

**Will a meter reader still have to read my meter?**

Yes. Cheyenne Light will still need to read your meter, either manually or through automated meter reading. With therm billing, customer bills are calculated by multiplying the metered volume of thousands of cubic feet used by the dekatherm multiplier.

**What is the advantage for the company of billing by dekatherms?**

There isn't a financial advantage in billing by dekatherms. The conversion neither increases nor decreases Cheyenne Light's revenues. But billing by dekatherms is expected to streamline our billing process because it is consistent with how we are billed for the natural gas we buy from our suppliers and also with how we bill our industrial and large commercial customers.

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## Terms

**Energy:** Useable heat or electrical power.

**Dekatherm:** A measure of energy equal to 1,000,000 British thermal units (Btus).

**British Thermal Unit (Btu):** The amount of heat it takes to raise the temperature of one pound of water by one degree Fahrenheit. It's also approximately equal to the amount of heat given off from burning a wooden kitchen match.

**Energy content:** Measure of the heat produced by burning natural gas.



*Energy...for a lifetime.*

**Cheyenne Light**  
**Fuel & Power**  
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*Understanding...*

# THERM BILLING



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Cheyenne Light, Fuel & Power bills customers based on the energy content of the gas they use (in dekatherms) instead of on the volume of gas that passes through their meters (in thousands of cubic feet or Mcf). Dekatherms are thought to be a better measurement of the energy the customer uses than metered volume—or Mcf—because they more accurately reflect the differences in natural gas usage caused by altitude, gas temperature and energy content of the gas. In addition, *Therm Billing* has become an industry standard as many natural gas utilities around the country already bill in dekatherms.

We measure the amount of energy customers are receiving rather than the amount of gas running through the meters. If you live at higher elevations, your gas bill is probably lower than if you lived in lower elevations. *Please note that is not a revenue increase for Cheyenne Light.*



## Commonly Asked Questions About Therm Billing

### *How do you determine the amount of dekatherms I use?*

We multiply the metered volume of cubic feet used by a number called a therm multiplier. The multiplier is a formula that consists of the altitude of the service address, the temperature of the natural gas and the energy content of the natural gas received at the service address.

#### **Equation for Converting Mcfs to Dekatherms:**

**Dekatherms = Volume**  
(metered volume (Mcf))  
X

**Altitude Factor**  
(altitude)  
X

**Temperature Factor**  
(gas temperature)  
X

**Energy Factor**  
(energy content)

### *How does altitude affect the use of natural gas?*

Just as air is thinner at high altitudes, so is natural gas. Because of this, customers who live in higher altitudes use higher volumes of gas than those at low altitudes. .

### *How do you know what altitude my home or business is at?*

At Cheyenne Light we use mapping software that uses U.S. Geological Survey elevation information to assign an altitude to service addresses to be placed in one of two 600-foot altitude ranges. The altitude factor used in the multiplier will be the mid-point of each range. The approximate difference in the altitude factor from the mid-point to the lowest and highest points are +1% and -1% respectively.

### *How does the temperature of the gas affect usage?*

The temperature of the gas affects its density to some extent. As the temperature drops, the density of the gas increases. In other words, the colder it is, the more molecules there are in a given volume of gas. That means customers in areas with warmer temperatures must use slightly higher volumes of gas than customers in colder climates to achieve the same results.

### *How will you know the temperature of natural gas delivered to my home or business?*

At this time we don't have the equipment to measure gas temperature at each service address. Therefore, we will assume a temperature of 60 degrees F, which is an industry standard. In the future, we may use other methods to determine this factor.

### *What is the energy content and why does it matter?*

Cheyenne Light receives natural gas from several gas suppliers, including interstate pipelines and local gas processing plants. Because the chemical composition of each supply differs according to the source of the supply, properties such as energy content (or heating value) also differ.

A change in energy content can result in a customer consuming higher or lower volumes of gas to deliver a given amount of energy. For example, customers in areas that receive natural gas with a lower energy content use more gas than customers in regions receiving natural gas with a higher energy content to achieve the same results.

### *How do you know the energy factor of the natural gas delivered to my house or business?*

We use mapping software to assign a Btu Zone location to each service address. A Btu Zone is a region that receives its gas from either a single natural gas well or multiple sources with similar energy content. The energy factor is updated quarterly.

For more information on Therm Billing, call our Customer Service Department at 307-638-3361