

## DOCKETED

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**Pentair comments regarding Replacement Pool Pump Motors**

*Additional submitted attachment is included below.*



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California Energy Commission  
Docket No. 15-AAER-02  
1516 9th Street, MS-4  
Sacramento, CA 95814

To Whom It May Concern:

Pentair appreciates the opportunity to review and comment on the ***Draft Pool Pump Motors Standards*** as presented on August 3<sup>rd</sup> 2017.

Pentair has been an active contributor towards supporting energy efficiency for pool equipment in California. We've done this through the development and adoption of the APSP-15, American National Standard for Residential Swimming Pool and Spa Energy Efficiency, work on national legislative and regulatory efforts, working with the California Investor Owned Utilities (CAIOU's) with marketing and education on proper installation and the development of incentive programs, as well as trade education on Title 20 and the support of our dealer network with compliance.

As Pentair reviews these ***Draft Standards*** we respectfully offer the following comments:

- A. Pentair agrees that pool pump motors must be regulated. However, we strongly recommend that the CEC allow the US Department of Energy (DOE) DPPP motor negotiated rulemaking process to run to completion such that there is one national unified standard.
  - a. The US Department of Energy has embarked on an effort to regulate pool pump motors. This DOE effort is more comprehensive than the proposed CEC standards because its scope includes all pool pump motors including new OEM models as well as replacement models. The initial DOE meeting indicates a strong consensus amongst stakeholders on the approach (consistent with the CEC proposal) and a desire to implement these rules quickly and no later than the federal DPPP rules in July 2021. We encourage the CEC to play an active role in this negotiated rulemaking process.
  - b. It is possible that a rapid development and deployment of the CEC standards may not completely align with the final DOE regulations. This would cause unnecessary confusion in the market and drive manufacturers to develop products that could soon be rendered noncompliant.

- B. A motor's end-use application can be difficult to determine and regulate since that same motor may be used for both inground and aboveground applications.
- C. Motors and their suitability for use with drives (i.e. VFD, inverters, etc.) can vary making it difficult to determine its final configuration.
- a. A drive is typically used with a three phase motor. In this case the motor is not usable as a standalone item on a residential single phase electrical system. Would this standard allow for the sale of this motor only as a replacement?
  - b. There are also single phase induction motors (e.g., Permanent split capacitor – [PSC]) that can be used with a drive to vary its speed. This is a case where the motor-only may not be compliant but if applied to a drive, the system (motor + drive) would meet the intent.
  - c. The following issues need to be addressed:
    - i. Does this proposed regulation allow for the PSC's use with a drive? Would the motor be able to be sold alone without the accompanying drive?
    - ii. This same issue may apply to the electrically commutated motors (ECMs). Could the motor-only component be sold or would it require the accompanying drive to meet the standard?
- D. The Pump's Hydraulic HP (HHP) may vary greatly from the Motor's rated HP.
- a. The same motor could be paired with many different hydraulic wet-ends. The pump's HHP is mainly dependent upon the impeller chosen. It is frequent that a larger variable speed motor (3.96 total HP) is used with a small impeller (1.0 HHP) pump. This same motor may also be used on a 2.8 HHP pump. How would the CEC determine the motor HP that matches a correlating HHP when that motor has no wet end? It is the HHP that is used to determine the size of the pump which then determines its performance requirements. Confusion would occur when a single replacement motor is used on both a "Standard-Size" as well as a "Small-Size" pump where their required MWEF values are different for the two categories.
- E. Timing can be critical and it can be difficult for the CEC motor regulations to go into effect prior to the corresponding DOE pump regulation without adversely impacting consumers.
- a. This is an example where a consumer would be unfairly impacted.
    - i. A consumer purchases a single speed 2HP pump for use on a water feature application (in full compliance with Title 20 regulation which is limited to filter pump applications). If this motor is damaged during



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installation (due to an error in the installation, thus not covered under warranty), the consumer would be prohibited from purchasing an identical replacement motor for his brand new pump.

- ii. If the DOE regulations were in effect, the purchase of the 2 HP single speed pump would be prohibited thus no conflict between the pumps and its replacement parts.
- b. Pentair strongly encourages that CEC motor regulations be limited to motors sold into commerce such that warranty replacements for like items are exempt.

F. Enforcement of these CEC regulations within one state is a concern.

- a. How does the CEC intend to regulate internet-based sales and the influx of non-compliant products across state lines?

Pentair appreciates the opportunity to comment on the ***Draft Pool Pump Motors Standards*** and looks forward supporting the California Energy Commission in its final ruling.

*Pentair Aquatic Systems ([www.pentairpool.com](http://www.pentairpool.com)), Cary, NC, is a global leader in swimming pool, spa and aquatic equipment for applications ranging from residential pools to large water environments. Aquatic Systems manufacture premium high performance and energy-efficient pool products such as pool pumps, cleaners, filters, heaters and other equipment which helps consumers enjoy their pools.*