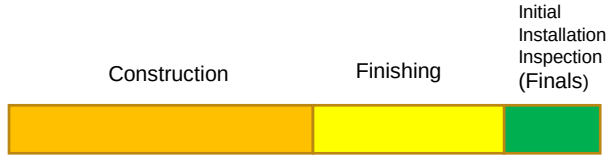
Builder Guidelines on Using Residential Temporary Heat (Construction and Finishing)

In this document you'll find what you need to know about:

- Using natural gas for residential temporary heat (construction), including: preparing your site, using construction heater manifolds, using furnaces approved for construction heat (during construction stages)
- Using natural gas for residential temporary heat (finishing), including: preparing your site, using a residential furnace for finishing heat (during the finishing stages of construction)
- When you should be calling for initial installation inspections (Finals), prior to homeowner occupancy



Builder Guidelines on Using Residential Temporary Heat (Construction and Finishing)

About Residential Temporary Heat (Construction and Finishing)

Temporary heat refers to the use of natural gas prior to initial installation inspections, either during construction stages or finishing stages, and prior to homeowner occupancy. It includes the activation of an appliance which is approved for either construction or finishing heat as outlined by manufacturers, local code, Technical Standards & Safety Authority (TSSA) requirements, and Enbridge policy.

Using natural gas for temporary heat allows your project to stay on schedule and budget. Natural gas heat is drier and provides significant cost savings compared to propane heaters. Whether you use an installed furnace or a temporary construction heater, natural gas is an efficient and cost-effective choice.

Residential temporary heat includes the activation of the following appliances if approved for such use:

- Portable construction heaters;
- Residential furnaces approved for construction heat;
- Residential furnaces used for finishing heat. This furnace must meet the requirements of TSSA Advisory (FS-232-17) and Enbridge's Builder Site Preparation for Residential Temporary Heat Activation (Construction and Finishing) bulletin.

Note: An appliance can only be used during the construction phase if it is explicitly stated in the manual that this type of use is permitted, or if it has been authorized through local codes. Please also note that most appliance manuals do not allow this.

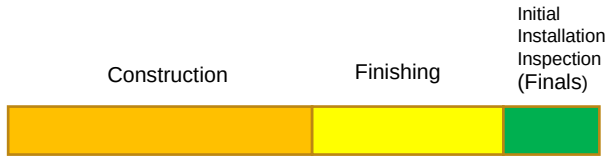
In order to ensure that your site is ready for Temporary Heat activation, please refer to our Builder Site Preparation for Residential Temporary Heat Activation (Construction and Finishing) bulletin.

Builders must contact Enbridge Gas Distribution (Enbridge) to request activation of the meter set for construction heat purposes. A site visit will be scheduled to assess the site and installation to determine if it meets the criteria set forth in the Enbridge guidelines for construction heat. An inspection charge of $70.00 plus HST will apply to activate natural gas for construction heat.

Initial Installation Inspections

Once temporary heat is no longer required, Enbridge must conduct Initial Installation Inspections on all permanent equipment intended to be installed for use, and prior to homeowner occupancy. More information on Initial Installation Inspections can be found at the end of this document and/or the stand alone document "Builder Guidelines – Initial Installation Inspections" at www.buildwithgas.com.

Note: Residential Temporary Heat is not permitted in a premises that is occupied



Builder Guidelines on Using Residential Temporary Heat

Construction Heat - Temporary Construction Heater

Using a Temporary Construction Heater (TSSA Requirements)

The Technical Standards & Safety Authority (TSSA) and Ontario Regulations require anyone installing, or operating a natural gas fired construction heater to hold a current “Record of Training” (ROT) certification (must be renewed every three years), or possess a G2 or G1 license (regulation 215/01).

