Natural gas is coming to Homer What can I do to be prepared?

The City of Homer and Enstar are working to get Natural gas in front of your home. But what will steps do you have to take to feel the toasty warmth radiating throughout your home? There are a many different variables involved in converting your home to natural gas and you will need to spend some time, energy and money to be able to use this fuel source. Like any home improvement project, you will have to make decisions along the way about how much you are able to spend and the quality of the appliance you want. If the cost of converting your entire home at once is daunting, consider starting with smaller more affordable appliances and then use the savings from that to budget for future conversions. This site has some information to help you understand the task for converting you home to natural gas. However, the City highly recommends you call your local plumbing and heating specialist for a conversation about the particulars of your home and to get a quote.

Enstar will contact you before they get to your home to survey whether or not you want to hook up to gas as the line goes by your house. They will ask you a number of questions like the total square footage of your building and the appliances you intend on hooking up. You can find an application for natural gas connection here to get an idea of the questions you will be asked. Enstar will charge you for installing the service line, \$1290 for the first 100 feet and \$2 for every additional foot (2013 prices). You are only charged for the service line that runs on your property (you will not be charged for road crossings, for example). The meter is an additional cost and varies depending on your anticipated load, but the average customer pays \$200 for a meter.

Elements to consider when thinking about converting your home to natural gas are:

1. Plumbing and Venting. Enstar will pipe gas to your home. You are responsible for plumbing gas to the appliances in your home. This will be easier, and more affordable, the closer your appliances are to each other and if the line can run under or outside your house (in a crawl space, for example). Installing appliances on second stories or where you have to run pipe through walls will be more expensive. All natural gas appliances have to be vented and many need to be placed on exterior walls for venting.

If your home is plumbed for propane it may still have to be re-plumbed for natural gas depending on the size and type of pipe used. Alaska state law does not prohibit you from pluming your own appliances, but Enstar will inspect the installation before they hook you up to natural gas. Tips of how to install to code provided by Enstar can be found here.

2. Space Heat. How do you heat your home?

a. <u>Fuel Oil:</u>

Converting a Fuel Oil Boiler to Natural Gas: If you have a newer oil fired boiler, you *may* be able to convert it to natural gas by replacing the burner. However if

it is not over 85% efficient you might want to consider purchasing a more efficient natural gas boiler anyway. Even if you have a new boiler that can be converted to natural gas, the conversion has to be supported by the manufacturer of your boiler or your warranty will be voided and Enstar may not be able to hook up your unit.

Fuel Oil Space Heater: These cannot be converted to natural gas. You will have to purchase a new natural gas space heater. Most homes require two space heaters to heat the space effectively. Once installed, you may or may not be able to vent the heater out of the same hole your fuel oil stove was vented out of.

b. Propane

Converting a Propane Boiler: In some instances converting a propane boiler to natural gas is as simple as changing out a value, but not always. Some propane boilers cannot be converted, and if you have an older boiler the most cost effective option may be to buy a new high efficiency natural gas boiler. **Propane Space Heater:** Some propane space heaters cannot be converted to natural gas. Rinnai is a common brand in Homer that can be converted easily. Venting and plumbing for your existing propane space heaters will not necessarily be sufficient for natural gas.

c. Electric

i. **Electric Base Boards:** A concern with electric heating systems is how your heat is delivered. If you heat your house with electric baseboards, for example, you will need to invest not only in a new natural gas boiler but also a new heating distribution system to get the same quality of heat distribution, which can be quite costly.

d. <u>Wood</u>

- Wood Stove/Boiler: The cost savings associated with converting to natural gas for space heat when you heat with wood depends on how you get your wood. If you are paying for wood by the cord at today's prices, natural gas is cheaper. Even if your primary heat source is wood, you could experience significant savings by hooking up other appliances to natural gas (dryer, range).
- **3. Heating water.** If you have a large family, tight home and fuel efficient appliances, you may experience the greatest savings in changing out your hot water heater.
 - a. On demand hot water. Converting a propane on demand hot water heater to natural gas requires a lot of labor and it may be more cost effective to purchase a new natural gas on demand heater.
 - b. Standard water heater. A standard natural gas water heater can be less expensive than an on demand water heater. The type of water heater you choose depends on how much hot water you need available at once.

