

## by Peter Tavino, P.E., CGD

Here are thoughts on ways to keep geothermal dirt cheap:

- Every state should follow North Carolina's lead by allowing a substantial state tax credit over five years in addition to the federal tax credit. Local geothermal workers will pay more income tax to state coffers anyway. Wealthier geothermal clients would not relocate to lower taxed states.
- Any government policy that delays geothermal while design is reviewed (for miniscule archaeologic disturbance of grounds inhabited by Native Americans for instance) or policy such as only prevailing wage rates can be paid on rebateable geothermal jobs should be prohibited. So far, attorneys have generally kept out of geothermal lawsuit threats, but regulatory agencies with their burdensome costs and delays are creeping in. Folks with a broken air conditioning system cannot wait a month for the state archaeologist to bless the project.
- The mandatory energy audit before some geothermal projects can be rebated should be done by auditors who are trained in the benefits of geothermal. Too often, geothermal installers recommend energy auditors, who then tell homeowners: "Instead of investing in expensive, underground geothermal, let my cousin give you a price for new windows."
- Geothermal referrals for work should follow the ethics standards set by the American Institute of Architects or the National Society of Professional Engineers; and designer tax credits should not be limited to governmentowned buildings. Maybe more geo would be specified if there were fair tax incentives for architects and engineers.
- The AHRI (American Heating & Refrigeration Institute)
   Web site remains confusing and user unfriendly for geothermal designers and owners, who owe no allegiance to any one heat pump company. There are too many model

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number options instead of subsets.

- Geo heat pumps should all have universal wiring for any type of thermostat, especially smart systems tied into building owner cell phones or computers.
- Bentonite grout rigs should be equipped with water gauges to allow inspectors on the ground to see proper water content gallons for each batch. This will lead to improved grout quality and better heat pump performance.
- As utility
  companies
  scold geothermal
  installers who
  promise cus-

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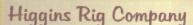
tomers "unlimited free hot water," a practical standard guideline for expectations based on climatic region would help.

- Our state of Connecticut has noticed, since a list of approved geothermal contractors with proper experience, insurance, IGSHPA (International Ground Source Heat Pump Association) certification and licensure has been compiled, customer complaints about geothermal have plummeted.
- I hope my design for a combined closed-loop 30 borehole field with two open-loop wells providing underground advection transfer of heat will be installed. Instead of competing, the two methods could, in the words of R. King "...all just get along."
- Geothermal installers previously IGSHPA accredited before NATE (North American Technician Excellence) began administering the exam two years ago, can retake the exam, and gain NATE certification. This helps in obtaining ACCA (Air Conditioning Contractors of America) Quality Installer status for Energy Star. But vertical loop installers do not take a NATE exam from IGSHPA, so test wisely.
- If each state performed a geothermal community service project, such as the one we are planning for a local food pantry, the image of geothermal would be greatly enhanced!

Want to find out how to save a ton on heating and cooling costs?...Do a little digging. Geothermal.

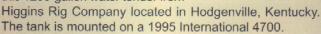
The statements and comments in this article are my own and are based on information and references believed to be true and factual. If you have any questions or comments, please forward them to me care of WWGR. Peter

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Brandon Creasy of Creasy Geothermal & Well Drilling located in Hahira, Georgia, purchased this 1200-gallon water tender from



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