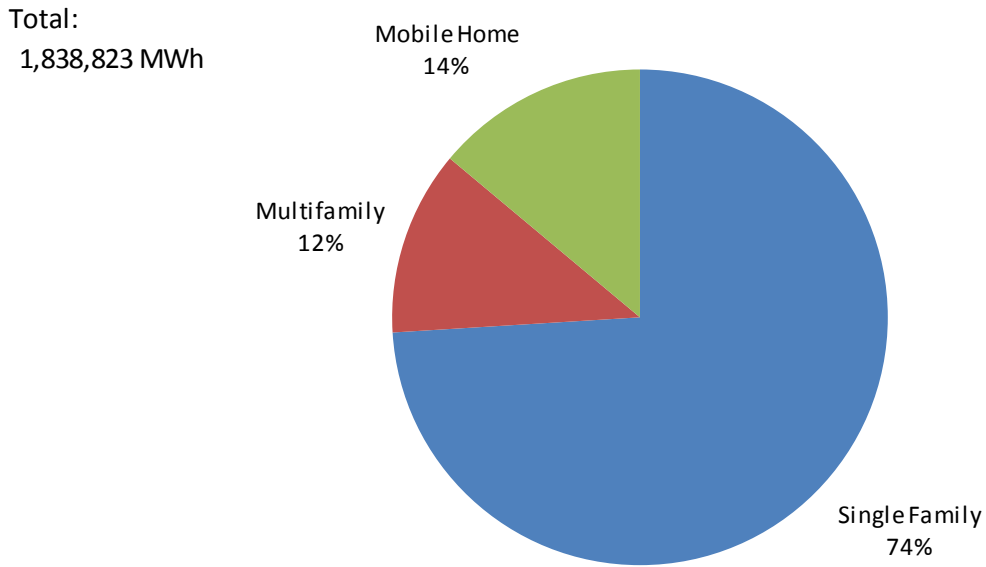
**Figure B-38** Idaho Residential Baseline Projection by Segment, 2034



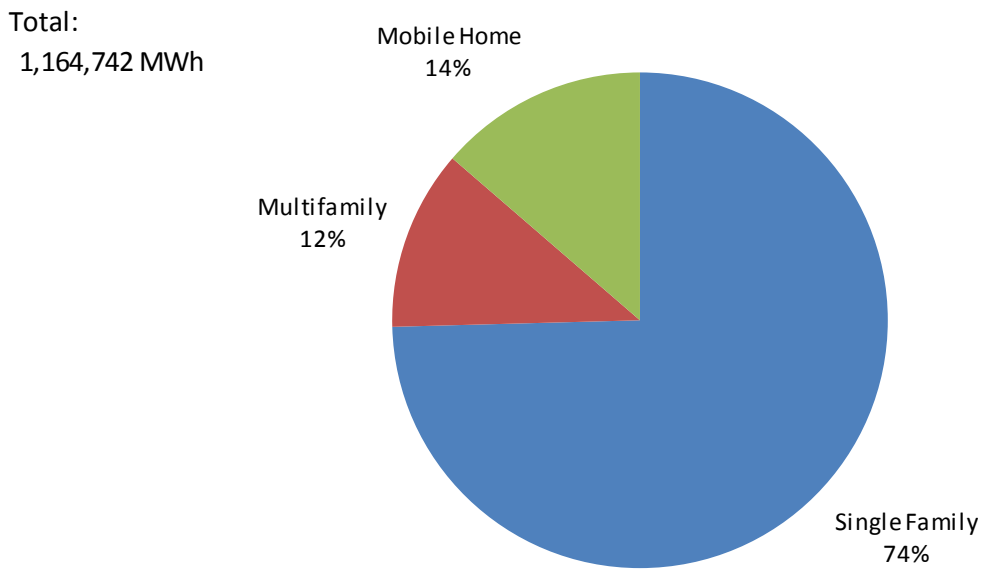
**Figure B-39** Utah Residential Baseline Projection by Segment, 2034



**Figure B-40** Washington Residential Baseline Projection by Segment, 2034

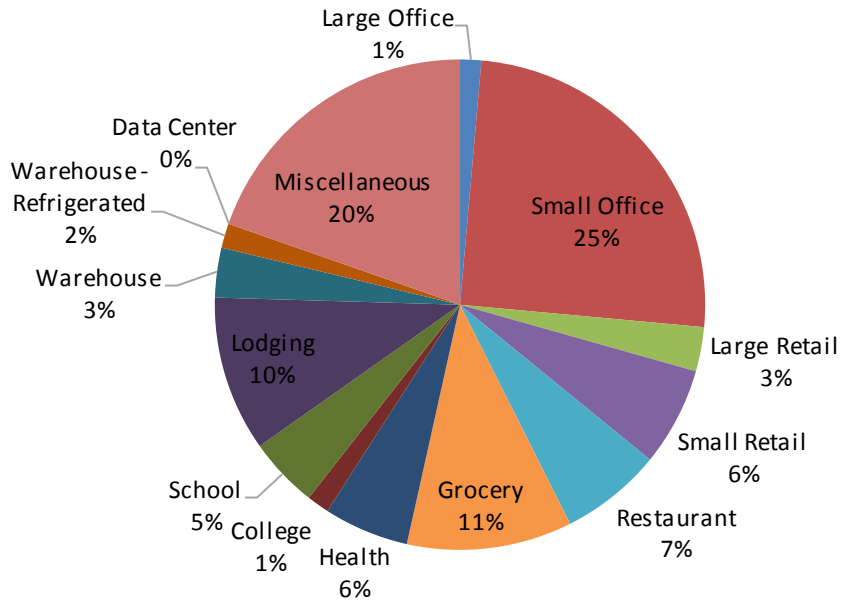


**Figure B-41** Wyoming Residential Baseline Projection by Segment, 2034



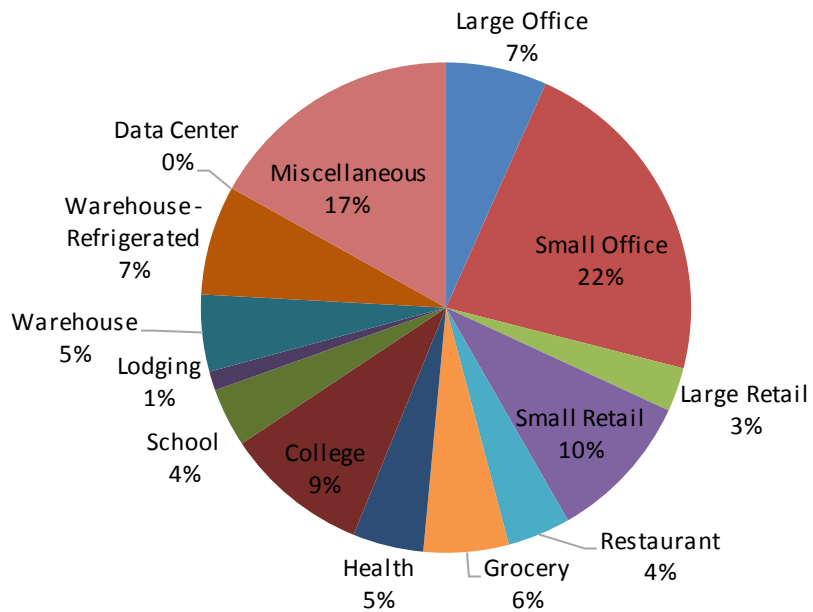
**Figure B-42 California Commercial Baseline Projection by Segment, 2034**

Total:  
310,741 MWh



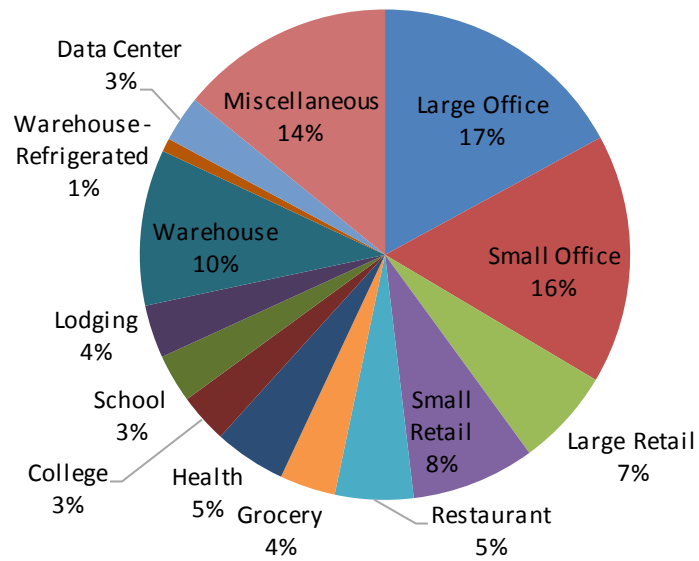
**Figure B-43 Idaho Commercial Baseline Projection by Segment, 2034**

Total:  
684,262 MWh



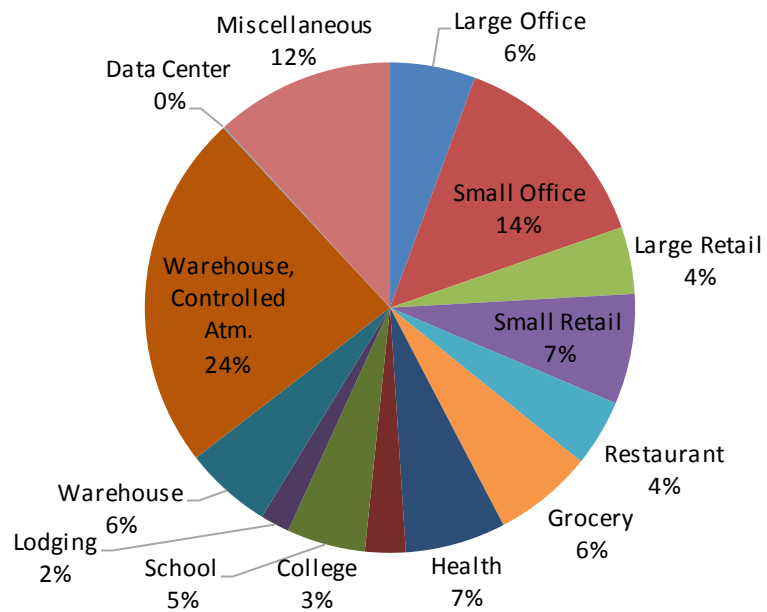
**Figure B-44 Utah Commercial Baseline Projection by Segment, 2034**

Total:  
12,449,590 MWh



**Figure B-45 Washington Commercial Baseline Projection by Segment, 2034**

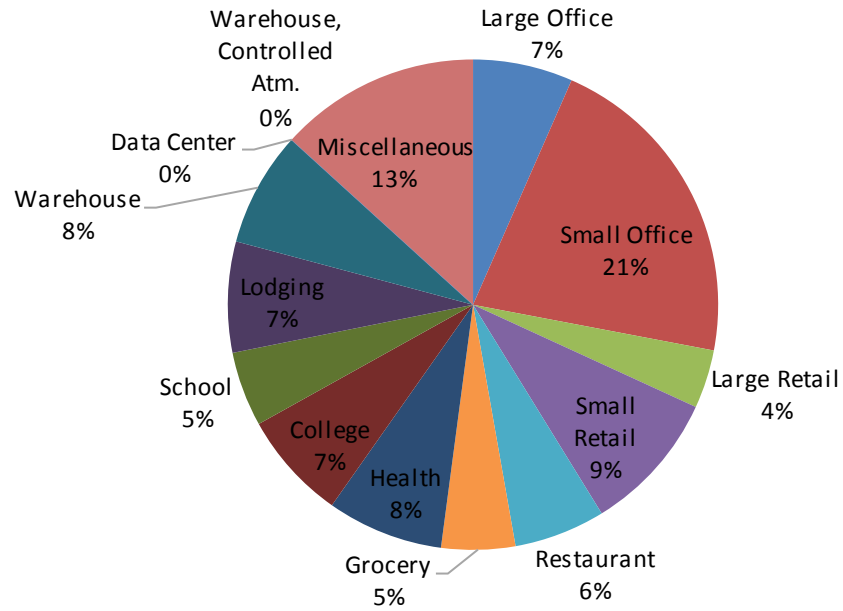
Total:  
1,505,506 MWh





**Figure B-46 Wyoming Commercial Baseline Projection by Segment, 2034**

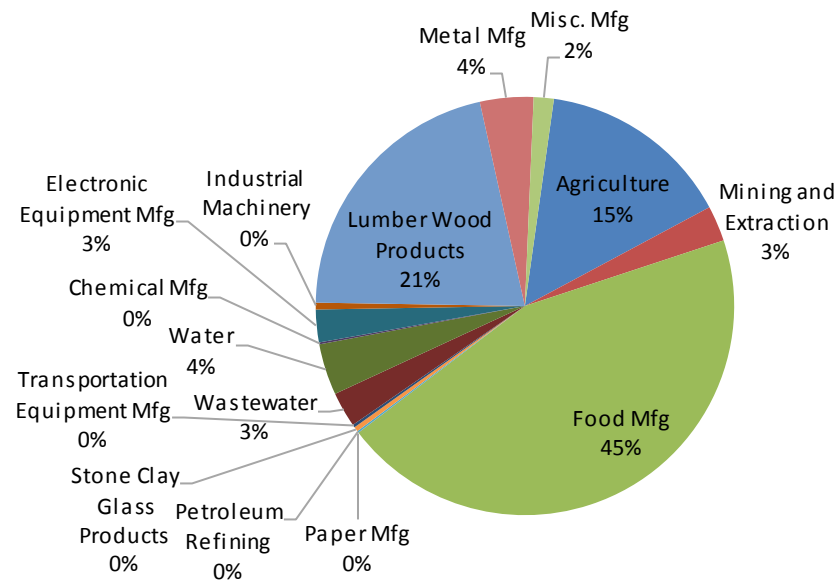
Total:  
2,049,704 MWh



**Figure B-47**

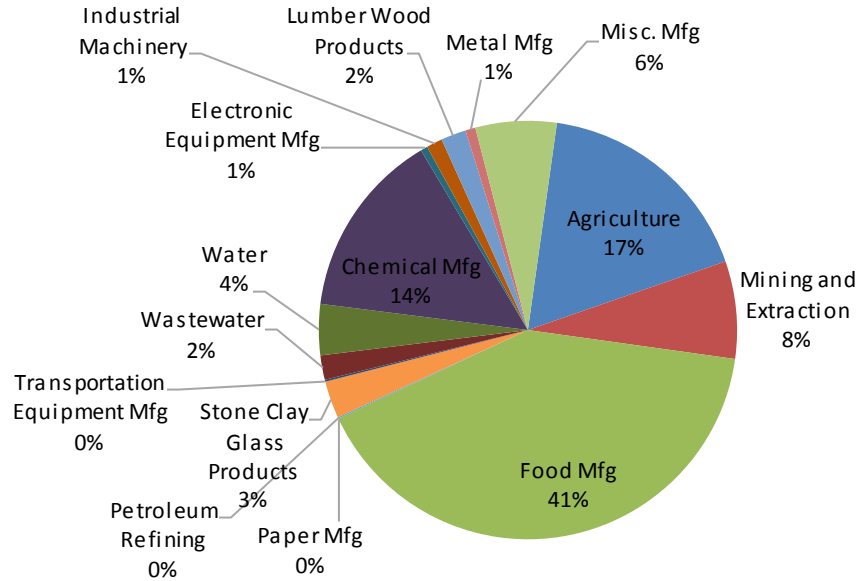
**California Industrial Baseline Projection by Segment, 2034**

Total:  
53,925 MWh



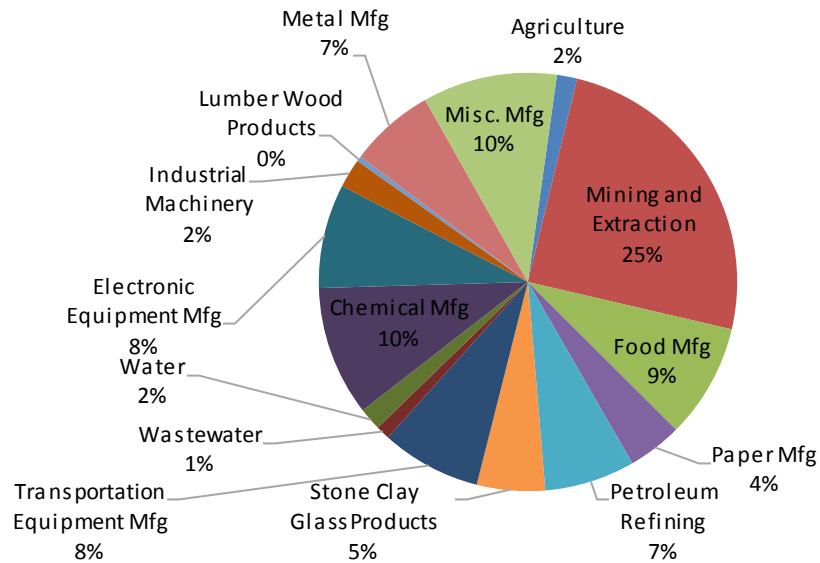
**Figure B-48 Idaho Industrial Baseline Projection by Segment, 2034**

