2013 Annual Conference A Success!

The Wisconsin Geothermal Association held its 2013 Annual Conference on February 13 and 14 at The Osthoff Resort in Elkhart Lake, Wisconsin. Approximately 80 people attended the two-day event that included two keynotes - one from Bill Wendle, Deputy Secretary of the Department of Safety & Professional Services and another from Tom Huntington, Chairman of the Geothermal Exchange Organization and President of WaterFurnace. The event also included sixteen breakout sessions, an exhibitor area, and plenty of time for industry networking.

We especially appreciate some of the feedback we received!

"Great format and timing. Presentations were high quality and informative."

"Gets a little better every year."

"Great location and time of year!"
Many thanks to all of our exhibitors and especially to our conference sponsors:

**Gold-Level**

![ENERTECH Logo]

**Silver-Level**

![B&D MFG, INC Logo]

**Bronze-Level**

![WaterFurnace Logo]
Annual Meeting Held: Directors/Officers Elected, Bylaws Changed

At our Annual Meeting, the following were elected to serve three-year terms on the Board of Directors:

**Mark Flock** (Director Term Ends 2016)
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[mark@flocksheating.com](mailto:mark@flocksheating.com)

**Dave Mitchell** (Director Term Ends 2016)
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The members thanks Manus McDevitt of Sustainable Engineering (Madison) for his years of service to the association. Manus decided to not seek reelection to the Board of Directors.

The Board of Directors elected the following to serve as officers of the association:

**Mark Flock** – President
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[mark@flocksheating.com](mailto:mark@flocksheating.com)

**Jerry Brown** – Vice President
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**Leo Udee** – Secretary
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**Dave Mitchell** – Treasurer
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Bruce Walker was thanked for his service as president in 2011 and 2012. Bruce will continue to serve the association as a Director as his current term does not end until 2015. As president, Bruce transitioned the association through a management change, was instrumental in getting a law passed in Wisconsin regulated those who construct geothermal drill holes (vertical), has attended the National Groundwater Association’s Annual Fly-In the past two years to promote geothermal, and served as a strong advocate for the development of new technologies and the expanded use of geothermal in the state.
What's A "Negawatt" And Why Does It Matter To The Geothermal Industry?

Simply put, a "negawatt" is a measurement of energy that is not used....

There are a couple of state laws that affect geothermal in Wisconsin. In one instance - 2005 Wisconsin Act 141 - geothermal is recognized as a valuable part of the state's arsenal for reducing its energy use. In effect, Act 141 allows the state to use geothermal on its own building and to take "credit" for the use of geothermal in meeting its renewable energy goals. More than that, Act 141 included geothermal in the list of technologies that could be incentivized through the use of Focus on Energy rebates, for instance. All of this is good, but it's not quite enough.

As a state, we have an Energy Policy that is laid out in Chapter 1 of the Wisconsin Statutes. That policy speaks to conservation and renewable energy, but it is silent with regard to geothermal technology. That needs to be fixed.

Geothermal is mentioned in other sections of the statutes and it is included in the list of renewable technologies but - and this is important - only to the extent that geothermal is producing electricity. That may be a useful definition in areas of the country where "hot rocks" geothermal systems are an option, but that's not the case in Wisconsin.

We need to be thinking more broadly about geothermal in our state, and that's where the "negawatt" comes into play....

Geothermal is not simply an energy-conservation measure. Geothermal uses a renewable resource - the earth - to take efficiencies into the 300, 400, and 500 percent level. That is, put one unit of energy in and you can get five units of energy out. It's not about making better use of that unit of energy, it's about capturing the renewable energy in the ground.

According to the U.S. Department of Energy (DOE), buildings are the largest single sector of total U.S. energy consumption - about 41% of energy used in 2010 and 60% of energy used in buildings is for “thermal loads.” Some quick math suggests that nearly a quarter of all energy used in the nation is for space heating, cooling and water heating. There's a place for additional energy production, but that production may only be able to keep pace with population growth and/or an increasing number of electronic devices that we are using. (Imagine, for instance, what would happen if electric car technology were to become more viable for most people. Where would that energy come from and at what expense?)

