

DOCKETED

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CALIFORNIA ENERGY COMMISSION

In the Matter of:)
)
 Flexible Demand Appliance) Docket Number: 23-FDAS-01
 Standards Public Hearing)
 Pool Controls)
 _____)

Held remotely via Zoom

TUESDAY, APRIL 11, 2023

10:00 A.M.

Reported by:
Elise Hicks

APPEARANCES

Commissioners

J. Andrew McAllister, CEC Commissioner

Speakers and Presenters

Bruce Helft, Energy Commission

Carlos Baez, Energy Commission

Nicholaus Struven, Energy Commission

Public commenters:

Jennifer Hatfield, Pool and Hot Tub Alliance

Dr. Bob Cruickshank, Power Networks, LLC

Philip Escobedo, Fluidra

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1 P R O C E E D I N G S

2 April 11, 2023

10:00 a.m.

3 MR. HELFT: Good Tuesday, and welcome to the
4 California Energy Commission's Public Hearing for the Flexible
5 Demand Appliance Standards for pool controls.

6 This is Bruce Helft, the senior staff scientist with
7 the Flexible Demand Appliance Standards Team. This slide
8 presents our agenda for today. Lead Commissioner Andrew
9 McAllister will provide opening remarks to set the stage for our
10 public hearing. Then the project Lead for the Flexible Demand
11 Appliance Standards Team Nich Struven will provide a brief
12 overview of the rulemaking process and next steps, then an
13 overview of the proposed regulatory language followed by a
14 public comment session. Today's public hearing is being held
15 remotely recorded by Zoom and transcribed by a court reporter.
16 Statements made today will become part of the public record. No
17 decisions will be made at this public hearing. Information and
18 documentation for this rulemaking can be found in Docket 23-
19 FDAS-01. The public advisor is available this morning to
20 facilitate your participation and may be contacted at the email
21 and phone number shown on this slide.

22 All attendees will be muted during the presentation.
23 Oral comments will be taken at the end of Nich's presentation,
24 estimated to be around 10:30 AM Pacific time. If online, raise
25 your hand and the host will give you the ability to speak during

1 the comment session. If on the phone raise your hand to speak by
2 pushing star nine and the host will give you the ability to
3 speak during the comment session when it is your turn push star
4 and the number six to mute and unmute. When speaking, please
5 state your name and your affiliation for the court reporter.
6 Alternatively, if you have questions, you may type them into the
7 question and answer function on Zoom and they will be forwarded
8 to the moderator. I welcome Commissioner Andrew McAllister to
9 formally launch this public hearing.

10 COMMISSIONER McALLISTER: Cool, thank you Bruce.
11 Really appreciate that and Nich as well and the rest of the
12 team, Corrine helping us with the process and number of the FDAS
13 team with us today. Carlos as well, who you'll hear from later,
14 I wanted to just really, well first of all thank staff for a
15 really persistent effort over the last couple of years to
16 develop this first staff report, this first initiative incursion
17 I guess over in within the FDAS regulatory trajectory.

18 So this is a new authority. Just a little bit of
19 context. This is a new authority that was granted the Energy
20 Commission by the legislature a few years ago to really kind of
21 compliment our other standards making authorities, which all of
22 you are familiar with. Our appliance efficiency standards, our
23 building standards and our load management standards in
24 particular, the load management standards I think complement
25 very well the Flexible Demand Appliance Standards.

1 So really instead of sort of three legs of this stool,
2 they're now four legs of this standards making stool that all
3 represent key supports for our clean energy transition. In
4 particular LMS, the load management standards, and FDAS focus on
5 load flexibility on the ability to manage our end uses to
6 accommodate the needs of the grid and really create a bi-
7 directional or sort of complimentary management capability of
8 the demand side. And so, as generation becomes more aligned with
9 the rhythms of nature, we need our loads to begin to do the same
10 thing. And so on the load management standards, it's getting
11 rates out there in a standardized format so that users and end
12 uses can automate around those rates and other signals like
13 carbon content of the power or flex alert from the CAISO. And we
14 could add signals, but in particular rates, so that devices can
15 automate their consumption day in and day out to help support
16 the grid, improve load factors and optimize the investments in
17 the reconductoring and the build out of the modern electric
18 grid.