Total:  
267,505 MWh

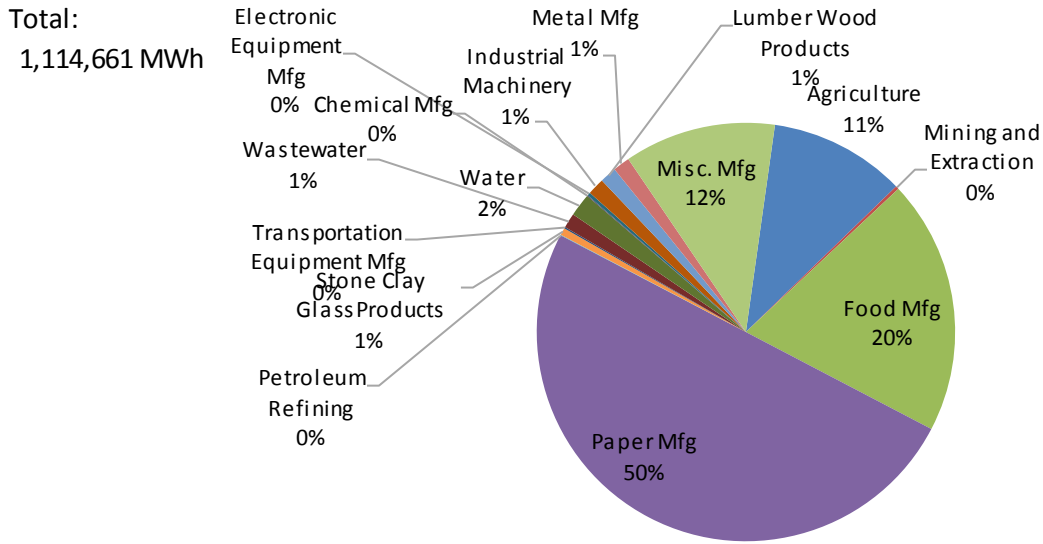


**Figure B-49 Utah Industrial Baseline Projection by Segment, 2034**

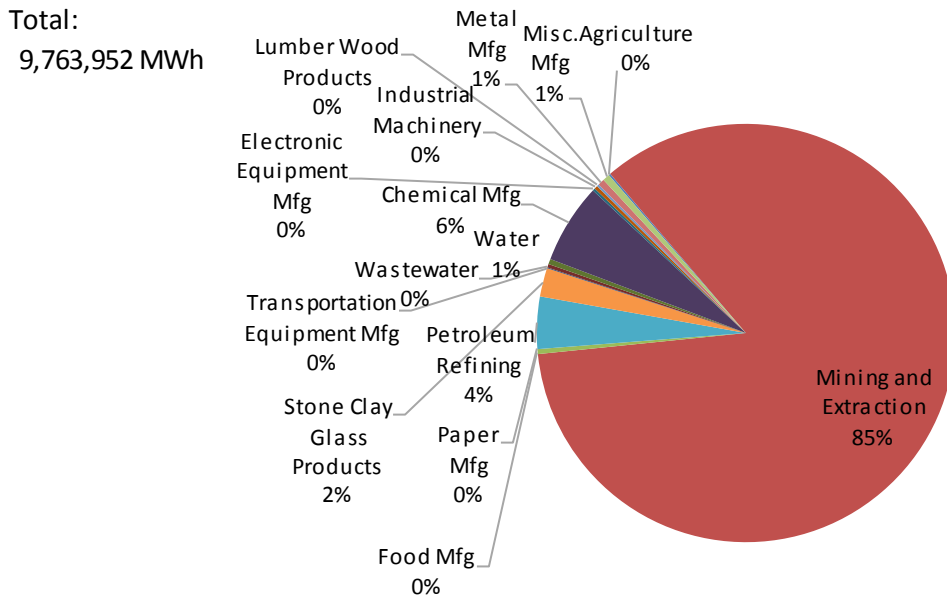
Total:  
11,152,219 MWh



**Figure B-50 Washington Industrial Baseline Projection by Segment, 2034**

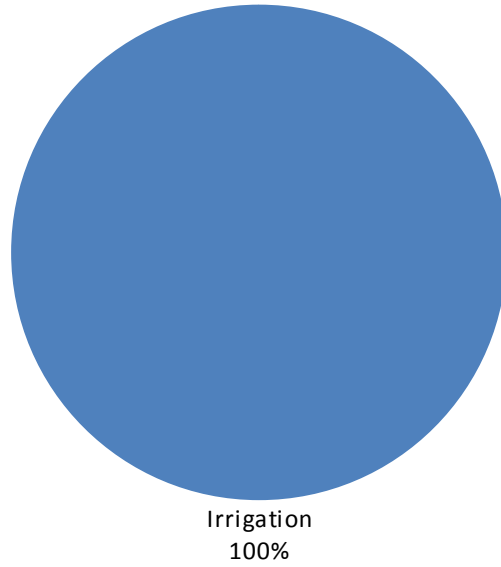


**Figure B-51 Wyoming Industrial Baseline Projection by Segment, 2034**



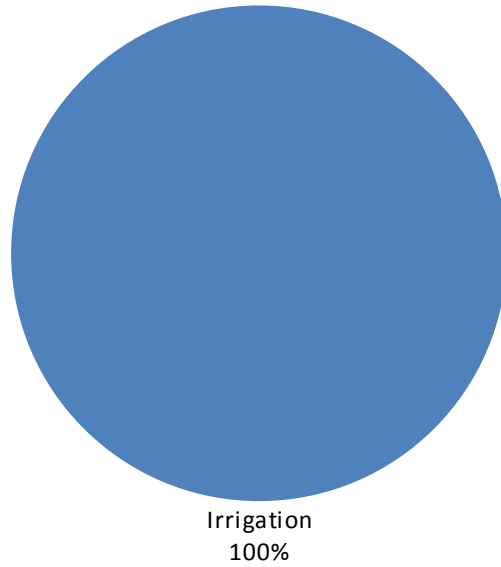
**Figure B-52** *California Irrigation Baseline Projection by Segment, 2034*

Total:  
96,313 MWh



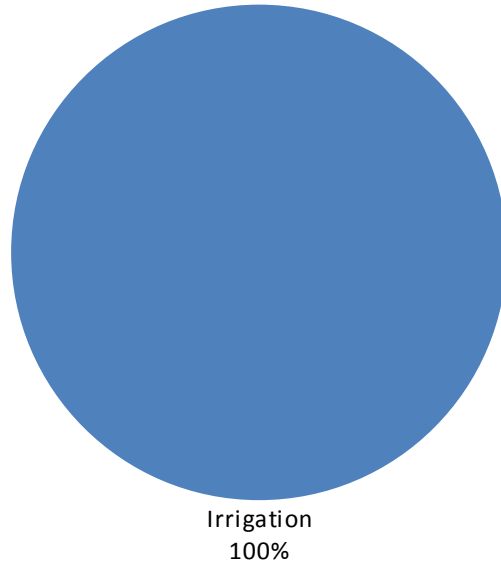
**Figure B-53** *Idaho Irrigation Baseline Projection by Segment, 2034*

Total:  
558,445 MWh



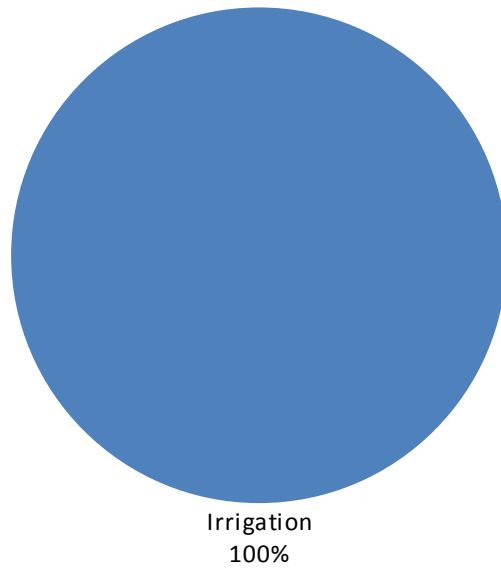
**Figure B-54** *Utah Irrigation Baseline Projection by Segment, 2034*

Total:  
188,540 MWh



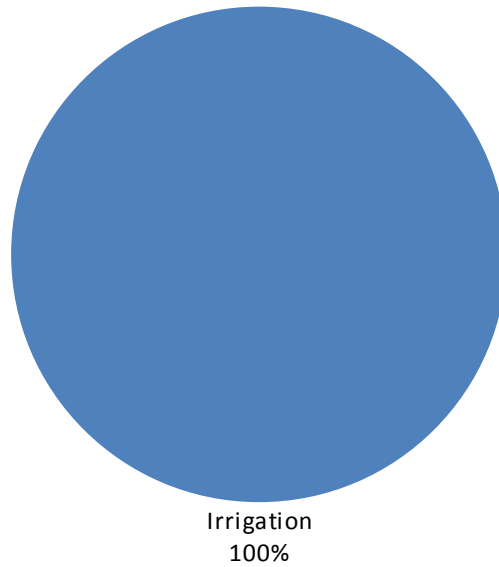
**Figure B-55** *Washington Irrigation Baseline Projection by Segment, 2034*

Total:  
155,442 MWh



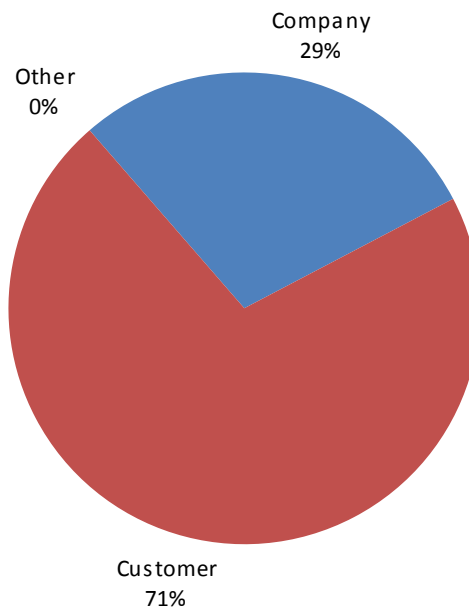
**Figure B-56 Wyoming Irrigation Baseline Projection by Segment, 2034**

Total:  
22,445 MWh



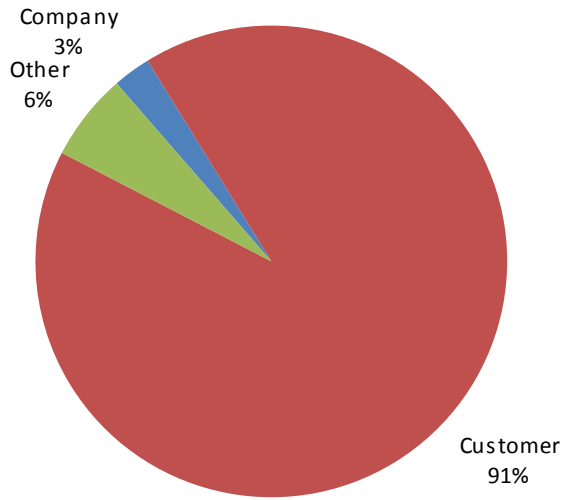
**Figure B-57 California Street Lighting Baseline Projection by Segment, 2034**

Total:  
2,470 MWh



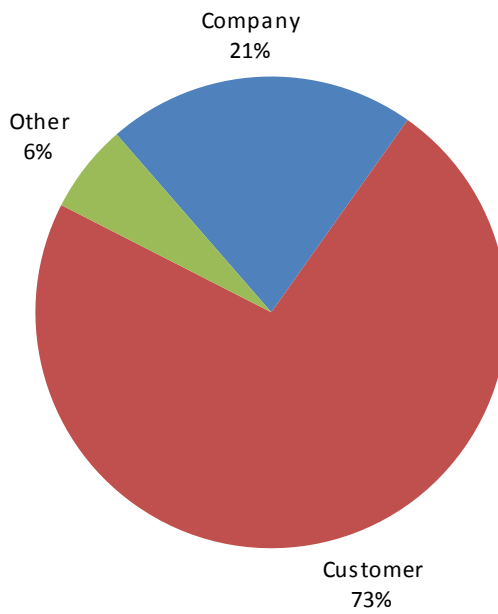
**Figure B-58** *Idaho Street Lighting Baseline Projection by Segment, 2034*

Total:  
3,710 MWh



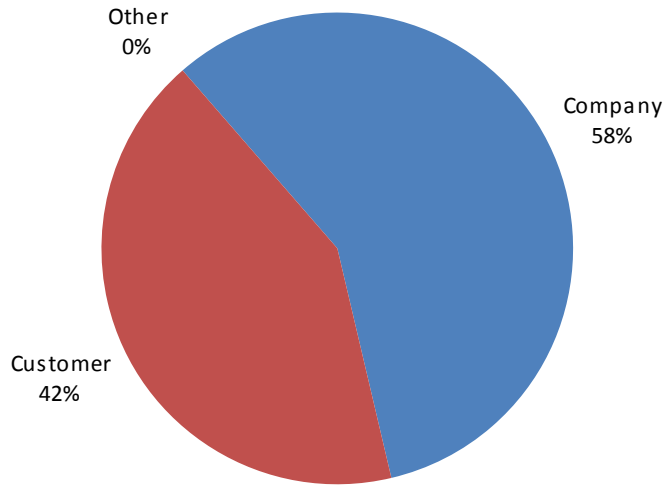
**Figure B-59** *Utah Street Lighting Baseline Projection by Segment, 2034*

Total:  
77,950 MWh



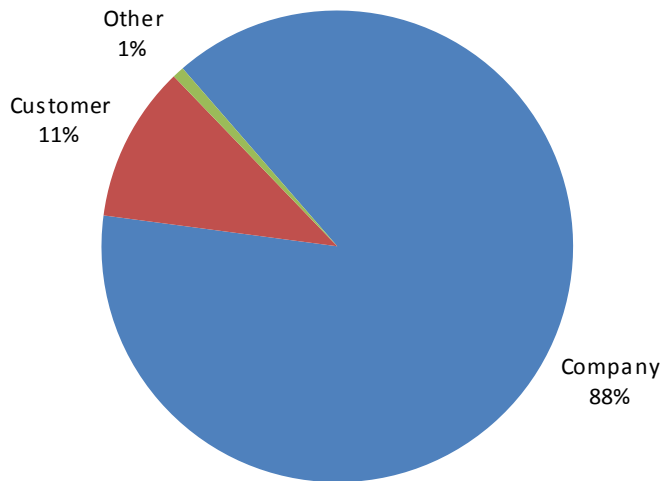
**Figure B-60** *Washington Street Lighting Baseline Projection by Segment, 2034*

Total:  
9,910 MWh



**Figure B-61** *Wyoming Street Lighting Baseline Projection by Segment, 2034*

Total:  
11,872 MWh



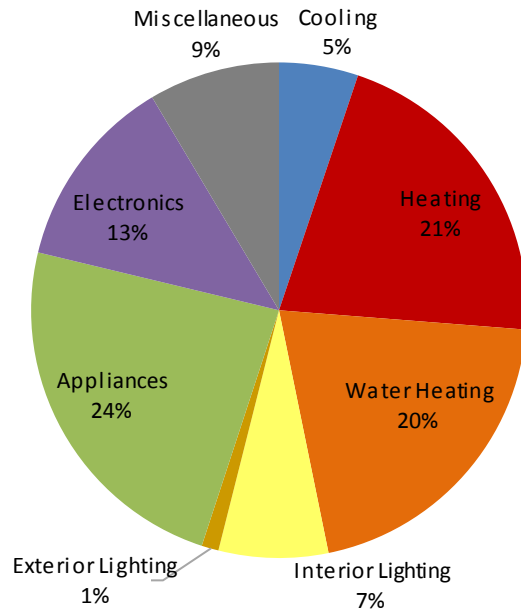


## Baseline Projections Pie Charts by State, Sector, and End Use

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 2034.

