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BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the matter of,)
) Docket No. 15-AAER-02
)
Pool Pumps and Spa Labeling)

**STAFF WORKSHOP ON
APPLIANCE EFFICIENCY REGULATIONS FOR
REPLACEMENT POOL PUMP MOTORS**

CALIFORNIA ENERGY COMMISSION
FIRST FLOOR, ART ROSENFELD HEARING ROOM
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

WEDNESDAY, NOVEMBER 28, 2018
10:00 A.M.

Reported By:
Peter Petty

APPEARANCES

CEC Staff Present

Leah Mohny, Supervisor, Appliances Unit, Efficiency Division

Sean Steffensen, Mechanical Engineer, Efficiency Division

Stakeholders Present

Charles Kim, Southern California Edison, on behalf of California Investor Owned Utilities (IOU)

Chad Worth, Energy Solutions, on behalf of California Investor Owned Utilities

Shajee Siddiqui, Zodiac Pool Systems, on behalf of Association of Pool and Spa Professionals

Rob Boteler, Nidec Corporation (Via WebEx)

Dan Delaney, Regal Beloit America, Incorporated (Via WebEx)

Public Comment

Kitt Butler, Advanced Energy (Via WebEx)

Kevin O'Donnell, WEG (Via WebEx)

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P R O C E E D I N G S

NOVEMBER 28, 2018

10:00 A.M.

MS. MOHNEY: Good morning and welcome to the Replacement Pool Pump Motor Workshop.

My name is Leah Mohney. I'm the Supervisor of the Applicants Unit, in the Efficiency Division of the Energy Commission.

I wanted to go over a few housekeeping rules before we get started. For those of you in the room, there are bathrooms across the hall and there are more bathrooms behind the stairs.

In the event of an emergency, please follow staff out the doors, to the park that's catty-corner across the street.

If you have a cell phone, please put it on silent.

And as a reminder, if you are speaking, please introduce yourself and the company or entity that you represent.

We will have the opportunity for public comments at the end of the presentation, so please hold your comments until then. If you're participating via WebEx, you can raise your hand or submit your comment in the chat feature.

Our agenda for this morning, we will have Sean

1 give the Replacement Pool Pump Motor Proposal. After
2 that, we will have several presentations by different
3 stakeholders. And at the end we will have the open
4 discussion and public comment, at which you can
5 participate, if you so choose.

6 The purpose of this workshop is to give you an
7 overview of the staff analysis on the Proposed
8 Replacement Pool Pump Motor Standard. And I wanted to
9 make sure that you understand that this is a separate
10 effort from the Petition to the U.S. Department of
11 Energy.

12 We're also seeking feedback from stakeholders in
13 this workshop.

14 Just a brief history on prerulemaking for this.
15 We've been working on this for a long time. March 2012,
16 we issued the Order Instituting Rulemaking. March 2013,
17 we released the Invitation to Participate. May 2013, we
18 had workshops. June 2013, we released the Invitation to
19 Submit Proposals. May 2014, requested additional
20 information on pool pumps and motors. January 2016, we
21 published a Draft Staff Report. February 2018 [sic], we
22 had our first workshop. June 2016, we published a
23 Revised Staff Report. July 2016, the second workshop.
24 January 2017, the DOE published a Direct Fund Rule-
25 setting Standard for Pool Pumps. July 2017, we

1 published the Second Revised Analysis of Standard for
2 Pool Pump Motors and Portable Electric Spas. August
3 2017, we had the third workshop. And November 2018, we
4 published the Third Revised Analysis for Pool Pump Motor
5 Standards.

6 As you can see, we are here where the blue arrow
7 is. We've had many opportunities for public
8 participation. Everywhere you see a green bubble, that
9 is your opportunity to participate.

10 We're in a 45-day feedback period right now,
11 seeking comments on the proposal. Comments are due by
12 5:00 p.m., on January 4th, 2019. You can submit them
13 electronically at the first link here. Go to the link
14 and click on submit e-comment, and you may submit your
15 comments. You can also send a hardcopy to the address
16 listed. And if you wish to send a digital copy, you can
17 send it to docket@energy.ca.gov. Please include the
18 docket number, which is 15-AAER-02 and indicate
19 Replacement Pool Pump Motors in the subject line.

20 At this time, I would like to introduce Sean
21 Steffensen. He is our mechanical engineer on the
22 Replacement Pool Pump Motor Standards.

23 MR. SIDDIQUI: Leah, if I may, before Sean gets
24 started, I just got a text from one of the people trying
25 to attend.

1 THE REPORTER: Can you get closer to the
2 microphone?

3 MR. SIDDIQUI: Oh, sorry. I just got a message
4 from one of the folks that's trying to download onto the
5 WebEx. they're not able to get on. They can hear, but
6 they can't see. So, I'm not sure if that's something
7 that someone can look at.

8 (Pause for technical issues)

9 MR. STEFFENSEN: Good morning. My name is Sean
10 Steffensen. I'm a Mechanical Engineer with the
11 Efficiency Division.

12 Welcome to both everybody in the room and
13 online. Thank you for your participation.

14 Here's the agenda for my presentation. I will
15 summarize the updates to the Draft Staff Report and end
16 by suggestions for topics for discussion. Pool pump
17 motors, including motors sold as replacement motors use
18 a significant amount of energy, as much as 2,500
19 kilowatt hours per year, per pool.

20 The California Energy Commission first regulated
21 pool pumps and motors starting in 2004. Before that
22 time, pool pump motors were single speed and utilized
23 inefficient motor types. There are current standards
24 for replacement residential pool pump motors. The
25 standards prohibit inefficient, split-phase, and

1 capacitor start, induction-run motors. They require all
2 pumps and motors of one horsepower, or greater, total
3 capacity to be capable of two-speed operation.

4 The U.S. Department of Energy has completed
5 regulations that will go into effect in 2021, for pool
6 pumps. Our focus today will be on the replacement pool
7 pump motors.

8 As I present today, I will attempt to say
9 replacement pool pump motors. From time to time, I will
10 say replacement motors to briefly mean replacement pool
11 pump motors. These are

12 carbonization and join together to combat the
13 existential threat of climate change."

14 We are living in changing times. The small
15 changes we make can make a big difference.

16 So, why energy efficiency? We live in changing
17 times. How can we protect ourselves from the threat of
18 climate change? Well, how we use energy matters. In
19 California, we have goals of using only clean, renewable
20 energy. The cleanest energy is the energy we never
21 need. It also is the cheapest and does not harm the
22 environment. Energy efficiency fights climate change.

23 We heard you. This is a summary of the comments
24 that Commission staff considered while drafting the
25 Proposed Regulation for Replacement Pool Pump Motors.

1 The words shown on the screen are those that I heard
2 during either the negotiation at the federal level,
3 during the negotiation for the petition with DOE. And
4 we sought to align, where possible, with the DOE
5 Dedicated Purpose Pool Pump Regulations, and also the
6 petition that was submitted to the DOE on the pool pump
7 motors, whether it be the definitions or the timing of
8 implementation.

9 We sought to eliminate loopholes, set a level
10 playing field between the pumps and motors, and to
11 propose regulations that were clear and enforceable.

12 If we don't address the motor, we won't realize
13 the full potential of energy savings from the DOE Pool
14 Pump Standard. That's something I heard somewhere.
15 That is a good way to express the motivation of this
16 proposal. We seek to set a level playing field between
17 the pool pumps and motors sold separately.

18 The proposal seeks the simplicity of the Pool
19 Pump Motor Petition through prescriptive speed
20 requirements. We seek to align the motor implementation
21 date with the DOE's pool pump date.

22 We have met many times on this proposal. This
23 proposal contains elements that are both new and old.
24 The Commission recognizes that expanding the scope to
25 include pool pump motors, regardless of intended use,

1 will help to close loopholes and level the playing
2 field. The proposal updates the test method and sets a
3 minimum motor efficiency in place of prescriptive motor
4 type prohibitions.

5 It sets a prescriptive variable speed motor
6 control standard to better align with the DOE, while
7 providing a simple, implementable standard.

8 Finally, staff proposes to incorporate the DOE
9 Dedicated Purpose Pool Pump Regulations into the
10 California Appliance Standards.

11 Here's a slide that shows a side-by-side
12 comparison of the current and proposed California
13 standards to show both what is changing and the reasons
14 why. I've shown this slide before and I've highlighted
15 where I've updated, to emphasize that this is both a
16 proposal that has been worked upon and improved. This
17 has been shown previously. And I have highlighted the
18 incremental changes and improvements.

19 Much more detail is shown in the Draft Staff
20 Report at this link. We hope to receive public comments
21 today and in the upcoming weeks as part of the workshop
22 process.

23 So, I'll spend a little time talking about the
24 details of this proposal. First is proposed a single
25 equipment class. I show three types of pool pumps to

1 illustrate the similarity in the pool motors intended
2 for the various pool pumps covered by the DOE Pool Pump
3 Standard.

4 Motors for different pumps are very similar and
5 lack distinguishing physical characteristics, such as
6 different mechanical or electrical interfaces.
7 Proposing a single equipment class and the term
8 Replacement Dedicated Purpose Pool Pump Motor will
9 provide a simple and enforceable regulation and level
10 the playing field.

11 The replacement dedicated purpose pool pump
12 motor is a motor that either complies with UL 1004-10,
13 that's currently in work, or is designed and marketed
14 for use in a dedicated purpose pool pump application.

15 There are exceptions to this scope, such as a
16 polyphase motor that is not sold with a drive to convert
17 single-phase power to three-phase. Replacement
18 waterfall pump motors. And replacement rigid electric
19 spa pump motors.

20 A single equipment class and the replacement
21 dedicated purpose pool pump motor term are consistent
22 with the approach in the Pool Pump Motor Petition to
23 DOE.