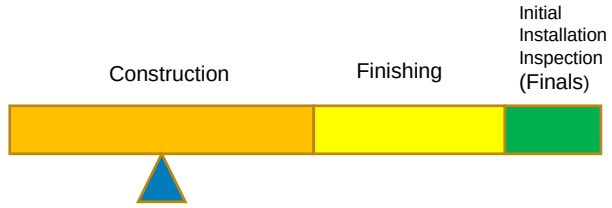
- The ROT certification must be on hand and presented when rental companies deliver the construction heaters to the site.
- ROT Certificate information must be documented on site and provided for reference when Enbridge performs meter activation for Construction Heat. An installation/operators tag must appear at the appliance or meter being activated and must contain the certificate holders license information. (It can be filled out on a blank test tag and zip-tied to the heater or meter outlet)
- The residential construction heater must be installed according to manufacturer’s installation instructions, the CSA B149.1 - current edition (Natural Gas and Propane Installation code), and per all local codes and regulations with regards to construction heat use.

Additional Enbridge Requirements:

- Complete the meter activation for temporary heat appointment form and provide 72 hours (3 business days) advance notice. Appointments can be scheduled by using the online form available at buildwithgas.com or by faxing it to 1-800-494-6411.

- ROT certificate information must be documented on site and provided for reference when Enbridge performs meter activation for temporary heat. An installation/operators tag must appear at the appliance or meter being activated and must contain the certificate holders license information. (It can be filled out on a blank test tag and zip-tied to the heater or meter outlet.)

To ensure that you follow all the requirements set out by Enbridge’s Temporary Heat Policy we have created Technical Resources with all the procedures and policies that have been indicated above. The bulletins can be found at www.buildwithgas.com or by contacting your local Channel Consultant.



Builders Guideline on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications - Standalone

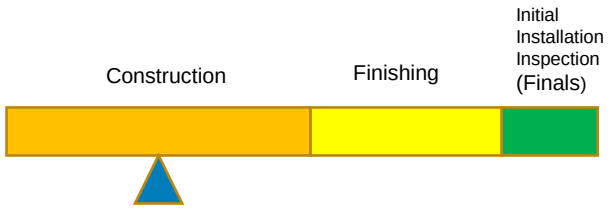
Before proceeding with any connection/installation work, ensure you are trained, qualified, and wearing all appropriate personal protective equipment (PPE).

Step 1: The gas meter will be installed with a capped meter tailpiece on the outlet side of the meter. This tailpiece has small brass fitting off the side called a "test port". Remove the meter tailpiece with cap provided with the Enbridge meter.

Note: The meter tailpiece and cap is property of Enbridge and must be saved for reinstallation and use by your gas piping installer.

Caution: If the pinlock has been removed from the meter service (winglock) valve and the valve is in the on position, turn the valve off and proceed with the manifold connection. Only Enbridge is authorized to activate the meter set. You must contact Builder Services to request meter set activation.

Figure 1



Builders Guideline on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications - Standalone

Step 2: The construction heater will come with a meter manifold (see figure 2). For connection to the meter tailpiece please refer to the “Enbridge Meter Connection” guidelines before continuing with step 3.

Figure 2

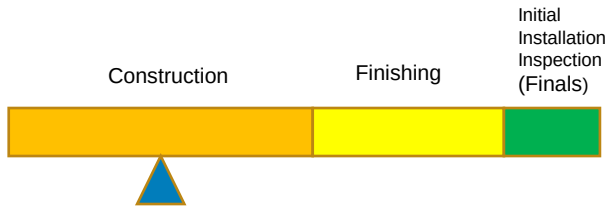
Figure 3

Note: Enbridge requires a test port for proper meter activation. If the construction heater’s meter manifold was supplied with an integrated test port (see figure 3), your installer will connect the manifold directly to the meter outlet after removing the meter tailpiece. Continue with step 3.

Step 3: Your trained and licensed installer/operator will attach the construction heater manifold, all other required components, and ensure the installation meets local code (see figure 4).

