

# The ENBRIDGE Builders Guide

Using natural gas for Construction Heat



[www.buildwithgas.com](http://www.buildwithgas.com)



# Your guide to using natural gas construction heat.

This guide contains everything you need to know about using natural gas during construction – from site requirements and installation guidelines to building regulations and special programs. As well, you’ll find inspection information to help prepare the homes you’re building for occupancy.

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### IMPORTANT:

At Enbridge Gas Distribution, we do our best to keep builders up-to-date with industry information that directly affects your business. So when changes occur, we'll send you updates. You can add these Builder Technical Bulletins to this guide.





## Getting Started

Discover how you can stay warm, dry and on budget with natural gas construction heaters. And be sure to check out our service area map to ensure your build site is in a location serviced by Enbridge.

## Why use natural gas for construction heat?

With natural gas construction heaters, your project can stay on schedule and on budget. Natural gas heaters are easy to install and provide significant cost savings compared to propane heaters. Whether you use an installed furnace or rent a temporary heater, natural gas is an efficient, cost-effective choice.

### Natural gas heaters offer:

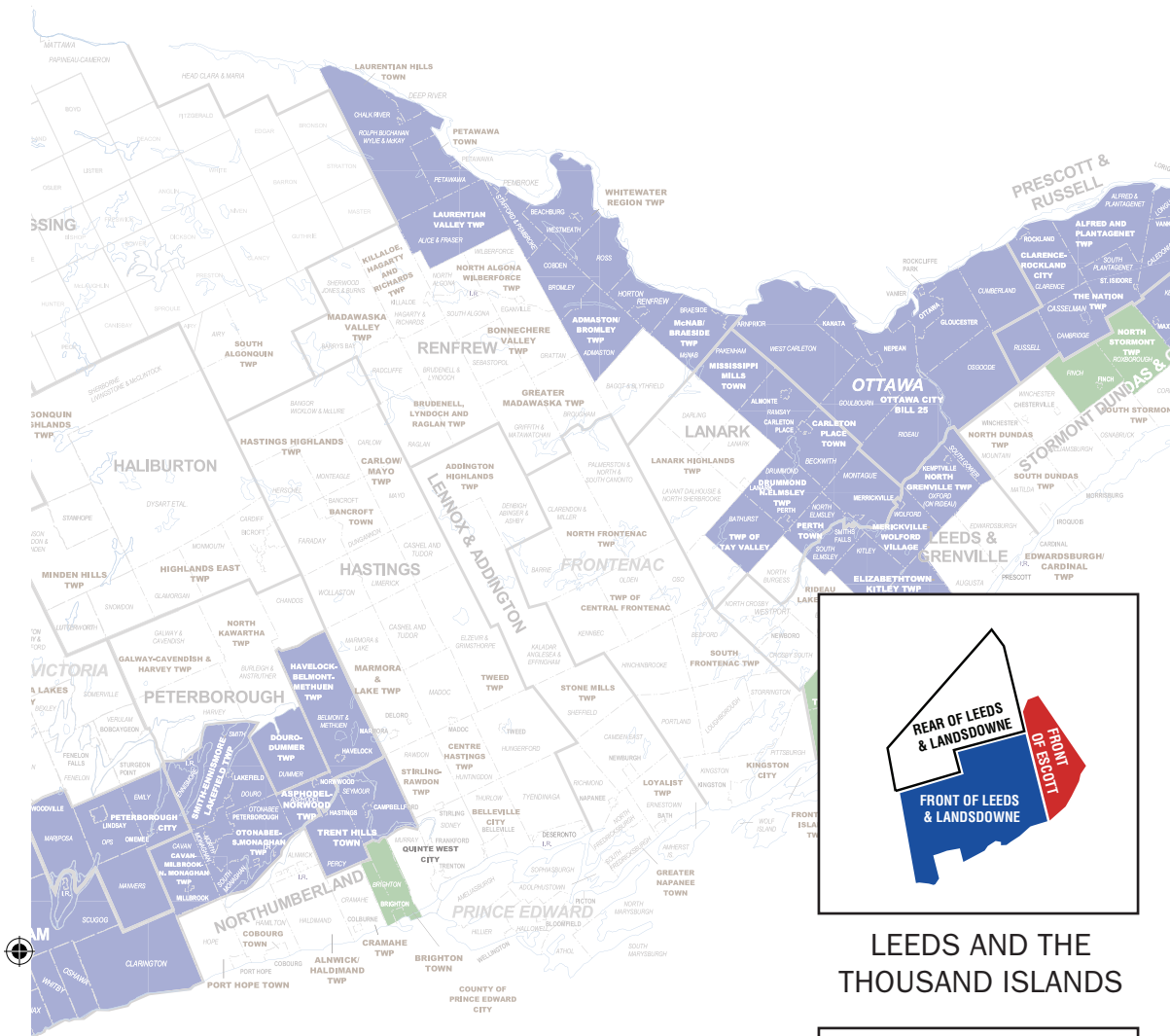
- Moisture control
- Fast curing and drying for concrete and drywall
- Unlimited fuel supply day and night — no tanks to haul and replace
- The cleanest-burning fossil fuel
- Easy setup
- Odourless and quiet




If you're planning to build, now is the best time to coordinate your gas installation. Enbridge will work with you to make sure your installation goes smoothly — from planning your project to final inspection.



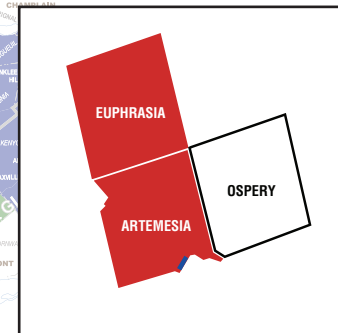
**FAILURE TO COMPLY WILL RESULT IN SERVICE CHARGES AND TSSA NOTIFICATION**



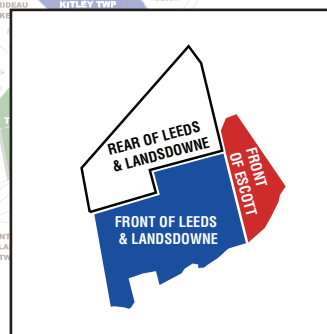


-  **ENBRIDGE**
-  **UNION GAS**
-  **NO FRANCHISE**

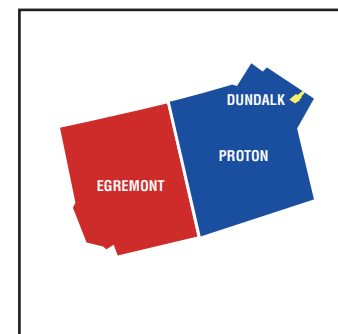
For any franchise inquiries contact  
Regulatory Affairs at:  
[EGDRegulatoryProceedings@enbridge.com](mailto:EGDRegulatoryProceedings@enbridge.com)  
(416) 495-5499



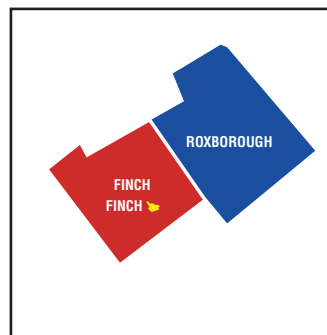
GREY  
HIGHLANDS



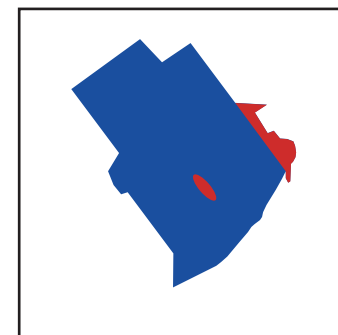
LEEDS AND THE  
THOUSAND ISLANDS



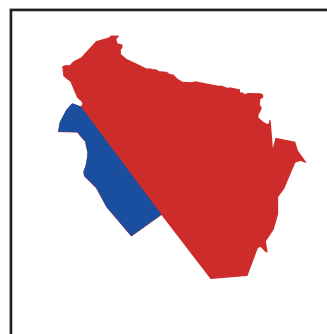
SOUTHGATE



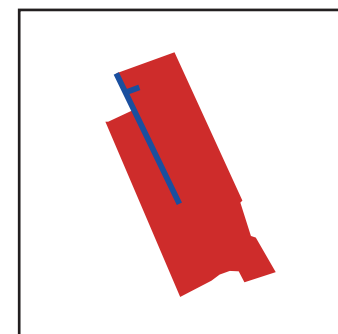
NORTH STORMONT



ORO-MEDONTE



SEVERN



BRIGHTON

## Plan for natural gas today.

There are two methods of natural gas construction heat you can choose from: a temporary (portable) natural gas heater or an installed furnace.

In both instances you should start planning early. At minimum, you should **contact Enbridge 6 to 8 weeks prior to the date you want your gas service and meter installed**. As a guideline, the call should be made once you start digging the foundation.

### Residential Site Preparation Checklist:

- ☐ The foundation is poured and capped
- ☐ The site is clear of obstructions
- ☐ Compacted soil is within 6 inches of final grade
- ☐ The meter location is clearly marked for the final position (to avoid relocation charges)
- ☐ Double check the location of fireplace, windows and any venting obstructions when marking meter location



To get started, contact an Enbridge Gas Distribution Customer Connections Representative today. See the contact list on page S2-3 for the representative in your area.



### IMPORTANT:

When you are ready to turn on your meter to use your natural gas construction heaters, please advise us by completing the Construction Heat Fax Transmission Form in the **Appendix Section** of this binder and faxing it to **1-800-494-6411**.



## Important Contact Information

Keep the following information handy so you know who to contact about service inquiries, installations, customer connections, Enbridge incentive programs and more.





# Builder Quick Reference Sheet



Keep this information handy as a quick and easy reference for getting in touch with Enbridge.

## Channel Consultants

**General mailbox** ..... **Email: [channelconsultant@enbridge.com](mailto:channelconsultant@enbridge.com)**

### City of Kawartha/Peterborough

**Don Armitage** ..... **Phone: (705) 749-5200 ext. 5236 or Email: [don.armitage@enbridge.com](mailto:don.armitage@enbridge.com)**

### Durham Region

**Neil Saunders** ..... **Phone: (905) 436-7017 or Email: [neil.saunders@enbridge.com](mailto:neil.saunders@enbridge.com)**

### Georgian Bay

**Dorothy Stewart** ..... **Phone: (705) 739-5227 or Email: [dorothy.stewart@enbridge.com](mailto:dorothy.stewart@enbridge.com)**

### Metro Toronto

**Margaret Ward** ..... **Phone: (416) 753-6234 or Email: [margaret.ward@enbridge.com](mailto:margaret.ward@enbridge.com)**

### Dufferin Region & York Region

**Michelle Vestergaard** ..... **Phone: (905) 887-4005 ext. 250 or Email: [michelle.vestergaard@enbridge.com](mailto:michelle.vestergaard@enbridge.com)**

### Peel Region

**Michael McDonnell** ..... **Phone: (705) 739-5236 or Email: [michael.mcdonnell@enbridge.com](mailto:michael.mcdonnell@enbridge.com)**

### Niagara Region

**Rick Porter** ..... **Phone: (905) 984-4994 or [rick.porter@enbridge.com](mailto:rick.porter@enbridge.com)**

### Ottawa East

**Leah Stiles** ..... **Phone: (613) 748-6703 or Email: [leah.stiles@enbridge.com](mailto:leah.stiles@enbridge.com)**

### Ottawa West

**Natalie Armstrong** ..... **Phone: (613) 747-4078 or Email: [natalie.armstrong@enbridge.com](mailto:natalie.armstrong@enbridge.com)**

## Other Important Contacts

**Emergencies (1-866-SMEL-GAS)** ..... **Phone: 1-866-763-5427**

**Builder Admin Group** ..... **Phone: 1-866-787-8566**

**Affidavit for Construction Heat** ..... **Phone: 1-866-787-8566 Fax: 1-800-494-6411**

**Clear Rejects** ..... **Phone: 1-877-362-7434**

**Final Inspections** ..... **Phone: 1-866-787-8566 Fax: 1-800-494-6411**

**Customer Billing** ..... **Phone: 1-877-362-7434**

**Change of Ownership** ..... **Phone 1-877-362-7434 Fax 1-866-428-3923**

**Ontario One Call** ..... **Phone: 1-800-400-2255**

**Collective Accounts** ..... **Email: [collective@enbridge.com](mailto:collective@enbridge.com)**

**Ontario One Call web site** ..... **[www.on1call.com](http://www.on1call.com)**

**[www.buildwithgas.com](http://www.buildwithgas.com)**

# Enbridge Gas Distribution Inc. Contacts List

## Customer Connection Representative

Responsible for:

- Initiating and managing gas main extension projects for new residential subdivisions, multi-family buildings and commercial/industrial developments.
- All new or existing commercial and industrial gas service line and meter installations or upgrades.

**General Contact** ..... **Toll Free: 1-888-427-8888**

## Operations Supervisor

Key contacts for inquiring about Natural Gas Code issues or installation technical problems involving unlocks or inspections.

**Technical desk** ..... **Toll Free: 1-800-924-5534**

## Notification of Construction Heat/Final Inspection

Before contacting Enbridge Gas Distribution to schedule the final inspection, the site must be fully accessible to the inspector.

**Phone** ..... **1-866-787-8566**

**Fax** ..... **1-800-494-6411**

**Online Website Access** ..... **www.buildwithgas.com**

## Reject Inspection

Once a rejected installation is corrected, the builder must notify Enbridge Gas Distribution by contacting us to confirm that a rejected installation has been corrected and to turn the gas on if required.

**Phone** ..... **1-877-362-7434**

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## Billing Information



At the beginning of the development of every new site, you need to contact your Customer Connections Representative to ensure that your lots can be processed by Enbridge Gas Distribution in a timely manner.

There are two methods in which you can receive invoicing:

1. All lots on one monthly statement regardless of site – requires one HST number
2. Separate monthly statements by site – requires a separate HST number for each site

### Sample of billing letter builders may receive from Enbridge.

Dear Builder, thank you for choosing the many benefits of Natural Gas for your homes.

At the beginning of the development of every new site, you need to contact your Customer Connection Representative. They will request the required information and communicate the timelines. Once we have received all the site information, it takes approximately 4-6 months for headers and 6-9 months for mains to be designed, drawn and permits obtained before gas can be installed at your site.

#### There are two billing options:

1. Collective Contract Account (formerly Monthly Statement) allows you to receive one monthly invoice for all of your lots. For every Collective Contract Account you open, you will need a different HST number. Please note: To ensure accuracy of billing for every address, occasionally an address may not appear on a collective contract account if it is deemed that a manual or technical issue has caused it to calculate improperly. The address or addresses affected will be held back for correction and billed the following month with notations. Billing inquiries via email: [Collective@enbridge.com](mailto:Collective@enbridge.com).
2. Individual or Non Collective will bill every lot individually. A special mailing address is required to forward bills to you until the home is transferred to the new homeowner. Please note: as the bills will be individual by lot they may not all come to you in the mail on the same day. Billing inquiries via email: [customercare@enbridgegas.com](mailto:customercare@enbridgegas.com).