4. Other Appliances.

Dryer. If you have a propane dryer, you should be able to easily convert it to natural gas. You can save significantly by replacing your electric dryer with natural gas. Keep in mind it needs to be vented properly to be safe and efficient.

Range. Home cooks and chefs alike love cooking on gas. Most ranges are sold for natural gas, if you kept the original pieces, the conversion is as simple as reinstalling those pieces. A conversion kit can also be purchased. As a general rule of thumb, the more expensive the appliance, the more expensive it will be to convert.

Grill, gas fire place. These are other appliance you may consider plumbing for natural gas.

Call your plumbing and heating specialist for a quote on what converting will cost you. If the Homer Natural Gas Special Assessment District is approved in November, there will potentially be many homes able to connect to natural gas in a short amount of time. The more prepared you can be, the better.

When Converting from Propane or Fuel Oil to Natural Gas

- 1. We recommend, **but don't require**, you have a licensed plumbing or heating contractor to make the conversion and install all gas lines and new equipment.
- 2. These suggestions **DO NOT** cover all codes and possible situations.

List of Common Problems found when converting oil fired appliances.

- 1. Heat exchanger's and flue's need to be cleaned.
- 2. All conversion burners need to meet manufacturer specifications and instructions.
- 3. Conversion burners need to have flue gas analysis done by qualified heating contractor.

Propane conversions need to be done before we arrive to set meter.

1. Appliances need to be approved to run on natural gas. See rating tag and manufacturer's instructions.

Installation of House Piping

- 1. Gas line needs to be installed as per code. (recommend using a licensed plumbing or heating contractor for this)
- 2. The line needs to be sized to meet BTU requirements.
- 3. You cannot have any unions in line.
 - Exceptions:
 - a) A union can be used as an appliance connector only after a shut off valve within 3 feet of appliance.
 - b) A union can be used outside immediately after a shut off valve.
- 4. Bushings cannot be installed in concealed spaces.
- 5. Flex connectors are not permitted through walls, floors, cabinets, crawl spaces or underground.
- 6. If you have a licensed contractor install a pressure test, he needs to leave a card with state plumber's number.
- 7. If you install and pressure test the line yourself, we need to see pressure on when we arrive. (10 lb min.)
- 8. Make sure all shut off valves are off and capped when you test. (If you put pressure up against controls on appliances you may destroy control valves.)
- 9. All black steel pipe need's to be a minimum of 6" above grade.
- 10. Make sure all black pipe is strapped and secured. $\frac{1}{2}$ " should be strapped every 6', $\frac{3}{4}$ " and 1" should be every 8', $\frac{1}{4}$ " should be every 10'.

Installation of Appliances

- 1. All gas fired appliances need to be installed per manufacturer's instructions and local, federal codes. Make sure all atmospheric burning appliances have proper combustion air.
- 2. If appliances are not installed correctly, the meter will NOT be set.



Meter Set

- 1. This plug is for ENSTAR's use only. DO NOT REMOVE IT. If you are going to install an additional line, please install a 2nd tee on the down stream side of your house line.
- 2. You can check-out a pressure gauge at ENSTAR. Your test will need to have a minimum of 10 lbs. of pressure when ENSTAR comes to install your meter.
- 3. DO NOT move the meter bar. Our riser is designed with a frost bend and need's to be left the way we install it.



Southern Division Code Application

<u>Kenai</u>

• For gas piping and appliance installation, use the International Mechanical Code (2006 Edition), the International Fuel Gas Code (2006 Edition), and the Uniform Plumbing Code (2009 Edition).

<u>Soldotna</u>

- For gas piping and appliance installation, use the International Mechanical Code (2006 Edition) and the Uniform Plumbing Code (2006 Edition).
- Note, both Kenai and Soldotna have received deferrals from the State Fire Marshals Office, for code enforcement and plan review.
- Outside the city limits of Kenai and Soldotna, for a 3 plex and smaller, gas piping and appliance installation use the Uniform Plumbing Code (2009 Edition). State Statute 8 AAC 63.010. This is under the State Department of Labor, Mechanical Inspection office.
- Outside the city limits of Kenai and Soldotna, for a 4 plex and larger, gas piping and appliance installation use the International Mechanical Code (2006 Edition), the International Fuel Gas Code, chapters 6 and 7 only, and the Uniform Plumbing Code (2009 Edition). State Statute 13 AAC 50.023 and 13 ACC 50.24 This is under the State Fire Marshal plan review.