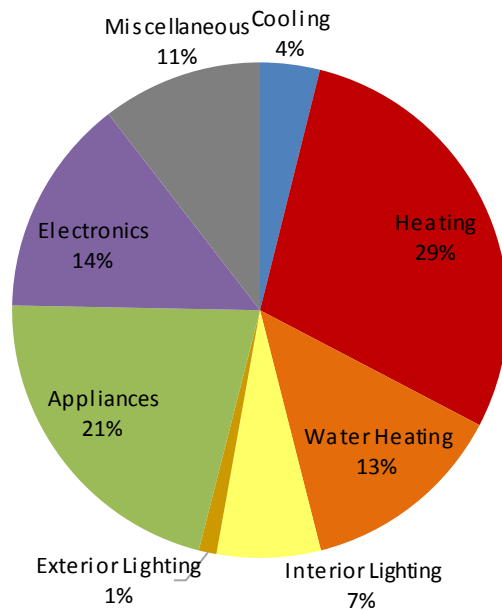
**Figure B-62 California Residential Baseline Projection by End Use, 2034**

Total:  
397,921 MWh



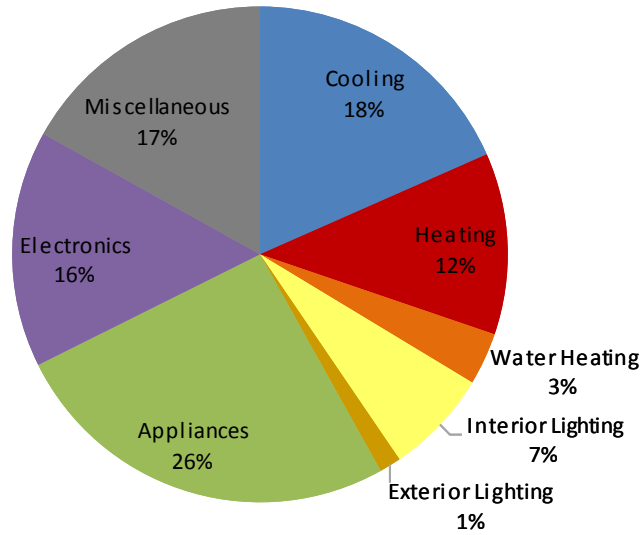
**Figure B-63 Idaho Residential Baseline Projection by End Use, 2034**

Total:  
871,193 MWh



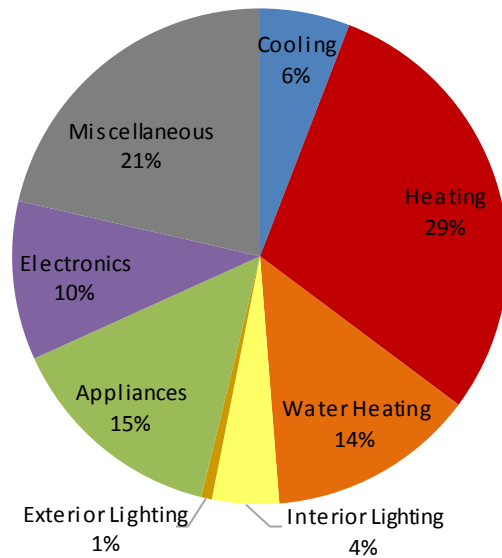
**Figure B-64 Utah Residential Baseline Projection by End Use, 2034**

Total:  
9,746,549 MWh



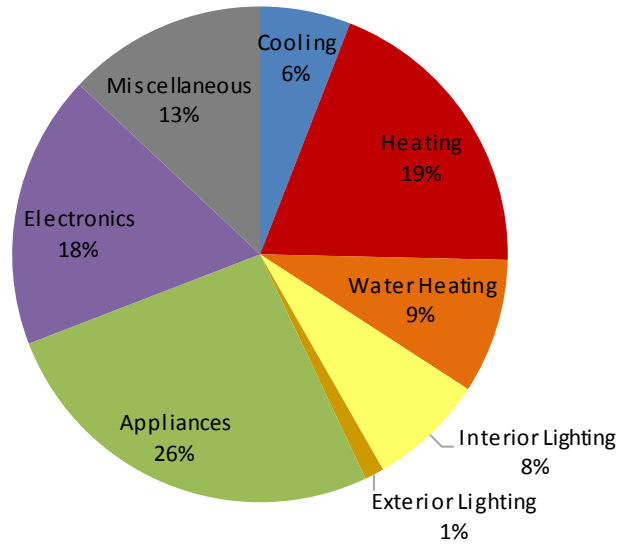
**Figure B-65 Washington Residential Baseline Projection by End Use, 2034**

Total:  
1,838,823 MWh



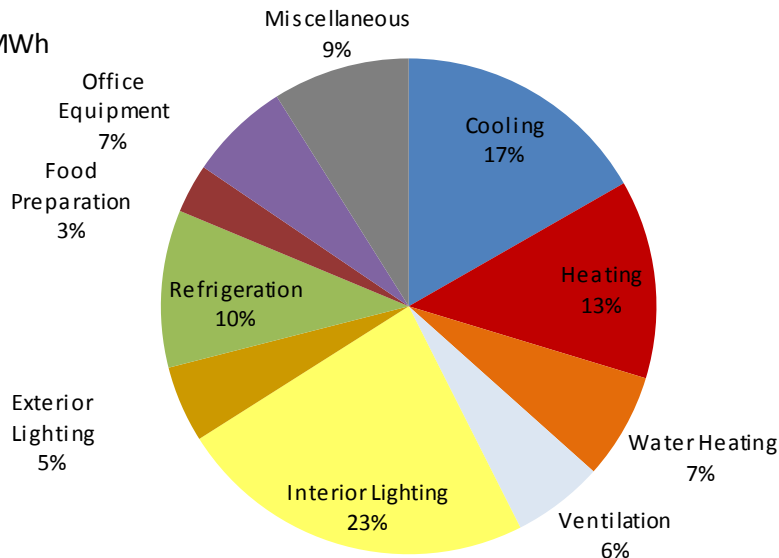
**Figure B-66 Wyoming Residential Baseline Projection by End Use, 2034**

Total:  
1,164,742 MWh



**Figure B-67 California Commercial Baseline Projection by End Use, 2034**

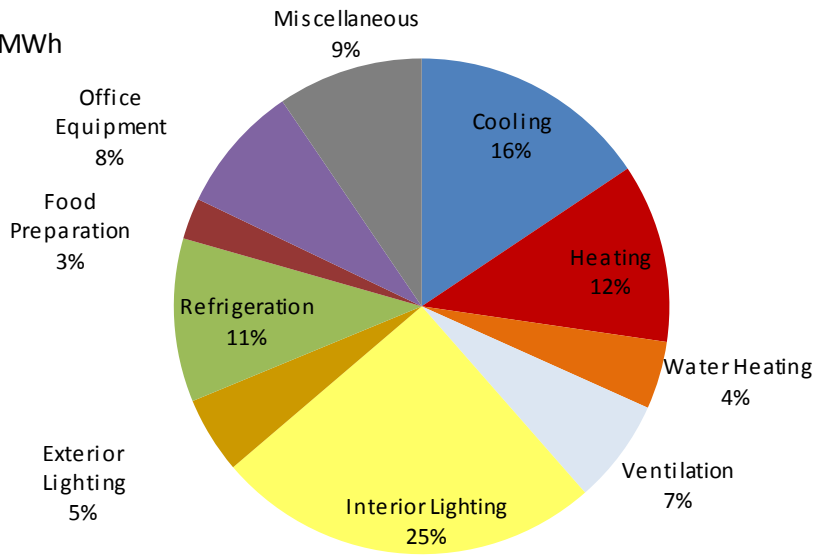
Total:  
310,741 MWh



**Figure B-68 Idaho Commercial Baseline Projection by End Use, 2034**

Total:

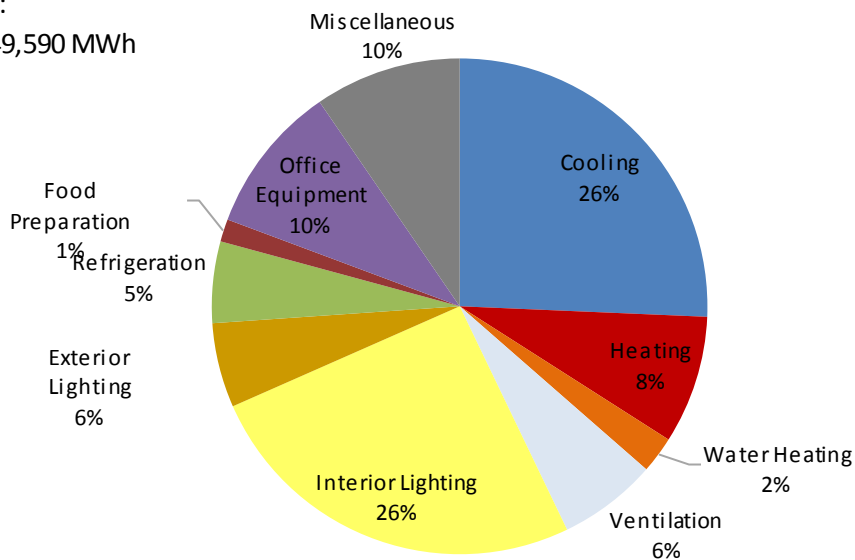
684,262 MWh



**Figure B-69 Utah Commercial Baseline Projection by End Use, 2034**

Total:

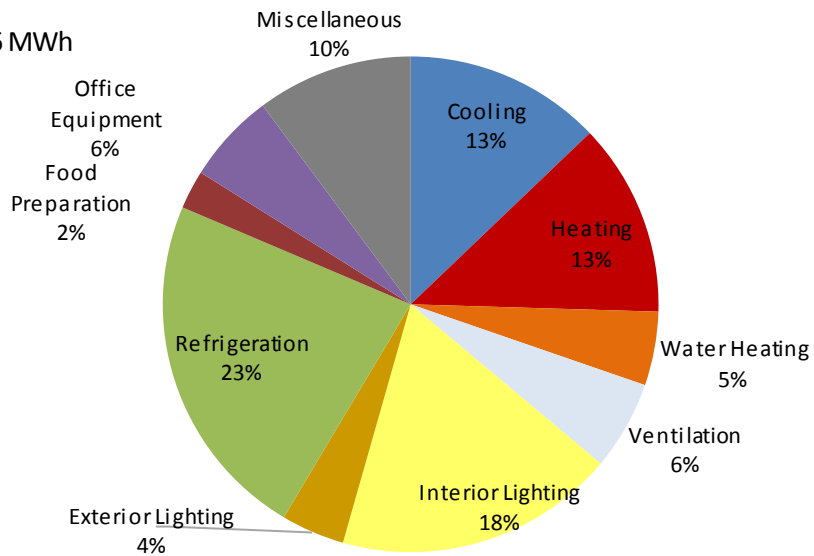
12,449,590 MWh



**Figure B-70 Washington Commercial Baseline Projection by End Use, 2034**

Total:

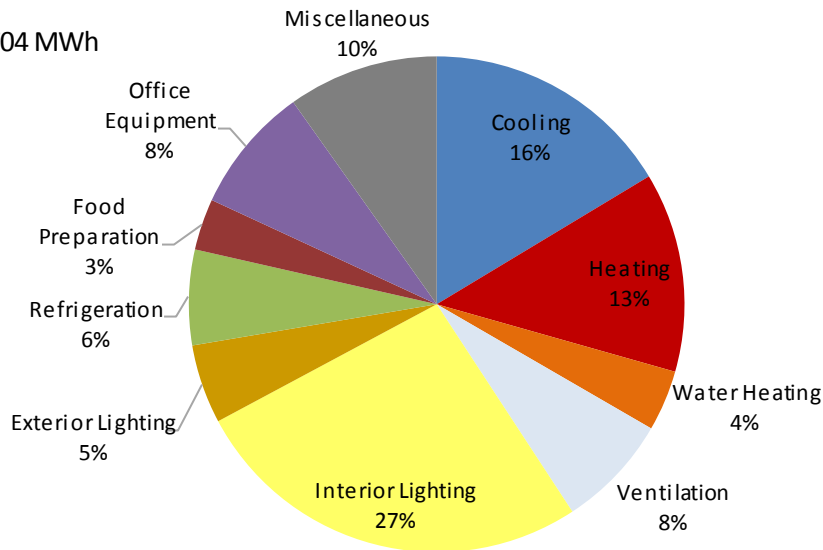
1,505,506 MWh



**Figure B-71 Wyoming Commercial Baseline Projection by End Use, 2034**

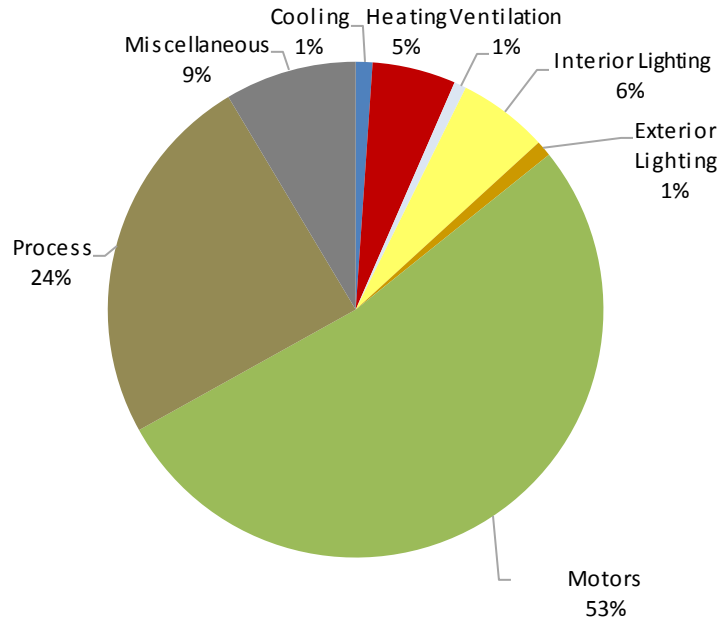
Total:

2,049,704 MWh



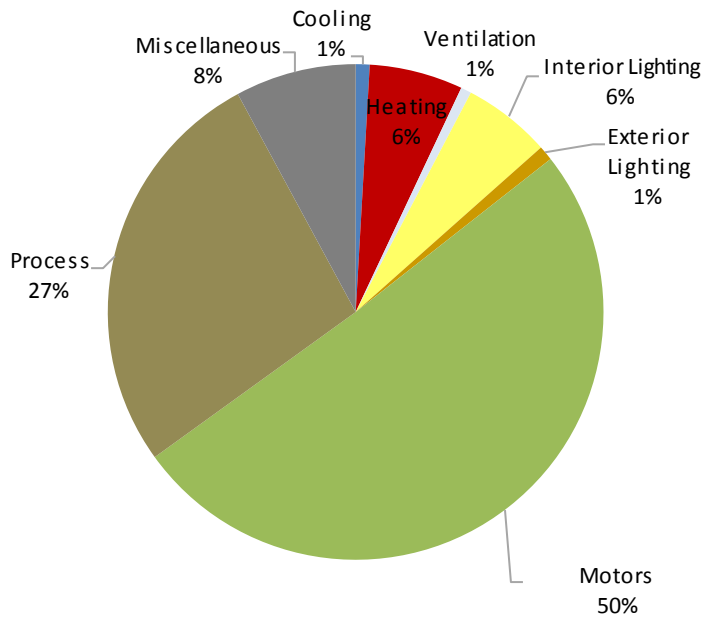
**Figure B-72 California Industrial Baseline Projection by End Use, 2034**

Total:  
53,925 MWh



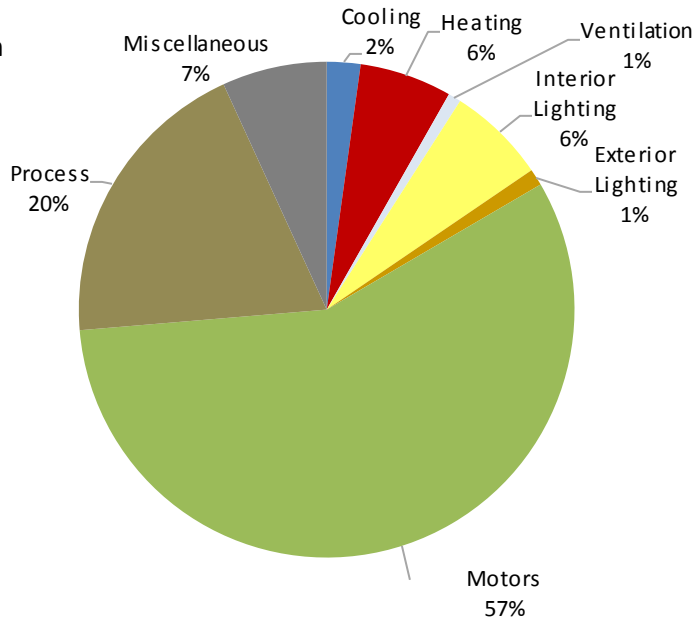
**Figure B-73 Idaho Industrial Baseline Projection by End Use, 2034**

Total:  
267,505 MWh



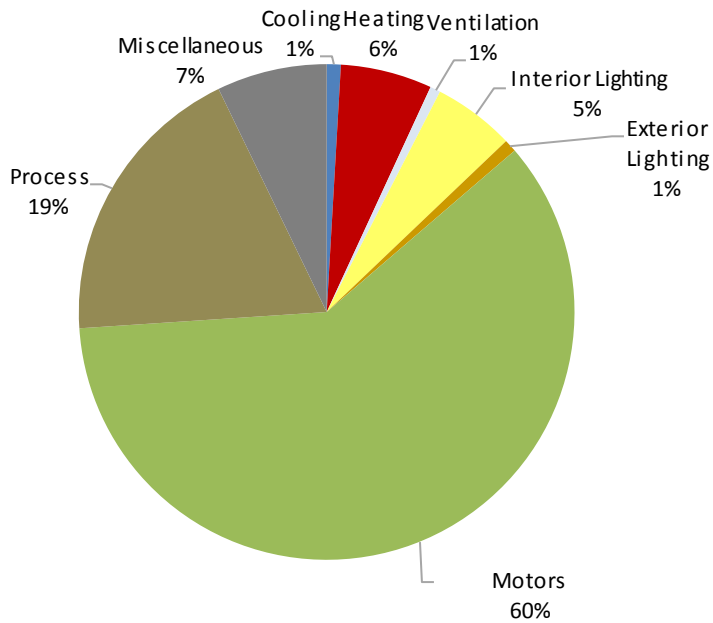
**Figure B-74 Utah Industrial Baseline Projection by End Use, 2034**