#### Change of Ownership


Before customers move to their new homes we are asking that all builders use the document on the following page (or similar version of your design) for reporting Change of Ownership to Enbridge. This will avoid billing confusion. Please notify Enbridge at the number noted below as early as possible preferably 30 days prior to closing. Provide the closing date, municipal address and lot number, city and the new purchasers' names. Please fax forms to FAX: 1-866-428-3923

#### Sale of lots

Once you have registered your lots with your Customer Connection Representative, the property will remain under your company's name unless otherwise notified. All charges affiliated with those homes will be invoiced to your company. If you sell lots to another builder, you must contact your Customer Connection Representative immediately to provide the necessary information to allow us to update our records. In Eastern regions, builders do not need to contact their Customer Connections Representatives to register their lots or initiate or transfer billing to a different builder. This timely notification will ensure that you are not billed incorrectly.

Sample of the Notification of Change of Ownership Fax Transmission.

CHANGE OF OWNERSHIP FAX TRANSMISSION  
Fax: 1-866-428-3923



Date: \_\_\_\_\_

Builder Name: \_\_\_\_\_ Monthly Statement #: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Telephone #: \_\_\_\_\_

CLOSING DATE	MUNICIPAL ADDRESS	LOT/SUITE #	CITY/TOWN	PURCHASER'S NAME

PLEASE PHOTOCOPY THIS FORM TO ENSURE AN ADEQUATE SUPPLY IS AVAILABLE FOR FAXING

08-00043 (REV. AUG/07)

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## Using Natural Gas for Construction Heat

In this section you'll find what you need to know about using construction heaters, including: preparing your site, using construction heaters with meter boxes, and Enbridge Gas Distribution and Technical Standards and Safety Authority (TSSA) requirements.



# Using temporary construction heaters for residential applications.



The following information pertains to traditional trench system natural gas installations. For Joint Utility Construction, see page S4-1.

You need to **contact an Enbridge Gas Distribution Customer Connections Representative 6 to 8 weeks prior to the date you want your gas service and meter installed. In Eastern regions, builders order their services by notifying the Work Management Centre.** A general guideline is to make the call when you start digging your foundation.

**You must indicate that your order is for CONSTRUCTION HEAT.**

Please note that the above timeline assumes the gas main has already been installed on the street; and is subject to Enbridge Gas Distribution's ability to obtain locates from other utilities. **Please allow 6 to 8 weeks for a new main if the project is already out to construction with our crews.**

## Steps for using temporary natural gas constructions heaters:

### Step A

The gas meter will be installed with a capped meter tailpiece on the outlet side of the meter. See *photo 1*.



Photo 1

### Step B

Your trained personnel will remove the capped meter tailpiece and install the construction heater quick connect assembly. See *photo 2*. The meter tailpiece and cap must be saved for later use by your gas piping installer.

Once the heater has been removed and if the permanent piping is not yet installed, please replace the meter tailpiece and cap.

If the meter is left unprotected from the elements (dirt, rain, snow), the meter will have to be exchanged. These costs will be charged to the builder.

For more on meter boxes, please go to page S3-7.



Photo 2

### Step C

Only your mechanical contractor can attach the permanent piping to the meter. The meter tailpiece (saved from Step B) must be used to attach the permanent piping to the meter according to our standard requirements for inspection. See *photo 3*.



Photo 3

To avoid delays in servicing your site, please ensure the following steps have been taken before contacting Enbridge.

### Residential Site Preparation Checklist:

- ☐ The foundation is poured and capped
- ☐ The site is clear of obstructions
- ☐ Compacted soil is within 6 inches of final grade
- ☐ The meter location is clearly marked for the final position (to avoid relocation charges)
- ☐ Double check the location of fireplace, windows and any venting obstructions when marking meter location.

## Regulations for activating temporary construction heaters.

Technical Standards & Safety Authority (TSSA) and Ontario Regulations require anyone installing, activating or operating a natural gas-fired construction heater must complete a “Record of Training” (ROT) certification or possess a G2 license or greater. Please note that ROT certification must be renewed every three years.

This certification must be on-hand and presented when rental companies deliver the construction heaters to the site. Once the meter is activated, a completed Construction Heat Form must be faxed to Enbridge at: 1-800-494-6411.

Only residential gas meters having between a 1 and 1 ½ inch meter outlet and a single pressure regulator are permitted to be turned on by a ROT trained individual or non-utility gas technician.

Contact your local rental company to arrange for rental and approved safety training now. For rental providers, see pages S3-17. For ROT training providers, see pages S3-12.



## Safety requirements.

Once the service and meter are installed, and the heater is connected and operating:

- Take precautions to ensure the meter is protected from damage during the construction process. Do not move, remove or alter the gas service, meter or regulator.
- Meter outlet connections should never be left open to the environment. A meter tailpiece and cap are provided with the meter when installed. Please ensure that meter tailpiece, cap and utility meter pin-lock are re-installed immediately after you have finished using the heater.
- If the gas line becomes exposed, call Enbridge Gas Distribution immediately at 1-877-362-7434



### IMPORTANT:

For your ease and convenience, you can access and complete all the necessary construction heat and final inspection forms at [www.buildwithgas.com](http://www.buildwithgas.com)




## Notification of use.


Written notice of the locations where you used natural gas for construction heaters must be faxed to Enbridge Gas Distribution within 24 hours of meter "Turn-On".


Please see the accompanying Notification of Meter "TurnOn" for Temporary Construction Heaters Fax Transmission form.

If you fail to notify us when you start to use the gas you will be back-billed for all gas charges from the date the meter was installed at the location.

**Construction Heat Fax Transmission: 1-800-494-6411**  
(Please check applicable box)



☐ 1. We've turned the meter on for Temporary Residential Construction Heaters  
Notification is required in writing to Enbridge Gas Distribution within 24 hours of your site staff unlocking gas meters for the purpose of temporary residential construction heaters.  
Meter turn on date: \_\_\_\_\_

☐ 2. We've turned the meter on for the Furnace to Heat a Residence(s) Under Construction, "Affidavit of Validation".  
Meter turn on date: \_\_\_\_\_  


Installing Company's Name: \_\_\_\_\_

Inspector (If not installer): \_\_\_\_\_

Installer's Name: \_\_\_\_\_

Certificate Number of Inspector: \_\_\_\_\_

Installer's Certificate Number: \_\_\_\_\_

☐ 3. Enbridge to unlock meter for Furnace Construction Heat; to be used when a builder requests Enbridge Gas Distribution to inspect and turn on a furnace for construction heat purposes only. A charge will apply.  
• MINIMUM 48 HOURS NOTICE REQUIRED! Be sure to indicate the date required for inspection in the appropriate column below.  
• Faxes received after 4:00 pm will be considered as received the next day.  
• Applicable charges will apply per premises.

Current Date: *August 27, 2009*

Builder's Name: *ABC*

Site Contact's Name: \_\_\_\_\_

Cell Number: *(XXX) 555-6789*

Subdivision: *Def*

Site Telephone Number: *(XXX) 555-6789*

Site Fax Number: *(XXX) 555-6789*

City	Lot Number	Municipal Address	Meter Number	Meter Reading (note - not all meters are set at zero, please ensure correct reading)	Date Required (If you have requested Enbridge to unlock meter)
<i>Aurora</i>	<i>16</i>	<i>86 Johnson Lane</i>	<i>SG-8243681</i>	<i>0045</i>	
<i>Aurora</i>	<i>23</i>	<i>95 Johnson Lane</i>	<i>SG-1234567</i>	<i>4012</i>	

**PLEASE NOTE:**  
Please photocopy this form to ensure an adequate supply is available for faxing.

1. When installing and activating a furnace for heating a residence under construction, all applicable codes and manufacturer's certified installation instructions must be met.  
2. Enbridge Gas Distribution must complete a final inspection of all appliances prior to homeowner occupancy. Please fax Enbridge Gas Distribution the "Request for Final Inspections Prior to Homeowner Occupancy" fax transmission when the premises are ready.

11-00253 (REV. DEC 07)

Sample of Meter "TurnOn" for Temporary Construction Heaters Fax Transmission form.



### IMPORTANT:

For your ease and convenience, you can access and complete all the necessary construction heat and final inspection forms at [www.buildwithgas.com](http://www.buildwithgas.com)



## Using temporary construction heaters for small commercial applications.



The following information pertains to traditional trench system natural gas installations. For Joint Utility Construction, see page S4-1.

You need to **contact an Enbridge Gas Distribution Customer Connections Representative 6 to 8 weeks prior to the date you want your gas service and meter installed. In Eastern regions, builders order their services by notifying the Work Management Centre.** A general guideline is to make the call when you start digging your foundation.

**You must indicate that your order is for CONSTRUCTION HEAT.**

Please note that the above timeline assumes the gas main has already been installed on the street; and is subject to Enbridge Gas Distribution's ability to obtain locates from other utilities.

**Please allow 6 to 8 weeks for a new main if the project is already out to construction with our crews.**

To avoid delays in servicing your site, please ensure the following steps have been taken before contacting Enbridge.

### Commercial Site Preparation Checklist:

- ☐ The foundation is poured and capped
- ☐ The site is clear of obstructions
- ☐ Compacted soil is within 6 inches of final grade
- ☐ The meter location is clearly marked for the final position (to avoid relocation charges)
- ☐ Double check the location of any building opening when marking meter location

## Steps for using temporary natural gas constructions heaters:

### Step A

The gas meter will be installed with a capped meter tailpiece on the outlet side of the meter.

### Step B

Your trained personnel will remove the capped meter tailpiece and install the construction heater quick connect assembly. The meter tailpiece and cap must be saved for later use by your gas piping installer.

Once the heater has been removed and if the permanent piping is not yet installed, please replace the meter tailpiece and cap.

If the meter is left unprotected from the elements (dirt, rain, snow), the meter will have to be exchanged. These costs will be charged to the builder.

For more on meter boxes, please go to page S3-7.

### Step C

Only your mechanical contractor can attach the permanent piping to the meter. The meter tailpiece (saved from Step B) must be used to attach the permanent piping to the meter according to our standard requirements for inspection.

### Step D

Enbridge Gas Distribution must conduct a final inspection of all gas appliances before occupancy. Enbridge Gas Distribution provides one inspection per premise free of charge. Additional visits required to inspect appliances that were not ready or rejected at the time of the first inspection will be chargeable.

There is no requirement for Enbridge Gas Distribution to conduct a pre-inspection of piping or venting, even if its to be concealed.



## Safety requirements.

Once the service and meter are installed, and the heater is connected and operating:

- Take precautions to ensure the meter is protected from damage during the construction process. Do not move, remove or alter the gas service, meter or regulator.
- Meter outlet connections should never be left open to the environment. A meter tailpiece and cap are provided with the meter when installed. Please ensure that meter tailpiece, cap and utility meter pin-lock are re-installed immediately after you have finished using the heater.
- If the gas line becomes exposed, call Enbridge Gas Distribution immediately at 1-877-362-7434

## Notification of use.

**Written notice of the locations where you used natural gas for construction heaters must be faxed to Enbridge Gas Distribution within 24 hours of meter "Turn-On".**

Please see the accompanying Notification of Meter "TurnOn" for Temporary Construction Heaters Fax Transmission form.

If you fail to notify us when you start to use the gas you will be back-billed for all gas charges from the date the meter was installed at the location.



### Fax Transmission

#### Notification of Meter "Turn-On" Temporary Small Commercial Construction Heaters

Only small commercial gas meters having a 1 inch meter outlet and a single pressure regulator are permitted to be turned on by an individual with a certified natural gas Record of Training (ROT) or non-utility gas technician. If the meter outlet is larger than 1 inch, you must contact the utility at 1-888-447-4911, or 416-447-4911 to turn on the meter.

Notification is required in writing to Enbridge Gas Distribution within 24 hours of your site staff unlocking gas meters for the purpose of temporary small commercial construction heaters.

To: Enbridge Gas Distribution		Fax: Toll Free 1-800-494-6411	
Current Date:	August 27, 2009	Site Name:	ABC
Meter Turned-On Date:	Def	Site Contact's Name:	ABC
Builder:		Site Telephone Number:	(XXX) 555-6789

	City	Lot Number (If applicable)	Municipal Address and Unit Number	Meter Number	Meter Reading (Last 4 digits on last of year, please ensure correct reading)
1.	Aurora	16	86 Johnson Lane	SG-8243681	0045
2.	Aurora	23	95 Johnson Lane	SG-1234567	4012
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

**Note:** Please photocopy this form to ensure an adequate supply is available for faxing.

August 2006



07-00354

Sample of Meter "TurnOn" for Temporary Construction Heaters Fax Transmission form.



### IMPORTANT:

For your ease and convenience, you can access and complete all the necessary construction heat and final inspection forms at [www.buildwithgas.com](http://www.buildwithgas.com)

## Using construction heaters with meter boxes.

A meter box is an optional method for installing gas services for multi-unit dwellings (such as townhouses) whereby the gas regulator, meter, and shut-off valve are integrated into the architectural detail of the building.

A specially developed adapter is required that duplicates the meter tie-in above the box while ensuring the gas regulator, meter and internal components are not repositioned. The adapter connects to the meter with a swivel coupling and extends through the top of the box, where the connection to the manifold can be made. This provides the flexibility required to rotate the manifold 180 degrees, thus accommodating installation needs.

The adapter is available from your rental company, and must be installed by anyone with an appropriate certificate or a “Record of Training” (ROT) certificate.

**For more on meter boxes see the Meter Box Installation guidelines in Section 5.**

### INCORRECT USE



### CORRECT USE



## Installing meter tie-ins.

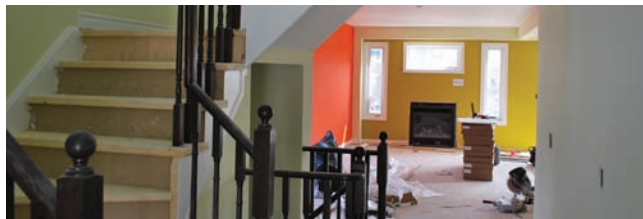
A meter tie-in is the connection of the house's internal gas piping system to the gas meter. Previously, Enbridge Gas Distribution would tie-in the existing downstream piping and paint the outlet piping at the time the meter was installed.

As a result of TSSA regulatory requirements, this service is no longer being provided by Enbridge. For more on TSSA regulations, see page S3-3.

**The tie-in must now be completed by your mechanical contractor, provided they are a licensed G2 fitter or higher.** As always, Enbridge Gas Distribution must conduct a final inspection of all gas appliances before homeowner occupancy.

Enbridge will continue to hang the meter (with minimum three weeks notice), provided the site is prepared and the meter location is clearly marked.

## Using an installed furnace for construction heat.



If you choose to use a furnace to heat a residence under construction, the installer is permitted to install the equipment, unlock the gas meter and activate the furnace.

**A licensed G2 fitter (or higher) must connect the house piping to the outlet of the meter and set up and activate the central furnace.**

There is no requirement for Enbridge to inspect a residential furnace that has been turned on for construction heat by a builder's G2 fitter, provided all requirements of the Technical Standards & Safety Authority (TSSA) guidelines are met.

Per TSSA guidelines, you must notify Enbridge Gas Distribution when your licensed G2 fitter turns on the furnace for heating a home under construction.

**Fax the "Affidavit of Validation" form with all completed information to 1-800-494-6411**

For more on the TSSA guidelines call the TSSA toll-free at 1-877-682-8772, or visit [www.tssa.org](http://www.tssa.org)

### Requesting Enbridge to turn on a residential furnace.

As an alternative to hiring your own G2 fitter, you can enlist Enbridge Gas Distribution services to inspect and turn on a residential furnace that is being used for construction heat. (There is a charge for this service.)

