Frequently Asked Questions:

New Federal Dedicated Purpose Pool Pump Test Procedure

Beginning February 5, 2018, dedicated purpose pool pump (DPPP) manufacturers are required to use the new federal test procedure [10 CFR 431.464 – Appendix B, and Appendix C to Subpart Y of Part 431]. Provided for your convenience is a list of frequently asked questions (FAQs) and guidance related to the amended DPPP test procedure and how it interacts with California standards.

If clarification is needed on any of the information contained in the FAQs, please contact the Appliance Efficiency Program via email at: appliances@energy.ca.gov with the following title in the subject line: Pool Pump FAQ, or call the appliance hotline toll free at (888) 838-1467 or outside California at (916) 651-7100 (9 a.m. to 4:30 p.m. PST).

General

Q: What are the effective dates of this test procedure?

A: The effective date for this federal test procedure is September 6, 2017, and representations made on or after February 5, 2018, regarding the energy consumption of dedicated purpose pool pumps must be based upon results generated under this test procedure.

Q: Where can I get a copy of the U.S. Department of Energy’s new test procedure for dedicated purpose pool pumps?

A: The final rule, including a discussion of the changes and rationale, is published in the Federal Register at 82 FR 36858 (August 7, 2017) and online at https://www.regulations.gov/document?D=EERE-2016-BT-TP-0002-0015. The test procedure is in 10 CFR part 431, Subpart Y, and Appendices B and C to Subpart Y of Part 431.

Q: Where can I get more information about pool pumps?

For general questions about pool pumps, the Appliances Efficiency Program has created a list of FAQs available at: http://www.energy.ca.gov/appliances/bulletins.html. For more information, visit our Appliance Efficiency Program Outreach and Education website at http://www.energy.ca.gov/appliances/outreach/index.html to access documentation guides and upcoming educational webinars.
Q: How does the California Energy Commission define and categorize pool pumps?

A: Under the Title 20 Appliance Efficiency Regulations, pool pumps are called Residential Pool Pump and Motor Combinations. The Energy Commission defines a residential pool pump as an impeller attached to a motor that is used to circulate and filter pool water in order to maintain clarity and sanitation, while a residential pool pump and motor combination means a residential pool pump motor coupled to a residential pool pump. These pool pumps are used to filter and circulate water in in-ground, above ground, and storable pools. They do not include pressure cleaner booster pumps, waterfall pumps, or pumps used in portable electric spas.

Q: How does the U.S. Department of Energy define and categorize dedicated-purpose pool pumps?

A: Dedicated-purpose pool pump comprises self-priming pool filter pumps, non-self-priming pool filter pumps, waterfall pumps, pressure cleaner booster pumps, integral sand-filter pool pumps, integral-cartridge filter pool pumps, storable electric spa pumps, and rigid electric spa pumps. [10 CFR section 431.462, definition of “dedicated-purpose pool pump”] The scope of the test procedure is narrower than the definition and only applies to self-priming pool filter pumps, non-self-priming pool filter pumps, waterfall pumps, and pressure-cleaner booster pumps, and is limited to those pumps whose pump output, expressed in hydraulic horsepower, is less than 2.5 total horsepower.

The U.S. Department of Energy created eight equipment classes for DPPP based on various hydraulic and pump characteristics shared by particular groups of products. When hydraulic and pump characteristics change so do the utility and efficiency of the devices.

The Energy Commission has interpreted the Title 20 Appliance Efficiency Regulations to include self-priming filter pool pumps, non-self-priming pool filter pumps, integral cartridge filter pumps, and integral sand filter pool pumps as residential pool pump and motor combinations.

**Testing**

Q: How is the federal test procedure different from the California test procedure?

A: Title 20 requires test method Hydraulic Institute (HI), HI 1.6-2000 while the new Federal Test Procedure will require HI 40.6-2016 modified as per 10 CFR 431.463 appendix A to subpart Y.
Q: What is the weighted energy factor metric required by the U.S. Department of Energy and how does it differ from the California energy factor metric?

Key Differences:

Weighted energy factor (WEF) is a new metric, defined as the ratio of the pump water flow to the pump input power at one or more load points. The load points are selected depending on the specific DPPP equipment class and speed configuration. The method to calculate the WEF is shown in 10 CFR 431 Appendix B to Subpart Y.

Energy factor (EF) is similar to WEF but represents the pool pump performance at only one speed and load point. California requires reporting of EF for load points on system curves A, B, and C at full speed. A second set of EF is required for dual and variable speed pumps at low speed.

Q: What test method and certification must a manufacturer perform to offer for sale or sell self-priming or non-self-priming pool pumps in California?

A: Residential pool pump and motor combinations, including those models that meet the federal definitions for self-priming pool filter pumps and non-self-priming pool filter pumps, must now certify new models using the new federal test procedure [10 CFR 431.464 – Appendix B, and Appendix C to Subpart Y of Part 431].

