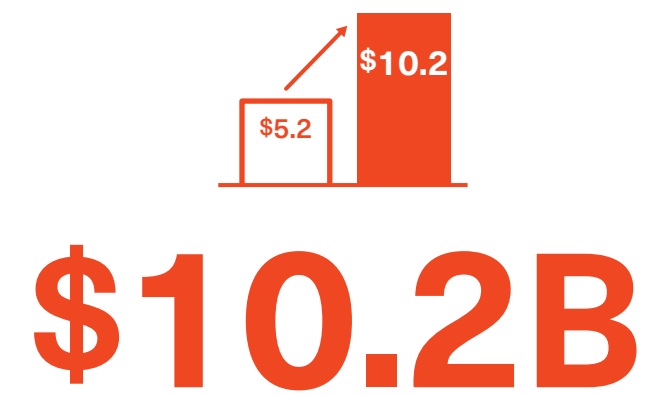




Distributed Geothermal Heat Pump System

Distributed geothermal heat pump systems use small water-to-air heat pumps placed throughout the building, giving each zone its own heating and cooling source. This decentralized setup supports individualized comfort, built-in redundancy, and flexibility for changing layouts, while the ground-source heat exchanger helps deliver reliable, year-round performance.



The commercial geothermal heat pump market is expected to be **\$10.2 billion** by 2029, growing at **11.7% CAGR**.*



Up to **50% more efficient than air-source systems** and as much as 75% more efficient than standard HVAC systems.**



6% base ITC, with bonuses raising total tax credits up to **50% of eligible project costs**.

*Global Forecast to 2029, MarketsandMarket. **Guidehouse Inc. Residential HVAC and Heat Pump Market Reports.

How it Works

A distributed geothermal heat pump system uses a shared ground loop with small water-to-air heat pumps in each zone. Each heat pump in the system transfers heat with the ground loop by absorbing or rejecting energy as zones call for heating or cooling.



Benefits



Individualized Comfort

Dedicated heat pumps in each zone provide precise local control and flexible comfort.



Low Operating Costs

Ground-source operation delivers high efficiency and lowers energy costs.



Energy Efficiency

Heat rejected from cooling units can be reused for heating other zones, improving overall efficiency.



Adaptable Design

Adapts easily to changing layouts or tenants and reduces the need for boilers or cooling towers.



Built-In Redundancy

Multiple small units increase reliability, allowing other zones to operate even during service.



End-To-End Support

Benefit from Trane's fully packaged design documentation, application guidance, and proven control sequences.