

Geothermal Exchange Organization

GEO Industry News



Chairman's Message



It's Time for Action

With Renewed Incentives, GEO and the Industry Must Execute Creative Strategies for the Future

By Joe Parsons, GEO Chairman of the Board

Editor's Note – Joe Parsons (EarthLinked Technologies) has served since April 2016 as Chairman of the Board of the Geothermal Exchange Organization. The GEO Board of Directors maintains a two-year election cycle for its officers. The group will select Parsons' successor at its next meeting, scheduled for Thursday, March 29, in Orlando, FL.

As I reflect on my last two years at Chairman of GEO, I first want to thank my fellow board members for their tireless contribution of time and influence over the past two years. Even as they faced the negatives of sales losses and layoffs brought on by the untimely loss of the federal tax credits for geothermal heat pumps, they remained positive and highly vocal in the fight for parity with solar technologies.

And I cannot say enough to compliment the staff of GEO, especially President and CEO Doug Dougherty. We greatly appreciated the personal sacrifices they made to get us the finish line for a tax incentive victory. The Board and our many allies worked incessantly in the fight to reinstate and extend the tax credits. Every Fly-In to Washington, DC during the past two years built the foundation of awareness that led to our success.

The process was definitely fraught with highs and lows, as the GEO team pinned its hopes for fairness in the tax code on legislative vehicles that championed our cause. We had H.R. 1090 in the House, and S. 1409 in the Senate—both crafted to give geothermal heat pumps and other orphaned technologies tax credit parity with solar.

Nearly everyone we spoke to on the Hill agreed that Congress should not be picking winners and losers in renewable energy markets, and that our technology needed a level playing field to grow and thrive. Yet time and again, dreams of attaching our tax credit language to “must pass” funding bills during the year were either dashed by Congress or kicked down the road.

Certainly, those were some of the worst months in my business career as a heating, ventilation and air-conditioning (HVAC) manufacturer. Geothermal heat pump companies across the industry were without a quick remedy for the dependency that we had built on the federal incentives. As 2017 wore

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on without a solution, the industry lost 50% in sales. For most companies, their only option was to make painful cuts to their workforces as we kept up our fight for justice in Washington, DC.

GEO was ultimately successful as Congress reinstated and extended the federal tax credits for both residential and commercial geothermal heat pump installations in February, retroactive through all of 2017 until 2022. But the year of incentives we lost after the tax credits expired at the end of 2016 came at a great cost that we don't want to repeat.

The industry and GEO must come up with creative new strategies during the next four years as we prepare for phase-out and sunset of the tax credits at the end of 2021. Implementation of marketing plans must begin very soon. I'm optimistic that the geothermal heat pump industry will come together to generate the necessary public awareness of the benefits our technology offers, and increase their economies of scale to reduce costs to consumers.

GEO should play a strong role in those outreach efforts at both the national and state levels, with support for education of homeowners, potential commercial customers, developers, architects, builders and specifying engineers. At the same time, the International Ground Source Heat Pump Association should redouble its training efforts to help the industry meet new demand for both residential and commercial geothermal heating and cooling systems. Problem installations cause a lack of confidence in the technology, so an increased focus on training is vital.

As GEO charts its path forward for the industry, it must include a continuing presence in Washington, DC as the industry leader in geothermal heat pump advocacy. With our focus on the tax credits, it is easy to forget such ongoing issues of energy policies, the need for government-sponsored research to lower costs, support for bringing innovation to market, and statutory recognition of GHPs as clean and renewable.

To maintain our success, we must continue our strong relationship with GEO's Beltway lobbying team to reinforce the positive relationships we formed with scores of legislators over the past two years. Regardless of the hard work by GEO President Doug Dougherty, staff and the Board of Directors, we would not have been successful in regaining our federal tax credits without the expert and professional help of our Washington-based advocacy team.

GEO must also keep up its momentum at the state level, with increasing involvement in the pro-industry activities of a growing number of state geothermal heat pump trade associations. By providing assistance and helping coordinate individual efforts among the states, GEO has strengthened the industry's hand in local legislative and regulatory affairs. Grassroots efforts by several state geothermal organizations have reinvigorated local support and incentives that are invaluable for our technology.

That work should also include involvement with all levels of electric utility energy efficiency programs. The industry needs to ensure continuing recognition of the benefits that geothermal technologies offer to utilities, including reduction of need for new generation capacity and transmission lines

while levelizing peak loads. GEO support of utility incentive programs like installation rebates, special rates, loop ownership and easy financing programs for installing geothermal heating and cooling systems are a vital component of the industry's future.

In large part, that future will also depend on unity. That means universal support of GEO as the national "Voice of the Geothermal Heat Pump Industry" by manufacturers, distributors, dealers, installers, drillers and all the other industry players across the country. The heat is on. We have a only short time to accomplish mainstream status for geothermal heat pumps.

GEO has proven its leadership in moving the industry forward. But reinstatement of the tax credits should be viewed as a milestone, not the end of the journey. While we should take a moment to celebrate our victory, we can't afford to delay with a plan to further unify our industry and bring our technology to the forefront of the HVAC industry where we belong. GEO must redouble its efforts to assure our industry is prepared to stand on its own. Thank you! (GEO)

HVACR Distributors, Manufacturers Dig into Reinstated Geo Tax Credits

March 7 – In a comprehensive article published by [Distribution Center](#) magazine, Editor-in-Chief Herb Woerpel discusses with industry leaders the Feb. 9 reinstatement by Congress of the federal 30% residential and 10% commercial ground-source heat pump (GSHP) tax credits.