**Please complete and fax the enclosed "Meter Unlock for Furnace Construction Heat" form to 1-800-494-6411. You can also download the form at [www.buildwithgas.com](http://www.buildwithgas.com)**

### Installation requirements:

- Installation must meet the criteria specified in Section 7.13.5 of the CSA B149.1 (current edition).
- Permission must be obtained from the manufacturer in writing to use the furnace for this purpose.
- The furnace and associated ductwork must be cleaned as required prior to occupancy.
- All manufacturer's certified instructions shall be met. See TSSA guidelines on page S3-3 for more details.

### Preparing your site for furnace construction heat.

The following minimum conditions must be met before Enbridge Gas Distribution will inspect and turn on the furnace for construction heat:

- The house must be closed in with the windows, doors and roof covering installed.
- Stairs to the basement must be installed or the builder must provide on-site access with an approved ladder.
- Ductwork does not have to be complete; however, the return and warm air plenums must be attached and the furnace must be protected against debris entering the open ends.
- The permanent gas piping system must be installed including a pressure test and test tag.
- The permanent venting system must be installed.
- Permanent wiring must be installed through a breaker panel and customer switch.
- The site must be reasonably clear of debris to provide safe operating conditions for the appliance and safe access for the inspector.
- Furnaces and water heaters must be installed on a concrete floor or pad.





# TSSA guidelines for using a furnace to heat a residence under construction.



Enbridge Gas Distribution strives to ensure builders are kept up-to-date with industry information that directly affects their business and interaction with Enbridge Gas Distribution. The following outlines the information released by the Technical Standards & Safety Authority (TSSA) in their March 2002 newsletter.

These guidelines apply to central furnaces utilized as a temporary means to heat premises under construction. Installers utilizing this guideline will be subject to periodic inspection by TSSA.

## TSSA Update (as of March 2002):

1. The furnace installer and person initially putting the furnace into use shall be at least a G2 and shall follow the TSSA Advisory NG 00/1 (issued February 1, 2000), Central Furnace Installations in Construction Applications. The three main points of this advisory are:
  - Installation must meet the criteria specified in Section 7.13.5 of the B149.105.
  - Permission must be obtained from the manufacturer in writing to use the furnace for this purpose.
  - The furnace and associated ductwork must be cleaned as required prior to occupancy.
2. All appropriate code clauses shall be met, paying particular attention to pressure testing of the piping system, venting and fresh air requirements.
3. All manufacturer's installation instructions shall be met, which will include but not necessarily be limited to:
  - Proper vent installation.
  - Furnace operating under thermostatic control.
  - Return air duct sealed to the furnace.
  - Air filters in place.
  - Fresh outdoor air supply provided to the furnace room.
  - After initial activation, return air temperature maintained at greater than 55°F (13°C).
  - Clean furnace, ductwork and components upon substantial completion of construction process.
  - Verify proper furnace operating condition including ignition, input rate, temperature rise and venting, according to the manufacture's instructions.

#### 4. An "Affidavit of Validation" form shall be completed:

- Stating all installation criteria per instructions on the form and this guideline are completed.
- Activation by a qualified person, if other than original installer, verifying on the same form that all required tests were completed.
- Completed form must be filed with the gas distributor.
- Each time a furnace is used to heat a residence under construction, an "Affidavit of Validation" form **MUST BE FAXED TO Enbridge Gas Distribution**. Enbridge Gas Distribution will notify TSSA of builders and/or installers who fail to meet this requirement. The form is included in Section 8 of this guide, or you can download it at: [www.buildwithgas.com](http://www.buildwithgas.com)

- Distributor agrees to provide meter set configuration to the meter outlet.
- A licensed G2 or higher shall connect the house piping to the outlet of the meter set up and activate the central furnace under the following conditions:
  - Directions in 1, 2, 3, and 4 above have been followed.
  - Ensure the meter and piping are protected from damage.
  - At no time shall any meter outlet connections be left exposed to the environment nor shall anyone, other than the distributor, perform work on the distributor's piping, regulator or meter.
  - Gas may be activated by means of the service riser valve.
  - When turning on the gas supply, due care will be taken and the valve opened slowly so as to avoid damage to the meter and service assembly.
  - Conduct a meter dial or manometer test to verify house piping integrity. Soap test all meter set connections, piping and fittings that were isolated during the dial test.
  - Prior to occupancy the distributor must inspect all installed appliances. For more on inspections, see page S6-1.



For more Information:  
Contact Enbridge representative:  
Greg Fabbruzzo at 416-495-6745 or  
email [greg.fabbruzzo@enbridge.com](mailto:greg.fabbruzzo@enbridge.com)

You can also call the TSSA toll-free at  
1-877-682-8772, or visit [www.tssa.org](http://www.tssa.org)



#### IMPORTANT:

Each time a furnace is used to heat a residence under construction, an "Affidavit of Validation" form **MUST BE FAXED TO Enbridge Gas Distribution**. You can find the form in Section 7 of this guide or download it at: [www.buildwithgas.com](http://www.buildwithgas.com)



## Record of Training (ROT)

Technical Standards & Safety Authority (TSSA) requires that anyone installing, activating or operating a natural gas-fired construction heater must complete a “Record of Training” (ROT) certification or possesses a G2 license or greater. Please note that ROT certification must be renewed every three years.

You’ll find more information on ROT, and safety training, on the following pages.



## Record of Training (ROT)

# HEATING SOLUTIONS

Fueled by **Stephenson's**  
RENTAL SERVICES

## R.O.T. TRAINING

### CONSTRUCTION HEATER SAFETY TRAINING 2010/2011

Record of Training (R.O.T.) courses are required by anyone working with propane or construction heaters. Reservations required.

#### On Site Training Courses

Available on your preferred date, at your preferred time!  
Cost of \$1,250/course for up to 10 employees, \$75 extra per person above 10, maximum class size is 15.

#### Additional R.O.T. Information

- \* Anyone who connects, disconnects or activates propane or natural gas heaters under 400,000 BTU's is required to hold a valid R.O.T. certificate.
- Proof of training must be provided before delivery of heaters or fuel.
- Renewal of your R.O.T. is required every 3 years.
- Cost of training is \$129.
- Payment by cash, cheque, credit card or on an existing credit account with Stephenson's.
- Training is approximately 4 hours.

#### Main Training Facility

1350 Creditstone Road, Concord, Ontario 905-761-6680

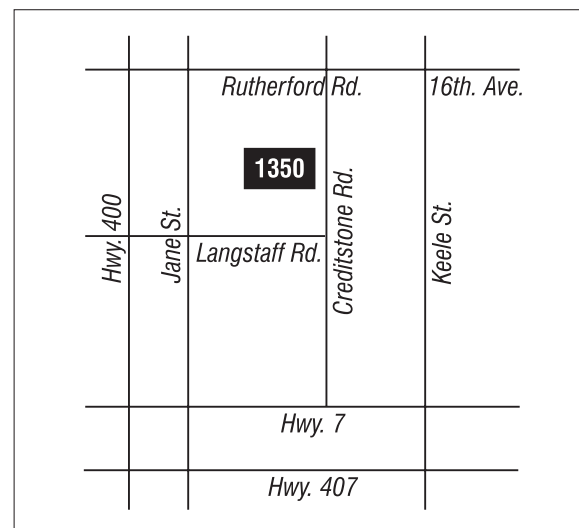
#### To Register

Contact your local branch or e-mail [heaters@stephensons.ca](mailto:heaters@stephensons.ca)

*We are continually adding classes.  
Please consult with your local branch for further updates or call 1-866-946-4646*

#### Directions:

From Highway 400, exit at Rutherford Road (North of Highway 407 at Canada's Wonderland). Rutherford East to Creditstone (1st light east of Jane Street). Right (South) on Creditstone to #1350 (North of Langstaff).





## Record of Training (ROT)



# RECORD OF TRAINING



### R.O.T. Certification Programs

Ontario Regulations require that all individuals installing, activating, or operating a gas-fired construction heater complete a 'Record of Training' (ROT) certification. This certificate must be on hand when the work is performed and presented when the rental companies leave construction heaters at the site.

Please note that ROT certification is only valid for a 3-year period. After 3 years, you must be re-certified. Only residential gas meters having between 1 and 1-1/2 inch motor outlet and a single pressure regulator are permitted to be turned on by a ROT trained individual or non-utility gas technician.

This ROT course for builders, employees and contractors is available through scheduled classes or on-site training sessions.

BattlefieldEquipment.ca | 1-800-RENT-CAT



## Record of Training (ROT)

# NATURAL GAS CONSTRUCTION HEATING



*We can Help you Heat up Your site.*

BOOK YOUR  
**NATURAL GAS (ROT) TRAINING**  
CALL US TOLL FREE  
**1-877-738-9178**



**CONSTRUCTION  
WORKPLACE  
SAFETY TRAINING LTD.**

Authorized  **ENBRIDGE**  
Training Provider

Visit Us On Line  
[www.buildwithsafety.com](http://www.buildwithsafety.com)

**Make Us  
Your #1  
Safety Choice!**



# En-Safe Safety Training and Consulting Services

En-Safe has been providing professional training and consulting services for Industrial, Commercial, Institution, and Construction sectors since 1992. En-Safe is a privately owned company conducting business in YOUR community and has trained over 3,000 companies.

Consider the following:

- ♦ En-Safe certificate courses are designed and approved by a Professional Engineer to meet or exceed legislative and industry standards and best practices. Also, courses strive to meet ANSI® Z490.1-2009 (ANSI Criteria for Accepted Practices in Safety, Health and Environmental Training) or they are in the process of being retooled to meet this standard.
- ♦ En-Safe's specialization is on-site training.
- ♦ Training can be customized to include specific operations or procedures which have been implemented by your organization.
- ♦ To meet legislative requirements, employers may be required to provide additional job specific training.
- ♦ To supplement selected training programs, pre and post consulting is available.
- ♦ Offers a 100% money back guarantee.

## En-Safe

P.O. Box 141

Sharon, On L0G 1V0

Phone: (905) 478-1326

Fax: (905) 478-1329

E-mail: [info@en-safe.com](mailto:info@en-safe.com)

Training and Consulting

[www.en-safe.com](http://www.en-safe.com)



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## Construction Heat ROT Awareness Training



CH-O2 certificate under Ontario Regulation 215/01 made under the Technical Standards and Safety Act, 2000, states that a person who is the holder of a CH-O2 certificate or the holder of a record of training for the purpose may activate a propane, natural gas or \*oil-fired construction heater or torch that has an input of 400,000 Btuh or less, and connect it to or disconnect it from piping, tubing, a refuelling appliance, a container or a natural gas meter. En-Safe is a TSSA accredited training provider. (TSSA TP #000155415)

**\*NOTE:** With respect to the oil designated ROT it is restricted to activating a fuel oil-fired direct or indirect construction heater with an integral fuel tank and/or construction heater with separate fuel tank that has been installed by an oil burner technician (OBT). It does not permit the ROT holder to install piping or service equipment.

### Construction Heat ROTs

- ♦ **CH-O2 Fuel Refresher - 8-9 hours (Propane and Natural Gas only)** \*\* See NOTE for restrictions
- ♦ **CH-O2 - Propane, Natural Gas and Oil**
- ♦ **PCH-O2 - Propane only**
- ♦ **NGCH-O2 - Natural Gas only**
- ♦ **OCH-O2 - Oil only**

### Also Available

- ♦ Propane Construction Torch Application
- ♦ Construction Heat Awareness
- ♦ Propane BBQ Application

**\*\*NOTE: FUEL REFRESHER**—Participants who have previously taken a Construction Heat ROT Course (Propane, Natural Gas or Fuel Combo (Propane and Natural Gas)) can take the 8-9 hour Fuel Refresher course which will extend their applicable ROT for another 3 years.

- ♦ Participants that **have not** completed a ROT previously **will be** qualified to connect and disconnect from a propane cylinder and activate a propane construction heater
- ♦ Participants that **have not** taken a **Natural Gas ROT** previously **will not be** qualified to connect/disconnect from a natural gas meter set or activate the initial lighting of a Natural Gas Heater with En-Safe's Fuel Refresher course. However, the ROT holder **will be** qualified to inspect a Natural Gas Heater while in operation and re-ignite a Natural Gas Heater

**Construction Heat ROTs have a legislated 3 year expiry**

**For Detailed Learning Objectives and/or Typical Program Outlines, please contact En-Safe directly!**

**Training Program Gap Analysis available!**

### Consulting Available

- ♦ Pre & Post Training Element Design
  - ♦ Working at Heights
  - ♦ Confined Space
  - ♦ Lift Truck
  - ♦ Hazardous Materials
  - ♦ Construction Heat
  - ♦ Workplace Violence and Harassment
- ♦ Training Program Gap Analysis
  - ♦ Accident Investigation
    - ♦ Fatalities and Criticals
  - ♦ Audits
  - ♦ Customized Documentation
  - ♦ Hazard Assessments
  - ♦ OHS Program Design
  - ♦ Engineering

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## Record of Training (ROT)



**CALL 905-642-8579**  
**www.fsntraining.com**

### Record of Training (ROT) Courses

- ON-SITE Training or
- Regularly scheduled classes - call us for details
- Professional Instructors across Ontario

#### ROT Courses Offered by FSN

- Natural Gas Construction Heater
- Heater Repair
- Propane

#### Other Courses Offered by FSN

- WHMIS
- Fall Protection
- Aerial Lift
- Forklift
- Transportation of Dangerous Goods



Head Office: 14 Forestview Trail, Newmarket ON L3Y 4W1





## Rental companies: natural gas heating equipment.

Natural gas heaters are efficient, easy to install, and provide significant cost savings compared to propane heaters. There are a variety of rental companies that rent temporary construction heaters to builders. You'll find a selection of reputable companies on the following pages.



## Construction Heaters

# HEATING SOLUTIONS

Fueled by **Stephenson's**  
RENTAL SERVICES

### The Stephenson's Advantage



### We Know Heat



Stephenson's Understands What You Need From Your Winter Heat

- 🔥 Reliable Performance
- 🔥 Operational Safety
- 🔥 Fuel Savings & Site Efficiency
- 🔥 Regulatory & Utility Guidance

Winter heat can be stressful. The wrong heaters may increase your labour, reduce productivity, increase moisture levels and increase your costs.

Let Stephenson's Heating Solutions provide you peace of mind and real benefits



## Expertise

We estimate that we have heated over 100,000 projects in the GTA & have in excess of 2 Billion BTU's worth of heaters in our fleet.



From residential to high rise to commercial we provide Heating Solutions from the smallest job to the largest project.

