

**DOCKETED**

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**FLUIDRA Comments to Docket 23-FDAS-01 Flexible Demand  
Appliance Standards**

*Additional submitted attachment is included below.*

July 10<sup>th</sup>, 2023

California Energy Commission  
Docket Unit  
Re: Docket No. 23-FDAS-01, Docketed Date: 6/23/2023  
715 P Street  
Sacramento, CA 95814

Re: Pool Controls Rulemaking, TN # 250722, Docket 23-FDAS-01, Docketed Date:  
6/23/2023

Esteemed California Energy Commission,

Fluidra appreciates the opportunity to participate in the rule making process for Flexible Demand Appliance Standards (FDAS) to meet the GHG reduction and electric grid resiliency goals of California Senate Bill SB 49. As a pool equipment manufacturer with U.S. Headquarters in California, Fluidra recognizes the importance and demand for energy efficient and environmentally sustainable swimming pool operation. Accordingly, continual efforts are made in the development of products that can meet the competitive goals of a sustainable future.

As a member of the Pool & Hot Tub Alliance Fluidra fully supports and endorses the comments jointly submitted by the Pool & Hot Tub Alliance (PHTA). In addition, we submit the following comments intended to assist the Energy Commission develop Flexible Demand regulation that can achieve and maximize the energy goals of the FDAS program, while sensibly minimizing negative impact to the consumer and the pool industry. Fluidra hopes to provide helpful insight into the possibilities, complexities, consumer engagement, and safety considerations for Flexible Demand Response in a swimming pool system.

## **DEFINITIONS**

Fluidra proposes the following revisions to the definitions in order to clarify the intent of what is "in scope" and "out of scope", as well as to close any loopholes that may put manufacturers at a competitive disadvantage.

### **I**

"Pool Control" means equipment with the capability to start, stop, or otherwise control the operation of a pool filter pump and includes, but is not limited to, a pool timer, pool pump switch, heater switch, direct load control switch, or any component or group of components, including software, that: has the capability to independently schedule the operation or control the start or stop times of a pool filter pump. Pool controls may control other pool equipment in addition to a pool filter pump.

1. "Pool control" excludes controls marketed exclusively for use as a control for pool filter pumps with a rated hydraulic horsepower (hhp) greater than 2.5 hhp, and excludes safety interlock or shutoff controls, and excludes integral pool filter pump controls that do not have the capability of independently

scheduling the operation or control of other pool equipment in addition to the pool filter pump.

Fluidra also recommends the addition of the following definition:

**“Integral pool filter pump control”** means a pool pump control provided as an integral part of a dedicated purpose pool filter pump or a replacement dedicated purpose pool filter pump motor, provided with a user interface or a user interface that is sold separately, that controls the pool pump motor. An integral dedicated purpose pool pump control that is capable of being removed from a dedicated purpose pool pump or a replacement dedicated purpose pool pump motor for remote mounting is considered to be an integral dedicated purpose pool pump control.

**Reasoning –**

This clarification to the definition is in line with the intended out of scope equipment according to the CEC staff report, illustrated below.

**From CEC 23-FDAS-01 Final Draft Report**

**Table 5-1: Examples of In-Scope and Out-of-Scope Pool Control Devices**

<b>In-Scope Devices</b>	<b>Out-of-Scope Devices</b>
Controls of pool automation systems	Integral pool pump controls on pool filter pumps not capable of controlling other pool equipment
Pool timers	Integral pool pump controls on replacement pool pump motors
Pool pump and heater switches	Pool controls with three-phase input power
Integral pool pump controls on pool filter pumps capable of controlling other pool equipment	Pool controls intended for pool filter pumps greater than 2.5 hhp
Direct load control switches	Solar only pool water heating control system

Source: California Energy Commission

Fluidra agrees that integral pool filter pump controls not capable of controlling other pool equipment should not be included in the scope of FDAS. Including these pool pump controls would be a significant change to the scope of this ruling, and in our opinion, would not be a practical and economically justifiable solution. The industry standard for a connected pool pad is through the use of pool controls, otherwise known as pool automation systems. Pool filter pumps and their integral controls should only be required to be **“connected ready devices”**. It would be wasteful to force a consumer to pay additional costs for connectivity hardware/software when the pool controls on their pool pad are already compliant to the requirements of a “connected device”

Additionally, radio-frequency interference (RFI) problems, which are inherent to electric motors used in appliances, generally make onboard radio/wireless



transceivers unreliable and impractical on a pool pump. One of the primary reasons separate Pool Controls are the widely adopted method for connectivity.

