



# Path Forward for the Joint Stakeholder Recommendations for Standards for Dedicated-Purpose Pool Pump Motors



2/14/19



# Agenda

Product Showcase – General Purpose and Pump Motors

Follow up from Previous Meeting

- Consumer impact
- What is payback
- What is market impact with out motor regulation

UL1004-10 and Labelling Approach

# Product Showcase

1. General Purpose 0.5HP, 1.25 SF – Single Speed
2. Through Bolt Foot Mounted 1.0 THP – Single Speed
3. Square Flange Pool Pump Motor 1.25 THP – Single Speed
4. Square Flange Pool Pump Motor 0.85 THP – Variable Speed
5. Square Flange Pool Pump Motor 2.70 THP – Variable Speed
6. Pump Housing

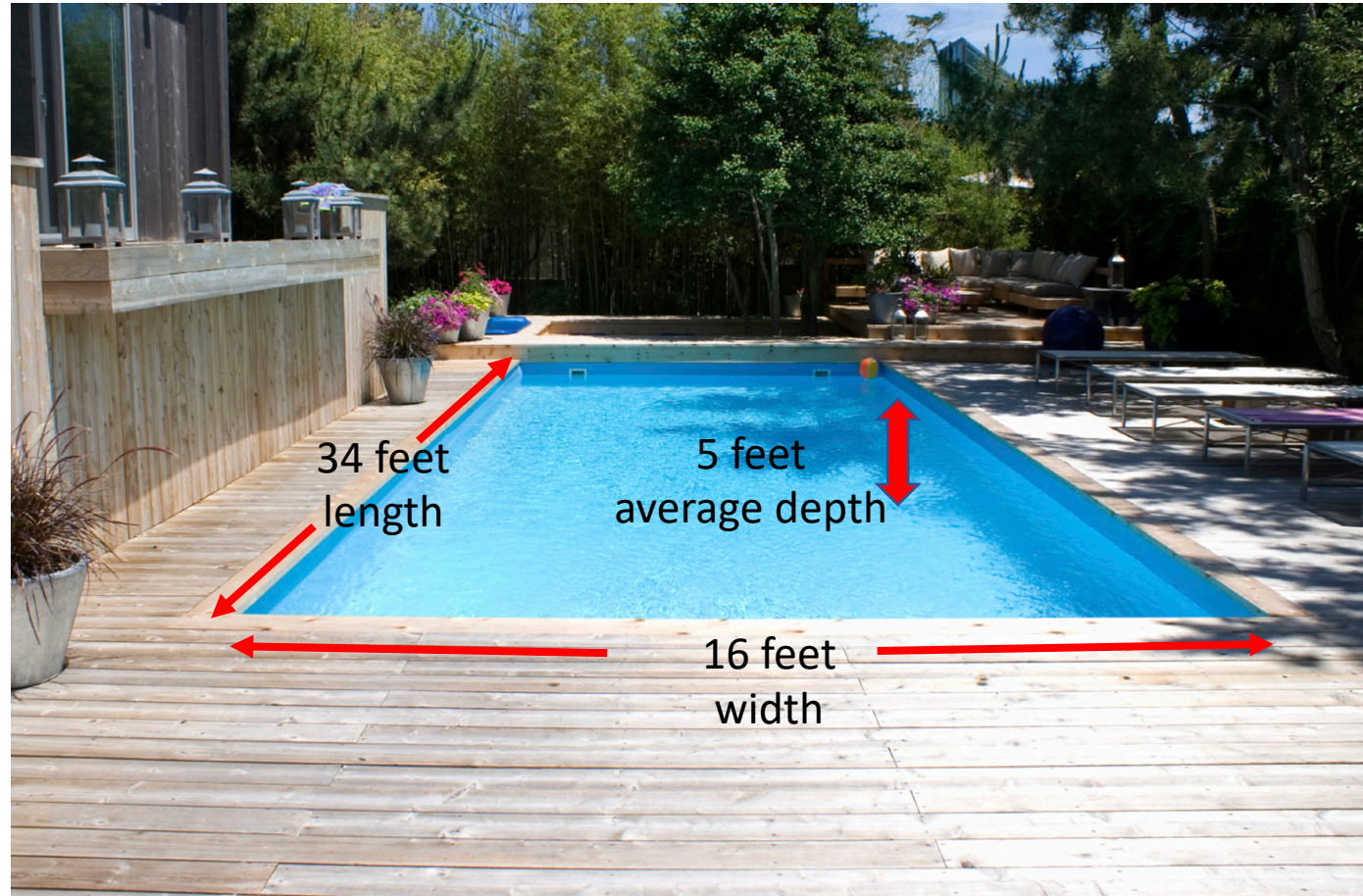
Differentiation Aspects  
Shaft Size  
Face  
Mounting  
Induction Vs Permanent