24 Staff proposes to measure the motor performance
25 at maximum speed and full load. The test point aligns

1 with one of the test points from the DOE Pool Pump Motor
2 Standard and will provide a representative performance
3 metric to determine the motor efficiency.

4 Staff also proposes a measurement of the power
5 factor. Staff proposes a minimum motor standard, motor
6 efficiency standard to take the place of the
7 prescriptive motor prohibition against split-phase and
8 capacitor start induction-run motors.

9 Staff selected the motor efficiency levels from
10 comments from industry, received in 2016. Staff
11 believes the approach will lead to greater energy
12 savings and technological innovation by removing the
13 prescriptive motor ban.

14 Staff added freeze protection setting
15 requirements, consistent with those adopted through the
16 DOE Pool Pump Rule.

17 Staff proposes a prescriptive variable speed
18 requirement for pool pump motors .5 horsepower and
19 above. Motors that meet the definition of variable
20 speed will meet the prescriptive requirement.

21 What is a variable speed motor? It has a user-
22 determined speed that are separate by, at most, 100 RPM
23 increments over the operating range and the lowest
24 operating speed is less than or equal to 1/3 of the
25 maximum operating speed and greater than zero.

1 Additionally, it will be sold with a user
2 interface or without a user interface, but is unable to
3 operate without the presence of a user interface.

4 This definition is similar to the DOE definition
5 for a variable speed, with the DP3 Pool Pump Standard.

6 Staff limited the prescriptive variable speed
7 requirement to motors that are 0.5 horsepower or
8 greater. This was done to be consistent with the U.S.
9 DOE DP3 Standard. The DOE set a minimum low-speed
10 hydraulic output of the pool pump. Pumps that could not
11 achieve the low-speed hydraulic output were scored as if
12 they were single speed.

13 Following this reasoning, staff chose the 0.5
14 horsepower threshold to be consistent with the DOE Pool
15 Pump Standard.

16 So, why variable speed? Determining the
17 required pool pump capacity ahead of time is difficult.
18 Nearly every pool is different. Pool plumbing layouts
19 can be complex and the layout may change with the flip
20 of a valve. A pool owner would not want a pump that
21 cannot meet the demand of the pool, so pumps are often
22 oversized. If the pump is single or two speed, the pool
23 owner is left with excess capacity and the excess energy
24 consumption every time the pool pump is used.

25 Variable speed control solves this dilemma. A

1 pool owner can select an oversized motor to protect
2 against unknowns, but not be forced to use this excess
3 capacity. A variable speed pool pump motor will provide
4 the flexibility to meet the demands of the pool user,
5 while using the least energy.

6 This chart shows system curve C, with estimates
7 by Commission staff as to the required motor output to
8 provide the flow and pressure and the various points
9 along the curve. The strength of the variable speed
10 control is a motor can be any of these sizes to meet any
11 need the pool owner requires. Every pool deserves a
12 pump that is the right size.

13 Our goals continue to be to modernize the
14 standards to take into account the current market
15 trends, and technology advances, and to extend statewide
16 energy savings.

17 Why does the Commission propose to move the
18 threshold for speed control requirement? For over a
19 decade the standard has been one or more horsepower, two
20 or more speeds. We propose 1/2 or more horsepower and
21 variable speed. The answer is there is a significant
22 market share of pool pump motors below one horsepower
23 that deserve energy savings.

24 The graph shows a Southern California Edison
25 Utility survey of pool pump motor sizes. Over half of

1 the motors are either one horsepower or below. A
2 significant market share will lead to significant energy
3 savings.

4 Commission staff reviewed the certifications of
5 pool pump and replacement pool pump motors to the
6 California Appliance Efficiency Database, or MAEDbS. We
7 compared for both the proposed motor efficiency and
8 variable speed standards.

9 The slide shows the results of the pool pumps
10 certified to the Commission. In each size class, zero
11 to just below .5 horsepower, .5 horsepower to just below
12 one horsepower, and one horsepower and above there are
13 pool pumps that contain motors that meet the proposed
14 standards. The green wedges represent the compliant
15 products.

16 Similarly, staff reviewed replacement pool pump
17 motor certifications and found compliant products for
18 both .5 horsepower to just below one horsepower, and one
19 horsepower and above. Staff did not find any
20 certifications for below .5 horsepower. Staff believes
21 that this may be due to the preference to offer the pump
22 and motor together for those replacements.

23 Staff concludes a technical feasibility for
24 below .5 horsepower from the pool pump certifications,
25 shown on the previous slide, since motors within pumps

1 can be prepared to be sold as replacement motors.

2 The proposal is cost effective, with payback
3 periods well within the product lifetimes.

4 Staff found substantial statewide energy savings
5 for the proposed standards. When fully implemented, the
6 standard will save 472 gigawatt hours per year.

7 Staff received comments that differed on how
8 often consumers choose to replace just the motor, rather
9 than the pump and motor combination. The estimates
10 differed between 25 percent to 60 percent. The
11 estimates assumed 25 percent of consumers choose to
12 replace the motor, while 75 percent of consumers choose
13 to replace the pump and motor at the end of the motor
14 life. A higher percentage of consumers choosing to
15 replace the motor would lead to greater savings.

16 The proposed standard provides millions of
17 dollars of savings for California businesses and
18 consumers. At full stock turnover, there will be \$88
19 million of electrical cost savings to Californians.
20 Well, what can \$88 million buy? Perhaps a trip to Mars.

21 The electrical energy savings are roughly
22 equivalent to the energy for the City of Roseville, a
23 city near Sacramento, with about 135,000 residents.

24 Now, I have listed some items to facilitate
25 discussion at the workshop. The proposal's goal is to

1 transform the replacement pool pump motor market to
2 variable speed.

3 One question will be how will the proposal
4 interact with the DOE Pool Pump Motor Standard and how
5 best can we achieve savings?

6 Do the terms and definitions communicate a
7 clear, accurate, and understandable description of scope
8 and requirements?

9 Are there gaps in the proposal? And if so, how
10 may they be closed?

11 Are the terms clear?

12 I'd like to discuss the Motor Performance
13 Standard, the efficiency levels and, of course, the
14 segments where the requirements change from one to the
15 other, such as at 0.5 and one horsepower. Are these the
16 best segments to choose?

17 And I'd also like to discuss the approach to
18 measuring motor performance, both the efficiency and
19 power factor. Are there areas to improve the proposal?

20 Staff is aware that many motor types are used to
21 drive dedicated-purpose pool pumps. Some replacement
22 motors may be covered under the DOE Electric Motor Rule,
23 or Small Electric Motor Rule. Staff seeks your comments
24 to identify overlap between the staff proposal and
25 existing DOE rules.

1 So, how best to exclude what is already covered?

2 And then, finally, how well does the proposal
3 map the DOE Dedicated Purpose Pool Pump Regulations into
4 the California Appliance Standards? That's a fairly
5 lengthy part of the proposal that's located at the back
6 of the Draft Staff Proposal. So, we wanted to look at
7 both the scope, the definitions, the testing, the
8 standards and the marking with an eye for that we want
9 to copy over and map in these requirements as they are
10 written in the Federal Code of Regulations for the pool
11 pumps.

12 Staff has received -- or, release a Draft Staff
13 Report. We are in a comment period, now. Comments may
14 be submitted electronically at the link above or emailed
15 to the docket. Hardcopies may also be sent to the
16 Energy Commission at the address shown on this slide.

17 For those of you on the phone, this entire slide
18 package has been docketed and is available in Docket 15-
19 AAER-02.

20 Comments are due by 5:00 p.m., January 4th.
21 Once we receive comments, we will analyze the issues,
22 compare the comments to the proposed standard and figure
23 out the best path forward. We look forward to your
24 feedback and will work hard to incorporate it into our
25 next draft of the standards.

1 Thank you for your participation today. My
2 contact information is shown here.

3 We will next proceed into formal presentations,
4 followed by an opportunity to receive comments from the
5 public and further discussion.

6 I will take clarifying questions on this
7 presentation, but substantial comments and statements
8 should be saved for the public comments following the
9 remaining presentations. Thank you.

10 I'll look to the room if there are any questions
11 regarding my presentation. And then we'll look to
12 online. Okay.

13 So, next up, I would like to invite Charles Kim.

14 MR. KIM: Hello, I'm Charles Kim. I'm with
15 Southern California Edison Company. I'm speaking on
16 behalf of California IOUs.

17 First of all, thank you so much to CEC for your
18 leadership. This has been a very long journey and this
19 measure is very important for the Californians. We have
20 more pools than any other states, and the energy savings
21 opportunity is bigger than any other state, as well.
22 And California has been working very hard to transform
23 the market, including variable speed incentive programs,
24 and et cetera.

25 And now, we are at the juncture of moving to the

1 next step here. And we have many meetings before at the
2 DOE, at the CEC, and I think this is the direction that
3 CEC's taking and California IOUs are very supportive of
4 the direction that CEC is taking. And we are looking
5 forward to having opportunities to collaborate with the
6 incredible manufacturers and associations. And as we
7 have been working together. And this is going to
8 address the need for Californians. Not just saving
9 energy for the small changes that we can do here, to
10 help the environment as well.

11 So, once again, I thank CEC for this wonderful
12 opportunity and an effort put on for such a long, long
13 time. Once again, thank you so much.

14 And I'll introduce Chad and he is going to go
15 over more in-depth discussion about this measure.

16 MR. WORTH: Thank you, Charles. Thank you,
17 Sean, and the Commission for having us here today.

18 Building upon what's been said, my name's Chad
19 Worth. I'm with Energy Solutions, on behalf of the
20 California IOUs, and we're happy to continue this
21 conversation about pool pump motors, specifically
22 replacement pool pump motors today.

