

DOCKETED	
Docket Number:	19-AAER-02
Project Title:	Replacement Pool Pump Motors
TN #:	234871
Document Title:	All Comments Received
Description:	All written and oral comments received to be used in conjunction with the written comments and responses document. See TN 234870
Filer:	Corrine Fishman
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	9/22/2020 1:39:47 PM
Docketed Date:	9/22/2020

DOCKETED

Docket Number:	19-AAER-02
Project Title:	Replacement Pool Pump Motors
TN #:	232675
Document Title:	Natural Resources Defense Council Comments - See attached comments
Description:	N/A
Filer:	System
Organization:	Natural Resources Defense Council
Submitter Role:	Public
Submission Date:	4/6/2020 1:12:00 PM
Docketed Date:	4/6/2020

*Comment Received From: Natural Resources Defense Council
Submitted On: 4/6/2020
Docket Number: 19-AAER-02*

See attached comments

Additional submitted attachment is included below.



April 6, 2020

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Comments regarding the Final Staff Report and Proposed Regulatory Language – Replacement Dedicated Purpose Pool Pump Motors (Docket # 19-AAER-02)

Submitted via e-comment

Dear Chairman McAllister and Commissioners,

On behalf of the Natural Resources Defense Council (NRDC), we support the California Energy Commission's (CEC) Final Staff Report and Proposed Regulatory Language, which will provide statewide standards for replacement dedicated-purpose pool pump motors (RDPPPM). The proposed standard is cost-effective, technologically feasible, and closes an important loophole.

A01

While there is a federal standard for dedicated-purpose pool pumps, which takes effect July 19, 2021, there is not a national standard for the replacement motors that are used by those pumps. This creates a loophole, where new pumps would have to meet the standard, but upon motor failure, the motor could be replaced with a much less efficient model. NRDC was involved in negotiations with manufacturers, states, and advocates to develop a national RDPPPM standard. While we came to an agreement, the U.S. Department of Energy has yet to act on finalizing the standard. In absence of federal action, the CEC is moving forward with a strong standard for California, which will provide certainty and savings to the largest pool market in the country.

The proposed standard will apply to all pool pump motors between 0 and 5 total horsepower, sold for both residential and non-residential application.

This clarifies language in the existing standard for replacement motors. The California standard will take effect consistent with the federal standard for dedicated-purpose pool pumps, which ensures that all pool pump and motor products sold in California will be efficient.

The benefits to consumers are significant. By 2029, when the pool pump motor stock turns over, Californians will save more than 450 GWh of electricity, equivalent to around \$82 million in annual electricity savings. Residential pool owners will save between \$70 and \$1,750 in costs, and commercial pool customers will save even more – between \$5,800 and nearly \$11,000 over the lifetime of the motor. Manufacturers have products available today that meet the standard, so we do not anticipate issues with supply.

NRDC commends the CEC for their leadership to improve RDPPPM standards to save Californians energy and money while providing regulatory certainty for the pool market. We support the proposed standard and urge the CEC to finalize it as soon as possible.

Sincerely,

A handwritten signature in black ink that reads "Lauren Urbanek". The signature is written in a cursive, flowing style.

Lauren Urbanek
Senior Energy Policy Advocate

DOCKETED	
Docket Number:	19-AAER-02
Project Title:	Replacement Pool Pump Motors
TN #:	232681
Document Title:	California Investor Owned Utilities Comments - Statewide CASE Team Comments on Proposed Regulatory Language for Replacement Pool Pump Motors
Description:	N/A
Filer:	System
Organization:	California Investor Owned Utilities
Submitter Role:	Public
Submission Date:	4/6/2020 5:01:06 PM
Docketed Date:	4/7/2020

*Comment Received From: California Investor Owned Utilities
Submitted On: 4/6/2020
Docket Number: 19-AAER-02*

Statewide CASE Team Comments on Proposed Regulatory Language for Replacement Pool Pump Motors

Additional submitted attachment is included below.

Replacement Dedicated-Purpose Pool Pump Motors (RDPPPMs)

Codes and Standards Enhancement (CASE) Initiative
Title 20 Standards Development

Comments on Final Analysis and Proposed
Regulatory Language
Replacement Pool Pump Motors
2019-AAER-02

April 6, 2020

Prepared for:



PACIFIC GAS & ELECTRIC
COMPANY



SOUTHERN CALIFORNIA
EDISON



SAN DIEGO GAS AND
ELECTRIC

Prepared by:
Chad Worth, ENERGY SOLUTIONS

This report was prepared by the California Statewide Utility Codes and Standards Program and funded by the California utility customers under the auspices of the California Public Utilities Commission.
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1. Purpose

The Codes and Standards Enhancement (CASE) initiative presents recommendations to support the California Energy Commission's (Energy Commission) efforts to update California's Appliance Efficiency Regulations (Title 20) to include new requirements or to upgrade existing requirements for various technologies. Three California Investor-Owned Utilities (IOUs) – Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric (SDG&E), and Southern California Edison (SCE) – sponsored this effort (herein referred to as the Statewide CASE Team). The program goal is to prepare and submit proposals that will result in cost-effective enhancements to improve the energy and water efficiency of various products sold in California. This document details the Statewide CASE Team's comments on the Energy Commission's proposed regulatory language for pool pump motors.

2. Background

The Statewide CASE Team has been involved with pool energy efficiency for over 15 years, developing and implementing pool-efficiency rebate programs, building codes, and appliance standards.

In 2004, the Statewide CASE Team proposed and supported the Energy Commission's adoption of the first-in-the-nation appliance standards for pool pump motors in California. These initial requirements included prescriptive design standards banning split-phase and capacitor start-induction run motor construction types, which took effect in 2006. These initial standards set a requirement that, starting in 2008, all residential pool filtration pump motors greater than one total horsepower (THP) be able to operate at two or more speeds. Also included in these standards was a test-and-list requirement for pool pumps to report "Energy Factor," a metric developed by the Statewide CASE Team and later adopted by ENERGY STAR®.

The Statewide CASE Team was also successful in 2008 in advocating for building code language that required energy-efficient equipment, plumbing, and design on all newly constructed pools in California through Title 24, Part 6. Years later, some or all of these standards have been adopted in Arizona, Washington, Florida, Oregon, and Connecticut.

The Energy Commission initiated a pre-rulemaking in 2012 to replace the prescriptive pool pump motor construction standard from 2004 with a performance design standard. The Statewide CASE Team has been active in each step of the rulemaking process, including the submission of a CASE Report, with formal recommendations to update the pool pump motor test procedures, standards, and reporting requirements.¹

In September 2015, the United States Department of Energy (U.S. DOE) initiated a formal working group to negotiate standards for dedicated-purpose pool pumps (DPPPs). The Energy Commission and Statewide CASE Team participated as members of the working group, which led to a final term sheet of recommendations to U.S. DOE on July 29, 2016.² U.S. DOE subsequently

¹ http://www.energy.ca.gov/appliances/2013rulemaking/documents/proposals/12-AAER-2F_Residential_Pool_Pumps_and_Replacement_Motors/California_IOUs_Response_to_the_Invitation_to_Submit_Proposals_for_Pool_and_Spas_2013-07-29_TN-71756.pdf

² <https://www.regulations.gov/document?D=EERE-2015-BT-STD-0008-0082>

released a Direct Final Rule on January 18, 2017, which was finalized via publication in the Federal Register on May 26, 2017.³ These new DPPP Standards will apply to self-priming pool pumps, non-self-priming pool pumps, pressure cleaner booster pumps, and integral pool pumps, and will take effect nationally on July 19, 2021. These standards, however, do not apply to replacement motors for DPPPs. Without a standard for replacement motors for DPPPs, there is an increased likelihood of DPPPs being repaired with inefficient low-cost replacement motors, putting the savings from the national DPPP standards at risk.

Considering the finalized U.S. DOE standards for DPPPs, the Energy Commission released a second revised staff report to cover replacement motors for DPPPs on July 12, 2017. This analysis utilized a newly created motor weighted energy factor (MWEF) metric to align with U.S. DOE equipment classes.⁴ On August 4, 2017, the Statewide CASE Team attended the Energy Commission's public staff workshop and presented on several items in the staff report.⁵

On August 10, 2017, U.S. DOE similarly held a public meeting to discuss issues related to the efficiency of DPPP motors. After attending this meeting, the Statewide CASE Team worked extensively with manufacturers, efficiency advocates and other stakeholders throughout 2017 and 2018 in developing a consensus-based agreement to address the replacement pool pump motor loophole, which is reflected in the Joint Stakeholder Proposal submitted to U.S. DOE on August 14, 2018.⁶

On November 14, 2018, the Energy Commission released its third revised staff report proposing to update efficiency standards for replacement motors in California to align with the DPPP effective date of July 19, 2021.⁷ The Statewide CASE Team attended the Energy Commission public workshop November 28, 2018, to present feedback on numerous items, and offer comments in support of the proposed regulations.⁸

3. Summary of Statewide CASE Team Support of Final Staff Report and Proposed Regulatory Language

The Statewide CASE Team supports the Energy Commission's Proposed Regulatory Language for replacement dedicated-purpose pool pump motors (RDPPPMs) and the analysis presented in the Final Staff Report. With roughly 20 percent of the nation's pools,⁹ California is the largest pool pump motor market in the country. The standards for RDPPPMs will lead to significant statewide energy savings and benefits for California residential and commercial pool owners. The proposed standards would save roughly 61 gigawatt-hours (GWhs) the first year the standard takes effect in 2021. By 2029, when the stock turns over, the proposed standards would yield an annual savings of roughly 451 GWhs. This amount equates to roughly \$82 million in annual electricity savings to California businesses and individuals after stock turnover. Furthermore, the life-cycle benefits from

B01

³ <https://www.regulations.gov/document?D=EERE-2015-BT-STD-0008-0135>

⁴ <https://efiling.energy.ca.gov/GetDocument.aspx?tn=220120&DocumentContentId=11709>

⁵ <https://efiling.energy.ca.gov/GetDocument.aspx?tn=220521&DocumentContentId=11722>

⁶ <https://www.regulations.gov/document?D=EERE-2017-BT-STD-0048-0014>

⁷ <https://efiling.energy.ca.gov/GetDocument.aspx?tn=225891&DocumentContentId=56568>

⁸ <https://efiling.energy.ca.gov/GetDocument.aspx?tn=225969&DocumentContentId=56661>

⁹ <http://www.apsp.org/Portals/0/2016%20Website%20Changes/2015%20Industry%20Stats/2015%20Industry%20Stats.pdf>

the standards are significant and range from \$70 to \$1,752 in residential pool applications. The savings are even larger in commercial pool applications (which have not previously been subject to Title 20 standards) with life-cycle benefits ranging from \$5,870 to \$10,974.¹⁰ This is due to the long (typically 24-hour) duty cycles for pool pumps in commercial applications as required by health and safety codes.

