

SURVEY OF SMALL SCALE BOILER SYSTEMS OPERATING IN THE SIERRA NEVADA REGION

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OVERVIEW

TSS Consultants (TSS) conducted a survey attempting to locate existing commercial boiler installations in the Sierra Nevada region. The survey made use of air quality permitting information and data available from various air pollution control districts (Air Districts), whose jurisdictions include the Sierra Nevada region, to assess location and scale of boilers in commercial service. TSS created a database of existing boilers that included as much information as could be gleaned from telephone interviews or from air permit lists: Business (or organization), location, current heat load and type of boiler. To supplement Air District data, a second survey was conducted at the county level with various Sierra Nevada County Departments of Public Works, or Facilities Management, to locate county buildings currently using boiler systems.

This report also includes a brief overview of economic and siting considerations of the potential to convert fossil fuel boilers to renewable forest biomass. In addition TSS provides recommendations for outreach based on the information collected.

Study Region

All or part of 22 counties make up the Sierra Nevada Conservancy (SNC) region and its sub-regions. All or part of 15 Air Districts fall within the SNC boundary. Each county does not have its own Air District; some Air Districts are composed of multiple counties (Table 1).

Table 1. Air Districts and Counties Within the SNC Region

Air District*		County*		SNC Region
Modoc	x	Modoc	x	SNC North
Lassen		Lassen		SNC North
Shasta	x	Shasta	x	SNC North
Northern Sierra	x	Plumas		SNC North Central
Northern Sierra		Sierra	x	SNC North Central
Northern Sierra		Nevada	x	SNC Central
Tehama		Tehama		SNC North Central
Butte	x	Butte	x	SNC North Central
Feather River	x	Yuba	x	SNC Central
Placer	x	Placer		SNC Central
El Dorado	x	El Dorado	x	SNC Central
Amador		Amador	x	SNC South Central

Air District*		County*		SNC Region
Calaveras	x	Calaveras	x	SNC South Central
Tuolumne		Tuolumne	x	SNC South Central
Mariposa		Mariposa	x	SNC South Central
San Joaquin Valley	x	Madera	x	SNC South
San Joaquin Valley		Fresno		SNC South
San Joaquin Valley		Tulare		SNC South
San Joaquin Valley		Kern		SNC South
Great Basin	x	Alpine	x	SNC East
Great Basin		Inyo	x	SNC East
Great Basin		Mono	x	SNC East
Respondents	10	Respondents	15	

* - Survey respondents are indicated with an "x"

Methodology

TSS designed a set of questions to gather the needed information:

- Are there any buildings in your Air District with a boiler heating system?;
- Who is the permit holder or what are the buildings in which the boilers are operating?;
- What city or town are they located in?;
- What is the boiler capacity in million Btu's per hour (MMBtu/h);
- What is the fuel type currently used?

TSS emailed each of the 15 Air Districts and then spoke directly to an Air District staff via telephone. Seven of the Air District required a formal data request via the California Public Records Act. Ten Air Districts responded with varying amounts of information for the survey. To supplement Air District data, a second survey was conducted at the county level with County Departments of Public Works, or Facilities Management, to locate county buildings using boiler systems. TSS emailed and phoned each of the 22 subject counties and 15 counties provided information.

The quantity and quality of information on permitted boilers varied significantly by Air District. Air District regulations are not standardized regarding the boiler size exempted from having to obtain an air quality permit to operate a boiler in their jurisdiction. When the exempted boiler capacity in MMBtu/hour is large (such as in Amador, Calaveras, Tuolumne, and Mariposa Air Districts), few, if any, permits may be on file. Three counties do not have a published exemption

size listed in their regulations or did not provide the information requested. The California Air Resources Board lists websites for all Air Districts.¹ District websites were searched for their published regulations and boiler size exemptions, and to gather contact information for the email and phone survey.

Table 2. Boiler Exemptions in the Sierra Nevada Air Districts

Air District	Exempted Size in MMBtu/h	District Rule Number
Modoc	5	2.2
Lassen	Not specified	2:01
Shasta	1 (uncertain)	2:05
Northern Sierra	3	402
Tehama	Not specified	2:4
Butte	1	401
Feather River	Not specified	R4-3
Placer	1	501
El Dorado	1	501
Amador	50	402
Calaveras	50	402
Tuolumne	50	402
Mariposa	50	402
San Joaquin Valley	5	2020
Great Basin	15	R201

Given the limited response from the Air Districts regarding small boiler permitting in their respective jurisdictions, TSS extended the original scope of work and contacted county Public Works or county Facilities Managers directly because many county buildings are known to have boiler systems but few of them appear in the Air District permit lists. TSS experience in the region indicates that public buildings are candidates for conversion to biomass boiler systems. In addition, TSS sought to supplement information for the counties in which Air District permit information was absent or weak. All counties were contacted by email with follow-up phone calls and TSS spoke to 15 county staff in positions ranging from Director of Public Works to building maintenance engineers.

SURVEY FINDING AND RESULTS

¹ <http://www.arb.ca.gov/capcoa/roster.htm>

Table 3 shows the database organization and an example of three survey responses. Some boilers have explicit descriptions and an exact boiler size in MMBtu/h, however many do not. TSS developed size classes and categorized all boilers by MMBtu/h size class. TSS also created a category for type of facility to assist in finding general patterns on boilers in use.

The complete database of existing boilers reported via the email and phone surveys can be found in Appendix A. (Descriptions are not shown in table below, but are included in Appendix A).

Table 3. Organization of the Database with Three Example Boiler Listings

Air District	County	Town	Building/ Permittee	Fuel Source	MMBtu/h size class	MMBtu/h
Modoc	Modoc	Alturas	County Courthouse	Kerosene	1 to 5	Not specified
Tuolumne	Tuolumne	Sonora	Tuolumne General Medical Facility	Diesel (No. 2)	1 to 5	1.843
Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	1.2

Findings

The survey result list of boilers in Appendix A is *not* a complete list of all boilers in the region. Not all Air Districts and/or County Public Works Departments responded to TSS inquiries. However, it can serve as a sample from which to draw useful generalizations.

Fuel Sources

Boiler systems are predominantly fueled by natural gas. There was no relationship between the type of facility or size of the boiler and the fuel source used. The choice of fuel was often due to geography and the location of PG&E natural gas transmission pipelines. PG&E has an interactive pipeline map² that is excerpted and shown in Figure 1.

² Available at: <http://www.pge.com/en/safety/systemworks/gas/transmissionpipelines/index.page>

Figure 1. PG&E Natural Gas Transmission Pipelines



While much of the SNC region is not served with natural gas, a Southwest Gas Corporation natural gas pipeline enters the Sierra Nevada on the eastern side from Nevada and provides gas to the South Lake Tahoe area and the Truckee area. The pipeline does not extend further into California.

Types of Facilities and Outreach Potential

Public Buildings. County government buildings often have boiler heating systems. County buildings are the largest group in our database due to the fact that they were specifically surveyed. Many counties contacted did have at least one older boiler system, often in a courthouse or county offices/courthouse complex. Most county buildings have boilers between 1 and 5 MMBtu/h, and some have systems smaller than 1 MMBtu. In addition, several county Public Works or facilities managers confirmed interest and would like to receive information on biomass thermal systems. Follow-up with these managers is recommended.

Medical Facilities. Medical facilities are the second largest group of facility type with boiler heating systems, including major medical centers and hospitals. Many of these facilities have multiple boilers and the combined heating capacity of all boilers is typically between 5 and 15 MMBtu/h, with a few over 15 MMBtu.