# A typical 20,000 gallon inground pool may look like this:

## Rectangular Pool Volume

$L \times W \times D \times 7.5 = \text{Gallons}$

$34\text{ft} \times 16\text{ft} \times 5\text{ft} \times 7.5 = 20,400\text{ Gallons}$



# Consumer benefits of Joint Stakeholder Proposal

Motor horsepower (THP)	Baseline motor (single-speed)			Motor compliant with Joint Proposal (variable-speed)		
	Installed cost (\$)	Annual electricity use (kWh/year)	Annual electricity cost (\$/year)	Installed cost (\$)	Annual electricity use (kWh/year)	Annual electricity cost (\$/year)
1.65	\$280	4,495	\$584	\$588	1,390	\$181
3.45	\$413	6,328	\$823	\$747	2,137	\$278

Source: DOE Technical Support Document for Dedicated-Purpose Pool Pumps Direct Final Rule.

Note: Annual electricity costs assume an average residential electricity price of \$0.13/kWh.

Motor horsepower (THP)	Incremental installed cost (\$)	Annual electricity savings (kWh/year)	Annual electricity cost savings (\$/year)	Simple payback period (years)	Lifetime electricity cost savings (\$)
1.65	\$308	3,105	\$403	0.8	\$2,821
3.45	\$334	4,191	\$545	0.6	\$3,815

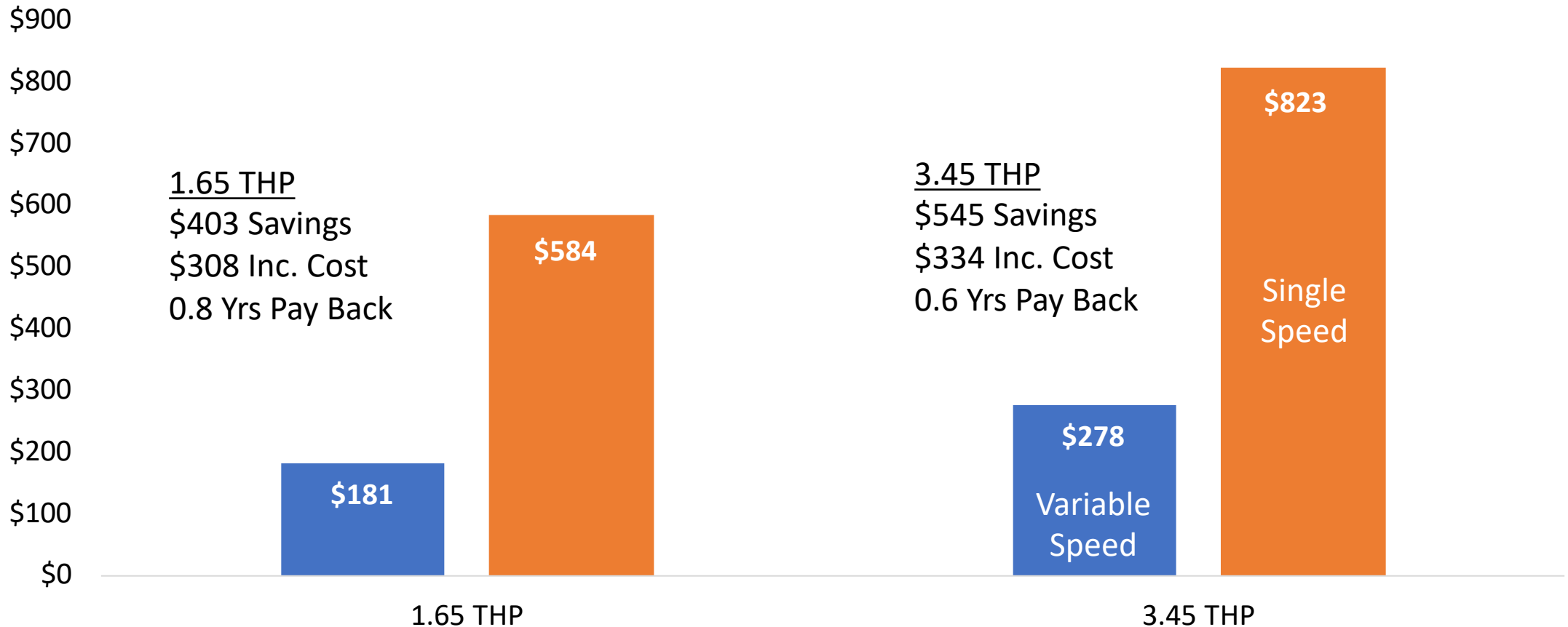
Source: DOE Technical Support Document for Dedicated-Purpose Pool Pumps Direct Final Rule.