19 Given the new loads that are going to be coming online
20 over the coming years and decades. Electrification, which will
21 double or even triple our energy consumption across the state,
22 our electricity consumption rather across the state FDAS is a
23 key component of this whole ecosystem because it will ensure
24 over the coming years that appropriate loads, appropriate end
25 uses have native load flexibility such that they can be part of

1 that load flex ecosystem. The Energy Commission is also at the
2 request of the legislature engaged currently into the summer
3 with the development of a load shift goal for the state. And
4 really it'll be sort of complimentary load shift goals plural,
5 for the state one sort of more in the demand response realm,
6 which we know is sort of emergency driven and event driven out
7 there and occasional load dropping or load shifting load shed.

8 And then on the other end of the spectrum, which is
9 where FDAS kind of plays, is the ability to, in setting a goal
10 really for really quotidian day, daily load load shaping. And so
11 the Flexible Demand Appliance Standards will over time enable
12 scale up of this automated load shaping. And so the, I'm getting
13 into this context because I just wanted to locate this
14 particular workshop and this particular staff report and
15 rulemaking in that broader context. So the pool controls
16 proposal is the staff report and regulatory proposal is the
17 first incursion, as I said, the first effort under the new FDAS
18 authority. And so it's really important that people pay
19 attention to the structure of the staff report, the various
20 themes that are part of this effort.

21 So not every device will have sort of profound sort of
22 treatment of every theme, but this first incursion effort tries
23 to identify the themes that will reappear as we move forward
24 with new devices. So pool control is obviously very important.
25 Water heaters, heat pump water heaters and electric water

1 heaters probably. We're pretty far down the road looking at how
2 to engage with that appliance category. We'll likely do
3 additional devices like behind the meter batteries. We already
4 treat those in the building code with a joint appendix, but they
5 are becoming a very important load shaping tool and as they
6 scale up, we want to shape how that happens. We want to
7 influence how that happens so that the grid can benefit from it
8 and not suffer from it.

9 We have electric vehicles which already are scaling
10 up, significant part of the new car market. They will need to
11 play a positive role on the grid as well. And so this load
12 shaping of car charging, both charging and discharging is really
13 important for the grid. So all of this is to say that pool
14 controls are an important element and a sort of initial element
15 of creating over the long term, over the medium and long term
16 this load flex ecosystem and California really is leading this
17 effort in load flexibility. There is no federal regulation or
18 legislation, there's no federal authority that's been asserted,
19 for load flexibility. So we don't have issues of federal
20 preemption like we have in some of the efficiency realms,
21 certainly with appliances. And so we really have an open field
22 here to do the right thing and that's why we need all of the
23 participants here, all the stakeholders, the various market
24 participants in this case, the Pool and Hot Tub Alliance and its
25 members and the environmental stakeholders.

1 I think lots of stakeholders that have a vested
2 interest in success here and we want what's best for California
3 balancing, so the private and the public drivers of
4 sustainability. So finding that balance is what we do with the
5 Commission and that's really what we strive to do through these
6 public processes. The record building, the record, having
7 participation, having input from all the stakeholders is what
8 makes this whole operation, what keeps the clock ticking. And so
9 really I just can't have to overemphasize how important is your
10 engagement and so your thoughtful engagement and your sort of
11 input helping our staff. Our staff are excellent as I said, but
12 nobody knows everything about these industries and each device
13 category, each has its own particulars and the experts. We
14 really need the experts out there in the industry and in
15 deployment and manufacturing to help inform us at the Energy
16 Commission about the landscape so that we can sort of track the
17 right path through it and end up in a place that is both
18 impactful but also flexible enough that compliance is not hugely
19 problematic.

20 So all this is to say welcome, really glad that
21 everyone's engaging and here you really are in good hands with
22 Nich and the team, Nich and Bruce and Carlos and Corrine and the
23 rest of the team and just want to thank leadership in the
24 efficiency division and Mike Sokol, Christine Collopy and all
25 the leaders, Peter Strait in the appliances branch and just all

1 the staff who really complement one another and together they
2 make an amazing team.