Figure 4

Note: The manifold and the hose must be properly secured and supported to avoid any strain on the meter set. Do not use the meter set to support the construction heater in any way.



Builders Guideline on Using Temporary Heat

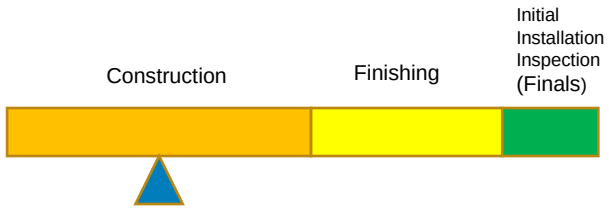
Using Temporary Construction Heaters for Residential Applications - Standalone

Step 4: Contact Builder Services to schedule your "Construction Heat activation" a minimum of 3 Business days prior. Online forms requesting Meter Activation for Construction Heat are available. For more information or to access the forms visit www.buildwithgas.com.

Step 5: Once the heater has been removed and if the permanent piping is not yet installed, replace the meter tailpiece and cap, if both of them were removed for construction heat installation purposes. *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.*

Note: Only your licensed mechanical contractor can attach the permanent piping to the meter. The meter tailpiece provided with the Enbridge meter must be used to attach the permanent piping to the meter according to our standard requirements for installation (See figure 5).

Figure 5



Builders Guideline on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications – Meter Box

Before proceeding with any connection/installation work, ensure you are trained, qualified, and wearing all appropriate personal protective equipment (PPE)

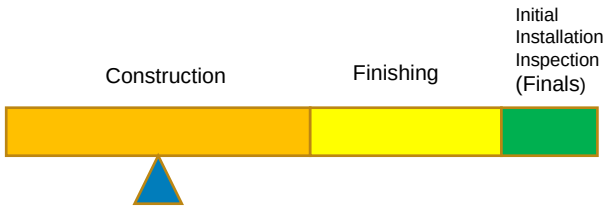
Step 1: The gas meter will be installed with a capped meter tailpiece on the outlet side of the meter (see figure 1). This tailpiece has small brass fitting off the side called a “test port”. Remove the meter tailpiece cap.

Caution: If the pinlock has been removed from the meter service (winglock) valve and the valve is in the on position, turn the valve off and proceed with the manifold connection. Only Enbridge is authorized to activate the meter set. You must contact Builder Services to request meter set activation.

Step 2: Your trained installer will use a specially developed adapter installed to duplicate the meter tie-in above the meter box. The adapter connects to the meter tailpiece, and extends through the top of the meter box to allow connection to the construction heater’s manifold. This adapter ensures that the gas regulator, meter and internal components will not be repositioned. Providing the flexibility required to rotate the manifold 180 degrees in order to accommodate the installation of the portable construction heater (see Figure 2).

Figure 1

Figure 2



Builders Guideline on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications – Meter Box

Step 3: If the meter box is not accessible from the top, remove the meter tailpiece with cap provided with the Enbridge meter and connect the construction heater manifold (Figure 3) projecting outside the meter box (see figure 5). The connection is done at the meter outlet with elbows and appropriate fittings, projecting outside the meter box to connect to the portable construction heater. For connection follow the steps in the "Enbridge Meter Connection" guidelines (on page 7), before continuing with step 4.

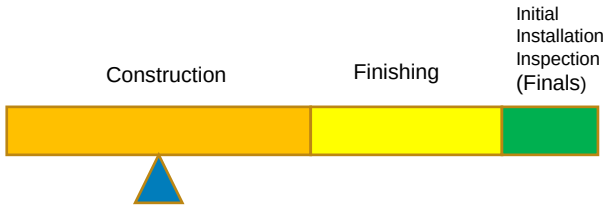
Note: If the construction heater manifold has an integrated test port (Figure 4) your installer will connect the manifold directly to the meter outlet. Before the connection can take place the meter tailpiece has to be removed and saved for later reinstallation.

