

ENERGY STAR GEOTHERMAL TIERS GETTING TOUGHER

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The U.S. Environmental Protection Agency (EPA) and Department of Energy (DOE) are tightening their standards for geothermal heat pump (GHP) systems under the federal ENERGY STAR Program. Stricter program tiers will impact how consumers of GHPs can claim the 30% federal tax credit for residential GHP installations, and the agencies have clarified questions about date of manufacture vs. date of installation in claiming the credit.

ENERGY STAR is an international standard for energy efficient consumer products originated during the early 1990s in the United States. Products that have earned the ENERGY STAR designation meet strict energy efficiency guidelines set by the EPA.

According to EPA and DOE, “GHPs are among the most efficient heating and cooling technologies available, because they use the Earth’s natural heat to provide heating, cooling, and water heating. ENERGY STAR qualified geothermal heat pumps are over 45 percent more energy efficient than standard heating and cooling options.”

The American Recovery and Reinvestment Act of 2009 revised the U.S. Tax Code, allowing a 30% federal tax credit as of Dec. 1, 2009, for homeowners who install ENERGY STAR-qualified GHP systems at primary and secondary residences (rentals do not qualify).

ENERGY STAR qualified GHPs can include open loop, closed loop, and Direct Expansion (DGX), powered by single-phase current. A qualified residential GHP system must meet the following ENERGY STAR requirements to be eligible for the federal tax credit:

- Installed after January 1, 2009 and before Dec. 31, 2016.
- According to Internal Revenue Service guidance, the federal tax credit is tied to the Energy Star specification that is in effect at the date of installation.
- Installed in residence (not limited to primary residence). Does not include rentals.

ENERGY STAR has a 3 Tier Program of progressively increasing energy efficiency requirements for qualification.

New Tier 2 requirements for water-to-air and direct geoexchange GHP models took effect on Jan. 1, 2011. All GHP units manufactured on or after this date must meet the new efficiency requirements to be listed as an ENERGY STAR-qualified product. GHP units manufactured before Jan. 1, 2011 must meet the ENERGY STAR Tier 2 efficiency requirements to be ENERGY STAR-tax credit eligible for this year. ENERGY STAR qualification **does not guarantee** tax credit eligibility.

Tier 2 ENERGY STAR GHP Requirements

Closed Loop	Open Loop	DGX
EER ≥ 14.1	EER ≥ 16.2	EER ≥ 15
COP ≥ 3.6	COP ≥ 3.6	COP ≥ 3.5

Tax Credit Includes Installation Costs

Source: ENERGY STAR website: www.energystar.gov

To qualify for the federal tax credit, GHP systems must meet the ENERGY STAR requirements **in effect at the time of installation**. This can include GHP units produced before Jan. 1, 2011 if they meet the latest, Tier 2 program efficiency levels. More stringent requirements will go into effect for water-to-water and water-to-air GHP models on Jan. 1, 2012.

GEO—the Geothermal Exchange Organization—is a non-profit 501(c)(6) trade association representing the interests of its member companies, with outreach to government institutions and the public about the economic, national security, and environmental benefits of geothermal heat pump systems for both residential and larger scale commercial applications.

For information about GEO and how your company can become a member, visit our website at www.geoexchange.org and click on Join GEO at the top of the page. You can also reach GEO by phone at (888) 255-4436, or by e-mail at GEO@geoexchange.org.