Total:  
11,152,219 MWh



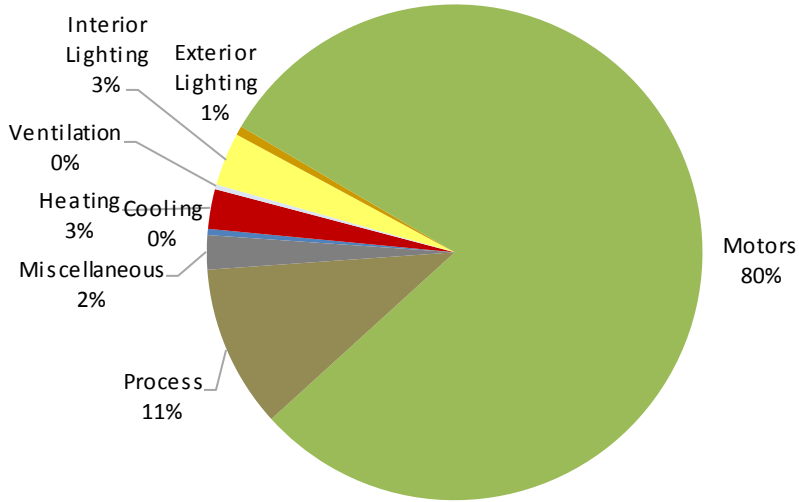
**Figure B-75 Washington Industrial Baseline Projection by End Use, 2034**

Total:  
1,114,661 MWh



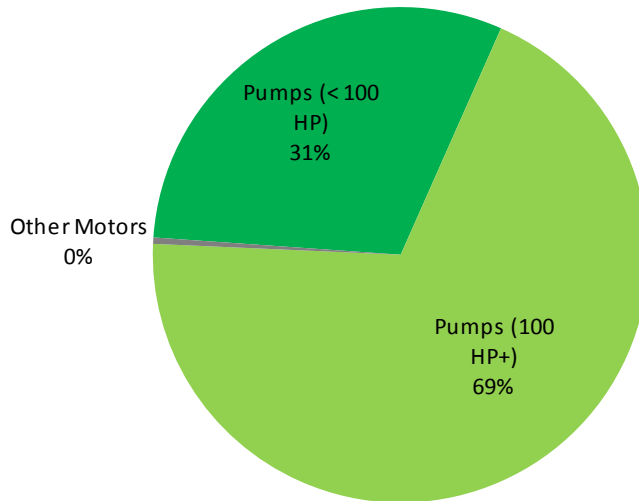
**Figure B-76 Wyoming Industrial Baseline Projection by End Use, 2034**

Total:  
9,763,952 MWh



**Figure B-77 California Irrigation Baseline Projection by End Use, 2034**

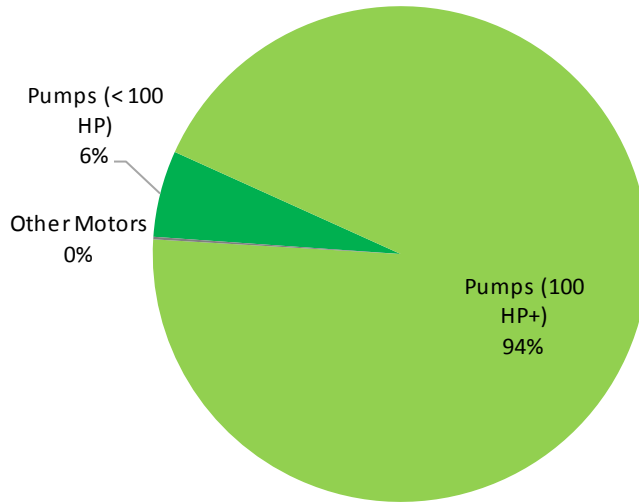
Total:  
96,313 MWh





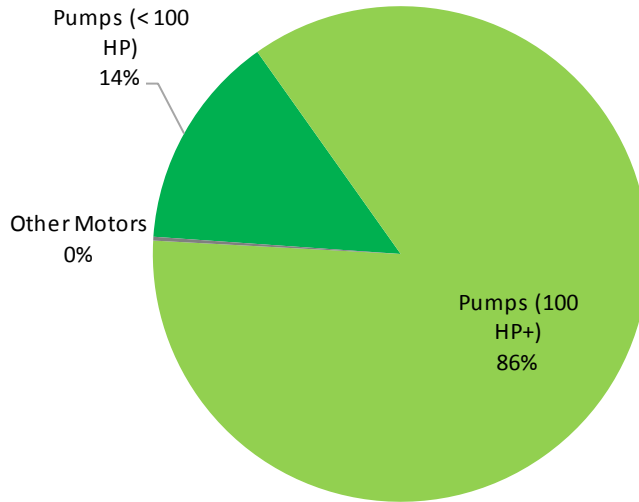
**Figure B-78 Idaho Irrigation Baseline Projection by End Use, 2034**

Total:  
558,445 MWh



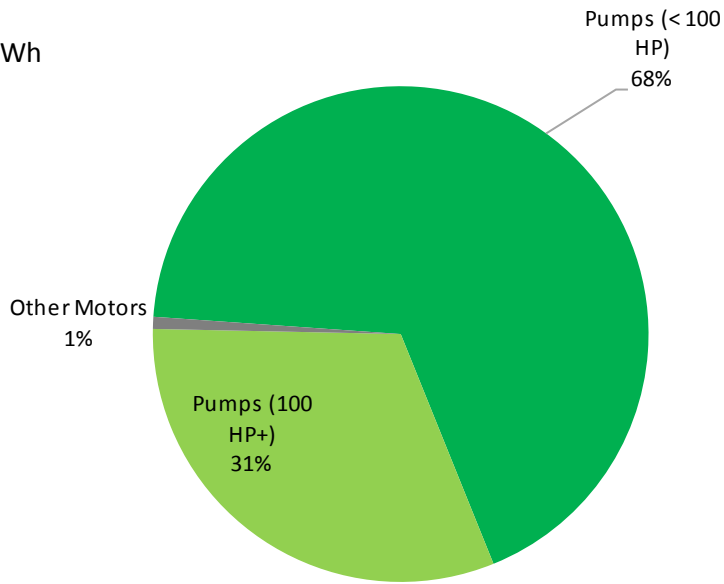
**Figure B-79 Utah Irrigation Baseline Projection by End Use, 2034**

Total:  
188,540 MWh



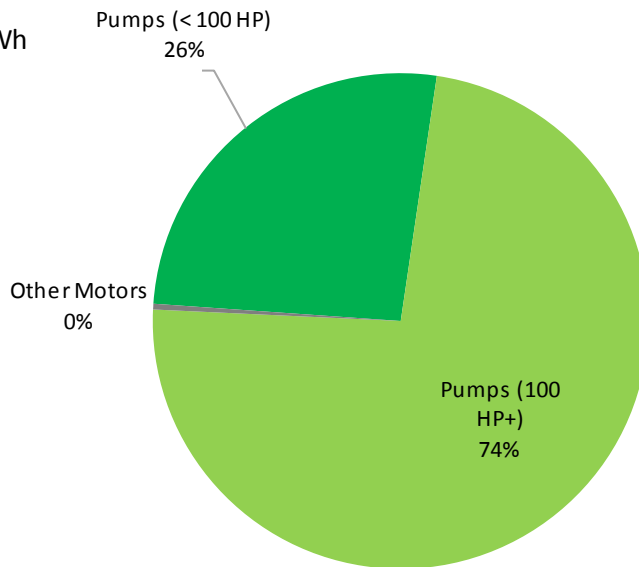
**Figure B-80 Washington Irrigation Baseline Projection by End Use, 2034**

Total:  
155,442 MWh



**Figure B-81 Wyoming Irrigation Baseline Projection by End Use, 2034**

Total:  
22,445 MWh

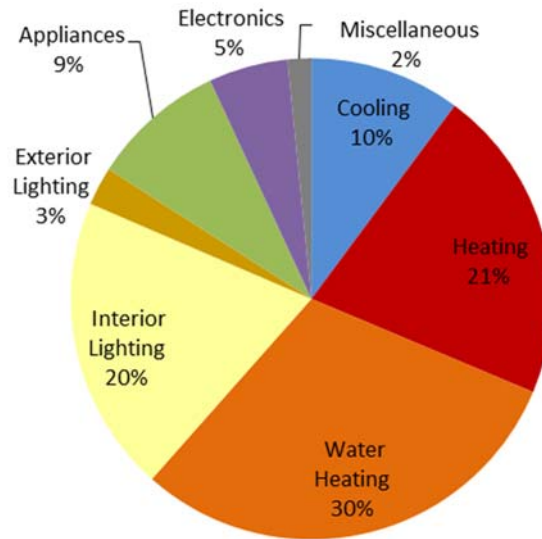


Street Lighting consists of a single end use and is not shown here.

## Achievable Technical Potential Pie Charts

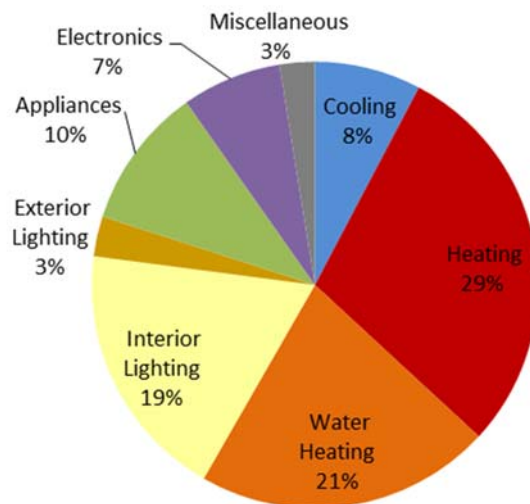
This section provides pie charts that show the Achievable Technical Potential for each state territory and sector in the study, broken down by end use in 2034.

**Figure C-1 California Residential Achievable Potential by End Use, 2034**



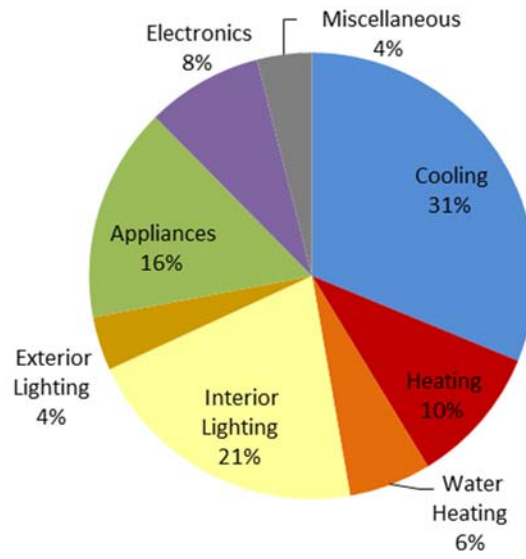
Total: 93,624 MWh

**Figure C-2 Idaho Residential Achievable Potential by End Use, 2034**



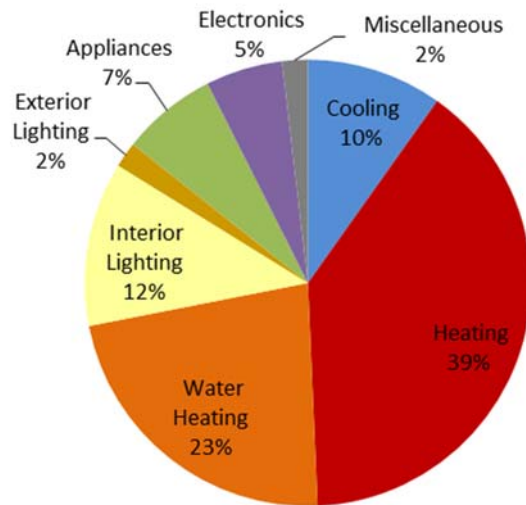
Total: 190,554 MWh

**Figure C-3 Utah Residential Achievable Potential by End Use, 2034**



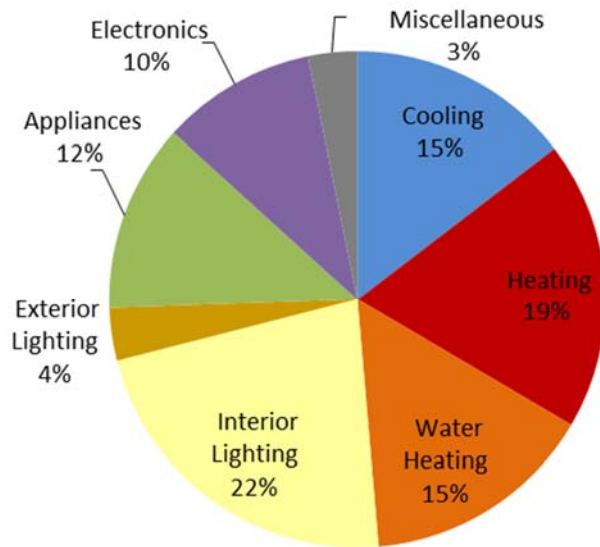
Total: 2,024,856 MWh

**Figure C-4 Washington Residential Achievable Potential by End Use, 2034**



Total: 391,658 MWh

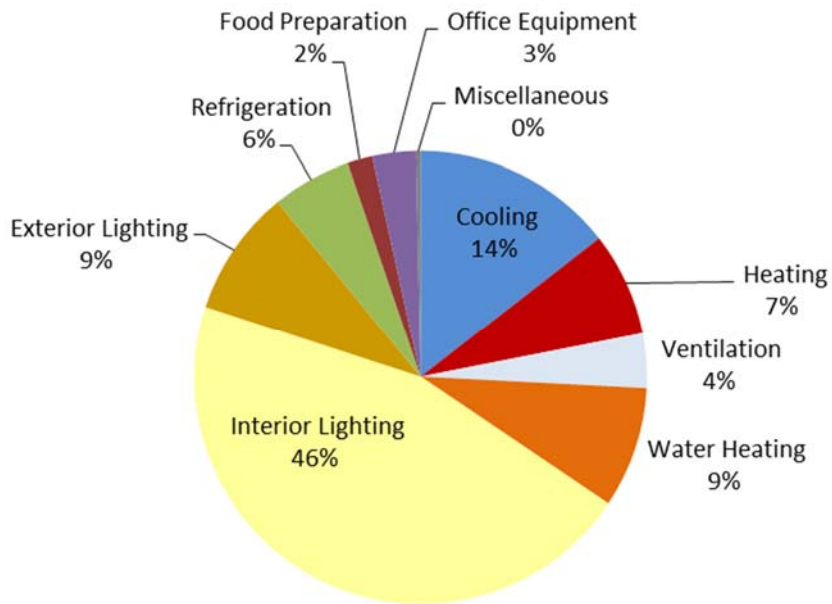
**Figure C-5 Wyoming Residential Achievable Potential by End Use, 2034**



Total: 241,478 MWh

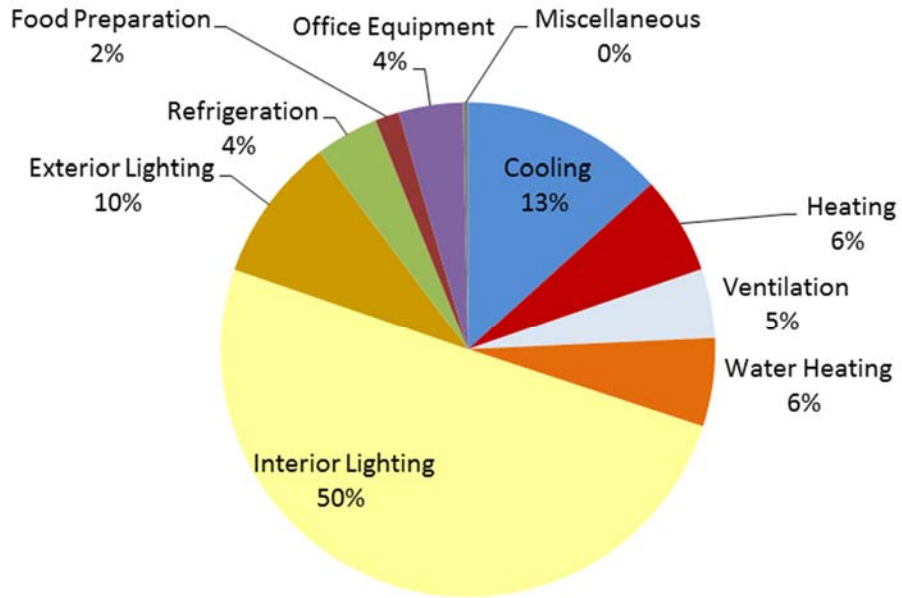
**Figure C-6 California Commercial Achievable Potential by End Use, 2034**

Total: 96,246 MWh



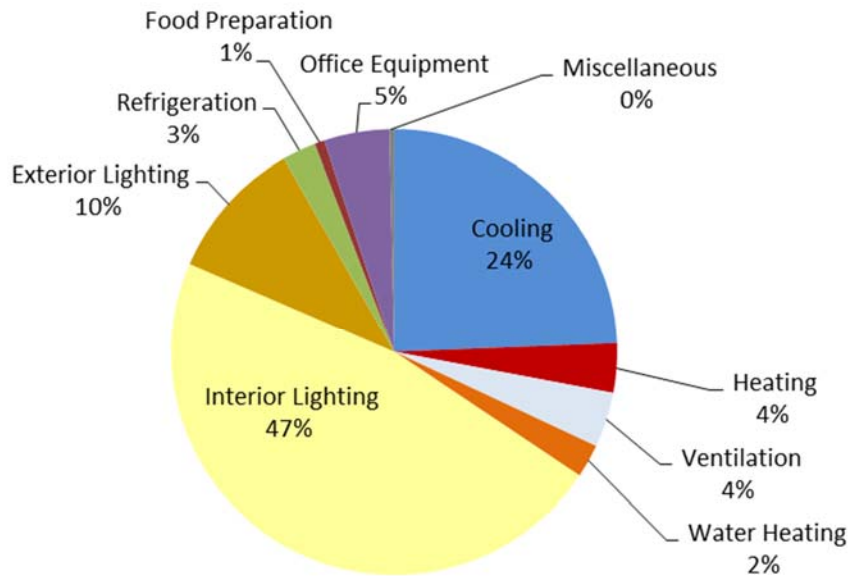
**Figure C-7 Idaho Commercial Achievable Potential by End Use, 2034**