### 20 Convenient Locations To Serve You Better



<b>CENTRAL</b>			
<b>NORTH YORK</b>	278 Bridgeland Ave.	(416) 781-5244	
<b>LEASIDE</b>	832 Eglinton Ave. E.	(416) 487-1141	
<b>DOWNTOWN</b>	520 Richmond St. W.	(416) 703-0553	
<b>ETOBICOKE</b>	747 Kipling Ave.	(416) 255-8185	
<b>REXDALE</b>	1132 Martin Grove Rd.	(416) 247-7856	
<b>WEST</b>			
<b>MISSISSAUGA</b>	700 Burnhamthorpe Rd. W.	(905) 270-8393	
<b>MILTON</b>	901 Steeles Ave. E.	(905) 876-2825	
<b>BRAMPTON</b>	45 Wilkinson Rd.	(905) 452-0543	
<b>HAMILTON</b>	275 Nebo Rd.	(905) 385-3226	
<b>LONDON</b>	441 Industrial Rd.	(519) 659-3791	
<b>OAKVILLE</b>	1329 Speers Rd.	(905) 842-6780	
<b>NIAGARA FALLS</b>	4711 Kent Ave.	(905) 356-9992	
<b>WATERLOO</b>	263 Northfield Dr. E.	(519) 576-5935	
<b>CAMBRIDGE</b>	1144 Industrial Rd.	(519) 653-1774	
<b>EAST</b>			
<b>SCARBOROUGH</b>	1191 Kennedy Rd.	(416) 267-4646	
<b>PICKERING</b>	1887 Kingston Rd.	(905) 683-1962	
<b>WHITBY</b>	4071 Thickson Rd. N.	(905) 655-9051	
<b>NORTH</b>			
<b>MARKHAM</b>	25 Heritage Rd.	(905) 471-5444	
<b>CONCORD</b>	1350 Creditstone Rd.	(905) 761-6680	
<b>BARRIE</b>	35 Churchill Dr.	(705) 733-0572	
<b>CORPORATE</b>			
	201 City Centre Dr. Mississauga, Suite 502	(905) 507-3650	

**Toll Free 1-866-946-4646**

**www.stephensons.ca**



## ***LOCATIONS THROUGHOUT ONTARIO TO SERVE YOU.***

**AURORA, 79A Ram Forest Road, L0H 1G0**  
Ph: (905) 726-1111 • Fx: (905) 751-0496

**BRACEBRIDGE, 560 Ecclestone Dr, P1L 1T5**  
Ph: (705) 645-1111 • Fx: (705) 645-6014

**BARRIE, 535 Welham Rd., L4N 8Z6**  
Ph: (705) 739-6999 • Toll Free: (888) 553-0552 • Fx: (705) 739-1004

**BRANTFORD, 411 Henry St., N3S 7V6**  
Ph: (519) 752-7074 • Toll Free: (800) 639-1877 • Fx: (519) 752-2607

**COLLINGWOOD, 199 Mountain Road, L9Y 3Z9**  
Ph: (705) 444-8377 • Fx: (705) 444-8310

**GUELPH, 614 York Rd., N1E 6A3**  
Ph: (519) 824-0005 • Fax: (519) 824-0705

**HALIBURTON, 37 Mallard Rd., P.O. Box 1070, K0M 1S0**  
Ph: (705) 457-9833 • Fx: (705) 457-9829

**HUNTSVILLE, 40 Cairns Cres., P1H 1T4**  
Ph: (705) 788-7718 • Fx: (705) 788-0603

**KINGSTON, 780 Development Dr., K7M 4W8**  
Ph: (613) 634-6889 • Fx: (613) 634-3449

**KITCHENER, 75 Centennial Rd., N2B 3E9**  
Ph: (519) 576-6640 • Toll Free: (888) 277-0432 • Fx: (519) 576-6641

**ORILLIA, 1 Forestview Dr., RR#1, L3V 6H1**  
Ph: (705) 327-8282 • Toll Free: (866) 996-0199 • Fx: (705) 327-2966

**OTTAWA, 2489 Sheffield Rd., K1B 3V6**  
Ph: (613) 744-8889 • Toll Free: (888) 694-0996 • Fx: (613) 746-6333

**OWEN SOUND, 1635 2nd Ave. E., N4K 2J6**  
Ph: (519) 376-8555 • Fx: (519) 376-8493

**PEMBROKE, 1388 Pembroke St. W., K8A 7M3**  
Ph: (613) 732-8544 • Fx: (613) 732-2739

**PORT ELGIN, 137 Goderich St., N0H 2C1**  
Ph: (519) 832-3333 • Fx: (519) 832-9458

**TORONTO (Brampton), 221 Advance Blvd. L6T 4J2**  
Ph: (905) 456-8540 • Fx: (905) 456-2510

**WALKERTON, 130 Kincardine Rd., N0G 2V0**  
Ph: (519) 881-3333 • Fx: (519) 881-2345

**WOODSTOCK, 836 Parkinson Rd. N4S 8L2**  
Ph: (519) 421-7219 • Toll Free: (888) 527-7219 • Fx: (519) 421-9761



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## Rental companies: HVAC and water heating equipment

Natural gas HVAC and water heaters are great additions to any new home build. There are a range of companies that rent natural gas HVAC and water heating equipment to builders. You'll find a selection on the following pages.





# HVAC and Water Heating Equipment

## HVAC RESOURCE SHEET

Rental/Lease providers of HVAC and Water Heating Equipment for Residential New Housing Construction Builder Market, covering entire Enbridge Gas Distribution franchise area.\*

### Direct Energy

80 Allstate Parkway,  
Markham, ON L3R 6H3  
[www.directenergy.com/builder](http://www.directenergy.com/builder)  
Builder Delivery Group  
1-800-819-2273

### Home Corp Services Inc.

80 Bass Pro Mills Drive, Unit 5  
Vaughan, ON L4K 5W9  
[www.homecorpservices.com](http://www.homecorpservices.com)  
905-660-8886  
1-877-331-8886

### Allianze Power Corp

4299 Queen Street East  
Brampton, ON L6T 5V4  
[www.allianzepower.com/home-builders](http://www.allianzepower.com/home-builders)  
1-800-844-9936

### Reliance Home Comfort

2 Lansing Square, 12th Floor  
Toronto, ON M2J 4P8  
[www.reliancehomecomfort.com](http://www.reliancehomecomfort.com)  
Builder Desk  
1-888-499-7255

### National Home Services

25 Sheppard Avenue West  
Suite 1700  
Toronto, ON M2N 6S6  
[www.nationalhomeservices.ca](http://www.nationalhomeservices.ca)  
1-877-673-5373

### morEnergy Services Inc.

119 Westcreek Drive, Suite 3  
Woodbridge, ON L4L 9N6  
[www.morenergy.ca](http://www.morenergy.ca)  
905-306-8180



\* In the course of preparing this reference guide Enbridge Gas Distribution Inc. has reprinted certain information regarding products or services offered by third party firms. Enbridge Gas Distribution Inc. has obtained this information directly from such firms, on August 2010, and has not undertaken any independent investigation with respect to such information. Enbridge Gas Distribution Inc. makes no representations or warranties as to the accuracy of information supplied to it by any third party or as to the quality or merchantability of any products or services made or provided by such third party and expressly disclaims responsibility for any such information contained in this resource sheet or for any third party products or services offered by such third parties. The listing is not intended to be exhaustive and additional rental providers may currently exist of which Enbridge Gas Distribution Inc. is not aware at time of printing. If you require additional information about the products and services offered by any firm described in this reference guide, please contact such firm directly.

**Q: If I want to use natural gas for construction heat, how far in advance do I need to contact Enbridge?**

A: Contact an Enbridge Gas Distribution Customer Connections Representative 6 to 8 weeks prior to the date you want your gas service and meter installed. In Eastern regions, builders order their services by notifying the Work Management Centre. A general guideline is to make the call when you start digging your foundation.

**Q: What happens if the gas main has not yet been installed on the street where I'm building?**

A: If the gas main hasn't been installed, you will need to contact an Enbridge Gas Distribution Customer Connections Representative. In Eastern regions, builders order their services by notifying the Work Management Centre. Please allow 6 to 8 weeks for a new main if the project is already out to construction with our crews.

**Q: What do I need to know about preparing my site for natural gas construction heaters?**

A: Refer to the Residential Site Preparation Checklist on page S1-4 of this guide.

**Q: Does Enbridge supply the construction heating equipment?**

A: Enbridge supplies the natural gas, not the equipment. There are a variety of rental companies that can provide heaters as well as HVAC equipment. You can find a listing of rental companies on pages S3-17 to S3-22 in this guide.

**Q: Can anyone on my crew install a natural gas construction heater?**

A: Technical Standards & Safety Authority (TSSA) and Ontario Regulations require that anyone installing, activating or operating a natural gas-fired construction heater must complete a "Record of Training" (ROT) certification or possesses a G2 license or greater.

**Q: How can I find out more about ROT training?**

A: Various natural gas equipment rental companies provide ROT training. For a list of companies offering training, please refer to pages S3-11 to S3-16.

**Q: Once the meter is activated, is there anything I need to do?**

A: Once the meter is activated, you must complete a Construction Heat Form and fax it to Enbridge at: 1-800-494-6411.

**Q: Are there any special requirements for small commercial applications?**

A: The site must be reasonably enclosed, and you should double check the location of any building opening when marking meter location. For more, refer to the Commercial Site Preparation Checklist on page S3-5 of this guide.

**Q: Are there any special requirements regarding multi-unit dwellings?**

A: For multi-unit dwellings such as townhouses, a meter box can be used to integrate gas services into the architectural detail of the building. Contact your local rental company for details.

**Q: What do I need to know about using an installed furnace for construction heat?**

A: The installer is permitted to install the equipment, unlock the gas meter and activate the furnace. But a licensed G2 fitter (or higher) must connect the house piping to the outlet of the meter and set up and activate the central furnace.

**Q: What do I need to know about preparing my site for furnace construction heat?**

A: You'll find the list of requirements on page S1-4 of this guide.



## Joint Utility Construction in Residential Subdivisions

Joint Utility Construction can save you time and money. In this section you'll find out more about this utility installation solution and get help determining if it's right for your next project.

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SECTION 1

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SECTION 4

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SECTION 6

SECTION 7

APPENDIX





## The more efficient way to install utilities.



Traditionally during construction, gas lines are laid in one trench and utility wires are laid in an adjacent trench. This results in extra time and effort to schedule and coordinate more than one contractor. As well, because the additional contractor has to work beside a previously excavated trench, utility stakeouts are required.

With Joint Utility Construction, all utilities are installed in a common trench. One approved contractor comes to the site, excavates a trench and places the gas lines, and hydro, cable and telephone wires in the same trench – each with utility approved separation. In Eastern regions, the developer's contractor prepares the trench for an Enbridge Gas Distribution or approved sub-contractor installs the gas mains.

Everything is completed in one phase, which not only reduces the time required for utility installation, it reduces site disturbance because there are no longer multiple trenches. Other trades can get on site earlier and designated streets can be available for basement excavation within days of commencing main line construction.

Note: Services can be installed early in the construction process to accommodate builders who wish to use temporary natural gas construction heaters.





## How to determine if your site can use Joint Utility Construction.

Enbridge Gas Distribution, the electrical consultant or hydro authority, and the developer's civil engineer will work cooperatively at the new subdivision development stage to ensure that the joint utility design is included on construction drawings for subdivision mains and laterals.

The developer of the lots informs the builder if lots are pre-serviced for joint trenching; if in doubt, you should discuss the project's status with the developer.

In areas where the construction site is already engineered as a traditional two-trench system, all utilities will continue to be installed in this fashion.

Planning ahead:

1. Call Enbridge Gas Distribution to register your subdivision service request. We require the number of services, lot numbers, civic numbers, street names, etc. Discuss with your area EGD Customer Connections Representative that all services will be installed in a common trench.

**Please note: Builder street plan must be registered with the Municipality prior to contacting Enbridge Gas Distribution for Joint Utility Construction.**

2. Call the builder's electrical contractor to arrange for the installation of services.
3. Make sure your site is properly prepared for servicing. See page S1-4 for the Site Preparation Checklist.
4. Call Enbridge Gas Distribution to request final inspections before homeowner occupancy. See page S6-6 for more on inspections.

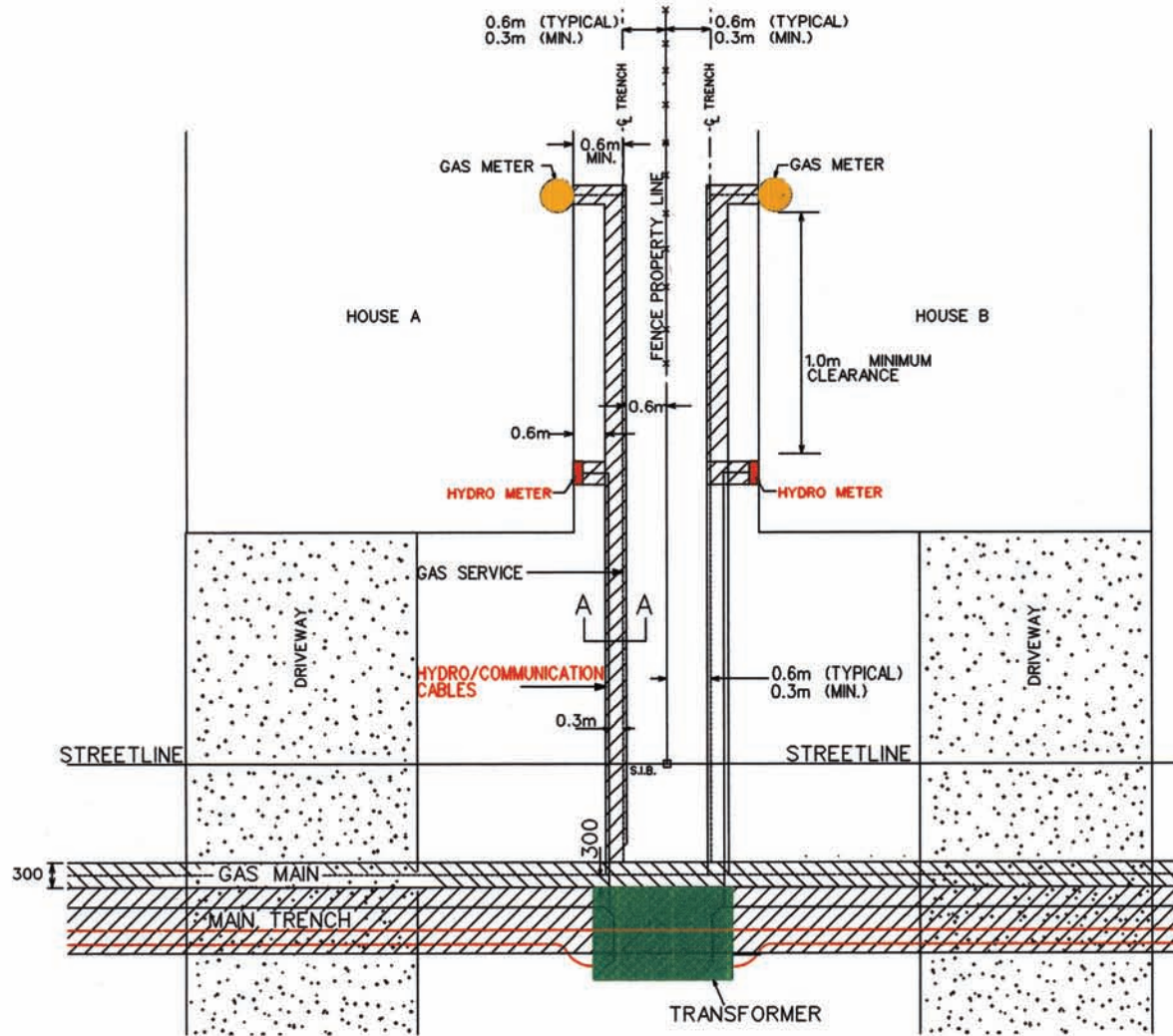


## How Joint Utility Construction works.

The builder hires a Joint Utility Construction contractor – who must be approved by both gas and hydro utilities. The approved contractor schedules and coordinates all site trench work, as well as gas meter installation.

Using one contractor helps to improve the quality of installed services through consistent depth, utility separation and the elimination of any potential risk of damage to existing utilities.