Enstar Policy That Applies to All Divisions

- 1. Domestic gas-fired clothes dryers may be installed in bathrooms if provided with a make-up air opening having an area of not less than 100 square inches. Generally this is provided by cutting off the appropriate length off the bottom of the bathroom door.
- 2. Appliances shall not be installed in a location where subject to physical damage unless protected by barriers.
- **3.** In garage installation, if the equipment platform is a minimum of 24" high and the equipment does not extend beyond the face of the platform, barriers are not required.
- **4.** If the equipment is installed in an alcove, a barrier will not be required as long as the equipment does not protrude beyond the face of the wall and the height of the alcove platform, measured from the floor to the top of the platform, is a minimum of 24" in height.
- 5. If the equipment platform is less than 24" high, one or more barriers must be installed.
- **6.** The barriers must be a minimum 30" high and be constructed of a minimum 2" diameter schedule 40 iron pipe.
- 7. The barrier must have a minimum of 6" setback from the platform or equipment. The maximum unprotected distance shall not exceed <u>five feet</u>.
- 8. The barrier must be installed per one of the following methods: a. Buried a minimum of 2' deep in compact soil and imbedded in concrete slab. b. Set in a minimum 1' x 1' square x 1' deep block of concrete (slab included). c. Secured to a wood framed garage floor with flange and stainless steel bolts and imbedded in concrete slab. d. Secured to the concrete slab using a floor flange with minimum of four 3/8" diameter x 3 1/2 " long galvanized or stainless steel bolts.

- **9.** Piping and ductwork is not allowed to be surface mounted on the face of the platform, where it may be subject to damage.
- **10.** Unit heaters and related piping shall be mounted clear of any potential vehicle damage.
- **11.**Combustion Air grill shall not be covered with less than ½ inch mess for residential and up to 1 inch for commercial applications.
- **12.** Combustion Air shall not be taken from a cold attic.
- 13. Any vent termination including combustion air, shall not be less than 24 inches from finished grade. This keeps it 12 inches above the anticipated snow depth of 12 inches. Measurements shall be made to the bottom of the vent outlet.
- 14. Fuel gas appliances that have components that generate a glow, spark, or flame (such as switches, electrical receptacles, thermostats, dryers, furnaces, boilers, water heaters, pumps, zone valves, motors etc.) that are located in spaces of a building where flammable vapors may accumulate due to leakage or spills from fuel tanks of motorized equipment, must have such ignition sources elevated at least 18 inches above the floor. Exceptions 1. Habitable portions of a private dwelling unit separated from the attached garage, by one-hour protection on the garage side, with a self closing, gasket all around, rated door. 2. Areas of a building that are separated by a minimum one hour occupancy separation protection with a vestibule type room providing a two doorway separation with self closing, gaskets all around, rated doors, from spaces accessible by motorized equipment containing combustible fuels. Note, bathrooms, toilet room's closets, hallways, storage or utility spaces, and similar areas are not considered habitable spaces.
- **15.** Overhead heaters installed in aircraft storage or servicing areas shall be at least 10' above or away from the upper surface of wings or engine enclosures of the tallest aircraft which may be housed in the hanger. Exception: Where a 10' vertical separation cannot be maintained in a NFPA 409 Class 3 hangar, a sealed com
- **16.** An appliance installed in wet under floor crawl spaces is prohibited. An exception is a FAF suspended from the floor joists above water line.
- 17. All joints in underground ferrous piping shall be welded when, the nominal pipe diameter is 2 1/2 inch or larger, or the pipe is installed under a driveway, or medium gas pressure is used.
- 18. All joints in underground copper shall be brazed with wrought copper fittings. No underground joints shall be permitted unless the underground length of run exceeds 60'. All pipe to tubing transitions shall be made above ground.
- **19.** Where unions are necessary, right and left nipples and couplings shall be used. Ground joint unions may be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shut off valve.
- **20.** At all points where fuel gas piping enters or leaves the ground there shall be installed, above ground, an approved, listed connector, capable of absorbing a six inch displacement, in any direction, due to frost heave action. A Dormont, series 30 or 31, stainless steel flex is an example of a suitable connector. For medium pressure CSST will be considered a suitable connector.
- **21.** At points where copper tubing type systems enter or leave the ground, they shall be protected from frost heave action by the incorporation of suitable above ground 6 inch radius bends or approved flex connection of equal size.
- **22.** Pound to inches regulators serving mobile homes (trailer kits) and connected to copper tubing shall be attached directly to the inlet connection on the exterior of the mobile home, and shall not be located under the mobile home. The kits must be installed with 12" extension so as the regulator is above the skirting.
- **23.** All building fuel gas piping entrances and exits shall be located above grade or in an approved vented vault.