**II**

“Open standards” – We support the addition of all widely adopted and used open standards and application layer, and propose the suggested updates to the open standards definition.

“Open standards” means a communication with entities outside the CPPS that use, for all communication layers, standards:

1. [Included in Hypertext Transfer Protocol \(HTTP\), and/or](#)
2. [Included in the Smart Grid Interoperability Panel \(SGIP\) Catalog of Standards, and/or](#)
3. [Included in the National Institute of Standards and Technology \(NIST\) Smart Grid Framework Tables 4.1 and 4.2, and/or](#)
4. [Adopted by the American National Standards Institute \(ANSI\) or another well-established international standards organization such as the International Organization for Standardization \(ISO\), International Electrotechnical Commission \(IEC\), International Telecommunication Union \(ITU\), Institute of Electrical and Electronics Engineers \(IEEE\), or Internet Engineering Task Force \(IETF\).](#)

Additional examples include, but not be limited to, Wi-Fi, Zigbee, and Bluetooth.

**FM RADIO BROADCAST DATA SYSTEM RECEIVER**

This requirement is a significant update to the previously proposed scope of this rulemaking. FM radio receivers have never been used for communication of pool products, as far as we know, and the practicality and reliability of this technology for use on pool controls is unknown. Furthermore, we are unaware of any widespread adoption by utilities for this method of communication for Appliance Flexible Demand.

Being a brand-new technology to our industry, manufactures will need to consider all aspects of safety, reliability, cybersecurity, IoT infrastructure, coding, FCC emissions, etc. for these FM receivers. There would be several expected and unexpected challenges to make this technology work, and with a compliance date of 3 years, this is a significant addition to the development manufacturers will need for compliance to this FDAS Rule Making.

Fluidra recommends **removing** this requirement to this round of rulemaking for Pool Controls. If in the future this type of technology is widely adopted as a practical, reliable, and sole source of communication for utilities and the associated flexible demand appliances, CEC can revisit this requirement with further input and discussion from industry, utilities, and all relevant stakeholders. At this time the addition of this requirement would be premature.



**COMMUNICATION REQUIREMENTS (Section 1693 (b)(2)(A)(2))**

2. Pool controls manufactured on or after January 1, 2027, shall be connected devices and shall contain a radio broadcast data system receiver.

As previously stated, we disagree with the additional requirement of a radio broadcast data system receiver. Additionally, pool owners should still be able to purchase "connected ready devices" for their existing pool pad after 2027. For example, if a pool owner already owns connected pool controls that are compliant to the 2027 CEC "connected device" requirements, then they may not need to spend the money to repurchase compatible connectivity hardware for their upgrades.

The nature of pool controls in our industry is to have these systems be modular, compatible, and upgradeable. Often a pool owner will upgrade their pool controls and pool equipment to the latest generation of controls which still supports their existing connected pool pad system. They should be able to do this without wasting money on connectivity hardware which they may already have that is already CEC compliant. The hardware for connectivity in pool controls is typically a modular system/component which manufacturers make compatible across their line of equipment. It is imperative that these continue to be allowed to be sold separately, with the requirement that pool controls are a "connected ready device". Fluidra suggests the following revision to this clause.

2. Pool controls manufactured on or after January 1, 2027, shall be connected devices, **or connected ready devices compatible with separable hardware and/or software that meet the requirements of a connected device.**

**CLOCK REQUIREMENTS (Section 1693 (b)(2)(B)(2) and (3))**

The use of portable smart device, such as a smart phone, tablet, or laptop for BOTH local and remote setup is extremely common in modern pool equipment controls. The onboard appliance user interface may be a simple on/off control, and the user must connect via Bluetooth for example to schedule, program, and use the complete features of a connected pool control. This is commonplace in our industry, and the use of a smart device should be allowed for **both** local and remote setup and scheduling of a device. Not recognizing the use of a smart device as an acceptable and practical means of local setup would be a step backwards.

Suggest the following update to item 2. (a)

2. Pool controls shall support both local and remote setup, selection, and update of its operating schedule via a user interface. Local and remote setup, selection, and update shall be possible through a user interface.

- a. The user interface for local setup shall be integrated into or supplied with the control, or via a smart device such as smartphone, tablet, or laptop for installation at the same location or premises as the control.

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Thank you for the opportunity to participate. We are open and welcome the opportunity to directly discuss any questions, concerns, and clarifications to our comments.

Respectfully,



Philip Escobedo  
FLUIDRA – Director of Regulatory Compliance  
pescobedo@fluidra.com