Indeed, the greatest opportunity appears to be to increase our energy capacity is not to focus on the production side of the equation, but on the consumption side, and to focus not only on efficiency, but on ways to multiply the value of each unit of energy we use.

Here's a way to calculate the potential savings. If a typical 3-ton residential GHP can reduce summer peak electricity demand by approximately two kilowatts (kW), and if 500 units are installed, you have a peak power demand reduction of a megawatt. That's a megawatt of electricity NOT used is equal to one "negawatt."

In Wisconsin, the WGA is in the early stages of discussion with state legislators, regulations, and other interested parties about the need to revisit the real purpose of our state's renewable energy goals. If the idea is to reduce the amount of fossil fuel being used to produce electricity, that can be done through production as it can be through a reduction of demand.

Currently, only two states include thermal load avoidance through the use of geothermal systems as renewable. We think it's time to revisit that notion in Wisconsin and give utilities credit for "negawatts," and in doing so, encourage utilities to offer incentives for the installation of GHPs by their customers.
Mark Your Calendar And Hold The Date!

The Wisconsin Geothermal Association is pleased to announce the date and location of its 2014 Annual Conference:

Wednesday February 19 - Thursday, February 20
The Osthoff Resort
Elkhart Lake, Wisconsin

More information coming soon!

Committees Forming

Are you interested in helping plan the 2014 Annual Conference?

Are you interested in helping us spread the word about the benefits of geothermal and the WGA?

President Mark Flock and the Board of Directors invites all members to let their interest be known and to help us make your association the very best that it can be. Your input is critical to our success and participating can be as easy as a few short conference calls during the course of the year.

Want to know more? Want to volunteer? Contact Jeff Beiriger at jeff@assocmgmtservices.com or call him at (414) 331-2059.
Resources For Driller and Others

Randell Clark of the Wisconsin DNR and one of our speakers at the Annual Conference, provided us with a list of resources that might be of interest to both drillers and others involved with in the state's geothermal industry. Among other ideas, Mr. Clark suggested that the list can be used to research if there are potential issues with the proposed location of a geothermal system.

**DNR Well Construction CD**
(Well construction records 1988 - 2012)
Call Judy Gifford at: (608) 266-0153 or e-mail to: judith.gifford@wisconsin.gov

**DNR Well Construction Records Search Screen:**
(Well construction records 1988 - 2012)
[http://prodoasext.dnr.wi.gov/inter1/watr$ startup](http://prodoasext.dnr.wi.gov/inter1/watr$ startup)

**DATCP (Department of Agriculture, Trade and Consumer Protection)**
**Well Construction Website:**
(Well construction records (1935 – 1989)

**BRRTS (Bureau of Remediation & Redevelopment Tracking System) Website:**
(Environmental Repair Sites and Leaking Underground Storage Tank Sites)

**BRRTS Search Screen:** [http://dnr.wi.gov/botw/SetUpBasicSearchForm.do](http://dnr.wi.gov/botw/SetUpBasicSearchForm.do)


**DNR Groundwater Retrieval Network:**
[http://prodoasext.dnr.wi.gov/inter1/grn$ startup](http://prodoasext.dnr.wi.gov/inter1/grn$ startup)

Focus On Energy Provides Updated Information On Geothermal

Focus on Energy has an updated website and it includes new information on geothermal. The site provides information about the budget associated with the with the renewables program. You can find information here: [http://www.focusonenergy.com/residential/renewable/geothermal-heat-pumps](http://www.focusonenergy.com/residential/renewable/geothermal-heat-pumps).


Note: For the record, WGA doesn't necessarily agree with all of the numbers presented on the site. We think geothermal is far more efficient than stated and we're working with FOE to look at some additional data and, possibly, to revise the site.
**Trenching Safety**

The installation of geothermal systems will almost always require some sort of excavation or trench. And while geothermal installations may not immediately strike you as dangerous, it's important to remember that a cubic yard of soil can weigh as much as a car. It doesn't take much to create a potentially serious hazard.