- **24.** Plastic and copper gas piping shall have at least 18 inches of earth cover or other equivalent protection.
- **25.** Air pressure used to test piping shall be at 10 psig and the test shall be performed with gauges of 1/10 psi increments or less.
- 26. Welded pipe shall be tested at not less than 60 psig test pressures.
- 27. Temporary gas approval is given to allow "comfort heating" appliances to be used to provide temporary heat to a building or building site prior to the completion of the building's primary heating system. The most commonly used appliance is a natural gas portable space heater. Other comfort heat appliances allowed for temporary heat purposes are warm air furnaces, boilers, and unit heaters. It is not the policy of Enstar Natural Gas to allow "decorator fireplaces" or "ranges" to be utilized as temporary heat for buildings. These appliances are not designed or "listed" for that purpose.
- **28.** All appliances used to provide temporary heat for buildings shall be installed in accordance with the manufacturers' instructions and terms of their listing, with particular attention being paid to the clearances to combustibles from the top, bottom, front, back, and sides of these appliances.
- **29.** Unit heaters used for temporary heat shall be installed per manufacturer's instructions and listed clearances to combustibles from the top, bottom, front, back, and sides of these appliances.
- **30.** Unit heaters used for temporary heat shall be installed per manufacturer's instructions and listed clearances to combustibles. The vent connector must be graded at ¼ inch per foot slope upward to the outside and it must be changed to "B" vent at the wall penetration. The "B" vent must maintain its listed clearance to combustibles, extend a minimum of 5 feet vertically, and be secured.
- **31.** Furnaces used for temporary heat must comply with the same requirements as for unit heaters as stated above. In addition, the return air for the furnace shall be ducted a minimum of 10 feet from the furnace.
- **32.** Portable space heaters must be provided with 100% outside air to the back end of the heater. In most cases, the gas regulator attached to these heaters must be piped to the outside. If the regulator vent discharges, it shall not be allowed to discharge into the space being heated.
- **33.** Gas hose used for temporary heaters shall be an approved type. All manufacturers' listed clearances shall be maintained. The hose shall have an internal wire mesh or braid and be "kink proof". Supporting wire shall run the full length of the hose. Each time a hose is moved from one lot to another, it must be retested with 60 psig air pressure, for 10 minutes.
- 34. A permit and inspection will not be required for residential temporary construction heat serving tented footings and foundations. This provision is for thawing ground and curing concrete, not comfort heat for construction workers, i.e. plumbers, electricians, sheet rockers etc. This allowance is limited to portable 'SURE FLAME' type heaters and not intended for unit heaters, furnaces, and boilers, which have special venting considerations. All heaters and hoses must be of the approved type. Heaters must be listed by an approved listing agency. All hoses must have an internal wire mesh or braid, and be "kink proof". Supporting wire shall run the full length of the hose. 100% outside air must be provided to heater at all times. Listed clearances to combustibles must be maintained. A licensed journeyman plumber or gasfitter must perform all work. This is not intended for the home owner building his own home, and is not qualified to perform such work.
- **35.** Installation of unvented appliances is prohibited. Regardless if listed for such use.