Educational facilities. Some unified school districts and institutions of higher education appear in the database. Schools were not often listed in the Air District survey, nor covered by the County public works survey. Therefore, TSS conducted some calls to school district facility managers (e.g., Mono County, Eastern Sierra Unified School District). Based on these conversations, many schools appear to have had a series of funding opportunities in recent years, allowing them to upgrade their heating systems. However, a comprehensive phone survey of educational facilities is recommended. Unified school districts that are located outside of the PG&E natural gas pipeline system would be good candidates for outreach on biomass- based heating.

Resorts and Hotels. Among the wide range of private businesses with boiler heating systems, there are multiple hotels, resorts and ski areas. Many of the resort facilities are in the Lake Tahoe area, and most, though not all, appear to be serviced by the Southwest Gas Corporation natural gas distribution system. El Dorado county air permit information indicated, but was not specific, about boiler size and number of boilers. The larger resorts or ski areas could have multiple boiler systems.

Economics of Conversion to Wood Biomass Fuel Source

Facilities considering a heating system using woody biomass as the energy feedstock would need to consider the cost of the alternative fuel. In the study area, boiler systems use both natural gas and liquefied petroleum gas (propane) with a few boilers using diesel or kerosene. Conversion of a heating system to biomass thermal energy would also factor in the operating costs of electricity as electrically powered heating systems are also an option. To understand the potential annual savings from switching to biomass, the price of these fuel sources are illustrated in Table 4. The energy source is standardized as a price per unit of energy delivered. This metric helps accounts for different system efficiencies. Propane, electricity and woody biomass feedstock are shown at two price points representative of a range of price examples for the region.

Table 4. Fuel Cost Comparison for Thermal Systems

Energy Type	Current Price		Energy Content		Price per Unit Energy		System Efficiency	All-In Price per Unit Energy	
	Price	Unit	Value	Unit	Price	Unit		Price	Unit
Propane	2.10	\$/gal	91,500	Btu/gal	22.951	\$/MMBtu	0.80	28.693	\$/MMBtu
Propane	2.65	\$/gal	91,500	Btu/gal	28.962	\$/MMBtu	0.80	36.208	\$/MMBtu
Natural Gas*	0.775	\$/Therm	100,000	Btu/Therm	7.754	\$/MMBtu	0.80	9.692	\$/MMBtu

Energy Type	Current Price		Energy Content		Price per Unit Energy		System Efficiency	All-In Price per Unit Energy	
Electricity @ 12¢	0.12	\$/kWh	3,412	Btu/kWh	35.170	\$/MMBtu	0.98	35.888	\$/MMBtu
Electricity @ 17¢	0.17	\$/kWh	3,412	Btu/kWh	49.824	\$/MMBtu	0.98	50.841	\$/MMBtu
Woody Biomass Feedstock	35	\$/BDT	8,500	Btu/lb	2.059	\$/MMBtu	0.70	2.941	\$/MMBtu
Woody Biomass Feedstock	60	\$/BDT	8,500	Btu/lb	3.529	\$/MMBtu	0.70	5.042	\$/MMBtu

*Natural gas is not available in much of the study region

The above table indicates fuel savings are possible using a biomass energy source with delivered feedstock priced at \$35 to \$60/BDT.³ A full feasibility analysis for a thermal biomass heating system would include the current cost of fuel, the annual heat utilization (capacity factor), and the installation cost of the system (and appropriate emissions controls as required). Previous economic assessments by TSS show that the most important factors for economic feasibility of a biomass project are the cost of fuel and the efficiency of the boiler. Lowering the cost of biomass as a fuel source also shortens the payback period of a biomass heating system installation.

Propane or diesel boiler systems in the Sierra Nevada outside of the PG&E natural gas distribution system have significantly higher annual operating costs when compared to wood fuel. Natural gas is also approximately twice as expensive as wood fuel even at a fairly expensive cost of biomass per BDT (\$60/BDT), with propane being higher by 5 to 10 times depending on what the woody biomass fuel costs.

Attributes for Siting a Biomass Heating System

There are several attributes to consider for siting a biomass heating system. The following list presents some of the more important considerations.

- Adequate heat loads at a facility (the amount of heating required) improves the economics of purchasing and operating a biomass thermal boiler system.
- The larger heating requirement of public or commercial buildings requires a location to store the needed volume of woody biomass feedstock.
- Buildings adding a biomass boiler must either already be using a hot water heating system, or such a system must be economically installed.
- In some cases, a single large boiler can provide heat for multiple buildings. Several buildings in close proximity, whether they ARE a school campus or medical center buildings, or a town center with government and community center buildings, can share

³ BDT= Bone dry ton. One BDT represents 2,000 pounds of dry wood fiber.

heat from a central thermal biomass plant. Economies of scale for the initial outlay and the costs of heating pipelines for a network of buildings need to be considered.

- New commercial-scale wood heating systems have greatly reduced criteria pollutant emissions. Air District requirements are, however, still a siting consideration.
- Propane heating systems are known to be costly to operate and woody biomass is a less costly fuel source. However, biomass thermal systems are also less costly to operate than natural gas fueled boilers. Facilities with natural gas boilers located in the Sierra Nevada foothills should still be considered as possible candidates for conversion to biomass heat.

Recommendations Based on the Survey Results

Based on the siting considerations and the boiler survey data, TSS offers the following recommendations:

- Woody biomass is demonstrably less expensive as a fuel source than current fuel sources (propane, natural gas, diesel or kerosene). The decreased cost in comparison to propane is especially relevant in areas outside of the PG&E natural gas distribution pipelines. However, it is important to note that woody biomass represents a cost savings to all fossil fuels, including natural gas.
 - A simple outreach brochure/webpage illustrating the fuel cost savings of wood thermal energy would be useful.
- County government buildings offer a unique opportunity for installation of individual or multi-building networked biomass thermal systems.
 - An outreach program offering an educational presentation to Counties should include the Board of Supervisors, Department of Public Works, and county Facilities Management. Relevant city officials for the town in which the county is seated should also be invited.
- Specific county seats that have existing boiler systems in some county buildings and/or expressed an interest by phone in biomass thermal energy were:
 - Bear Valley, Alpine County
 - Bridgeport, Mono County⁴
 - Cameron Park, El Dorado County
 - El Dorado Hills and Placerville, El Dorado County
 - Independence, Inyo County
 - Mariposa, Mariposa County
 - Nevada City, Nevada County

⁴ Mono County Department of Public Works is currently installing a 0.75 MMBtu/hour woody biomass boiler system in its Bridgeport Maintenance Building with funding assistance from the SNC.

- San Andreas, Calaveras County
 - Sonora, Tuolumne
 - Oroville, Butte County
 - Redding, Shasta County
- The survey did not include enough information from the unified school districts to make recommendations on their use of boilers or potential for biomass heat. Some, but not all, schools appear in the Air District permits. A separate survey would need to be conducted.
 - Resorts, hotels and ski areas figure prominently among the private sector commercial buildings with existing boiler systems. Those in the immediate South Lake Tahoe area mostly have natural gas fueled boiler systems. These facilities may benefit from both the fuel cost savings and the favorable environmental public relations and media attention of a wood energy installation.
 - Medical centers and hospitals appear on the existing boiler survey list in both regions served by PG&E and regions reliant on propane. Medical facilities commonly have multiple boilers, and a need for large quantities of hot water. However, they have separate and unique heating, safety/emergency, and environmental requirements. An outreach tailored to them as a group could be more effective than a general approach.
 - Air Districts varied widely not only in their permitting of boilers in general, but also in their understanding or preparedness for biomass thermal systems in their counties. Air Districts, the Air Pollution Control Officer (APCO) and staff, would also benefit from a customized education and outreach effort aimed at answering their questions.