"This decision finally fixes the inequity Congress created two years ago when tax credits for solar installations were extended through 2021, said Doug Dougherty, president and CEO, Geothermal Exchange Organization (GEO). "GEO's message to legislators was ultimately heard: Congress shouldn't be picking winners and losers when it comes to renewable energy and fairness in tax policy. And, now, we have finally achieved parity with solar."

Steve Smith, CEO, Enertech Global LLC, said the company will optimistically start increasing its inventory levels and hiring back employees it was forced to lay off in the very near future. "We received a response from customers before 8 a.m. the morning the bill was signed," he said. "New jobs were immediately switched over to geothermal with the news, and some contractors had builders return to offering geothermal with their new builds immediately."

"Achieving this critical milestone for our industry couldn't have been accomplished without the positive and aggressive leadership of GEO's staff, manufacturers and members, our D.C. lobbying team, and the tireless efforts of my fellow board members during several Fly-Ins to Washington over the past two years," said Joe Parsons, President, EarthLinked Technologies Inc. and GEO Board Chairman.

The article points out the need for manufacturers, distributors, and contractors to diligently work at raising consumer awareness any way they can. "People spend an average of 4,000-6,000 hours in their home per year, yet they don't pay that much attention to the heating and cooling systems that keep them comfortable," Smith said. "Identify their hot-button issues and hit on those. Are they

IRS Residential Geo Tax Credit Form and Instructions

In response to Feb. 9 congressional action re-instating and extending the federal tax credits for geothermal heat pumps, the Internal Revenue Service has updated its Form 5695 and instructions for individual taxpayers to use when claiming the Section 25D Residential Energy Efficient Property Tax Credit. The new form is available online [here](#). Instructions are available [here](#). (GEO)

interested in renewable energy, being economically sound, having no outdoor unit, equipment longevity, improved comfort, etc.? Or, are they interested in the fact that geothermal provides better dehumidification in the cooling mode or more even heat through the home in the heating mode? Geothermal systems have so many benefits. Sell geothermal on its benefits first, and offer the tax credit as the icing on the cake.”

Todd Graf, vice president and general manager, ClimateMaster Inc., said ClimateMaster has already started to receive contact from homeowners regarding the details of the reinstated incentives. “Commercial geothermal projects will take a little more time to develop due to the inherent timing that comes with larger jobs,” he said. “Regardless of the demand, ClimateMaster’s business model will allow us to respond to the market and readily satisfy customers’ needs.”

While considering how the industry can better tout the benefits of geothermal comfort, Tim Wright, Enertech residential sales manager, said every branch of the industry must commit to spreading the word. “Contractors should be offering geothermal on every single job,” he said. “That always gets contractors farther ahead simply because they’ll minimize their competition if they’re already starting to talk about geothermal instead of conventional systems. With the tax credits returning, we encourage contractors to seek manufacturers or distributors that have excellent support and training. We have an opportunity to grow this industry, and we need to make sure it’s done the right way.”

The article notes that while the return of the tax credit is often praised, there is some debate within the industry whether the proposed phasedown timeline is adequate or if the tax credits should have been reinstated at all. While tax incentives are valuable, the industry needs to poise the market for geothermal systems to stand on their own merits, said ClimateMaster’s Graf.

“We should look to a future where the incentive is derived from the energy savings realized,” he said. “Geothermal systems can stand on their own and outperform any other system on the market today. Regardless of government intervention, a geothermal system is the clear choice in HVAC.” Read the entire article [here](#). A contractor-centric version is the cover story for the March 19 online issue of the *Air-Conditioning, Heating and Refrigeration News*, [here](#). (*Distribution Center / ACHR-The News*)

Geothermal Market Heats Up

March 12 – The *Journal Record* (Oklahoma City) reports: “Tenacity paid off for the nation’s geothermal industry. Renewed federal tax incentives for commercial and residential systems has reheated the market for Oklahoma equipment installers. ComfortWorks Chairman Dan Ellis said his company will need to hire more workers to meet what he expects will be a jump in demand this year.

“He said he’s relieved and excited Congress reinstated the tax incentives through 2021, which gives geothermal parity with federal solar and wind incentives. Combined with rebates from utilities for customers, he said he expects the incentives will increase activity to the level of a couple of years ago before the credits expired. The challenge he faces is ramping up and training new engineers and project installation managers. ‘The only limitation is (finding) those who can properly design and install systems,’ Ellis said.

“He said even though the credits are good through the end of 2021, there’s a chance demand will still remain after that. His goal is to install as many systems as possible in the next four to five years to help boost consumer confidence in the systems. The tax credits provide him some stability for the near-term. ‘This gives us the optimism to invest and bet on the future,’ Ellis said. ‘We need like 10 of me to design systems. I want to focus my time on training others.’” (*Journal Record*)



Geothermal Comfort Equals Year-Round Low Cost



How a Geothermal Heat Pump in an Energy Efficient Home Beat the Neighborhood in Heating and Cooling Expenses

By Keith Swilley

Energy Sales and Efficiency Manager, Gulf Power / Southern Company

Like a lot of people, I love my home. With a geothermal heating and cooling system, I enjoy what everyone wants, year-round comfort, at very little cost. With geothermal, my home in Pensacola, Florida is all about comfort and efficiency. That fact was borne out during the harsh winter of 2017-18, with my monthly heating and cooling bills typically only half that of my neighbors.