- **36.** Venting systems installed exterior to the building outside the thermal envelope shall be enclosed in an insulated (R-19 minimum) shaft. The portion of the vent system that is above the last roof and its projected plane need not be enclosed. The portion of the venting system passing through an attic space need not be insulated or enclosed.
- **37.** Vent terminations that penetrate a metal roof with a pitch shall be protected by an ice dam or deflector.
- **38.** Gypsum Wall Board (sheetrock) shall be considered a noncombustible material when determining minimum required clearances. It should be noted that GWB cannot be used to reduce clearances to combustibles. For example, B vent must be installed with a one inch minimum clearance from wood, even if the wood is covered with GWB.
- **39.** The maximum length of a clothes dryer exhaust duct may be increased when necessary due to location of the dryer in relationship to an exterior wall or roof, not to exceed the dryer manufacturer's recommendations. When exceeding the maximum allowable length per code, a placard stating the length of the run and the amount of 90 degree elbows must be posted on the wall next to the dryer exhaust connection. The placard must be laminated or in a moisture resistant sleeve and be secured using screws, staples, or thumbtacks. Push pins are not acceptable. The duct must be routed using the shortest possible distance to the exterior.
- **40.** For distances exceeding the dryer manufacturer's recommendations, a booster fan, listed for the purpose, shall be used for lengths up to the booster fan manufacturer's recommendations.
- **41.** Ventilating hoods shall be installed over all domestic free standing or built-in ranges, unless the range is otherwise listed for forced down draft ventilation. The hood or ventilation system shall exhaust to exterior of the building.



APPLICATION FOR NATURAL GAS CONNECTION

ENSTAR Natural Gas Company P.O. Box 190288 Anch, AK 99519-0288 PH: (907) 277-5551 Fax: (907) 334-7737 Kenai/Soldotna (907) 262-9334 Matanuska Valley (907) 376-7979

, tacan		Whittier 1-877-907-9767				
CUSTOMER INFORMATION	Name of Applicant (Please Print)	Lot/Block Subdivision				
	Mailing Address (Street)	Service Address (number/mile and street name/highway)				
	Mailing Address (City, State, Zip Code)	City Zip				
	Home Phone Business Phone Cell Phone	Nearest Cross Street				
	Email Address	Parcel ID/#				
	Building description:	□ New construction □ Existing building □ Lot cleared □ Framed □ Ready for gas now				
	Total Square Footage of Building:	Foundation backfilled? Yes No Expected date:				
	Total Square Footage of Unit served by meter:	Permanent Service Temporary Construction Heat				
0	Check any underground obstructions that apply and indicate on drawing. Customer is responsible for providing accurate information. Underground wiring Oil lines and tank Well Septic *No obstructions per customer *Customer Initial:					
COMPANY USE	DO NOT FILL IN BELOW- TO BE COM Customer Account Number: Location ID:	PLETED BY ENSTAR REPRESENTATIVE Grid: Area: Jurisdiction: Zone:				
	CYCLE Gross CFH load Gross CFH load No of units	Additional				
	per meter	Meter set(s): Existing Main Main Extension ER and/or Proposal Number: Image: Content of the set of the				
	$\Box G1 \qquad \Box G2 \qquad \Box G3 \qquad \Box G4$	·				
0	Road Crossing Required:	Latitude: Longitude:				
Ŭ	RESIDENTIAL TYPE: 1 thru 8 COMMERCIAL TYPE: 1 thru 8	Credit Approval Amount Due \$				
NE	SERVICE LINE LESS THAN 2" CHARGES	SERVICE LINE 2" or GREATER ESTIMATED CHARGES				
TLI	100 feet or less: \$	100 feet or less: \$				
ICE	Excess footage charge @ Per foot: \$	Estimated Cost per Foot: \$				
SERVICE LINE	Excess Charges: \$	(over 100 ft.)				
	Estimated Permanent Service Line Charges \$	Estimated Charge to Collect: \$				
	Meter Size:	METER LOCATION/NOTES				
ES	Measurement Pressure: Inches WCPSIG	*INSTALLATION WEATHER PERMITTING / CUSTOMER				
ßG	Meter Installation Charge \$	TO MARK METER LOCATION*				
HA	Est. Annual Consumption (Mcf/YR):					
METER CHARGES	Allowance per Mcf: \$					
	Less: Meter Allowance \$					
	Sales Tax (if applicable):					
	Estimated Service Connection Fee \$	Contact:Phone:				

Application for Natural Gas Service: The Customer is applying for natural gas service under the terms and conditions set out in the Company's tariff approved by the Regulatory Commission of Alaska (RCA). The Customer understands that fees and charges for service line and meter set installation must be paid prior to installation. Billing for gas service and any deposits are due upon receipt and will become delinquent if not paid within twenty-five (25) days of the billing, in accordance with the Company's tariff. Failure to pay by the date specified on the bill or a notice of non-payment may result in the discontinuance of service. The Customer agrees to pay reasonable costs and attorney fees incurred by the Company for the collection of any unpaid accounts. The Company's tariff and the terms of this application may be amended periodically as a result of action by the RCA. This application is only a request for a service, and does not bind the Company to provide the service line and meter set. The Company will only install service lines during the normal Alaska construction season and will not attempt installation in frozen ground.