SUMMARY

The survey of existing boilers in use in the Sierra Nevada region was conducted targeting Counties and Air Districts in the mountainous portion of the Sierras and in the foothills. Some cities in the Central Valley were included by the Air Districts, and were also included in the report to provide a broader overview and explore opportunities for biomass thermal heating in these locations (for example, Chico and Modesto). TSS experience in siting woody biomass heating systems was combined with the survey results to draft a list of recommendations. Outreach efforts should be directed toward groups with similar needs and interests – Air Districts, county government, school districts, medical facilities, resorts and hotels. The strongest need for education and outreach is to Air Districts and County governments.

APPENDIX A

Master list of Boiler Systems: Respondents to Boiler Survey

APPENDIX A. Master list of Boiler Systems: Respondents to Boiler Survey

FT is Facility Type. G is Government – City, County or Federal. E is educational facility – unified school district or higher education. R is resort – resort, hotel or ski area. A is agricultural. M is medical facility – medical center, clinic or hospital. W is wastewater treatment.

This list is not wholly inclusive, as several of the Air Districts and County Agencies contacted did not have readily available lists of facilities with small boilers.

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
g	Amador	Amador	Jackson	Amador County Offices	Nat Gas	1 to 5	1.25
r	Butte	Butte	Biggs	Bayliss Ranch	Nat Gas	5 to 15	6.3
	Butte	Butte	Chico	Youth With a Mission	Nat Gas	1 to 5	
e	Butte	Butte	Chico	Lifetouch National School Studios	Nat Gas	1 to 5	1.18
e	Butte	Butte	Chico	Lifetouch National School Studios	Nat Gas	1 to 5	1.18
e	Butte	Butte	Chico	Craig Student Living (Bradley & Abbey Halls)	Nat Gas	1 to 5	2.1
e	Butte	Butte	Chico	Craig Student Living (Craig Hall)	Nat Gas	1 to 5	2.4
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.1
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	3.25
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.25
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.25
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	4.5
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.44

¹ A blank space indicates that the actual size of the boiler was not specified

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
				Chico			
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.44
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	2
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	3
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	3
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.06
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	1 to 5	1.06
	Butte	Butte	Chico	Orient & Flume Art Glass	Nat Gas		
w	Butte	Butte	Chico	City Of Chico Water Pollution Control Plant	Nat Gas	1 to 5	1.1
w	Butte	Butte	Chico	City Of Chico Water Pollution Control Plant	Nat Gas	1 to 5	1.5
a	Butte	Butte	Chico	California Olive Ranch	Diesel	1 to 5	1.5
	Butte	Butte	Chico	Nature's Hilights, Inc.	Nat Gas	1 to 5	2.1
m	Butte	Butte	Chico	Enloe Medical Center Esplanade	Nat Gas	1 to 5	
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	5 to 15	7
	Butte	Butte	Chico	Mission Linen Supply	Nat Gas	5 to 15	10.4
e	Butte	Butte	Chico	Enloe Medical Center Esplanade	Nat Gas	5 to 15	6
e	Butte	Butte	Chico	California State University, Chico	Nat Gas	more than 15	43.3
E	Butte	Butte	Chico	California State University, Chico	Nat Gas	more than 15	43.3
	Butte	Butte	Chico	Mooney Farms	Nat Gas	5 to 15	13.5
	Butte	Butte	Chico	North State Rendering Company	Nat Gas	more than 15	25
	Butte	Butte	Chico	Sierra Nevada Brewing Company	Nat Gas	5 to 15	12.25
	Butte	Butte	Chico	Sierra Nevada Brewing Company	Nat Gas	5 to 15	12.25
	Butte	Butte	Chico	Sierra Nevada Brewing Company	Nat Gas	5 to 15	12.55
a	Butte	Butte	Chico	Smucker Natural Foods	Nat Gas	more than 15	16.7
m	Butte	Butte	Chico	Enloe Medical Center Esplanade	Nat Gas	5 to 15	14.46
m	Butte	Butte	Chico	Enloe Medical Center Esplanade	Nat Gas	5 to 15	14.46

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
	Butte	Butte	Gridley	Mary's Gone Crackers, Inc.	Nat Gas	1 to 5	3.35
	Butte	Butte	Gridley	Mary's Gone Crackers, Inc.	Nat Gas	1 to 5	3.35
	Butte	Butte	Gridley	Mary's Gone Crackers, Inc.	Nat Gas	1 to 5	
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
m	Butte	Butte	Gridley	Biggs-Gridley Memorial Hospital	Nat Gas	1 to 5	2.835
a	Butte	Butte	Gridley	Stapleton Spence Packing Company	Nat Gas	more than 15	25.6
a	Butte	Butte	Gridley	Stapleton Spence Packing Company	Nat Gas	more than 15	25.6
e	Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	1.2
e	Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	2
e	Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	1
e	Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	1.5
e	Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	1.5
e	Butte	Butte	Oroville	Butte-Glenn Community College	Nat Gas	1 to 5	2
	Butte	Butte	Oroville	Graphic Packaging International, Inc.	Nat Gas	1 to 5	2.5
	Butte	Butte	Oroville	Sierra Pacific Industries	Nat Gas	1 to 5	2
a	Butte	Butte	Oroville	Ehmann Olive Company	Nat Gas	1 to 5	2.2
g	Butte	Butte	Oroville	United States Postal Service	Nat Gas	1 to 5	1.7
a	Butte	Butte	Oroville	Pacific Coast Producers	Nat Gas	5 to 15	8.4
a	Butte	Butte	Oroville	Pacific Coast Producers	Nat Gas	more than 15	112
a	Butte	Butte	Oroville	Pacific Coast Producers	Nat Gas	more than 15	84
a	Butte	Butte	Oroville	Pacific Coast Producers	Nat Gas	more than 15	33.6
g	Butte	Butte	Oroville	Butte County Courthouse	Nat Gas	5 to 15	0.9
g	Butte	Butte	Oroville	Butte County Fleet and Public Works	Nat Gas	1 to 5	1.75
g	Butte	Butte	Oroville	Butte County Offices	Nat Gas	1 to 5	1.46
g	Butte	Butte	Oroville	Butte County Offices	Nat Gas	1 to 5	2.07
g	Butte	Butte	Oroville	Butte County Jail	Nat Gas	1 to 5	0.8