According to OSHA, two workers are killed every month in trench collapses. That's why the agency has made trenching and excavation a focus area.

Employers must provide a workplace free of recognized hazards that may cause serious injury or death. The employer must comply with the trenching and excavation requirements of 29 CFR 1926.651 and 1926.652 or comparable OSHA-approved state plan requirements. If you are the prime contractor and subcontract excavation work, it's still important for you to know the rules, as your company could be held responsible for providing a safe jobsite - both for your own employees and those of other contractors.

An excavation is any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal. A trench (trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 meters).

**Dangers of Trenching and Excavation**
Cave-ins pose the greatest risk and are much more likely than other excavation-related accidents to result in worker fatalities. Other potential hazards include falls, falling loads, hazardous atmospheres, and incidents involving mobile equipment. One cubic yard of soil can weigh as much as a car. An unprotected trench is an early grave. Do not enter an unprotected trench.

**Trench Safety Measures**
Trenches 5 feet (1.5 meters) deep or greater require a protective system unless the excavation is made entirely in stable rock. If less than 5 feet deep, a competent person may determine that a protective system is not required. Trenches 20 feet (6.1 meters) deep or greater require that the protective system be designed by a registered professional engineer or be based on tabulated data prepared and/or approved by a registered professional engineer in accordance with 1926.652(b) and (c).

**Competent Person**
OSHA standards require that employers inspect trenches daily and as conditions change by a competent person before worker entry to ensure elimination of excavation hazards. A competent person is an individual who is capable of identifying existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to workers, soil types and protective systems required, and who is authorized to take prompt corrective measures to eliminate these hazards and conditions.

**Access and Egress**
OSHA standards require safe access and egress to all excavations, including ladders, steps, ramps, or other safe means of exit for employees working in trench excavations 4 feet (1.22 meters) or deeper. These devices must be located within 25 feet (7.6 meters) of all workers.

**General Trenching and Excavation Rules**
- Keep heavy equipment away from trench edges.
- Identify other sources that might affect trench stability.
- Keep excavated soil (spoils) and other materials at least 2 feet (0.6 meters) from trench edges.
• Know where underground utilities are located before digging.
• Test for atmospheric hazards such as low oxygen, hazardous fumes and toxic gases when > 4 feet deep.
• Inspect trenches at the start of each shift.
• Inspect trenches following a rainstorm or other water intrusion.
• Do not work under suspended or raised loads and materials.
• Inspect trenches after any occurrence that could have changed conditions in the trench.
• Ensure that personnel wear high visibility or other suitable clothing when exposed to vehicular traffic.

**Protective Systems**
There are different types of protective systems.

**Benching** means a method of protecting workers from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels. *Benching cannot be done in Type C soil.*

**Sloping** involves cutting back the trench wall at an angle inclined away from the excavation.

**Shoring** requires installing aluminum hydraulic or other types of supports to prevent soil movement and cave-ins.

**Shielding** protects workers by using trench boxes or other types of supports to prevent soil cave-ins. Designing a protective system can be complex because you must consider many factors: soil classification, depth of cut, water content of soil, changes caused by weather or climate, surcharge loads (e.g., spoil, other materials to be used in the trench) and other operations in the vicinity.

For additional information, visit OSHA’s Safety and Health Topics web page on trenching and excavation at [www.osha.gov/SLTC/trenchingexcavation/index.html](http://www.osha.gov/SLTC/trenchingexcavation/index.html) and [www.osha.gov/dcsp/statestandard.html](http://www.osha.gov/dcsp/statestandard.html).
Join us for our **8th Annual Geo Ride**. Drive or ride in ANY open-air vehicle. A motorcycle, a convertible, or even a truck with the windows rolled down will do!

The ride will take you through western Wisconsin and some of the most beautiful roads in the state. Stops are planned for lunch and at the end of the ride.