It should be noted that California currently has a standard for replacement motors, as motors in new residential pool pumps and replacement motors are treated the same in Title 20. To reiterate, currently, residential pool pump motors cannot be split-phase and capacitor start-induction run motor construction types, and if the motor capacity is greater than one THP, it must be able to operate at two or more speeds. However, as has been discussed extensively throughout this pre-rulemaking and acknowledged by the Energy Commission and manufacturers, the word “residential” in “residential pool pump motor” makes the current Title 20 Regulation application specific and thus confusing for pool service contractors and challenging for manufacturers to ensure compliance. For pool pump and motor combinations (i.e., DPPP), this issue will be solved when the U.S. DOE standard takes effect on July 19, 2021, as the U.S. DOE standard makes no differentiation between residential and nonresidential applications. For replacement motors, the Energy Commission’s final proposed standards also makes no differentiation between residential and nonresidential applications. The proposed standard will require variable-speed capabilities for all RDPPMs between 0.5 to 5.0 THP and set minimum motor efficiency requirements for all RDPPMs up to 5.0 THP. As the Final Staff Report has shown, these standards are technically feasible and cost-effective.

In summary, the Statewide CASE Team commends the Energy Commission staff for their thorough proposal and leadership in seeking to improve the energy efficiency of RDPPMs in California. To align with the U.S. DOE DPPP standard effective date on July 19, 2021, it is imperative that California act to implement updated standards for RDPPMs to protect consumer energy and monetary savings and provide regulatory certainty for the largest pool market in the country. In California and nationally, the Energy Commission, the Statewide CASE Team, efficiency advocates, and manufacturers have a long and successful history of working together to develop efficiency standards for pool pumps and motors. The Statewide CASE Team looks forward to working with the Energy Commission and other stakeholders to successfully implement these updated energy efficiency standards for RDPPMs.

¹⁰ Table 7-1, Final Analysis of Efficiency Standards for Replacement Dedicated-Purpose Pool Pump Motors, Energy Commission

DOCKETED	
Docket Number:	19-AAER-02
Project Title:	Replacement Pool Pump Motors
TN #:	232670
Document Title:	PHTA-NEMA Comments on CEC Notice of Proposed Action Replacement Pool Pump Motors 19-AAER-02
Description:	N/A
Filer:	System
Organization:	Alex Boesenberg
Submitter Role:	Public
Submission Date:	4/6/2020 9:02:54 AM
Docketed Date:	4/6/2020

*Comment Received From: Alex Boesenberg
Submitted On: 4/6/2020
Docket Number: 19-AAER-02*

**PHTA-NEMA Comments on CEC Notice of Proposed Action
Replacement Pool Pump Motors 19-AAER-02**

Additional submitted attachment is included below.



National Electrical Manufacturers Association

PHILIP A. SQUAIR

Vice President, Government Relations



**POOL &
HOT TUB
ALLIANCE**

April 6, 2020

Online via:

<https://www.energy.ca.gov/appliances/2019-AAER-02>

Commissioner Andrew McAllister
California Energy Commission
Docket No. 19-AAER-02
1516 Ninth Street
Sacramento, CA 95814-5512

PHTA-NEMA Comments on CEC Notice of Proposed Action Replacement Pool Pump Motors 19-AAER-02

Attachment: PHTA-NEMA Comments of October 21, 2019

Dear Commissioner McAllister:

The Pool and Hot Tub Alliance (PHTA) and National Electrical Manufacturers Association (NEMA) submit the following comments:

The Pool & Hot Tub Alliance was formed in 2019, combining the Association of Pool & Spa Professionals (APSP) and the National Swimming Pool Foundation (NSPF). PHTA represents more than 3,568 company members and 11,117 individual members nationwide, including 221-member companies and 717 individual members in California. During 2017, the U.S. swimming pool and hot tub industry contributed more than \$36.5 billion and 382,000 job equivalents to the U.S. economy.

The National Electrical Manufacturers Association (NEMA) represents more than 325 electrical equipment and medical imaging manufacturers that make safe, reliable, and efficient products and systems across 56 product Sections. Our combined industries account for 370,000 American jobs in more than 6,100 facilities covering every state. Our industry produces \$124 billion electrical equipment and medical imaging shipments per year with \$42 billion exported.

We welcome your careful consideration of these comments. Our Members look forward to an outcome that meets their expectations. If you have any questions on these comments, please contact Jennifer Hatfield of PHTA at jhatfield@phta.org or Alex Boesenberg of NEMA at alex.boesenberg@nema.org.

Sincerely,

Jennifer Hatfield
Director, Government Affairs
Pool & Hot Tub Alliance

Phil Squair
Vice President, Government Affairs
National Electrical Manufacturers Association

PHTA-NEMA COMMENTS AND CONCERNS

Our associations have submitted comments several times during the informal pre-rulemaking activities, most recently on October 21, 2019 (see attachment). To date we have not received any detailed response to these comments, and as such we are submitting them again to make them part of the formal rulemaking record.

To summarize our previously submitted concerns:

- 1) The CEC is deviating from its previous public position in joint petition to the U.S. Department of Energy to request National standards for these products. PHTA and NEMA continue to favor a single National standard and we call on the CEC to maintain its original position in favor of this. As such this proposal should not be adopted. **C01**
- 2) In its analysis, the CEC has grossly overestimated the number of booster pump motor shipments. This overestimate unfairly tilts the economic analysis to justify a regulation where in fact this may not be true. **C02**
- 3) Incremental cost assumptions of the price difference between booster pumps and variable speed pumps are too low as evidenced by 2019 prices, again incorrectly favoring the economic payback cost justification calculations. **C03**
- 4) Another point of concern for our stakeholders is the CEC induced market incentive to move back to single speed pumps due to the misalignment of maximum single speed replacement motor Total Horsepower (THP) at 0.49THP compared to the DOE DPPP single speed maximum of .710 Hydraulic Horsepower (HHP) which is approximately equivalent to motor THP of 1.15THP. The consequence of this misalignment is the vast majority of motor failures in the range of 0.50THP to 1.15THP or greater will be replaced with a single speed pump compliant to DOE DPPP EL2 efficiency levels. The CEC does not appear to have included this regulatory induced market trend in the analysis of energy savings. A DOE compliant single speed pump less than .711HHP will likely be lower cost than a replacement variable speed motor in almost all cases, so the market will move to single speed pumps driven by cost-conscious pool owners. **C04**

Additional concerns were submitted earlier in the process and are available on request, but the above represent the most significant issues submitted prior to this current rulemaking event.

The above-mentioned cost justification analyses are now more relevant than ever. In the wake of the Coronavirus and COVID-19 global pandemic, supply and distribution lines are significantly disrupted, manufacturing is closed or operating at reduced capacity, and consumers are in lockdowns and unable to work or make purchases per normal. Regardless of their popularity in California, swimming pool items and other major purchases are among those things deferred while the battle against Coronavirus is waged and consumer economics and market forces wait to be understood and addressed. The social and economic impacts of the Coronavirus have yet to be determined and understood, and as such the analytical assumptions of the CEC for this topic cannot possibly be accurate. **C05**

While one may argue that economic forecasts are only ever educated estimates, and as such many rulemakings are concluded with these “best guesses”, it is no longer appropriate to assume that this holds true in a post-pandemic market. These uncertainties make the CEC cost benefit analysis not only inaccurate but no longer representative of the future economic conditions of California. **C06**

It is our request that the CEC remove this proposal from the April 8th Commission Business Agenda until such time as the economic analysis can be re-evaluated in the wake of the national and State impacts of the Coronavirus/COVID-19 pandemic./

DOCKETED

Docket Number:	19-AAER-02
Project Title:	Replacement Pool Pump Motors
TN #:	232676
Document Title:	Jennifer Hatfield Comments - PHTA-NEMA Attachment to earlier submitted comment
Description:	N/A
Filer:	System
Organization:	Jennifer Hatfield
Submitter Role:	Public
Submission Date:	4/6/2020 2:44:19 PM
Docketed Date:	4/6/2020

*Comment Received From: Jennifer Hatfield
Submitted On: 4/6/2020
Docket Number: 19-AAER-02*

PHTA-NEMA Attachment to earlier submitted comment

This is the October 21, 2019 comments previously submitted that were to be attached to the PHTA/NEMA comments on this proceeding, submitted earlier today.

Additional submitted attachment is included below.

October 21, 2019

California Energy Commission
Docket Unit, MS-4
Docket No. 15-AAER-02
1516 9th Street
Sacramento, CA 95814-5512

RE: Docket No. 15-AAER-02, Appliance Efficiency Regulations for Replacement Pool Pump Motors

To Whom It May Concern:

The Pool and Hot Tub Alliance (PHTA) and National Electrical Manufacturers Association (NEMA) respectively submit the following comments:

1. Introductory comments

The Pool & Hot Tub Alliance was formed in 2019, combining the Association of Pool & Spa Professionals (APSP) and the National Swimming Pool Foundation (NSPF). PHTA represents over 3,200 company members and 10,616 individual members nationwide, including 222-member companies and 715 individual members in California.

PHTA, NEMA, and their members have a long history of working with the California Energy Commission (Commission or CEC) and appreciate the opportunity to continue a positive collaboration to ensure the citizens of California, and those of the rest of the United States, are provided energy regulations for pool pump motors that balance energy savings with other critical factors important to consumers and industry. We also have worked with the Commission and other stakeholders over the last few years on taking the good work started here in California and encouraging federal regulations for both pool pumps and motors that would ensure savings nationwide and eliminate a patchwork approach to regulation that is not in the consumers best interest nor our industry members.

