



EARTHLINKED
TECHNOLOGIES

Renewable energy for people and planet



e-Newsletter ~ January 2012

EarthLinked in The NEWS



An article published in the November 21, 2011 issue of *the Air Conditioning, Heating & Refrigeration NEWS* uses EarthLinked as the definitive source on Direct GeoExchange. Authored by John Tomczyk, a Professor of HVACR at Ferris State University, the article "Geothermal Comes in More Than One Flavor" describes in detail the technology behind Direct GeoExchange systems.

The professor's interest in ETI's unique method of refrigerant management prompted his initial inquiry while updating the Refrigeration and Air Conditioning Technology textbook of which he is a co-author.

[Read the article](#)

Commercial Water Heating Sales Tools

Product Literature

We now offer two pieces of product literature available to Sales Reps and Dealers for EarthLinked's Commercial Water Heating product line. Owners or managers of hotels, restaurants, multi-family and healthcare facilities will appreciate the energy saving features of geothermal water heating.

- **Presentation Folder:** A presentation folder designed to provide a customized information package that can include inserts such as a data sheet, customer testimonials or feasibility report.
- **Brochure:** Prospective customers can read about saving up to 75% on their water heating bill and up to 40% on their total energy bill—all with a 3 to 5 year payback. Not bad for commercial users who are looking to go green and reduce operating costs in the process!



Please contact [Gail Barna](#) in Customer Service if you would like to place an order for this brochure or other literature.

Proven Energy Savings Website

A new website at www.provenenergysavings.com is now online to provide additional exposure and specific information on Commercial Water Heating. The website points out that few organizations are aware of their cost to heat water because there is no separate utility meter on the water heater.

Hotels, multi-family residences, dormitories and healthcare facilities can consume hot water in the bath, laundry, kitchen and swimming pool. Restaurants, commercial laundries, multi-family dwellings, and food and dairy processing plants need large amounts of hot water, as well.

The website offers insight on how easy it is to tame the hidden meter-spinner in the back room of any facility.



Staff Briefing

Bob Cochran is transitioning from President of EarthLinked Technologies to his new role as Founder and Chairman. In addition to being the developer of the EarthLinked heat pump and Refrigerant Management System, Bob spent 11 years in engineering with General Electric, and 23 years in engineering and management with the Lakeland, Florida municipal electric system. Bob will continue to advise and consult with EarthLinked in R&D.

Jerre Wilson, who has been Executive Vice President and General Manager for the past five years, will assume the role of President. Jerre has 42 years experience as an engineer and manager with emphasis on development and administration. His experience includes 17 years with TVA, including the management of energy conservation and alternative energy programs.

Kevin Nelson has recently joined the team as Manager of Technical Sales. Based in North Carolina, Kevin will focus on Dealer support in that state, as well as seeking opportunities for Commercial Water Heating sales.

John Webster is our new Technical Support Representative. Also based in North Carolina, John offers pre and post installation support to Dealers and Sales Representatives along the east coast.

Geothermal Drilling Partner

In early 2011 Mid-Western Machinery Company, Inc. was acquired by Bramko Specialty Products, LLC. The company is now operating under the name [Mid-Western, LLC](http://www.bramko.com). All manufacturing functions are now being performed in Bramko's manufacturing facility near St. Louis, Missouri.

Mid-Western has been manufacturing quality drilling equipment for over 65 years, offering Hydraulic Rotary Drills that can be converted to fit just about any piece of equipment.

Capable of drilling up to 300 feet but leaving a very small footprint, these rigs allow for easy mobility with minimal landscape damage perfect for quick installation of direct exchange systems.



Mid-Western HRMD110
(Diesel Unit with Ramrod
Mini Skid)

News from Australia

Byron Bay Library Project

The new Byron Bay Library, located in Byron Shire, Australia, will be heated and cooled by 10 EarthLinked geothermal systems, ranging in capacity from 5.25 kW to 21 kW for a total capacity 106.75 kW or 30.5 tons. The building has been designed to incorporate sustainable features which will provide the building with a 5-star environmental rating.



Environmental design has addressed key issues including reducing the heating and cooling load through the selection of building materials, orientation, high efficient lighting, photoelectric cells and time switches, glazing, shading elements, geothermal heat pump and energy monitoring.