I built my home in 2001 from the ground up with a custom contractor (Bob Price Homes) and heating and cooling system contractor (Energy Systems Air Conditioning) who were open to providing me what I wanted. At the time, I thought it might be my last home, so I wanted to construct it beyond minimum thermal building codes with the most efficient heating, cooling and hot water system available. Friends and colleagues thought I was going way overboard, but my purpose was to maximize and enjoy comfort at the lowest energy cost possible. Guess who's laughing now?

As an Energy Efficiency Manager for Gulf Power Company, I was familiar with every heating and cooling system manufactured, so I knew geothermal heat pumps were the answer. I also had a very good experience with geothermal system in a prior home that my family lived in for six years. It was a 2,000 square-foot, all-electric model that averaged only \$80/month in utility bills. That's pretty darned good! When I sold, those low energy bills impressed potential homebuyers, and without question helped sell the house quickly compared to others on the market at the time. If someone likes a house, its efficiency and low energy bills are icing on the cake when selling.

My current home is 2,500 square-feet with a well-insulated, tight envelope. The house has 6" walls filled with blown-in R-21 insulation, and loose-fill blown-in R-38 ceiling insulation. The windows are double-paned vinyl, Low E windows—all tightly sealed for low air infiltration. Since the home is super air-tight, I have a passive outside ducted line connected to the return air to positively pressurize the home with some fresh air each time the heat pump operates.

The heating and cooling system is based on a packaged unit geothermal heat pump, nominal 3- ton, 2-speed capacity, with a single zoned duct system and heat recovery for hot water preheating.



The geothermal ground heat exchanger serving the heat pump consists of three vertical polyethylene pipe ground loops at 250 ft. each, the most common and typical in my area in Northwest Florida.

The American Heating and Refrigeration Institute (AHRI) Water Loop Rating of my geothermal heat pump—which is closest to our ground operating/entering water temperatures—is 17 EER (energy efficiency rating) at high speed, and 19 EER at low speed for cooling. For heating it has a 5.5 COP (coefficient of performance) at high speed and 6.4 COP at low speed. Since most geothermal systems operate at partial load much of the time, my heat pump's average efficiency is likely 18 EER and 5.0 COP, which is how and why I enjoy such low energy costs compared to conventional heating and cooling systems with far lower equipment efficiency.

The recent harsh winter weather in northwest Florida (a solid week of temperatures in the teens and 20s, then 30s all month in January) offers an excellent example of the energy efficiency I enjoy with my geothermal heat pump. I live on a private road with seven neighbors on large lots. They all have typical, less efficient air-source heat pumps. The average of all those homes' January 2018 electric bills was \$250, while my bill for the same period was \$120.

Even better—as shown in the graph below of my energy costs—my bills total only \$340 for an entire year! Why? Because my geothermal heat pump system offers the best efficiency compared to any other electric or gas heating, ventilation and air-conditioning (HVAC) system on the market.

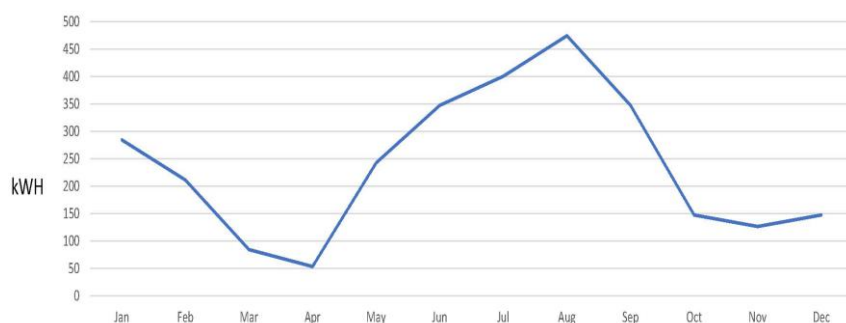
Right after it was built in 2001, my home and contractors won the Florida Home Builders Association "Grand Aurora Award" for energy efficiency at the Southeast Builders Conference in Orlando, FL. The following year, my home and contractors won the Quality Comfort Home Award sponsored by *Contracting Business* magazine, including a 4-page feature article, and were also featured at the 2002 ComfortTech Conference.

Serving the Northwest Florida panhandle area, Gulf

Power has been a leading utility in the South promoting geothermal heat pumps since the mid-1990s. Working with our ratepayers, we have helped install over 4,000 residential geothermal systems, and over 10,000 tons of capacity in commercial buildings. We know it works, it's efficient, and it's good for customers and us—the utility. Gulf Power only recommends and incents "closed-loop" GHP systems simply because there more reliable long-term than open well systems, and earth loops are maintenance free. My system is going on 17 years old and I've not spent a penny on my ground loop the entire time. You can't ask for more.

