

Designing and Implementing a Utility Geothermal Heat Pump Program

December 9, 2009

By
John Root

- Went to work for MP&W in 1999 as the Energy Services Advisor
- Discovered that the Geo Resource in the area was immense!
 - Muscatine is located next to the Mississippi River
 - The Mississippi River is the 5th Largest River in the world, discharges at an annual average rate of between 200 and 700 thousand cubic feet per second (7,000–20,000 m³/s).

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- South end of City is large alluvial field covering 10 to 20 sq miles with a water table about 20' below surface
- 20 or 30 sand pits filled with water which are 50 to 75' deep.
- The city of Fruitland is located above the alluvial field and is in MP&W's service area, has approx. 400 homes.
 - Each home has a sand point which was used for water before city water was run to the area.

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- After realizing the magnitude of the resource I started contacting local heating and cooling contractors.
 - Some had experimented with Geo in the past
 - They had problems
 - None were interested in selling or installing Geo
 - Their biggest concerns were:
 - The installation of the fields
 - Reliability of the heat pumps

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- Offer workshops on Geo
 - Attendees were mostly home owners
 - Two local contractors attended
- Utility began to discuss
 - How to encourage customers to drive the market
 - Purchasing horizontal boring equipment
 - Setting up a marketing program to encourage HVAC dealers to offer Geo.
 - Local dealers were unresponsive

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- How we managed to get dealers involved in MP&W's Geo Program.
 - Went to the Iowa Heat Pump Associations' annual conference and contacted the Horizontal bore equipment dealers letting them know that MP&W was considering purchasing a boring machine so we could provide boring to customers who wanted Ground source heat pumps
 - Word spread quickly
 - Was contacted by several boring companies and several Geo Dealers/Manufactures at the conference

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- Developed list of companies interested in installing Ground Source Heat pumps in Muscatine.
- Developed a Residential and Commercial Rebate program for MP&W Customers
- Developed a Marketing plan for Geo in the MP&W service area.

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- MP&W Geo Rebate Program can be found @
<http://www.mpw.org/greenmuscatine.aspx>
- Residential rebate based on tons installed:
 - \$150 per ton for single stage
 - \$300 a ton for dual stage
 - Installer must:
 - Be approved dealer of a nationally known HP Manufacturer
 - Provide proof of insurance
 - Be IGSHPA Certified

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Commercial rebate based on tons installed and a declining scale:

- Information on MP&W's commercial geo rebate program can be found at:
 - http://www.mpw.org/pdf/2009CommercialRebatePrograms_LTR.pdf
- Program uses a decline scale based upon installed tonnage.
- Installer must:
 - Be approved dealer of a nationally known HP Manufacturer
 - Provide proof of insurance
 - Be IGSHPA Certified

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- Marketing Program:
 - MP&W is a cable provider so we marketed the Geo program in the following ways.
 - Adds on our own cable channel
 - Phone messages when our customers would call.
 - Scrolling messages on various channels on our cable network
 - By going on the Education Channel and participating in Educational Programming
 - On the bill marketing materials
 - Articles in the employee news letter

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- Marketing Program:
 - Efforts made to work with Geo Dealers who expressed a desire to sell in MP&W service area.
 - Offered discounts on cable advertising to participating dealers.
 - Included the names of participating dealers on MP&W marketing materials.
 - Ran a few adds in local news paper.

Designing and Implementing a Utility Geothermal Heat Pump Program Results

- Residential 20 tons:
 - 4 residential Systems
- Commercial Over 350 tons.
 - Schools
 - 5
 - Environmental Learning Center
 - Musco Lighting
 - Humane Society
 - Watermelon Hills Kennels'
 - Welsh Apartments
 - Allsteel Inc.
 - Pending

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Lessons Learned

- A greater emphasis needs to be put on education to over come preconceived ideas about reliability and economics.
- Marketing efforts need to be consistent and repeated often.
- More emphasis needs to be put on the residential market.
- There is a lot of potential among the commercial customers especially when you show them how they can benefit economically.
- The same is true for the residential market.

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For more information please contact:

The RootCellar

John R. Root

pvperson2@aol.com

www.therootcellar.us