23 The California IOUs have long been involved in
24 pool energy efficiency. PG&E created the first
25 voluntary incentive program for pool pumps back in 2001,

1 so we're approaching 20 years of engagement on this
2 effort. We've been very involved in the previous Title
3 20 rulemaking, the Title 24 rulemaking. The IOUs helped
4 develop the energy factor standard, which is now used by
5 Energy Star and serves as the basis for the DOE
6 Dedicated Purpose Pool Pump Rulemaking and, most
7 recently, we've been engaged with this rulemaking and
8 efforts at the federal level to address replacement pool
9 pump motors.

10 I thought Leah did a good job of going through
11 the history of this particular rulemaking, so I won't
12 restate that. But there have been many meetings, as
13 have been noted, and we've been happy to be here along
14 the way. And I think we, you know, continue to move in
15 a good direction.

16 The current Title 20 Standards, as they are, I
17 guess most of us here in this room know what they are,
18 but I do just want to reiterate. We do have a
19 Replacement Motor Standard in California, as is. It
20 seeks to be improved upon. This word, residential pool
21 pump motors has caused some challenges in the market and
22 how this standard is implemented, interpreted, and
23 ultimately enforced. And I think that is one of the big
24 things this proposal will help fix.

25 In addition, we're only talking about a two-

1 speed requirement with the current standard, over one
2 total horsepower. And, obviously, the market has moved
3 in the last ten years, significantly, to where a
4 variable speed standard is appropriate. So, we do have
5 a replacement motor standard, but in order for this all
6 to work and to get the energy savings we've been, I
7 don't know if promise is the right word, that we've been
8 hoping for, we need to close this loophole.

9 As Sean mentioned, there's a pool pump rule
10 nationally coming in, in July 2021, but it's covering
11 all the four categories of pool pumps, non-self-priming,
12 booster pumps, large self-priming, and small self-
13 priming based on the weighted energy factor (WEF). And
14 we know manufacturers are working towards this right
15 now. Energy Star is working towards the WEF. And
16 we're -- the replacement motor loophole is one that
17 needs to be closed for this all to work.

18 The need for a replacement motor standard, again
19 has been said but, really, what it comes down to is
20 nationally we're going to have regulated pool pumps and
21 we want to ensure that those are not replaced with
22 unregulated, inefficient, single-speed motors
23 nationally. And to a lesser degree, because as I was
24 mentioning, we do have somewhat of a replacement motor
25 standard here in California. But we need to -- we don't

1 want really efficient pumps being replaced with
2 inefficient motors.

3 We were, we being the IOUs, and CEC, and some of
4 the other folks in this room, were all party to the
5 Joint Stakeholder Proposal that was docketed to DOE in
6 August, after a months' long collaboration, talking
7 through many of these issues.

8 In September, DOE published this proposal for
9 public comment. We and many other stakeholders wrote
10 letters of support and had even more letters of support
11 on the docket, and have yet to hear anything back from
12 DOE. Thought we had, I think, what, 30 letters of
13 support and essentially no opposition, which is
14 promising.

15 However, as Charles mentioned and as Sean
16 mentioned, California is the largest pool market in the
17 country, with roughly 20 percent of the eight and a half
18 million pools in the U.S. And we need something here in
19 case things at the Department of Energy do not work out.

20 The updated replacement motor standards are
21 necessary to ensure the savings from the DP3 rule that's
22 been talked about. And overall, you know, we're still
23 digesting the staff report that just came out two weeks
24 ago. Sean, I thought you did a great job with your
25 presentation, a really clear and crisp analysis of

1 what's at stake. And going to Mars, I will forever
2 associate with pool pump motors now. So, good job on
3 that.

4 And we look forward to working with you and the
5 manufacturers that we've worked with so well over the
6 years to continuing this conversation, to save the
7 energy that we know is needed. So, thank you.

8 MR. STEFFENSEN: Thank you, Chad. Next up will
9 be Shajee.

10 MR. SIDDIQUI: I don't have a presentation. I'm
11 going to read some statements. So, do you want me to
12 come up there or can I sit at the table?

13 MR. STEFFENSEN: Wherever you'd like.

14 MR. SIDDIQUI: Okay, I'll just stay here. Thank
15 you.

16 First, to just introduce myself, my name is
17 Shajee Siddiqui. I'm with Zodiac Pool Systems, based in
18 Vista, California. We're one of the premier
19 manufacturers or one of the largest manufacturers of
20 swimming pool equipment, and that includes pool pumps.

21 I'm not only speaking on behalf of Zodiac here,
22 but I'm also speaking on behalf of the Association of
23 Pool and Spa Professionals, APSP, in response to the
24 Third Revised Staff Analysis of Efficiency Standards for
25 Replacement Pool Pump Motors.

1 APSP appreciates the opportunity to provide
2 comments on behalf of its membership, including the pool
3 pump and pump motor segments, which are most directly
4 affected by this proposal.

5 Just a quick blurb about APSP. The Association
6 of Pool and Spa Professionals represents over 3,100
7 company members nationwide and is the world's oldest and
8 largest association representing swimming pool, hot tub,
9 and spa manufacturers, distributors, manufacturers'
10 agents, designers, builders, installers, supplies,
11 retailers and service professionals. APSP is the only
12 industry organization recognized by the American
13 National Standards Institute to develop and promote
14 national standards for pools, hot tubs, and spas.

15 Now, having said that, I'll get into the
16 comments that the APSP and its members have. APSP and
17 its members have a long history of working with the
18 Energy Commission. We appreciate the opportunity to
19 continue a positive collaboration to ensure that the
20 citizens of this state, along with the rest of the
21 country, hopefully, are provided with energy regulations
22 for pool pump motors that balance both energy savings
23 and other critical factors important to consumers and
24 the industry.

25 We've also worked with the CEC and other

1 stakeholders over the last few years, as has been
2 alluded to earlier by my colleagues, on taking good that
3 started here in California, and encouraging federal
4 regulations for both pool pump motors -- for pool pumps
5 and motors that would ensure savings nationwide, thus
6 avoiding a patchwork approach to regulation. A
7 patchwork approach that is neither in the consumer's
8 best interest, nor in that of our industry members.

9 APSP members participated in the Department of
10 Energy, DOE, ASRAC Negotiated Workgroup on Dedicated
11 Purpose Pool Pumps, which I'll refer to affectionately
12 as DP3, which resulted in a unanimous agreement and a
13 direct federal rule, or a DFR for pool pumps.

14 We were very pleased to see this occur in 2017
15 and our members continue to prepare for the July 2021
16 compliance date.

17 APSP members who participated in the DP3
18 negotiations voiced concerns that DP3 motors must also
19 be addressed. Otherwise, a significant loophole would
20 occur. Over the past year and a half, we have continued
21 to work with the stakeholders, which include the CEC, to
22 request a DFR for dedicated purpose pool pump motors.

23 This painstaking effort resulted in a
24 unanimously agreed-upon joint petition, which Chad also
25 referred to, which was submitted to the DOE on August

1 14th of this year, by the stakeholders.

2 In this case, the stakeholders included the
3 motor and pump manufacturers, consumer advocates, pool
4 service professionals, states, efficiency advocates,
5 utilities, and others.

6 APSP and our industry members stand behind that
7 joint petition to the Department of Energy, and all
8 stakeholders continue to work towards the goal of seeing
9 that the department issues a DFR based on the joint
10 petition.

11 That being said, although we appreciate the fact
12 that this Revised Third Analysis from CEC staff captures
13 much of the joint petition submitted to the Department
14 of Energy, we feel that it still runs somewhat counter
15 to that agreement. We would strongly urge the
16 Commission that if they intend to move forward with this
17 proposed rulemaking, while they wait for the DOE to act,
18 that they align their proposal to ensure consistency
19 with the approach agreed upon by all the interested
20 stakeholders and which was submitted to the Department
21 of Energy for consideration.

22 Having two different approaches will most
23 certainly cause disruption and market confusion, which
24 will adversely affect consumers and the industry.
25 Alignment across all 50 states is of utmost importance.

1 And we, therefore, believe that the approach provided to
2 the DOE should also be the one adopted by the Energy
3 Commission, instead of one that may conflict with or
4 otherwise deviate from that agreement.

5 Industry has spent and continues to spend
6 significant resources to prepare for the DP3 Pump Rule
7 of 2021, and we'll do the same for the motor rule in an
8 expedited fashion, if a DFR is issued with that same
9 July 2021 compliance date, which is our intent and goal.

10 To have to also prepare for a CEC rule that
11 takes, albeit a similar, but somewhat of a different
12 approach, with require financial, or additional
13 financial commitment, which could be quite or would be
14 quite burdensome.

15 Therefore, if the end goal is the Joint Petition
16 submitted to the Department of Energy, we believe
17 California should follow that proposal. In doing so,
18 California would simply be ahead of the federal action
19 and would not have to make changes when that rule went
20 into effect.

21 Furthermore, motor manufacturers would then have
22 a clearer path towards compliance and would be able to
23 prepare for either possible rule, the California one or
24 the federal one, without having to make significant
25 adjustments which could arise from having to prepare for

1 two different approaches.

2 And the industry is still reviewing the revised
3 analysis, since the timing was just -- it was a bit
4 short. It was before Thanksgiving and we didn't have
5 time to provide written comments. And we will do so by
6 the deadline, of course.

7 However, in addition to the overreaching
8 comments made, we also want to go on record by voicing
9 our concern that we're not aware of anything that is
10 formalized and in place to address the methodology
11 that's proposed in the analysis.

12 The analysis makes some assumptions. We believe
13 that there is a lot more to consider. It is important
14 to recognize that everyone's product is different. The
15 concern is that the revised analysis is not a
16 prescriptive method like that which was agreed upon in
17 the joint petition to the DOE. A performance metric is
18 being added, which is not an accepted methodology in the
19 industry today.

20 My industry colleagues that will, hopefully,
21 speak after me, can provide more details about these
22 specific concerns.

