

Organizations throughout the Railbelt are making plans to deal with a potential natural gas shortfall this winter. While it's not considered likely, all agree that it is important to be prepared. Nobody wants to be caught unprepared on a cold, dark winter evening. That's why the electric utilities in the Railbelt, ENSTAR, and the Municipality of Anchorage have been working together on a collective approach to the situation.

WINTER 2009-2010

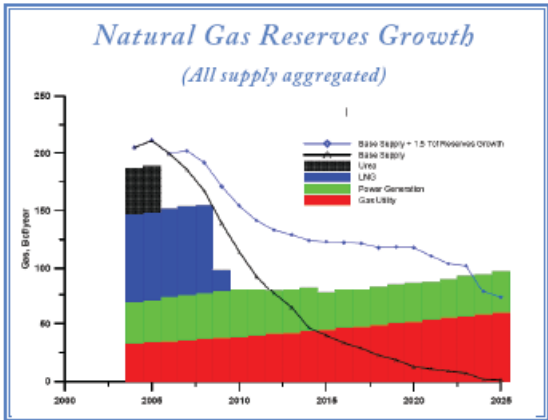


Southcentral depends upon gas

Natural gas is the primary fuel for heating and electric power generation in the Railbelt south of the Alaska Range. Most of the homes and businesses in Southcentral depend upon natural gas for thermal heating, and the area's electric utilities annually produce about 85-90 percent of their kilowatt-hours with gas-fired generation (the balance comes from hydropower).

Cook Inlet gas helped the region prosper

For more than 40 years natural gas from the Cook Inlet basin has helped fuel the economy of Southcentral Alaska. For decades, the gas supply was plentiful and the price was reasonable. Builders installed gas heating systems and appliances, electric utilities converted to natural gas as their primary fuel, and industries developed to convert gas into fertilizer and liquefy it for export. The completion of the Anchorage-Fairbanks intertie in the mid-80s allowed Interior Alaskans to share this benefit by enabling sales of electricity produced with inexpensive gas-fired power to flow north, offsetting more expensive oil-fired generation.



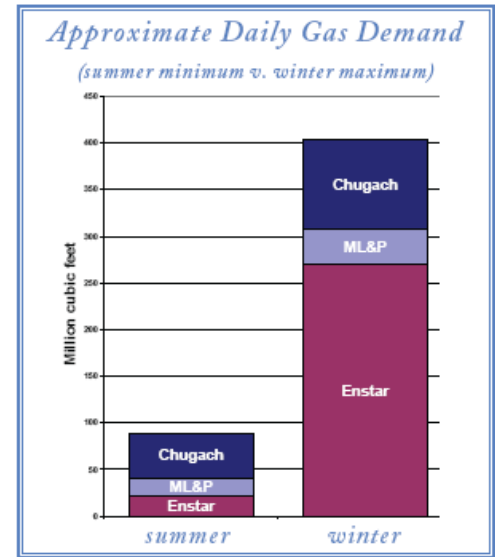
Existing gas fields are aging

In recent years proven reserves of natural gas from the Cook Inlet basin have been declining. While to date there has been sufficient gas to meet the demands of gas and electric utility customers, the characteristics of the Cook Inlet gas fields and individual

wells have changed over time. As a gas field ages, both reserves and pressures decline, and it becomes more challenging for gas producers to provide gas at times of peak demand. When Cook Inlet gas fields were first developed, they had enough field pressure to meet the real-time needs of customers. Today, producers and ENSTAR have compressors on the pipeline system to help maintain sufficient pressure to move gas from wells and fields. When a compressor trips off-line, it presents the possibility that the gas transmission system may not be able to supply gas at the rate customers are demanding it.

Supply versus deliverability

The provision of natural gas has two broad components: supply and deliverability. Supply refers to a volume of gas available to meet the needs of a customer. Deliverability refers to the process of transferring a gas supply to a customer when and where they need it. ENSTAR, Chugach and ML&P all have contracts for natural gas to meet their needs in the winter of 2009-2010. It is important that the delivery system be able to provide gas at the point in time that utilities – and their customers – need it.