Total: 203,763 MWh



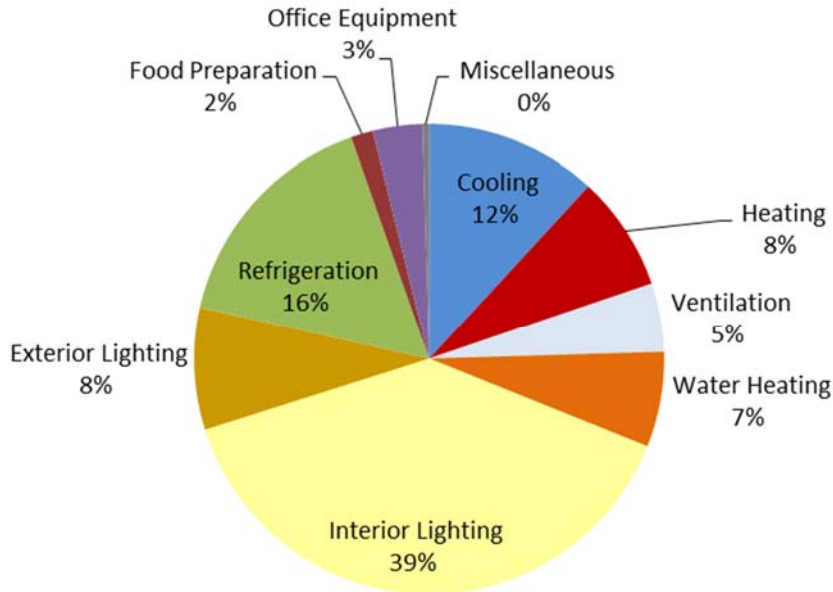
**Figure C-8 Utah Commercial Achievable Potential by End Use, 2034**

Total: 4,210,831 MWh



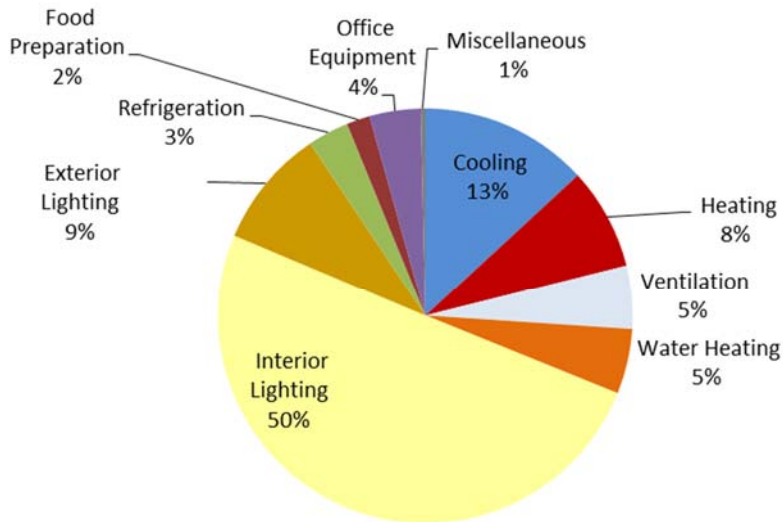
**Figure C-9 Washington Commercial Achievable Potential by End Use, 2034**

Total: 414,298 MWh

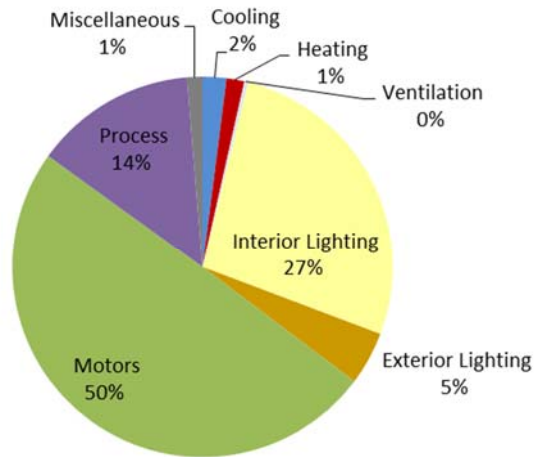


**Figure C-10 Wyoming Commercial Achievable Potential by End Use, 2034**

Total: 645,591 MWh

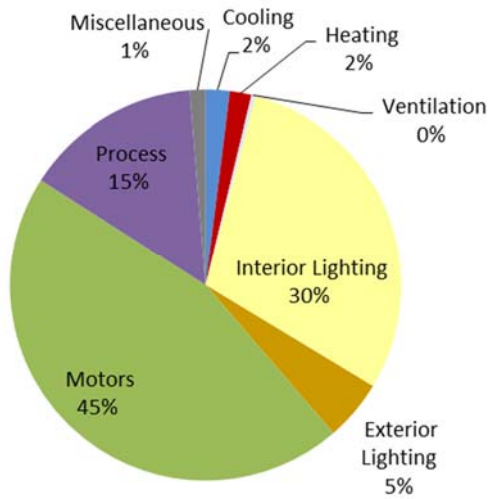


**Figure C-11 California Industrial Achievable Potential by End Use, 2034**



Total: 7,607 MWh

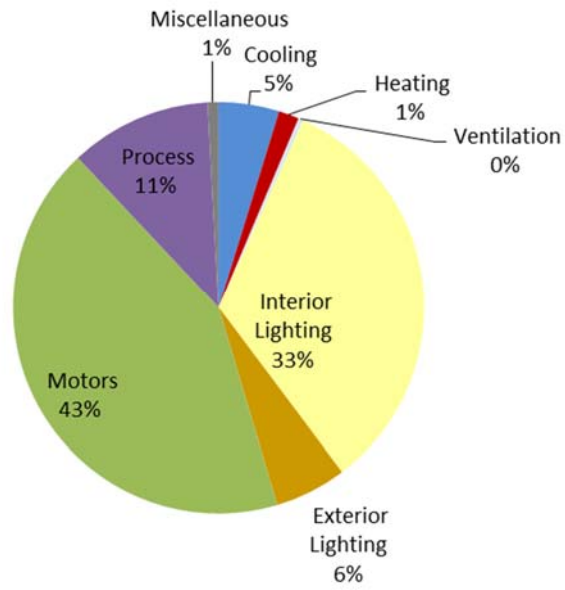
**Figure C-12 Idaho Industrial Achievable Potential by End Use, 2034**



Total: 33,294 MWh

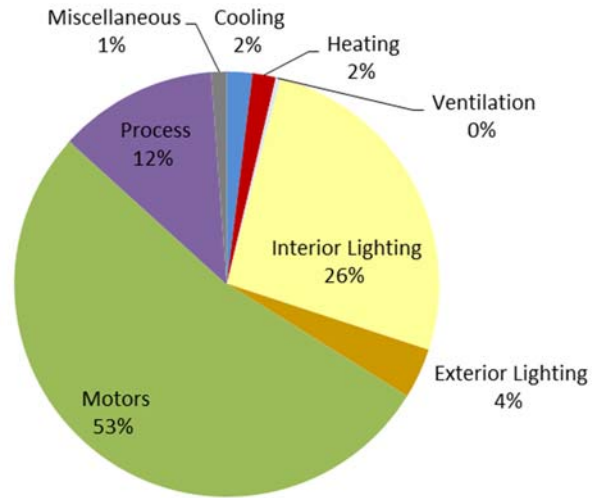


**Figure C-13 Utah Industrial Achievable Potential by End Use, 2034**



Total: 1,398,672 MWh

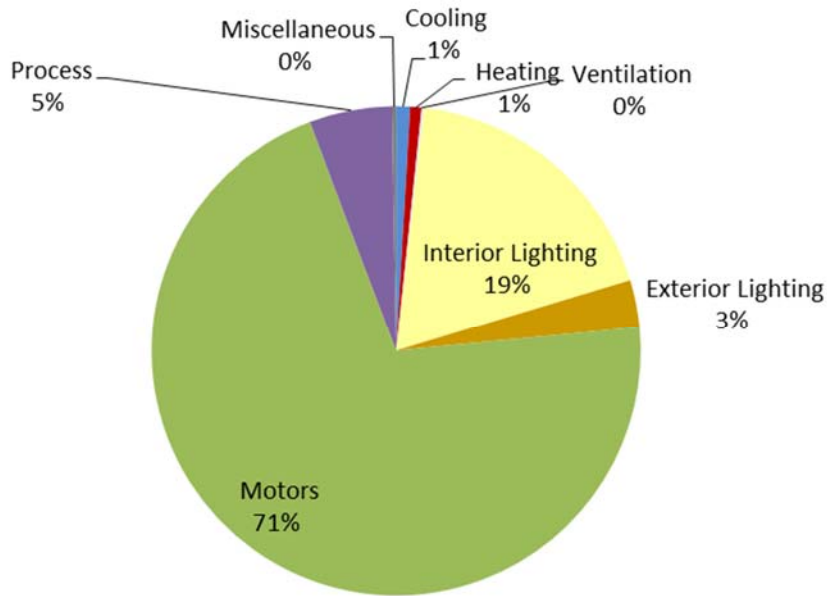
**Figure C-14 Washington Industrial Achievable Potential by End Use, 2034**



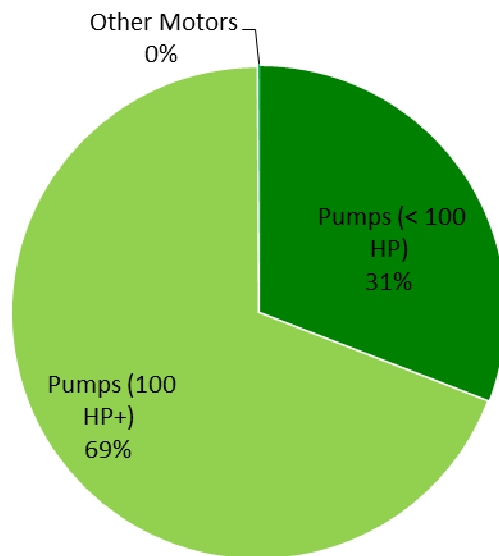
Total: 146,330 MWh

**Figure C-15 Wyoming Industrial Achievable Potential by End Use, 2034**

Total: 1,163,230 MWh

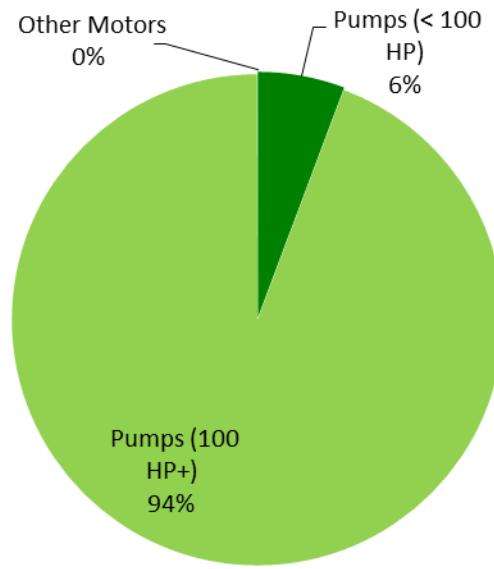


**Figure C-16 California Irrigation Achievable Potential by End Use, 2034**



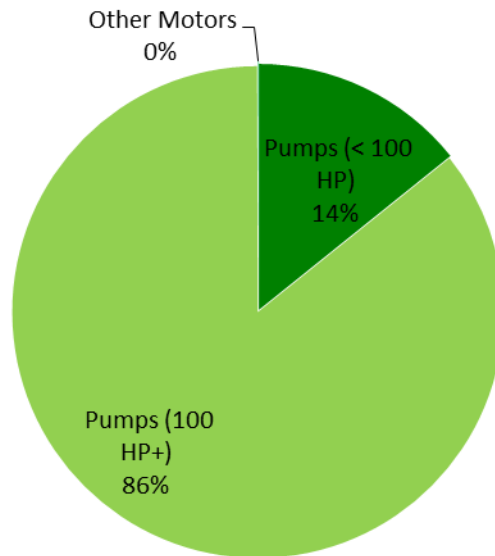
Total: 9,386 MWh

**Figure C-17 Idaho Irrigation Achievable Potential by End Use, 2034**



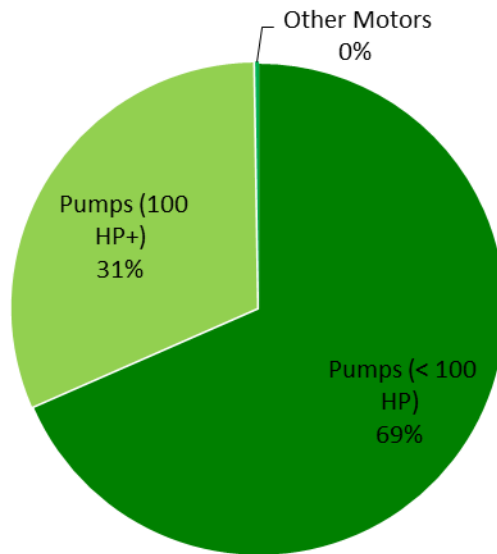
Total: 54,377 MWh

**Figure C-18 Utah Irrigation Achievable Potential by End Use, 2034**



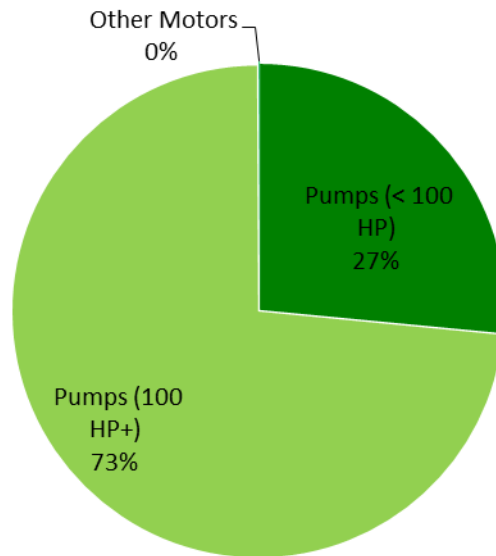
Total: 18,364 MWh

**Figure C-19 Washington Irrigation Achievable Potential by End Use, 2034**



Total: 13,282

**Figure C-20 Wyoming Irrigation Achievable Potential by End Use, 2034**



Total: 2,137 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-1** *Emerging Technology Measures Included in Class 2 DSM Analysis*

Sector	Measure Name
Residential	Water Heater <= 55 Gal - EF 2.2 (HP)
Residential	Screw-in LED
Residential	Specialty LED
Residential	Clothes Dryer - Heat Pump Dryer (EF 7.47)
Residential	Refrigerator - CEE Tier 3 (30-35% above standard)
Residential	Geothermal Heat Pump - EER 30 / COP 5.0 Ductless, Var.Ref.Flow
Residential	Solar Pre-heater for Ventilation Air
Residential	Water Heater - Drainwater Heat Recovery
Residential	Water Heater - Desuperheater
Residential	Electronics - Smart Power Strips - Load Sensing Strip
Residential	Advanced New Construction Designs
Residential	Behavioral Programs
Commercial	Screw-in - LED
Commercial	High-Bay Fixtures - LED
Commercial	Linear Fluorescent style - Tubular LED
Commercial	High Intensity Discharge (HID) applications - LED
Commercial	Geothermal Heat Pump - EER 27.8, COP 4.9 Ductless, Var.Ref.Flow
Commercial	Space Heating - Heat Recovery Ventilator
Commercial	Water Heater - Desuperheater
Commercial	Water Heater - Solar System
Commercial	Interior Lighting - Daylighting Controls
Commercial	Exterior Lighting - Photovoltaic Installation
Commercial	Electronics - Smart Power Strips
Commercial	HVAC - Occupancy Sensors
Commercial	Clothes Washers - ENERGY STAR
Commercial	Data Center - Server Virtualization
Commercial	Data Center - Direct Server Cabinet Cooling
Commercial	Strategic Energy Management
Commercial	Advanced New Construction Designs
Industrial	Screw-in - LED

Industrial	High-Bay Fixtures - LED
Industrial	Linear Fluorescent style - Tubular LED
Industrial	High Intensity Discharge (HID) applications - LED
Industrial	Interior Lighting - Daylighting Controls
Industrial	Motors - Magnetic Adjustable Speed Drives
Industrial	Motors - Synchronous Timing Belts
Industrial	Strategic Energy Management
Street Lighting	LED Fixtures

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-2 Emerging Technology Measures Excluded from Class 2 DSM Analysis**

Sector	Measure Name	Rationale for Exclusion
Residential	Hybrid Halogen / CFL bulbs	Potential covered by LED in study
Residential	Electron Stimulated Luminescence Lighting	Potential covered by LED in study
Residential	Microplasma Lighting	Experimental, insufficient definition of savings and/or costs
Residential	OLED Lighting	Experimental, insufficient definition of savings and/or costs
Residential	Magnetic Refrigeration	Experimental, insufficient definition of savings and/or costs
Residential	Ultraviolet Germicidal Irradiation of HVAC Coils	Experimental, insufficient definition of savings and/or costs. Potential covered by Maintenance measures in study.
Residential	Condensing Residential Clothes Dryers	Experimental, insufficient definition of savings and/or costs
Residential	Domestic Water Heating from Condensing Air Conditioners	Experimental, insufficient definition of savings and/or costs
Residential	Insulated Heat Tape for Freeze Protection	Experimental, insufficient definition of savings and/or costs. Potential covered by Pipe Insulation in study.
Residential	Embedded HVAC Diagnostics	Insufficient definition of savings and/or costs
Residential	Color-Tunable General Lighting	Insufficient definition of savings and/or costs
Residential	Membrane Dehumidifier Cooling	Experimental, insufficient definition of savings and/or costs
Residential	Low-cost stable, switchable mirrors - electrochromic window shading	Experimental, insufficient definition of savings and/or costs
Commercial	Hybrid Halogen / CFL bulbs	Potential covered by LED in study
Commercial	Electron Stimulated Luminescence Lighting	Potential covered by LED in study
Commercial	Microplasma Lighting	Experimental, insufficient definition of savings and/or costs

Commercial	OLED Lighting	Experimental, insufficient definition of savings and/or costs
Commercial	Embedded HVAC Diagnostics	Insufficient definition of savings and/or costs
Commercial	Data Center - High Efficiency UPS	Low market uptake and prohibitive costs
Industrial	Hybrid Halogen / CFL bulbs	Potential covered by LED in study
Industrial	Electron Stimulated Luminescence Lighting	Potential covered by LED in study
Industrial	Microplasma Lighting	Experimental, insufficient definition of savings and/or costs
Industrial	OLED Lighting	Experimental, insufficient definition of savings and/or costs
Industrial	Embedded HVAC Diagnostics	Insufficient definition of savings and/or costs

## Class 2 DSM Resource Ramping

This appendix presents the methods used by Applied Energy Group (AEG) and the Energy Trust of Oregon (Energy Trust) to develop reasonable estimates of annual Class 2 DSM (energy-efficiency) potential available for acquisition in PacifiCorp's service territory for consideration in PacifiCorp's 2015 Integrated Resource Plan (IRP). The Energy Trust's method is applied to resources in Oregon while AEG's method applies to the other five states PacifiCorp serves. Though the mechanics of the two methods differ, the objectives are the same – to estimate the amount of reasonably achievable Class 2 DSM potential in each year of the 20-year study period. The general method is presented below, with additional detail on AEG and Energy Trust methods following.

