



state
WATER HEATERS

**HIGH EFFICIENCY
INTEGRATED HEAT PUMP**





State Premier[®] Hybrid Electric Heat Pump Water Heater





Premier Hybrid Electric Heat Pump: Features

- Hybrid electric design: Integrates heat pump technology
 - Conserves energy; less than half the cost to operate compared to standard electric model
- 2.4 EF: Standard electric units are .93 to .95 EF
 - The only type of electric water heater that is ENERGY STAR® qualified
- 60 & 80 gallon capacities
 - Extra capacity to store “cheap” hot water created from the heat pump technology





Premier Hybrid Electric Heat Pump: How It Works



The Premier Hybrid Electric Heat Pump is an integrated system that utilizes heat pump technology to pull heat from the surrounding air and deposit the heat into the tank.

In “efficiency” mode, the water heater operates in the following manner:

- 1 A fan brings air through the top air filter
- 2 Heat in the air is absorbed by the refrigerant inside the evaporator coil
- 3 The refrigerant is pumped through a compressor, which raises the temperature
- 4 Hot refrigerant is circulated through the copper coil and transfers heat to the water



Premier Hybrid Electric Heat Pump: Payback

Payback Scenario	
MSRP	\$1,995
Federal Tax Credit (30%)	-\$599
SEEARP (State ENERGY STAR Rebate)	-\$200
Utility Rebate	-\$100
Standard 50 gallon electric cost	-\$300
Upgrade cost delta	\$797
Annual cost of operation savings	\$360
Payback	2.2 yrs
Total product life savings	\$4,320

Assumptions:

State funding remains for ENERGY STAR products

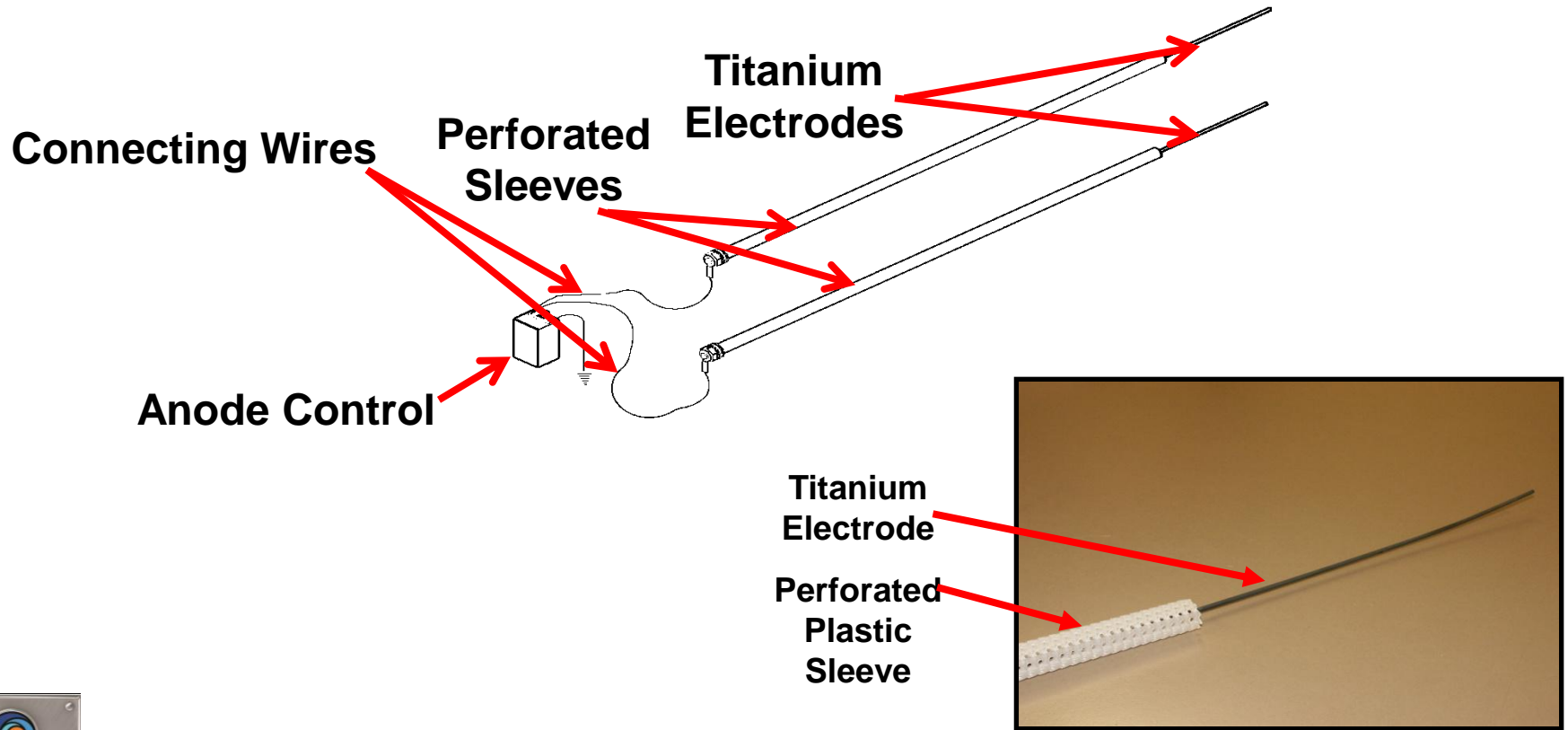
Utility rebates are available

Product lifespan of 12 years



Powered Anode System

- Provides longer-lasting tank protection



Powered Anode System

What Benefits does it offer?

- The State powered anode system provides “Ultra” tank protection
- Unlike traditional sacrificial anodes that are designed to be consumed over time leaving the tank unprotected, eventually leading to tank failure. However the durable State powered anode uses the most modern technology available to provide long lasting tank protection.
- No Anode Maintenance or Inspection = Years of dependable operation.
- Powered anodes eliminate the potential for smelly water.
- Proven Dependability - Powered anodes have been used for years in Europe and on a limited basis in the United States with excellent results.



Powered Anode System

How does it work?

- The powered anode system consists of two main components:
 - Potentiostat built into the intelligent control
 - Titanium anode probe
- The potentiostat measures conditions in the tank. Based on this information the precise current required to meet the reference potential is calculated. This exact amount of current is then fed to the titanium anode located in the tank so the optimum protection level is achieved. These measurements and supply cycles alternate at millisecond intervals. Over time or as water conditions change the amount of power needed to protect the tank is adjusted.
- In the event of a powered anode malfunction or failure the intelligent control will flash an alert and give an explanation.





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