

**DOCKETED**

<b>Docket Number:</b>	20-FDAS-01
<b>Project Title:</b>	Flexible Demand Appliance Standards
<b>TN #:</b>	245763
<b>Document Title:</b>	Sam Dose Comments on Flexible Demand Appliance Standard
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Sam Dose
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	8/31/2022 3:43:33 PM
<b>Docketed Date:</b>	8/31/2022

*Comment Received From: Sam Dose  
Submitted On: 8/31/2022  
Docket Number: 20-FDAS-01*

## **Comments on Flexible Demand Appliance Standard**

*Additional submitted attachment is included below.*



POOL PRODUCTS  
One Hayward Industrial Drive  
Clemmons, NC 27012  
1.336.712.9900  
www.haywardnet.com

August 31, 2022

Submitted via: [Docket Log 20-FDAS-01](#)

Commissioner J. Andrew McAllister, Ph.D.  
California Energy Commission  
Dockets Office, MS-4  
1516 9th Street  
Sacramento, CA 95814

Re: Comments on Flexible Demand Appliance Standards for Pool Controls, Draft Staff Report and Proposed Regulatory Language, Docket # 20-FDAS-01

Dear Commissioner McAllister:

Hayward Industries, Inc., is a global leader in the development, manufacturing, and distribution of swimming pool equipment including pumps, filters, heaters, automatic cleaners, sanitizers, automation and lights. Hayward's US manufacturing and distribution operations cover six states and employs over 2,000 associates in support of our business objectives.

Hayward has participated in conference calls with CEC staff as well as the PHTA Energy Coalition regarding the development of this standard, and approves and supports comments submitted by PHTA.

Additionally, Hayward provides the following comments and welcomes your careful consideration and looks forward to continuing to participate in this rulemaking.

If you have any questions or need additional information, please contact Sam Dose of Hayward Industries at [sdose@hayward.com](mailto:sdose@hayward.com).

Sincerely,

*Sam Dose*

Sam Dose  
Energy and Legislative Consultant  
Hayward Industries, Inc.  
336-918-9979

## Hayward Comments and Suggestions on Flexible Demand Appliance Standards for Pool Controls

Hayward supports California and the Commission's efforts to reduce energy demand and lessen greenhouse gas emissions by establishing a statewide flexible demand appliance standard (FDAS) for pool controls.

### **Default Schedule**

Hayward believes the proposed default schedule is too prescriptive and certain aspects have not been considered, as follows:

- Prohibiting operation of the pool filter pump at more than 50% of the maximum operating speed other than 9 AM – 3 PM, will not allow pool owners to turn on their pump during these hours. This is due to the fact when priming the pump, it must be done at full speed. Therefore, the proposal would only allow the pump to be turned on and off within the 9-3 window. This also poses an additional concern of how prepared the electrical grid is for the over 1.5 million pools to come online at the same time.
- The proposed default schedule would prohibit operation of single speed pumps outside the 9-3 window; this could result in an inadequate turnover period for some pools, depending on the size of the pool. Further, not all controllers can “talk” to the filtration pump. This results in a Variable Speed pump turning into a single speed pump and only being able to run in the 9-3 window.
- The proposed default operating schedule includes specific operations; however, there is no way for the pool control manufacturer to know if a pressure cleaner booster pump (PCBP) or electrical pool water heater, or any equipment for that matter, is installed and connected to a given pool control. Further, the proposed language is unclear, in that if a consumer has a pool control, are they required to have a default schedule for all three applications listed (filter, PCBP and pool heater)? And how would the Commission or local utility determine this?

Pool controls are smart and flexible, and can be programmed to do what the user wants with the output they have, but we are not clear how the default schedule will be able to recognize if the function is for the filter pump, PCBP or pool heater? What exists on any given pool equipment pad is not known until the installer adds the pool control. PHTA believes the default schedule, as proposed, is too prescriptive and including aspects not needed. Not all consumers will have, for instance, a PCBP or pool heater. If the goal is to control the filtration pump, that should be all that is listed (recognizing the concerns that remain by only allowing a 9-3 window for even pool filter pumps).