23 So, in closing, we appreciate that the Energy
24 Commission recognizing -- or, we appreciate that they
25 recognize the importance of addressing the replacement

1 motor aspect. We certainly support that.

2 As we have stated to the DOE, if a DP3 motor
3 standard is not put in place, an enormous loophole will
4 certainly occur. This could drive nearly all
5 replacement motor business towards the lower cost, lower
6 quality, unregulated motors. Again, a point made by
7 Sean -- and I'm sorry, Sean, Chad and Charles.

8 This will have a significant and detrimental
9 impact on both the pool industry and consumers, as well
10 as on the expected energy savings from the DP3 final
11 rule.

12 Therefore, while we applaud the fact that
13 California wants to move forward as we all wait for the
14 DOE to act, we believe the best course of action would
15 be to stay completely aligned with the joint petition
16 that was unanimously agreed upon by all those who signed
17 on, including the Energy Commission. And that we hope
18 not to deviate from it in any manner.

19 APSP and our member companies look forward to
20 providing more detailed written comments and working
21 with the Commission towards a final rule. Appreciate
22 the time, thank you for allowing us the opportunity.

23 MR. STEFFENSEN: Thank you, Shajee, for your
24 comments.

25 Next up, we'll have Rob from the Nidec

1 Corporation.

2 MR. BOTELEER: Yes. Can you hear me okay?

3 MR. STEFFENSEN: Yes, we can.

4 MR. BOTELEER: So, I can hear my echo. I'm not
5 going to talk on a technical side. Oh, I'll get rid of
6 the echo.

7 Can you hear me okay?

8 MR. SIDDIQUI: Rob, you might be on the phone,
9 as well as your computer microphone might be on, so you
10 might have to shut off your computer microphone or your
11 -- or just use one, not both.

12 MR. BOTELEER: Hmmm, I don't know how I do that.

13 So, I'm Rob Boteler. And I'm -

14 MR. STEFFENSEN: Hi Rob. We believe we've lost
15 the connection, if you can hear us.

16 MR. BOTELEER: You can hear me okay?

17 MR. STEFFENSEN: I can hear you now.

18 MR. BOTELEER: Okay.

19 MR. STEFFENSEN: If you can just start your
20 comments from the beginning?

21 MR. BOTELEER: Okay. So, I'm Rob Boteler. I
22 have been involved with the Department of Energy. I've
23 actually met with the CEC and talked to a number of
24 people years ago. I'm the father of NEMA Premium. And
25 I want to just kind of take a couple of comments that --

1 MR. STEFFENSEN: Hi Rob. We're having a lot of
2 trouble hearing due to the feedback. Is there anything
3 we can do on our end?

4 MR. BOTELEER: If I do that, can you hear better?

5 MR. STEFFENSEN: That's much better, thank you.

6 MR. BOTELEER: I can't hear you. Did that help?

7 MR. STEFFENSEN: Yes, it did.

8 MR. BOTELEER: It did help, okay. I'm going to
9 turn off my speaker, but then I can't hear you.

10 All right, so one of the things that I just
11 wanted to make a point on is the last speaker mentioned
12 the DOE and consistency with the DOE. And from a motor
13 manufacturer's perspective, that is probably the most
14 critical thing.

15 Even though, as Sean said, California is a very
16 large market, 20 percent or more of the pool pump
17 market, it is still a submarket of the overall pool
18 market. And that consistency allows us, as
19 manufacturers, to develop the best products at the best
20 price. It also makes sure, I think, that we don't
21 eliminate some competitors because they choose not to
22 participate in a market because it is, in fact, a
23 submarket.

24 Prescriptive programs really need to be well
25 defined. And I think when we start to look at an

1 application and we get away from the test methods that
2 are in place, and we look at revising test methods, it
3 becomes very critical. And Dan is going to talk about
4 that in a minute as to just what we have to do there.

5 We talk about the test methods and load points,
6 and I think one of the things that motor manufacturers
7 look at historically is the interval product was done at
8 100 percent load and that was the numbers -- well, the
9 numbers that were used within the regulations. But yet,
10 we know, we have data from Department of Energy that
11 over 50 percent of the motors in application weren't
12 below 50 percent load and the actual efficiency is
13 significantly less.

14 We certainly are looking, and applaud CEC in the
15 support of variable speed. And, Sean, I liked your
16 chart where you recognize the benefits of variable speed
17 by allowing the end user to actually tune the load
18 points and the speed for what his application needs.

19 And we've been trying to make that argument,
20 that position known with DOE. We look at that as a new
21 metric, where the metric becomes power management,
22 instead of efficiency. And I think that's one of the
23 issues we had with this regulation is we're talking
24 about efficiency, but yet, the benefits that we're
25 trying to gain are really coming from managing power.

1 One of the other issues that we continue to have
2 is enforcement. And I think when we have a regulation
3 or a requirement at the state level, it becomes
4 difficult for enforcement. And when we have product
5 that's imported, we have an additional element that
6 comes in where we need the Homeland Security and CVP to
7 come into play and have import declarations, and work
8 through the import process to make sure that things are
9 not being imported that are not compliant.

10 When we look at the current small motor
11 regulation, it's a regulation that was done for a
12 subsegment of the product area only for general purpose,
13 only for open motors. And I think none of us knew
14 exactly what was going to happen, but it became a case
15 where a great many of the end users of the product, be
16 they OEMS or others, avoided the regulation by simply
17 changing to a different technology or revising some of
18 their products. Moving from a Cap-start, induction run,
19 to a PSC. And we've got to be careful of that I think,
20 with this regulation, that we need to avoid loopholes
21 like that and work together.

22 And again, I think it's more of the reason why
23 we need to stay with the DOE. And I think, if anything,
24 it motivates us to move quicker with the DOE.

25 With that, I'm going to turn it back over and

1 let Dan talk about the test procedures.

2 MR. STEFFENSEN: Thank you, Rob.

3 The next up is Dan Delaney.

4 MR. BOTELEER: Okay.

5 MR. STEFFENSEN: All right, next up will be Dan.

6 You're speaking now.

7 MR. DELANEY: Great. Can you hear me, Sean?

8 MR. STEFFENSEN: Yes, thank you.

9 MR. DELANEY: I have that echo issue as well.

10 Is there any way you can mute me on the -- there we go.

11 That's better. No, it's not. Do you guys -- are you

12 getting the echo from me?

13 MR. STEFFENSEN: No, Dan, we hear you fine here.

14 MR. DELANEY: Okay, then I'll proceed. I think

15 you've -- I think whenever you mute me out, I'm fine.

16 So, I'll speak and I don't know if you guys have to

17 unmute me.

18 But thank you very much, first of all, for the

19 opportunity to present. Appreciate the CEC giving us an

20 opportunity to share. My name is Dan Delaney. I'm with

21 Regal Beloit. I'm speaking on behalf of, obviously,

22 Regal Beloit. We sell pool pump motors, pool pump ECM

23 type motors, both OEM and replacement into this market.

24 Much of the product is brand-new this century.

25 I also am a member of APSP and as well as NEMA,

1 and also represent those members as well in these
2 comments.

3 So, first of all, I appreciate Sean and Chad
4 presenting your details. That was a very good summary
5 of the document in the docket that you guys have put
6 forth.

7 One of the things that kind of struck at me,
8 from Sean's presentation, you know, you used those key
9 words on what was most important, you know, in your
10 petition and moving forward in alignment. That was
11 obviously a key word in there. And clearly CEC, clearly
12 Sean, clearly Chad, both of you, it was with a passion
13 in the work we did over a past year or so, our goal was
14 alignment. Our goal was to do that.

15 And as Shajee put forth that position, we want
16 to continue to see that alignment, continue to work with
17 both of you as strong partners in the growth of that
18 petition.

19 For many reasons Rob mentioned, alignment of
20 that industry and ensuring that industry stays in
21 alignment with each other. The last thing we want to
22 have happen is the situation where you have
23 uncompetitive type of positions where products now are
24 finding loopholes and other ways around different
25 products. So, the federal process we believe is best.

1 And we certainly hope that CEC will continue to see that
2 as a good path.

3 So, appreciate you putting this together and
4 putting these comments. Specifically, there was a
5 comment in the docket that I really want to address. It
6 was that motor efficiency test procedure. I believe
7 this is page 27 and 28. You start with a Table 6.1 of
8 that variable speed control with minimum motor
9 efficiency. So, I really want to talk a little bit
10 about minimum motor efficiency and maybe some of the
11 challenges there.

12 Certainly, when you talk about the less than
13 half horsepower, I think you guys have hit it correctly.
14 I think the efficiency number is reasonable. That's a
15 fairly large gap of product. You don't see a huge
16 number of products below that realm, of at least
17 replacement pump motors. Integral, obviously you see
18 more, but not so much in the replacement. So, I think
19 the efficiency and the test method prescribed for that
20 first row of pool pump motors is accurate.

21 Now, when we go to the next two rows in variable
22 speed, that's where there's some concern of myself, and
23 our members, about the challenge there. And, of course,
24 as Chad and Sean have been along with the petition and
25 remember our decision to go prescriptive was really

1 motivated primarily by the challenge that the minimum
2 motor efficiency around variable speed motors exists.

3 So, I'll just speak a little bit about how an
4 ECM, that's a term that's used in the docket, so I'll
5 use it. A variable speed pool pump motor, commonly
6 referred to ECM, an integrated controlling motor.

7 Yes, it absolutely allows variable speed, but it
8 also allows other intelligence. Other intelligence to
9 properly keep the motor safe, properly keep the motor
10 operating at its most optimum point. So, it is able to
11 do that dynamically. And as a result of those features,
12 it doesn't allow itself to be tested easily in the same
13 manner an induction motor would be tested.