Note: The manifold and the hose must be properly secured and supported to avoid any strain on the meter set. Do not use the meter set to support the construction heater in any way.

Figure 3

Figure 4

Figure 5



Builders Guideline on Using Temporary Heat

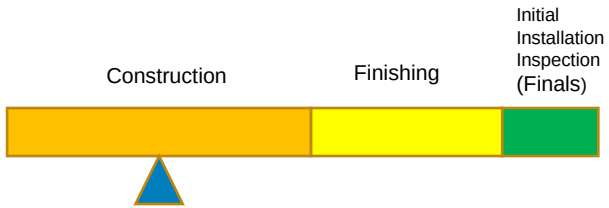
Using Temporary Construction Heaters for Residential Applications – Meter Box

Step 4: Contact Builder Services to schedule your Construction Heat activation a minimum of 3 Business days prior. Online forms requesting Meter Activation for Construction Heat are available. For more information or to access the forms visit www.buildwithgas.com.

Step 5: Once the heater has been removed and if the permanent piping is not yet installed, replace the meter tailpiece and cap , if both were removed for construction heat activation purposes. *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.*

Note: Only your licensed gas mechanical contractor can attach the permanent piping to the meter. The meter tailpiece provided with the Enbridge meter must be used to attach the permanent piping to the meter according to our standard requirements for installation (See Figure 6).

Figure 6



Builders Guideline on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications – Enbridge Meter Connection

This section refers to properly connecting a construction heater manifold to an Enbridge meter, where a test port is not provided by the construction heater manifold

Before proceeding with any connection/installation work, ensure you are trained, qualified, and wearing all appropriate personal protective equipment (PPE)

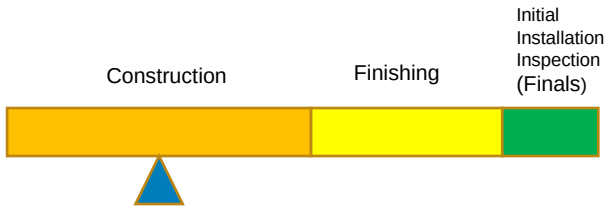
The Enbridge natural gas meter will be installed with a capped meter tailpiece on the outlet side of the meter. This tailpiece has a small brass fitting off the side called a test port. If a construction heater manifold with an integrated test port is available, you may use it instead.

Note: The Tailpiece and cap supplied by Enbridge must remain with the meter, once construction heat is no longer required. It must be reinstalled on the meter as originally found.

Step 1: Carefully remove the meter tailpiece with test port on the outlet side of the meter (see figure 2).

Figure 1

Figure 2



Builders Guideline on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications – Enbridge Meter Connection

Step 2: With two properly sized wrenches, carefully remove the cap supplied with the Enbridge meter tailpiece; exposing the threads. The brass “test port” is very fragile, and can break easily if pressure from the wrench is applied.

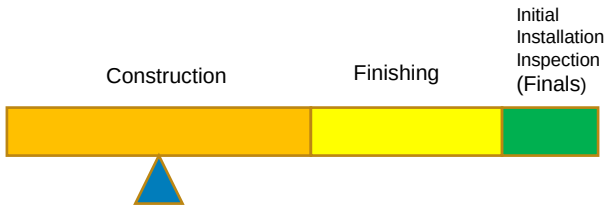
Figure 3

Step 3: Use two properly sized wrenches and ensure that no other components are loosened or damaged during this operation. Remove the meter tail piece that does not have the “test port” from the construction heater manifold.

Figure 4

Step 4: Once the connection piece provided with the construction heater manifold has been removed from it, keep it aside and in a safe place for later.

