NYC cleanheat

FREQUENTLY ASKED QUESTIONS

FOR BUILDINGS CONVERTING FROM HEAVY FUEL OILS

FIRM, INTERRUPTIBLE, DUAL FUEL FIRM GAS AND HOW TO DECIDE

What is a firm gas rate?

Firm gas rates apply when a building burns natural gas only. Firm gas service will not be interrupted because of weather or other conditions. Firm delivery rates are established by Con Edison's New York Public Service Commission. Firm gas customers are entitled to 100 feet of *free* gas main and 100 feet of *free* service to their building from Con Edison. This is referred to as "entitlement".

What is an interruptible gas rate?

Interruptible gas rates are for customers who can burn either natural gas or oil. When required by Con Edison, interruptible customers agree to switch to oil or another energy source based on Con Edison's pre-established criteria. The interruptible gas rate may change from month to month, and may be lower than the firm rate. The upcoming month's interruptible rate is published on the company website at the end of each month. Interruptible customers need to maintain 10 days of supply of No. 2 oil.

What is dual fuel firm gas?

Buildings that currently burn at least 70,000 gallons of oil annually can inquire with Con Edison about dual fuel firm gas. Buildings that maintain a dual fuel system pay the firm gas rate. They are also required to burn a minimum amount of gas each year with that amount set by Con Edison. The construction costs for bringing the gas main and service to the building are rendered through a "Revenue Test" which determines if the anticipated revenues from the building can offset the cost to bring service to the building.

What is a Service?

The service is the gas pipe that comes from the street to the building.

What is a Main?

The main is the gas pipe in the street that is part of the distribution system. Depending on the location, the main may be supporting a low pressure system or a high pressure system.

Why is Con Edison requiring some buildings to commit to a firm rate for a five-year period in order to bring service at no or low cost?

Con Edison requires customers to commit to burning only gas for an agreed upon amount of time in order to cover the costs of the entitlements under the New York State (NYS) Tariff.

What if I sign up for firm service and decide later to transfer to interruptible service?

Customers that were required to commit to five years of firm service and that want to transfer to interruptible service sooner may, at Con Edison's discretion, be required to pay all or a portion of the gas line costs previously incurred by Con Edison (e.g., entitlements). The change in service from firm to interruptible may trigger additional capital costs.

What if gas prices become more expensive than oil prices during the firm rate commitment period?

It is unlikely that gas prices will become more expensive than oil prices in the next three to five years. The U.S. Energy Information Administration (EIA) and MIT predict that gas prices will remain low.

See the EIA Annual Energy Outlooks 2011:
http://www.eia.gov/neic/speeches/newell_12162010.pdf, (slides 27 and 29), and
The MIT Report, *The Future of Natural Gas*:
http://web.mit.edu/mitei/research/studies/natural-gas-2011.shtml and
http://web.mit.edu/newsoffice/2012/shale-gas-revolution-report.html.

How can a building owner calculate what is financially beneficial for the building to choose between firm and interruptible gas?

A cost comparison will help determine the return on investment. To calculate how many therms of gas the building will burn annually, the average number of gallons of oil burned annually multiplied by 1.5 results in the approximate number of therms a building will burn once on gas. Con Edison can provide the price per therm for both the firm and interruptible gas rates or you can inquire with your fuel provider.

There are additional costs for interruptible gas service such as:

- Ten day supply of No. 2 fuel oil maintained in the tank.
- Bringing the gas line (service) to the building.
- Potential oil tank replacement if the oil tank is considered an underground tank or not capable of containing No. 2 oil..

Is there a risk of gas interruption for firm gas customers?

Some building owners are afraid that Con Edison "will turn off the gas one day" when they are on *firm* gas and do not have a back-up supply to maintain heat and hot water. That is an

unfounded fear. If there is a capacity problem, Con Edison will require the *interruptible* gas customers to switch to oil so that it can ensure enough supply for the firm rate customers.

If a building is on the firm rate, can Con Edison suddenly increase the price of gas?

Con Edison is regulated by the NYS Public Service Commission (PSC) and cannot increase the gas delivery charge without first getting approval from the PSC. The price of the gas or commodity portion fluctuates monthly and can be purchased from any commodity broker. Con Edison's revenue comes from the transportation of the commodity.

Does the building have to buy the gas from Con Edison?

No. A building can buy the gas from any fuel broker.