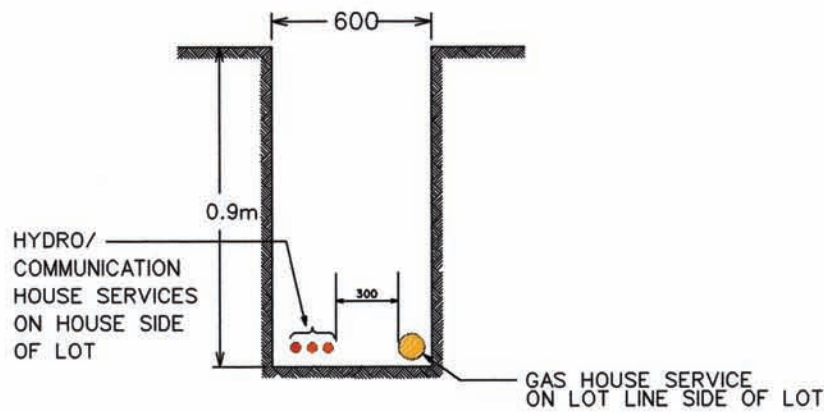
An Enbridge Gas Distribution representative meets with the builder and contractor to plan gas line locations and ensure that meter locations are marked and meet all clearance requirements. All gas line installations are inspected by Enbridge Gas Distribution to ensure that the trench and utility separation specifications are maintained. See Diagram 1 on the next page.

**NOTE:**

GAS METER PIPING MUST MAINTAIN 0.3m (MIN) SEPARATION FROM HYDRO METER AND CONDUIT

**PLAN VIEW OF SERVICE LATERAL FROM MAIN TRENCH TO METER BASE**

N.T.S.



**SECTION "A"- "A"**  
(SERVICE TRENCH)

Diagram 1



## Trenches and meters for Joint Utility Construction.

A typical joint utility trench is 0.9m deep and 0.6m wide at the time of the installation with a 0.3m horizontal separation from hydro.

During the gas main installations, all service laterals are stubbed into the property line, beside the hydro tails and telephone and cable drops. This allows for easy installation of the service laterals, eliminating any disturbance of the main trench when the home is ready for utility servicing. In Eastern regions, not all services are stubbed into the property line in joint utility projects.

Services are laid to a common wall on the house, with the gas service always placed on the property line side of the trench.

With services installed to a common wall on the house, the location of meters for gas and hydro are specified:

- Hydro meter is placed close to the front of the house (per local hydro standards).
- Gas meter is installed 1 m back from the hydro meter where clearances permit (per gas standards).  
Note: the Enbridge Gas Distribution construction group will work with the builder and electrical contractor to determine the best location for the gas meter.
- House side as the common wall for trench and meter location is preferred over the garage side to provide easier access to the basement. If site conditions mandate the use of the garage wall for meters, Enbridge Gas Distribution can assist in the development of alternative downstream piping methods.
- Townhouse meter locations should be determined in advance of building construction in conjunction with a local hydro representative. This is important as compliance with city building standards may require visually aesthetic locations.
- Meter boxes can be a solution to front and side meter locations to minimize the visual impact. Please contact your Channel Consultant for more information. See page S2-3 for contact information.



For additional information on Joint Utility Construction, where it is available, and pilot program opportunities, please call 1-888-427-8888 and they will direct your call to the appropriate EGD Customer Connection Representative responsible for your area.



### IMPORTANT:

Builders must register their street plan with the municipality prior to contacting Enbridge Gas Distribution regarding joint utility construction.





Q: What is Joint Utility Construction?

A: It's the process by which all utilities are installed in a common trench, instead of the more traditional method of laying gas lines in one trench and utility wires in an adjacent trench.

Q: What are the advantages of using Joint Utility Construction?

A: Everything is completed in one phase – saving time and reducing site disturbance. Other trades can get on site earlier and designated streets can be available for basement excavation earlier.

Q: Who is responsible for digging the trench and laying the lines?

A: The builder hires a Joint Utility Construction contractor – who must be approved by both gas and hydro utilities. The approved contractor schedules and coordinates all site trench work and gas and utility installation.

Q: How do I know if my site is eligible for Joint Utility Construction?

A: Joint Utility Construction is more commonly used in the development of new subdivisions. For additional information including, where it is available, and pilot program opportunities, please contact the Construction Manager at 1-888-427-8888 or the EGD Customer Connection Representative responsible for the area where you are building.



Did you know?

Many municipalities now request that Joint Utility Construction be the method of utility installation for new subdivisions.





## Guidelines for Working with Natural Gas

In this section you'll find what you need to do, and what you need to avoid, to ensure a safe construction site while working with natural gas construction heat.

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## Builder's Technical Bulletin

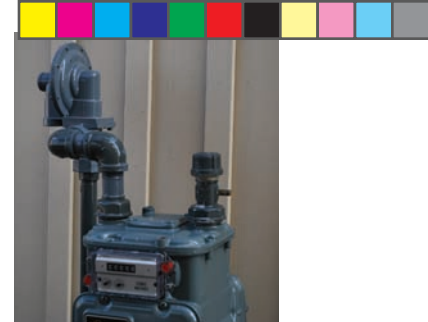
Enbridge Gas Distribution Meter Box Installation Guideline



[www.buildwithgas.com](http://www.buildwithgas.com)



# Enbridge Gas Distribution Meter Box Installation Guidelines



## Compliance to Meter Box Guidelines

It is the responsibility of the Builder to ensure the meter box guidelines and specifications are incorporated into the architectural design. The following document provides a reminder of the Company's policy on meter box installations and encourages you to review the Company's Meter Box – Builders' Installation Guidelines. The Builders must be working with Enbridge Customer Connections Representative during the architectural design stage prior to installations.

The meter box and its installation are designed to integrate the gas regulator, meter, and shut-off valve into the architectural design (refer to figure above). The design contains two components: the meter box and the 2" grey PVC conduit.



### IMPORTANT:

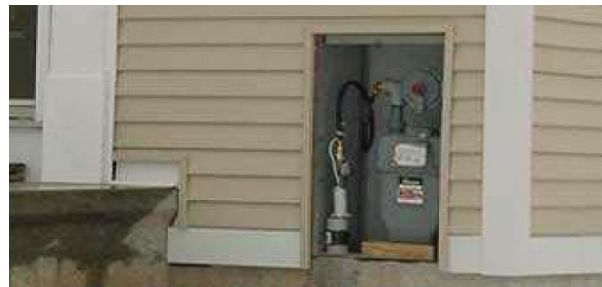
Failure to comply with the Meter Box Installation Guidelines may result in delays or rejected installation of the gas service. The potential of reinstatement cost(s) are the responsibility of the builder e.g. damaged gas meter, meter box or replacement of the entire gas service to correct poor installations.

Please review the attached meter box guidelines and ensure all involved onsite are familiar and understand these guidelines. You can also access the Meter Box Guidelines online on our website at: [www.enbridgegas.com/constructionheaters](http://www.enbridgegas.com/constructionheaters). Click on Brochures & Technical Bulletins, and then select Meter Box Guidelines for Builders.

**For any technical questions related to this Bulletin, please call the Technical Help Desk at 1-800-924-5534 or email [Technical-Desk-VPC@enbridge.com](mailto:Technical-Desk-VPC@enbridge.com).**

**For any other builder related questions, please call your local channel consultant.**

**Thank you for your cooperation.**



## How to protect gas meters:

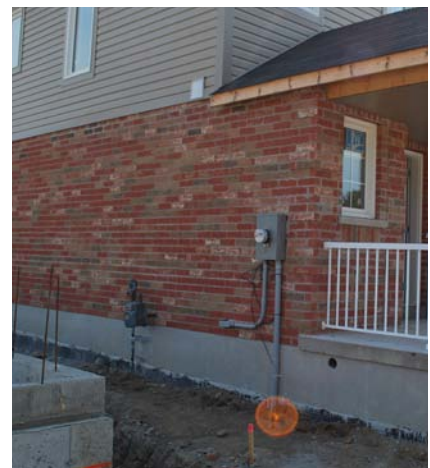
- PVC conduit must be NPS 2 grey PVC conduit, purchased separately from meter box (note: ABS and corrugated PVC conduit is not accepted).
- PVC conduit must be completely encased in concrete, with a minimum of 2" of concrete encasement around the circumference of the conduit.
- PVC conduit must extend a minimum of 2" into the meter box through the precut hole provided in the bottom of the box.
- Meter box must be framed and secured in place during installation. The meter box is not a structural element; masonry or other building materials must be supported by a lintel to eliminate pressure points on the meter box.
- Meter box location must allow for 0.9 m clearance of building openings and 1.0 m clearance from sources of ignition.
- Cutting or modifications to the meter box is not permitted.
- The builder is responsible to ensure a gas tight seal of the meter box prior to the final inspection by Enbridge. This includes sealing the PVC conduit entrance into the bottom of the box, the meter box edges and corners, and the supply line exit at the top of the box.
- Multiple, stacked or meter boxes adjoining the interior living space must receive approval from Enbridge Gas Distribution during the architectural design stage prior to installation.





## Builder's Technical Bulletin

Enbridge Gas Distribution Meter Location Reminder



[www.buildwithgas.com](http://www.buildwithgas.com)





# Enbridge Gas Distribution Meter Location Reminder



## Compliance to New Meter Installations

Please keep in mind the Company's guidelines when incorporating meter sets into the architectural design. The following document provides a reminder of the Company's policy on new meter installations and examples of meter locations that would follow the Company's guidelines.

- A gas meter and a service regulator must be located in an area that is free of obstructions and must at all times be accessible for inspection, meter reading, testing, maintenance and exchange.
- Regulators must meet minimum vent clearances under the B149 Code (e.g. building openings, combustion air openings, appliance vent outlets, etc.).
- New meter installations must be in locations that give protection from external damage (e.g. vehicular damage, etc.).
- New meter installations are not permitted under combustible egress structures (e.g. stairways, landings, etc).
- When a meter box is required, the builder is responsible for its installation. It must be installed in accordance with the Company Meter Box – Builders' Installation Guidelines – September 2011. Applications outside the scope of these guidelines will require approval from Enbridge Gas Distribution's Engineering Department and further review of the Builder's architectural design.

The following figures are examples of meter locations that would comply with the Company's guidelines for new meter installations.

**For any technical questions related to this Bulletin, please call the Technical Help Desk at 1-800-924-5534 or email [Technical-Desk-VPC@enbridge.com](mailto:Technical-Desk-VPC@enbridge.com). For any other Builder related questions, please call your local channel consultant. Thank you for your cooperation.**



Figure 1: Meter Set in an Alcove Enclosure.



Figure 2: Meter Sets Behind Customer's Greenery.



Figure 3: Meter Box Installation



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# ENBRIDGE GAS DISTRIBUTION METER BOX

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Builders' Installation Guidelines  
September 2011





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# Meter Box

## Builder's Guideline for Installations

### Introduction

These guidelines are provided to communicate to Builders, the design criteria and installation requirements for the use of Meter Boxes in multi-dwelling units.



**Above:** Two different examples of Meter Box service installations in the Ottawa area.

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## Scope

It is the responsibility of the Builder to ensure these guidelines and specifications are incorporated into the architectural design.

If a Meter Box installation is to be used, the Builder must consult with an Enbridge Gas Distribution New Housing Market Consultant for details on requirements when submitting a preliminary request for site servicing and layout.

Specifically, the following Enbridge Gas Distribution representatives may be contacted for more information:

Region	Contract (New Housing Market Consultant)
Barrie	Dorothy Stewart (705) 739-5227
Durham	Neil Saunders (905) 436-7017
Ottawa and Eastern Region	Leah Stiles (613) 748-6703 Natalie Armstrong (613) 747-4078
Toronto (Metro)	Margaret Ward (416) 753-6234
Niagara	Rick Porter (905) 984-4994
Kawartha	Don Armitage (705) 749-5200 x 5236
Peel	Michael McDonnell 1-866-820-6215 x 2137
York	Michelle Vestergaard (905) 887-4005 x 250

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These guidelines provide criteria for standard meter box installations. Applications outside the scope of these guidelines will require approval from Enbridge Gas Distribution's Engineering Department and further review of the Builder's architectural design. For example, the following installations will require additional approval:

- Stacked Meter Boxes
- Installations that do not provide protection of the conduit as specified in these guidelines
- Installations where the Meter Box may be adjoining to the interior living space of the dwelling
- All other locations outside the specifications provided in these guidelines (e.g. elevated Meter Box on Terrace Homes)

Failure to notify Enbridge Gas Distribution prior to the installation of Meter Boxes will result in delays or rejected requests for gas servicing for the project.

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## Meter Box Application

The Meter Box is designed to integrate the gas regulator, meter, and shut-off valve into the architectural detail of multi-dwelling units. The design contains two components: the Meter Box and the NPS 2 Grey PVC conduit.

The PVC conduit is installed in the foundation at the time of forming. The Meter Box is then framed in on top of the foundation wall and secured in place. This allows for the gas service and meter to be installed at a later time by Enbridge Gas Distribution.

Upon final installation, a gas-tight seal of the interior of the box must be ensured so any potential migration of gas may be vented through the screen opening at the front of the box.

The Builder is responsible for supplying the Meter Box and the PVC conduit as part of this installation.

Meter Box Suppliers	Ottawa Area	GTA and Elsewhere
	<b>Convex</b> Tel: (613) 723-3141 Fax: (613) 723-0190	<b>Tecvalco</b> Tel: (905) 353 0101 Fax: (905) 353 8778



**Above:** Meter Box Installation Example. The Meter Box is designed to integrate the gas regulator, meter, and shut-off valve into the architectural detail of the building.

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## Installation Procedures

Prior to the gas service installation, the Builder has the responsibility of ensuring the Meter Box and PVC conduit have been installed according to these specifications.

### Installation of NPS 2 Grey PVC Conduit

The PVC conduit must conform to the following guidelines to ensure clear access to the gas meter, regulator, and shut-off valve.

Incorrect installations of the conduit, which compromise the integrity of Enbridge Gas Distribution's gas meter set, will be repaired by the Builder.

- 1)** The piping used as the conduit for these installations is standard NPS 2 grey PVC pipe; compatible fittings must also be used.
- 2)** The PVC conduit must be completely encased in concrete, with a minimum of 50 mm (2 in) of concrete encasement around the circumference of the piping.
- 3)** All joints must be glued and taped before installation in the concrete to ensure continuity of the PVC conduit.
- 4)** The PVC conduit must extend 50 mm (2 in) into the box through the precut hole provided in the bottom of the box. The top of the PVC conduit must be cut evenly; a damaged or fractured conduit will not be accepted.
- 5)** The PVC conduit must be installed as illustrated in the drawings provided in the Appendix. Additional horizontal or vertical offsets of the conduit are not acceptable.
- 6)** The Builder must ensure the integrity of the PVC conduit during the construction process and seal both ends to prevent contamination prior to the installation of the gas service.
- 7)** The PVC conduit should exit the foundation at a minimum depth of 600 mm (24 in) below grade.
- 8)** The PVC conduit should not exit the foundation under a driveway.

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### Deviations from Standard Installations – PVC Conduit

If the Meter Box can not be located on the foundation, for example as result of a poured concrete porch or steps, the conduit may extend a maximum of 300 mm (12 in) above top of the foundation without additional concrete encasement.

For installations with more than 300 mm (12 in) elevation above the foundation, approval from Enbridge Gas Distribution is required. These installations may require the PVC conduit to be completely encased in concrete from the top of the foundation to the bottom of the Meter Box.

### Common Installation Pitfalls – PVC Conduit



**Above:** Two examples of common pitfalls and unacceptable installations of the PVC conduit.

**Left:** The PVC conduit extends more than 300 mm (12 in) above the base of the foundation. This type of installation requires additional consideration and approval by Enbridge Gas Distribution prior to the start of construction (i.e. when submitting a preliminary request for site servicing).