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
g	Butte	Butte	Oroville	Butte County Juvenile Hall and Court	Nat Gas	1 to 5	1.25
	Butte	Butte	Salida	Pacific Oroville Power	Nat Gas	5 to 15	
m	Calaveras	Calaveras	San Andreas	Mark Twain Medical Center	Nat Gas	less than 1	0.4
g	Calaveras	Calaveras	San Andreas	Government Center	Nat Gas	less than 1	
g	El Dorado	El Dorado	Cameron Park	Cameron Park Comm Ctr	Propane	1 to 15	
g	El Dorado	El Dorado	Cameron Park	Cameron Park Library	Propane	1 to 15	
	El Dorado	El Dorado	Cameron Park	Fork Lift	Propane	1 to 15	
	El Dorado	El Dorado	Cameron Park	Syar Concrete (Air)	Propane	1 to 15	
g	El Dorado	El Dorado	El Dorado Hills	El Dorado Hills Community Services	Nat Gas	1 to 15	
	El Dorado	El Dorado	El Dorado Hills	Cemex - El Dorado	Nat Gas	1 to 15	
	El Dorado	El Dorado	El Dorado Hills	Cooks Collision, Inc.	Nat Gas	1 to 15	
g	El Dorado	El Dorado	El Dorado Hills	EDC - Bldg C	Nat Gas	1 to 15	
g	El Dorado	El Dorado	El Dorado Hills	EDC - El Dorado Center	Nat Gas	1 to 15	
g	El Dorado	El Dorado	El Dorado Hills	EDC - Jail	Nat Gas	1 to 15	
g	El Dorado	El Dorado	El Dorado Hills	EDC Community Park Pool	Nat Gas	1 to 15	
g	El Dorado	El Dorado	El Dorado Hills	EDUCHSD - Union Mine HS	Nat Gas	1 to 15	
w	El Dorado	El Dorado	El Dorado Hills	EID-El Dorado Hills WWTP	Nat Gas	1 to 15	
	El Dorado	El Dorado	El Dorado Hills	El Dorado Hills Sports Club	Nat Gas	1 to 15	
	El Dorado	El Dorado	El Dorado Hills	Holiday Inn Express	Nat Gas	1 to 15	
r	El Dorado	El Dorado	El Dorado Hills	Serrano Country Club	Nat Gas	1 to 15	
	El Dorado	El Dorado	El Dorado Hills	The Club At Blackstone	Nat Gas	1 to 15	
	El Dorado	El Dorado	Grizzly Flats	Leoni Meadows	Propane	1 to 15	
	El Dorado	El Dorado	Kyburz	Caltrans Kyburz Maint Stn	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	49ers Cleaners	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Cary House Hotel	Propane	1 to 15	
g	El Dorado	El Dorado	Placerville	City Of P'ville - Aquatic Center	Propane	1 to 15	
g	El Dorado	El Dorado	Placerville	City Of P'ville Senior Center	Propane	1 to 15	
g	El Dorado	El Dorado	Placerville	City Of P'ville WRF	Propane	1 to 15	

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
g	El Dorado	El Dorado	Placerville	EDUHSD - El Dorado High School	Propane	1 to 15	
g	El Dorado	El Dorado	Placerville	El Dorado County Courthouse	Propane	1 to 15	
g	El Dorado	El Dorado	Placerville	El Dorado County Offices Bldg A & B	Propane	1 to 15	
g	El Dorado	El Dorado	Placerville	El Dorado County Jail	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Frank's Body Shop	Propane	1 to 15	
m	El Dorado	El Dorado	Placerville	Marshall Hospital	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Placerville Body Shop	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Placerville Inn	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Steve Stymeist Auto Body (Air)	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Wal-Mart	Propane	1 to 15	
	El Dorado	El Dorado	Placerville	Western State Distributing	Propane	1 to 15	
e	El Dorado	El Dorado	Shingle Springs	EDUHSD - Ponderosa High School	Propane	1 to 15	
	El Dorado	El Dorado	Shingle Springs	Kniesel's Collision Center	Propane	1 to 15	
	El Dorado	El Dorado	Shingle Springs	MBIS: El Dorado	Propane	1 to 15	
	El Dorado	El Dorado	Shingle Springs	Naturex	Propane	1 to 15	
	El Dorado	El Dorado	Shingle Springs	TNT Powder Coating	Propane	1 to 15	
e	El Dorado	El Dorado	Somerset	Pioneer Union School District	Propane	1 to 15	
r	El Dorado	El Dorado	South Lake Tahoe	3 Peaks Resort & Beach Club	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Alpine Metals	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Americana Vacation Club, Inc.	Nat Gas	1 to 15	
m	El Dorado	El Dorado	South Lake Tahoe	Barton Memorial Hospital	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Beach Retreat & Lodge At Tahoe	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Best Western - Station House Inn	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Big Pines Mountain House	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Blue Jay Lodge	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Blue Lake Inn	Nat Gas	1 to 15	
g	El Dorado	El Dorado	South Lake Tahoe	California Conservation Corps	Nat Gas	1 to 15	
g	El Dorado	El Dorado	South Lake Tahoe	City Of SLT - Recreation Ctr	Nat Gas	1 to 15	
g	El Dorado	El Dorado	South Lake Tahoe	City Of SLT Parking Garage	Nat Gas	1 to 15	

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
g	El Dorado	El Dorado	South Lake Tahoe	City Of SLT Transit Center	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Days Inn	Nat Gas	1 to 15	
g	El Dorado	El Dorado	South Lake Tahoe	EDC - SLT Juv. Hall	Nat Gas	1 to 15	
g	El Dorado	El Dorado	South Lake Tahoe	EDC - SLT Juv. Hall	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Fantasy Inn	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Forest Inn Resort	Nat Gas	1 to 15	
r	El Dorado	El Dorado	South Lake Tahoe	Heavenly Ski Resort	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Inn By The Lake	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Johns Cleaners	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Lake Tahoe Ambassador Lodge	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	Lake Tahoe Community College	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Lake Tahoe Resort Hotel	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Lake Tahoe Vacation Resort	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Lakeland Village	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD AI Tahoe School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD AI Tahoe School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD Bijou Community School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD Lake Tahoe Environ Magnet School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD Sierra House Elem School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD So Tahoe High School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD So Tahoe Middle School	Nat Gas	1 to 15	
e	El Dorado	El Dorado	South Lake Tahoe	LTUSD Tahoe Valley School	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Marriott - Grand Residence	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Marriott- Timber Lodge	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Motel 6 #250	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Park Tahoe Inn	Nat Gas	1 to 15	

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
	El Dorado	El Dorado	South Lake Tahoe	Raleys #119	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Rodeway Inn	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Sierra Tahoe Ready Mix	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	South Side Auto Body	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Stardust Lodge	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Super 8 Motel	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Tahoe Crescent Partnership	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Tahoe Seasons Resort	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	The Landing Resort & Spa	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	The Trailhead	Nat Gas	1 to 15	
	El Dorado	El Dorado	South Lake Tahoe	Travel Inn	Nat Gas	1 to 15	
g	Feather River	Feather River	Marysville	F R County Courthouse	Nat Gas	less than 1	0.4
g	Feather River	Feather River	Marysville	Health and Human Services	Nat Gas	less than 1	0.75
g	Feather River	Feather River	Marysville	Health and Human Services	Nat Gas	1 to 5	1.5
r	Great Basin	Alpine	Bear Valley	Bear Valley Mountain Resort	Diesel	1 to 5	2.6
g	Great Basin	Alpine	Bear Valley	Firehouse/sheriff/jail	Propane	1 to 5	
g	Great Basin	Alpine	Bear Valley	Library/county service	Propane	less than 1	
g	Great Basin	Inyo	Independence	County Courthouse	Propane	1 to 5	
g	Great Basin	Inyo	Independence	County Annex	Propane	1 to 5	
m	Great Basin	Inyo	Lone Pine	Southern Inyo Hospital	Diesel	1 to 5	3.0
m	Great Basin	Inyo	Lone Pine	Southern Inyo Hospital	Diesel	1 to 5	2.25
g	Great Basin	Mono	Bridgeport	County Annex	Propane	less than 1	0.75
m	Great Basin	Mono	Bridgeport	Hospital	Propane	less than 1	0.75
m	Great Basin	Mono	Bridgeport	Hospital	Propane	less than 1	0.75
g	Great Basin	Mono	Bridgeport	County Courthouse	Propane	less than 1	0.75
g	Great Basin	Mono	Bridgeport	County Courthouse	Propane	less than 1	0.75
g	Great Basin	Mono	Bridgeport	County Roads Shop	Propane	1 to 5	
g	Great Basin	Mono	Bridgeport	Cal Lake Community Center	Propane	less than 1	0.110
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	1 to 5	4.9
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	1 to 5	4.9