Cooperation is key

Gas producers, the liquefied natural gas (LNG) export facility, ENSTAR and Railbelt electric utilities have worked together many times over the years to ensure that there is enough gas for heating and power production. There are many tools available to deal with a temporary inability of the gas production system to deliver fuel. Most contingencies would be handled in a 3-step process.

Step 1: Utility system operations

Collectively, system operators have significant actions they can take. Depending on the situation, deliveries can be diverted from the LNG plant, production from hydropower could be increased, and Southcentral electric utilities could stop making power sales to the Interior and begin buying power produced there with liquid fuels. These are just a few of the options system operators have historically used.

Step 2: Voluntary actions by consumers

Another option is to ask customers to reduce their demand on the gas and electric systems. While most customers are practicing conservation and energy efficiency on a daily basis, there is usually more that can be done for short periods of time during an emergency. Simple actions that are helpful include lowering the thermostat, turning down the setting on the hot water heater, postponing doing laundry and dishwashing, and turning off unused lights and electronics.



Step 3: Interruptions are a last resort

Intentional interruptions are a last resort that could be used to deal with a gas delivery problem. This would entail electric utilities intentionally opening substation breakers to cut power to some customers for short periods of time before re-energizing them and rolling the outage to other customers. This option would only be necessary if the many different actions available through system operations and voluntary customer actions were unable to sufficiently reduce the demand on the gas delivery system.



How can I be more efficient?

As consumers, each of us should use energy wisely. Snug, well-insulated structures will retain heat and reduce the amount of gas needed to fuel furnaces and boilers. If you are buying a major new appliance like a refrigerator, look for one that has earned an ENERGY STAR rating. Gas and electric utilities can provide information to help you better understand your energy bill and how to take steps to control it through conservation and energy efficiency. The U.S. Department of Energy and Alaska Housing Finance Corporation are other great resources for information and programs.

How can I help in an emergency?

If the gas delivery system is going to come under extra stress, it is usually going to be in the evening hours during a prolonged cold snap. In addition to the steps you're already taking to use energy wisely, you may be asked to further reduce your use of natural gas and electricity to help take pressure off the gas delivery system. Taking relatively small steps like turning down thermostats, lowering the setting on your water heater, postponing activities like doing laundry or dishes, and turning off unused lights and electronics can make a big difference in the amount of gas that's needed during a few critical hours.

How will I know if you need my help?

If it's necessary to call for voluntary actions by consumers to help reduce the demand on the gas delivery system, an announcement will be made through the media by local government officials and Emergency Operations Centers. Announcements should outline the situation, spell out specific actions customers are being asked to take, and provide some idea of the duration of the problem.

How will outages be handled ... and will I lose gas service?

Electric utilities can do something that gas utilities generally can't: interrupt service to selected customers for short periods of time and then restore it. Therefore,

In the event of gas system problems, emergency managers might use a chart like this to advise customers

CONDITION	MEANING	Customer Action
Green	System Stable	<ul style="list-style-type: none">• Use energy wisely• Be conservation minded• Your utilities can provide energy-saving tips
Yellow	Caution	<ul style="list-style-type: none">• Set thermostat to 65 degrees in living areas, and 40 degrees in the garage• Lower water heater setting to "warm" or "vacation"• Minimize usage of natural gas range• Postpone doing laundry and dishes• Turn off unnecessary lights and electronics
Red	Alert	<ul style="list-style-type: none">• Set thermostat at 60 degrees in living areas (55 if away)• Turn water heater gas valve to "pilot"• Do not use natural gas fireplaces, decorative heaters or gas grills• Consolidate household activities into as few rooms as possible• Use the microwave for cooking

no scheduled service outages are planned for ENSTAR customers. Planned power outages would be a last resort, necessary only if the combination of system operations and voluntary customer actions fail to cut enough demand from the gas delivery system. If it becomes necessary to interrupt service to electric customers, outages are planned to be 20-30 minutes long and rotated among customers, with consideration for critical facilities.

How can I learn more?

Check the Web site of your electric utility and ENSTAR for additional information.