### General Methodology

Both AEG and the Energy Trust begin 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 achievable technical 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 Sixth Northwest Conservation and Electric Power Plan (6th Plan). The resulting quantities are then presented as "annual achievable technical" potential, allowing PacifiCorp's IRP model to determine the amount of achievable technical potential that is cost-effective in a given year, which informs PacifiCorp's acquisition targets in each state.

Both AEG and the Energy Trust assume 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 existing 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 resources.

The timing challenges created by lost opportunities make these resources more difficult to acquire than discretionary opportunities. As detailed in the AEG and Energy Trust methodology sections below, both 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 the assumptions used by the Northwest Power and Conservation Council (Council) in its Sixth Northwest Conservation and Electric Power Plan (6<sup>th</sup> Plan).

In addition to the timing considerations for each measure, it is important to recognize the interaction between the two resource classes. 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 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. The remainder of this appendix presents additional detail on AEG and Energy Trust methods for estimating annual achievable technical potential.

## Results

Though some of the specific methods used by AEG and Energy Trust to calculate annual achievable technical potential differ, the results are very similar. AEG estimates that across all Class 2 DSM resources, 81% of total technical potential is achievable over 20 years and that 57% of this achievable technical potential would come from lost opportunity resources. Energy Trust estimates that 84% of the technical potential can be achieved over 20 years with 63% of this achievable potential coming from discretionary resources.

## Applied Energy Group's 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 6th Power Plan, although the study incorporated additional considerations for Class 2 DSM measure acquisition:

- The first year of the 6th Power Plan ramp rates (2010) was aligned with the study's first year (2015).
- For measures not included in the 6th Power Plan, the study assigned a ramp rate considered appropriate for that technology (i.e., the same ramp rate as a similar measure in 6th 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 had 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. 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. In AEG's model, this is implicitly accounted for in equipment measures, but for non-equipment measures in new construction applications, a maximum value of 65% is applied to the measure ramp rates. This approximates the effect of the stock accounting model and produces an equivalent end point for the potential modeling as the equipment model. Overall, this results in achievability of 77% of the lost opportunity technical potential over the 20-year study period.

To calculate annual achievable technical 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 time frame limits 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 achievable technical 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 achievable technical potential, AEG then applies the 85% market achievability limit defined by the Council.

### ***Market Ramp Rates***

The 2013 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. The market ramp rates were applied in California, Idaho and Wyoming. Since that time, PacifiCorp's programs have continued to gain traction, and therefore, the California and Idaho market ramp rates were not applied in this study. However, momentum in the Wyoming industrial sector is still building and the current assessment utilizes the "Emerging" market ramp rate used in the 2013 assessment<sup>1</sup> for Wyoming's industrial sector.

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<sup>1</sup> 2013 PacifiCorp CPA, Volume 1, Figure 7

## Energy Trust of Oregon Methodology

Energy Trust begins by assessing the available technical potential in each year of a twenty-year study period, based on a “frozen efficiency” baseline of commercially available technical resources. The annual amounts of technical potential are then translated into annual achievable acquisitions by applying an achievable percentage and annual acquisition rates. Determining the optimum annual breakdown of individual measures is a function of several considerations, which are detailed below:

Consistent with the AEG method presented above, Energy Trust distinguishes between discretionary and lost opportunity resources to capture timing and interactive considerations. The Energy Trust resource assessment works with the measures in various ways to ensure that retrofit and replacement would not be double-counted in instances where they compete. As an example, often, the retrofit is much more expensive because it considers the full cost of replacement, whereas an upgrade on equipment burnout considers only the incremental cost over above standard new equipment. In cases where retrofit costs fall well above the range of costs expected to be deemed cost-effective by the IRP model, the savings are assumed to be acquired through natural equipment replacement.

### *Lost Opportunity Resources*

Like the AEG method, Energy Trust uses equipment turnover and new construction rates to calculate the technical potential in each year of the planning period. Equipment turnover is assumed to be inversely proportionate to the effective useful life (EUL) and new construction rates are tied to PacifiCorp’s customer forecasts. Next, the technical potential is adjusted for expected achievability, based on market conditions and program experience. On average, 74% and 72% of new construction and equipment replacement opportunities, respectively, are assumed to be achievable over the 20-year study period.

### *Discretionary Resources*

Again like the AEG method, the Energy Trust calculates the achievable technical potential for retrofit opportunities by applying the regionally accepted 85% achievability factor to its identified technical potential. The total achievable potential is then distributed across the years of the study by applying ramp rates reflecting what Energy Trust believes to be reasonable deployment rates accounting for current program pipeline activity among other market factors.

### *Deployment Rates*

The deployment rates for lost opportunity and discretionary resources are informed by:

- **Delivery market expansion/contraction** – Changes in year-to-year acquisition create volatility in the delivery market and years of boom and bust which is not ideal for businesses installing measures or customers receiving ever-changing messages about program offerings and funding availability. Therefore, creating reasonable transitions from year to year is important and is captured in the deployment rates.
- **Portfolio management** - The mix of measure types deployed each year needs to balance other long standing goals of providing equity for all customer types so there is something available for everyone. For example, deploying all industrial resource in one year but all residential and commercial in the following year may result in consistent savings from year to year, but a lack of balance in each individual year.
- **Cost effectiveness** - In the first two years of the planning period, Energy Trust assumes that only resources that are currently cost-effective (levelized total resource cost is less than avoided costs) will meet cost-effectiveness requirements and be used in programs. In later years, resources with higher costs are considered available to be acquired if selected by the IRP model.

The resulting annual achievable potential, also called the Energy Trust deployment scenario, is informed in the first two years by the program delivery team. That is, achievable quantities are based on what program managers believe can be acquired in the short term. Ramp rates for the subsequent 18 years are informed primarily by the planning department by allocating the remaining resource according to the considerations listed above. The application of these ramp rates is comparable to those used in the AEG study, described above. That is, they are an estimate of the total available resource that can be acquired in that year considering limitations to Energy Trust implementation. The Energy Trust assumes that 84% of the technical potential is achievable over the 20-year study period. Approximately 63% of the achievable potential is discretionary, with the remaining 37% from lost opportunity resources.

Energy Trust's deployment rates are provided in Table E-2. Lost opportunity ramp rate (New Constr. and Replacement) values represent the percent of the identified annual achievable technical opportunity assumed to be acquired. Retrofit ramp rate values represent the percent of the 20-year achievable technical opportunity assumed to be acquired in each year of the forecast period.

Table E-1 Measure and Market Ramp Rates Used in AEG's Analysis

Ramp Rate Name	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Res_LostOp_15yr	17%	26%	34%	43%	51%	60%	68%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_EmergTech *	1%	1%	3%	5%	6%	8%	10%	12%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Res_LostOp_20yr	9%	17%	26%	34%	43%	51%	60%	68%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_5yr	43%	57%	71%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_10yr	43%	51%	60%	68%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_12yr	26%	34%	43%	51%	60%	68%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_ResComputer	9%	16%	24%	31%	39%	47%	54%	62%	70%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_ResMonitor	9%	16%	24%	31%	39%	47%	54%	62%	70%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_ResTV	9%	16%	24%	31%	39%	47%	54%	62%	70%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_LostOp_ResSTB	9%	18%	28%	37%	47%	56%	66%	75%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_NonLostOp_10yr <sup>D</sup>	9%	17%	26%	34%	43%	51%	60%	68%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Res_NonLostOp_15yr <sup>D</sup>	6%	11%	17%	23%	28%	34%	40%	45%	51%	57%	62%	68%	74%	79%	85%	85%	85%	85%	85%	85%
Res_NonLostOp_20yr <sup>D</sup>	4%	9%	13%	17%	21%	26%	30%	34%	38%	43%	47%	51%	55%	60%	64%	68%	72%	77%	81%	85%
Res_NonLostOp_5yr <sup>D</sup>	17%	34%	51%	68%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Bus_LO Fast	45%	50%	60%	80%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Bus_LO Slow	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	85%	85%	85%
Bus_LO Medium	11%	23%	37%	52%	65%	74%	79%	82%	84%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Bus_Retro in 20 <sup>D</sup>	4%	9%	13%	17%	21%	26%	30%	34%	38%	43%	47%	51%	55%	60%	64%	68%	72%	77%	81%	85%
Bus_Retro in 10 <sup>D</sup>	9%	17%	26%	34%	43%	51%	60%	68%	77%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Bus_Retro in 5 <sup>D</sup>	17%	34%	51%	68%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
NewConstruct_LostOp **	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Wyoming Ind. Market	46%	49%	52%	55%	57%	60%	63%	66%	69%	72%	74%	77%	80%	83%	86%	89%	91%	94%	97%	100%

<sup>D</sup> Indicates discretionary measure ramp rate

\* Assumption of 50% maximum achievability from Council's 6<sup>th</sup> 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.

**Table E-2 Energy Trust Deployment Rates**

Ramp Rate Name	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential New Const.	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%
Residential Retrofit <sup>D</sup>	3%	7%	12%	18%	23%	28%	34%	38%	42%	47%	51%	55%	59%	64%	68%	71%	75%	78%	82%	85%
Residential Replacement	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%
Residential CFLs <sup>D</sup>	10%	18%	25%	30%	34%	38%	41%	45%	48%	51%	55%	58%	62%	65%	68%	72%	75%	79%	82%	85%
Commercial New Const.	128%	81%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%
Commercial Retrofit <sup>D</sup>	9%	17%	23%	28%	33%	37%	41%	45%	48%	52%	55%	59%	62%	65%	69%	72%	76%	79%	82%	85%
Commercial Replacement	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%
Industrial Retrofit <sup>D</sup>	7%	13%	19%	25%	30%	35%	39%	43%	47%	51%	54%	58%	61%	65%	68%	71%	75%	78%	82%	85%
Industrial Replacement	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%

<sup>D</sup> Indicates discretionary measure ramp rate

\* Energy Trust's commercial New Buildings program expects higher savings in 2015 than is currently predicted by the resource assessment model. A value above 100% is used here to align 2015 deployment with program expectations.

## Comparison of Measures to the Energy Trust of Oregon Resource Assessment

The Energy Trust of Oregon, Inc. (Energy Trust), recently completed a resource assessment<sup>2</sup> of potential energy efficiency and renewable energy measures to provide electricity and natural gas demand-side savings for Oregon consumers through 2033 within the Energy Trust's service territory. Applied Energy Group reviewed the electric measures analyzed in the Energy Trust study and compiled a list of the comparable PacifiCorp measure names.

The following three tables present residential, commercial, and industrial measure names. Each table includes the sector, Energy Trust measure name, and comparable PacifiCorp measure name. Notes in the far right column provide additional detail where relevant. Please note that irrigation and street lighting measures are included as part of industrial in the Energy Trust study, while the PacifiCorp study breaks them out separately.

**Table F-1 Comparison of Energy Trust and PacifiCorp Residential Measure Names**

Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Residential	Res- Opower- Behavior Savings (NEW)	Behavioral Programs	New vintage
Residential	Res- Opower- Behavior Savings (RET)	Behavioral Programs	Existing vintage
Residential	Res - CFL (Screw In)	Screw-in CFL	
Residential	Res - CFL (Screw In) (NEW ONLY)	Screw-in CFL	New vintage
Residential	Res - CFL Specialty Lights	Specialty CFL	
Residential	Res - CFL Specialty Lights (NEW ONLY)	Specialty CFL	New vintage
Residential	Res - Duct Sealing, Elec SH, Z1	Ducting - Repair and Sealing	
Residential	Res - Duct Sealing, Elec SH, Z2	Ducting - Repair and Sealing	
Residential	Res - Elec Hi-eff Clothes Washer - Elec DHW	Clothes Washer	
Residential	Res - Elec Hi-eff Dishwasher - Elec DHW	Dishwasher	
Residential	Res - Elec Hi-eff Dishwasher - Elec DHW - SF	Dishwasher	Single Family segment
Residential	Res - Energy Star New Home BOP 1 - ER SH	Advanced New Construction Designs	
Residential	Res - Energy Star New Home BOP 1 - ER SH, Z1	Advanced New Construction Designs	
Residential	Res - Energy Star New Home BOP 1 - ER SH, Z2	Advanced New Construction Designs	
Residential	Res - Energy Star New Home BOP 1 - HP SH	Advanced New Construction Designs	
Residential	Res - Energy Star New Home BOP 1 - HP SH, Z1	Advanced New Construction Designs	
Residential	Res - Energy Star New Home BOP 1 - HP SH, Z2	Advanced New Construction Designs	
Residential	Res - ER SH to Heat Pump, ET, Z1	Air-Source Heat Pump	
Residential	Res - ER SH to Heat Pump, ET, Z2	Air-Source Heat Pump	
Residential	Res - ER SH to Heat Pump, Z1	Air-Source Heat Pump	
Residential	Res - ER SH to Heat Pump, Z1 - MH	Air-Source Heat Pump	
Residential	Res - ER SH to Heat Pump, Z2	Air-Source Heat Pump	
Residential	Res - ER SH to Heat Pump, Z2 - MH	Air-Source Heat Pump	
Residential	Res - ER SH to Mini-split ductless heat pump, Z1	Ductless Mini Split Heat Pump	
Residential	Res - ER SH to Mini-split ductless heat pump, Z1 - MH	Ductless Mini Split Heat Pump	Manufactured Home segment
Residential	Res - ER SH to Mini-split ductless heat pump, Z2	Ductless Mini Split Heat Pump	
Residential	Res - ER SH to Mini-split ductless heat pump, Z2 - MH	Ductless Mini Split Heat Pump	Manufactured Home segment
Residential	Res - Heat Pump (HP Upgrade), ET, Z1	Air-Source Heat Pump Geothermal Heat Pump	

<sup>2</sup> "Energy Efficiency Resource Assessment Report" for the Energy Trust of Oregon – Final Report June 4, 2014: [http://energytrust.org/library/reports/Energy\\_Efficiency\\_Resource\\_Assessment\\_Report.pdf](http://energytrust.org/library/reports/Energy_Efficiency_Resource_Assessment_Report.pdf)