**Right:** This installation is unacceptable because the PVC conduit is not completely encased with a 50 mm (2 in) encirclement of concrete. Remedial action would be required prior to service installation.

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## Installation of Meter Box

Proper installation of the PVC conduit in the foundation allows the Meter Box to be installed according to these guidelines and ensures an acceptable meter configuration for Enbridge Gas Distribution. Installations that do not conform to these guidelines must be corrected prior to the service installation.

The Meter Box is designed with precut holes, which align the PVC conduit with the gas regulator, meter, and supply line connection. Modifications to the precut openings in the box are not permitted. Exceptions are to be reviewed and approved by Enbridge Gas Distribution prior to the installation of the gas service.

- 1)** The Meter Box must be secured prior to the service installation to prevent movement of the box or PVC conduit. The Meter Box does not adequately support masonry. The Builder shall use lintel angles above the box in order to support masonry.
- 2)** The location of the Meter Box must allow for 0.9 m (3 ft) clearance of building openings and 1.0 m (40 in) clearance from sources of ignition (measurements to be taken from edge of the screen on the front of the box to the building opening).
- 3)** The Meter Box shall be installed such that the bottom of the box is on the foundation. If the Meter Box can not be located on the foundation, for example as result of a poured concrete porch or steps, the Meter Box may be elevated a maximum of 300 mm (12 in) above the foundation. For installations with more than 300 mm (12 in) separation, approval from Enbridge Gas Distribution is required (please also see "Deviations from Standard Installations - PVC Conduit" on page 8).
- 4)** The Meter Box door must be accessible at all times and must be able to open freely. Clearance of 600 mm (24 in) in front of the door must be maintained to allow for access to Meter Box. Modifications to the door of the Meter Box are not permitted; the door shall not be fixed in place by any means.
- 5)** The meter must be left in such a condition that the front portion of the box can be installed as designed.

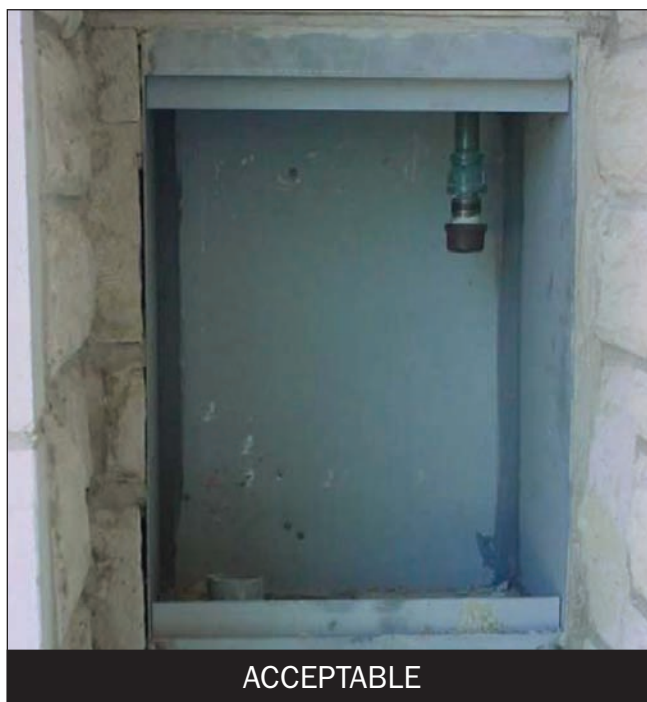
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## Deviations from Standard Installations – Meter Box

Stacked or clustered Meter Boxes are not be used without the approval of Enbridge Gas Distribution. These installations are to be considered as “non-standard” and will be evaluated on a case-by-case basis.

### Installation Examples – Meter Box



**Above:** An example of an acceptable and unacceptable Meter Box installation.

**Left:** An acceptable installation incorporates the following: a secured box (siting on foundation or otherwise secured), use of lintel angles, sufficient clearance from openings, and a door which opens freely (i.e. not fixed or tampered). In this instance, the supply line has been installed and capped. Enbridge Gas Distribution will be responsible for the tie-in.

**Right:** An example of an unacceptable installation. The door has been partially bricked over and access to the meter set is compromised. Remedial action would be required prior to service activation.

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## Installation of Meter Set

Enbridge Gas Distribution is responsible for the installation of the following components of the Meter Box service:

- Installation of gas service, riser and shut-off valve, gas regulator, and gas meter
- Tie-in of supply line to meter if supply line is in the Meter Box at the time of service installation
- If the Builder has not installed the supply line at the time of service installation, Enbridge Gas Distribution will cap the service at the meter. The Builder will then be responsible for the tie-in of the supply line to the meter.
- For supply line piping, it is permissible to transition to corrugated stainless steel tubing (CSST) or copper within the box if the following criteria have been satisfied:
  - i. The connection is made with the use of fitting such as a coupling
  - ii. A pipe hanger must not be installed on the outlet meter tail piece
  - iii. The meter must be supported by a wooden block
  - iv. The meter must not be left in contact with any portion of the box.
  - v. The meter box cover must be left installed on the box in the manner that it was designed for
  - vi. All holes in the box must be sealed in order to eliminate the possibility of gas migrating into a structure in the event of a gas leak or regulator relief relieving. It is the responsibility of the builder to ensure that the meter box is sealed using caulking at all seams and at all points where piping enters and exits the box.
  - vii. If downstream piping must exit on the same side as the utility riser, it must not exit closer than 150 mm (6 in) from the riser and it shall not block access to the wing lock.
  - viii. Under no circumstances it is permissible to route downstream piping under the meter
  - ix. Under no circumstances shall the utility meter be left resting on downstream piping.

Meter box installations that do not meet the requirements of these guidelines must not be turned on

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The Builder is responsible for the following:

- Installation of supply line piping 150 mm (6 in) straight into the box through the precut hole in the top of meter box. The piping is to be capped for future tie-in by Enbridge Gas Distribution.
- If Enbridge Gas Distribution has installed the gas service prior to the Builder installing the supply line piping, the Builder shall be responsible for bringing the supply line into the Meter Box and the tie-in of the supply line to the meter.

For supply line tie-in requirements, please refer to the “Enbridge Gas Distribution Home Builder Guidelines for Meter Tie-In” technical bulletin.

All connections to temporary construction heaters by the Builder must be made outside of the Meter Box. The impact of temporary construction heaters to meter box installations is currently under review. Guidelines will be provided in an additional bulletin.

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## Sealing of Meter Box Installation

It is the responsibility of the Builder to ensure that the Meter Box is gas tight and that any potential migration of gas will vent through the screen opening in the door of the Meter Box. This includes sealing the PVC conduit entrance into the bottom of the box, the Meter Box edges and corners, and the supply line exit at the top of the box.

Materials used to seal the Meter Box must ensure the long-term integrity of a gas-tight installation. The preferred sealant for the conduit entrance and supply line exit is a sealing slug. The preferred sealant for the box edges and corners is silicone exterior-grade caulking. Duct sealer caulking and spray foam insulation are also suitable sealants provided a gas-tight seal is ensured.

## Fitter Turn-On and Inspection

During the final inspection (EBI), it is necessary to comply with these standards for Meter Box installations. Failure to meet these standards may result in delays in activating gas services.

Failed inspections of Meter Box installations will not be activated until corrective action has been taken. Damages to the meter set as a result of supply line tie-ins will be repaired at the Builder's cost. For example, any damages caused by connections to the meter outlet for winter construction heat will be repaired at the Builder's expense.

## Final Grade Requirements

At time of service installation, final grade shall be within 150 mm (6 in) of construction grade. Please note that damages can occur after the installation of the gas service as a result of insufficient grade cover, use of heavy equipment above services, or the use of poor backfill material after the installation of the gas service. Any damages will be repaired by Enbridge Gas Distribution but will be charged back to the Builder.

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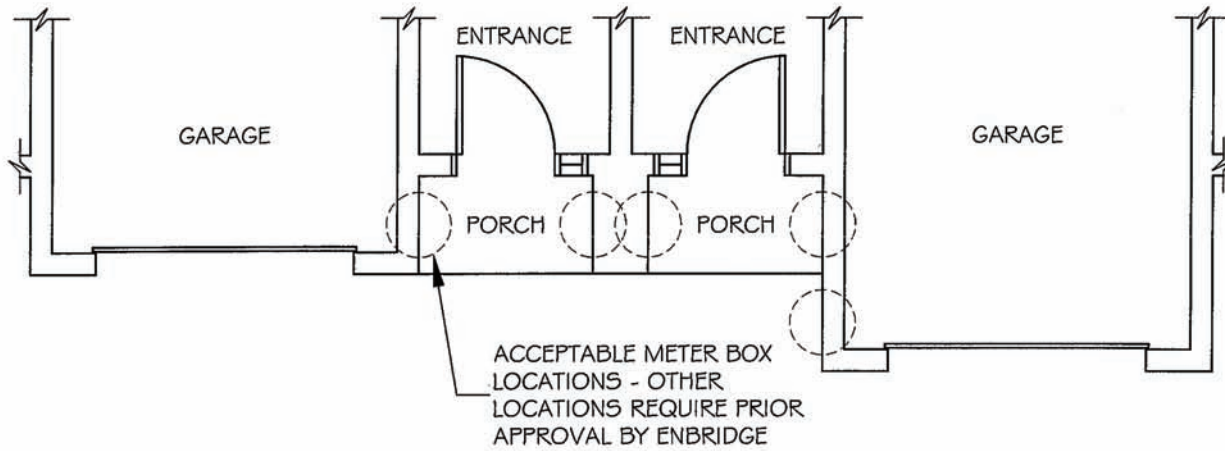


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# Appendix – Meter Box Drawings and Specifications







**NOTE:**

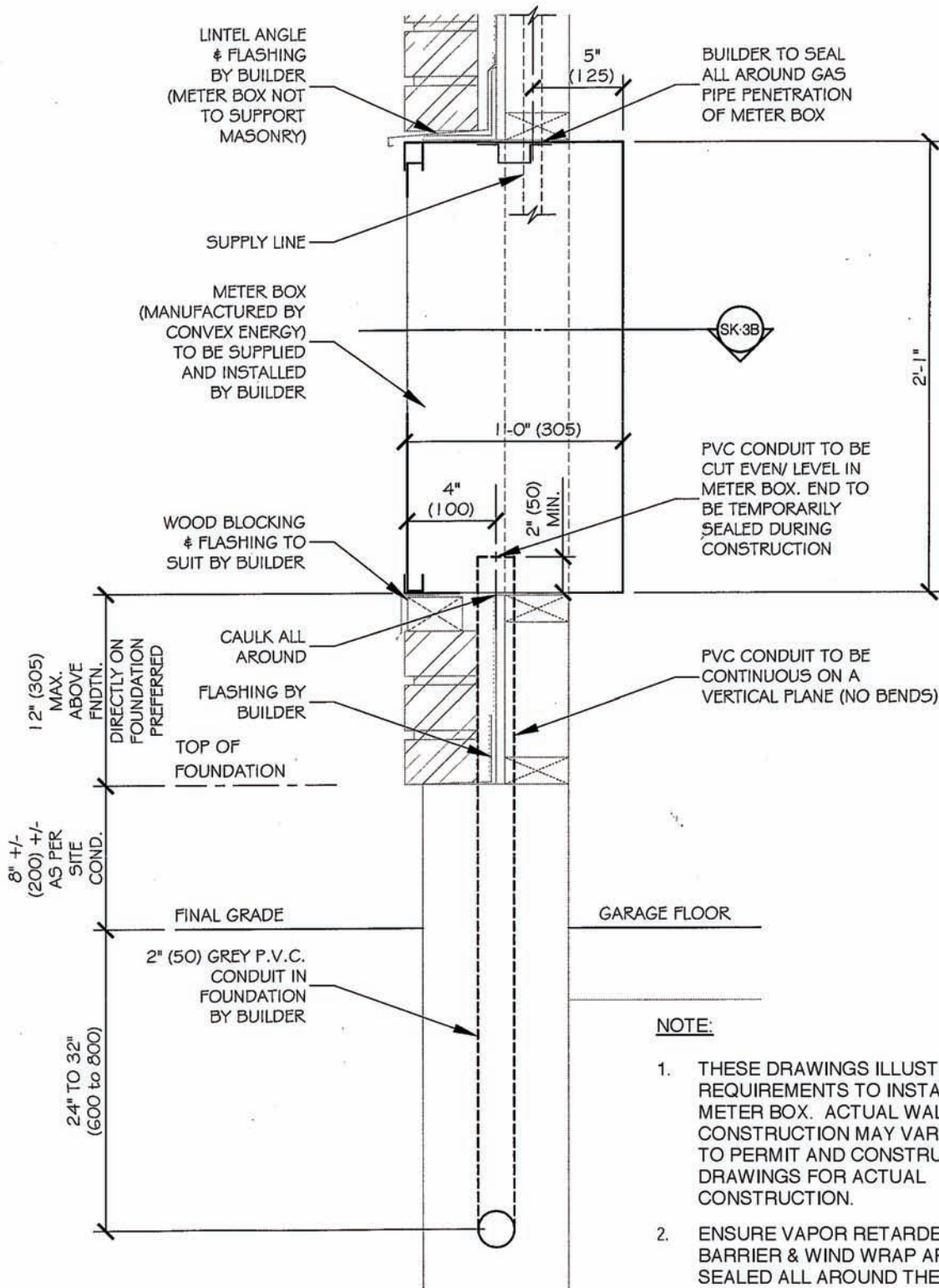
1. THESE DRAWINGS ILLUSTRATE REQUIREMENTS TO INSTALL A METER BOX. ACTUAL WALL CONSTRUCTION MAY VARY. REFER TO PERMIT AND CONSTRUCTION DRAWINGS FOR ACTUAL CONSTRUCTION.
2. ENSURE VAPOR RETARDER, AIR BARRIER & WIND WRAP ARE SEALED ALL AROUND THE METER BOX TO PROVIDE CONTINUOUS BARRIERS.