PHTA and NEMA members participated in the Department of Energy (DOE) Appliance Standard and Rulemaking Federal Advisory Committee (ASRAC) negotiated workgroup on dedicated purpose pool pumps (DPPP), which resulted in a unanimous agreement and a direct final rule (DFR) for pool pumps. We were pleased to see this occur in 2017 and our members continue to prepare for the July 19, 2021, compliance date. PHTA and NEMA members who participated in the DPPP negotiations voiced concerns that DPPP motors must also be addressed; otherwise, a significant loophole would occur. To address this, over the past two years, we have continued work with stakeholders, which include the CEC, to request a DFR for dedicated purpose pool pump motors. That effort resulted in a unanimously agreed upon joint petition, submitted to DOE on August 14, 2018 by stakeholders which consisted of motor and pump manufacturers, consumer advocates, pool service professionals, states, efficiency advocates, utilities, and others. **C07**

Since the submittal of that petition, 30 comments in support of the petition were received by DOE in October 2018. Beginning in December 2018 and throughout the Spring of 2019, PHTA and NEMA met with DOE to encourage action, resulting in a labeling approach that would follow the original August petition through requirements being laid out in an UL standard that a proposed DOE rule would then require labeling to ensure compliance. This continued engagement with DOE resulted in publication in **C08**

the Spring Unified Agenda that included the pump motor labeling proposal. Based on recent outreach, PHTA and NEMA remain optimistic that DOE will move forward to address this loophole in time for a DPPP motor rule to align with the July 19, 2021 DPPP rule compliance date.

PHTA and NEMA, along with our member companies, continue to work towards the goal of seeing that the DOE issues a rule, based on the original joint petition, addressing pool pump motors. Therefore, we strongly urge the Commission to consider aligning their July 2019 Revised Staff Analysis and Draft Appliance Energy Regulations for Replacement Pool Pump Motors with the August 14, 2018 petition. **C09**

2. COMMENTS ON THE CEC JULY 2019 REVISED STAFF ANALYSIS AND DRAFT LANGUAGE

CEC Assumptions About Booster Pump Motor Shipments

In order to make the claim about how much total energy this will save CA, the CEC makes an assumption about the total number of replacement motors being shipped to CA. At the bottom of Appendix page A-4, their report states:

California Replacement Motor Shipments

Staff chose to assume replacement motor shipments represent 25 percent of the total market. Therefore, the U.S. DOE pump shipments represents 75 percent of the market (75%+25%=100%). 25 percent divided by 75 percent is equal to 1 divided by 3. Replacement motor shipments are found by dividing pump shipments by 3.

We believe that the CEC assumption of **25%** is grossly overstated as it applies to booster pumps. Our sales data of booster pump motors sales vs complete booster pump sales indicates that only about **0.5%** of total shipments of booster pumps are motor shipments. If this assumption is used to calculate the actual annual savings, the estimated energy savings will decrease dramatically. Table 7-2 on page 35 of their report (copied below) shows the CEC's calculated savings in GWh and dollars. Based on the correct assumption of 0.5% of booster pump motor sales, these numbers should be reduced to about 1/50th of their current estimate. **C10**

Table 7-2: Statewide Annual Savings

Product	Application	First-Year Savings		Annual Existing and Incremental Stock Savings	
		Electricity Savings (GWh/yr)	Savings (\$M)	Electricity Savings (GWh/yr)	Savings (\$M)
Replacement Self-Priming Pool Filter Pump Motor, standard-size (1.90 hp)	Residential	2.6	\$0.5	19	\$3.5
Replacement Self-Priming Pool Filter Pump Motor, standard-size (3.76 hp)	Residential	1.2	\$0.2	9	\$1.6
Replacement Self-Priming Pool Filter Pump Motor, small-size (0.88 hp)	Residential	10.0	\$1.9	73	\$13.5
Replacement Non-Self-Priming Pool Filter Pump Motor (1.04 hp)	Residential Commercial	26.0	\$4.8	190	\$35.3
Replacement Pressure Cleaner Booster Pump Motor (1.24 hp)	Residential Commercial	4.3	\$0.8	2	\$5.9
Replacement Self-Priming Pool Filter Pump Motor, standard-size (1.90 hp)	Commercial	13.2	\$2.4	96	\$17.8
Replacement Self-Priming Pool Filter Pump Motor, standard-size (3.76 hp)	Commercial	6.8	\$1.3	50	\$9.3
Replacement Self-Priming Pool Filter Pump Motor, small-size (0.88 hp)	Commercial	0.6	\$0.1	4	\$0.8
Total Savings		64.7	\$12.0	472	\$87.7

Additionally, the shipment data indicates that people don't replace the motors on their booster pumps; instead, they replace the entire booster pump itself. This is due to the low cost difference between the cost of a replacement motor versus the cost of replacement the entire pump. Another motivating factor for the consumer to replace the complete pump, rather than just the motor, is that when they replace the complete pump, they get a 3 year warranty instead of a 1 year warranty that comes with a motor-only replacement. If the cost of the replacement motor were to increase – for example if a variable-speed motor is required for replacement -- this would likely decrease motor sales further even with estimate net energy savings of \$77 over seven years. Additionally, there is further data below which would appear to negate the total net energy savings estimate.

CEC Assumptions About Incremental Cost Between Booster Pump and VS Pump

There is a reference to the average consumer price of a motor, in Appendix table A-25 of the CEC report. In this table, as shown in the image below, the CEC cites a DOE TSD Table. Their \$611.45 estimate for an 80% efficient VS booster pumps is low for 2019 pricing and what pricing can be projected to be in 2021. From 2015-2019, our variable speed pumps and booster pumps' prices have increased an average of 3% per year. Compounded annually, this translates to approximately 12.5% price increase over that time. Since variable motors are more expensive, on a dollar basis, the cost of a variable speed motor will increase more over time than a single speed motor.

In order to calculate the incremental cost of a VS motor (and thus calculate lifetime savings for the consumer), the CEC take the difference between the baseline booster pump cost (which appears to be from efficiency level 0) and use that as the base cost for comparison against the VS booster pump cost of \$611.45 as shown in Appendix, Table A-25 below

Table A-25: Average Consumer Price for Pressure Cleaner Booster Pumps

Efficiency Level	Average Consumer Price 2015 (\$)	Incremental Cost 2015 (\$)
Baseline	\$255.40	--
1	\$275.77	\$20.36
2	\$312.35	\$56.95
3	\$611.45	\$356.05
4	\$611.45	\$356.05

Source: U.S. DOE TSD Table 8.2.19

When the average annual increase of 3% over the last 4 years (12.5% total) are factored in:

- The new baseline booster pump cost becomes: $\$255.40 * 1.125\% = \287.33
- The new VS booster pump cost becomes: $\$611.45 * 1.125 = \687.88
- The incremental cost for a variable speed pump in 2019 increases from the CECs estimate to \$400.55. This would increase a few dollars more in 2021.

C11

This amounts to an additional incremental cost of \$44.50 over the CECs initial estimate. As such, the CEC projection of a life-cycle benefit would further decrease from \$77 shown in the table below, to approximately \$32.50

Table 7-1: Annual Energy and Monetary Savings per Unit

Product	Application	Design Life (years)	Electricity Savings (kWh/yr)	Average Incremental Cost	Average Annual Savings	Life-Cycle Savings	Life-Cycle Benefit
Replacement SP Pool Filter Pump Motor, (1.90 hp)	Residential	7.3	63	\$17	\$12	\$76	\$59
Replacement SP Pool Filter Pump Motor, (3.76 hp)	Residential	7.3	86	\$10	\$16	\$103	\$93
Replacement SP Pool Filter Pump Motor, small-size	Residential	7.3	1,410	\$289	\$261	\$1,692	\$1,403
Replacement NSP Pool Filter Pump Motor	Residential	7.3	1,520	\$367	\$282	\$1,825	\$1,458
Replacement Pressure Cleaner Booster Pump Motor (1.24 hp)	Residential	7.3	361	\$356	\$67	\$433	\$77
Replacement SP Pool Filter Pump Motor, (1.90 hp)	Commercial	7.3	6,092	\$358	\$1,130	\$7,314	\$6,956
Replacement SP Pool Filter Pump Motor, (3.76 hp)	Commercial	7.3	9,502	\$348	\$1,763	\$11,408	\$11,061
Replacement SP Pool Filter Pump Motor, small-size	Commercial	7.3	1,579	\$380	\$293	\$1,896	\$1,516

It should also be pointed out the numbers that the CEC references for life-cycle savings are **pump** cost comparisons. Since this rule seeks to replace the motor, the more appropriate comparison would be to compare incremental **motor** cost. The incremental cost to the consumer of a variable speed motor vs a single speed booster pump motor is significantly higher than the \$400.55 amount calculated above and would actually put the consumer at a net life cycle benefit loss.

CEC proposal inconsistent with DOE petition

As stated before, while we continue to appreciate the fact the latest draft language from CEC staff captures a significant portion of the joint petition submitted to the DOE in August 2018, we would reiterate that it still continues to be inconsistent with that agreement. Specifically, we continue to have concerns with the Commission’s proposal to expand the scope of coverage below 1.15 Total HP for the following reasons:

C12

1. Sales in many of these lesser power categories have considerably lower run/use time compared to >1.15 THP, and therefore energy savings and value to the customer will also be lower. Taken by themselves, in the <1.15 THP category, we believe several pump applications will not pass financial feasibility analysis, and therefore they should be carefully re-evaluated if CEC intends to maintain them in this proposal.
2. The addition of the <1.15 THP category impacts the Technological Feasibility analysis. Many small motors <1.15 THP will move from induction designs to Electronically Commutated Motors

(ECM). This creates additional burden and time considerations for manufacturers who have not incorporated these designs already. It is not readily apparent that the CEC has considered this in the feasibility analysis.