3 So really looking forward to a productive morning and
4 hearing how it goes from staff later and also reading comments
5 are already coming in, the docket is starting to populate. So
6 really appreciate everyone's input and really hope that folks
7 comment in writing and on the docket as a result sort of
8 following up from this workshop. So thanks everyone. Really
9 looking forward to hearing your input and moving forward from
10 here. So with that Nich and Bruce, I'll hand it back to you for
11 the substance of the workshop. So thanks again.

12 MR. STRUVEN: Thank you, Commissioner. I am Nich
13 Struven of the Flexible Demand Appliance Standards team and I'll
14 provide you a brief overview of the rulemaking process and the
15 next steps.

16 Let's start with where we're at in the regulatory
17 process. On February 23rd, we docketed the final staff report
18 for pool controls and the associated rulemaking documents. This
19 was the start of the formal rulemaking and we're currently in
20 the public comment period. Staff will continue evaluating and
21 reviewing comments that were received. Stakeholders are
22 encouraged to sign up for the flexible demand appliances list
23 server and receive updates and notices on this topic.

24 Note that this is a multipurpose listserv that serves
25 flexible demand appliances, load management and demand response

1 activities at the commission. The table shows approximate dates
2 for key milestones for the rulemaking schedules. Staff plans to
3 recommend to the CEC for adoption, the first flexible demand
4 appliance standards in the third quarter of 2023 with an
5 effective date for a compliance one year after adoption.

6 Next up on our agenda is the overview of the proposed
7 regulatory language. I'll provide a brief overview of the
8 proposed regulatory language, helping to provide a framework for
9 your public comments. The entire proposed regulation document
10 for this rulemaking can be found in docket 23-FDAS-01.

11 These are the sections that will be added to the Title
12 20 code California Code of Regulations with this rulemaking.
13 Section 1690, scope 1691 definitions 1692 general requirements,
14 1693 appliance specific standards and 1694 customer consent
15 section 1695 certification requirements Section 1696, data
16 submittal requirements Section 1697, compliance enforcements and
17 administrative civil penalties. Let's discuss the proposed
18 regulations for pool controls, which is the first flexible
19 demand standard implemented by the California Energy Commission
20 under authorizing legislation SB 49 (2019).

21 The scope of the regulations is for pool controls, as
22 defined in the proposed regulation. The proposed regulations
23 also define dedicated purpose pool pump, electric pool heater,
24 pool equipment, pool filter pump. Staff opted to use definitions
25 that are consistent and align with those commonly used in the

1 pool and hot tub industry.

2 Additional definitions relevant to the requirements
3 are found in section 1691, the pool controls definition section
4 of the proposed regulations. This slide highlights some of the
5 definitions found in the proposed regulatory language. The
6 proposed regulation defines pool controls as any component or
7 group of components, including software, that 1)has the
8 capability to start or stop the operation of a pool filter pump
9 and other pool equipment and 2)uses single phase AC power as
10 input power. Pool controls exclude controls marketed exclusively
11 for use as a control for pool filter pumps with rated hydraulic
12 horsepower greater than 2.5.

13 This slide highlights some of the definitions found in
14 the proposed regulatory language. Consent means a customer's
15 permission or agreement to use capabilities of an appliance
16 subject to this article to schedule shift or curtail its use
17 through direct action by the customer or by a third-party load
18 serving entity or a grid balancing authority. Consent may be
19 expressed or implied. Additional definitions relevant to the
20 requirements are found in section 1691. The general definition
21 section of the proposed regulations. Additional requirements
22 relative to consent are found in Section 1694, the customer
23 consent section of the proposed regulations. "Connected device"
24 means any device that is capable of receiving TCP IP signals
25 from the internet with or without connections through common

1 home network equipment or radio broadcasting by means of
2 integrated or separate communication module. Additional
3 definitions relevant to the requirements are found in section
4 1691. The general definition section of the proposed
5 regulations, TCP IP signal means a type of data format used to
6 carry data through the network. Additional definitions relevant
7 to requirements are found in section 1691. The general
8 definition section of the proposed regulations Section 1692
9 general requirements subsection A testing contains the general
10 testing requirements framework consistent with other Title 20
11 testing requirements. Section 1693, the appliance specific
12 standards and requirements. Subsection four testing is where the
13 future testing requirements for pool controls may be included.
14 Currently, there are no testing requirements for pool controls.