Depending on the home, geothermal heat pumps can save easily 30-40% on energy bills, but like my home system, many can save over 50%. Geothermal heating and cooling is by far the best choice for anyone who is going to buy or build a home and keep it for the long-term. And with the current federal tax credit of 30% against residential geothermal installation cost, it's as they say, a "no-brainer." (GEO)

Metered Annual Geo Heating and Cooling Costs 2,500 square-foot home in Pensacola, Florida



\$340 for the entire HVAC year @ 12¢/kWh



The Value of GEO Membership

The Geothermal Exchange Organization (GEO) is the “Voice of the Geothermal Heat Pump Industry,” focused on legislative, regulatory and tax initiatives to expand residential and commercial markets and to increase profits for members. Two examples are our continued efforts to reinstate the federal tax credits for residential and commercial installations of geothermal heat pumps (GHPs) and to forge state energy policy which recognizes the value of thermal energy as a renewable resource.

GEO is successfully working toward universal recognition of the thermal energy utilized by GHPs—which will offer increased sales and business opportunities to all segments of the industry from manufacturers and component producers, to GHP installers and drillers.

Our presence in our nation’s capital and across the country provides support to grassroots efforts, political insight and action on a variety of issues that are vital to the future of our industry. GEO continually tracks federal policies, from tax treatment to technological research and deployment. In addition to supporting tax credit parity for clean energy, we actively support various agency actions on technology advancement, as well as environmental and energy efficiency programs, that will enhance GHPs’ market position.

GEO also actively supports state geothermal associations in their efforts at the local level to craft legislation and regulations favorable to the GHP industry. We were instrumental in amending Maryland's Renewable Portfolio Standard to include GHP as a utility compliance option. New Hampshire and Massachusetts followed suit and now Massachusetts has one of the highest financial incentives for installing GHPs in the country. At the same time, GEO amended Illinois energy efficiency law, encouraging utility rebates for GHP installations. With GEO support, New York has instituted several programs supporting the benefits of GHPs.

Your GEO Membership is Crucial

As a company supplying products and services to the GHP industry, increased market share for residential and commercial installations directly improves your sales and revenues. Your company’s GEO membership will help us fulfill our mission of growing the industry through advocacy and beneficial changes to federal and state public policies. Additional important benefits of GEO Membership include:

- Involvement in GEO legislative and regulatory initiatives at both the federal and state levels, helping to set the pace for a positive industry future.
- Participation in GEO’s continuing efforts to positively influence the industry’s future growth through personal meetings with your elected officials.
- Collaboration with GEO efforts to influence and guide utility renewable and demand-side energy programs that favor GHP technologies.
- Access to GEO information and studies, plus up-to-date reports on our activities across the country via our monthly *GEO Industry News*, Action and News Alerts, and our targeted industry press releases.

GEO Urges Caution with MassCEC Program

Feb. 26 – The Geothermal Exchange Organization (GEO) — the national trade association for the geothermal heat pump industry in the United States — recently learned that in response to the reinstatement of federal tax credits for geothermal heat pump installations, MassCEC is considering a change to its incentive program for our technology.

In response, GEO sent a letter urging MassCEC to consider maintaining its geothermal incentive program unchanged for at least a year, and giving geothermal stakeholders a chance to respond to any proposals for program changes. In part, the letter said:

“We expect that 2018 will see renewed growth in geothermal heat pump installations and public awareness through marketing by our member companies. But it will take time to recover and reinvestigate sales in Massachusetts. It would be a great disappointment for the industry if your program for geothermal heat pumps is reduced or ended prematurely, especially now, as the GHP industry is just beginning to regain its market footing after a 50% loss in sales due to expiration of the federal tax credits.

“With the New England Geothermal Professional Association (NEGPA), we ask that we receive advance notice of any potential program changes, and that geothermal stakeholders be given the opportunity to comment on the future of the program. GEO also asks that at a minimum, MassCEC provide at least a one-year overlap of the program with the federal tax credits (into 2019). This will give the geothermal heat pump supply chain in Massachusetts a chance to recover its losses and rebuild a customer base that will ultimately lead to economies of scale.” (GEO)

GEO Again Supports Farm Bill Energy Title

Feb. 22 – The Geothermal Exchange Organization (GEO) has again signed on to a letter of support by the Ag Energy Coalition for federal Farm Bill clean energy programs. According to Coalition Director Lloyd Ritter, “Together we have preserved the Farm Bill energy title programs over many years. It is more important than ever to do so again, as the entire title is under attack. It is fair to say that without your leadership we may not have an energy title in the upcoming farm bill.”

The energy title's core suite of programs support rural renewables in all forms, as well as energy efficiency. They cost well less than 1% of total farm bill outlays, and pack a development punch for the very modest investment. Over \$5 billion has been leveraged since the title's inception to support economic development and jobs across rural America.

Sent to Senate and House agriculture committee leadership, the Ag Coalition letter asks that they maintain stable mandatory funding for energy title programs in the next farm bill reauthorization. “For more than 15 years, the farm bill energy title programs have greatly assisted rural America in developing clean, renewable energy, biobased products, and making energy efficiency investments. Federal leadership has paid off. Rural economic development, jobs, manufacturing, and environmental quality have all seen quantifiable and substantial gains.