Notes: Electricity cost savings assume an average residential electricity price of \$0.13/kWh. Lifetime electricity cost savings are undiscounted and assume an average lifetime of 7 years.

# Consumer impact of replacement motor loophole

*When a variable-speed motor is replaced with a single-speed motor*

Annual electricity costs



Source: DOE Technical Support Document for Dedicated-Purpose Pool Pumps Direct Final Rule.

Notes: Electricity cost savings assume an average residential electricity price of \$0.13/kWh

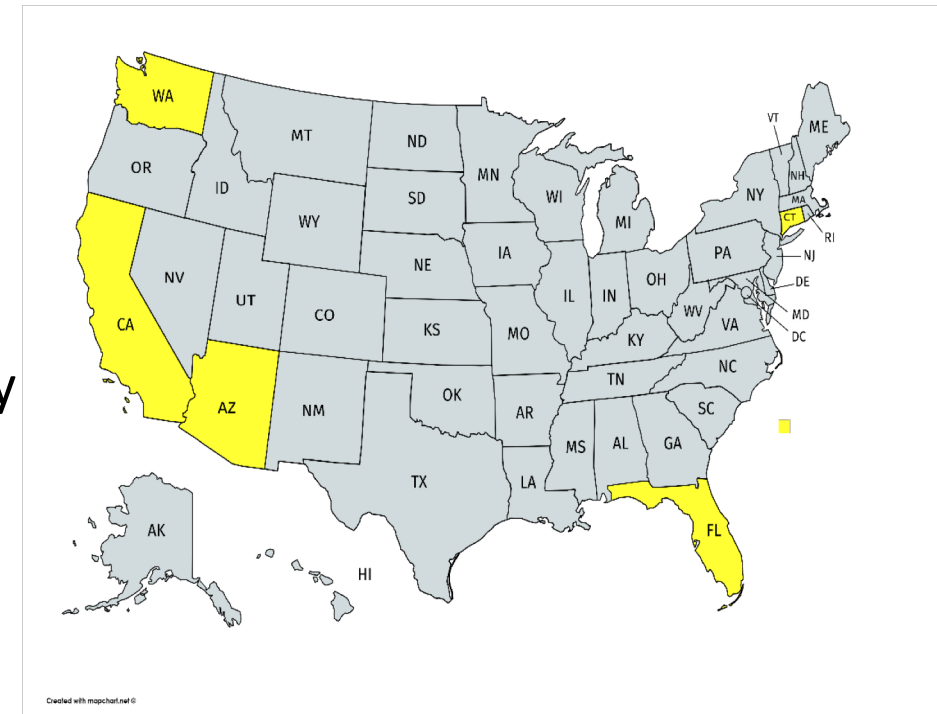
# Magnitude of the replacement motor loophole

<b>Scenario</b>	<b>Current</b>	<b>2021 (compliance date of pool pump standard)</b>
Motor replacement	40%	60%
New pump/motor combination purchased	60%	40%

Source: DOE Technical Support Document for Dedicated-Purpose Pool Pumps Direct Final Rule.