15 This slide highlights the marking requirements in the
16 proposed regulatory language. The following information shall be
17 permanently, legibly, and conspicuously displayed on an
18 accessible place on each unit of every appliance. Within the
19 scope of this article. 1) the manufacturer's name or brand name
20 or trademark, 2) the model number and 3) the date of
21 manufacturer indicating year, month, or smaller week, week
22 increment. If the date is in code, the manufacturer shall
23 immediately upon request provide the code to the energy
24 commission. Additional details are found in section 1692,
25 subsection B, the general requirements section for the marking

1 of proposed regulations.

2 This slide highlights the cybersecurity requirements
3 and the proposed regulatory language device identification
4 requiring unique logical identifier for the connected device,
5 device configuration requirements only allowing authorized
6 entities to make software changes. Data protection requirements
7 are an important first step to protect personal data. Passwords
8 are required to be unique and secure passwords. Software updates
9 are important to patch security vulnerabilities, restart
10 settings upon device, restart. The device shall automatically
11 restore the most recently programmed settings, including
12 reconnection to a network automatic rejoin. When the physical
13 logical communication is lost, the connected device shall
14 automatically attempt to rejoin the physical or logical
15 communication override function. The connected device shall
16 allow consumers to change the event responses and connected
17 device settings at any time. Additional details are found in
18 section 1692, subsection C, the general requirements section for
19 cybersecurity of the proposed regulations.

20

21 This slide highlights the certification and data
22 submittal requirements found in the proposed regulatory
23 language. Section 1695 certification requirements contains the
24 general certification requirements similar to those current CEC
25 title 20 certification process section 1696. The data submittal

1 requirements contains table A data submittal requirements for
2 all appliances table A two data submittal requirements for all
3 connected appliances and table B one data submittal requirements
4 for pool controls. Future flexible demand appliances are planned
5 to be added to six to section 1696 during future rulemaking.
6 Please refer directly to the docketed proposed regulatory
7 language for the specific details, since these slides were
8 designed to provide only a brief overview. This concludes the
9 brief overview of the proposed regulatory language. Let's now go
10 to public comment with Carlos. Welcome Carlos.

11 MR. BAEZ: Good morning. This is Carlos Baez from the
12 Appliances Branch at the Energy Commission.

13 We'll now start the public comment. The time is 10:23
14 AM and a reminder that this public hearing is being recorded by
15 a court reporter and all statements today become part of the
16 public record. Comments may be limited to three minutes per
17 person and one person per per organization depending upon the
18 number of commenters wishing to speak. Please state your name
19 and affiliation when speaking to comment, please use the ray's
20 hand function to speak online. After using the raise hand
21 function, the host will give you the ability to speak. Then the
22 participant must push unmute for anyone on phone only. Raise
23 your hand by pushing star nine. The host will give you the
24 ability to speak. Then the caller must push star six to mute and
25 unmute. For general clarifying questions, please type your

1 question in the q and a section. Also, if you are unable to
2 speak but would like to comment, please indicate so in the q and
3 a section and then we'll read your comment out loud for you.
4 We'll now open now for any public comments. I don't see any
5 raised hands at this time, but again, please raise your hand if
6 you'd like to comment.