Figure 5



Builder Guidelines on Using Temporary Heat

Using Temporary Construction Heaters for Residential Applications – Enbridge Meter Connection

Step 5: Connecting to the Manifold

1. Apply only an approved natural gas thread sealant to the threads of the Enbridge meter tailpiece
2. Using correctly sized wrenches, carefully attach the threaded portion of the Enbridge meter tailpiece to the threaded inlet of the construction heater manifold
3. Ensure that the brass “test port” has not been damaged and will be facing the 3:00 or 6:00 position on the meter
4. Keep all other components for later use

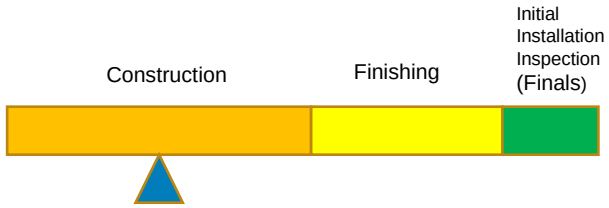
Note: Be sure to use and apply an approved natural gas pipe thread sealant. Always follow instructions for use and wear proper PPE.

Step 6: Your construction heater manifold is now ready to be connected to an Enbridge meter as per the steps in the previous sections “Stand-alone” and “Meter Boxes” connections. Please ensure that when attaching the manifold the meter gasket ring is also installed.

Figure 6

Figure 7

Figure 8



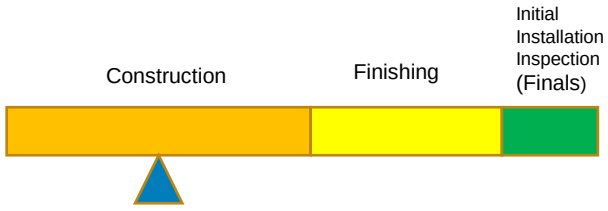
Builder Guidelines on Using Residential Temporary Heat

Construction Heat – Furnace

Caution: Only furnaces approved for construction heat can be activated during construction stages, many manufacturers have indicated they no longer allow for construction use in Canada. This may most commonly be found written as: *"Gas furnaces manufactured on or after May 1, 2017 are not permitted to be used in Canada for heating of buildings or structures under construction".*

Guidelines for using a Furnace to heat a building or structure under construction

1. The furnace must be specifically approved for use in a building or structure under construction. This can be found in the manufacturers certified installation instructions
2. All site requirements are met as listed within the Residential Temporary Heat – Site Preparation Bulletin.
3. Builders will be required to contact Enbridge to have Enbridge or its authorized contractor to initially activate an Enbridge meter for construction heat purposes. If the meter has already been activated for a portable construction heater, the licensed heating contractor can switch over to the furnace without an additional appointment. (note: the furnace must be specifically approved for use in a building or structure under construction, as listed in point #1 above)
4. The furnace installer shall be a G2 or G1 certified technician and shall follow all local code requirements for Furnace Installation/Operation in Construction Heat Applications.
5. All appropriate code clauses shall be met, paying particular attention to pressure testing of the piping system, venting and fresh air requirements, in addition to the provision of a thermostat that is installed on a solid bracket or wall and located in the furnace area or a location supplied with heat through ductwork from the furnace.



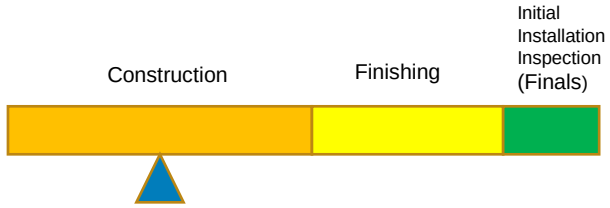
Builder Guidelines on Using Residential Temporary Heat

Construction Heat - Furnace

6. All manufacturer's certified 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 13C (55F).
    - 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.