C13

3. The insistence that variable speed products are always the best, a foregone conclusion in California, ignores the realities of both physics and practical application. The best example for this is <1.15 THP booster pumps. These products are often run at a fixed speed in typical applications. The addition of a power converter and its associated losses will use more power than a fixed speed motor operating at full load for the short time usage of a power booster application. The CEC is aware of this mismatch, having scaled up the demanded motor efficiency of small booster pump systems to counter the inevitable losses from the incorporation of a variable speed drive. If a small booster pump will only be run at full speed the most cost-effective design is today's readily available fixed-speed motor commonly used for power booster pumps today. Any other design, such as variable speed and a high-efficiency motor, will fail financial feasibility against the readily available alternative. *To insist that small booster pumps must be variable speed will not save energy in any significant amount.*

C14

4. This is not a pool pump regulation; it is a replacement pool pump motor regulation. It is the belief of the industry that a requirement for replacement pool pump motors to be variable speed below 1.15 THP will encourage consumers to seek Federally compliant WEF rated options rather than the CEC-desired more efficient variable speed replacement pool pump motor options.

C15

5. Because the electric motor industry has experienced lost sales due to the impact of out-of-scope alternatives to General Purpose Small Electric Motors, they are sensitive to similar results from this proposal, particularly in the categories noted above. To assist in preventing undercutting of sales, PHTA and NEMA requests CEC develop a detailed import compliance procedure as part of this proposal, to include instructions to Customs and Border Patrol as well as related funding to assure that American suppliers are not negatively affected by unfair competition resulting from an unenforced regulation at the state level.

C16

As such, we would again submit that if the CEC intends to move forward with this proposed rulemaking, they align their proposal to ensure consistency with the approach agreed upon by all interested stakeholders in and presented to the DOE in 2018 for consideration. Otherwise, having two inconsistent rules will certainly create disruption and market confusion that will have adverse effects on both consumers and industry. Alignment across all 50 States is critical and therefore, we believe the approach provided to the DOE should be seriously considered and adopted by the CEC rather than taking a path which is inconsistent with that agreement.

C17

As we have communicated previously, PHTA and NEMA members, have already expended significant resources in preparation for complying with the Federal DPPP pump rule, which goes into effect in July 19, 2021. We will do the same for the motor rule, but with much less time and therefore with much more aggressive efforts if the Federal rule is issued with the same July 19, 2021, compliance date -- which is what we would like to see as an effective date. A separate, different California rule would require our members to also prepare for two different rules; this will require significant additional financial commitment, in addition to more development and staffing resources. Therefore, if the logical and reasonable end goal is the joint petition submitted to the DOE, we sincerely and humbly again urge the CEC to remain fully aligned with that proposal. By doing so, the CEC and California would simply be ahead of the federal action and would likely not have to be concerned with possibly having to revise a rule that may already be in effect at the time when the DOE decides to issue a ruling. Motor manufacturers can then prepare for both, hopefully consistent, rules without having to make varying

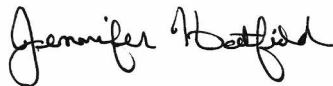
C18

products/skus for different markets, which they would otherwise have to do if they were forced to prepare for two different rules.

To summarize, let us reiterate that we appreciate the CEC recognizing the importance of addressing the replacement motor concerns. As we have already made clear to the DOE, if a DPPP motor rule is not put in place, a clear loophole will exist. This will drive nearly all replacement motor business to lower cost, lower quality, potentially unsafe and unregulated motors. This in turn will have a detrimental impact on both the pool industry and consumers; it will also hijack the expected energy savings from the DPPP final rule. Therefore, while we applaud the fact that California wants to move forward as we wait on DOE to act, we believe the best approach is to remain fully consistent – without any deviations -- with the joint petition that was unanimously agreed upon by all those who participated, including the CEC, in its development. This is especially most relevant to the booster pump category.

PHTA and NEMA appreciate the opportunity to comment and provide input towards this important issue. If there are any questions regarding our comments, please feel free to contact the undersigned via email at jhatfield@phta.org and alex.boesenberg@nema.org or via telephone at 941-345-3263 and 703-841-3268

Sincerely,



Jennifer Hatfield
Director, Government Affairs
Pool & Hot Tub Alliance
Association



Alex Boesenberg
Senior Manager, Regulatory Affairs
National Electrical Manufacturers



DOCKETED

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STATE of CALIFORNIA
STATE ENERGY RESOURCES CONSERVATION and
DEVELOPMENT COMMISSION

In the matter of:) Docket No. 19-AAER-02
)
Dedicated-Purpose Pool Pumps) PUBLIC HEARING
and Replacement Dedicated-)
Purpose Pool Pump Motors)
_____)

Held via WebEx and Telephone

from the
California Energy Commission
Warren-Alquist State Energy Building
1516 Ninth Street
Sacramento, California 95814

Tuesday, April 7, 2020

Reported by:
Peter Petty, Certified Electronic Reporter

APPEARANCES

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Public Commenters:

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Chad Worth, Energy Solutions, for the Statewide CASE Team and the California IOUs

Joanna Mauer, Appliance Standards Awareness Project

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Rob Boteler, Nidec Motor Corporation

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P R O C E E D I N G S

APRIL 7, 2020

10:00 a.m.

MR. STEFFENSEN: Good morning. We're starting The Public Hearing. my name is Sean Steffensen. I'm a mechanical Engineer in the Compliance Office here at the Energy Commission. Today we are having a Public Hearing on Replacement Pool Pump Motors. It is Docket Number 19-AAER-02. Information discussed today is available on the Commission's website. We will be available for comment until everyone has finished providing comments today.

In addition, the Public Advisor is available to assist with those that are having connection issues. We have placed contact information for the Public Advisor in the chat feature here, I think at this hearing. The Public Advisor's email address is: Public Advisor -- and "Advisor" is spelled with an -o- -- @Energy.CA.gov. And their phone number is: 916-654-4489.

This Public Hearing is online only due to the Covid-19 Public Health Order. This hearing will be held pursuant to the California Administrative Procedure Act, Government Code 11346.8.

No decisions will be made today. Copies of the Initial Statement of Reasons, Notice of Proposed Action, the proposed text, documents incorporated by reference, the Proposed Negative Declaration and the Initial Study are

1 available for review on our website, at the Docket 19-AAER-
2 02.

3 Public comment on the Proposed Regulations and
4 Proposed Negative Declaration will occur today, immediately
5 following this presentation.

6 This Public Hearing is being recorded by a court
7 reporter and on WebEx. All statements today become part of
8 the public record. And this chart package has been posted
9 to the docket.

10 There are several ways to comment today. People
11 on WebEx could either use the raised-hand feature, as
12 illustrated in the picture in the upper right-hand corner.
13 And you will be unmuted. Or you could type your name into
14 the chat box and your comment or question will be read into
15 the record. In either case, please state your name and
16 affiliation. After that is completed, we will allow
17 comments from the phone lines, in case there are
18 participants who are in audio only. Again, please state
19 your name and affiliation.

20 Finally, the Public Advisor will read any
21 comments that they have received into the record. This
22 will occur immediately after this presentation.

23 Here is the agenda for today. It is separated
24 into five parts. The length of each box represents the
25 length of each section. We will spend the most time on

1 this Proposal. I hope to complete the 34 slides in about
2 45 minutes.

3 Part 1, Our Process. I will go over who we are
4 and our approach to considering Appliance Efficiency
5 Regulations. Here is a summary of the events: Commission
6 staff has sought public participation at many points over
7 the past five years. We have published our analysis, held
8 workshops to discuss our results, and reviewed and
9 incorporated comments from stakeholders to create the
10 proposal as it's presented today.

11 On this chart, we are nearing the end of this
12 process, as indicated by the red marker. Thank you for
13 your participation.

14 Here is a brief history of the pre-rulemaking.
15 We have been working on the Proposal -- (garbled audio) in
16 March of 2012, we issued the order instituting a
17 rulemaking. In March of 2013, we released the invitation
18 to participate. In May 2013, we had workshops to discuss
19 those proposals. In June of 2013, we released the
20 invitation to submit proposals. In May of 2014, we
21 requested additional information on pool pumps and motors.
22 In January 2016, we published a draft staff report. In
23 February 2016, we had our first workshop. In June 2016, we
24 published the Revised Staff Report. In July of 2016, we
25 held our second workshop.

1 Additionally, we participated in the U.S. DOE
2 effort to set federal standards for direct - or dedicated-
3 purpose pool pumps. This culminated in the DOE publishing
4 a direct final rule for federal standards for
5 dedicated---purpose pool pumps in January of 2017.

6 In July of 2017, we published the Second Revised
7 Analysis for the Standards for Pool Pump Motors. In August
8 of 2017, we had our third workshop. And in November of
9 2018, we published a third analysis and held our fourth
10 workshop.

11 Here is the rulemaking time line. We posted the
12 rulemaking documents at the end of February and included
13 the Notice of Proposed Action, the Initial Statement of
14 Reasons, and the Proposed Regulatory Language. We posted
15 the California Environmental Quality Act, or CEQA; the
16 Initial Study; and the Proposed Negative Declaration at the
17 beginning of March. There was a 45-day public comment
18 period on the rulemaking documents and a 30-day public
19 comment period on the CEQA documents. Both comment periods
20 ended yesterday, on April 6th.

21 We are at a public hearing today. On April 8th,
22 staff will present this proposal for adoption at the Energy
23 Commission Business Meeting, and the proposed effective
24 date is July 19th, 2021.

25 To summarize, staff finds the proposed standards

1 are technical feasible and cost-effective to the consumer.
2 We will consider comments from today and from the public
3 comment period. If any changes are needed, staff will
4 propose 15-day language to provide an additional comment
5 period -- and provide an additional comment period to
6 review those changes. The final step will be to seek
7 adoption at a future Commission business meeting, possibly
8 tomorrow, April 8th.

9 Part 2. What's the problem? This is the key to
10 our process. If we can identify the problem, then we can
11 create the solution.

12 Climate change is here and will strain our way of
13 life. Evidence includes wildfires. And despite the recent
14 March and April rains, the state faces another drought.
15 Climate change is driven by carbon emissions from the
16 energy production and transportation sectors. The Energy
17 Commission seeks solutions to reduce these carbon emissions
18 to protect our California way of life.

19 One way we seek to reduce carbon emissions is
20 through energy efficiency. The existing pool pump motor
21 standards leave out applications such as commercial pools
22 and nonfiltration applications. These applications have
23 cost-effective savings from efficiency improvements. The
24 lack of coverage also presents enforcement challenges,
25 since the same pool pump or pool pump motor may be used for

1 in-scope or out-of-scope applications. The rule must be
2 modernized to reflect innovation.