◆The Byron Bay Library will be a statement of what can be achieved with ecological sustainable design features and will be the first public building in the region to meet the 5 star environmental rating standard,◆ says Mayor Jan Barham. ◆This design standard reflects the core principles of the community to address environmental building issues.◆

Australian Geothermal Energy Group



EarthLinked's Australian Sales Representative, Donald Payne of Direct Energy, has been actively involved as a presenter and co-leader of Technical Interest Group with the Australian Geothermal Energy Group (AGEG). A Geothermal Tech Clinic was recently held to educate business leaders on preparing Australian businesses for a sustainable economy. Some of the key topics discussed:

- How can geothermal energy be used to cost effectively heat, cool, improve energy efficiency and reduce carbon footprints in residences and small commercial buildings?
 - How can geothermal energy be used for the production of hot water?
 - What sources of funding and tax incentives are available for the installation of direct use geothermal systems?
 - What market development models for renewable energy technology have proven successful to date, and how might Australian stakeholders get involved in the geothermal HVAC sector?
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Virginia Homeowners Delighted

An excerpt of an email received from a homeowner in Virginia where EarthLinked is used to heat /cool the home and provide domestic hot water states:

◆ We wanted to let you know how delighted we are with our EarthLinked Geothermal System. The house is always comfortable, and our heating and cooling costs are less than one-third of comparable sized homes nearby. We achieved the US Green Building Council's LEED Silver certification in September 2010, ◆ say homeowners Wayne and Joan Peppers.



◆ Our home has been featured in *The Washington Post* (May 7, 2011), local magazines and newspapers (Fall edition of *The Roanoker*), and was the most-visited house during the October 2010 Smith Mountain Lake Charity Home Tour, with over 1,200 visitors."

◆ For each interview and the charity home tour, we were asked many questions about our EarthLinked System, and many referrals were made to your website during the tour, and in visits to our website that resulted from the publicity. Thanks so much for providing such an efficient and reliable system !◆

Thank you, Mr. and Mrs. Peppers, for sharing your story! Read more about the Peppers◆ home at www.peppersgreenhome.com.

Product Updates

R-410A Product Line

The full line of R-410A compressor units and matching air handlers will be available by mid February 2012. For those of you who may have already purchased R-410A compressor units you will notice some rather distinctive changes in the overall design. The R-410A system will now incorporate a TXV/CAV assembly located in the air handler or within the heat exchanger cabinet for hydronic models. R-410A is a blended refrigerant and under certain conditions in any heat pump system, especially in the cooling mode, can fractionate and cause reduced efficiency. By placing the combination of an expansion device and cooling assist valve in or near the air handler or hydronic heat exchanger the possibility of performance degradation is eliminated.

Commercial Water Heating

EarthLinked lab testing of heat pumps using refrigerant R-134A has resulted in heated water well beyond the current 110◆ F limit of the ETI CWH unit. Temperatures exceeding 120◆ F can be achieved at COPs greater than 4, and 140◆ can easily be delivered for brief periods to comply with forthcoming ASHRAE Standards for Service Water Heating. Currently the project is still in the engineering department with unit drawings underway with a prototype to follow in the first quarter of 2012.

The Auxiliary Cooling Module Redesign

Heat Craft Refrigeration of Stone Mountain, Georgia will supply specially circuited condensers for use in our Auxiliary Cooling Module (ACM). In addition to lab testing in Lakeland, a trial unit was successfully tested throughout the summer of 2011 in Dallas, where temperatures exceeded 100◆ F for more than 30 days. Testing is currently underway to quantify the capacity and performance gains so that the information can be included in the equipment selection tables.

Employee Spotlight

Gail Barna has been with ETI since 2007. Gail started out in the manufacturing department but later transitioned to Customer Service where her knowledge of parts and pricing keep orders moving efficiently from production to shipping, and out the door. When you call to place an order or speak to Technical Support, her voice is most likely the first one you will hear.

We are proud that Gail is frequently the subject of compliments about our customer service from dealers and sales representatives



EarthLinked Technologies, Inc. | 4151 S. Pipkin Road | Lakeland, FL 33811 | www.earthlinked.com