

DOCKETED

Docket Number:	15-AAER-02
Project Title:	Pool Pumps and Spa Labeling
TN #:	212252
Document Title:	APSP Pool Pump & Motor CEC Presentation
Description:	N/A
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Organization:	APSP
Submitter Role:	Public
Submission Date:	7/12/2016 2:17:51 PM
Docketed Date:	7/12/2016

APSP Pool Pump & Motor CEC Presentation

July 13, 2016

Introduction

- APSP and its pool pump & motor manufacturer members are supportive of the CEC's initiative to further advance the efficiency standards for pool pumps and motors. This is another opportunity for the industry to demonstrate its ability to cooperate with its various constituents, as most recently witnessed via the Department of Energy's (DOE) Dedicated Purpose Pool Pump Working Group.

Introduction

- APSP recommends the CEC, manufacturers, and energy advocates model their efforts on the recent DOE process which proved to be both effective and fair to those involved. As such, the following comments and recommendations are based largely on what was learned and utilized in the DOE rulemaking.

Item 1: product categories & definitions

- APSP recommends the CEC utilize the same product categories and definitions as the DOE. This will provide consistency with the federal regulations and thereby allow manufacturers to have a common platform from which to build upon.

Item 1: product categories & definitions

■ Specifically, we recommend CEC use the same DOE definitions for the following:

- Self-priming
- Non-self-priming
- Extra small non-self-priming
- Pressure Cleaner Booster Pump (PCBP)

Item 1: product categories & definitions

- This, in turn, will allow for the associated requirements, test methods, etc. to be flexible instead of a “one size fits all” approach (described in further detail below), which would clearly handicap the ability to meet the established federal guidelines.

Item 2: motor efficiency vs. overall pump

- APSP would like to understand why the proposed requirements are based on motor efficiency instead of parameters of the overall pump such as but not limited to, energy factor. The impact of the pump's hydraulics ("wet end") plays a significant part of the overall energy consumption.

Item 2: motor efficiency vs. overall pump

- In addition, there are examples of products that would meet the new “EL6” federal guidelines yet not have the motor efficiency at either high or low speed as per the CEC regulation.

Item 3: self-priming & non-self-priming

- APSP recommends the CEC set different requirements for the categories per the federal guidelines as noted above. In the recently negotiated DOE rulemaking, self-priming pumps represent the vast majority of the energy saving opportunities, and should rightfully be the focus for updated regulations. The other categories such as non-self-priming and PCBPs represent much smaller saving opportunities as well as less financial justification for the homeowner.

Item 3: self-priming & non-self-priming

- As such, APSP proposes separate requirements for these categories. Further recommendations regarding PCBPs are noted below. This, again, would align with DOE where each category has separate EL requirements.

Item 4: two-speed pumps

- The proposed requirements for pumps larger than 1 THP would effectively eliminate two-speed pumps as they exist today as most do not meet either the high or low speed motor efficiencies (sometimes both). The energy saving opportunities of an existing two-speed vs. a single speed can be significant, so it would be counterproductive to require further product changes for what would amount to minimal incremental savings.

Item 4: two-speed pumps

- APSP recommends that two-speed pumps be allowed but only if they meet two-speed definition and subsequent criteria as described by the federal standard. This would still **require** most self-priming pumps greater than 1 THP to be variable speed, but would not eliminate the use of existing energy saving technology.

Item 5: Pressure Cleaner Booster Pump

- Most PCBPs are approximately 1.1-1.3 THP. The proposed requirements would result in these either changing to variable speed, which is impractical for the given application, or **reducing** performance to less than 1 THP, which would likely reduce performance of the pressure cleaner, resulting in longer run times and greater energy consumption.

Item 5: Pressure Cleaner Booster Pump

- The federal guidelines do not differentiate the THP for PCBPs and the associated EL aligns with a more efficient single speed option. APSP recommends the CEC adopt similar requirements.

Item 6: Auxiliary pumps

- As discussed in the DOE meetings, many self-priming pumps are used as “auxiliary pumps” for water features, spa booster, etc. These applications are not “speed discretionary”, meaning their application does not allow for reduced speeds associated with significant energy savings. Further, these applications run a fraction of the time of filtration/circulation pumps, thus the associated energy consumption (or saving opportunities) is dramatically lower.

Item 6: Auxiliary pumps

- By adopting the same federal guideline definitions as noted above, it allows manufacturers to develop products that would not be suitable or easily modified to be used for filtration/circulation, yet still appropriate for low energy consumption auxiliary applications.

Item 7: Freeze protection

- Regarding freeze protection, APSP recommends the CEC adopt the federal guidelines which include that if the pump is shipped with freeze protection disabled, the prescriptive requirements do not apply.

Item 8: PCBP test procedure

- APSP recommends the CEC adopt the federal guidelines for the pressure cleaner booster pump test procedure, which involves testing the pump at the minimum head the pump can achieve greater than or equal to 60 feet at 10 GPM.

Item 9: timing of DOE vs CEC regulations

- The federal guidelines go into effect 4.5 years (54 months) following publication of the direct final rule. APSP recommends CEC align the implementation of its revised efficiency standards for pool pumps and motors with this so that the industry can prepare for both concurrently.

Item 9: timing of DOE vs CEC regulations

- This is particularly important if there are differences in the fundamental criteria, e.g. motor efficiency requirements vs. a weighted energy factor, which could otherwise result in “California only” models if subsequent design changes are made to meet the DOE requirements.

Item 10: Preemption

- **The industry also needs absolute clarification of the CEC's view as to the impact of DOE Pool Pump Rulemaking on CEC pool motor efficiency standards. DOE is expected to publish rulemaking based on recent workgroup negotiations once approved by ASRAC. The industry believes that any state standards pertaining to pool pumps or pump components would be preempted upon the DOE effective date.**
- *Note that pump manufacturers certify their product with the motor that comes with it and any replacement motor needs to be the same.*

Conclusion

- The pump & motor manufacturers have always cooperated and worked with regulators on higher efficiency standards. In the past, some state regulations have been implemented with limited coverage creating loopholes, insufficient market enforcement (AZ, CA), or implemented and rescinded (FL) causing motor manufacturers to invest in new compliant motor designs without a return on the investment.

Conclusion

- APSP is confident the CEC, pump & motor manufacturers, and energy advocates, can leverage the successes from the DOE rulemaking to deliver an effective set of efficiency standards for pool pumps and service components such as pool pump replacement motors and align such regulations to ensure consumers realize the maximum benefits. To the above points, APSP respectfully requests that the CEC consider our comments as it develops its final rulemaking.