



GEO 2016 • Year in Review

GEO Advocacy in Washington

Tax Credits for Geothermal Installations With their expiration looming at the end of the year, the federal tax credits for geothermal heat pump (GHP) installations took center stage for the Geothermal Exchange Organization (GEO) during 2016.

The Omnibus spending bill passed by Congress in December 2015 extended for five years the Wind Production Tax Credit (PTC), the 30% solar Investment Tax Credit for commercial installations (IRC Sec. 48, including bonus and 5-year depreciation), and the 30% solar income tax credit (IRC Sec. 25D) for residential applications.

Though GEO was assured that GHPs would be included in the bill, they were left out during last-minute negotiations that also forgot fuel cells, small wind, microturbines, and combined heat and power. House Ways & Means Chairman Kevin Brady (R-TX) acknowledged that the ITC and income tax credit extensions did not include eligible technologies, and promised immediate action along with Senate Minority Leader Harry Reid (D-NV) and House Minority Leader Nancy Pelosi (D-CA).

GEO and its allies lobbied hard, first seeking for an amendment to the Federal Aviation Administration reauthorization bill that would have extended the residential and commercial tax credits for GHPs and other qualifying renewables through 2021 (with a phase-out). But in late-April, the Senate passed the legislation and the House concurred with no amendments.

Hope was renewed in May when Rep. Tom Reed (R-NY) introduced H.R. 5167 to put all orphaned technology tax credits in line with solar. The Reed bill also included an important change to the tax provision's "placed in service" eligibility requirement to "commenced construction." You can read a copy of the bill [here](#).

As the fight wore on into summer, GEO was joined by associations representing its fellow orphaned technologies, builders and realtors, plus important groups like the National Rural Electric Cooperative Association (NRECA), Pew Charitable Trusts, National Ground Water Association (NGWA) and the International Ground Source Heat Pump Association.

GEO President Doug Dougherty was a regular in the halls of Congress throughout the year, with more than a dozen trips to Washington. He was joined in June and September by the GEO Board of Directors, company and allied industry representatives during formal "Fly-Ins" to the capitol. On both occasions, the groups visited more than 50 congressional offices to drive home the GEO plea for parity.

Such outreach was greatly enhanced by industry wide Action Alerts that spawned hundreds of emails and calls to House and Senate leaders. Industry supporters scheduled a number of geothermal job site visits around the country in a further bid to educate their elected officials on the need for tax incentive parity with the solar industry.

In September, GEO doubled down on its push, strengthened by a sizable infusion of new funds. Immediate steps were taken to convince legislators that Congress must correct their "drafting error" when extending the solar tax credits. GEO bolstered its Washington, DC by adding two lobbying firms, and initiated a focused Beltway public outreach effort aimed at the lame duck Congress following the national elections in November.

The message? That Congress should not be in the business of picking winners and losers in renewable energy markets, and that leveling the field for all renewables is a policy issue of fairness.

GEO hoped that passage of continuing resolutions in September and then in December to keep the government functioning would open the door for the Reed bill as an amendment, but both passed as “clean” bills, with no amendments. The federal residential and commercial tax credits for GHPs quietly expired at midnight on Dec. 31.

GEO remains extremely disappointed at this outcome after a year of intense effort to extend the tax credits. The industry is already feeling the pinch, with thousands of jobs in jeopardy across the country. GEO is not quitting the fight, as it renews strategy efforts with its DC Team to address the issue in the 115th Congress. Geothermal businesses across the country should calculate the economic impact of this inaction for GHPs to their bottom lines, and voice it loudly to their elected representatives.

Editor’s Note: A recent *Buzzfeed* blog recaps the frustrations of the GHP industry over the tax credit issue during the past year. Read it [here](#).

GEO’s Tax Credit “Ask” to Congress in 2017

GEO will continue to work for tax credit parity in the new Congress in 2017. The GHP industry wants nothing less than parity with the solar industry tax credits included in Congressman Reed’s H.R. 5167 (which will be reintroduced in the 115th Congress). For the 30% income tax credit (IRC Sec. 25D) applicable to residential GHP installations, this includes:

- Retroactive 30% after 12/31/16 and placed in service before 1/1/20,
- 26% after 12/31/19 and placed in service before 1/1/21, and
- 22% after 12/31/20 and placed in service before 1/1/22.

For the 10% business investment tax credit (IRC Sec. 48) applicable to commercial GHP installations, this includes extension to Dec. 31, 2021 with no phase out. In addition, the language governing eligibility requirements for GHP installations under IRC Sec. 48 must be changed from “placed in service” to “construction of which begins before Jan. 1, 2022.”

