Most Efficient 2024
www.energystar.gov

Recognition Criteria
Geothermal Heat Pumps

Scope

Included products: Residential geothermal heat pumps, as defined below, are eligible for ENERGY STAR® Most Efficient recognition in 2024.

a. **Geothermal Heat Pump (GHP):** A geothermal heat pump uses the thermal energy of the ground or groundwater to provide residential space conditioning and/or domestic water heating. A GHP model normally consists of one or more factory-made assemblies that include indoor conditioning and/or domestic water heat exchanger(s), compressors, and a ground-side heat exchanger. A GHP model may provide space heating, space cooling, domestic water heating, or a combination of these functions and may also include the functions of liquid circulation, thermal storage, air circulation, air cleaning, dehumidifying, or humidifying. A GHP system generally consists of one or more GHP models, the ground heat exchanger(s), the air and/or hydronic space conditioning distribution system(s), temperature controls, and thermal storage tanks.

Excluded products: The following products are not eligible for ENERGY STAR Most Efficient recognition in 2024 under this specification:

- Units that run on three-phase power.

Recognition Criteria

1) Product must be ENERGY STAR certified consistent with ENERGY STAR Partner Commitments and the requirements set forth in the ENERGY STAR Geothermal Heat Pumps, Version 3.2. Product performance must be certified by a certification body recognized by the U.S. Environmental Protection Agency (EPA).

2) Products must meet the following cooling and heating performance levels:

Product type	EER	COP
Closed Loop Water-to-Air GHP	17.1	3.6
Open Loop Water-to-Air GHP	21.1	4.1
Closed Loop Water-to-Water GHP	16.1	3.1
Open Loop Water-to-Water GHP	20.1	3.5
DGX-to-Air	16.0	3.6
DGX-to-Water	15.0	3.1

Recognition Period

The U.S. Environmental Protection Agency (EPA) will indicate ENERGY STAR Most Efficient recognition for eligible models on the ENERGY STAR product finder for geothermal heat pumps from January 1, 2024, through December 31, 2024. The ENERGY STAR Most Efficient 2024

designation may be used in association with models recognized during this period for as long as the model remains on the market.