“All of this happened with an incredibly modest, cost-effective investment. Energy title programs account for less than one tenth of 1 percent of farm bill spending and yet provide outsized benefits.... Energy title programs provide the means for ag-based entrepreneurs to launch initiatives to generate jobs and economic development – from wind, **geothermal**, hydro and solar power, to biogas and advanced biofuels, to biopower, biobased products, renewable chemicals, and energy efficiency.” Read the complete letter [here](#). (Ag Energy Coalition)



GEO Board Welcomes Jim Leverette

March 16 – At its teleconference meeting on March 16, the Geothermal Exchange Organization (GEO) Board of Directors unanimously voted to accept Jim Leverette as replacement for Keith Swilley as its utility representative. Swilley resigned from the Board in January due to accepting a new position as Lighting Sales Manager at the Southern Company.

Leverette currently serves as a Research Engineer for the utility, where he evaluates emerging building energy systems, including HVAC and water heating. He also develops lab procedures and protocols, and collaborates with research organizations and government entities to evaluate new technologies. “Jim’s education, experience and current activities will be a huge asset to the GEO Board,” said GEO Chairman Joe Parsons (EarthLinked).

His prior positions have included energy engineer for CLEAResult, mechanical/energy engineer for CHA Consulting, and energy engineer for the Tennessee Technological University Industrial Assessment Center. Leverette earned a BS and MS in mechanical engineering at Tennessee Tech, where he participated in a number of leadership positions for student affairs. He is currently working on an MBA at the Auburn University Harbert College of Business. (GEO)

Dandelion Acquires Geo-Connections

March 6 – According to Greentech Media, “The residential geothermal heating-and-cooling company Dandelion will acquire Geo-Connections, with a vision to streamline the geothermal system design process. Dandelion has developed a new drilling technique and financing package to make ground-source geothermal projects easier to develop and pay for. With Geo-Connections software expertise, it is looking to standardize system design.

“It’s really the automation of the process that we’re looking to supercharge,” said Dandelion Chief Technology Officer James Quazi. “Like any acquisition, it’s a huge jump-start.’ In the residential geothermal industry, Quazi said there’s a tendency to treat each system like a “unique engineering project,” because of the idiosyncrasies that characterize different homes and sites.

According to the article, “The Geo-Connections software takes the computationally intense process of analyzing a site -- with variables such as soil conditions, average air temperature, a building’s window-to-wall ratio, and various other inputs -- and plugs it into a user-friendly interface.”

“Quazi said the years of experience that Geo-Connections’ mechanical and software engineers bring to the Dandelion team will be ‘absolutely critical’ in pushing Dandelion’s product into the mainstream. Engineers have used Geo-Connection’s software in designing tens of thousands of geothermal systems across the United States. The company’s web-accessible ‘LoopLink’ technology uses a software-as-a-service model to make modern geothermal project planning readily accessible to designers.” Read the entire article [here](#). (Greentech Media)



When you Think **“GEOTHERMAL HEAT PUMPS”**
Think **“GEO”** at www.GeoExchange.org



Developer Hits Milestone for Large 100% Geothermal Community in Kentucky

March 16 – According to an article by Alyssa Danigelis in [Energy Manager Today](#), “A new neighborhood development in northeast Jefferson County, KY has completed its 200th geothermal home. Norton Commons, which sits on nearly 600 acres, aims to create the nation’s largest 100% geothermal community.



“Currently Norton Commons includes more than 1,200 residences, over 60 businesses, three schools, along with dozens of parks, pools, and green space, according to the developer. With 200 of the residences already heated and cooled using geothermal technology, another 50 are under construction now, and 50 more are being planned. Construction first began in December 2015. When the homes are finished, the developer says that Norton Commons’ North Village will have more than 1,500 homes, making it one of the largest residential geothermal communities in the United States.

“The network of underground geothermal loops and heat pump units inside each home offers several major advantages, according to Norton Commons. They include eliminating outdoor air conditioning units, saving space, and reducing noise. Lower utility bills is another selling point.

As a result, the geothermal homes have been popular. Norton Commons managing director Charles A. Osborn III also pointed to the federal 30% tax credit for residential geothermal heat pump installations that reinstated in February by Congress.

“Norton Commons Elementary in the North Village, the first new-build school for Jefferson County Public Schools since 2008, incorporates eco-friendly geothermal heating and cooling as well as other eco-friendly features like solar-heated water, a reflective white roof and LED lights with motion sensors. For further details visit: nortoncommons.com.

“The Kentucky development joins other sizable geothermal communities in the works. [Whisper Valley](#) in Austin, Texas, is a 2,062-acre master-planned community valued at \$2 billion expected to have 7,500 single homes when completed. Planning began in 2012.

“[Pinewood Forest](#) in Fayetteville, Georgia, announced plans last year to become the first large-scale fully geothermal community in the country. Construction began in April 2017 on the 234-acre master planned residential and mixed-use development 24 miles south of Atlanta. Once built, it’s expected to have 1,300 residences.” (*Energy Manager Today*)

GEO Board and Member Meetings

The Geothermal Exchange Organization (GEO) Board of Directors will convene a meeting at 8:00 a.m. on March 29, 2018, at the Royal Carib Hotel, following the International Ground Source Heat Pump Association Conference & Expo. In addition, the Board will also call to order a brief GEO Membership Meeting. If you have any suggestions for agenda items, please contact GEO at (888) 255-4436. Or email GEO Chief Operating Officer Ryan Dougherty: ryan@geoexchange.org.