Please contact Mark Flock (608/654-5522) or the WGA office (262/649-9125) for additional information and to let us know you plan to join us!
More Questions....

While it's more typical that we have consumer-oriented questions, we've noticed a trend toward more contractor-oriented questions of late. That's good and that's bad....

It's good because it means that our members recognize that we can be a source of information not only on geothermal, but on business-related matters as well. More likely than not, if we don't have an answer, we know somebody who does. Our network of business advisors - from legal, to marketing, to human resources, to government - can help you get the information you need to make better, more informed business decisions.

So what's bad about the surge in contractor inquiries? Well, most of them have to do with getting paid for your work. We'd much rather focus on ways to save money than ways to collect it.

That said, we offer the following advice with regard to getting paid for your work:

Know who you are working for! Don't assume the person you are dealing with is the owner of the property. That assumption could cause you a problem when you go to collect. You need to know the names of all of the legal entities that own the property. Your county assessor or register of deeds is a great resource for this information.

You need to know a little bit about the equity in the property. A lien really only helps you if there is equity in the property. If there's no equity, everyone else will get their piece of the pie and leave you with nothing.

Consider partnering with a financing company to offer customers options. You get paid and the risk for payment shifts to the company offering credit. You might lose a customer if he/she can't get approved, but you might have lost a whole lot more by proceeding with the work. And it might cost you a couple of percentage points, but spread among the volume of work you do, it might be worth the cost because it might increase sales and help you avoid that "bad" job.

Nobody likes to ask for a whole lot of personal information, but consider asking for employment information. Hopefully, you won't have to use it, but if you have to go to court to be paid and you win a judgment against the property owner, you can use this employment information to ask the court for wage garnishment until the debt has been paid.

While it has its limitations, consider using CCAP, Wisconsin's Circuit Court Access Program, to find out more about your customers. It's easy to get intrigued by some of the information you will find -speeding tickets and the like - but that doesn't tell you much about your customer. Look for information about collections procedures or, for businesses, problems making payroll or keeping up with payments required tax filings, for instance.

Keep in mind that CCAP does not deal with bankruptcy. You can use other sources to determine whether or not your customer has declared bankruptcy recently. If your customer declares bankruptcy while you are on the project, you're probably dealing with something that will require the use of an attorney to improve your chances of payment. Don't wait to make that call. Call as soon as you are alerted to a possible problem.
Do You Know About ATCP 110 And How It Affects YOU?

Are you familiar with ATCP 110? If you do residential contracts for construction/remodel, you should be....

ATCP 110 is a rule related to consumer protection and, specifically, contracts for home repairs. Under ATCP 110, if contractors fail to follow the requirements of the rule, they can be held responsible for double damages. The question is "double" what? The value of the contract? The profit?

What we are seeing is more and more lawyers using ATCP 110 in payment disputes. The contractor is owed money and the lawyer for the homeowners makes a claim under ATCP 110 for double the value of the contract. As a result, what was a $15,000 project for a new well can very well end up a $30,000 claim against the contractor over some technicality. When you go to court to make your payment claim, the counter-claim under ATCP 110 really changes the balance of power in the negotiation. "Splitting the baby" might result in the contractor walking away from the work they did without receiving a dime.

We're working on a long-term solution to some of the problems with ATCP 110, including greater clarification with regard to "damages." In the meantime, the best advice we can give is to become educated.

WGA has a guidance document available that may help you. Contact the WGA office at (877) 782-6815 for a copy of the document. For a copy of the rule, see ATCP 110 by clicking HERE.
Many thanks to our Annual Sponsors!

Quotable

“Some tasks have to be put off a dozen times before they slip your mind.

Ignorance can't be bliss or a whole lot more people would be jumping up and down with joy.

Today, if someone offered us the world on a silver platter, most of us would take the platter.

If we used the metric system in our country, would 28.349 grams of prevention be worth .453 kilograms of cure?

All quotes are unattributed.

(The quotes above are part of a collection of hundreds of quotes that were found among the papers of Ronald Reagan.)
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