How much cheaper is natural gas compared to No. 2 heating oil?

As of May 2012, the difference renders a value of approximately 30%. This number will fluctuate based on the rise and/or fall of both fuels.

TECHNICAL QUESTIONS RELATED TO THE SWITCH TO GAS

What is an underground (buried) oil tank?

The NYS Department of Buildings considers a tank to be a buried tank if the bottom of the vessel is beneath or in contact with dirt. Having the vessel in contact with the dirt can lead to advanced corrosion and potential leaks that could remain undetected.

Does a building have to disconnect the oil supply when going to firm gas?

Yes. According to the NYS Tariff, a firm rate customer cannot have the ability to burn fuel oil. Both the fill and feed lines to the boilers must be disconnected from the tank and the tank decommissioned according to agency regulations. Ask your licensed professional to ensure that all aspects of your conversion are incompliance with all applicable local, municipal, city, and/or state requirements. These requirements may include disconnection, decommissioning or removal of your existing oil tank.

Will the building's oil tank need to be replaced when going to the interruptible gas rate?

Whenever a building's heating system is going through a conversion from a No. 6 fuel oil to a less viscous fuel, the tank will need to be cleaned and inspected. The inspection process will include a pressure test to ensure the tank has not become porous and potentially leak once filled with the No. 2 fuel oil. If the tank fails the test, and the customer wants to burn fuel oil, the tank can be repaired depending on the severity of the porosity or a new tank will be necessary.

How can a building avoid the required gas "integrity test" if the pressure in the existing gas piping is interrupted?

During the investigation phase by the engineer or contractor, specific piping in the service line within the building known as "bypass piping" should be noted.

If the bypass piping exists, this will enable Con Edison to maintain gas pressure in the existing internal piping by bringing an outside source of natural gas by means of a truck or bottles of gas to the building. This is known as "bottling the building". This will be necessary when switching the existing internal piping over to the new gas service and will also incur a cost for the operation in the range of $5,000. Bottling of the building secures pressure in the existing line and eliminates the need to perform a high pressure, integrity test. This test could result in leaks with the building and the gas flow cannot be resumed until all the leaks have been mitigated.

If the bypass piping does not exist, you should request a *second* service (separate, new gas line) from Con Edison. However, this second service must be paid for at a cost determined by Con Edison at the time of evaluation. It should be noted that the cost of a second service could be negligible to the cost of re-piping the entire building.

Is there a risk of a gas explosion when natural gas is used for heating?

Most NYC buildings already have gas for cooking and dryers and use it without event. Risk of explosion due to natural gas is very small and is only volatile when the limits fall between 5% and 15% volume within the given space. Gas that is piped to buildings is also injected with an odorant so it can be easily detected. Con Ed should be notified if gas orders are evident.

Does the chimney need to be lined when switching to gas?

Masonry chimneys typically need to be lined with a stainless steel liner (10 or 20 gauge). This is due to the exhaust products generated from the burning of natural gas containing more moisture which can destroy the mortar between the bricks. This is an important aspect to the conversion to natural gas and your engineer or contractor should know about current code issues relevant to your chimney. The process of inspection is to send a camera down the shaft by a qualified chimney company and the results shared with the NYC Department of Buildings. Chimney liners can cost in the range of $5,000 to $10,000 per floor.

Does the boiler or burner need to be replaced when switching to gas?

Replacement of the existing boiler will most likely not be required unless a licensed professional determines that the boiler needs to be replaced. Single fuel burners will need to be replaced. Only dual fuel burners are capable of burning both gas and oil.

Does every building need a gas booster?

Only buildings receiving low pressure gas service for burners requiring higher pressures than guaranteed by Con Edison will require a gas booster. The building engineer can inquire with

Con Edison if the service will be low pressure or high pressure. Gas boosters generally cost in the range of $25,000. Gas boosters are not required for high pressure service.

Can a building choose between low pressure and high pressure gas?

Con Edison's decision is based on the system infrastructure and where the low and high pressure gas lines are in relation to your building. If low pressure is readily available and your choice is high pressure and upgrades to the system are required, Con Edison will evaluate and inform you of any cost associated with those upgrades (the costs could be very high).

What are the financing options if a building does not have enough reserve funds to pay for the conversion?

Call 311 and ask for NYC Clean Heat or email info@nyccleanheat.org for more information on financing options.