14 So, to simply pull an ECM motor out of a box,
15 connect it in the same manner an induction motor would
16 be to a dynamometer, which is able to load that at a
17 fixed speed and load, that ECM motor may or may not
18 operate as an induction motor. Some may have
19 intelligence to allow it to hold load across speed.
20 Some may fall back and do other operations as it was
21 designed for that pool pump operation.

22 So, my concern would be a pool pump ECM is not
23 designed for max efficiency for load and speed. It is
24 designed for max efficiency of a pool pump operation and
25 it does so by studying that curve C and the other

1 information that's outlined as part of the DOE DP3 Rule.
2 And it does it very effectively. It's a very, very good
3 cost-saving effort.

4 So, there is concern on our industry that there
5 is a gap there. There's a gap that has to be filled
6 between the test method, which I believe you have
7 correctly chosen, the CSA C747, which allows a good
8 method to test an ECM motor, connecting it and how to
9 load it, but it was not intended, obviously, for a
10 verification or assignment of a very specific point. It
11 was designed to evaluate the range of the operation of
12 the pool pump. So, by assigning a single point of
13 efficiency, that is a gap. That is a gap that needs to
14 be closed. A gap that we, as a petition group, had
15 decided we did not have the time and energy. It was
16 agreed upon by the Department of Energy in the context
17 that we consulted through that time.

18 It is certainly not to say it can't be done. It
19 just requires the additional work necessary. One
20 example could be that through the development of
21 manufacturers, pool and motor manufacturers, it's
22 possible we could come up and develop a test procedure.
23 but it's also likely that as a result of that test
24 procedure ECM motor manufacturers may have to design a
25 test point within the parameters of the operation so

1 that the motor can be tested at what we sometimes refer
2 to as max efficiency, not operating efficiency across
3 wide sweeping.

4 So, it just depends on what our mode of
5 operation is. And I just wanted to explain that
6 complication of a simple point versus how the product is
7 designed to save, obviously, energy as you explained it
8 and showed it perfectly, Sean, on our Curve C example of
9 the curve.

10 And then, secondly, I did want to note that
11 industry, today, has a very specific detail when it
12 comes to identifying motor efficiencies. It has, you
13 know, metrics and tolerances around those. And those
14 are referred to as a NEMA nominal efficiency. And I
15 would recommend that we pursue that.

16 What, essentially, the NEMA nominal efficiency
17 ability is, it's Table 12.10 of NEMA MG1, it takes a
18 look at all the characteristics that go into the
19 manufacturing and tolerance of efficiency. And it
20 shows, basically, a statistical, normal distribution of
21 what would be expected around an efficiency point and
22 provides that tolerance as necessary for induction
23 motors today.

24 So, I'd recommend, if we're going to choose an
25 efficiency, a performance metric, that we look to

1 industry to help us choose the number around the value,
2 as well as the performance metric around that.

3 So, with that, that concludes my comments.

4 Again, thank you for allowing me to share my notes.

5 Thanks.

6 MR. STEFFENSEN: Thank you, Dan.

7 Sean Steffensen speaking again. And I'll want
8 to look to open -- I guess I should say is there anyone
9 else in the room that is here to comment on the
10 proceeding or when we start a discussion.

11 We'll look to online, then. Are there
12 participants online that would like to speak and make
13 public comment at this time?

14 Okay, hearing none, what I would like to do is
15 I've been listening and I appreciate the participation
16 today. And I know that there will be further comments
17 to help guide this process.

18 I'll start by saying that the Energy Commission
19 strongly supports the DOE petition for pool pump motors.
20 We hope that effort to be successful and look forward to
21 the response from DOE.

22 This proposal is a separate process and we look
23 to move it along so that we can be ready, in the event
24 of whatever else may occur. So, that's why we want to
25 continue to receive comments on this proposal so that we

1 can put our best foot forward in the event that we do
2 move forward.

3 So, I appreciate the comments. I did hear very
4 much into the details, and I believe I did hear details
5 as to specific issues that are raised. And I think I
6 want to just, if I can, extend the conversation to go
7 through, I guess, some of the comments regarding the
8 proposal.

9 I guess starting out with, you know, I'll look
10 to receive comments as to how better to improve the
11 regulatory language. As Dan concluded, he was talking
12 about the need to perhaps settle on an industry-
13 established measurement of motor efficiency, citing NEMA
14 nominal.

15 And I think looking to the staff proposal, as I
16 flip through the pages here, my intent had been to -- I
17 said, "Shall meet a nominal full-load efficiency." If
18 those words are unclear or fall short, that was my
19 intent was to call out the NEMA nominal efficiency. If
20 there's additional words that need to be provided, that
21 would be a valuable comment that we would like to
22 understand and see.

23 Just working backwards through the comments, I
24 am very interested in understanding how electrically
25 commutated motors may differ from other motors. And,

1 certainly, we want to ensure that the test method is
2 accurate and fair, and representative of the motor
3 performance.

4 And so, I'd like to understand, you know, the
5 reasons why and how an ECM motor, when tested under a
6 certain set of circumstances, which are dictated by the
7 speed, and torque, or load on the motor, and measuring
8 the electrical draw, how that may differ from one motor
9 technology to another.

10 The intent was to propose a proposal that makes
11 the technology blind. Ultimately, I think that's what
12 the consumer will be faced with. They won't know how to
13 identify the different motor types. They'll just be
14 concerned on what the flow rate and pressure that's
15 delivered by the pump, and that will be their judge as
16 to the quality of the product they've received.

17 So, that's where I would want to understand, you
18 know, how perhaps the ECM motor has a certain wrinkle to
19 this. That's new information to me and I just am
20 expressing a curiosity and making a request for
21 understanding, to understand how perhaps an ECM motor
22 may need to be tested differently. That could be maybe
23 the first topic of discussion.

24 So, again, and I understand that perhaps, you
25 know, there maybe needs to be some time to prepare

1 comments. But as I go through this, I'll be listing
2 some items of what I heard, that are of interest to me.
3 Not to say that all the comments are of interest. I may
4 have missed a couple of things as I was taking notes.

5 Yes. And feel free to just -- I won't call on
6 anyone, so just feel free to speak up as I pause.

7 MR. WORTH: This is Chad with the IOU team.
8 Dan, I had a follow-up question. I guess I'm somewhat
9 confused as to your concerns about the CSA test
10 procedure. You know, we've been talking about this test
11 procedure within this rulemaking for many years and how
12 it was -- I think it was even Regal, or the pool
13 industry in general that supported using the CSA test
14 procedure as opposed to the IEEE test procedure which is
15 currently used as kind of a voluntary reporting right
16 now.

17 Is it that the levels -- you know, let's just
18 take the 80 percent efficiency level is too high for
19 what you were talking about? Or, is it that actually
20 using the test procedure to get that number is not
21 accurate?

22 MR. DELANEY: Let me test this. Can you mute on
23 your end, so I can speak? Okay, better for me now.

24 So, yeah, just to clarify again. And I'm sorry,
25 Sean, I didn't try to ignore your question. I certainly

1 want to work with both of you to try to better explain
2 this situation.

3 So, in summary, the easiest way to look at an
4 ECM is it is not designed for a max efficiency, as the
5 proposal has been made. Some ECM motors can simply be
6 taking out of the box, connected to a dynamometer,
7 loaded at a max speed load point that's in alignment
8 with the nameplate, and efficiency can be reached.

9 Other ECM products, even within the same family,
10 obviously different competitors. I don't want to speak
11 for others on how their products react. There are modes
12 of operation that allow fullbacks, that allow changes in
13 result to, obviously, the pump curve that would not
14 fully allow the motor to be tested at its true max
15 efficiency under a constant load, like a dynamometer.

16 So, as we had talked about this in the petition
17 rule, it's got nothing to do with the level or the test
18 method. So, either one of those two, I don't have any
19 major concern. I haven't looked at it in detail. At
20 first glance, the numbers seem fine to me.

21 Obviously, I was involved with 747. That test
22 method will work fine for outputting and efficiency.
23 Everything has an error that is an acceptable error for
24 small motors and ECM, as evaluated and as commented in
25 the test method.

1 The concern solely is that ECM motors are not
2 designed in the same manner by which induction.
3 Therefore, it would require us to discuss and talk about
4 a test procedure by which manufacturers should be aware
5 of so that when you do take it out of the box, and do
6 try to load it on a dynamometer you can get repeatable
7 results which is a max efficiency, so you can have a
8 determination of, really, what this ECM product would
9 be, since it is not designed to do that today.

10 So, that's my comment is that an ECM motor
11 cannot be assumed it can simply be loaded and tested at
12 a single point of efficiency at its max load speed and
13 able to output its true max efficiency as it is sold
14 today. It can certainly be done, speaking from Regal
15 Beloit's end, in the future with, potentially, a test
16 point. With a selectable point that allows it to be
17 tested as that. But it's simply taking it out of its
18 box and selecting the different speeds would -- it gives
19 it a potential error, depending on the user, or the
20 government official, or the regulator, or whoever it is,
21 inspector that is trying to evaluate that product.

22 So, there's additional steps that are necessary
23 to close that gap between test method and what the
24 actual ECM product is really designed to do. It is not
25 designed to be pulled out of the box, ran at max load

1 speed, and tested at efficiency.

2 I'll go on mute.

3 MR. WORTH: This Chad with the IOUs. Thanks
4 Dan. So, just so I understand, you're basically saying
5 that the full load, full speed test point for an ECM
6 motor is not necessarily its max efficiency point.
7 Therefore, it's perhaps not the appropriate place to set
8 an efficiency regulation level? Is that -- like, is it
9 at 80 percent speed or 80 percent load? It's efficiency
10 actually goes up, which is different from induction
11 motors that it drops off as it goes lower. Does that
12 sum it up properly?