Manufacturers do not need to re-certify or re-test pool pump models that had been tested to the old test method and certified to the Energy Commission prior to February 5, 2018.

Q: What test method and certification must a manufacturer perform to offer for sale or sell pressure cleaner booster pumps, waterfall pumps, or portable electric spa pumps in California?

Products that are covered as federal dedicated purpose pool pumps but that do not meet the definition of a “residential pool pump and motor combination,” such as pressure cleaner booster pumps, waterfall pumps, storable electric spa pumps, and rigid electric spa pumps, are not required to be certified to the Energy Commission.

Q: What test method and certification must a manufacturer perform to offer for sale or sell integral cartridge filter pool pumps and integral sand filter pool pumps in California?

Residential pool pump and motor combinations that are typically used in storable-type pools, such as integral cartridge filter pool pumps and integral sand filter pool pumps, are not covered under the new federal test procedure, will not be archived, and should continue to use the existing California test procedures for any new models certified to the Energy Commission database.
Q: Will the Energy Commission continue to require the submission of data at Curves A, B, and C pump performance data?

A: Yes. The Energy Commission will continue to require certification of pool pump performance data at Curves A, B, and C for flow, input watts, and energy factor. Dual-speed and variable-speed pool pumps will be required to submit data for both high and low speed.

Certification

*Not required to be certified to the Energy Commission and not regulated under Title 20.
Q: What happens to residential pool pump and motor combinations certified before February 5, 2018?

A: All pool pump and motor combinations certified before February 5, 2018, will be archived, but units of these models may still be sold in California until the new federal standards take effect on July 19, 2021.

Q: Can archived residential pool pump motor combination models still be sold in California?

A: Yes. Models that were certified as compliant to the standard before February 5, 2018, can still be sold in California after the compliance date, and will be displayed in the archived section of the Modernized Appliance Efficiency Database System (MAEDbS).

Q: How do I find archived Residential Pool Pump Motor Combinations?

A: Under the search feature in the Energy Commission MAEDbS database go to “Appliance Type” and select the following fields:

Once you have completed these steps click the search button, and it will locate all of the archived residential pool pump and motor combinations.

Q: Why is the Energy Commission requiring manufacturers to certify new residential pool pump and motor combinations to a new test procedure?

A: On September 6, 2017, the federal test method for DPPP went into effect. Any representations about dedicated purpose pool pumps made on or after February 5, 2018, including information certified to the Energy Commission MAEDbS database, must be made using those federal test procedures. [See 10 CFR 431.462 for dedicated purpose pool pump definitions, and 10 CFR 431.464(b), Appendix B, and Appendix C for federal test procedure information]
Q: When will manufacturers be able to submit certifications and test data based on the new federal test method to the Energy Commission MAEDbS database?

A: Beginning on February 5, 2018, the Energy Commission MAEDbS database will accept certifications and test data based on the new federal test method.

Q: Do I need to certify pressure cleaner booster pumps or waterfall pumps?
A: No, pressure cleaner booster pumps and waterfall pumps are outside the scope of the California Appliance Efficiency Regulations.

Q: Do these changes affect efficiency standards for residential pool pump and motor combinations sold or offered for sale in California?
A: No, the California standards remain in effect and unchanged until July 19, 2021, when the federal pool pump standards become effective. The California standards are shown in Section 1605.3(g)(5)(A) and (B).

(A) Motor Efficiency. Pool pump motors manufactured on or after January 1, 2006, may not be split-phase or capacitor start - induction run type.

(B) Two-, Multi-, or Variable-Speed Capability.

1. Residential Pool Pump Motors. Residential pool pump motors with a pool pump motor capacity of 1 HP or greater which are manufactured on or after January 1, 2010, shall have the capability of operating at two or more speeds with a low speed having a rotation rate that is no more than one-half of the motor's maximum rotation rate. The pump motor must be operated with a pump control that shall have the capability of operating the pump at least at two speeds.

Q: Do replacement pool pump motors need to certify using the new test procedure?
A: No, replacement pool pump motors are not in the scope of the federal test procedure, and do not need to recertify using the new test procedure.

Q: Where can I find the certification packet for pool pumps?
A: The certification packet for Residential Pool Pumps can be found at the following URL:
http://www.energy.ca.gov/appliances/database/forms_instructions_cert/Pool_Products/.

Q: How does the Energy Commission require the marking of residential pool pump and motor combinations?
A: Marking requirements for residential pool pump and motor combinations are found in Title 20, Sections 1607(b) and 1607(d)(9). Marking requirements that are consistent with federal law are required on residential pool pump and motor combinations. [See 10 CFR 431.466(b)] The Energy Commission will no longer require that residential pool pumps be marked with the nameplate horsepower of the pump. Note, however, that the Energy Commission requirement that the pool pump motor be marked with the capacity of the motor is consistent with federal law which requires the motor to be marked with the same information under the term “motor total horsepower.”