SWITCH TO GAS NOW OR LATER?

Would a building have to wait if they choose not to convert with a pre-arranged group of buildings, or a cluster?

The Public Service Commission does not allow Con Edison to do speculative building of gas infrastructure. In other words, Con Edison may only expand the gas infrastructure once the buildings have submitted load letters requesting gas service and have proven to Con Edison that they are ready to convert. If there are a group of buildings ready to receive and burn gas, Con Edison may prioritize that cluster and schedule the work to perform the upgrade. For those buildings that have not demonstrated the ability to be ready to receive the gas service when Con Edison is installing the infrastructure, they will be excluded from the cluster of building.

Buildings that decide to wait or are not ready to connect might not be able to get a gas service once the building is ready for the following reasons:

- The Dept. of Transportation might have a restriction as to how many times a street or sidewalk can be opened up in a five year period.
- The gas line in the street might not have enough capacity to bring more buildings on.

As a result, it's best to switch to gas at the same time as the entire cluster. If the building doesn't have the money to invest in the gas conversion, call 311 and ask for NYC Clean Heat for more information on financing options.

Rather than actively forming a cluster of buildings to go to gas, could a building simply wait until gas capacity is available?

Yes, but it could take some time. Con Edison is aggressively improving the infrastructure to support the new growth activities but cannot support everyone at the same time. Forming a

cluster is a way of accelerating growth in certain areas. Call 311 and ask for NYC Clean Heat for help with cluster formation..

What happens if a building decides not to go forward with the cluster and first go to No. 2 oil or No. 4 oil?

The main focus of the Clean Heat initiative is to mitigate the particulate matter in the air we are breathing. Switching to No.2 will satisfy that requirement. But if a building is interested in converting to natural gas as well, serious consideration should be given to being included in a cluster. The building should consider financing the gas conversion if the building does not have sufficient funds at the time the cluster is being formed.

No. 4 oil is not an advisable choice because it is still a highly polluting heating oil that could cost about the same as burning No. 2 oil after taking boiler efficiency loss and additional maintenance into consideration. Go to www.edf.org/cleanheat for a fact sheet on this issue called "Why burning No. 4 oil could end up costing about the same as burning No. 2 oil".

What is required to start the conversion process for my building?

Many buildings will be able to switch to one of the cleanest fuels using their existing equipment. Others may need to replace or upgrade components of their systems. Contact NYC Clean Heat to answer any questions.

1. **Know when you need to switch**

   Beginning July 1, 2012, buildings that currently use No. 6 oil will need to switch to a cleaner fuel before their three-year boiler operating certificate expires. Planning well in advance of the expiration date will give you the most flexibility and options for your building. See the NYC Clean Heat website to see if your building burns heavy oil and to learn more about the regulations and permitting process.

2. **Understand conversion options**

   Buildings that currently burn No. 6 and No. 4 heating oil have several conversion options to chose from when switching to cleaner fuels. These include No. 2 heating oil, biodiesel, natural gas, and steam.

3. **Consider energy efficiency**

   Most buildings that utilize heavy oil and are required to switch to cleaner fuels must also comply with the City's energy efficiency laws, the Greener Greater Buildings Plan. At a minimum, pursuing energy efficiency and a fuel conversion at the same time will improve heating system performance, reduce fuel usage and costs.

4. Obtain costs estimates

Start by contacting your existing fuel supplier or boiler service provider to ask how they can assist you with converting to a cleaner fuel and to obtain cost estimates. If more extensive work to your heating system is needed, you may also need to consult a licensed engineer. If you plan to seek bids from multiple contractors, make sure to submit the most detailed specifications possible and ask contractors to include pricing for all required items.

5. Contact your utility if necessary

If you are interested in connecting to the natural gas system you will also need to contact Con Edison or National Grid, depending on which utility serves your neighborhood, to determine if there will be costs for connecting to their gas distribution system. It is best to obtain cost estimates for your fuel conversion work prior to contacting your gas utility so that you are ready to take action. If you live in Manhattan below 96th street and are interested in converting to steam, contact Con Edison Steam.

6. Evaluate Incentives and Financing Options

Converting to a cleaner fuel will likely include upfront costs. See the NYC Clean Heat website for more information in incentives and financing options.

For more information on the conversion process, visit our website at http://nyc.gov/cleanheat

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