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	less than 1	0.411
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	less than 1	0.411
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	less than 1	0.411
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	less than 1	0.411
m	Great Basin	Mono	Mammoth Lakes	Mammoth Hospital	Propane	less than 1	0.411
r	Great Basin	Mono	Mammoth Lakes	Mammoth Mountain Ski Area	Propane	less than 1	0.753
r	Great Basin	Mono	Mammoth Lakes	Mammoth Mountain Ski Area	Propane	1 to 5	1.918
r	Great Basin	Mono	Mammoth Lakes	Mammoth Mountain Ski Area	Propane	1 to 5	4.2
r	Great Basin	Mono	Mammoth Lakes	Mammoth Mountain Ski Area	Propane	less than 1	0.675
r	Great Basin	Mono	Mammoth Lakes	Mammoth Mountain Ski Area	Propane	less than 1	0.675
g	Mariposa	Mariposa	Mariposa	Health and Human Services	Propane	1 to 5	
g	Modoc	Modoc	Alturas	County Road Shop		less than 1	
g	Modoc	Modoc	Alturas	County Courthouse	Kerosene	1 to 5	
g	Modoc	Modoc	Davis Creek	County Road Shop	Biomass	less than 1	
g	Northern Sierra	Nevada	Donner Lake	Donner State Park	Propane	1 to 5	
g	Northern Sierra	Nevada	Nevada City	County Animal Shelter	Propane	less than 1	
g	Northern Sierra	Nevada	Nevada City	Washington Ridge Youth Conservation Camp	Propane / Kerosene	1 to 5	
g	Northern Sierra	Sierra	Downieville	Sierra County Courthouse	Propane	1 to 5	
e	Northern Sierra	Sierra	Downieville	Junior-Senior High	Propane	1 to 5	
e	Northern Sierra	Sierra	Sierraville	Sierraville Elementary School	Propane	1 to 5	
a	San Joaquin Valley	Fresno	Fresno	Valley Fig Growers	Digester gas		
a	San Joaquin Valley	Fresno	Fresno	Valley Fig Growers	Nat Gas / Digester gas	2 to 5	4
a	San Joaquin Valley	Fresno	Fresno	Valley Fig Growers	Nat Gas / Digester gas	2 to 5	4
a	San Joaquin Valley	Fresno	Fresno	Valley Fig Growers	Nat Gas / Digester gas	2 to 5	4.2
g	San Joaquin Valley	Fresno	Fresno	IRS-Fresno Service Center	Nat Gas	5 to 15	12.6
g	San Joaquin Valley	Fresno	Fresno	IRS-Fresno Service Center	Nat Gas	5 to 15	12.6
m	San Joaquin Valley	Fresno	Fresno	San Joaquin Valley Rehab	Nat Gas / Diesel	2 to 5	2.5

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
m	San Joaquin Valley	Fresno	Fresno	San Joaquin Valley Rehab	Nat Gas / Diesel	2 to 5	2.5
a	San Joaquin Valley	Fresno	Fresno	San Joaquin Valley Concentrates	Nat Gas	2 to 5	4.9
a	San Joaquin Valley	Fresno	Fresno	San Joaquin Valley Concentrates	Nat Gas		33.66
a	San Joaquin Valley	Fresno	Fresno	Foster Farms, Jameson Ranch	Diesel	2 to 5	5
a	San Joaquin Valley	Fresno	Fresno	Foster Farms, Jameson Ranch	Diesel	2 to 5	5
g	San Joaquin Valley	Fresno	Mendota	Federal Bureau Of Prisons, Mendota	Nat Gas / fuel oil	2 to 5	5
g	San Joaquin Valley	Fresno	Mendota	Federal Bureau Of Prisons, Mendota	Nat Gas / fuel oil	2 to 5	5
g	San Joaquin Valley	Fresno	Mendota	Federal Bureau Of Prisons, Mendota	Nat gas / fuel oil	2 to 5	5
a	San Joaquin Valley	Fresno	Tranquility	Foster Farms, El Dorado Ranch	Diesel	2 to 5	5
	San Joaquin Valley	Kern	Bakersfield	Tricor Refining, LLC	Nat Gas		99
	San Joaquin Valley	Kern	Bakersfield	Tricor Refining, LLLC	Nat Gas		100
w	San Joaquin Valley	Kern	Bakersfield	Bakersfield City Wastewater #2	Digester gas	2 to 5	2
w	San Joaquin Valley	Kern	Bakersfield	Bakersfield City Wastewater #2	Digester gas	2 to 5	2
	San Joaquin Valley	Kern	Lost Hills	Seneca Resources	Nat Gas	2 to 5	2.5
	San Joaquin Valley	Kern	Lost Hills	Greka Oil & Gas Inc	Nat Gas	2 to 5	3
	San Joaquin Valley	Kern	Lost Hills	Seneca Resources	Nat Gas	2 to 5	3
	San Joaquin Valley	Kings	Kettleman	Kmd Operating Company LLC	Nat Gas		
	San Joaquin Valley	Kings	Lemoore	NAS Lemoore	Nat Gas	5 to 15	10.2
	San Joaquin Valley	Kings	Lemoore	NAS Lemoore	Nat Gas	2 to 5	3.35
g	San Joaquin Valley	Merced	Atwater	United States Penitentiary	Nat Gas	2 to 5	4.999
g	San Joaquin Valley	Merced	Atwater	United States Penitentiary	Nat Gas	2 to 5	4.999
g	San Joaquin Valley	Merced	Atwater	United States Penitentiary	Nat Gas	2 to 5	4.999
g	San Joaquin Valley	Merced	Atwater	United States Penitentiary	Nat Gas	2 to 5	4.999
g	San Joaquin Valley	Merced	Merced	City Of Merced	Nat Gas / Digester gas	2 to 5	3
g	San Joaquin Valley	Merced	Modesto	City Of Modesto, Public Works	Digester gas	2 to 5	3