7 Okay, we do have a raise hand from Jennifer. I've just
8 given you the ability to speak. Please unmute yourself. Yes,

9 MS. HATFIELD: Thank you Commissioner and staff. I
10 just wanted us to make a brief comment. Jennifer Hatfield. I
11 represent the pool in Hot Tub Alliance in our member support
12 California and the commission's efforts to reduce energy demand
13 and lessen the greenhouse gas emissions by establishing these
14 statewide flexible demand appliance standards for pool controls.
15 We have suggested some modifications to the proposed regulatory
16 language. Those were submitted yesterday. And I'll just note we
17 think these are opportunities to further improve the language
18 you have that you reviewed today. And we just urge you to
19 commission the commission to consider them. We think they're
20 ultimately going to provide clarity that is needed in terms of
21 what is and isn't in scope. Eliminate requirements that it will
22 stifle innovation and provide adequate time for manufacturers to
23 develop the products. So with that, I just want to thank you so
24 much for all your hard work on this. We look forward to
25 continuing to hopefully provide helpful comments to the

1 commission. And thanks.

2 MR. BAEZ: Thanks, Jennifer. Another raised hand from
3 Dr. Bob Cruickshank. Bob, I've just given you the ability to
4 speak.

5 DR. CRUICKSHANK: Hello. Thank you very much for
6 pulling this together. And for the prior document which we
7 provided comments on, I was curious if the slides have already
8 been distributed. I joined a few minutes late and I put that in
9 the chat. And then my question is, did you say that a device has
10 to have two way IP connectivity to be considered connected?

11 MR. BAEZ: Nich or Bruce, one of you mind writing
12 clarification on that point?

13 MR. STRUVEN: Yeah, and if we look at the proposed
14 regulatory language, it does not require it to be two way. Just
15 receiving a data packet would indicate that one way would be
16 acceptable.

17 DR. CRUICKSHANK: That's great. I think that was in the
18 spirit of several comments that were provided on the written
19 version a few months ago. Thank you for the clarification.

20 MR. BAEZ: Yeah, thank you. And about the slides?
21 Yeah, if they're not already posted, they should be posted by
22 the end of today or tomorrow. So very soon, another raised hand
23 from Phillip. Phillip, I've given you the ability to speak.

24 MR. ESCOBEDO: Hello and thanks for the opportunity
25 here. Just want to say we have submitted written comments along

1 with PHTA, which we fully support their comments as well. We
2 agree with the approach, so of the pool automation system or
3 pool controls being what we want to target and not just a pool
4 pump controller. This assures the appropriate operation of all
5 pool equipment and the safety of the pool. I would just
6 encourage the CEC as they read through our comments if they want
7 to reach out directly to manufacturers to get clarity on exactly
8 what the comment means. If there's any questions, concerns,
9 please reach out to us or happy to answer those questions to
10 make sure it's understood. And ultimately we want to help
11 provide a rule that's meaningful and enforceable. Thank you.

12 MR. BAEZ:

13 Thank you. Did you mind stating your name and
14 affiliation again? Phillip?

15 MR. ESCOBEDO:

16 Oh, Phillip Escobedo from the company Fluidra.

17 MR. BAEZ: Thank you. Going back to Dr. Bob, do you
18 mind stating your name and affiliation? Bob?

19 DR. CRUICKSHANK: Absolutely. Bob Cruickshank, Power
20 Networks LLC. Thank you.

21 MR. BAEZ: Thank you. I appreciate it. No other raised
22 hands at this time, but we will continue to stay online for a
23 while longer.

24 Still not seeing any new raised hands. We'll hang,
25 hang on just for another few seconds before moving to the end

1 slides. Thank you.

2 Okay. Still no raised hands and no new chats in the Q
3 and A so we can conclude the public comment portion of this
4 hearing.

5 Thank you for all of your comments today. This slide
6 provides the details for three options for you to submit your
7 written comments. We welcome all comments and here is contact
8 information if you'd like any more information or have questions
9 about this rulemaking. Thank you all again for your
10 participation. We appreciate all the comments received and hope
11 you have a good rest of your day. Thank you.

12 (Whereupon the meeting was adjourned at 10:32
13 a.m.)

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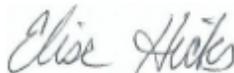
25

CERTIFICATE OF REPORTER

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 1st day of May, 2023.



ELISE HICKS, IAPRT CERT**2176

CERTIFICATE OF TRANSCRIBER

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



MARTHA L. NELSON, CERT**367

May 1, 2023