3 Much has changed since the last rulemaking over
4 10 years ago. Staff proposes to make the standard
5 performance based, to raise the bar to variable speed, and
6 to add freeze-protection requirements to deepen the
7 efficiency. These changes will provide Californians with
8 significant cost savings and environmental benefits but
9 more efficient energy use.

10 Part 3. The California Environmental Quality
11 Act, or CEQA. We will now turn our attention to the
12 findings of this proposed rulemaking.

13 Staff has prepared an initial study of the
14 environmental effects of the proposed statewide minimum
15 efficiency levels for replacement dedicated-purpose pool
16 pump motors and dedicated-purpose pool pumps. Staff
17 findings were that the proposed standards would reduce
18 future energy use by increasing the efficiency of the
19 electric motors used to pump pool water.

20 There is no significant change to the materials
21 or manufacturing for replacement dedicated-purpose pool
22 pump motors and dedicated-purpose pool pumps. The product
23 lifetime will be unchanged. Because of the reduced
24 electricity use in the future, there will be reduced
25 criteria air pollutants, greenhouse gases, and particulates

1 from the generation of electricity by fossil fuels.

2 The proposed standards will improve air quality
3 and result in reduced powerplant operation and related
4 facility emissions in California, as compared to no
5 standards due to the reduced need for electricity
6 production.

7 Staff made a finding of no significance, meaning
8 the proposed regulations do not have any potential for
9 adverse environmental impacts. The written comment
10 deadline was Monday, April 6th for CEQA. No comments were
11 received on the Negative Declaration. Staff will recommend
12 that the Commission adopt the Proposed Negative
13 Declaration.

14 Part 4. What staff proposes. This is the key
15 to -- so the Energy Commission's first regulated pool pumps
16 and motors starting in 2004. Before that time pool pump
17 motors were single speed and utilized inefficient motor
18 types. There are current standards for replacement
19 residential pool pump motors. The standards prohibit
20 inefficient split-phase and capacitor-start induction-run
21 motors. They require all pumps and motors of one
22 horsepower or greater total capacity be capable of two-
23 speed operation.

24 The U.S. Department of Energy has completed
25 regulations that will go into effect in July 2021 for pool

1 pumps. Our focus today will be on the replacement pool
2 pump motors. As I present today, I will attempt to say
3 "replacement pool pump motors." From time to time I will
4 say "replacement motors" to briefly mean replacement pool
5 pump motors.

6 We have met a number of times on this proposal.
7 The proposal contains elements that are both new and old.
8 The Commission recognizes that expanding the scope to
9 include pool pump motors, regardless of intended use, will
10 help to close loopholes and level the playing field. The
11 proposal updates the test method and sets minimum motor
12 efficiency in place of the prescriptive motor type
13 prohibition. It sets a prescriptive variable-speed motor
14 control standard to better align with DOE and their
15 standard, while providing a simple, implementable
16 framework.

17 Finally, staff proposes to incorporate the DOE
18 dedicated-purpose pool pump regulations into the California
19 Appliance Standards.

20 I'll spend a little time talking about the
21 details of this proposal. First, it has proposed a single
22 equipment class. Various pool pump types covered under the
23 DOE pool pump standard use similar pool pump motors.
24 Motors for different pool pumps are different -- or, sorry.
25 Motors for different pool pumps are very similar and lack

1 distinguishing physical characteristics, such as different
2 mechanical or electrical interfaces. Proposing a single
3 equipment class and the term replacement dedicated-purpose
4 pool pump motor will provide a simple and enforceable
5 regulation and level the playing field.

6 The replacement dedicated-purpose pool pump motor
7 is a motor that is designed for use in the
8 dedicated---purpose pool pump application. There are
9 exceptions to the scope, such as the poly-faced motor that
10 is now sold with a drive to convert single-phase power to
11 single - to three-phase power, replacement waterfall pump
12 motors, and replacement rigid electric spa pump motors. A
13 single equipment class and the replacement
14 dedicated---purpose pool pump motor term are consistent
15 with the approach in the pool pump motor petition to DOE.

16 In looking at this slide, the scope will cover
17 all types of pools. So those motors that are intended for
18 inground pools, aboveground pools, and also storable pools;
19 and will cover pool pump motors intended for various pool
20 pump applications, such as the filtration pump on the left
21 or the pressure cleaner booster pump on the right.

22 Staff proposes to measure the motor performance
23 at maximum speed and full load. The test point aligns with
24 one of the test points from the DOE pool pump standard and
25 will provide a representative performance metric to

1 determine the motor efficiency. Staff also proposes a
2 measurement of the power factor.

3 Staff proposes a minimum motor
4 standard -- minimum motor efficiency standard to take the
5 place of the prescriptive motor prohibition against split-
6 phase and capacitor-start induction-run motors. Staff
7 selected the motor efficiency levels from comments from
8 industry received in 2016. Staff believes the approach
9 will lead to greater energy savings and technological
10 innovation by removing the prescriptive ban. Staff added
11 freeze-protection settings -- setting requirements,
12 consistent with those adopted to the DOE pool pump rule.

13 So why variable speed? Determining the required
14 pool pump capacity ahead of time is difficult. Nearly
15 every pool is different. Pool plumbing layouts can be
16 complex and the layout may change with the flip of a valve.
17 A pool owner would not want a pump that could not meet the
18 demand of the pool, so pumps are often oversized.

19 If a pump is single or two speed, the pool owner
20 is left with excess capacity and the excess energy
21 consumption every time the pool pump is used. Variable-
22 speed control solves this dilemma. A pool owner can select
23 an oversized motor to protect against unknowns, but not be
24 forced to use this excess capacity. A variable-speed pool
25 pump motor will provide the flexibility to meet the demands

1 of the pool user while using the least energy.

2 This chart at left shows the system curve C, with
3 estimates by the Commission staff as to the required motor
4 output to provide the flow and pressure. The curve on the
5 right is curve A. The strength of the variable-speed
6 control is a motor can be any of the sizes, whether it's
7 needed for unrestricted flow or restricted flow, and still
8 provide only the flow that's required and consume only the
9 energy that's required.

10 Every pool deserves a pump that is the right
11 size. Our goals continue to be to modernize the standards
12 to take into account the current market trends and
13 technology advances and to extend statewide energy savings.

14 Why has the Commission proposed to move the
15 threshold for the speed-control requirement? For over a
16 decade the standard has been one or more horsepower at two
17 or more -- and two or more speeds. We propose one half or
18 more horsepower and variable speed. The answer is that
19 there is a significant market share of the pool pump motor
20 of one horsepower that deserve energy savings.

21 This graph shows a Southern California Edison
22 Utility survey of the pool pump motor sizes. Over half of
23 the motors are either one horsepower or below. A
24 significant market share will lead to significant energy
25 savings. So what this slide is showing is that on the

1 left-hand side of the graph, from one horsepower, .75 and
2 .5, that many of these motors currently can be single
3 speed. And what we're proposing is to require that
4 replacement motors be variable speed for this application,
5 to extend those savings into the significant market share.

6 Commission staff reviewed the certifications of
7 pool pumps and replacement pool pump motors to the
8 California Appliance Efficiency Database, or MAEDbS. We
9 compared for both the proposed motor efficiency levels and
10 variable speed standards. This slide shows the results of
11 the pool pumps certified to the Commission. In each size
12 class, zero to just below .5 horsepower, .5 horsepower to
13 just below 1 horsepower, and 1 horsepower and above, there
14 are pool pumps that contain motors that meet the proposed
15 standards. The green wedges represent the compliant
16 products.

17 Similarly, staff reviewed replacement pool pump
18 motors certifications and found compliant products for both
19 .5 horsepower to just below 1 horsepower and 1 horsepower
20 and above. Staff did not find any certifications for below
21 .5 horsepower. Staff believes that this may be due to the
22 preference to offer the pump and motor together for these
23 replacements.

24 Staff concludes technical feasibility for below
25 .5 horsepower from the pool pump certifications shown on

1 the previous slide, since motors within pumps can be
2 prepared to be sold as replacement motors.

3 The proposal is cost-effective with payback
4 periods well within the product lifetimes. Staff examined
5 eight applications and found all cost-effective. On this
6 slide we highlight two cases, one for the residential
7 replacement pool pump motor, or a filtration motor, on the
8 left, with a benefit of \$70 over the lifetime; and on the
9 right the commercial replacement pool pump motor, with a
10 significant \$6,000 benefit over its lifetime. The
11 difference is due to the commercial pool pump motor
12 being -- having a much heavier duty cycle and also the
13 extension of requirements to these motors for the very
14 first time.

15 Staff found substantial statewide energy savings
16 for the proposed standards. When fully implemented, the
17 standard will save 451 hours per year. Staff received
18 comments that differed on how often consumers choose to
19 replace the motor rather than the pump and motor
20 combination. These -- staff chose to be conservative to go
21 with the lower estimate of 25 percent.

22 The proposed standard provides millions of
23 dollars in savings for California businesses and consumers.
24 At full stock turnover, there will be \$82 million of
25 electrical cost savings to Californians. What can \$82

1 million buy? Perhaps a trip to Mars.

2 The electricity savings due to this proposal will
3 be significant. It will be the equivalent to the
4 electricity used of the Bay Area Rapid Transit system, one
5 of the largest consumers of electricity in Northern
6 California.

7 We will now enter Part 5, Public Comments. We
8 now request public comments on the Staff Proposal and
9 Negative Declaration. There are several ways to comment
10 today. People on WebEx could either use the raise-hand
11 feature, and you will be unmuted. Or you could type your
12 name in the chat box and your comment or question will be
13 read. In either case, please state your name and
14 affiliation.

15 After we go through WebEx we will pause and
16 unmute the phone lines in case there are participants who
17 are in audio only. Again, please state your name and
18 affiliation before making a comment.

19 After that we will pause to read any comments
20 left in the chat box. And, finally, we will call upon the
21 Public Advisor to read any comments that they have
22 received. And to note again, for anyone who is
23 experiencing connection issues, the Public Advisor is
24 available at: PublicAdvisor -- "Advisor" spelled with an -
25 o- -- @Energy.CA.gov. And their phone number is 916-654-

1 4489. This information is included in the chat box,
2 probably near the top.