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
g	San Joaquin Valley	San Joaquin	Lodi	City Of Lodi/White Slough	Nat Gas / Digester gas	2 to 5	2.095
g	San Joaquin Valley	San Joaquin	Lodi	City Of Lodi/White Slough	Nat Gas / Digester gas	2 to 5	2.095
g	San Joaquin Valley	San Joaquin	Lodi	City Of Lodi/White Slough	Digester gas	2 to 5	2.095
m	San Joaquin Valley	San Joaquin	Manteca	Kaiser Foundation Hospital	Nat Gas	2 to 5	3.5
m	San Joaquin Valley	San Joaquin	Manteca	Kaiser Foundation Hospital	Nat Gas	2 to 5	3.5
m	San Joaquin Valley	San Joaquin	Manteca	Kaiser Foundation Hospital	Nat Gas	2 to 5	3.5
m	San Joaquin Valley	San Joaquin	Tracy	City Of Tracy	Nat Gas / Digester gas	2 to 5	2.51
m	San Joaquin Valley	Stanislaus	Modesto	Memorial Medical Center	Nat gas / fuel oil	5 to 15	14.65
m	San Joaquin Valley	Stanislaus	Modesto	Memorial Medical Center	Nat gas / fuel oil	5 to 15	14.65
m	San Joaquin Valley	Stanislaus	Modesto	Memorial Medical Center	Nat Gas	5 to 15	14
m	San Joaquin Valley	Stanislaus	Modesto	Memorial Medical Center	Nat Gas	2 to 5	3
m	San Joaquin Valley	Stanislaus	Modesto	Memorial Medical Center	Nat Gas	5 to 15	14
m	San Joaquin Valley	Stanislaus	Modesto	Doctors Medical Center	Nat Gas	2 to 5	3.7
m	San Joaquin Valley	Stanislaus	Modesto	Doctors Medical Center	Nat Gas	2 to 5	3.7
m	San Joaquin Valley	Stanislaus	Modesto	Doctors Medical Center	Nat Gas	5 to 15	6.3
m	San Joaquin Valley	Stanislaus	Modesto	Doctors Medical Center	Nat Gas	5 to 15	6.3
m	San Joaquin Valley	Stanislaus	Modesto	Doctors Medical Center	Nat Gas	5 to 15	6.3
m	San Joaquin Valley	Stanislaus	Modesto	Doctors Medical Center	Nat Gas	5 to 15	6.3
m	San Joaquin Valley	Tulare	Tulare	TRMC/Div Of Tulare Local Healthcare Dist	Nat Gas / Diesel	2 to 5	4.2
m	San Joaquin Valley	Tulare	Tulare	TRMC/Div Of Tulare Local Healthcare Dist	Nat Gas / Diesel	2 to 5	4.2
w	San Joaquin Valley	Tulare	Visalia	Visalia Wastewater Treatment	Nat Gas / Digester gas	2 to 5	3
w	San Joaquin Valley	Tulare	Visalia	Visalia Wastewater Treatment	Nat Gas / Digester gas	2 to 5	3
m	San Joaquin Valley	Tulare	Visalia	Kaweah Delta District Hospital	Nat Gas	2 to 5	5

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
	San Joaquin Valley		Sw Section 12, T10n, R19w	Drilling & Production Co	Nat Gas	2 to 5	5
e	Shasta	Shasta	Anderson	Anderson High School	Nat Gas	1 to 5	
	Shasta	Shasta	Anderson	Siskiyou Forest Products	Nat Gas	1 to 5	
e	Shasta	Shasta	Cottonwood	West Valley High School	Nat Gas	1 to 5	
m	Shasta	Shasta	Redding	Mercy Medical Center	Nat Gas	1 to 5	
m	Shasta	Shasta	Redding	Shasta Regional Medical Center	Nat Gas	1 to 5	
	Shasta	Shasta	Redding	Aramark Uniform	Nat Gas	1 to 5	
g	Shasta	Shasta	Redding	12 Shasta County Buildings	Nat Gas	1 to 5	
g	Tuolumne	Tuolumne	Sonora	Administrative Office	Diesel (No. 2)	less than 1	0.72
m	Tuolumne	Tuolumne	Sonora	Tuolumne General Medical Facility	Diesel (No. 2)	1 to 5	1.843
m	Tuolumne	Tuolumne	Sonora	Tuolumne General Medical Facility	Diesel (No. 2)	1 to 5	1.843
	Placer County	Placer	Auburn	Auburn Ravine Terrace	Nat Gas	1 to 5	1.30
	Placer County	Placer	Auburn	Auburn Ravine Terrace	Nat Gas	1 to 5	1.02
	Placer County	Placer	Auburn	Bear River Ready Mix	Nat Gas	1 to 5	1.41
	Placer County	Placer	Auburn	Knee Deep Brewing Company, LLC	Nat Gas	1 to 5	1.80
	Placer County	Placer	Auburn	Miltenyi Biotec, Inc.	Nat Gas	1 to 5	2.25
	Placer County	Placer	Auburn	Pacific Gas & Electric (PG&E) - Portable	Nat Gas	1 to 5	5.00
	Placer County	Placer	Auburn	Pacific Gas & Electric (PG&E) - Portable	Nat Gas	1 to 5	5.00
	Placer County	Placer	Auburn	Pacific Gas & Electric (PG&E) - Portable	Nat Gas	1 to 5	5.00
	Placer County	Placer	Auburn	Pacific Gas & Electric (PG&E) - Portable	Nat Gas	1 to 5	5.00
	Placer County	Placer	Auburn	Placer County - Auburn Justice Center	Nat Gas	1 to 5	3.00
	Placer County	Placer	Auburn	Placer County - Auburn Justice Center	Nat Gas	1 to 5	3.00
	Placer County	Placer	Auburn	Placer County - CDRC	Nat Gas	1 to 5	1.68
	Placer County	Placer	Auburn	Placer County - CDRC	Nat Gas	1 to 5	1.68
e	Placer County	Placer	Auburn	Placer High School	Nat Gas	1 to 5	4.65
e	Placer County	Placer	Auburn	Placer High School	Nat Gas	1 to 5	4.38
m	Placer County	Placer	Auburn	Sutter Auburn Faith Hospital	Nat Gas	1 to 5	2.00
m	Placer County	Placer	Auburn	Sutter Auburn Faith Hospital	Nat Gas	1 to 5	2.00
m	Placer County	Placer	Auburn	Sutter Auburn Faith Hospital	Nat Gas	1 to 5	1.05
m	Placer County	Placer	Auburn	Sutter Auburn Faith Hospital	Nat Gas	1 to 5	1.05
m	Placer County	Placer	Auburn	Sutter Auburn Faith Hospital	Nat Gas	1 to 5	1.20
e	Placer County	Placer	Colfax	Colfax High School	Propane	1 to 5	2.00
e	Placer County	Placer	Colfax	Colfax High School	Propane	1 to 5	2.00

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
e	Placer County	Placer	Colfax	Colfax High School	Propane	1 to 5	2.80
e	Placer County	Placer	Foresthill	Foresthill High School	Propane	1 to 5	2.00
e	Placer County	Placer	Foresthill	Foresthill High School	Propane	1 to 5	2.00
e	Placer County	Placer	Granite Bay	Granite Bay High School	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Kings Beach	Kings Beach Elem. School	Nat Gas	1 to 5	1.98
e	Placer County	Placer	Kings Beach	Kings Beach Elem. School	Nat Gas	1 to 5	1.42
	Placer County	Placer	Lincoln	A&A Concrete	Nat Gas	1 to 5	1.00
e	Placer County	Placer	Lincoln	Carlin C. Coppin Elem. School	Nat Gas	1 to 5	1.44
e	Placer County	Placer	Lincoln	Foskett Ranch Elementary School	Nat Gas	1 to 5	1.50
e	Placer County	Placer	Lincoln	Foskett Ranch Elementary School	Nat Gas	1 to 5	1.50
	Placer County	Placer	Lincoln	Holiday Inn Express & Suites	Nat Gas	1 to 5	1.50
m	Placer County	Placer	Lincoln	Kaiser - Lincoln Medical Office	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Lincoln	Lincoln Crossing Elementary School	Nat Gas	1 to 5	1.20
e	Placer County	Placer	Lincoln	Lincoln Crossing Elementary School	Nat Gas	1 to 5	1.20
e	Placer County	Placer	Lincoln	Lincoln High School	Nat Gas	1 to 5	1.44
e	Placer County	Placer	Lincoln	Lincoln High School	Nat Gas	1 to 5	1.44
e	Placer County	Placer	Lincoln	Rio Bravo-Rocklin	Nat Gas	more than 15	356.80
e	Placer County	Placer	Lincoln	Sierra Pacific Industries - Lincoln	Nat Gas	more than 15	414.00
e	Placer County	Placer	Lincoln	Twelve Bridges Elem. Sch.	Nat Gas	1 to 5	1.50
e	Placer County	Placer	Lincoln	Twelve Bridges Elem. Sch.	Nat Gas	1 to 5	1.50
e	Placer County	Placer	Lincoln	Twelve Bridges Middle School	Nat Gas	1 to 5	2.50
e	Placer County	Placer	Lincoln	Twelve Bridges Middle School	Nat Gas	1 to 5	2.50
e	Placer County	Placer	Loomis	Del Oro High School	Nat Gas	1 to 5	2.40
e	Placer County	Placer	Loomis	Del Oro High School	Nat Gas	1 to 5	4.02
	Placer County	Placer	Loomis	Lausmann Lumber & Moulding Co.	Nat Gas	5 to 15	12.60
	Placer County	Placer	Norden	Mt. Judah Condominium Owners Association	Propane	1 to 5	2.00
	Placer County	Placer	Norden	Mt. Judah Condominium Owners Association	Propane	1 to 5	2.00
	Placer County	Placer	Norden	Mt. Judah Condominium Owners Association	Propane	1 to 5	2.00
	Placer County	Placer	Olympic Valley	Plump Jack Squaw Valley Inn	unknown	1 to 5	1.90
	Placer County	Placer	Olympic Valley	Plump Jack Squaw Valley Inn	unknown	1 to 5	1.90
r	Placer County	Placer	Olympic	Resort At Squaw Creek	unknown	1 to 5	3.50