13 MR. BOTELEER: Chad, this is Rob. I mean, I
14 think maybe where we're headed is the motor that's going
15 to save the most energy, the one with the highest
16 efficiency at a selected point or the motor with the
17 flattest curve. And I think what we would say depending
18 upon the application, it's more likely the one with the
19 flattest curve.

20 MR. DELANEY: So, Chad, a very good summary of
21 my comments. Exactly the point. The max efficiency of
22 an ECM -- there's always the question we come back to a
23 customer when they ask, what's the efficiency of this
24 ECM? And we come back to them as do you want running
25 efficiency, which means whatever the point the

1 customer's using the product at, or would you like max
2 efficiency, which means the max efficiency that it could
3 be run. It may or may not align with your -- in power,
4 your operation, or whatever curve.

5 So, our point would be that it would be best
6 that this would be tested under a test point of
7 efficiency that would give, you know, the ability for a
8 max efficiency of the product to be displayed and maybe
9 not how it is going to operate on that specific pump,
10 pump and power pool pump combination. Because we're
11 testing a replacement ECM motor and not a system. So,
12 we think it should be fairly judged against itself and
13 not its potential operation point.

14 MR. WORTH: Thanks Dan. I think I certainly
15 understand where you're coming from. And yeah, I guess
16 I'd just like to point out, you know, I think this was
17 acknowledged years ago which is why originally, I think
18 the IOUs and the CEC proposed a couple of different
19 efficiency levels to try to capture that curve. And I
20 think the CEC, in this latest proposal, in the guise of
21 trying to make it simple and perhaps taken in previous
22 feedback chose the full load, full speed. And now,
23 we're back to, you know, it's kind of a tradeoff between
24 simplicity and accurately capturing what might happen in
25 the market. But I think I at least understand your

1 concern now, and thanks for sharing.

2 MR. STEFFENSEN: Hi, Sean Steffensen. Thanks
3 Dan. And I'll just chime in on my motivations. I mean,
4 one is I've heard the comments that the prescriptive ban
5 may not serve the market as well. That's why we are
6 proposing a performance metric to allow all motors,
7 regardless of technology, to compete to a performance
8 metric.

9 As we proposed previously, there was a full
10 speed and half speed requirement in the -- I guess in
11 the sense of providing a more simple framework,
12 recognizing that under the DOE Dedicated Purpose Pool
13 Pump Standard that there's definitely a full speed test
14 point. But then as to where a manufacturer may elect to
15 test the motor at a lower speed, that's really left at
16 the discretion of the manufacturer within some bounds.

17 And so, it was just felt that we want to make
18 sure that there's a quality motor out there. If we
19 remove the prescriptive ban, let's look to make sure
20 that there is a metric that can show that there is a
21 measure of quality and energy savings.

22 So, I think that's the motivation of exploring
23 this area. I think that we're trying to be very clear
24 as to where the motor shall be tested in this
25 rulemaking. What we want to do, though, is to listen

1 and understand, well, if it's not at full load and full
2 speed, well, where should it be. But we want to
3 recognize that our goal is to be technologically
4 neutral. So, if we want to -- I would look to see what
5 other suggestions participants can come up with, if full
6 load and full speed aren't. But we would want to be in
7 the spirit of that it's level, it's uniform, it's a
8 level playing field.

9 MR. DELANEY: Sean, I appreciate your comments.
10 I think -- am I back off mute? Good, okay. I'll just
11 add that the industry has been spending a large amount
12 of time here, meaning the motor industry in variable
13 speed, obviously both with system regulations, system
14 standards in the marketplace. And there's been a lot of
15 advancement there. Even though, maybe it's still closer
16 to the academic level, than at the industry.

17 The industry still believes that the products
18 are best represented by a sweep or a replication of what
19 the system is doing. So, that collaboration between us
20 as the component motor control providers and the system
21 providers, the handshake must happen.

22 I appreciate your comments recognizing that.
23 Because it's important that the technology be fairly
24 judged, as well, meaning across its operating range.
25 Max efficiency, max load, probably not the best measure

1 of the savings a pool pump, as you've clearly shown in
2 your demonstration. So, that's where I think the pool
3 pump motor manufacturers can engage and can help you
4 through that process, and would be willing to.

5 But I just wanted to point out it's simply not
6 something that we can pick. I just wanted to make sure
7 it was clear. It wasn't just simply a test method and a
8 value of efficiency, it's a little more complicated than
9 that. And you can read that in 747 to understand the
10 sweeps and the goal there is to try to get more of an
11 idea of the operating, you know, range of efficiency.
12 And, you know, let's say its range of operation. So,
13 thank you.

14 MR. WORTH: And this is Chad, again. I think
15 Dan and -- I guess I think that part of the thought --
16 you know, I thought Rob put it nicely that, you know,
17 power management versus efficiency, and the variable
18 speed is definitely the power management side of things
19 and the motor efficiency is kind of the efficiency, more
20 old-school way of looking at some of these -- how we
21 save energy from products.

22 And, you know, the efficiency I think in this
23 case is kind of met, just to somewhat level the playing
24 field and like account for the worst-case scenarios.
25 So, someone buys a variable speed pump and just like

1 ramps it up to full blast and walks away from their
2 pool, at least it would be efficient.

3 So, you know, perhaps there's some -- you know,
4 I think Sean alluded to it. It just got me thinking
5 like, you know, we have this 80 percent turndown
6 availability in the WEF test procedure. Like, if
7 there's a better way to do that, that captures real-
8 world conditions at perhaps a higher efficiency point
9 for some of these motors, like maybe there's some ideas.

10 I think, unfortunately, and correct me if I'm
11 wrong, none of the DOE motor regulations really cover
12 ECM motors. There's not a lot to point to in terms of a
13 good way to set efficiency standards. But if you guys
14 have ideas, you know, I think we would certainly be open
15 to hearing that.

16 MR. STEFFENSEN: I would say much the same that
17 we would look to specific proposals as to how to test
18 these motors to deliver a performance metric. So that
19 way, that the consumer -- and the concern would be that,
20 well, we know the motors are very high quality now, with
21 motor efficiency, but what would happen if somehow
22 things change? This is a check to ensure that there's
23 quality and energy savings as we remove a prescriptive
24 ban. So, we want to understand just how best to update
25 the proposal. And, of course, the reasons why go a long

1 way to helping to make a persuasive comment.

2 MR. BOTELEER: This is Rob. I think what you get
3 into here is really -- and I see Kitt Butler's on the
4 line. But in kind of his world, too, is you have test
5 standards that we work to and then we have test methods
6 or test processes. And I think it's that process that
7 needs to take the variable speed and the variable load
8 into consideration and decide how to deal with that.
9 And it needs to be dealt with because if we're going to
10 do a prescriptive program, it has to be very, very
11 concise.

12 MR. STEFFENSEN: Thank you, Rob. Going back to
13 a comment that Rob stated regarding the small motor rule
14 and how manufacturers and consumers reacted to the rule.
15 I mean, obviously, I do not want to motivate the market
16 to somehow skirt this regulation, find a loophole,
17 change technology. I'm very interested in achieving the
18 energy savings.

19 So, a lot of the way we've structured this
20 proposal is single equipment class. The test being that
21 it's a pool pump motor because it's being called a pool
22 pump motor as it's designed or marketed, or as it's
23 certified to UL 1004-10.

24 I do want to explore though, I mean and this
25 could be just an ask for the comments that will be

1 coming is, you know, we want to look hard for loopholes.
2 We really want to have a level playing field. I don't
3 want to end up with somewhere where, again, it becomes
4 hard at the time of reckoning to say that either
5 someone, you know, lived within the rules or lived
6 outside of the rules. We want everyone to say that they
7 need to follow the rules so that everyone else who's
8 following the rules, there's a level of fairness.

9 And that starts here, where we identify those
10 loopholes and create a very strong regulation where it
11 can't be circumvented. That's where a lot of this --
12 going back to the previous discussion as to where best
13 to test the motor, trying to come up with a simple
14 framework of single test point, the very clear
15 instruction as to how the motor shall be tested, in the
16 hopes that it becomes very enforceable and very clear as
17 to what the requirements are.

18 But I do want to hear, if there's a better
19 place, a better approach, that's what I'm hoping to
20 uncover.

21 And I really appreciate this level of
22 conversation that we're having.

23 MR. BOTELEER: This is Rob, again. When you get
24 into the enforcement side, you kind of get away -- and
25 that's not the motor manufacturer's role. We're not

1 enforcers. We build product and put it into the
2 marketplace, and sell it.

3 But the example that we've heard and used is in
4 the pool pump market, the pool pump contractor is Bubba,
5 with a pickup truck. And the lowest cost motor that
6 fits into the application is available from a multitude
7 of motor distributors. It's probably even -- I'm sure
8 it's available online today.

9 And how you enforce at that level, we really
10 don't know. I mean, we had that argument with DOE. DOE
11 tells us that they enforce, they have attorneys. And my
12 argument with them is, yeah, but you don't have
13 policemen. You have nobody that's actually out looking
14 at the marketplace, trying to uncover discrepancies and
15 noncompliant product.

16 And how you do that with a product like this, I
17 don't know.

18 MR. STEFFENSEN: Hi, Sean Steffensen. I'll
19 respond to the comment as to how enforcement has worked
20 here. I mean, certainly, we perform a lot of outreach.
21 We want to head off any problems before they occur.
22 Outreach both within my office, as well as we have the
23 Office of Enforcement and Outreach.

24 What we want to do is first make sure that the
25 regulations are clear. But in the event that something

1 happens, where someone is not following the rules, we
2 want to make sure that the regulation can be enforced.

3 Some of the mechanisms by which the regulations
4 are enforced is that members of the public come forward.
5 As recently as last week, we received a call from a
6 consumer that believed that they had been sold the wrong
7 motor. And so, that consumer was encouraged to contact
8 our Enforcement Unit where an investigation could be
9 pursued.