3 And now I will start the public commenting by
4 going to a slide presentation that we had received from the
5 California IOUs, California Investor Owned Utilities. This
6 presentation is available in the docket at 19-AAER-02. And
7 I would call upon Chad Worth and Mary Anderson.

8 MS. ANDERSON: Good morning. My name is Mary
9 Anderson from Pacific Gas & Electric, speaking on behalf of
10 the California Investor Owned Utilities, or IOUs, and the
11 Statewide Code and Standards Enhancement, or CASE Team.

12 The California IOUs strongly support the Energy
13 Commission's proposed regulation for replacement **D01**
14 dedicated--purpose pool pump motors. The statewide IOUs
15 and the statewide CASE team and the Energy Commission have
16 a long history, starting in 2004, and working together to
17 promote high-efficiency pool pumps and motors in
18 California, the largest pool pump market in the country.
19 The CEC's proposed standards builds upon California's
20 existing 1220 standards and will set efficiency
21 requirements that will -- which will apply to portable pool
22 pumps, aboveground pool pumps, inground pool pumps, and
23 pressure cleaner booster pumps. Notably, it will also
24 apply to pool pumps in the small commercial pool sector.

25 Without a standard for replacement motors for

1 DPPP's, there is an increased likelihood of pool pumps being
2 replaced with inefficient low-cost motors. This would put
3 savings from national pool pump standards at risk while
4 also risking California's -- California customers'
5 investment in bill savings and in efficient pool pumps.

6 Through numerous staff reports and staff
7 workshops, the Energy Commission has honed a proposal that
8 is technical feasible, cost-effective, and will lead to
9 significant statewide energy savings. The Statewide CASE
10 Team commends the Energy Commission staff for their
11 thorough proposal and leadership in seeking to improve the
12 energy efficiency of replacement dedicated-purpose pool
13 pump motors in California, to align with the U.S. dedicated
14 pool pump standard, effective date on July 19, 2020. It is
15 imperative that California -- 2021 -- it is imperative that
16 California act to implement updated standards for
17 replacement motors to protect consumer energy and monetary
18 savings and provide regulatory certainty for the largest
19 pool market in the country.

20 Thank you.

21 Chad.

22 MR. WORTH: Thank you, Mary. And thank you,
23 Sean.

24 Good morning, everyone. My name is Chad Worth.
25 I am with Energy Solutions and we work with and on behalf

1 of the Statewide CASE Team, the California IOUs.

2 Sean, do you click for me or do I have the
3 ability to click here?

4 MR. STEFFENSEN: Yeah. Please ask to have the
5 slides advanced.

6 MR. WORTH: Okay. Thank you. So we'll go to the
7 next slide, please.

8 As Mary alluded to, you know, the simple reason
9 why that we're here is that we have a federal pump standard
10 coming and no replacement motor standard to complement it.
11 The DOE standards will take effect, as has been mentioned,
12 in July 2021. And we need a replacement motor standard in
13 California to ensure that these nationally-regulated pool
14 pumps are not replaced or fixed with less efficient or **E01**
15 unregulated replacement motors in California.

16 Next slide. So the summary of the Energy
17 Commission proposal, and I know Sean just went over this,
18 we'd just like to highlight that it's largely unchanged
19 from the proposal in November of 2018, the last staff
20 report that came out and the last staff workshop that was
21 held. Importantly, this applies to all applications,
22 residential and nonresidential, for replacement motors
23 under five horsepower.

24 And I just want to take a second to reiterate how
25 important this is. For many years we have had a standard

1 that only applied to residential pool pump motors, which
2 has made enforcement and compliance challenging. It's been
3 confusing for manufacturers and for pool contractors. The
4 new proposed standard is simple to understand and I think
5 will be -- go a great way in ensuring high compliance and
6 easy enforcement.

7 The proposal is quite easy to explain. Between
8 half and five horsepower, a replacement motor needs to be
9 variable speed, and there's also minimum motor efficiency
10 requirements.

11 Next slide. The Energy Commission's proposal is
12 cost-effective. As demonstrated in the staff report, the
13 life cycle benefits in residential applications will range
14 from \$70 to over \$1700, and in the commercial sector, the
15 life cycle benefits go upwards of over \$10,000, and that's
16 because health codes require nonresidential pools
17 essentially to operate 24/7. And the savings from high-
18 efficiency motors and variable-speed motors are even
19 greater.

20 I'd also just like to point out an example that
21 was in the staff report that I think, you know, is worth
22 mentioning, that often, the use case that was put here,
23 when a pump -- a pool pump breaks there are a number of
24 options right now. You could do a single-speed pump -- I
25 should say often it's the motor that needs fixing, but

1 often a whole new pump will be put in, a single-speed
2 replacement motor, a variable-speed pump, or a variable-
3 speed replacement motor.

4 And it should be noted for the customer's
5 perspective in many cases the variable-speed replacement
6 motor will be the best investment for total lifetime cost.
7 As just a side, I was reflecting back when this effort
8 started, as Sean mentioned, in 2012 and 2013, and when we
9 were doing some of this analysis, I don't -- you know,
10 maybe a manufacturer could correct me, but I don't believe
11 there were variable-speed replacement motors on the market
12 at that time. There were variable-speed motors on pumps,
13 but they were not offered as replacement motors. And I
14 think it's a testament to how far the industry has come
15 that there's multiple models available for multiple
16 manufacturers in different sizes, and that it is often one
17 of the best lifetime cost choices for the customer.

18 Next slide. Which leads into what I was just
19 saying, that the proposal is technically feasible. There
20 are products on the market available in, you know, 110 and
21 220 volts, 48 threaded frame, 56 frame for multiple
22 manufacturers and at various horsepower and sizes.

23 As I mentioned, there have been variable-speed
24 motors on new pool pumps, and that's what we mostly see in
25 the database. There are less skews, if you want to call

1 them, in the replacement market in the database, but that's
2 because rather than having a half horsepower or a three-
3 quarter horsepower, a one, etc., a manufacturer could offer
4 just a handful of replacement variable-speed motors and
5 they can meet any size that's needed. Again, I want to
6 point out that this technology has come a long way since
7 this process began and there are a lot of really quality
8 products out there that make this proposal technically
9 feasible.

10 Next slide. The Energy Commission's proposal
11 also has significant statewide benefits. Californians will
12 save \$82 million per year, which I guess I now know that's
13 how much it costs to go to Mars, according to Sean. But I
14 want to highlight that they did -- the Energy Commission
15 did offer a number of alternatives in the staff report.
16 And the alternative that they selected, Alternative Number
17 5, is the proposal with the greatest net benefits to
18 Californians.

19 Next slide. So in summary, the California IOUs
20 support the Energy Commission's action on replacement
21 motors. As has been stated, California is the largest pool
22 market in the country, with roughly 20 percent of the pools
23 nationwide. And we're really at that time where we have to
24 get something on the books to have a replacement motor
25 standard in effect by July 19, 2021, only some, you know,

1 15 months away. It's critical that we have to act now to
2 have that in effect by that time.

3 So the Statewide CASE Team supports the
4 Commission proposal. Again, it closes this application
5 loophole that will be critical to securing the energy
6 savings. It's cost-effective, it's technically feasible,
7 there's significant statewide energy and carbon benefits.
8 And, again, importantly, it's taking action to align with
9 the DOE Dedicated Purpose Pool Pump Rule with the July 19,
10 2021 effective date.

11 Thank you very much, and look forward to the
12 following conversation and further comments.

13 MR. STEFFENSEN: Thank you, Chad, and Mary for
14 your comments.

15 Next we'll turn to participants on WebEx. I'll
16 ask Carlos to call upon the next person.

17 MR. BAEZ: Yeah. Hi, this is Carlos Baez from
18 the Energy Commission. I'm helping to run the WebEx today.

19 We will first go through the phone lines and the
20 rest of the people who have their hands raised, so first I
21 see Joanna Mauer.

22 I'll unmute you right now, Joanna.

23 Joanna, are you there?

24 MS. MAUER: Hi. Yes, this is Joanna Mauer with
25 the Appliance Standards Awareness Project.

1 ASAP organizes and leads a coalition of
2 efficiency advocates to advance appliance standards at both
3 the national and state levels. And we have a steering **F01**
4 committee that includes representatives of efficiency and
5 environmental groups, consumer groups, utilities, and state
6 government.

7 We appreciate the collaborative effort among
8 manufacturers, the Energy Commission, the California IOUs,
9 and ASAP, and other efficiency advocates to advance pool
10 pump and motor efficiency over the past several years.

11 This group of stakeholders negotiated the DOE
12 pool pump standards that will take effect in 2021. As has
13 been mentioned, in 2018 we submitted a joint recommendation
14 to DOE proposing complementary standards for pool pump
15 motors that would close the replacement motor loophole in
16 the pool pump standards. The joint proposal would protect
17 both the energy savings from the pool pump standards and
18 the investments that manufacturers are making to meet those
19 standards. However, unfortunately, DOE has yet to take any
20 action on the joint recommendation.

21 While we continue to hope that DOE will implement
22 the joint recommendation, in the absence of DOE action
23 states can provide leadership. We therefore support the
24 Energy Commission finalizing standards for pool pump
25 replacement motors. Thank you.

1 MR. STEFFENSEN: Thank you, Joanna.

2 MR. BAEZ: All right. Next I received a comment
3 from Noah Horowitz, who asked to be unmuted.

4 So, Noah, you're unmuted now. Please make your
5 comment.

6 MR. HOROWITZ: Hi. Are you able to hear me?

7 MR. BAEZ: Yes, we can hear you.

8 MR. HOROWITZ: Hi. Good morning, everyone. My
9 name is Noah Horowitz. I'm a senior scientist at the
10 Natural Resource Defense Council, NRDC, and I'm here today
11 on behalf of our three million members and electronic
12 activists.

13 NRDC strongly supports CEC's adoption of its **G01**
14 proposal for setting minimum energy efficiency standards
15 for the replacement motors that go into swimming pool
16 pumps. As stated earlier, while there are national energy
17 efficiency regulations due to go into effect next July for
18 new pumps, the regulatory landscape fails to cover the
19 situation when the motor in an existing pump fails and
20 needs to be replaced. The standard will assure that all of
21 these replacements are also energy efficient.

