



Municipal Technical Advisory Service
INSTITUTE *for* PUBLIC SERVICE

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Local Natural Gas Systems

Dear Reader:

The following document was created from the MTAS website ([mtas.tennessee.edu](https://www.mtas.tennessee.edu)). This website is maintained daily by MTAS staff and seeks to represent the most current information regarding issues relative to Tennessee municipal government.

We hope this information will be useful to you; reference to it will assist you with many of the questions that will arise in your tenure with municipal government. However, the *Tennessee Code Annotated* and other relevant laws or regulations should always be consulted before any action is taken based upon the contents of this document.

Please feel free to contact us if you have questions or comments regarding this information or any other MTAS website material.

Sincerely,

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Local Natural Gas Systems

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The municipal gas system takes delivery of the natural gas at its city gate. The pipeline gas pressure is reduced to system operating pressure, and an odorant is injected into the gas to assist in detecting leaks. Gas metering and maintenance are major components of a natural gas system's workload.

The local gas department must have certified gas operators whose education and training must be documented and kept current. The Tennessee Public Utility Commission is responsible for natural gas pipeline safety. <https://www.tn.gov/tpuc> [1].

The system also may have a third-party transport customer. This is usually an industrial facility that buys its own gas and transports the gas on its own transportation contract to the municipality's city gate. The local gas system transports it from the gate to its facility and charges the industrial customer a transport fee. The city must keep up with the usage and compare it to the daily nominations to avoid imbalances within the LDC.

For More Information

The Tennessee Gas Association (www.tngas.org [2]) is a membership association of gas LDCs, suppliers, and others who work together in training and other natural gas issues.

Conversion of MMBtu to Mcf

The LDC purchases natural gas in units of energy (MMBtu) but sells gas to customers in volume (Mcf). The amount of energy delivered is checked every day on each segment of an interstate pipeline. At the end of the month the agent or LDC will receive a summary of the daily MMBtu level delivered in each segment. It will vary from day to day, and it will change gate station delivery totals. Below is an example of how the units are converted within the LDC.

Example

The LDC had 100 MMBtu delivered at the gate station and used all 100 MMBtu for the gas day. The energy content was 1.032 MMBtu for the day.

$Mcf = MMBtu / \text{energy content}$

$Mcf = 100 \text{ MMBtu} / 1.032$

$Mcf = 96.89$

By volume, 96.89 Mcf were delivered to the city gate, which equals the 100 MMBtus.

Links:

[1] <https://www.tn.gov/tpuc>

[2] <http://www.tngas.org>

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