**Hayward recommends the Commission further review the need and justification and redevelop the default schedule, if needed, as there are too many varying conditions on any given pool that are not being considered.**

There are additional unintended consequences related to the proposed default schedule that Hayward would ask the Commission to consider as well including limiting operation of other pool equipment to 9 AM – 3 PM. The following are examples:

1. Pressure Cleaner Booster Pumps – These require pool pumps to operate at greater than 50% of maximum operating speeds.
2. Pool Heater Heat Pumps – These typically require 40-50 gpm water flow to operate, which is not achievable at pump speeds below 50% of maximum operating speed.
3. Solar Heating Systems - Most solar panels require between 3-5 gpm per panel for optimal solar heat transfer. If a homeowner has ten solar panels this will require the pump to flow between 30-50 gpm for the maximum solar heat transfer, which requires pump speeds in excess of 50% of maximum operating speed. A consumer would not be fully able to utilize the solar panels outside the default schedule without opting out of the program or having to choose not to fully utilize the investment they made in installing a solar pool heating system.
4. Solar Cooling Systems – These are the same equipment as used for heating, however in very hot environments swimming pools can become uncomfortably warm. The solar system is used to cool the pool during night time hours. When used in this way this system requires 30-50 gpm for maximum cooling, which again requires operating the filtration pump at speeds above 50% of its maximum operating speed. Solar Cooling Systems are used in California cities with desert-like climates such as Bakersfield (11th hottest city in the nation), Fresno (13th), Redding (17th), Stockton (34th), and Sacramento (45th). All five of these cities are ranked in the top 50 hottest cities nationally.

#### **Pool Controls, Definition & Other Requirements**

PHTA recommends that the Commission consider revisions as follows under the definition of pool controls found in section 1687:

- Clarify that the following are *in scope*: timers that are external to the pool filter pump and integral pool pump controls that have the capability of controlling other devices.
- Clarify that the following are *out of scope*: integral pool pump controls that only control the pool filter pump and replacement motors with integral pool pump controls that only control the pool filter pump.

Hayward believes these clarifications are necessary to align written definitions with examples listed in table 5-1 of the draft proposal.

#### **Cost-Effectiveness**

Hayward does not find the information shown in Table B-19 on page 140, to accurately reflect the cost of a compliant pool equipment switch. We find consumer costs to obtain and integrate compliant product would be in the \$500-600 range, and request the commission provide additional information on their findings.

#### **Effective Date –**

Although connected pool controls are common and available, any FDAS pool control requirement will be new and take time to ensure reliable and secure operation, which will better ensure consumers are satisfied and want to remain in the program; thereby improving the reliability of the grid in California and lessen greenhouse gas emissions.

Equipment manufacturers will need more time than the current proposed January 1, 2024, effective date. Typically, 3-5 years is needed to develop, validate, test/certify, and launch connected pool controls. With all the necessary protocols to interact and react directly with Utilities, MIDAS, Flex alerts etc., more time is required than the current proposal provides. Changes in under 2 years will delay

introduction of our compliant products, or jeopardize Hayward's established development process. Since most of these products incorporate microchips, you should consider that current lead times are in excess of one year due to supply chain constraints.

**Conclusion**

Hayward supports the use of connected pool controls and the ability these products have to lessen demand at peak times and reduce greenhouse gas emissions. However, currently, the FDAS program is voluntary for consumers.

Considering there is no requirement in the FDAS regulations for a pool owner to purchase and connect a pool control to their pool equipment, Hayward believes the recommended changes we have put forth for the Commission to consider will ultimately improve the use of the flexible demand program by consumers. Making the program easier for a consumer to want to opt-in and stay in will thereby reduce both demand on the grid and greenhouse gas emissions. Greater flexibility will also continue to allow for innovation by industry.