

**Market Transformation: Drain Water Heat Recovery Program**

Program Name: Drain Water Heat Recovery Program (“DWHR”)

Goal: Achieve widespread installation of DWHR in residential new construction low rise homes in the Enbridge Gas Distribution Inc. (the “Company” or “Enbridge”) franchise territory. The DWHR program will be positioned as a door opener for the Company’s new Integrated Design Process (“IDP”) initiative being launched in 2012. It is expected that some of the builder participants in the DWHR program will also be interested in the IDP program.

Target Market: Builders of new, residential, low rise (towns, semis, and detached homes) homes in the Enbridge franchise territory. Enbridge will be targeting its promotional activity directly to the builder market. The ultimate target market is residential Rate 1 customers, purchasers of new homes.

End Uses Addressed: Water heating

Background: DWHR saves water heating energy by capturing the waste heat from drain water and using it to pre-heat inlet water. Enbridge’s DWHR program focuses on encouraging builders to install the measure during construction of a new home. To date, Enbridge has worked closely with a number of builders, providing installation training and installation in model homes. This initiative has allowed Enbridge to build new relationships with the builder market which can be leveraged as part of the IDP initiative roll-out.

Witnesses: P. Goldman  
A. Mandyam  
J. Ramsay  
S. Surdu

With changes to the Ontario Building Code (“OBC”) in 2012, builders have an option to choose either a performance path or a prescriptive path to achieve compliance, where the performance path is achieved through a combination of measures. The DWHR brings the opportunity for builders to meet the energy portion of the OBC requirements by installing the unit in conjunction with one or more other measures offered in a series of prescriptive “packages” under the new OBC.<sup>1</sup> By the end of the Code cycle in 2017, it is anticipated that the installation of DWHR will surpass 50% of all new homes in the market, allowing the measure to be specifically included in the new OBC (i.e., mandatory, subject to the Code adoption process).

As a result of Enbridge’s activities to date, participating builders are now installing the measure in all of their new homes. The intent of the program is to amplify that outcome to the rest of the builder market and thus demonstrate that the practicality of including the measure as part of the next OBC. The ultimate success of the initiative is highly dependent upon the builder relationship and builder enrollment is critical to achieving those installations.

Barriers: The primary barrier relates to a lack of awareness among builders about the potential savings and the relative ease of installation. Other barriers include:

- Trades contractors are not willing to install the units;
- Builders are reluctant to change traditional practices; and
- Energy efficiency technologies and related activities compete with other construction priorities.

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<sup>1</sup> Note that DWHR measure alone will not be sufficient to achieve OBC compliance.

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Strategy: The following table presents a summary of the proposed strategy and tactics for the program. These are further described in the Program Design section below.

Strategy - DWHR	Program Elements - DWHR
Introduce technology to builders and demonstrate energy savings that are achievable	Recruit builders, Enroll them in the DWHR initiative
Demonstrate ease of installation	Support for training and demonstration activities including site installation and model home installation
Encourage rapid market uptake	Provide DWHR units at no cost to participating builders

Program Design: Enbridge support is generally focused on achieving a rapid uptake in the market with a commensurate exit plan as transformation occurs. The program has three main components:

- Introduction of the technology and demonstration of its benefits to builders resulting in builder sign-on and commitment to install the units;
- Training and related demonstration activities intended to demonstrate ease of installation, including specific site installations and support for trainers to engage the new construction market; and
- Provision of the DWHR units at no cost to participating builders.

The marketing of the program will leverage Enbridge's existing relationships with new home builders and will also seek to marry this initiative to the IDP initiative. The table provided on the following page illustrates the various program elements.

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