Energy Star Plan Draws Ire

Feb. 22 – In his budget request to Congress for fiscal year 2019, Trump is asking lawmakers to eliminate the \$42 million in federal funding for the Environmental Protection Agency’s popular Energy Star program. He instead has proposed allowing the EPA to fund the energy efficiency certification through fees charged to companies that use it. However, he is facing strong opposition.

Groups that represent manufacturers, retailers, utilities, environmentalists and others who benefit from the program are lining up against Trump’s plan. They cite, among other things, the estimated \$30 billion in energy savings that users of Energy Star products achieve each year, arguing that it’s a hugely successful program that should be embraced. Trump’s proposal last year to eliminate Energy Star also met with significant backlash.

More than 1,000 companies and groups signed onto a letter in April to leading congressional appropriations leaders supporting the program. The House ended up voting to preserve Energy Star, but cut its funding to \$31 million. The Senate never voted on an appropriations bill for the EPA. Read the article [here](#). (*The Hill*)

Go Green Galloway: Consider Geo

Jan. 25 – “Perhaps the most overlooked source for the heating and cooling of our homes and buildings is right under our feet. Working with the constant shallow earth temperature of about 55 degrees, we can build passive structures right into the ground. Further, for new or existing structures, we can use that geothermal resource to heat or cool our living and working spaces using some basic principles and ever more efficient equipment.”

So says Go Green Galloway (GGG), a volunteer organization dedicated to reducing the carbon footprint of Galloway, NJ through the promotion of energy efficiency and conservation, environmental education and the implementation of sustainable practices.

In an article posted by *The Current* online newspaper, GGG describes open and closed loop geothermal ground heat exchangers that extract heat from the surrounding earth for use by the geothermal heat pump to heat or cool a building.

“Another possible side benefit of geothermal for buildings is hot water heating. A “desuperheater” within the heat pump equipment uses waste heat from the process of either heating or cooling conversions to heat a tank of water for building functions. If this is not enough on its own, it can be used as a preheater to assist solar hot water heating or other forms such as gas or electric to make the energy consumption lighter.”

GGG says that “South Jersey soils are ideal for geothermal well drilling, having few large rocks or impediments to drilling. Stockton University in Galloway has some of the largest and most innovative geoexchange installations in the world under its parking lot and much of the property.

“To help you explore your options, you can either find one-stop shopping with geothermal professionals or a combination of plumber, electrician, HVAC technicians and well drilling specialists. Make sure they are capable of guiding you through an energy audit first and in helping you to get the federal and state tax credits available to help you with your energy efficiency project. You can contact Go Green Galloway at gogreengalloway12@gmail.com, or call Mary at (609) 742-7076. Read the entire article [here](#). (*The Current*)

Healthy Residential Market for PACE

March 4 - As of early 2017, more than 30 states plus the District of Columbia have commercial Property Assessed Clean Energy (PACE) enabling legislation and approximately \$400 million in projects have been financed with commercial PACE. PACE has helped nearly 200,000 American families make energy and water efficiency upgrades, and install solar panels. It has also created 35,000 jobs in many communities that need new economic activity.

Moreover, a new report from the credit rating agency DBRS finds that property owners are fulfilling their repayment duties at a better rate than even the average American with property tax requirements: Residential Property Assessed Clean Energy delinquency rates have been consistently lower than delinquency rates on residential property taxes. Read the article [here](#). (CleanTechnical.com)

SAVE THE DATES!

2018 Geothermal and Related Conferences

March 27-28 International Ground Source Heat Pump Association (IGSHPA)
Caribe Royale, Orlando, FL – [Information and Registration](#).

April 18-19 New York Geothermal Energy Organization (NY-GEO)
Radisson Hotel, Albany, NY – [Information and Registration](#).

April 18-19 Advancing Renewables in the Midwest
University of Missouri Campus, Columbia MO – [Information and Registration](#).

April 24-25 Michigan Geothermal Energy Association (MGEA)
Soaring Eagle Casino, Mt. Pleasant, MI – [Information and Registration](#).

Call for Abstracts Deadline March 30



The Geothermal Resources Council (GRC) invites you to present your latest technical work in geothermal research, exploration, development and utilization (including geothermal heat pumps) at GRC's 42nd Annual Meeting & Expo from October 14-17, 2018 at the Peppermill Resort Spa Casino, Reno, Nevada. **Submission deadline is March 30th, 2018. For information and instruction on how to submit your call for abstract, [click here](#).**

NY-GEO 2018

The New York Geothermal Energy Association's Premier Northeast Renewable Heating & Cooling Conference



Heating buildings by burning fossil fuels causes about 1/3 of the Greenhouse Gas (GHG) emissions in New York State. There is no way New York will reach its GHG goals without a massive conversion of buildings to renewable heating.

Our annual conference is the best place to learn about heating and cooling without burning fossil fuels and NY-GEO 2018 is the place to meet the movers and shakers as New York begins to embrace this incredible opportunity.

Come learn what it's all about! Be part of the geothermal surge!

There's a 10% early discount if you register by January 31st and a 2nd discount for those who have taken out a 2018 NY-GEO membership.

We urge you to consider becoming a sponsor – or an exhibitor at this year's conference.

