

**ENERGY STAR® 2019 Emerging Technology Award Requirements:
Air-to-Water Heat Pumps¹ with a Rated Cooling Capacity < 65,000 Btu/h**

Performance Metric	Criteria	Test Method/Required Documentation
Air-to-Water Heat Pump Performance		
Energy Efficiency Requirements	Heating Coefficient of Performance (COP _H) shall be ≥ 1.7 at full load capacity and the following conditions: <ul style="list-style-type: none"> • Dry bulb air temperature of 5°F • Leaving water temperature of 110°F COP _H and capacity (in BTUs) will be reported	AHRI Standard 550/590 2018 Standard for Performance Rating of Water-chilling and Heat Pump Water-heating Packages Using the Vapor Compression Cycle
Reporting Requirements	COP _H and capacity (in BTUs) at air temperature of 47°F dry bulb, 43°F wet bulb, and a leaving water temperature of 105°F	
	COP _H and capacity (in BTUs) at air temperature of 17°F dry bulb, 15°F wet bulb, and a leaving water temperature of 105°F	
	Integrated Part-Load Value (IPLV) to be reported if the heat pump is capable of providing space cooling	
	Refrigerant type used	
	Energy measurements must be performed at an ISO/IEC 17025 accredited lab ²	
Warranty Minimum	One year on compressor and all other parts	Copy of warranty agreement
Certification	Must meet all applicable U.S. electrical safety requirements	Copy of case files
Additional Company Requirements		
Product Commercial Status	This Award is only granted to products that are available for sale in the U.S. Products must meet one of the following criteria: 1) available for sale at multiple supplier locations, <i>or</i> 2) have commercial orders pending and firm plans to sell products to customers within 3 months of the Award application date.	

¹ Air-to-Water Heat Pumps must meet the following description to be eligible:

- Must be an air source heat pump,
- Has refrigerant to water or water/glycol heat exchange, and
- Provides space heating (and potentially also provides space cooling and domestic hot water)

² [ENERGY STAR Partner Resources Third Party Certification Laboratory Resources Webpage](#)