<b>DRAWING:</b> TYPICAL METER BOX INSTALLATION LOCATIONS	<b>DATED:</b> SEPTEMBER 2011	<b>PAGE:</b> 16 OF 20
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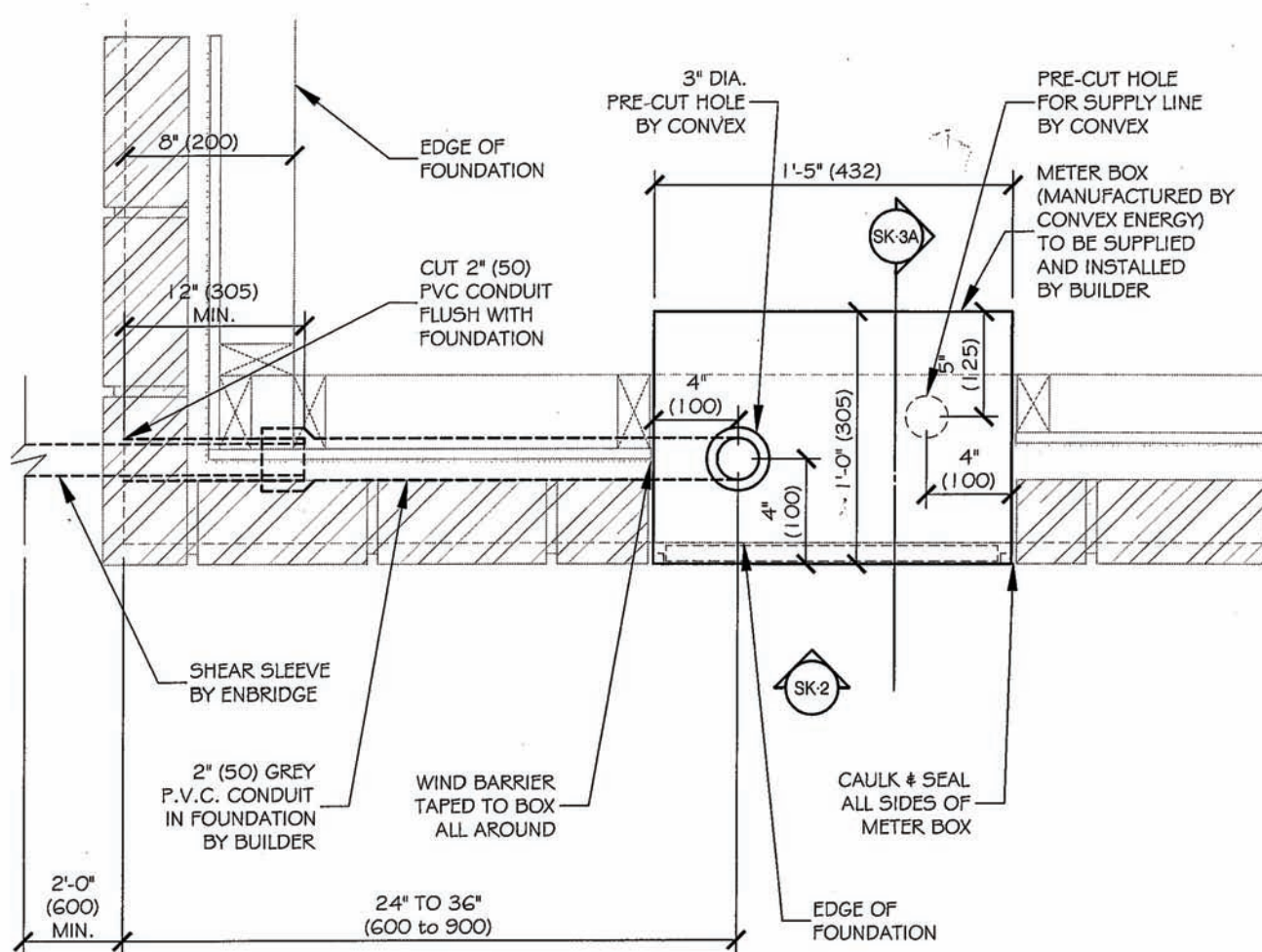
1. THESE DRAWINGS ILLUSTRATE REQUIREMENTS TO INSTALL A METER BOX. ACTUAL WALL CONSTRUCTION MAY VARY. REFER TO PERMIT AND CONSTRUCTION DRAWINGS FOR ACTUAL CONSTRUCTION.
2. ENSURE VAPOR RETARDER, AIR BARRIER & WIND WRAP ARE SEALED ALL AROUND THE METER BOX TO PROVIDE CONTINUOUS BARRIERS.

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DRAWING: SECTION THROUGH GARAGE WALL WITH BRICK FINISH	DATED: SEPTEMBER 2011	PAGE: 18 OF 20
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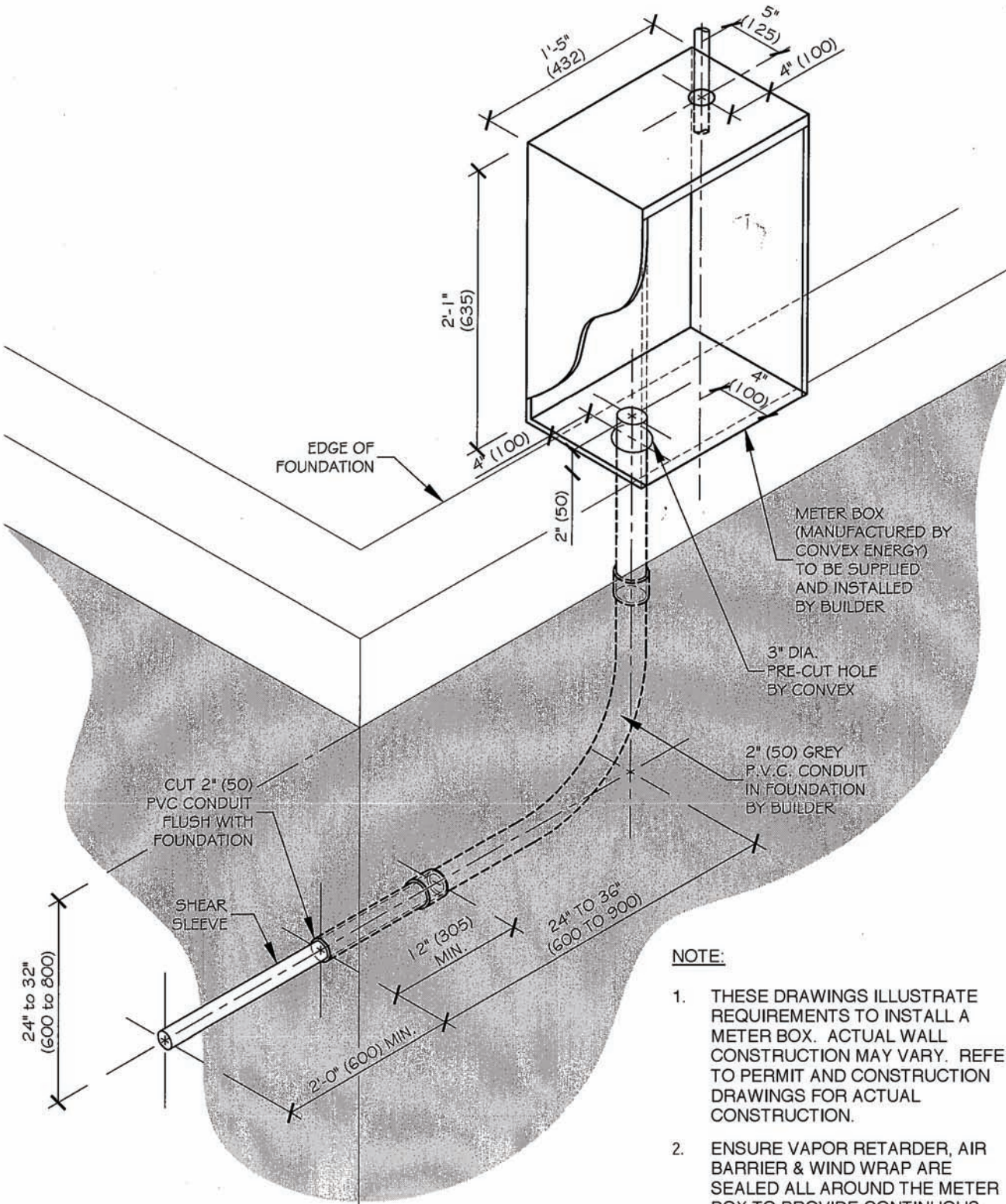


NOTE:

1. THESE DRAWINGS ILLUSTRATE REQUIREMENTS TO INSTALL A METER BOX. ACTUAL WALL CONSTRUCTION MAY VARY. REFER TO PERMIT AND CONSTRUCTION DRAWINGS FOR ACTUAL CONSTRUCTION.
2. ENSURE VAPOR RETARDER, AIR BARRIER & WIND WRAP ARE SEALED ALL AROUND THE METER BOX TO PROVIDE CONTINUOUS BARRIERS.

<b>DRAWING:</b> PLAN DETAIL OF GARAGE WALL WITH BRICK FINISH	<b>DATED:</b> SEPTEMBER 2011	<b>PAGE:</b> 19 OF 20
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DRAWING:  
ISOMETRIC VIEW

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## Preparing for Homeowner Occupancy

The following information, code changes, guidelines and checklist will help you prepare for homeowner occupancy and final inspection. Plus, we've included information to help you should your installation be rejected.

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## Change of ownership notification.



As part of your preparation plan for homeowner occupancy, please remember to notify Enbridge of a change of ownership on the property. If you do not notify us, the natural gas bill will continue to be charged to you.

**Preferrably within 30 days prior to closing:** fax the completed Change of Ownership Fax transmission form in Section 7 of this guide to Enbridge at 1-866-428-3923, to report a Change of Ownership. Provide the closing date, municipal address and lot number, city, and the new purchasers' names.

You can also download the form at [www.buildwithgas.com](http://www.buildwithgas.com)

# Natural gas appliances and venting systems.



Natural gas appliances provide comfort, convenience, energy efficiency and savings for many years in the new homes you build. Natural gas is clean, reliable, and the best value for your homebuyer's energy dollar.

## Plastic venting systems now required.

Plastic venting is a plastic pipe that is used for venting purposes on appliances like water heaters, furnaces and boilers. The pipe is used to carry hot by-products of combustion, including carbon monoxide, away from spaces used for living.

As of August 1, 2007 the Technical Standards and Safety Authority (TSSA) adopted a new code change regarding plastic venting systems: B149.1 Natural Gas and Propane Installation Code.

Now only non-metallic venting approved to ULC S636, the Standard for Type BH Natural Gas Venting Systems, can or may be used when installing new natural gas appliances. For example, if a new natural gas water heater is being installed in a new home, the installation must comply with this code.

The ULC S636 Standard mandates that the vent must be distinguished as a certified flue gas venting system through special markings on pipes and fittings. Look for the markings to assure the system you're using is approved and meets the code.

Note: because the combustion air pipe is not exposed to flue gases it does not need to be certified to ULC S636.



## What builders need to know:

- ABS (Acrylonitrile butadiene styrene) venting can no longer be used in new appliances as it does not meet ULC Standard S636.
- All certified piping is marked with the ULC Standard S636 numbering clearly on the pipe and fittings.
- There is no requirement to retrofit existing installations of ABS. Appliance turn on and utilizing venting systems that are not certified to ULC S636 prior to August 1, 2007 are not required to be in compliance with ULC S636.
- Uncertified venting installed prior to August 1, 2007 but utilized on equipment turned on after August 1, 2007 requires a variance from the TSSA. This is the responsibility of the builder.
- In cases where non-certified venting is found on initial inspections of appliances installed after August 1, 2007, (unless a TSSA variance is presented by the builder/homeowner), the appliance will be rejected and left off. If it is the only appliance, then the meter will be shut off.



# Venting system installation regulations.



In August, 2006, Ontario adopted new regulations regarding natural gas in new residential buildings. In particular, the regulations affected natural gas appliance ventilation systems. Your mechanical contractor should be up to date with these changes, but as a builder you should be aware of the changes as well, and how they may impact your buildings.

## Major changes included:

- A vent terminal may now be located directly above a regulator vent outlet, as long as it is not closer than 15 ft. This should allow for easier vent locations of second floor appliances. Previously there was no minimum distance specified; a vent terminal could not be located above a regulator vent outlet.
- Discharge clearance from relief device openings with capacities under 50 cf/h (1.5m<sup>3</sup>/hr) is 1 ft (0.3m) to a building opening, appliance vent outlet or appliance air intake or source of ignition and 3ft (1m) to a mechanical air intake.
- A meter/regulator assembly within 3ft (900 mm) horizontally of the vertical centre-line of the regulator vent outlet to a maximum vertical distance of 15 ft (4.5 m);
- A vent terminal of a side wall venting appliance cannot be installed within 3 ft. of the centre-line of a regulator vent outlet. Previously the minimum distance was 6 ft.



## For more information:

If you would like a copy of the B149.1-05 Natural Gas and Propane Installation Code please contact Canadian Standards Association International at 416-747-4044 or 1-800-463-6427.

For further clarification or more information, please contact the TSSA directly at 1-877-682-8772 or visit them at [www.tssa.org](http://www.tssa.org)

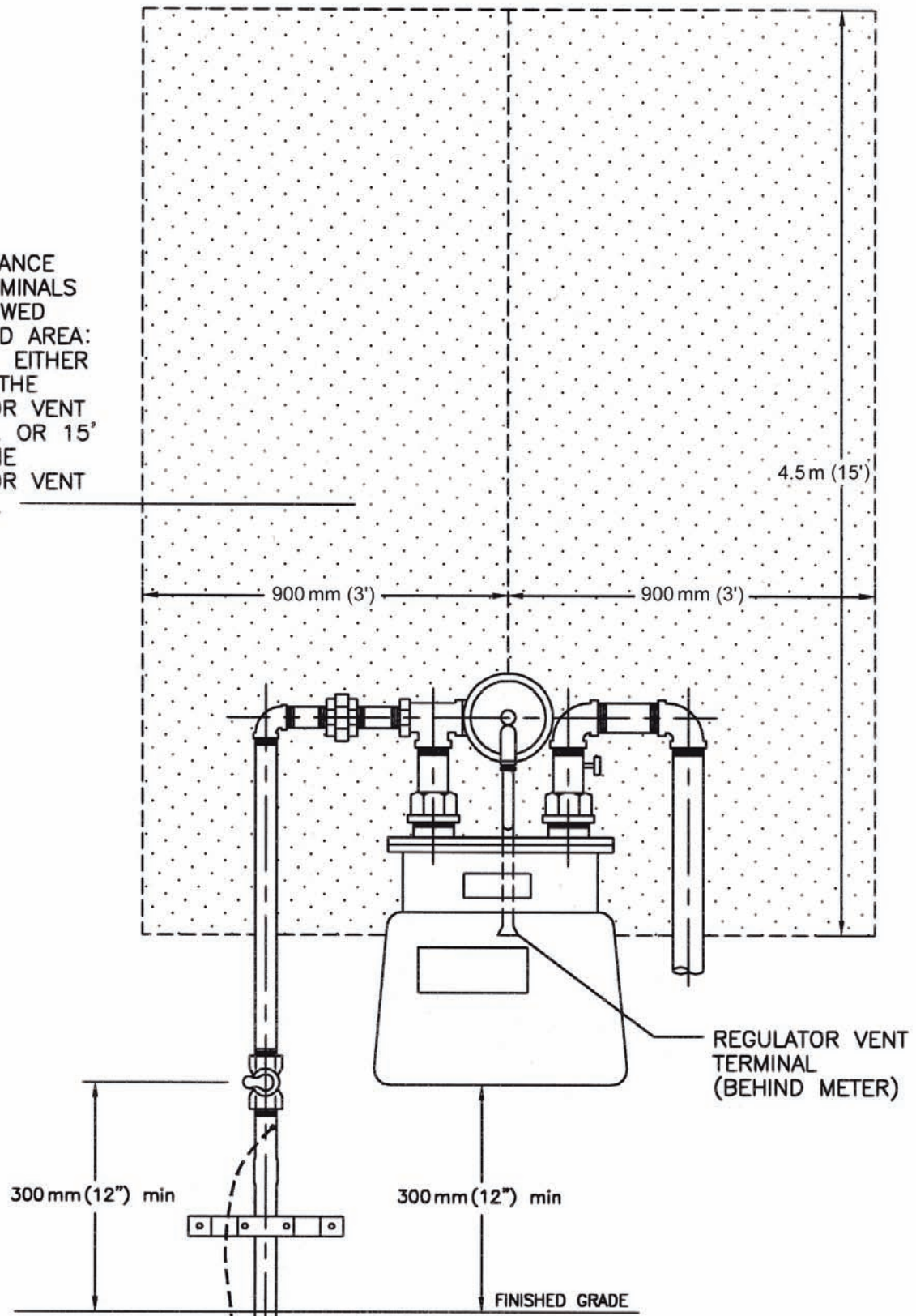


### IMPORTANT:

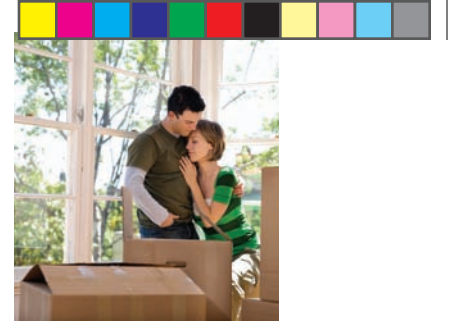
For your ease and convenience, you can access and complete all the necessary construction heat and final inspection forms at [www.buildwithgas.com](http://www.buildwithgas.com)



NO APPLIANCE  
VENT TERMINALS  
ARE ALLOWED  
IN SHADED AREA:  
WITHIN 3' EITHER  
SIDE OF THE  
REGULATOR VENT  
TERMINAL, OR 15'  
ABOVE THE  
REGULATOR VENT  
TERMINAL.