22 This is critically important because when a motor
23 fails, in particular in the summer on a hot day, the pool
24 owner is very anxious to get a replacement and is often
25 subject to whatever is on the truck or in the warehouse at

1 the time. Also, while a joint agreement between advocates
2 and manufacturers was indeed reached and submitted to DOE
3 for replacement motors, DOE has had it for over a year now.
4 And it's highly unlikely that this anti-regulatory
5 administration will adopt it. That's why California action
6 is so critical.

7 I also want to talk for a moment about some
8 comments that were submitted by NEMA and PHTA, the trade
9 association requesting not to move forward due to concerns
10 about the Covid virus. We'd like to point out that the
11 standards are extremely cost-effective and that the
12 California utility rates are likely to go up due to
13 wildfire liabilities, making these standards even more
14 cost-effective.

15 Also the standards don't go into effect for other
16 14 months, and we anticipate that supply chains will be
17 restored well before then, as evidenced by the ramp-up
18 underway in China now, roughly three to four months since
19 the inception of the unfortunate Covid-19 outbreak. Also
20 motors that meet the standard already exist on the market
21 and industry can sell through existing inventory imported
22 before that date.

23 In conclusion, we urge the CEC to move forward
24 without further delay. As pointed out, these standards are
25 very cost-effective and technically feasible, and will save

1 pool owners across the state -- whether it's at someone's
2 home, a school, the town pool, or a hotel -- money on their
3 utility bills. And, as we know, lowering statewide
4 electricity consumption translates to less pollution, both
5 conventional pollutants and those that cause climate
6 change.

7 Lastly, we'd like to give a big shout out to
8 PG&E's Gary Fernstrom, who began this work to improve
9 energy efficiency in this space more than 10 years ago, and
10 for PG&E's ongoing support of this work. Thanks very much.

11 MR. STEFFENSEN: Thank you, Noah.

12 Hi, Carlos. Are there others that are on WebEx
13 at this time with a hand raised?

14 MR. BAEZ: Yes. Jennifer Hatfield.

15 I've just unmuted you.

16 MS. HATFIELD: Oh, good morning. I guess I'm
17 actually planning on going after Alex, with NEMA. I'm
18 sorry about that. Has he raised his hand yet? If it's
19 possible to make that happen.

20 MR. BAEZ: Yeah.

21 Alex, I can unmute you now.

22 MR. BOESENBERG: Thank you. As stated, I'm Alex
23 Boesenberg with the National Electrical Manufacturers
24 Association. We are a joint commenter with the Pool and
25 Hot Tub Association, being the supplier of the motors in

1 question to those products.

2 We again caution against a state standard when a
3 national and a federal standard is in progress. We have **H01**
4 had multiple ex parte meetings with Department of Energy
5 staff stressing this, and been reassured each time that
6 they are moving the standard along. We all know the DOE
7 doesn't move as fast as we'd like sometimes, but there is
8 no indication that it is not going to happen. And we favor
9 a single standard to have to meet for everything, which
10 helps economies of scale and just generally vents
11 additional burden on industry and misunderstandings in the
12 field.

13 We have stated previously and we continue to **H02**
14 state we think there has been an over estimation in the
15 number of booster pump motor shipments, that helps add up
16 to tilt the economic analysis toward a positive outcome
17 when that may not be true.

18 And, additionally, by changing the scope of the
19 motors impacted, we're concerned that the forecast energy
20 savings won't actually be reached, for reasons much like **H03**
21 Mr. Horowitz quoted. If somebody needs a repair right
22 away, they're going to get the most effective option if
23 they are cost conscious. And that will be a DOE pump with
24 a single-speed motor, not a variable-speed alternative.
25 And that's one of the idiosyncrasies of pushing for

1 variable speed only. But I won't belabor that any further.

2 And while we all hope by July 2021 all this will
3 be sorted out, it's very optimistic to say that everything
4 will be normal after the Corona virus. I'm aware that some
5 pool pump manufacturers are already having to let employees
6 go, and we don't know what that's going to do to product
7 availability and future product availability, and so forth.
8 I won't belabor it. But times are changing and the
9 economic analysis heretofore was about things we're all
10 very used to. And this -- one can look at any headline and
11 say that -- and see that this is new and what's going to
12 happen is anybody's guess, and we really shouldn't be
13 guessing about millions of dollars.

14 And I'll leave it with that and turn it over to
15 my co-commenter Jen Hatfield. Thank you.

16 MR. STEFFENSEN: Thank you.

17 MS. HATFIELD: All right. Good -- good morning,
18 everyone. Thank you. My name is Jennifer Hatfield, with
19 the Pool and Hot Tub Alliance. The Alliance was formed in
20 2019, combining the Association of Pool and Spa
21 Professionals, as you probably previously knew us, with the
22 National Swimming Pool Foundation. We represent over 3500
23 company members and 221 of those are located in California.

24 PHTA and NEMA and our members have a long history
25 working with the California Energy Commission, and we

1 appreciate the opportunity to continue a positive
2 collaboration, to ensure the citizens of California are
3 provided energy regulations for pool pump motors, but are
4 balanced energy savings with other critical factors
5 important to consumers and industry.

6 As noted by Alex, PHTA and NEMA have provided
7 joint comments to CEC staff previously, so those comments
8 were provided. And I know in an attachment we resubmitted
9 our ones from October 21st, 2019 for consideration. And
10 we're hoping to hear back from the Commission at some point
11 on those comments.

12 We agree with the points Alex has made, and I
13 just would like to highlight further a few items. As Alex
14 mentioned, you know we believe the Department of Energy is
15 still working on a federal standard and we do believe a **J01**
16 national standard is a better approach. Our last meeting
17 with them was in early February, and they had given us no
18 indication that they have shelved this plan. It's just
19 unfortunately they had -- are taking longer than any of us
20 would like, but we believe that is going forward.

21 Two, incremental cost assumptions of the price **J02**
22 difference between booster pumps and variable-speed pumps
23 are too low, as evidenced by 2019 prices. And this is
24 resulting in incorrectly favoring the economic payback cost
25 justification calculations. Again, for additional detail

1 on that I would point you to our October 21st comments.

2 And, finally, as Alex had noted, we are concerned
3 on the effect of the Covid-19 global pandemic. We think it
4 provides a lot of uncertainty for our economy. And I think
5 that as, you know, a revised cost-benefit analysis is **J03**
6 necessary due to Covid and the effect on supply and
7 distribution lines, manufacturing is either being closed or
8 in reduced capacity in some cases, and its effect on
9 California consumers. You know none of us know what a post
10 Covid world is going to look like, but we strongly believe
11 its effects need to be considered before moving forward.

12 Thank you for the time today.

13 MR. STEFFENSEN: Thank you, Jennifer.

14 MR. BAEZ: Next we have Ray and -- from Ken
15 Osborne.

16 Ken, I've just unmuted you now.

17 MR. OSBORNE: Thank you. Can you hear me?

18 MR. BAEZ: Yes, we can hear you.

19 MR. OSBORNE: Thank you. Hi, Sean. And hello to
20 everyone. I just wanted to add a specific comment in
21 addition to --

22 MR. STEFFENSEN: Can you state your organization,
23 please?

24 MR. OSBORNE: I'm sorry. This is Ken Osborne.
25 I'm a sales director with Regal Beloit Corporation, a

1 leading supplier of electric motors for the swimming pool
2 pump industry.

3 So I wanted to add an additional comment on
4 behalf of the industry, and appreciate the comments made by
5 Alex and Jennifer. One specific comment that PHTA and NEMA
6 submitted to the CEC pertains to the effort to expand **K01**
7 variable-speed replacement pump motors down to one-half
8 horsepower. Our view is that there may have been a
9 miscalculation and an oversight here in that the definite-
10 purpose pool pump regulation from DOE has a demarcation
11 between standard size and small size pool pumps at .711
12 hydraulic horsepower. Our all-stakeholder working group
13 that was trying to formulate a replacement pool pump motor
14 standard that would align with the DOE pump standard ended
15 up with 1.15 horsepower. We all agreed that the .711
16 hydraulic equated to a range of about 1 horsepower up to
17 about 1.3, all dependent on the hydraulic efficiency of
18 the -- of the wet end.

19 By extending it down to one-half horsepower, I
20 think that the CEC is creating an incentive for contractors
21 and pool owners to revert back to single-speed pumps. And
22 I'll refer to the comments made by Mary and Chad, **K02**
23 representing the California IOUs, in that presentation it
24 was noted that a replacement variable-speed motor estimated
25 cost was 481, a replacement single-speed motor -- or, I'm

1 sorry -- single-speed pump was \$320. That
2 is -- directional, I think, they are valid numbers, and an
3 indication of the financial incentive for pool owners and
4 contractors to revert back to single-speed pumps instead of
5 variable-speed pumps in the lower horsepower range.

6 I just wanted to highlight that, that issue,
7 which I think could have been an oversight or unintended
8 consequence of the extension down to half horsepower in
9 this proposed regulation. Thank you.

10 MR. STEFFENSEN: Thank you, Ken.

11 MR. BAEZ: This is Carlos. We have no other
12 raised hands. I did receive a written comment in my chat
13 which I read in a moment. Oh, hold on. We have a raised
14 hand from Philip.

15 Philip, I've just unmuted you now.

16 MR. ESCOBEDO: Thank you. My name is Philip **L01**
17 Escobedo from Zodiac Pool Systems, a manufacturing of pool
18 equipment and pool and spa equipment.

19 I just wanted to totally agree on the effort to
20 reduce energy use and lower environmental impact, but I
21 also want to urge the council (phonetic) to seriously
22 consider all the written comments submitted by the Pool and
23 Hot Tub Alliance, particularly relating to booster pumps.

24 What's happening worldwide, they said, is
25 unprecedented and I really feel we're creating an

1 unnecessary burden to the California consumer and families
2 at the worst possible time, with very little if any gains
3 on energy efficiency or longterm fiscal savings. Please
4 reconsider our comments and rationale to remove the booster
5 pumps from the scope of the ruling or wait for the federal
6 DOE rule. Thank you, and that's all.

