## REPI-90-21:

*Add new definitions as follows:*

**DEMAND RESPONSE SIGNAL.** A signal that indicates a price or a request to modify electricity consumption for a limited time period.

**DEMAND RESPONSIVE CONTROL.** A control capable of receiving and automatically responding to a *demand* *response signal*.

*Add new text as follows:*

**R403.5.4 Demand Responsive water heating.** Electric storage water heaters shall be provided with *demand responsive controls* in accordance with Table R403.5.4 or an equivalent *approved demand responsive control*.

**Table R403.5.4**

**Demand Responsive Water Heating**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equipment Type** | **SIZE CATEGORY (input)** | **Rated Water Storage Volume** | **Controls** | |
| Before 7/1/2025 | As of 7/1/2025 |
| Electric Storage Water heaters | ≤ 12 kW | 40-120 gallons | ANSI/CTA-2045-B Level 1 and also capable of initiating water heating to meet the temperature set point in response to a *demand response signal*. | ANSI/CTA-2045-B Level 2, except “Price Stream Communication” functionality as defined in the standard. |

*Revise table as follows:*

**Table R405.2**

**Requirements for TOTAL BUILDING PERFORMANCE**

|  |  |
| --- | --- |
| **SECTION** | **TITLE** |
| Mechanical | |
| R403.5 except Section R403.5.2 | Service hot water systems |
| ~~R403.5.1~~ | ~~Heated water circulation and temperature maintenance systems~~ |
| ~~R403.5.3~~ | ~~Drain water heat recovery units~~ |

*Revise table as follows:*

**Table R406.2**

**Requirements for Energy Rating Index**

|  |  |
| --- | --- |
| **SECTION** | **TITLE** |
| Mechanical | |
| R403.5 except Section R403.5.2 | Service hot water systems |
| ~~R403.5.1~~ | ~~Heated water circulation and temperature maintenance systems~~ |
| ~~R403.5.3~~ | ~~Drain water heat recovery units~~ |

*Add new standard as follows:*

|  |  |  |
| --- | --- | --- |
| **CTA** | Consumer Technology Association  1919 S. Eads Street  Arlington, VA 22202 |  |
| Standard  reference  number | Title | Referenced  in code  section number |
| ANSI/CTA-2045-B | Modular Communications Interface for Energy Management . . . . . . . | . . . . . . . R403.5.4 |

### Reason for Revision

This revision is the result of a collaboration/negotiation between AHRI and NBI. It makes a couple of key revisions:

* + It replaces definitions for “grid integrated control” with “demand responsive control.” The market is moving to a more robust implementation of demand response, but has not yet settled on a terminology. This change utilizes a known term, “demand response,” until such time as the market settles on a new term that can be defined in code. These definitions are used in Title 24, which is leading the market for demand responsive control requirements
  + The range of storage tank sizes subject to the requirement been aligned with water heaters on which manufacturers are installing these requirements.
  + An effective date of 7/1/2025 has been added based on the availability of these controls on the market. Before that date, water heaters will be required to meet requirements that can be met by equipment on the market today. After that date, water heaters will be required to meet requirements that can be met by equipment that manufacturers have committed to having available on the market by that date.
  + The proposal uses a table format as that is the precedent for having “as of date” requirements in the IECC. It also enables the addition of DR controls for additional water heating equipment types as they become available.