

# ENERGY STAR® TEST METHOD TO VALIDATE DEMAND RESPONSE

Test methods and compliance for room air conditioners

**Intertek has the experience and expertise to help you understand and meet the Connected Criteria for Demand Response in Room Air Conditioners.**



ENERGY STAR® test methods offer the ability to evaluate specific products for Demand Response. This is the first and only protocol written for a “connected” HVAC Systems, with unique test methods that may be considered.

Intertek's experts in Cortland, New York were the first to complete Demand Response testing on an HVAC system, bringing combined expertise in energy efficiency, electrical safety, performance and wireless testing, as well as knowledge of the ENERGY STAR program, to the industry to meet all HVAC needs.

## Demand Response

Demand Response technology allows energy companies to send signals to electrical equipment and appliances throughout the day, telling them to use less energy when necessary.

## ENERGY STAR Test Method

The ENERGY STAR program for Room Air Conditioners requires third party test data in accordance with the below published specifications. If a product meets the requirements of the Connected Criteria, the manufacturer has the option to pursue a 5% allowance for its Combined Energy Efficiency Ratio (CEER). The below optional test method is then required.

- ENERGY STAR Version 4.1 Room Air Conditioners Specification
- ENERGY STAR Test Method for Room Air Conditioners to Validate Demand Response (optional)

These protocols confirm products will reduce power grid load, lower energy use and reduce utility bills for consumers. Incentive programs may be offered to consumers who utilize connected products.

## Intertek Solutions

With more than a century of experience in product testing and certification, our Total Quality Assurance solutions provide manufacturers with services to meet the Demand Response requirements:

- Assurance: Services for product design and development stage
- Testing: Assess products to specifications, including energy efficiency requirements, software assessments, safety and performance
- Certification: ENERGY STAR validation, as well as ETL certification to applicable safety standards

## Did You Know?

Demand Response technology can help products meet the requirements for ENERGY STAR certification where they would not have qualified before. Learn more on the next page.



## Using Demand Response Technology to Achieve ENERGY STAR Ratings

With the Demand Response CEER allowance, manufacturers can certify models that previously would not have been classified as ENERGY STAR or make design changes to limit costs in production. These tables illustrate the minimum CEER required for certification, highlighting in yellow the lowered minimum CEER required if the model can meet the ENERGY STAR connected criteria using the test method ENERGY STAR Test Method for Room Air Conditioners to Validate Demand Response (June 2017).



Capacity (BTU)	Table 1: Units without Reverse Cycle			
	CEER <sub>MIN</sub> (Unit with Louvered Sides)		CEER <sub>MIN</sub> (Unit without Louvered Sides)	
	Standard	With Allowance	Standard	With Allowance
<6000	12.1	11.5	11.0	10.5
6000 to 7999				
8000 to 10999	12.0	11.4	10.6	10.1
11000 to 13999			10.5	10.0
14000 to 19999			10.2	9.7
20000 to 27999	10.3	9.8	10.3	9.8
≥28000	9.9	9.4		

## About Intertek

Intertek is a leading Total Quality Assurance provider to industries worldwide. Our network of more than 1,000 laboratories and offices and over 44,000 people in more than 100 countries, delivers innovative and bespoke Assurance, Testing, Inspection and Certification solutions for our customers' operations and supply chains. Intertek Total Quality Assurance expertise, delivered consistently with precision, pace and passion, enabling our customers to power ahead safely.

Capacity (BTU)	Table 2: Units with Reverse Cycle			
	CEER <sub>MIN</sub> (Unit with Louvered Sides)		CEER <sub>MIN</sub> (Unit without Louvered Sides)	
	Standard	With Allowance	Standard	With Allowance
<14000			10.2	9.7
≥14000			9.6	9.1
<20000	10.8	10.3		
≥20000	10.2	9.7		

Type	Table 3: Casement Units	
	CEER <sub>MIN</sub>	
	Standard	With Allowance
Casement-Only	10.5	10.0
Casement-Slider	11.4	10.8

## FOR MORE INFORMATION

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