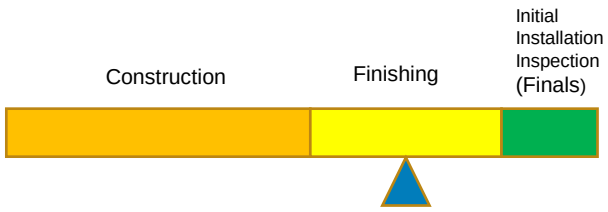
7. Once Temporary Heat (Construction) is no longer required, Enbridge must still conduct Initial Installation Inspections (Finals) of all natural gas piping and equipment in the home prior to occupancy. This additional inspection will be completed once you request inspections after all equipment installations are complete and before building occupancy.



Builders Guideline on Using Residential Temporary Heat

Finishing Heat - Furnace

Important: Furnaces that **are not approved for construction heat may only be used for finishing heat, as per the TSSA advisory (FS-232-17). The TSSA advisory outlines the accepted practice of using residential gas furnaces to heat a home during finishing stages of construction, prior to homeowner occupancy, provided that strict requirements are followed.*



Finishing heat is activation and use of any new residential furnace to heat the home during the finishing stages of construction, prior to initial installation inspections, and prior to homeowner occupancy.

When is a home ready for Finishing Heat activation?

A home is ready for finishing heat activation once all major interior construction work has been completed, and the home is entering the finishing stages of construction, which begins once the drywall installation is complete and with the first coat of interior wall primer is applied.

Builders will be required to contact Enbridge to have Enbridge or its authorized contractor to initially activate an Enbridge meter for finishing heat purposes. If the meter has already been activated for a portable construction heater, the licensed heating contractor can switch over to the furnace for finishing heat (without an additional appointment) provided all aspects of the finishing heat requirements are in place.

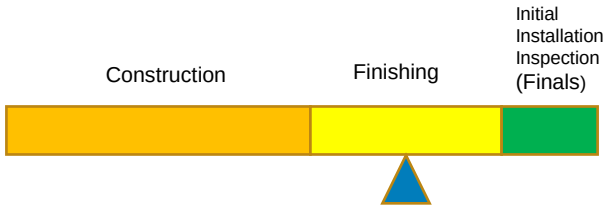
All site requirements are listed within Residential Temporary Heat – Site Preparation Bulletin, the Residential Finishing Heat Activation Form, and the TSSA FS-232-17 advisory.

Key Aspects:

- The builder/contractor must review, understand, and acknowledges that all conditions for finishing heat activation and operation are put in place and maintained
- The builder/contractor has completed all relevant sections of the “Finishing Heat Activation form”
- The builder/contractor have confirmed that the furnace has not been previously activated
- A walkthrough of the site to ensure all loose construction debris has been cleaned
- The Finishing Heat Activation form has been posted on the return air ductwork
- Arrangements have or will be made with the installing contractor for post final commissioning of the equipment

Builder Guidelines on Using Residential Temporary Heat

Finishing Heat - Furnace



Finishing Heat Checklist

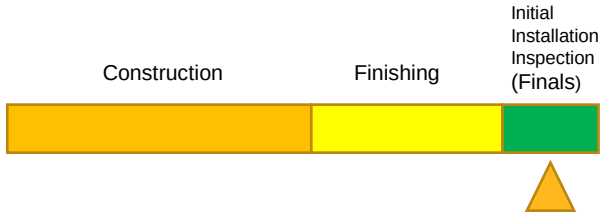
- All interior drywall has been installed, taped, sanded, and first coat of primer applied
- The home has been cleaned of all loose construction and finishing materials
- A New MERV 11 filter has been installed, and is identified by the manufacturer
- The furnace has not been previously activated *includes circulation fan
- The Builder portion of the finishing heat activation form has been completed
- The contractor portion of the finishing heat activation form has been completed (when applicable)
- Arrangement have or will be made for post use verification and final commissioning
- Ongoing site assessment will be made to ensure the conditions for finishing heat are met
- Enbridge will be contacted for initial installation inspections once finishing construction is completed prior to homeowner occupancy

Note: The furnace's return air and supply air openings must be covered to minimize infiltration of dust and/or debris during early stages of construction prior to activation for finishing heat (e.g. drywall installation, woodworking).