10 So, there's that awareness of the consumers. We
11 try to put out -- or, we have put out a memorandum to
12 contractors, through the Contractors State Licensing
13 Board, to instruct contractors of what the current
14 regulations are. We certainly review other reports that
15 come in from various sources.

16 I would say, you know, I mean the industry
17 itself is self-policing. A lot of the enforcement leads
18 come about from industry, looking at what their
19 competitors are doing and, in a sense, feeling a sense
20 of unfairness.

21 So, we do have an Enforcement Unit. They do
22 seek compliance with the regulations. And, of course,
23 we look to try to settle those things and look at all
24 the circumstances. And it could lead up to penalties in
25 a financial sense.

1 So, there is enforcement that can occur. It
2 certainly is another part of the conversation. But as
3 we look to these regulations we have currently, we want
4 to see how best we can improve them, and modernize them,
5 and move them forward as technology has changed. And
6 so, that is the emphasis here. We're looking to leave
7 behind the prescriptive ban, which is the best we could
8 -- we had at the time. We had data as to say that
9 certain motor types were perhaps more efficient than
10 other motor types.

11 As we move this conversation forward, well,
12 what's a good test method to move to a performance
13 metric where all motor types are allowed to perform to
14 it?

15 How best to capture these energy savings from
16 variable speed and what motors deserve the energy
17 savings from variable speed?

18 So, again, and our experience has informed us
19 that loopholes do not serve anyone well, and so we want
20 to review that. So, I was -- I think part of that
21 conversation, looking at the comment from Rob, and the
22 experience with the small motor regulation.

23 MR. BUTLER: This is --

24 MR. STEFFENSEN: I think we can hear you.

25 MR. BUTLER: Hello?

1 MR. STEFFENSEN: Hi. Could you identify
2 yourself?

3 MR. BUTLER: This is Kitt Butler with Advanced
4 Energy. Rob mentioned me a minute ago.

5 MR. STEFFENSEN: I'm sorry, you may need to mute
6 your --

7 MR. BUTLER: I wanted to respond to that and
8 also talk about enforcement a bit. Enforcement can be
9 done as long as the Commission continue to do the things
10 that they are doing. Which is clear standards, clear
11 labeling requirements. And it can go beyond just legal
12 issues, where there can be, as you know, the public, or
13 there can be other entities that actually would pull
14 product from the market and have it tested to agreed-
15 upon metrics that are clearly defined through
16 regulation. (Indiscernible)

17 MR. STEFFENSEN: Hi. We're having trouble
18 hearing you and we also would appreciate it if you would
19 identify yourself and affiliation?

20 MR. BUTLER: I'm sorry. It's Kitt Butler with
21 Advanced Energy. Maybe you can mute me.

22 MR. STEFFENSEN: Kitt Butler with Advanced
23 Energy.

24 MR. BUTLER: I wanted to respond to the
25 discussion regarding enforcement, as well as the

1 discussion around test methods for ECM motors.

2 Enforcement can be done beyond just lawyers just
3 reviewing what's been filed. It's done best along the
4 lines of the way the Commission is addressing this now,
5 with clear test standards and clear labeling
6 requirements.

7 I'm not sure why one test standard has to be
8 applied here, when we're talking about different motor
9 types. There may be different test methods to consider.

10 I think that enforcement can happen beyond that,
11 as well. Once a rule is set and it's clear, the test
12 method is understood and recognized by all, your product
13 can be pulled and tested to that standard and become
14 enforceable. And that does happen.

15 MR. STEFFENSEN: Hi, Sean Steffensen again.
16 Thank you. We did hear those comments clearly. Thank
17 you. And we would appreciate further comments,
18 especially if you believe there are test methods that
19 pair well with certain motor types and the reasons why
20 that pairing would be advantageous.

21 MR. BUTLER: Okay.

22 MR. DELANEY: Yeah, Sean, this is Dan.

23 MR. STEFFENSEN: Yes, please, Dan, go ahead.

24 MR. DELANEY: So, I appreciate Kitt sharing, you
25 know, some of his knowledge and his experience. And

1 he's familiar with, obviously, some of the complication
2 of some of these advanced technologies, bet it ECM, you
3 know, for example.

4 One of the reasons, you know, we talk about
5 loopholes and enforcement, very, very important to the
6 motor industry. We spend large sums of money,
7 obviously, designing this product, ensuring its
8 compliance. But that doesn't even speak of all the
9 investment that, obviously, Kitt, and the other motor
10 manufacturers understand when it comes to motor testing
11 and the amount of investment there that is necessary to
12 validate this.

13 So, one of the real big motivators for us -- I'm
14 not saying it's the number one, but it's certainly high
15 on the list, was performance metric and validation. So,
16 you talk about loopholes or playing by the rules, when
17 you add the efficiency, then you have to add the
18 appropriate equipment, accuracy, competency of the test
19 technician, and all those resources. Obviously, Kitt
20 knows that as manager of one of the top independent labs
21 in motors, in the industry.

22 So, I'm glad to hear that, obviously, he echoed
23 those same thoughts of both the efficiency test method
24 has to be well understood. It's wrought with
25 unfortunate loopholes and landmines if it is not a good,

1 clear test procedure with motor manufacturers and other
2 experts contributing and ensuring.

3 So, the last thing we want to do is create a
4 performance metric that ends up creating another
5 loophole.

6 And I just wanted to express some of the
7 investment necessary. Obviously, motor manufacturers
8 have a huge investment in motor testing and efficiency.
9 And even in a mature market, like industrial three-phase
10 integral horsepower motors, there is still a lot of
11 effort and work done to ensure accuracy and improvement
12 of the test standards. As Kitt's employees are involved
13 with that, as well as motor manufacturer employees
14 involved in the improvement of those test methods and
15 those accuracies.

16 But it's important that CEC understand that
17 investment that's there to get an accurate test. The
18 amount of money it takes, potentially millions of
19 dollars of investment to have accurate test equipment to
20 do these types of tests. So, it's a significant
21 investment and one I would think that CEC, obviously,
22 would want to try to monitor as close as possible. And
23 the amount of time, energy, investment necessary to do
24 that to ensure there isn't loopholes. So, thank you.

25 MR. BUTLER: This is Kitt Butler, again. If you

1 can mute me, maybe I'll sound better. Dan's right on
2 the mark there. I agree with everything he said.

3 And I would just add that, you know, at a
4 minimum if anyone is submitting test data, for any
5 database the CEC is using or going to rely on, that
6 those tests be conducted in a motor efficiency test lab
7 that is, at a minimum, 1705 accredited. I'm sorry,
8 17025.

9 MR. STEFFENSEN: Thank you for the comments Dan
10 and Kitt. Certainly, our intention is not to incur
11 large expenses, and that is the reason for our selection
12 of the CSA 747, as not to invent a new test procedure.
13 We want to try to ensure that the -- we embrace the best
14 practices of industry.

15 And, you know, I did -- I'll say I did go out
16 somewhat on my own in choosing a test point. And
17 that's, I think, where I think the discussion is and
18 that's where I think, you know, comments in the record
19 will help me to uncover what is the appropriate test
20 point.

21 I guess as far as the levels go, I mean I heard
22 Dan say that the below 1/2 horsepower, 66 percent was
23 appropriate. I do want to understand what the levels at
24 72 and 80 percent, for those motors above a half
25 horsepower.

1 I mean, I did this check a while ago, but I
2 believe that the more stressing case was, whether or not
3 the motor had variable speed rather than the motor
4 efficiency. And, certainly, my selection of embracing
5 the APSP's suggestion from two years ago, of 72 and 80
6 percent, was really not so much to set a high bar that
7 only a few motors could pass but, really, as a backstop
8 to make sure that something in the future doesn't
9 undermine the savings through variable speed.

10 But I would want to welcome comments as to what
11 is the -- what are the appropriate levels. And these
12 thresholds that I've chosen, whether it's a half
13 horsepower, one horsepower, are they set at the
14 appropriate levels? And are they adequately defined, in
15 a sense, that we understand exactly what we think we
16 mean?

17 As well as, you know, the previous experience of
18 where we set a threshold at one horsepower and then
19 there were a number of new entrants to the market that
20 came in right underneath the threshold. That certainly
21 is something that's informed the selection, now.

22 MR. BOTELER: This is Rob. One question I have,
23 and I'll show my ignorance here. When you talk about
24 the motor efficiency, is that only looking at the losses
25 of the motor or does that include the losses of the

1 motor and the control?

2 MR. STEFFENSEN: Yeah, I'm leafing through the
3 proposed regulations so I can quote it more exactly.
4 So, on page 63, just to -- "If a drive is sold or
5 offered for sale with a replacement dedicated purpose
6 pool pump motor, the input power of the drive while the
7 drive is connected to the motor shall be used to
8 determine motor efficiency and power factor per the test
9 procedure, which is the CSA 747."

10 So, I think our intent is, of course, the power
11 that goes into the drive that's in turn delivered to the
12 motor is what's used as one input to the calculation of
13 motor efficiency. And then, the mechanical motor output
14 is the other measure for the determination of the motor
15 efficiency.

16 MR. BUTLER: This is Kitt Butler, again. Dan
17 can probably speak to this, as well as some of our folks
18 that work here. But I believe CSA 747 does do a fair
19 job of isolating the motor efficiency from the drive,
20 Rob.

21 MR. DELANEY: I think this brings up -- can
22 everybody hear me?

23 MR. STEFFENSEN: Yes.

24 MR. DELANEY: I hope I'm not on mute. The motor
25 and drive separation is an important point. I

1 understood the table that was presented as a system
2 efficiency, and that does present a challenge. And I'll
3 speak of that because below the one horsepower, I know
4 when we, as a petition group, we really looked at that
5 area it was diminishing returns below the one horsepower
6 for variable speed, mainly for operation hours and
7 other.