# No DOE action = patchwork of state standards

- Patchwork of state standards for pool pumps not good for consumers and manufacturers
- CEC has already begun the process
  - Covers 0.5 THP and Above – Impacts Low Income Consumers
  - Does not align with DOE DPPP Rule
- A single national standard is much preferred
  - Reduces burdens on manufacturers avoiding unnecessary costs to the consumer
  - Provides a platform for DOE enforcement
  - Ensures that all consumers benefit, regardless of where they live
  - Prevents unsafe non-compliant DPPP motor imports
  - Protects US jobs



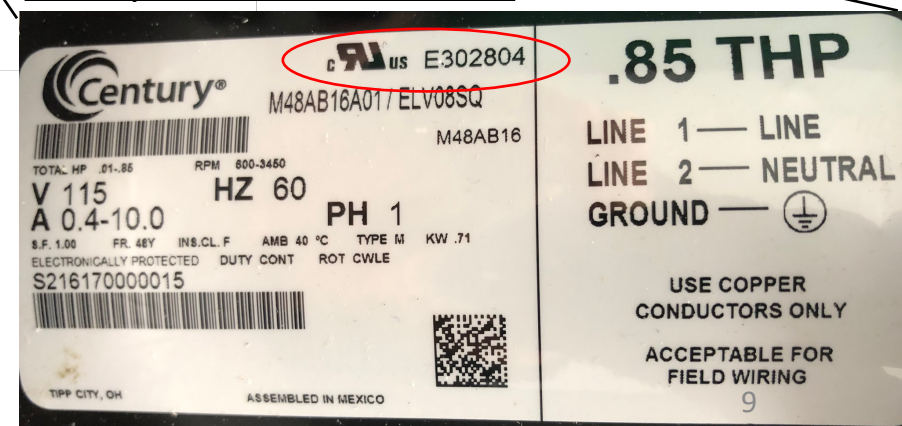


# UL 1004-10 Label

- Requirements in UL 1004-10 are identical to Joint Stakeholder Proposal from Aug. 14, 2018
- Developed to identify compliant DPPP Motors with a Label
- Identifies criteria for DPPP motors
  - All DPPP motors shall not be Split-Phase and Capacitor Start Induction Run
  - DPPP motors  $\geq 1.15$  THP shall be Variable Speed Control
- Requires the following Markings
  - THP
  - Speeds (Single, Dual, Multi or Variable)
  - NRTL (3<sup>rd</sup> party) mark of compliance



Example of Current Label



# DOE Label Proposal

- The alternative labeling rule for DPPPMs would have the following third-party verification requirement:

A manufacturer shall use UL1004-10 certification program, that DOE has classified as nationally recognized, to measure the total horsepower of a basic model of a dedicated-purpose pool pump motor and certify the variable speed capability of a dedicated-purpose pool pump motor over 1.15 total horsepower, and issue a certification marking for the dedicated-purpose pool pump motor.

# Path Forward

We respectfully request that DOE:

- Grant the August 2018 DPPPM Joint Petition and publish a DFR.
- *In the alternative*, initiate a rulemaking under 42 U.S.C. § 6315(c) and (g) for a labeling rule for DPPPMs.

# Conclusion

- We appreciate DOE's willingness to engage with us and look forward to moving ahead with DOE.
- Time is of the essence for industry
  - Product development stalled
  - State DPPP motors regulatory actions in process
- We respectfully request that DOE provide a path of action for industry ASAP