	Customer Contacted: UYES NO		
	Application Updated: DIYES DINO		
Printed Name	OS: SC:		
	Enstar Rep:		
	Date:		
Application Date			

Customer or Customer's Agent Signature

Gas Meter Location

Gas meters will not be located:

- 1. In living guarters, garages, carports, boiler rooms, or unventilated or inaccessible locations
- 2. In contact with ground or in a depression below the general ground level
- 3. Near a driveway unless adequately protected from passing vehicles
- 4. Closer than 36" to any ignition source including an electric meter assembly
- 5. Closer than 36" to or directly under an operable window or wall opening
- 6. In areas subject to ice and snow damage from roof, or vehicular damage

Gas meters shall be located in ventilated spaces readily visible and accessible for examination, reading, replacement, and maintenance.

A. To have service line installed:

Your service line can be installed anytime after the foundation is complete and backfilled to within 6" of finished grade and meter location is marked. Customer is responsible for accurately locating all underground obstructions. Any damage resulting from underground obstructions that have not been located or improperly located will be the responsibility of the Customer. If the Customer fails to provide adequate locate information for private, underground facilities (fuel lines, well, wires, septic, etc.), damage during the service line installation will be the responsibility of the Customer.

B. To have meter bar installed:

Licensed plumbers may pick up a single meter bar at any ENSTAR office and install it. This will allow the house piping to be tied in. The meter bar must be secured solidly to a stud wall and installed at the proper height in accordance with the requirements of ENSTAR. For meter bars with two or more meters, call ENSTAR's Service Department at the appropriate phone numbers below to schedule installation.

C. To have a meter set and unlocked (gas turned on):

- 1. Call the nearest ENSTAR office for an air test and inspection instructions for your area. (Anchorage and Palmer must be inspected and tagged by a city inspector)
- 2. House piping must be connected to a meter bar and a service line must be installed.
- A major gas appliance must be connected to the house piping and ready to be turned on. 3.
- 4 Must have legal address (lot, block, and subdivision name) and name as it appears on the service line application. When you are ready for a meter, please call ENSTAR Customer Service at:

Anchorage/Eagle River/Turnagain areas	334-7600
Mat-Su Valley.	376-7979
Kenai Peninsula	262-9334
Whittier1-87	77-907-9767
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If No. 1, 2, & 3 of above are not completed when a service person arrives to install and unlock a meter, a one-hour service charge at 5. the prevailing hourly labor rate will be billed to your account. An additional trip may be necessary.

D. Call before you dig:

Remember that before any excavation work (post holes, shrubs, etc.) is done, please call the following number for underground line locates. Hand dig within 2' (two feet) of ENSTAR's service line and other utilities.

Alaska Statewide: 811

This is a free service offered by your local utilities to prevent you from being charged for damages to underground services.

Commercial Meters

- Upon request, ENSTAR Marketing Representatives will provide you with a drawing of the type of gas meter that will be installed to 1. serve your needs.
- 2. It is the customer's responsibility to install 6" (six-inch) pipe bollards filled with concrete to protect ENSTAR's meter from damages.
- The number and location of the bollards is shown on the meter drawing. 3.
 - When installing bollards, call for locates before digging by calling 811.

Important Information

Service Line Installation and Fees; The Company will generally install the service line along the shortest practical and available route, as determined by the Company, from the nearest gas distribution main to the metering equipment at the service connection. The location of the service connection, which includes the meter and meter assembly, will be approved by the Company, taking into consideration convenience and unimpeded access for meter reading and maintenance of the Company's facilities. Under normal, frost-free conditions, the Company will install a meter and service line to the Company's preferred meter location for the charges and fees set out in the Company's tariff. The Customer understands that requesting a service connection or service line routing that differs from the Company's preferred location may result in additional charges to the customer as detailed in the Company's tariff. For example, in the case of a service line less than two inches in diameter, the Customer will be assessed a service line excess footage charge in addition to the basic service line installation fee for the length of service line that is in excess of 100 feet, or for the additional length of the service line installed to accommodate the Customer's preferred meter location, whichever is greater.