GEO Seeks Change to Federal Definition of Clean, Renewable Energy GEO continued its work to codify GHPs as a clean, renewable source of energy within the Federal Renewable Energy Purchase Requirement in the 2005 Energy Policy Act. GEO’s definition reads: *“The term ‘renewable energy’ means energy produced or, if resulting from a thermal energy project placed in service after December 31, 2014, thermal energy generated from, or avoided by, solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or hydropower.”* Though GEO successfully included the clarification in Senate and House versions of the bipartisan Energy Policy Modernization Act (S.2012), the broad-based energy legislation died before the end of the year.

GEO Asks EPA for Energy Efficiency On Aug. 17, GEO signed on to a letter to the U.S. Environmental Protection Agency from the American Council for an Energy Efficient Economy that promotes energy efficiency as a vital component of the EPA Clean Energy Incentive Program (CEIP). The letter says that credits available for clean energy resources should include energy efficiency. “We recommend that early investments in energy efficiency receive at least the same incentive as early investments in renewable energy.” This can be achieved by expanding the program scope so that investment in energy efficiency can receive emission rate credits with a federal match at a ratio of 1:1. Read the letter [here](#).

Geothermal Advocacy in the States

During 2016, GEO continued to support the efforts by state-level stakeholders in their quest for public policies favorable to GHPs. "State GHP associations are growing in sophistication and strength," said GEO President Doug Dougherty. "They have done a great job of promoting tax credit legislation and favorable regulatory policies for the technology." Following are highlights of state association advocacy for the GHP industry during the year.

South Carolina Geo Tax Credit Signed Into Law On Feb. 16, South Carolina Gov. Nikki Haley (R) signed into law H. 3874, which provides an income tax credit to any individual or business that "constructs, purchases, or leases certain solar energy property and places it in service in this state... and allows an income tax credit for certain costs incurred by the taxpayer in the purchase and installation of geothermal machinery and equipment." The law took effect retroactively to Jan. 1, 2016, allowing a tax credit against the income tax liability of a taxpayer, equal to 25% of the costs incurred in the purchase and installation of geothermal machinery in or on a facility in South Carolina and owned by the taxpayer. The tax credit cannot be claimed before an installation is completed. The amount of the credit in any year may not exceed \$3,500 for each facility, or 50% of the taxpayer's tax liability for that taxable year, whichever is less. If the credit amount exceeds \$3,500, the taxpayer may carry forward the excess for up to 10 years. Local geothermal advocates promoted H. 3874, with political guidance from GEO. "This bill represents a significant change in public policy by recognizing the thermal energy capabilities of geothermal heat pumps," said Bret Ross (WaterFurnace International) in testimony for the measure to the South Carolina House Ways and Means Committee. Read the text of the law [here](#).

Iowa Geo Tax Credit Signed Into Law On April 29, the Iowa Legislature passed HF 2468, which provides for a 10% standalone tax credit for residential installations of GHPs in lieu of federal tax incentives. Both the House and the Senate voted unanimously in favor of the measure. Gov. Terry Branstad signed the measure into law on June 15. It took effect on Jan. 1, 2017. The measure is not capped, and doesn't provide a tax credit for commercial installations. The Iowa Geothermal Association was instrumental in securing the new law. The new Iowa tax credit "...shall not be available during any tax year in which the federal residential energy efficient property tax credit for geothermal heat pumps provided in section 25D(a)(5) of the Internal Revenue Code is available." Per existing Iowa law, there is a 6% state tax credit that is tied to the current federal tax incentive for residential GHP installations. When the current federal tax credit for GHPs expired at the end of 2016, the 6% Iowa state tax credit also expired. They were then replaced with Iowa's new 10% standalone credit.

New York Governor Vetoes Geo Tax Credit Bill On Nov. 28, New York Gov. Andrew Cuomo vetoed Assembly Bill 9925, a bill that would amend the tax law to reduce personal income tax liability by an amount equal to 25% of qualified geo energy systems expenditures. The bill passed the state legislature in spring 2016, promoted by the New York Geothermal Energy Organization (NY-GEO). In his veto message, Gov. Cuomo said the geothermal tax credit bill suffered from the same fundamental flaw as a similar bill he vetoed in 2015, by not identifying a designated source of funding to offset the cost of providing a tax credit for the GHP installations. He said such funding decisions should occur in the context of the annual budget negotiations. NY-GEO lauded the administration's intention to support geothermal energy, and work with their many friends in the legislature to include the tax credit in the 2017-18 state budget. GEO is providing financial and technical assistance for a legislative push in 2017.