# Guidelines for final inspection prior to homeowner occupancy.



Enbridge Gas Distribution (EGD) must conduct a final inspection of all gas appliances before homeowner occupancy. If the inspection has not taken place at the time the account is transferred from the builder to the homebuyer, the gas supply may be terminated until the inspections can be completed.

EGD provides one inspection per premise free of charge. Additional visits required to inspect appliances that were not ready or rejected at the time of the first inspection will be chargeable.

It is the installer's responsibility to ensure that all appliances are installed, and that the installation meets all code requirements and those of the manufacturer's certified instructions, including concealed piping or venting.



## IMPORTANT:

For your ease and convenience, you can access and complete all the necessary construction heat and final inspection forms at [www.buildwithgas.com](http://www.buildwithgas.com)

## Home inspection checklist:

- ☐ Pressure test tag is complete and present
- ☐ All gas piping is supported
- ☐ All venting supported, (i.e. screwed, glued and sealed)
- ☐ Outdoor piping is painted, wrapped and sealed
- ☐ Condensate lines are piped to drains
- ☐ T&P valves are piped to drain or not more than 12" from the floor
- ☐ Vent terminal clearance is 12" above grade with 3 ft. clearance from the gas meter regulator
- ☐ All clearances to combustible material are correct (C vent – 6", B vent – 1")
- ☐ Copper gas tubing and remote valves are identified
- ☐ Outside valves are approved
- ☐ Chimney size and type of liner are correct for application
- ☐ All manufacturers' instruction manuals are with the equipment




## Requesting a home inspection.

It is the responsibility of the builder to contact Enbridge Gas Distribution for inspection before the appliances are turned on. We require a minimum of 48 hours notice. Before contacting Enbridge Gas Distribution to schedule the final inspection, the site must be fully accessible to the inspector.

When you are ready for the inspection, fax the information to us at 1-800-494-6411 using the "Request for Final Inspection Prior to Homeowner Occupancy" fax transmission. A sample of the form is featured below.

You can also use our website to request the inspection at [www.buildwithgas.com](http://www.buildwithgas.com). Click on "Meter Unlock and Appliance Inspection" and fill out the "Request for Final Inspections Prior to Homeowner Occupancy" form.

**Fax Transmission: 1-800-494-6411**

**"Request for Final Inspections Prior to Home Occupancy"**

- \* Book your inspection anytime after the mechanical equipment is installed and ready for inspection.
- \* **MINIMUM 48 HOURS NOTICE REQUIRED!** Indicate the required date for inspection.
- \* Faxes received after 4:00 pm will be considered as received the next day.

<b>To: Enbridge Gas Distribution</b>		<b>Fax: Toll Free 1-800-494-6411</b>	
Current Date: <i>August 27, 2007</i>	Subdivision: <i>Def</i>		
Builder: <i>ABC</i>	Site Telephone Number: <i>(XXX) 555-6789</i>	Site Foreman's Cell Number: <i>(XXX) 555-3456</i>	
Site Contact's Name: <i>John Doe</i>	Site Fax Number: <i>(XXX) 555-1234</i>		

Please check off the appliances you need inspected (e.g. water tank, fireplace, furnace) under the "Final Inspection" column.

	City	Lot Number	Municipal Address	Final Inspection	Date Required
1	<i>Aurora</i>	<i>16</i>	<i>86 Johnson Lane</i>	<input checked="" type="checkbox"/> Furnace <input checked="" type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input type="checkbox"/> Other	<i>Sept 1, 2007</i>
2	<i>Aurora</i>	<i>23</i>	<i>95 Johnson Lane</i>	<input checked="" type="checkbox"/> Furnace <input checked="" type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input checked="" type="checkbox"/> Other <i>Gas Lamp</i>	<i>Sept 9, 2007</i>
3				<input type="checkbox"/> Furnace <input type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input type="checkbox"/> Other	
4				<input type="checkbox"/> Furnace <input type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input type="checkbox"/> Other	
5				<input type="checkbox"/> Furnace <input type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input type="checkbox"/> Other	
6				<input type="checkbox"/> Furnace <input type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input type="checkbox"/> Other	
7				<input type="checkbox"/> Furnace <input type="checkbox"/> Water Heater <input type="checkbox"/> Fireplace <input type="checkbox"/> Range <input type="checkbox"/> Dryer <input type="checkbox"/> BBQ <input type="checkbox"/> Other	

**PLEASE NOTE:**  
Photocopy this form to ensure an adequate supply is available for faxing.  
Additional Notes or Instructions for access:

\_\_\_\_\_

\_\_\_\_\_

11-00333 (REV. DEC-07)

Sample of Request for Final Inspections Prior to Homeowner Occupancy



# How to deal with rejected installations.



If natural gas appliance installations do not pass inspection, it can upset construction schedules, delay closings and increase construction costs. However, rejections do happen. Here's what you need to know to respond to rejected installations.

**ENBRIDGE**

**Press hard – you are making multiple copies**

Date of inspection: Year Month Day  
 Date of verbal notification: Year Month Day  
 Name of person notified: \_\_\_\_\_  
 Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Installation address: \_\_\_\_\_ Town: \_\_\_\_\_  
 Name of installer or builder: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ Town: \_\_\_\_\_  
 Meter number: \_\_\_\_\_

**Reinspection or corrective charges:**  
☐ Charge owner ☐ Charge builder ☐ Charge installer Charge account number: \_\_\_\_\_

Materials	Labour	PST	GST	Total

Department: \_\_\_\_\_ Payroll number: \_\_\_\_\_  
 Account area: \_\_\_\_\_ Name: \_\_\_\_\_  
 Appliance type code: \_\_\_\_\_  
 Hours: \_\_\_\_\_ Minutes: \_\_\_\_\_

Appliance	Make	Model number	Installation Reject - Type and Status				Not Ready
			Immediate Hazard	Non-Immediate	Connected	Left Off	
Central Heating			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FWA <input type="checkbox"/> Boiler <input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Heating			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fireplace			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Infractions: (Code or installation manual page reference)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**For Rejected Installations – Rejects must be corrected within 45 days.**  
 When completed please phone: \_\_\_\_\_ Inspector: \_\_\_\_\_  
 REJECT NOTED: \_\_\_\_\_  
 White – Site Green – Builder Yellow – Billing/Accounting Pink – Records Management Gold – File

Sample of Reject Notice



## IMPORTANT:

Enbridge Gas Distribution must conduct a final inspection of all gas appliances before homeowner occupancy. If the inspection has not taken place before occupancy, the gas supply may be terminated.

## Minor rejects requiring less than 10 minutes to repair.

Where minor infractions are found that require less than 10 minutes to correct, the Inspector will perform the work and pass the inspection. There will be no charge for this corrective work.

Typical repairs the Inspector will make at no charge include (but are not limited to):

- Screws in venting
- Pipe hangers (e.g. if one or two more are required)
- Piping identification
- Painting exterior piping (weather permitting)
- Caulking pipe passageways through exterior walls.

Any minor infractions that cannot be rectified at the time of inspection due to weather, construction, etc. will be reported to the builder for correction.

## Rejects requiring greater than 10 minutes to repair.

When the Inspector rejects an installation where corrective action would exceed 10 minutes, the Inspector will leave the appliance off. If the appliance is the building's heating system, the meters will also be locked.

When an installation is rejected, it is the builder's or installer's responsibility to have the appropriate repairs conducted, and to notify Enbridge Gas Distribution when they have been completed.

Instructions for informing the utility are found on the reject notice. If a second inspection is required, the builder will be charged. Note: If additional rejects are found on a second inspection as a result of oversight by the first Inspector, there will be no charge for the inspection or reject.

Appliances that do not fire during an inspection will be rejected, as it is not possible to check the safety controls.



## Inspection reject notification.

- All reject forms will clearly indicate the Inspector's name, phone number and the Code clause, or the section of the manufacturer's instruction that has been contravened.
- The Inspector will make every effort before leaving the site to directly contact the builder's representative to report installations that have been rejected. Contact with the builder's representative will be made at the site office when possible.
- The Inspector will clearly indicate on the reject form the date, time and the name of the builder's representative to which the report was made.
- If the building is occupied, the Inspector will also leave a copy of the reject notice with the customer.

## Clearing rejected installations.

Once a rejected installation is corrected, the builder must notify Enbridge Gas Distribution by contacting us at 1-877-362-7434 to confirm that a rejected installation has been corrected and to turn the gas on if required.

## Invoicing for inspection rejects.

The builder will be invoiced for outstanding charges relating to installation rejects.

In all cases the builder will have 60 days to pay. This will allow sufficient time for builders to appeal any reject or charge they feel is unjustified.

If payment is not received within 60 days, the matter will be turned over to our Credit and Collection department for appropriate action.

If a builder feels an installation reject or labour charges are not in keeping with the intent of these guidelines, they should discuss the matter with the Enbridge Gas Distribution supervisor in that area. The supervisor has the authority to overturn any reject that is not justified.

If the builder is still unable to reach a satisfactory conclusion they may request that the issue be reviewed by the Joint HRAI/Enbridge Gas Distribution Inspection Review Board.

A request to have a grievance of this nature heard must be made in writing to:

**Greg Fabbruzzo**

**Enbridge Gas Distribution, P.O. Box 650, Scarborough, ON M1K 5E3**

**greg.fabbruzzo@enbridge.com**



**Q: When and how do I notify Enbridge about change of ownership?**

A: You need to fax a Change of Ownership form to Enbridge at 1-866-428-3923, within 30 days of closing. Provide the closing date, municipal address and lot number, city, and the new purchasers' names.

**Q: Why do I need to notify Enbridge about change of ownership?**

A: If you do not notify Enbridge about a change in ownership, the natural gas bill will continue to be charged to you.

**Q: When does the final inspection need to take place?**

A: Enbridge must conduct a final inspection of all gas appliances before homeowner occupancy. A minimum 48 hours notice is required.

**Q: What happens if the final inspection doesn't take place before homeowner occupancy?**

A: If the inspection has not taken place at the time the account is transferred from the builder to the homebuyer, the gas supply may be terminated until the inspection can be completed.

**Q: How much does an inspection cost?**

A: Enbridge provides one inspection per premise free of charge. Additional visits required to inspect appliances that were not ready or rejected at the time of the first inspection are chargeable.

**Q: What can I do to ensure I'm properly prepared for the home inspection?**

A: Please see the home inspection checklist on page S6-6. Or contact your Enbridge Channel Consultant.

**Q: Do the new TSSA codes regarding plastic venting on appliances affect my existing properties?**

A: Appliances installed prior to August 1, 2007 are exempt. However, uncertified venting installed prior to August 1, 2007 but utilized on equipment turned on after August 1, 2007 requires a variance from the TSSA.

**Q: What happens if non-certified venting is found during the inspection?**

A: The appliance will be rejected and left off. If it is the only appliance, then the meter will be shut off.

**Q: What do I do if my natural gas appliance installations don't pass inspection?**

A: Where minor infractions are found that require less than 10 minutes to correct, the Inspector will perform the work and pass the inspection. Where corrective action would exceed 10 minutes, the Inspector will leave the appliance off. If the appliance is the building's heating system, the meters will also be locked.

**Q: How will I know if the inspection has been rejected?**

A: The inspector will complete a reject form, and make every effort before leaving the site to directly contact the builder's representative to report installations that have been rejected.

**Q: How do I clear a rejected installation?**

A: Once a rejected installation is corrected, the builder must notify Enbridge Gas Distribution at 1-877-362-7434.





## Forms for Builders

On the following pages you'll find all the necessary natural gas construction heat and final inspection forms you'll need when working with Enbridge. You can also find these forms at [www.buildwithgas.com](http://www.buildwithgas.com)

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SECTION 2

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SECTION 5

SECTION 6

SECTION 7

APPENDIX





## Glossary of terms

EGD:	Enbridge Gas Distribution
DWHR:	Drain Water Heat Recovery
OBC:	Ontario Building Code
ROT:	Record of Training
TSSA:	Technical Standards and Safety Authority

**Builder Technical Bulletins:** Paper-based news updates to advise you of any changes to building codes, policies, etc., that may affect your business.

**Drain Water Heat Recovery (DWHR):** As hot water passes through the drain, cold fresh water passes up through the copper coils and heat is transferred – preheating the cold water before it gets to the water heater.

**EnerGuide 80:** An EnerGuide rating is a standard measure of a home's energy efficiency level. Homes are scored on a scale of 0 to 100. The 2012 Ontario Building Code (OBC) will require that all new houses reach EnerGuide 80 levels of energy efficiency.

**ENERGY STAR:** An initiative to promote the construction of better built, more energy efficient homes in Ontario. The ENERGY STAR label is a homeowners assurance that their new home is built to exacting, energy efficient guidelines.

**EnerQuality:** EnerQuality promotes energy efficient housing in Ontario through certification, training and consulting. In 2005, EnerQuality introduced the ENERGY STAR for New Homes initiative and is a licensed service organization (with Natural Resources Canada) to deliver the program.

**Gas-Cov® meter box covers:** Comprised of light but durable high density polyethylene plastic, these covers are used to protect gas meters from the elements as well as third party damage and vandalism.

**Gas main:** Refers to the main gas line in a neighbourhood or community, which must be in place in order to connect construction sites and new homes to natural gas.

**G2 fitter/ G2 license (see also Record of Training):** Anyone installing, activating or operating a natural gas-fired construction heater must possess a G2 license or greater, or complete a “Record of Training” (ROT) certification.

**Joint Utility Construction (joint utility trench system):** Gas lines, and hydro, cable and telephone wires are laid in the same trench – each with utility approved separation.

**Locates:** At the beginning of any construction project, utility companies should be contacted to mark the location of existing utility lines and wires.

**Meter box:** The gas regulator, meter, and shut-off valve are integrated into the architectural detail of the building. Often used for multi-unit dwellings.

**Meter tie-in:** A meter tie-in is the connection of the house's internal gas piping system to the gas meter.

**Ontario Building Codes (OBC):** Were created to provide consistent standards in construction, with particular regard for the quality and durability of construction and construction materials.

**Record of Training (see also G2 fitter):** Anyone installing, activating or operating a natural gas-fired construction heater must complete a “Record of Training” (ROT) certification or possess a G2 license or greater.

**Technical Standards and Safety Authority (TSSA):** Administers and enforces technical and safety standards in the province of Ontario, in regards to fuels, pressure vessels and boilers, upholstered and stuffed articles and elevating and amusement devices.

**Two-trench utility system:** Gas lines are laid in one trench and utility wires are laid in an adjacent trench.