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
			Valley				
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	1 to 5	1.83
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	1 to 5	3.50
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	1 to 5	8.46
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	1 to 5	3.50
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	5 to 15	8.46
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	5 to 15	8.46
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	1 to 5	1.83
r	Placer County	Placer	Olympic Valley	Resort At Squaw Creek	unknown	1 to 5	1.83
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.05
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	4.18
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	3.04
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.05
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.20
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.50
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.50
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.50
r	Placer County	Placer	Olympic Valley	Squaw Valley Resort, LLC	unknown	1 to 5	1.50
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	1 to 5	3.00
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	1 to 5	3.00
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	5 to 15	6.00
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	5 to 15	6.00
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	1 to 5	2.50
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	1 to 5	2.50
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	1 to 5	2.50
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	less than 1	0.80

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
r	Placer County	Placer	Olympic Valley	The Village At Squaw Valley	Nat Gas	less than 1	0.80
	Placer County	Placer	Rocklin	Gap - Data Center	Nat Gas	1 to 5	1.38
	Placer County	Placer	Rocklin	Howard Johnson O'cairns Inn	Nat Gas	1 to 5	1.38
	Placer County	Placer	Rocklin	Rocklin Corporate Center - A	Nat Gas	1 to 5	1.97
	Placer County	Placer	Rocklin	Rocklin Corporate Center - B	Nat Gas	1 to 5	1.97
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	5 to 15	8.40
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	5 to 15	8.40
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	1 to 5	2.97
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	5 to 15	8.40
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Rocklin	Sierra JT. Comm. College Dist.	Nat Gas	1 to 5	2.40
	Placer County	Placer	Rocklin	Sunrise Assisted Living	Nat Gas	1 to 5	1.50
e	Placer County	Placer	Rocklin	Whitney High School	Nat Gas	1 to 5	1.75
	Placer County	Placer	Roseville	Advance Metal Finishing, LLC	Nat Gas	1 to 5	1.14
	Placer County	Placer	Roseville	Advance Metal Finishing, LLC	Nat Gas	1 to 5	1.20
	Placer County	Placer	Roseville	Adventure Christian Church	Nat Gas	1 to 5	3.90
	Placer County	Placer	Roseville	Adventure Christian Church	Nat Gas	1 to 5	3.90
	Placer County	Placer	Roseville	BJ's Restaurant Brewery	Nat Gas	1 to 5	1.80
g	Placer County	Placer	Roseville	City Of Roseville - 4th & D	Nat Gas	1 to 5	1.63
g	Placer County	Placer	Roseville	City Of Roseville - Central Park Pool	Nat Gas	1 to 5	2.00
g	Placer County	Placer	Roseville	City Of Roseville - Central Park Pool	Nat Gas	1 to 5	1.80
g	Placer County	Placer	Roseville	City Of Roseville - Fire Station #1	Nat Gas	1 to 5	1.64
g	Placer County	Placer	Roseville	City Of Roseville - Woodcreek Oaks Blvd	Nat Gas	1 to 5	2.10
g	Placer County	Placer	Roseville	City Of Roseville - Woodcreek Oaks Blvd	Nat Gas	1 to 5	4.10
	Placer County	Placer	Roseville	Cokeva, Inc	Nat Gas	5 to 15	7.50
	Placer County	Placer	Roseville	Cokeva, Inc	Nat Gas	1 to 5	4.00
	Placer County	Placer	Roseville	Douglas Park	Nat Gas	1 to 5	1.29
	Placer County	Placer	Roseville	Eureka Development Co LLC	Nat Gas	1 to 5	1.29
	Placer County	Placer	Roseville	Extended Stay America	Nat Gas	1 to 5	1.08
	Placer County	Placer	Roseville	Folsom Ready Mix, Inc. - #2 Plant	Nat Gas	1 to 5	2.80

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
	Placer County	Placer	Roseville	H.B. Fuller Company	Nat Gas	5 to 15	6.28
	Placer County	Placer	Roseville	Hanford Ready Mix, Inc.	Nat Gas	1 to 5	1.76
	Placer County	Placer	Roseville	Hines - Douglas Corp Center I	Nat Gas	1 to 5	3.00
	Placer County	Placer	Roseville	Hines - Douglas Corp Center II	Nat Gas	1 to 5	2.20
	Placer County	Placer	Roseville	Hines - Olympus Corp Center I	Nat Gas	1 to 5	1.01
	Placer County	Placer	Roseville	Hines - Olympus Corp Center I	Nat Gas	1 to 5	1.01
	Placer County	Placer	Roseville	Hines - Olympus Corp Center II	Nat Gas	1 to 5	1.10
	Placer County	Placer	Roseville	Hines - Olympus Corp Center II	Nat Gas	1 to 5	1.10
	Placer County	Placer	Roseville	Hines - Roseville Corp Center	Nat Gas	1 to 5	2.00
	Placer County	Placer	Roseville	Hines - The Summit I	Nat Gas	1 to 5	2.20
	Placer County	Placer	Roseville	Hines - The Summit Ii	Nat Gas	1 to 5	1.80
	Placer County	Placer	Roseville	Johnson Ranch Racquet Club	Nat Gas	1 to 5	1.39
m	Placer County	Placer	Roseville	Kaiser Permanente	Nat Gas	5 to 15	12.00
m	Placer County	Placer	Roseville	Kaiser Permanente	Nat Gas	5 to 15	8.00
m	Placer County	Placer	Roseville	Kaiser Permanente	Nat Gas	1 to 5	2.39
m	Placer County	Placer	Roseville	Kaiser Permanente	Nat Gas	1 to 5	4.76
m	Placer County	Placer	Roseville	Kaiser Permanente	Nat Gas	1 to 5	1.68
m	Placer County	Placer	Roseville	Kaiser Permanente	Nat Gas	5 to 15	8.00
	Placer County	Placer	Roseville	Lava Ridge Business Center - 2281	Nat Gas	1 to 5	1.01
	Placer County	Placer	Roseville	Lava Ridge Business Center - 2990	Nat Gas	1 to 5	1.29
	Placer County	Placer	Roseville	Lava Ridge Business Center - 3000	Nat Gas	1 to 5	1.76
	Placer County	Placer	Roseville	Lava Ridge Business Center - 3010	Nat Gas	1 to 5	1.76
	Placer County	Placer	Roseville	Maidu Village Ii, L.P.	Nat Gas	1 to 5	1.43
	Placer County	Placer	Roseville	Maidu Village Ii, L.P.	Nat Gas	1 to 5	1.43
	Placer County	Placer	Roseville	Maidu Village Phase III	Nat Gas	1 to 5	1.43
	Placer County	Placer	Roseville	Maidu Village Phase III	Nat Gas	1 to 5	1.43
	Placer County	Placer	Roseville	Mourier Land Invest Corp - Highland Pt.	Nat Gas	1 to 5	1.67
e	Placer County	Placer	Roseville	Oakmont High School	Nat Gas	1 to 5	5.00
e	Placer County	Placer	Roseville	Oakmont High School	Nat Gas	1 to 5	5.00
e	Placer County	Placer	Roseville	Oakmont High School	Nat Gas	1 to 5	1.90
e	Placer County	Placer	Roseville	Oakmont High School	Nat Gas	1 to 5	1.90
e	Placer County	Placer	Roseville	Oakmont High School	Nat Gas	1 to 5	1.20
e	Placer County	Placer	Roseville	Oakmont High School	Nat Gas	1 to 5	2.50
	Placer County	Placer	Roseville	Parkway Corporate Plaza 1620	Nat Gas	1 to 5	1.65
	Placer County	Placer	Roseville	Roseville Gateway	Nat Gas	1 to 5	4.00