Michigan Recognizes GHPs for Renewable Energy Credits On Dec. 16, the Michigan legislature passed energy bills that will boost renewable energy investment in the state. Senate Bills 437 and 438 raise Michigan's renewable portfolio standard from 10% to 15% by 2021, and retain the state's energy optimization standard (1% annual efficiency improvement for electric utilities) through 2021. The measures boost incentives for utilities to hit higher efficiency targets, and set a nonbinding goal to meet 35% percent of Michigan's power needs through a combination of renewable energy and energy conservation by 2025. For the GHP industry, the legislation's definition of renewable energy now includes the technology and makes it eligible for renewable energy credits. The Michigan Electric Cooperative Association (MECA) was instrumental in favorable treatment for GHPs. GEO will assist the MECA in developing recommendations to the State on how to measure, quantify and report the energy produced by GHPs to best determine the appropriate number of renewable energy credits for their use.

VGHPA Pushes for Geothermal Tax Credit In early December, the Virginia Geothermal Heat Pump Association (VGHPA) worked toward filing legislation with the state General Assembly that will offer a tax credit for residential GHP installations. The credit will cover 25% of residential GHP equipment (Energy Star rated) and installation cost, with a \$10,000 cap. Consumers can take \$2,500 annually on their tax form. Credit cannot exceed 50% of taxable liability, and can be carried forward for 10 years. The aggregate cap for any fiscal year of \$10 million, and it sunsets at the end of 2022. GEO and GHP manufacturers are financially supporting the effort, which includes advocacy by May Fox and Tom Lisk with Eckert Seamans (Richmond, VA). GEO is participating in regular legislative update conference calls. Senate Commerce Chairman Frank Wagner (R-21st Dist.) and House Caucus Chairman Rep. Tim Hugo (R-40th Dist.) will patron the legislation, which is supported by the Virginia Homebuilders Association, Virginia Well-Drillers Association, and Association of Electric Cooperatives in Virginia, Delaware and Maryland. The state's major utility, Dominion Power, and the Virginia Oil and Gas Association have taken a neutral position. Read the draft legislation [here](#).

GEO Comments on Governors' Clean Energy Accord On March 3, GEO responded to a bipartisan group of governors from 17 states who pledged to boost renewable energy after the U.S. Supreme Court stayed implementation of the U.S. Environmental Protection Agency's (EPA) Clean Power Plan. The "Governors' Accord for a New Energy Future" sets commitments to expand renewable energy and energy efficiency, and integrate solar and wind generation into electricity grids. New standards and benchmarks for energy efficiency and renewables will also be set. GEO sent letters to the governors and their energy advisors in California, Connecticut, Delaware, Hawaii, Iowa, Massachusetts, Michigan, Minnesota, New Hampshire, Nevada, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia and Washington. GEO President Doug Dougherty extolled the many environmental and economic benefits of GHPs, concluding: "GEO hopes your state will strongly consider promoting new and/or expanded state and utility sponsored efforts to help homeowners and businesses install geothermal heating and cooling systems to reducing power plant emissions."

GEO Comments on Connecticut Energy Strategy On Nov. 3, GEO submitted comments to the Connecticut Department of Energy and Environmental Protection (DEEP) Bureau of Energy and Technology Policy on the role that GHPs should play in the state's Comprehensive Energy Strategy. "GEO recommends that Connecticut's Comprehensive Energy Strategy make room for aggressive promotion of the many benefits of GHPs. We would also like to see the state adopt strategies for basic financial incentives for GHP installations. Finally, we urge the development of state- and/or utility-

sponsored loan guarantee programs for GHPs. Such a program would allow ratepayers to more easily enjoy the comfort and economic benefits of the technology while making monthly payments that are less than the money they save on utility bills.” Text of GEO comments on the importance of GHPs to Connecticut’s Comprehensive Energy Strategy is posted on GEO website, [here](#).

GEO-IGSHPA States Advocacy Meeting On July 27, GEO and International Ground Source Heat Pump Association (IGSHPA) jointly convened a meeting of several state geothermal associations. Their leaders took part in wide-ranging discussions about federal and state policies, regulation, and other activities. Participating state associations included the California Geothermal Heat Pump Association (CalGeo), Geothermal Alliance of Illinois (GAOI), Iowa Geothermal Association (IGA), Michigan Geothermal Energy Association (MGEA), Mid-Atlantic Geothermal Industry Coalition (MAGIC), Minnesota Geothermal Heat Pump Association (MNGPA), New England Geothermal Professional Association (NEGPA), New York Geothermal Energy Organization (NY-GEO), and the Wisconsin Geothermal Association (WGA). GEO Chief Operating Officer Ryan Dougherty moderated the meeting. Also representing GEO was President and CEO Doug Dougherty, and Outreach and Communications Manager Ted Clutter. Cary Smith (Sound Geothermal – Sandy, UT) and David Thomison (Oklahoma State University - Stillwater) represented the IGSHPA Advocacy Committee. Discussion included a federal tax credit update with a GEO primer on inviting legislators to geothermal job sites—to provide on the ground education and to recruit cosponsors for tax credit extension legislation. State association leaders provided updates on activities in California, Illinois, Iowa, Michigan, the Mid-Atlantic states, Minnesota, New England, New York and Wisconsin. GEO and IGSHPA intend to make these information and strategy meetings a regular occurrence.

