Building your business on energy efficiency

Building Up

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AN ALLETE COMPANY

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DWHR DRAIN WATER HEAT RECOVERY

Simply Saves Energy & Money

"It sounds too simple." That often is the first reaction when homebuilders, plumbers, and consumers hear about drain water heat recovery (DWHR). The process reclaims heat from warm wastewater and uses it to preheat fresh water before it enters the electric water heater. In the right applications, it can reduce water-heating costs by up to 40 percent and save average homeowners more than $100 per year.

Here is how it works. A DWHR unit consists of copper tubes wrapped around a copper pipe. It replaces a section of main vertical drainpipe, preferably beneath a home's primary shower. As warm wastewater from the shower flows down the drain, it clings to the walls of the pipe, transferring its heat to cold, fresh water that is traveling upward through the wrapped copper tubes. This "preheating" significantly reduces the amount of energy needed to heat the incoming water for showering, dishwashing, clothes washing, and other household uses.

"People tend to be skeptical when things are too easy, but it really works," said Rod Buchalter, RenewABILITY Energy, an industry leader in DWHR. "When you shower, 90 percent of the heat in the water goes down the drain, but DWHR recovers half of it. In other words, if 90 cents of your energy dollar is going down the drain, this puts 45 cents back in your pocket—money you don't have to spend heating water." continued

Plumber training events cosponsored by Minnesota Power, ComfortSystems, and RenewABILITY Energy stressed the benefits of DWHR and demonstrated the ease of installation in an actual home.

A Message from …

Minnesota Power has long been a respected and credible resource for home building professionals who pride themselves on constructing healthy, durable, energy efficient homes. For more than 20 years, we have forged meaningful partnerships with builders, architects, contractors, suppliers, and manufacturers who share our commitment to energy efficiency and high performance.

We continually look for innovative products and technologies that help homeowners save energy and lower costs, while helping members of the home construction industry grow their businesses through energy efficiency. Drain water heat recovery (DWHR), featured in this issue of Building Up, is a simple technology with tremendous market potential for both new and existing homes. We hope you learn more about DWHR and take advantage of incentives and rebates.

We also would like to introduce two people on our team who are working closely with the home building community to promote energy efficiency:

Chad Trebilcock, Energy Efficiency Specialist-Residential, is your contact for general information about Minnesota Power's numerous resources for homeowners and home construction professionals who are interested in energy conservation. He can be reached at 218.355.2759 or ctrebilcock@mnpower.com.

Doug Manthey, Triple E New Construction Consultant, is your contact for beginning the plan review process for Minnesota Power's Triple E New Construction program. Call him at 888.744.9003.

Minnesota Power's Power of One® Conservation Improvement Program (CIP) is here to help build your business on energy efficiency.

… the CIP Team

continued from front Minnesota Power is working to educate building contractors and plumbers about DWHR and its energy-saving benefits. The utility recently partnered with ComfortSystems and RenewABILITY Energy to present a DWHR Dine and Dialogue session and plumber training workshop. The training included an actual installation of a DWHR unit in a new home being built by Zierden Builders to Minnesota Power's Triple E/ENERGY STAR® standards for energy efficiency and performance.

"It is important for people in the building industry to learn about new products and technologies," said Doug Manthey, a consultant with the Triple E/ENERGY STAR® program. "DWHR units can save homeowners a lot of energy and money if they are installed correctly, and we encourage Triple E builders to consider them for new construction. They also can be retrofitted into existing homes."

Manthey noted that because DWHR units depend on a vertical drop, they are not ideal for houses with septic systems or single-story homes built on slabs, but there may be ways to incorporate the technology if reviewed in the early stages of construction.

"There are a hundred different ways to spend money trying to save energy, but this is simple and the payback is quick," said Jay Zierden, a Triple-E homebuilder. "I plan to incorporate DWHR as part of our standard package—something we just do automatically."

IN THE FIELD

Installing DWHR in Existing Homes

"DWHR units are relatively easy to install. You know they work right after you put them in. Turn on the shower and you can feel nice tempered water going to the hot water tank. They reduce wear and tear on the water heater and there are no moving parts, so they are virtually maintenance free. I feel they are a worthwhile investment."

Glen Nordquist, Plumber, Carlson Duluth Company

Featured Incentives

EDUCATE YOUR CUSTOMERS about Minnesota Power's conservation incentives and build your business on energy efficiency:

Drain Water Heat Recovery $400 rebate for Minnesota Power customers who heat their water with electricity for installation of a qualifying DWHR unit by a manufacturer-trained plumber in new or existing homes. This rebate is available through December 31, 2011. For more information, call 800.677.8423 or visit **www.mnpower.com/dwhr**.

Heating & Cooling System Upgrades (through Dec 31, 2010):

- **High Efficiency Furnace with ECM Motor:** $200 rebate
- **Air Source Heat Pump:** $300 rebate on furnace integrated system and $500 standard rebate on mini-split ductless system
- **Ground Source Heat Pump:** $200/ton rebate on closed loop and $100/ton rebate on open loop

Visit **www.mnpower.com/foundmoney** for more information on rebates and energy-saving tools to help your customers make energy-saving investments and build your reputation as a business committed to delivering the benefits of energy efficiency.

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MARK YOUR CALENDARS

Preconference: Feb. 21, 2011
Core Conference: Feb. 22-23, 2011
Duluth Entertainment Convention Center

For more conference information and to register early, visit us at www.duluthenergydesign.com

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