Arrangements must be made between the builder and contractor in accordance with manufacturers commissioning requirements.

Important: If a new furnace not approved for construction heat is used for finishing heat without meeting the requirements of the *TSSA advisory (FS-232-17)* and these guidelines, such furnace cannot be left for permanent use for homeowner occupancy.

Guidelines for Initial Installation Inspections Prior to Homeowner Occupancy



Enbridge Gas Distribution must conduct an initial inspection of all gas appliances before homeowner occupancy (Ontario Regulation 212/01). 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.

When is a home ready for initial installation inspections?

Initial installation inspections shall be conducted when the construction and finishing stages are completed and all natural gas appliances are installed, in accordance with codes and regulations. This includes all appliances intended to be installed at time of occupancy.

Guidelines for Initial Installation Inspections Prior to Homeowner Occupancy

Minimum site requirements for initial installation inspections:

- All natural gas equipment intended to be installed is ready for activation and inspection. [1]
- Building is substantially completed and suitable for occupancy:
  - Builder has completed all major interior construction work. [2]
  - Builder has completed all major finishing work within the building. [3]
  - Interior Electrical and Plumbing work has been completed.
  - The interior is cleaned of all construction and/or finishing materials (i.e. floor, walls, counters, appliance(s), ductwork, etc.).

[1] **Homes where the furnace was previously activated for residential finishing heat must have the Finishing Heat Activation Form on site for verification at time of initial installation inspections.**

[2] **Homes that still have exterior finishing work to be completed can request initial installation inspections provided all interior requirements are met.**

[3] **Occasionally items such as carpet installation, change orders, minor trim work, minor floor or tiling work may not be fully completed at the time of initial installation inspection requests. Depending on the adverse effect this work may have on the operation or installation of the natural gas equipment, the inspector will choose to accept or reject the installation.**

Rough-in work, which is work the occupant completes after moving in, is not considered part of ongoing construction or finishing stages during initial installation inspections.

Inventory Homes: Sometimes builders may develop inventory homes, which will be sold at a later date and will not have all interior finishing completed. In these situations, gas will be activated in accordance with temporary heat guidelines. Initial installation inspections should only be requested after all major interior finishing work is completed. Temporary heat (construction and finishing) guidelines can be found on our website at www.buildwithgas.com.

Guidelines for Initial Installation Inspections Prior to Homeowner Occupancy

Note

Use our website to request inspections before occupancy at www.buildwithgas.com. Use the Inspection Prior to Homeowner Occupancy form to fill out the addresses, list all appliances to be inspected, and request a day for an inspector to attend. You will receive a confirmation email for your records.

Initial Installation Checklist

- All major construction and finishing work has been completed.
- The home has been cleaned of all construction and finishing materials
- All gas equipment is fully installed as per local code and ready to be activated.
- Furnace and ductwork are cleaned and new filters installed to ensure there is no residual drywall and/or construction debris.
- Manufacturers' installation and operation instructions are present.
- All interior/exterior gas piping is installed in accordance with all local code.
- Pressure test tag(s) are complete and present.
- All appliance vents (combustion and air intake) are installed in accordance with all local codes.
- All gas pipe and appliance vents are sealed at entrance points.
- All clearances to the natural gas meter and regulator(s) are met.

Important:

Initial installation inspections are a regulatory requirement by the distributor to ensure the safe delivery of natural gas to its customers, and that an appliance will only be operated within environments in which it was intended.

Initial installation inspections are distributors inspections. They are not meant to be inspections for commissioning. Appliance and/or equipment commissioning is the sole responsibility of the HVAC contractor. Enbridge is not responsible for final setup/commissioning of appliances under any circumstances.

If the furnace was activated for finishing heat, the finishing heat activation form must be completed and present at time of initial installation inspections.

The builder must make arrangements with the heating contractor for final verification of set up and proper operation of the natural gas equipment.