8 I would be -- it's important to be responsible
9 for the marketplace to ensure -- well, certainly, we can
10 devise products and there's products available that can
11 certainly serve those ranges. It's important that
12 variable speed is used in the most cost-saving areas.

13 So, to me, that half-horse to one-horse, it
14 seems like our team felt that that was well below the --
15 you know, like I say, the reasonable returns necessary
16 within that scope. See, I brought that up, Scott -- or,
17 I'm sorry, Sean.

18 And then, secondly, just talking about the motor
19 versus drive efficiency, the system efficiency, you
20 know, I imply that was a part of the numbers that you
21 had showed. And when you get into that smaller segment,
22 both the drive efficiency and motor efficiency get to be
23 more of a challenge.

24 At the 72, I think that you had presented there,
25 it can be very marginal at closer to that half

1 horsepower and very acceptable to the one horsepower.
2 So, there's a pretty wide gap there. And there's not a
3 lot of product down by the half horsepower, certainly.
4 It's usually a larger product scaled down.

5 So, it's an interesting discussion because,
6 obviously, motor efficiencies in much of this product
7 are very efficient. The motor-plus-system efficiency
8 can change dramatically depending on the size of that
9 product.

10 MR. STEFFENSEN: Well, yeah, I appreciate the
11 comment, Dan. This is Sean Steffensen.

12 What, I guess, had looked at was a comment from
13 two years ago that really suggested that the framework
14 for the half, one and above, in the motor efficiencies,
15 looking for something that would be an adequate backstop
16 in case something unexpected occurred in the future, to
17 ensure the energy savings.

18 But certainly, that comment, if it needs to be
19 revisited, please comment further in your comments to
20 the record.

21 But I guess other areas of concern that I've
22 heard is, of course, the investment. This proposal does
23 reach further than the petition to the DOE, in that it
24 would require variable speed down to a half horsepower.

25 I see motors that are entering the marketplace

1 that are within that range. Variable speed, because of
2 its nature, can mimic capacities at its maximum capacity
3 and below. So, it would seem that there are perhaps
4 motors that could already fill this market between .5 to
5 1, which is an area where we have reached further than
6 the petition to DOE.

7 It's an area where I have found significant
8 energy savings. And I heard the comment that we would
9 want to see the methodology and the assumptions of that
10 energy savings. That is presented somewhat in the
11 appendix here. And I know it's been not a lot of time
12 to review it, given the holidays.

13 But just briefly, the methodology of the savings
14 is very consistent with what we assumed during the DOE
15 negotiation, where we assumed variable speed that the
16 saving would occur because of an 80 percent speed
17 turndown. So, from a max speed to 80 percent speed,
18 that's the savings that we're seeing within the .5 to 1
19 horsepower range.

20 So, as the consumer's allowed that option of
21 turning down the speed from 100 percent to 80 percent,
22 due to the cubic nature -- excuse me, the power laws of
23 pumps, that's a 50 percent reduction in the power. So,
24 the consumer's allowed to select or turn down the power
25 that's being supplied to a pump and not having to employ

1 that energy where it's not needed, and they can get to
2 that setting.

3 That's a very brief sort of way in which the
4 energy savings are achieved, and it is through the power
5 range that I think that Rob has been referencing. So,
6 that's about -- I made, yeah, two comments there.

7 MR. BOTELER: This is Rob. And it also comes
8 back to the motor with the flattest curve wins, saves
9 the most energy, manages power the best.

10 MR. STEFFENSEN: And I think that's maybe my
11 perspective is that as I've tried to become informed on
12 this topic, in reading various sources, that it does
13 seem that motor efficiency versus load is fairly flat
14 for a lot of motor types. Certainly, not all motor
15 types. And that's where I think there have been some
16 comments to say that perhaps not all motor curves are
17 flat. That was an underlying assumption that motor
18 efficiency would be flat through a wide range of
19 loadings.

20 And that the other assumption is that of a pump
21 that is under not a lot of restriction, in the sense the
22 piping and the plumbing system is fairly wide open, that
23 the torque rises fairly high. I know I'm getting very
24 technical here. And so, it ends up the motor is fairly
25 heavily loaded in a case where there's not a lot of

1 resistance to flow so, therefore, there's a lot of mass
2 or water being moved.

3 And that's the underlying assumption as to why I
4 believe that, you know, moving towards a more full load
5 point is the appropriate point to test that.

6 But I guess returning to maybe the other
7 comment, I know I branched there. The adjustments, I've
8 heard significant adjustments. I really would
9 appreciate further details, either now or in the written
10 comments, as to the nature of the adjustments,
11 especially given what I perceive as available products
12 within the marketplace that do fill this market share,
13 that could be called upon to fill this if, say, the
14 preferred, currently now, single-speed product no longer
15 would meet the standard.

16 I also want to understand the timing of the
17 proposal. We do seek to align with the DOE Standard,
18 which will go into effect in July of 2021. Which at
19 this point, today, is about two and a half years in the
20 future. This is something where I believe there's time
21 to prepare.

22 And I do want to understand the supply chain,
23 what has to happen to provide the products to market.
24 That's something else that we do look at. It was
25 something that helped to inform a previous rulemaking I

1 worked on, with lavatory faucets. Where industry was
2 very cooperative and persuasive in providing details
3 that helped me understand their efforts that were needed
4 to meet the standard.

5 So, I want to try to speak freely here. I
6 really appreciate over the past three years, where I've
7 been working on this product, how the participants have
8 been forthcoming, how we've worked together to achieve a
9 great success with the federal standard, how we've
10 worked together to supply, to DOE, what is a good
11 petition.

12 And in this effort here, I also want to extend
13 an invitation. I look to everyone here, that I hope
14 that we will work together on this effort, also.

15 So, yeah, I've tried, as I've listened here, to
16 take notes and mark those comments that I wanted to try
17 to emphasize and delve deeper into. I certainly don't
18 mean to say that if I haven't discussed a comment, that
19 it doesn't matter. I think it does matter to bring
20 those forward.

21 I would invite anyone that -- you know, if I've
22 missed something, where we want to try to discuss it a
23 little bit more deeply -- I think that's where, when we
24 have this conversation amongst stakeholders, we can kind
25 of understand what the reasons are, the reasons why for

1 the comments, that help to build a better understanding
2 so that we can work to those solutions.

3 I guess I'll pause here and allow anyone here to
4 speak up regarding any other comments that they would
5 like to bring forward today.

6 MR. DELANEY: Thank you, Sean. This is Dan
7 Delaney, again.

8 MR. STEFFENSEN: Hi, we can hear you.

9 MR. DELANEY: I'm curious about two things. I'm
10 not sure if I heard this, I just want to ask it.
11 Federal preemption. So, obviously, the CEC is a partner
12 in our petition. We're hoping in the next few weeks we
13 can get some activity, hopefully see some action by the
14 federal government, from the Department of Energy, see
15 some action there.

16 Can maybe you speak a little bit about federal
17 preemption and this proposal versus if DOE comes back
18 into motion? Again, neither one, can we determine
19 really timelines.

20 But maybe what you can control is your timeline
21 and your thoughts on timeline against if DOE starts to
22 show reaction and providing us some direction there in
23 the next month or so? So, maybe I just want to get some
24 of your thoughts on federal preemption and maybe some
25 timelines on CEC, and/or if CEC and DOE are in parallel

1 on this. So, thank you.

2 MR. STEFFENSEN: Yeah, I mean, my thoughts on
3 federal preemption is that it's complicated and would
4 largely depend upon how DOE acts. And beyond that, I
5 think I would ask my legal counsel for -- I think it's
6 really hard to speculate because we don't know what
7 would occur.

8 But as far as timeline goes, certainly, we will
9 not act before the end of this comment period. So,
10 January 4th is the deadline for comments. After that,
11 I'll need time. I think we've raised some good issues
12 here, a lot of good discussion. It will take me time to
13 look through those comments.

14 Certainly, I would say, you know, we're not on
15 the tip of doing something, issuing a NOPA. That's not
16 where we're at. We're in a prerulemaking stance. We'll
17 have time to review the comments and we'll have to just
18 take it from there.

19 I'll look around the room, if there are any
20 additional comments or statements? I'll look to online
21 if there are additional comments or statements? Has
22 anything landed in our chat box?

23 MR. O'DONNELL: This is Kevin O'Donnell. Hi,
24 this is Kevin O'Donnell, with WEG.

25 MR. STEFFENSEN: Okay. Kevin O'Donnell, from

1 WEG, please speak.

2 MR. O'DONNELL: This is Kevin O'Donnell.

3 MR. STEFFENSEN: Yes, we can year you.

4 MR. O'DONNELL: Okay, with WEG Corporation. I
5 wanted to comment that, you know, WEG supports the
6 opening presentations by the Association of Pool and Spa
7 Professionals, Nidec and Regal, and agree with those
8 comments that were all presented this morning. I think
9 having something that deviates from the federal rule,
10 for California, would be confusing to the market.

11 And I also wanted to thank you for putting this
12 together today.

13 MR. STEFFENSEN: Thank you, Kevin.

14 So, we'll ask again if there's anyone, either in
15 the room or online, or any comments to the chat box?

16 Not seeing any additional comments, I will close
17 here today by thanking everyone for attending and I'll
18 look forward to your comments on January 4th. Thank
19 you.

20 MR. SIDDIQUI: Thank you, Sean.

21 (Thereupon, the Workshop was adjourned at

22 11:47 a.m.)

23

24

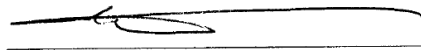
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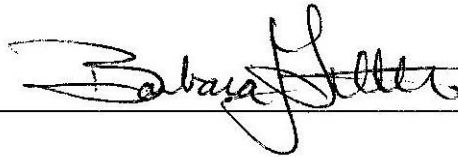
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