NY-GEO 2018

Geothermal Heating & Cooling

April 18-19 Albany, NY

This conference is affordable! Not only that - PSEG Long Island and Versaprofiles have donated to a grant fund – we'll work with you to get you here – Admission help is also available to Gov't officials with no conference budgets.

Check our website NY-GEO.ORG for more details and registration information.

Meet over 200 key players as New York moves into the Renewable Heating & Cooling future.

Workshops are keyed to Engineers, Architects, Building Owners & Managers, Installers, Designers, Contractors, Consultants, Policy Makers and all who care about the transition to Renewable Energy. AIA, PDH BPI and LEEDs Continuing Education Credits Available!



ESIDs Help Fund Geo in Ohio

Feb. 26 – According to an article by *The Press*, the Ohio Legislature passed a bill in 2010 that allows for the establishment of Energy Special Improvement Districts (ESIDs). The designation allows the city to apply for low interest loans for energy efficient projects, and businesses for energy upgrade funding. One of the objectives of establishing the ESID is that it will help businesses and municipalities lower the costs of heating, cooling and lighting in their buildings.

Toledo created its own ESID in 2011. Other communities in the area that have active districts include Maumee, Perrysburg, Sylvania and Sylvania Township. Some of the energy upgrades that

can be funded through ESID funding include solar thermal electric, solar thermal process heat, solar water heat, wind, biomass, geothermal direct-use energy, and geothermal heat pumps.

Oregon, Ohio's first project was making energy efficiency improvements to its main municipal complex. The city installed a ground source closed-loop geothermal heat pump system that saved the city tens of thousands of dollars with a simple payback of 5.2 years. "We are saving money by using less electricity and less natural gas," City Administrator Mike Beazley told *The Press*.

"It is not grant funding," he added. "It's really just a way of accessing financing dollars that in some cases works out very well for businesses. The primary goal is to encourage businesses to invest in projects that would otherwise be hard for them to justify. The payback is through the assessment on property taxes over a period of years depending on the duration of the project. It mainly allows businesses or government to invest in energy efficiency and have it paid back over time. And it works." Read the complete article [here](#). (*The Press*)

Introduction to Geothermal Systems Technology

March 27-28, in Orlando, Florida at the International Ground Source Heat Pump Association Annual Conference & Expo

ENROLL TODAY! for this unique opportunity to learn the basics of ground source heat pump systems. Taught by **Geothermal Consultant and Author Jay Egg** (Kissimmee, FL), the course offers and introduction to geothermal systems geared toward architects and engineers. It begins with the basics of HVAC and heat transfer, and moves comfortably into the application of geothermal heating and cooling systems of all kinds. The session includes a comprehensive, high-level overview of what is needed to understand how geothermal heating and cooling can work for a given building. Topics include a geothermal design overview, variations in ground source heat pump ground loop systems, how to choose the right geothermal HVAC system, and evaluating the benefits of geothermal systems. **Registration is \$650, which includes the fee for IGSHPA's 2018 Annual Conference & Expo in Orlando, FL. Click [here](#) for more information and to sign up.**



**Better
TOGETHER**
IGSHPA Conference & Expo 2018



This year we are bringing the ground source heat pump to the Sunshine State. With Conference sessions, training opportunities, and dedicated expo hours, you're sure to find all you

need to learn more about the ground- source heat pump industry. We're focusing this year's conference and expo on providing you with the tools and information you need to excel your business. You're sure to see some new faces and hear new ideas that can help support the industry. To be BETTER TOGETHER we need to come together.

Join IGSHPA on March 27-28!

**Here are the Top Five Reasons to Attend the
[IGSHPA Conference and Expo](#) in Orlando**



- 1-Session offerings are a mix of industry case studies, technical how-to's, and tools you can use to enhance your business in marketing, financing, and more!
- 2-Dedicated expo hall hours on Tuesday from 10am to noon.
- 3-Our second awards dinner on Wednesday night highlights innovative industry applications, notable achievements of our members, and exemplary industry supporters.
- 4-The welcome reception on Tuesday evening and the awards dinner Wednesday night provide attendees with networking opportunities.
- 5-Industry experts addressing large groups in panel settings.

**[Click Here for Registration, Exhibitor
Information, and Hotel Information](#)**

Certified GeoExchange® Designer Course

Certification for HVAC Engineers, Architects and Designers

With the cooperation of the Geothermal Exchange Organization (GEO), the CGD® Training Course is presented by the International Ground Source Heat Pump Association (IGSHPA), with certification awarded by the Association of Energy Engineers (AEE). The CGD® Course covers the gamut of professional geothermal heat pump system applications, from an introduction to the technology to a complete review of commercial design processes.

Who Should Attend The 3- day comprehensive Installation Workshops are designed for GSHP installers, contractors, dealers, home builders, manufacturers, distributors, architects, heating cooling mechanical engineers, trenching/water well drilling contractors, and anyone who desires a working knowledge of this innovative technology. Representatives from public utilities, private utilities, and rural electric cooperatives can also benefit from training. Workshop information can help utility representatives serve as information sources on ground source heat pump systems.

Accreditation Upon successful completion of the workshop and passing the IGSHPA installer's exam, you will be issued IGSHPA accreditation as an installer of GSHP systems, a 3-year installer's card and certificate, and a 1-year IGSHPA membership.