The Customer understands that the service line and the service connection will remain the property of the Company, regardless of any contribution made by the Customer, and the Company has the right of access to such Company-owned facilities at all reasonable times, including the right of ingress to and egress from the Customer's property. After any installation, repair or removal, the Company will exercise care to return the Customer's premises to a reasonable approximation of the conditions in which they were found immediately prior to such work. Interference with the metering equipment, its connections, the service line, or any other property of the Company may result in the discontinuance of service and additional charges to the Customer. It is further understood that it is the responsibility of the Customer to exercise reasonable care to prevent damage to the facilities (including damage by snow and ice from roofs or vehicular damage) and that the Customer may be held responsible for any such injury or damage. The Customer will notify the Company if any damage, defect, or leakage of gas is discovered.

Residential Natural Gas Equipment Usage Data Sheet

Customer na	ame: Contact	Phone #								
Legal Addre	ss: Location	n ID:								
Service Add	ress:									
Total Load Breakdown										
Quantity	Equipment Type	Load per unit		Total Load						
	Furnace		CFH		CFH					
	Boiler Circle type of heating system: Radiant floor Baseboard		CFH		CFH					
	Boiler Hydronic loads: Water Heater Snowmelt Unit Heater									
	Range		CFH		CFH					
	Dryer		CFH		CFH					
	Water Heater		CFH		CFH					
	On-Demand Water Heater		CFH		CFH					
	Grill		CFH		CFH					
	Garage Unit Heater		CFH		CFH					
	Generator		CFH		CFH					
	Fireplace		CFH		CFH					
			CFH		CFH					
			CFH		CFH					
			Total		CFH					
	Load information shown above confirmed accurate by the Customer (Custor	ner initials):								

Customer represents that the above information is an accurate listing of all gas-fired equipment intended to be used by the Customer. This information will be used by the Company to determine the size and type of service line and meter needed to serve the Customer. The Customer shall notify the Company of any future load changes. Load changes may require the Company to change the equipment needed to meet the Customer's load demand. It is critical that the Customer inform ENSTAR's Marketing Department before any additional gas-fired equipment is added to the service line. The Customer will be responsible for any and all costs and damages associated with failure to notify the Company of any load change.

Installation and Use of Excess Flow Valve

Effective February 12, 2010, ENSTAR is required by Federal Pipeline Safety Regulations 49 CFR 192.383 to install an Excess Flow Valve (EFV) in all new and renewed service lines that serve only one single-family residence.

EXCESS FLOW VALVE DEFINITION

An Excess Flow Valve (EFV) is a device placed inside the natural gas service line near the gas main that shuts off the flow of natural gas automatically if ENSTAR's service line is broken or otherwise has excessive flow, thereby restricting the flow of gas and mitigating the potential for property damage. Such excessive flow can be caused by damage due to excavation, damage caused by a natural disaster such as an earthquake, or excessive flow due to additional gas-fired equipment being added to the service line that exceeds the design capacity of the EFV. EFV's are designed for a specific flow range with some tolerance for additional load, and will be sized based on information provided by the Customer at the time application is made for a new or renewed service line. The cost of the initial installation of the EFV is included in the service line charge. Installation of an EFV will NOT protect against Customer appliance gas leaks, small service line punctures or gas meter leaks. An EFV may not protect against damages due to earthquakes or flooding.

CUSTOMER RESPONSIBILITIES

It is critical that the Customer inform ENSTAR's Marketing Department before any additional gas-fired equipment is added to the service line. Failure to do so could cause the EFV to close, disrupting natural gas service to the home. If a larger EFV needs to be installed to handle the Customer's increased load, the Customer will be responsible for the Company's cost to replace the EFV.

Should a Customer increase the load on the service line without notifying the Company causing the EFV to close, the Customer will be responsible for any and all costs and damages associated with the closed EFV, including but not limited to damage to the Customer's dwelling and equipment, and the Company's cost to repair and/or replace the EFV.

Customer's Printed Name____

Customer Signature___