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
e	Placer County	Placer	Roseville	Roseville High School	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Roseville	Roseville High School	Nat Gas	1 to 5	1.68
e	Placer County	Placer	Roseville	Roseville High School	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Roseville	Roseville High School	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Roseville	Roseville High School	Nat Gas	1 to 5	1.67
e	Placer County	Placer	Roseville	Roseville High School	Nat Gas	1 to 5	2.00
g	Placer County	Placer	Roseville	South Placer Adult Correctional (Main Jail)	Nat Gas	1 to 5	2.07
g	Placer County	Placer	Roseville	South Placer Adult Correctional (Main Jail)	Nat Gas	1 to 5	2.07
g	Placer County	Placer	Roseville	South Placer Adult Correctional (Main Jail)	Nat Gas	1 to 5	2.07
g	Placer County	Placer	Roseville	South Placer Adult Correctional (Main Jail)	Nat Gas	1 to 5	0.00
g	Placer County	Placer	Roseville	South Placer Adult Correctional (Min Security)	Nat Gas	1 to 5	1.26
g	Placer County	Placer	Roseville	South Placer Adult Correctional (Min Security)	Nat Gas	1 to 5	1.26
g	Placer County	Placer	Roseville	South Placer Justice Center Building B	Nat Gas	1 to 5	1.25
g	Placer County	Placer	Roseville	South Placer Justice Center	Nat Gas	1 to 5	1.75
g	Placer County	Placer	Roseville	South Placer Justice Center	Nat Gas	1 to 5	1.75
	Placer County	Placer	Roseville	Stone Point Phase 3	Nat Gas	1 to 5	2.00
m	Placer County	Placer	Roseville	Sutter Roseville Medical Cent.	Nat Gas	more than 15	20.92
m	Placer County	Placer	Roseville	Sutter Roseville Medical Cent.	Nat Gas	more than 15	20.92
	Placer County	Placer	Roseville	Teichert Ready Mix	Nat Gas	1 to 5	2.95
	Placer County	Placer	Roseville	The Palms Assisted Living	Nat Gas	1 to 5	1.40
	Placer County	Placer	Roseville	The Terraces Of Roseville Senior Living	Nat Gas	1 to 5	1.65
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	5 to 15	8.40
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	less than 1	0.16
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	more than 15	20.92
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	1 to 5	2.75
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	5 to 15	8.40
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	1 to 5	1.50
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	more than 15	20.92
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	5 to 15	8.40
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	more than 15	20.92
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	less than 1	0.16

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h ¹
				LLC			
	Placer County	Placer	Roseville	TSI Semiconductors America, LLC	Nat Gas	less than 1	0.16
	Placer County	Placer	Roseville	Vintage Park LLC	Nat Gas	1 to 5	1.20
r	Placer County	Placer	Tahoe City	Granlibakken Resort	Nat Gas	1 to 5	1.63
e	Placer County	Placer	Tahoe City	Tahoe Lake Elementary	Nat Gas	less than 1	0.70
e	Placer County	Placer	Tahoe City	Tahoe Lake Elementary	Nat Gas	less than 1	0.60
	Placer County	Placer	Truckee	Catamount	Nat Gas	5 to 15	6.25
	Placer County	Placer	Truckee	Catamount	Nat Gas	5 to 15	6.25
	Placer County	Placer	Truckee	Great Bear Lodge	Nat Gas	1 to 5	4.62
	Placer County	Placer	Truckee	Great Bear Lodge	Nat Gas	1 to 5	4.62
	Placer County	Placer	Truckee	Iron Horse	Nat Gas	1 to 5	4.62
	Placer County	Placer	Truckee	Iron Horse	Nat Gas	1 to 5	4.62
	Placer County	Placer	Truckee	Martis Camp - Family Barn	Nat Gas	1 to 5	1.50
	Placer County	Placer	Truckee	Martis Camp - Family Barn	Nat Gas	1 to 5	1.50
	Placer County	Placer	Truckee	Martis Camp - Family Barn	Nat Gas	1 to 5	1.10
	Placer County	Placer	Truckee	Martis Camp Lodge	Nat Gas	1 to 5	2.34
	Placer County	Placer	Truckee	Martis Camp Lodge	Nat Gas	1 to 5	2.00
	Placer County	Placer	Truckee	Martis Camp Lodge	Nat Gas	1 to 5	1.50
	Placer County	Placer	Truckee	Martis Camp Lodge	Nat Gas	1 to 5	2.34
	Placer County	Placer	Truckee	Martis Camp Lodge	Nat Gas	1 to 5	1.50
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	1.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	1.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
e	Placer County	Placer	Truckee	North Tahoe High/ Middle Schools	Nat Gas	1 to 5	2.00
r	Placer County	Placer	Truckee	Northstar Village	Nat Gas	1 to 5	1.44
e	Placer County	Placer	Truckee	Rideout School	Nat Gas	1 to 5	2.10
e	Placer County	Placer	Truckee	Rideout School	Nat Gas	1 to 5	1.50
	Placer County	Placer	Truckee	Ritz Carlton Hotel - Truckee	Nat Gas	5 to 15	14.47

FT	Air Pollution Control District	County	Town	Building Name or Permittee	Fuel Source	MMBtu/h size class	MMBtu/h¹
	Placer County	Placer	Truckee	Ritz Carlton Hotel - Truckee	Nat Gas	5 to 15	14.47
	Placer County	Placer	Truckee	Ritz Carlton Hotel - Truckee	Nat Gas	5 to 15	14.47
	Placer County	Placer	Truckee	Village Swim And Fitness Center	Nat Gas	5 to 15	7.24
	Placer County	Placer	Truckee	Village Swim And Fitness Center	Nat Gas	5 to 15	7.24