Topics Design and Material Options • System Layout • Pipe Joining Techniques - Hands-on for butt, socket, saddle and electro fusion • Trenching/Drilling Processes • Air and Debris Purging • Pressure Drop Calculations • Pump and Fluid Selection • Thermal Conductivity • Start-up, Performance Checking and Troubleshooting

[IGSHPA Certified GeoExchange Designer \(CGD Plus\) Accreditation](#)

March 27-28, at the IGSHPA 2018 Conference & Expo in Orlando, FL.
Click on the above link for more information and to register.



Join Our Effort!



The Geothermal Exchange Organization (GEO) is working hard for the geothermal heat pump industry with advocacy and outreach. To learn about how you can help, [CLICK HERE](#)

CBS Moneywatch Features GEO Members on Tax Credits

March 1 - An article by Irinia Ivanova of CBS News Moneywatch, "Geothermal is Slowly Gaining Steam in Homes," said, "Steve Smith's company, Enertech Global, has had a rough few years. Its trouble started when, just over two years ago, Congress let expire a tax credit for a number of lesser-known renewable energies, including geothermal, in what some describe as a drafting error.

"After two years of diligent lobbying from Smith and his fellow business owners, lawmakers reinstated the credit in the early-morning hours of Feb. 9. Hours later, Smith's phone started ringing with orders. 'We're already talking about bringing back 25% of the workforce we laid off,' Smith said. 'We want to be back to our initial size by next year.'

"Now that Congress has put the technology on equal footing with wind and solar, many in the industry are hoping for bigger growth. 'My phone rings every day with calls from homeowners and business owners,' said Ryan Dougherty, chief operating officer of the Geothermal Exchange Organization, an industry group. 'We've gotten a lot more signups and renewals since this happened.'

"But the upfront costs of a geothermal heating system -- somewhere between \$20,000 and \$25,000, or double the costs of a conventional system -- can be daunting, particularly when conventional energy is historically cheap. 'If natural gas is really cheap, people just tend to look at what's my out-of-pocket cost,' said Dougherty. 'It's a savvy consumer who asks, what is this going to cost me in the long run? Geothermal heat pumps cost more to install, but you're going to recoup that at an accelerated rate because the efficiency is so much higher.'

"That's where a boost from the government helps. With the federal tax credit, the cost of a \$25,000 system drops to \$18,500. Many states, especially in the Midwest and Northeast, also offer incentives. In New York, a single-family home can get back up to \$15,000. At those rates, a geothermal system could pay for itself in just a couple years, while potentially outlasting a conventional HVAC unit.

"Still, the recent Congress-induced hiccup has some geothermal businesses reconsidering how they market their product and focusing more on the merits of the system. 'There are some homeowners who think of it as a luxury product—it's quieter and clean, and they don't need to think of gas solutions,' said Katie Ullmann, vice president of marketing at Dandelion, a geothermal startup [and GEO Member] conceived at Google and based in upstate New York.

"The lifetime for a geothermal heat pump is over 20 years, said Smith, while the in-ground loop will often outlive the building itself. Unlike even solar and wind systems, geothermal is invisible, with no arrays to conceal or cover up. It's much quieter than a traditional furnace. And there's the appeal of self-sufficiency. 'It's like putting a power plant in your own yard,' said Smith. 'It's there permanently. And then the cost savings go from there.'" Read the entire article [here](#). (CBS Moneywatch)



ASHRAE Annual Conference

ASHRAE is heading to one of the world's most air-conditioned cities – Houston, for the **2018 ASHRAE Annual Conference, June 23-27, at the Hilton Americas-Houston Hotel and the George R. Brown Convention Center**. Registration is now open – Early bird registration ends April 30. The five-day event's technical program includes eight conference tracks. For more information and registration, click [here](#).

Industry Survival in 2018

MGEA 2018 Conference

Michigan Geothermal Energy Association

Soaring Eagle Resort • Mt. Pleasant Michigan

April 24, 6:00 PM-10:00 PM • April 25, 8:00 AM-1:00 PM



Keynote Speaker Dianna Cacko serves as the Trade Ally Account Representative for the Energy Optimization Residential HVAC and Business programs, previously serving as an account manager for both the Consumers Energy and DTE Energy residential energy optimization portfolios. WECC is a national leader in the design and implementation of innovative energy efficiency and renewable energy programs. Ms. Cacko's presentation will review utility service territories, all available incentives, the incentive application process, and examples of qualifying GSHP systems and incentives they have received from the program.

Our conference will feature additional presentations by:

- **Todd O'Grady** Contractor Coordinator- Michigan Saves
- **Rick Vanderbeek** Energy Coordinator USDA (Grants)
- **David Coveyou** Owner- Coveyou Farm (Geo Greenhouse)
- **Art Thayer** Director of EE programs MECA
- **Hantz Financial** Review of new Tax Laws

\$100 includes reception, dinner, Annual Meeting and half-day Conference. Annual Meeting OR Conference fee is \$50. Hotel rooms on your own at (877)232-5432 (Use special rate code MGEA042418. More information and conference registration is available [here](#).

Support the Industry's
National Voice



GEO Industry News is a publication of GEO, the Geothermal Exchange Organization, a non-profit trade association that advocates the environmental, energy efficiency and economic benefits of geothermal heat pump systems for heating and cooling of residential, commercial, and institutional buildings. For more information, visit our website: www.GeoExchange.org.

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