Comparison of Measures to the Energy Trust of Oregon Resource Assessment

Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Residential	Res - Heat Pump (HP Upgrade), ET, Z2	Air-Source Heat Pump Geothermal Heat Pump	
Residential	Res - Heat Pump (HP Upgrade), Z1	Air-Source Heat Pump Geothermal Heat Pump	
Residential	Res - Heat Pump (HP Upgrade), Z2	Air-Source Heat Pump Geothermal Heat Pump	
Residential	Res - Heat Pump Controls, Z1	Thermostat - Clock/Programmable	
Residential	Res - Heat Pump Controls, Z1 - MH	Thermostat - Clock/Programmable	
Residential	Res - Heat Pump Controls, Z2	Thermostat - Clock/Programmable	
Residential	Res - Heat Pump Controls, Z2 - MH	Thermostat - Clock/Programmable	
Residential	Res - HRV, Elec SH, Z1	Space Heating - Heat Recovery Ventilator	
Residential	Res - HRV, Elec SH, Z2	Space Heating - Heat Recovery Ventilator	
Residential	Res - LED Screw In (CFL Base)	Screw-in LED	
Residential	Res - LED Screw In (CFL Base), ET	Screw-in LED	
Residential	Res - LED Screw In (Inc Base)	Screw-in LED	
Residential	Res - LED Screw In (Inc Base) (NEW ONLY)	Screw-in LED	New vintage
Residential	Res - LED Screw In (Inc Base), ET	Screw-in LED	
Residential	Res - LED Screw In (Inc Base), ET (NEW ONLY)	Screw-in LED	New vintage
Residential	Res - LED Specialty Lights	Specialty LED	
Residential	Res - LED Specialty Lights (NEW ONLY)	Specialty LED	New vintage
Residential	Res - Linear Fluorescent - Premium T8s	Linear Fluorescent	
Residential	Res - LowPowerMode Appliances	Electronics - Smart Power Strips and ENERGY STAR Appliances	
Residential	Res - MF Common Area Lightng Controls	Interior Lighting - Occupancy Sensors	
Residential	Res - Recycle Freezer	Freezer - Decommissioning and Recycling	
Residential	Res - Recycle Refrigerator	Refrigerator - Decommissioning and Recycling	
Residential	Res - Window Replacement (U<.20), Elec SH, Z1	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U<.20), Elec SH, Z1 (NEW ONLY)	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U<.20), Elec SH, Z1, MH	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U<.20), Elec SH, Z2	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U<.20), Elec SH, Z2 (NEW ONLY)	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U<.20), Elec SH, Z2, MH	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.25), Elec SH, Z1	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.25), Elec SH, Z1 (NEW ONLY)	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.25), Elec SH, Z1, MH	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.25), Elec SH, Z2	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.25), Elec SH, Z2 (NEW ONLY)	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.25), Elec SH, Z2, MH	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.30), Elec SH, Z1	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.30), Elec SH, Z1, MH	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.30), Elec SH, Z2	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Window Replacement (U=.30), Elec SH, Z2, MH	Windows - High Efficiency/ENERGY STAR	AEG modeled U-0.22 windows
Residential	Res - Wx insulation (ceiling), Elec SH, Z1	Insulation - Ceiling	
Residential	Res - Wx insulation (ceiling), Elec SH, Z2	Insulation - Ceiling	
Residential	Res - Wx insulation (ceiling), NEW, ET, Elec SH, Z1	Insulation - Ceiling	



Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Residential	Res - Wx insulation (ceiling), NEW, ET, Elec SH, Z2	Insulation - Ceiling	
Residential	Res - Wx insulation (ceiling), RET, ET, Elec SH, Z1	Insulation - Ceiling	
Residential	Res - Wx insulation (ceiling), RET, ET, Elec SH, Z2	Insulation - Ceiling	
Residential	Res - Wx insulation (floor), Elec SH, Z1	Insulation - Floor	
Residential	Res - Wx insulation (floor), Elec SH, Z2	Insulation - Floor	
Residential	Res - Wx insulation (wall), Elec SH, Z1	Insulation - Wall Cavity	
Residential	Res - Wx insulation (wall), Elec SH, Z2	Insulation - Wall Cavity	
Residential	Res - Wx insulation (wall), NEW, ET, Elec SH, Z1	Insulation - Wall Cavity	New vintage
Residential	Res - Wx insulation (wall), NEW, ET, Elec SH, Z2	Insulation - Wall Cavity	New vintage
Residential	Res - Wx insulation (wall), RET, ET, Elec SH, Z1	Insulation - Wall Cavity	Existing vintage
Residential	Res - Wx insulation (wall), RET, ET, Elec SH, Z2	Insulation - Wall Cavity	Existing vintage
Residential	Res 50 Gallon Solar Thermal Water Heating Unit-Z1, Elec	Water Heater - Solar System	
Residential	Res 50 Gallon Solar Thermal Water Heating Unit-Z1, Elec (NEW ONLY)	Water Heater - Solar System	New vintage
Residential	Res 50 Gallon Solar Thermal Water Heating Unit-Z2, Elec	Water Heater - Solar System	
Residential	Res 50 Gallon Solar Thermal Water Heating Unit-Z2, Elec (NEW ONLY)	Water Heater - Solar System	New vintage
Residential	Res 50 Gallon Solar Thermal Water Heating Unit, ET-Z1, Elec	Water Heater - Solar System	
Residential	Res 50 Gallon Solar Thermal Water Heating Unit, ET-Z1, Elec (NEW ONLY)	Water Heater - Solar System	New vintage
Residential	Res 50 Gallon Solar Thermal Water Heating Unit, ET-Z2, Elec	Water Heater - Solar System	
Residential	Res 50 Gallon Solar Thermal Water Heating Unit, ET-Z2, Elec (NEW ONLY)	Water Heater - Solar System	New vintage
Residential	Res Advanced CO2 Heat Pump Water Heater-Z1	Heat Pump Water Heater EF 2.2	
Residential	Res Advanced CO2 Heat Pump Water Heater-Z1 (NEW ONLY)	Heat Pump Water Heater EF 2.2	
Residential	Res Advanced CO2 Heat Pump Water Heater-Z2	Heat Pump Water Heater EF 2.2	
Residential	Res Advanced CO2 Heat Pump Water Heater-Z2 (NEW ONLY)	Heat Pump Water Heater EF 2.2	
Residential	Res Bathroom Faucet Aerators, 1.0 gpm- Electric	Water Heater - Faucet Aerators	
Residential	Res Bathroom Faucet Aerators, 1.5 gpm- Electric	Water Heater - Faucet Aerators	
Residential	Res Kitchen Faucet Aerators, 1.5 gpm- Electric	Water Heater - Faucet Aerators	
Residential	Res Kitchen Faucet Aerators, 2.0 gpm- Electric	Water Heater - Faucet Aerators	
Residential	Res Showerheads - Elec DHW	Water Heater - Low-Flow Showerheads	
Residential	Res Smart Devices Home Automation (NEW)	Electronics - Smart Power Strips	New vintage
Residential	Res Smart Devices Home Automation (RET)	Electronics - Smart Power Strips	Existing vintage
Residential	Res Tier 1 Heat Pump Water Heater- Z1	Heat Pump Water Heater EF 2.2	
Residential	Res Tier 1 Heat Pump Water Heater- Z2	Heat Pump Water Heater EF 2.2	
Residential	Res Tier 2 Heat Pump Water Heater-Z1	Heat Pump Water Heater EF 2.2	
Residential	Res Tier 2 Heat Pump Water Heater-Z1 (NEW ONLY)	Heat Pump Water Heater EF 2.2	New vintage
Residential	Res Tier 2 Heat Pump Water Heater-Z2	Heat Pump Water Heater EF 2.2	
Residential	Res Tier 2 Heat Pump Water Heater-Z2 (NEW ONLY)	Heat Pump Water Heater EF 2.2	New vintage

**Table F-2 Comparison of Energy Trust and PacifiCorp Commercial Measure Names**

Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Commercial	Com - Advanced Package A/C RTU	RTU	
Commercial	Com - Advanced Refrigeration Controls - Commercial	Refrigeration - Anti-Sweat Heater Controls Refrigeration - Evaporator Fan Controls	
Commercial	Com - Advanced Ventilation Controls	Energy Management System	
Commercial	Com - Ceramic Metal Halide		AEG lighting potential modeled primarily with LEDs
Commercial	Com - CFL (9W)	Screw-in CFL	
Commercial	Com - CFL (9W), New	Screw-in CFL	New vintage
Commercial	Com - DDC HVAC Controls	Energy Management System	
Commercial	Com - Demand Control Ventilation	Ventilation - CO2 Controlled	
Commercial	Com - Desktop/Laptop Power Management	Electronics - Smart Power Strips	
Commercial	Com - Desktop/Laptop Power Management - NEW ONLY	Electronics - Smart Power Strips	
Commercial	Com - Economizer Diagnostic, Damper Repair & Reset	HVAC - Economizer	
Commercial	Com - Efficient Datacenter Power Distribution- NEW ONLY	Data Center - Air Flow Optimization and Commissioning	
Commercial	Com - Efficient Datacenter Servers - NEW ONLY	Server	Data Center segment
Commercial	Com - Efficient Datacenter UPS - NEW ONLY		Excluded from emerging tech measures due to high cost and low market penetration
Commercial	Com - Efficient Standalone Refrigeration	Refrigeration measures: Anti-Sweat Heater Controls, Door Gasket Replacement, Evaporator Fan Controls, Floating Head Pressure, Strip Curtain, High Efficiency Compressor	
Commercial	Com - EMS (New)	Energy Management System	New vintage
Commercial	Com - EMS (Retrofit)	Energy Management System	Existing vintage
Commercial	Com - Energy Recovery Ventilator - Cooling	Space Heating - Heat Recovery Ventilator	
Commercial	Com - Energy Recovery Ventilator - Elec Heating	Space Heating - Heat Recovery Ventilator	
Commercial	Com - Exit Signs	Interior Lighting - LED Exit Lighting	
Commercial	Com - Floating Heat Pressure Controls	Refrigeration - Floating Head Pressure	
Commercial	Com - High Bay LED	High-Bay Fixtures - LED (170 lm/W)	
Commercial	Com - High Bay LED, ET	High-Bay Fixtures - LED (170 lm/W)	
Commercial	Com - High Bay T5	High-Bay Fixtures - High Output T5 (75.5 lm/W)	AEG lighting potential modeled primarily with LEDs
Commercial	Com - High Bay T8	High-Bay Fixtures - High Output T8	AEG lighting potential modeled primarily with LEDs
Commercial	Com - High Efficiency Chiller	Air-Cooled Chiller Water-Cooled Chiller	
Commercial	Com - High Efficiency Heat Pump	Air Source Heat Pump Geothermal Heat Pump	
Commercial	Com - HP T8 (T12 baseline)	Linear Fluorescent - T8 HE (58.2 lm/W)	AEG lighting potential modeled primarily with LEDs
Commercial	Com - HP T8 (T8 baseline)	Linear Fluorescent - T8 HE (58.2 lm/W)	AEG lighting potential modeled primarily with LEDs
Commercial	Com - HVAC System Commissioning	Commissioning	
Commercial	Com - Hybrid IDEC	Evaporative Cooling - Indirect/Direct	
Commercial	Com - Hybrid IDEC - RET	Evaporative Cooling - Indirect/Direct	
Commercial	Com - LED	Screw-in - LED (170 lm/W) High-Bay Fixtures - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	
Commercial	Com - LED (Exterior)	Screw-in - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	Exterior Lighting end use
Commercial	Com - LED (Exterior), ET	Screw-in - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	Exterior Lighting end use
Commercial	Com - LED (Troffer), T12 baseline	Tubular LEDs	

Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Commercial	Com - LED (Troffer), T12 baseline, ET2	Tubular LEDs	
Commercial	Com - LED (Troffer), T8 baseline	Tubular LEDs	
Commercial	Com - LED (Troffer), T8 baseline, ET	Tubular LEDs	
Commercial	Com - LED Streetlights		Street Lighting is a separate sector in the PacifiCorp study
Commercial	Com - LED, ET	Screw-in - LED (170 lm/W) High-Bay Fixtures - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	
Commercial	Com - LED, ET, New	Screw-in - LED (170 lm/W) High-Bay Fixtures - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	New vintage
Commercial	Com - LED, New	Screw-in - LED (170 lm/W) High-Bay Fixtures - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	New vintage
Commercial	Com - Lighting Controls (Daylight)	Interior Lighting - Daylighting Controls	
Commercial	Com - Lighting Controls (OCC), New	Interior Lighting - Occupancy Sensors	New vintage
Commercial	Com - Lighting Controls (OCC), RET	Interior Lighting - Occupancy Sensors	Existing vintage
Commercial	Com - Refrigeration Bundle	Refrigeration measures: Anti-Sweat Heater Controls, Door Gasket Replacement, Evaporator Fan Controls, Floating Head Pressure, Strip Curtain, High Efficiency Compressor	
Commercial	Com - Refrigeration Auto Closers (Reach-in)		Considered standard practice
Commercial	Com - Refrigeration Auto Closers (Walk-in)		Considered standard practice
Commercial	Com - Server Virtualization	Data Center - Server Virtualization	
Commercial	Com - Server Virtualization - NEW ONLY	Data Center - Server Virtualization	New vintage
Commercial	Com - Smart Plug Power Strips	Electronics - Smart Power Strips	
Commercial	Com - Smart Plug Power Strips - NEW ONLY	Electronics - Smart Power Strips	New vintage
Commercial	Com - Supermarket Max Tech Refrigeration	Refrigeration measures: Anti-Sweat Heater Controls, Door Gasket Replacement, Evaporator Fan Controls, Floating Head Pressure, Strip Curtain, High Efficiency Compressor Grocery measures: Display Case - LED Lighting, Display Case Motion Sensors, Open Display Case - Night Covers	
Commercial	Com - Transformers	Transformer - High Efficiency	
Commercial	Com - Transformers - NEW ONLY	Transformer - High Efficiency	
Commercial	Com - VSD on HVAC Motors	Non-HVAC Motors - Variable Speed Control	
Commercial	Com - VSD on HVAC Motors - NEW ONLY	Non-HVAC Motors - Variable Speed Control	New vintage
Commercial	Com - Window Film		Savings included under: Windows - High Efficiency
Commercial	Com - Work Station Plug Load Occupancy Sensor	Office Equipment - Plug Load Occupancy Sensors	

**Table F-3 Comparison of Energy Trust and PacifiCorp Industrial Measure Names**

Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Industrial	Ind- Adv LED Lighting Retrofits	Screw-in - LED (170 lm/W) High-Bay Fixtures - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	Existing vintage
Industrial	Ind- Agriculture: Gasket Replacement	Irrigation – Gasket Replacement	
Industrial	Ind- Agriculture: Impact Sprinkler Nozzles	Irrigation - Nozzle Replacement - Flow-Control Type, and Rebuilt or New Brass Impact Sprinklers	
Industrial	Ind- Agriculture: Pipe Repair	Irrigation – Pipe Repair	
Industrial	Ind- Agriculture: Pump Systems Replacement	Irrigation - Pumps	
Industrial	Ind- Agriculture: Replace ditch with pipes		Measure is generally done for water savings instead of electric. Electric usage can sometimes be increased due to transition from gravity-fed ditches to pipes and pumps. With better characterization, savings may be present and measurable, but AEG did not find sufficient relevant data for inclusion in this study.
Industrial	Ind- Air Abatement	Savings attributable to this measure are included within Industrial Fan & filter measures: Fan Equipment Upgrade, Fan System – Maintenance, and Fan System - Optimization	
Industrial	Ind- Air Compressor- VFD and controls	Motors – Variable Frequency Drive	
Industrial	Ind- Air Compressor Demand Reduction	Compressed Air - Air Usage Reduction	
Industrial	Ind- Air Compressor Equipment Upgrade	Compressed Air - Compressor Replacement	
Industrial	Ind- Air Compressor Heat Recovery	Compressed Air - System Optimization and Improvements	
Industrial	Ind- Chiller Heat Recovery	HVAC – Economizer Chiller – Efficient Mechanical Layout Strategic Energy Management	
Industrial	Ind- Clean Room Upgrade	Clean Room: Change Filter Strategy Clean Room: Chiller Optimize Clean Room: Clean Room HVAC	
Industrial	Ind- Demand Control Ventilation	Ventilation - CO2 Controlled	
Industrial	Ind- Efficient Chiller Upgrade	Air-Cooled Chiller Water-Cooled Chiller	
Industrial	Ind- Efficient Lighting Retrofits	Screw-in - LED (170 lm/W) High-Bay Fixtures - LED (170 lm/W) Linear Fluorescent - LED (170 lm/W) HID - LED (170 lm/W)	
Industrial	Ind- Fan Equipment Upgrade	Fans & Blowers	
Industrial	Ind- Fan System- VFD	Fan System - Controls	
Industrial	Ind- Green Motor Rewind	Green Motor Rewind (<100 HP) Green Motor Rewind (100 HP+)	
Industrial	Ind- HVAC O&M	Heat Pump - Maintenance	
Industrial	Ind- Lighting Controls	Interior Lighting - Occupancy Sensors Interior Lighting - Timeclocks and Timers Interior Lighting - Daylighting Controls Exterior Lighting - Daylighting Controls	
Industrial	Ind- Mechanical Conveyor	Conveyors	
Industrial	Ind- Pneumatic Conveyor	Conveyors	
Industrial	Ind- Pump Equipment Upgrade	Pump Equipment Upgrade	
Industrial	Ind- Pump Systems- Sequencing Controls	Pumping System - Controls	
Industrial	Ind- Pump VFD	Pumping System - Optimization	
Industrial	Ind- Refrigeration O&M	Refrigeration - Maintenance	
Industrial	Ind- Refrigeration System Upgrade	Refrigeration - System Optimization	

Sector	Energy Trust Measure Name	PacifiCorp Measure Name	Notes
Industrial	Ind- Strategic Energy Management	Strategic Energy Management	
Industrial	Ind- Switched reluctance motors	Motors - Variable Frequency Drive	Switched reluctance is a special kind of motor controller included in the superset of VFD measures
Industrial	Ind - Advanced Refrigeration Controls - Industrial	Refrigeration - Anti-Sweat Heater Controls Refrigeration - Evaporator Fan Controls	

## Comparison of Washington Measures to the Council's 6th Plan and the Regional Technical Forum

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) 6th Northwest Electric and Conservation Power Plan (6th 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 6th Plan, the RTF has continued to review baseline and measure assumptions. Thus, many of the measures used in the 6th Plan have been updated based on more recent data. Therefore, AEG used RTF assumptions where available and 6th Plan assumptions if an RTF update had not been completed as of January 31, 2014. 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 6th Plan measures. However, not all measure names, measure-efficiency tiers, measure iterations, and measure savings will directly mirror the RTF or 6th Plan. These differences account for changes in federal equipment efficiency standards, the latest version of Washington 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 code and 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 uses 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 G-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 G-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 6th 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 (NEEA), PacifiCorp's Market Characterization studies (2011 and 2012), 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. Table G-3 contains a comparison of the savings values and notes on the key drivers of differences where relevant.