Geo Guides to Help States On Feb. 1, the Geothermal Energy Association (GEA), Geothermal Resources Council (GRC), and GEO announced the release of guidance for states on meeting new clean energy standards from the U.S. Environmental Protection Agency (EPA). The free state-by-state guides walk through the benefits and uses of three major types of geothermal applications: power generation, direct use and heat pumps. The materials are available from GEA, and are focused on the needs of state officials, regulators and the public. They provide valuable information about geothermal energy uses in their individual states that should be considered as policymakers and stakeholders seek ways to meet the mandates of EPA’s Clean Power Plan. For free copies, contact GEA at (202) 454-5261.

GEO-IGSHPA Alliance

2016 saw increased cooperation by GEO and the International Ground Source Heat Pump Association (IGSHPA), with GEO Chief Operating Officer Ryan Dougherty serving as liaison between the two organizations. The July edition of *GEO Industry News* featured an in-depth interview of IGSHPA President John Turley and GEO Chairman Joe Parsons, who laid out their cooperative vision for the future of the associations in concert with the GHP industry. GEO’s monthly publication has also promoted IGSHPA training workshops and its annual conference and expo. IGSHPA worked with GEO on the tax credit issue at the federal level, with members of its Advocacy Committee attending a legislative Fly-In to Washington, DC in September. IGSHPA cosponsored a mid-summer teleconference meeting of state geothermal associations called by GEO (above). On Oct. 27, GEO congratulated Roshan Revankar on his appointment as IGSHPA Acting Executive Director. Revankar joined IGSHPA as the training manager in 2012 after studying ground source heat pumps during master's work in engineering at Oklahoma State University.

International Cooperation

GEO and HRAI Sign MOU On Aug. 26, GEO and the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) entered into a Memorandum of Understanding that establishes a framework for cooperation in the ongoing development and improvement of the geothermal heating and cooling industry in Canada and the United States.

GEO Stands Against Natural Gas in Ontario In May, Ontario passed the Climate Change Mitigation and Low-carbon Economy Act, enabling the province to invest money from a carbon emission cap-and-trade program into reducing greenhouse gas pollution. In a letter of support to the Ontario Geothermal Association, GEO supported OGA's stand against state or ratepayer supported extension of natural gas pipelines into small towns and rural areas of Ontario. The cap-and-trade system program and action plan are the backbone of the province's strategy to cut emissions to 80% below 1990 by 2050.

C448 Bi-national Geothermal Standard In February, CSA published its C448 Bi-national Standard, to harmonize differences between existing resources, simplify referencing in regulations and contracts, incorporate the latest advancements, clarify compliance using standards language, and provide credibility through development of accredited neutral standards. The Bi-national Committee included leaders from GEO, IGSHA and other industry associations, utilities, drillers, installers, manufacturers, regulators, designers, engineers and academia. For more information, visit the CSA website [here](#).

GEO 2016 Administrative News

In Memory – Tom Huntington Feb. 12 – The geothermal heat pump industry lost one of its key leaders on Feb. 10, with the passing of WaterFurnace President and CEO Tom Huntington, after a long and heroic battle with cancer. Tom proudly served as GEO Chairman in 2012-13.

Parsons Elected GEO Chairman

By unanimous vote of its Directors at its April 20 meeting in Lakeland, FL, the GEO Board of Directors named Joe Parsons (Earthlinked Technologies) as its new Chairman for 2016-17. Parsons has served on the Board since May 2014. He is Chief Operating Officer at Earth-Linked Technologies, responsible for product development, training programs, standards compliance and authorized dealer relationships.

GEO 2016-17 Board of Directors

- Chairman Joe Parsons (Earthlinked Technologies)
- Past Chairman Steve Smith (Enertech Global, LLC)
- Vice Chairman Keith Swilley (Gulf Power-Southern Co.)
- Secty/Treasurer Phil Schoen (GEO-Enterprises)
- Board Member Mike Albertson (WaterFurnace Intl.)
- Board Member Rick Aldridge (ClimateMaster, Inc.)
- Board Member Dan Ellis (ComfortWorks)
- Board Member Martin Forsén (NIBE)
- Board Member David Hules (Emerson Climate Technologies)

New GEO Board Members On March 4, the GEO Board of Directors replaced Board Member Tom Huntington with **Michael Albertson**, WaterFurnace Senior Vice President for Sales & Marketing. On Sept. 28, the GEO Board appointed NIBE Manager of International Affairs **Martin Forsén** to its ranks. Based in Sweden, NIBE owns GEO Manufacturer Members Climate-Master, Enertech and WaterFurnace in the United States.