7 MR. STEFFENSEN: Thank you, Philip.

8 This is Sean Steffensen. Let's move to the phone
9 participants and unmute the lines.

10 MR. BAEZ: Yeah. So there are six call-in users
11 on the WebEx, so those people who are on the phone only.
12 They can't raise their hands or chat. So I will unmute
13 those six right now and just leave it open for a few
14 seconds to allow the comments to be made.

15 All right. All the call-in users are unmuted
16 now. If you have a comment, if you're just on the phone,
17 feel free to state your name and affiliation.

18 MR. WORTH: Hi. This is Chad with the IOU team.
19 Can you hear me?

20 MR. STEFFENSEN: Yes.

21 MR. BAEZ: Yes, we can hear you.

22 MR. WORTH: Hi. Thanks. I just wanted to
23 respond to a couple of the comments that were just made,
24 just briefly.

25 Alex, I guess and to Jen on the

1 NEMA -- sorry -- I keep wanting to say APSP -- the new Pool
2 and Spa -- Hot Tub Association [sic]. On the booster pump
3 sales, I noticed in the comments docketed yesterday, I just
4 want to kind of give CEC a little credit. I think the **E02**
5 comment -- in short, I think CEC listened to your previous
6 comments and from the last staff report significantly
7 revised down the number of booster pump replacement motor
8 sales. I think it's literally in the hundreds that are
9 being estimated to be sold. So I think Sean and the Energy
10 Commission did acknowledge that comment and revised their
11 shipments of replacement motors to booster pumps down quite
12 significantly in the final staff report. I know that
13 doesn't change perhaps the review of the economics of it,
14 but they did listen to that comment.

15 However, on the cost-effectiveness of booster
16 pumps and for those of us that have been doing this for a
17 while we know that the booster pump has been, you know, one
18 of the trickiest parts of this whole effort. In NEMA's and
19 the pool industry's comments, what you had stated was that
20 they weren't as cost-effective as CEC had projected but
21 that it was still cost-effective. And I just want to point
22 out that even if the benefits are slightly less than on the
23 margin but it's still cost-effective, it's still cost-
24 effective for the customer, and that's ultimately what I
25 think the Energy Commission looks to and what we look to in

1 supporting a standard.

2 I also want to note that there were some comments
3 about the DOE costs for a variable-speed booster pump motor
4 in the EL3, EL4 range was like \$611, and there was a
5 comment in those -- in your -- in the NEMA comments that
6 said this is not realistic. You know, there is a variable-
7 speed replacement motor or a variable-speed booster pump on
8 the market that I found today on multiple websites for a
9 hundred dollars less than that, for \$500. So I don't think
10 that -- I'm not seeing that price difference in the market
11 that I think you were perhaps alluding to.

12 And then I guess, finally, Ken, just in response
13 to the line being different like is true, like the line is
14 not at 1.15. And what is a consumer's view if their pool
15 pump burns out, you made note of reverting back to single-
16 speed pumps. I don't know if that -- while there may be
17 some shifting on the margins between the two, if somebody
18 had a variable speed, there wouldn't necessarily be today
19 an incentive or with the DOE joint agreement to do -- it
20 would be no different, I guess. They would probably do a
21 single-speed pump anyways.

22 What we're interested in is people do do a
23 replacement motor, is -- it is cost-effective, and I think
24 that that has been born out and there's really some great
25 productions out there to do so.

1 And then I guess lastly, to Philip, on the
2 booster pump front, we -- I think if there was an easy way
3 to carve out booster pump motors, as you can see a lot of
4 the comments around this, we would have tried to do so. We
5 spent a lot of time on this and we couldn't find anything
6 different for booster pump motors, hence why we have to
7 treat all motors equally in the standard because they are
8 identical. And if we start trying to add exemptions for
9 different applications, that's when loopholes are created,
10 kind of like the loopholes we have in California now. And
11 I think from our perspective it's really important that we
12 don't create loopholes after all this effort. We want to
13 have a uniform standard that leads to high levels of
14 compliance. Thank you.

15 MR. STEFFENSEN: Thank you.

16 Carlos, are there any other phone participants?

17 MR. BAEZ: Next. Yeah, we have a hand raised
18 from Rob.

19 Rob, I have unmuted you now.

20 MR. BOTELER: Good afternoon/good morning. This
21 is Rob Boteler. I work for Nidec Motor Corporation. Just
22 a couple of comments.

23 Sean, I think one of the things that -- and I
24 think we've talked about this in the past a little bit, is
25 enforcement. And those of you that have been hanging

M01

1 around with me since the early nineties working on energy
2 regulations know that that's -- that that's an issue that I
3 brought up in over the last 10 years or so with the
4 Department of Energy. And I think with this regulation
5 where it's going to be enforced at state borders, you have
6 a unique issue because you're going to have internet
7 suppliers from other states that are going to provide
8 single-speed motors that are noncompliant motors. And I
9 have no idea how you're going to enforce that, but I'd like
10 to see that in your regulation, that you list the
11 documentation on how it's going to be enforced and some
12 idea of what the funding is going to be to enforcement, to
13 enforce the program. And with California being one of the
14 two motor manufacturers with the most to lose here, we're
15 pretty concerned about that.

16 The other comment I would make is I'm still
17 puzzled why we have, and Chad and I talked about this
18 earlier, I'm still puzzled why we have efficiency as a **M02**
19 metric on variable-speed motors. I mean we all have gone
20 through the affinity laws and we know what's happening with
21 the infinity laws. And adding the efficiency as a metric
22 on the variable speeds doesn't really make sense to me, but
23 it is what it is.

24 And the question I would have is that an **M03**
25 efficiency level a motor-only efficiency level or is that a

1 system level? Is that the motor and the control? I'm not
2 clear on that. And that I assume in the regulation there
3 will be references to the test standard and, you know, an
4 improved ANSI standard that we would then be held to and
5 what adds would be to the lengths that we should use to
6 verify performance.

7 That's all I have. Thanks.

8 MR. STEFFENSEN: Thank you, Rob. I will respond
9 to the enforcement comment. In general, I won't respond to
10 comments today, as I need to consider them all in their
11 whole, but the enforcement comment is -- relates more to
12 something that is existing and is not changing in this
13 proposal.

14 Enforcement is in place to both manufacturers
15 that are within California and beyond its borders. There
16 have been enforcement cases that have been resolved, where
17 a manufacturer outside the state of California has reached
18 settlement with the Commission. And so I want to assure
19 you that we can resolve cases that are both within
20 California and without to ensure compliance with the
21 standard, to level the playing field.

22 Carlos, would you call on the next participant?

23 MR. BAEZ: Yeah. There's no more hands raised.
24 All of the six call-in users are still unmuted. And I mute
25 them -- I'm going to unmute all the call-in users right

1 now, but it doesn't appear that they have any comments.

2 MR. STEFFENSEN: Now let's sweep the WebEx one
3 more time.

4 MR. BAEZ: So for any more phone comments for the
5 WebEx users, feel free to use the hand-raise feature.

6 MR. STEFFENSEN: If there are any chats, let's
7 read those.

8 MR. BAEZ: Okay. Yeah, I'll go into the chat box
9 next. I just received some comments from Philip from
10 Zodiac. He spoke earlier, but I'll read his comments into
11 the record in case they weren't addressed in the phone
12 call -- or in the phone comment.

13 The first comments from Philip Escobedo from **L02**
14 Zodiac. His comment reads: A variable-speed pump that
15 comes with a variable-speed motor from the factory cannot
16 be replaced with a single-speed motor without voiding UL
17 and NSF certification of that one. We have not seen this
18 behavior obtained for a variable-speed pump, only to
19 downgrade to a single speed.

20 And Philip's second comment reads: I would **L03**
21 strongly urge the council to delay the ruling or push back
22 the effective implementation date. What Covid-19 has done
23 and will continue to do to our economy is not known, but
24 the outlook is very bad. Many companies have already had
25 to lay off engineering resources for both short-term and

1 long-term financial viability. Now is just not the time to
2 force this on the industry.

3 And that's the end of his comment.

4 I don't have any more written comments -- oh,
5 let's see. Philip, I see your hand is raised again. I can
6 unmute you right now.

7 MR. ESCOBEDO: No. I didn't mean to raise it.
8 Sorry.

9 MR. BAEZ: Okay, no problem.

10 MR. STEFFENSEN: Let's hear from the Public
11 Advisor.

12 MR. BAEZ: I will unmute them. Hey, the Public
13 Advisor is unmuted.

14 MS. RUSSELL: Hi. This is Lindsay Russell with
15 the Public Advisor's Office. We have not received any
16 emails or calls for public comments to relay back to you
17 guys.

18 MR. BAEZ: Thank you, Lindsay.

19 MR. STEFFENSEN: Well, at this time this is the
20 last call for public comment.

21 I want to thank everyone for their participation
22 today in this hearing. And I'll provide my contact
23 information.

24 MR. BAEZ: Sean, do you want --

25 MR. STEFFENSEN: Hi again. I'm Sean Steffensen.

1 My email address is displayed here. My phone number is
2 also displayed. It does ring through to where I'm at. You
3 can reach me by that phone number. And of course that's
4 the mailing address. And of course the docket, 19-AAER-02.

5 Thank you for your participation today. If there
6 are no more raised hands, Carlos.

7 MR. BAEZ: Sean, do you want to change your
8 comment box too, just to make sure if any comments went
9 through to your personal box.

10 MR. STEFFENSEN: No, I don't -- well, let's see.
11 Bear with me for a second. It says there are -- yeah, one
12 comments from Charles Kim: Thank you so much.

13 And that's all I have.

14 MR. BAEZ: Okay.

15 MR. STEFFENSEN: So hearing that there are no
16 more comments, I will close the hearing and the public
17 record. Thank you for your participation today.

18 (Whereupon, the Public Hearing was concluded at 11:04
19 a.m.)

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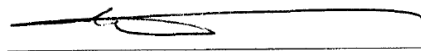
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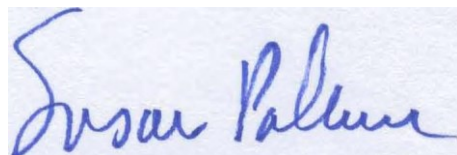
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IN WITNESS WHEREOF, I have hereunto set my hand this 21st day of April, 2020.



Susan Palmer
Certified
Reporter
CERT 00124