Table G-4 contains a similar comparison of the savings values and notes on relevant key drivers of differences in the irrigation sector.

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 G-5 for a comparison of these measures.

**Table G-1 Comparison of RTF and PacifiCorp Residential Measures in Washington**

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
All Residential	Cooling	Room AC - EER 11.5	Installation	All	19.21	56.96	6PP "EStar Room AC FY09" v1.0	6th Plan savings data is out of date: does not include new market standard of EER 11.0 effective in 2014. Value given is for an EER 10.8 unit over an EER 9.8
Single Family	Cooling	Air-Source Heat Pump - SEER 22, Ductless w/ Var. Ref.	Installation	Existing	203.40	169.14	RTF "Res SF Variable Speed HP Upgrade" v1.0	RTF has savings only up to SEER 18 (given here). Compares with SEER 22 in AEG study.
Single Family	Cooling	Ductless Mini Split Heat Pump - Installed	Installation	Existing	23.92	60.01	RTF "Res Heating Cooling Ductless Heat Pumps SF" v2.0	AEG's Market Profile average home has lower baseline room AC cooling usage than the weighted RTF baseline. Using the same percentage savings therefore yields lower absolute kWh savings.
Single Family	Cooling	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	39.67	45.5	RTF "Res New SF EStar WA ID MT" v2.2 (Average of Furnace/CAC and ASHP)	-
Single Family	Heating	Ductless Mini Split Heat Pump - Installed	Installation	Existing	3,543.20	2,719.03	RTF "Res Heating Cooling Ductless Heat Pumps SF" v2.0	AEG's Market Profile average home has higher baseline Zonal Heating usage than the RTF baseline. Using the same percentage savings therefore yields higher absolute kWh savings.
Single Family	Heating	Air-Source Heat Pump - SEER 22, Ductless w/ Var. Ref.	Installation	Existing	1,908.17	890.32	RTF "Res SF Variable Speed HP Upgrade" v1.0	RTF has savings only up to SEER 18 (given here). Compares with SEER 22 in AEG study.



Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
Single Family	Heating	Insulation - Ceiling - R-30	Installation	Existing	536.96	625.31	RTF "Res SF Wx" v2.4 (R19-R38, scaled to R30)	AEG's Market Profile average home has lower baseline heating usage than the RTF SF baseline. Using the same percentage savings therefore yields lower absolute kWh savings.
Manufactured Home	Heating	Insulation - Ceiling - R-30	Installation	Existing	608.08	357.77	RTF "Res MH Wx" v3.1 (Ceiling R19-R30, Average heating system)	AEG's Market Profile average home has higher baseline heating usage than the RTF MH baseline. Using the same percentage savings therefore yields higher absolute kWh savings.
Single Family	Heating	Insulation - Floor - R0-19	Installation	Existing	469.33	1,485.12	RTF "Res SF Wx" v2.4 (R0-R19)	RTF reported baseline heating usage for prototype in this measure is nearly three times that determined by the AEG market profile, significantly raising the savings potential. AEG used the RTF percentage savings applied to PacifiCorp-specific building, not absolute kWh savings.
Single Family	Heating	Infiltration Control - 0.1 ACH Reduction	Installation	Existing	506.9	749.05	RTF "Res SF Wx" v2.4 (Average Heating System)	AEG's Market Profile average home has lower baseline heating usage than the RTF baseline. Using the same percentage savings therefore yields lower absolute kWh savings.
Manufactured Home	Heating	Infiltration Control - 0.1 ACH Reduction	Installation	Existing	1,020.4	910.69	RTF "Res MH Wx" v3.1	-
Single Family	Heating	Ducting - Repair and Sealing - Sealed	Installation	Existing	1,217.41	1,219.06	RTF "Res SF Duct Sealing" v2.3	-
Manufactured Home	Heating	Ducting - Repair and Sealing - Sealed	Installation	Existing	1,548.83	1,512.71	RTF "Res Heating Cooling Duct Sealing MH" v2.4	-
Single Family	Heating	Windows - High Efficiency/ENERGY STAR - U-0.22 Window	Installation	Existing	738.56	781.72	RTF "Res SFWx" v2.4, "Standard Information Workbook" v1.3	RTF savings are for 0.35 upgrade to 0.22 (AEG reflects WA code)

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
Manufactured Home	Heating	Windows - High Efficiency/ENERGY STAR - U-0.22 Window	Installation	Existing	412.56	405.20	RTF "Res MH Wx" v3.1	-
Single Family	Heating	Doors - Storm and Thermal - R-5 Door	Installation	Existing	121.84	71.00	6PP "Res WX SF_wAdvanced Lighting sqft FY09" v1.2	6 <sup>th</sup> Plan data out of date, updated with data from AEG's building simulation tool.
Multifamily	Heating	Doors - Storm and Thermal - R-5 Door	Installation	Existing	137.92	401.00	6PP "Res WX SF_wAdvanced Lighting sqft FY09" v1.2	6 <sup>th</sup> Plan data out of date, updated with data from AEG's building simulation tool.
Manufactured Home	Heating	Doors - Storm and Thermal - R-5 Door	Installation	Existing	183.18	182.00	6PP "Res WX SF_wAdvanced Lighting sqft FY09" v1.2	6 <sup>th</sup> Plan data out of date, updated with data from AEG's building simulation tool.
Single Family	Heating	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	1,417.03	1,781.42	RTF "Res New SF EStar WA ID MT" v2.2 (ASHP) and "EStar NW SF Homes_DHP tco_ WAIDMT" (Ductless Heat Pump) (Average used)	AEG's Market Profile average home has lower baseline heating usage than the RTF baseline. Using the same percentage savings therefore yields lower absolute kWh savings.
Multifamily	Heating	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	457.09	427.55	RTF "Res MF EStar Homes 2012" v1.1	-
Manufactured Home	Heating	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	1,827.40	3,376.96	RTF "New MH EStar Eco Rated" v1.3 (Average of Energy Star and Eco Rated, Furnace and ASHP)	The base SEEM run for MH heating in this workbook has much higher heating load and square footage than AEG prototype.
Single Family	Water Heating	Water Heater <= 55 Gal - EF 2.2 (HP)	Installation	Existing	1,800.05	1,774.18	RTF "Res_HPWH" v 1.2	RTF Average used
Single Family	Water Heating	Water Heater - Drainwater Heat Recovery - Installed	Installation	Existing	373.3	373.3	6PP "Res DHW Heat Recovery FY09" v1.1	-

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
Single Family	Water Heating	Water Heater - Low-Flow Showerheads - 1.5 gpm	fixture	Existing	248.76	327.35	RTF “Res Showerheads” v2.1	AEG’s Market Profile average home has lower baseline DHW usage than the RTF baseline for this measure. Using the same percentage savings therefore yields lower absolute kWh savings.
Multifamily	Water Heating	Water Heater - Low-Flow Showerheads - 1.5 gpm	fixture	Existing	191.34	260.84	RTF “Res Showerheads” v2.1	AEG’s Market Profile average home has lower baseline DHW usage than the RTF baseline for this measure. Using the same percentage savings therefore yields lower absolute kWh savings.
Single Family	Water Heating	Water Heater - Desuperheater - Installed	Installation	Existing	1,468.48	1,609.26	RTF “Res GSHP” v2.2	AEG weighted savings assumptions toward New Construction instances, which is most common occurrence of this measure.
Single Family	Water Heating	Water Heater - Desuperheater - Installed	Installation	New	1,466.56	1,457.35	RTF “Res GSHP” v2.2	
All Residential	Interior Lighting	Screw-in CFL - CFL (58.8 lm/W)	lamp	Existing	28.81	28.18	RTF “Res CFL Lighting” v2.2	-
All Residential	Interior Lighting	Screw-in LED - LED (70.2 lm/W)	lamp	Existing	21.03	17.76	RTF “Res LED Lighting” v3.0	AEG per-unit savings are higher based on updated LED efficacies reflecting current market conditions not available in cited RTF workbook
All Residential	Interior Lighting	Specialty CFL - CFL (55.3 lm/W)	lamp	Existing	15.76	16.8	RTF “Res Specialty CFL” v1.3	-
All Residential	Interior Lighting	Specialty LED - LED (59 lm/W)	lamp	Existing	17.41	10.65	RTF “Res LED Lighting” v3.0	AEG per-unit savings are higher based on updated LED efficacies reflecting current market conditions not available in cited RTF workbook

Comparison of Washington Measures to the Council's 6th Plan and the Regional Technical Forum

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
Single Family	Interior Lighting	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	550.14	532.81	RTF "Res New SF EStar WA ID MT" v2.2 (Average of Furnace/CAC, ASHP, ductless HP)	AEG market profile has slightly higher Interior Lighting usage than the RTF baseline for this measure, slightly raising the savings when the same percentage is used.
Multifamily	Interior Lighting	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	331.74	414.65	RTF "Res MF EStar Homes 2012" v1.1	AEG market profile has lower Interior Lighting usage than the RTF baseline for this measure, lowering the savings when the same percentage is used.
Manufactured Home	Interior Lighting	Advanced New Construction Designs - ENERGY STAR Home Design	Installation	New	394.02	830.38	RTF "New MH EStar Eco Rated" v1.3	RTF baseline is all incandescent, while AEG used a more efficient, updated market baseline.
All Residential	Exterior Lighting	Screw-in CFL - CFL (58.8 lm/W)	lamp	Existing	44.16	56.37	RTF "Res CFL Lighting" v2.2	RTF assumes higher hours of use.
Single Family	Appliances	Clothes Washer - MEF 3.2	Installation	Existing	42.71	45.20	RTF "Res Clothes Washers SF" v4.0	-
All Residential	Appliances	Dishwasher - CEE Tier 1 (180-295 kWh/yr)	Installation	All	4.9	4.90	RTF "Res Dishwasher" v2.2	-
All Residential	Appliances	Refrigerator - CEE Tier 3 (30-35% above standard)	Installation	All	96.65	97.73	RTF "Res Refrigerators" v2.2 (Any Freezer)	-
All Residential	Appliances	Freezer - Energy Star Tier 4 (25-30% above standard)	Installation	All	92.00	95.2	RTF "Res Freezer" v2.2 (Any)	-
All Residential	Appliances	Microwave - Efficient	Installation	All	9.79	9.79	6PP "Res Oven_Microwave FY09" v1.0	-
All Residential	Electronics	Personal Computers - ENERGY STAR	unit	All	77.00	169.72	6PP "PNW Consumer Electronics Supply Curve_6th Plan" v1.7 (Avg.)	AEG used more current data from ENERGY STAR 5.0 calculator at energystar.gov
All Residential	Electronics	Monitor - ENERGY STAR	unit	All	14.2	36.63	6PP "PNW Consumer Electronics Supply Curve_6th Plan" v1.7 (Avg.)	AEG used more current data from ENERGY STAR 5.0 calculator at energystar.gov
All Residential	Electronics	TVs - ENERGY STAR (5.1)	unit	All	80.17	207.74	6PP "PNW Consumer Electronics Supply Curve_6th Plan" v1.7 (Avg.)	AEG used more current data from ENERGY STAR 5.0 calculator at energystar.gov

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
All Residential	Electronics	Set-top Boxes/DVR - ENERGY STAR	unit	All	5.2	164.69	6PP "PNW Consumer Electronics Supply Curve_6th Plan" v1.7 (Weighted Avg.)	6th Plan does not include the more efficient baseline standard from 2017 Manufacturer's Agreement
Single Family	Electronics	Electronics - Smart Power Strips - Load Sensing Strip	unit	Existing	40.7	40.7	RTF "Res Advanced Power Strips" v1.5	-

**Table G-2 Comparison of RTF and PacifiCorp Non-Residential Measures in Washington**

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
All Commercial	Cooling	HVAC - Outside or Underfloor Air Distribution - Installed	Per SqFt	New	0.29	0.50	6PP "PC-LowPressureDist-6P-D1" (Average value)	AEG adjusted savings proportionally to account for differences between the 6P building prototype assumptions and the AEG market profile.
All Commercial	Heating	Retrocommissioning - Retrocommissioning	Per SqFt	Existing	0.39	1.42	6PP "PC-HVACControls-6P-D4" (Average value)	AEG used data from the PacifiCorp study on Retrocommissioning completed in 2012
All Commercial	Heating	Commissioning - Commissioning	Per Sq Ft	New	0.80	1.09	6PP "PC-HVACControls-6P-D4"	AEG used data from the PacifiCorp study on Commissioning completed in 2012
All Commercial	Ventilation	HVAC - Outside or Underfloor Air Distribution - Installed	Per SqFt	New	0.16	0.74	6PP "PC-LowPressureDist-6P-D1" (Average value)	AEG adjusted savings proportionally to account for differences between the 6P building prototype assumptions and the AEG market profile.
All Commercial	Ventilation	Ventilation - CO2 Controlled - On-Demand Ventilation	Per SqFt	All	0.022	0.022	6PP "PC-DemandControlVent-6P-D4" (Average of given buildings/vintages)	-
All Commercial	Water Heating	Water Heating - EF 0.89	Installation	Existing	92.00	86.70	RTF "Com DHW Efficient tank" v3.0	-
All Commercial	Water Heating	Water Heater - Faucet Aerators/Low Flow Nozzles - 1.5 GPM	Installation	Existing	347.94	242.43	RTF "Com DHW SHowerhead" v3.0	RTF is showerheads only; AEG applied the percentage savings to all Water Heating to include other faucets.
All Commercial	Food Preparation	Oven - ENERGY STAR	Installation	Existing	3,019.84	3,019.84	RTF "Com Cooking Convection Oven" v2.0	-
All Commercial	Food Preparation	Fryer - ENERGY STAR	Installation	Existing	2,881.11	2,881.11	RTF "Com Cooking Fryer" v2.0	-
All Commercial	Food Preparation	Hot Food Container - ENERGY STAR	Installation	Existing	1,246.99	1,246.99	RTF "Com Cooking Hot Food Cabinet" v2.0	-
All Commercial	Office Equipment	Desktop Computer - ENERGY STAR	Installation	Existing	133.27	138.53	6PP "PNW Consumer Electronics Supply Curve_ 6thPlan" v1.7 (Energy Star weighted average)	AEG used more current data from ENERGY STAR 5.0 calculator at energystar.gov

Segment	End Use	Measure Name	Unit Definition	Construct. Vintage	Average Savings per Unit (Annual kWh @meter)	RTF/6th Plan Savings per Unit (Annual kWh @meter)	Reference RTF/6PP Workbook	Notes
All Commercial	Office Equipment	Monitor - ENERGY STAR	Installation	Existing	14.79	39.53	6PP "PNW Consumer Electronics Supply Curve_ 6thPlan" v1.7 (Energy Star weighted average)	AEG used more current data from ENERGY STAR 5.0 calculator at energystar.gov
All Commercial	Office Equipment	Electronics - Smart Power Strips - Smart Power Strips	Installation	Existing	100.00	100.00	RTF "Smart Plug Power Strips" v2.0	-
Grocery	Refrigeration	Refrigeration - Anti-Sweat Heater Controls - Installed	Installation	Per Linear Foot of case	230.1	230.1	6PP "Com Grocery Anti Sweat Heater Controls" v2.0	-
Grocery	Refrigeration	Grocery - Display Case - LED Lighting - LED Lighting	Per Linear Foot	All	79.00	79.00	RTF "Com Grocery Display Case LEDs" v2.2 (T8 Baseline)	-
Grocery	Refrigeration	Grocery - Display Case Motion Sensors - Installed	Per Linear Foot	All	9.6	9.6	RTF "Com Grocery Display Case Motion Sensors" v3.0 (<4 W /ft)	-

## **About Applied Energy Group (AEG)**

Founded in 1982, AEG is a multi-disciplinary technical, economic and management consulting firm that offers a comprehensive suite of demand-side management (DSM) services designed to address the evolving needs of utilities, government bodies, and grid operators worldwide. Hundreds of such clients have leveraged our people, our technology, and our proven processes to make their energy efficiency (EE), demand response (DR), and distributed generation (DG) initiatives a success. Clients trust AEG to work with them at every stage of the DSM program lifecycle – assessing market potential, designing effective programs, supporting the implementation of the programs, and evaluating program results.

The AEG team has decades of combined experience in the utility DSM industry. We provide expertise, insight and analysis to support a broad range of utility DSM activities, including: potential assessments; end-use forecasts; integrated resource planning; EE, DR, DG, and smart grid pilot and program design and administration; load research; technology assessments and demonstrations; project reviews; program evaluations; and regulatory support.

Our consulting engagements are managed and delivered by a seasoned, interdisciplinary team comprised of analysts, engineers, economists, business planners, project managers, market researchers, load research professionals, and statisticians. Clients view AEG's experts as trusted advisors, and we work together collaboratively to make any DSM initiative a success.