

DOCKETED

Docket Number:	18-AAER-04
Project Title:	Portable Air Conditioners
TN #:	225965
Document Title:	Staff Presentation for Portable Air Conditioner Public Hearing
Description:	Staff Presentation for Portable Air Conditioner Public Hearing
Filer:	Patrick Saxton
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Portable Air Conditioners Docket # 18-AAER-04 Public Hearing

November 27, 2018
10 a.m. to noon



Patrick Saxton
Appliances Office
Efficiency Division
California Energy Commission



Public Hearing

- Pursuant to California Administrative Procedure Act, Government Code §11346.8
- Public comment on proposed regulatory language and proposed negative declaration
- No Commissioners will be present
- No decisions will be made



Rulemaking Timeline

- October 11, 2018: Rulemaking documents posted
 - Notice of Proposed Action
 - Initial Statement of Reasons
 - Proposed Regulatory Language
- October 26, 2018: California Environmental Quality Act (CEQA) document posted
 - Initial Study and Proposed Negative Declaration
- November 26, 2018: 45-day (rulemaking) and 30-day (CEQA) public comment periods end
- November 27, 2018: Public hearing
- December 10, 2018: Proposed adoption
- February 1, 2020: Proposed effective date



CEQA

- Project – statewide minimum efficiency levels for portable air conditioners (PACs)
- Energy impacts – proposed efficiency standards will reduce future electricity consumption
- Environmental impacts
 - No significant change to materials or manufacturing process
 - No change to product lifetime of PACs
 - Reduced criteria pollutants, greenhouse gases, and other particulates due to lower electricity consumption



CEQA

- Staff finding that the proposed efficiency standards will not have any significant adverse effect on environment
- No written comments received by 5 p.m. deadline on November 26, 2018
- Staff will recommend that the Energy Commission adopt the proposed negative declaration at the December 10, 2018, business meeting



Background – Standard

- U.S. Department of Energy (DOE)
 - Pre-publication final rule notice – December 28, 2016
 - Never published in Federal Register
 - Ongoing litigation Natural Resources Defense Council, Inc., et al. v. Rick Perry, et al.
 - State of California is a plaintiff
 - Energy Commission is a plaintiff
 - 13% of PAC models met proposed efficiency level



Background – Standard

- Purchase price range \$200-\$500
- Lifetime of 10 years
- California shipments ~ 165,600 per year
- Commission staff relied on
 - DOE Technical Support Document, December 2016
 - DOE Energy Conservation Standards for Portable Air Conditioners: Final Rule, December 28, 2016
 - California Investor Owned Utilities Codes and Standards Enhancement (CASE) Initiative Analysis, October 2018



Scope - §1601

- In Scope: single- and dual-duct portable air conditioners attached to an adjustable window bracket





Background

- Out of Scope: Spot air conditioners with no ducts or ducts not attached to adjustable window bracket
 - No change to the existing “test and list” requirements


-N-OUT





Proposed Definitions - §1602

- Consistent with DOE definitions in test procedure and pre-publication final rule
- Minor modifications referring to California's jurisdiction
 - “Products sold or offered for sale in CA” instead of “distributed in commerce”
- Minor modifications referring to “dry-bulb outdoor conditions” in several definitions based on comments from the Appliance Standards Awareness project
 - Consistent with DOE definitions



Test Procedure - §1604

- Incorporated in the recent 'clean-up' rulemaking
 - 10 CFR 430.23(dd) (Appendix CC to subpart B of part 430)
 - No modifications
- No change for spot air conditioners
 - ANSI/ASHRAE 128-2001



Proposed Standard - §1605

- PACs sold or offered for sale in CA that have both single-duct and dual-duct configurations
 - Both configurations must meet the proposed standard in §1605.3
 - Consistent with DOE pre-publication final rule



Proposed Standard - §1605.3

- New state efficiency standard for PACs
 - Equation identical to DOE efficiency level two (EL 2)
 - Proposed effective date of February 1, 2020



Proposed Data Submittals - §1606

- Removed exception that PACs were not subject to data submittal requirements
- Additional data fields required compared to DOE pre-publication final rule
 - Used for validation of submitted data
 - Determine prevalence of dehumidification function
- No change for spot air conditioners



Proposed Marking - §1607

- No product specific marking
- General requirements for all appliances
 - Manufacturer or brand name
 - Model number
 - Date of manufacture



Proposed Compliance and Enforcement - §1608

- Removed exception that PACs were not subject to enforcement



Technical Feasibility

- Increased heat-transfer surface area of evaporator and condenser coils
- Improved compressor efficiency
- Improved blower/fan efficiency
 - Replace permanent split capacitor (PSC) motor with permanent magnet motor or electronically commutated motor (ECM)
- Low-standby-power electronic controls



Technical Feasibility

- Not considered by DOE but technically possible
 - Variable-speed compressors
 - Alternative refrigerants (e.g., replace R-410A with R-32)
- No PACs incorporating these features were available at time of analysis



Cost and Savings per Unit

First Year Electricity Savings (kWh)	Incremental Retail Price	First Year Monetary Savings (\$)*	Lifecycle Net Monetary Savings (\$)***	Benefit-Cost Ratio
223	\$76	\$30	\$224	2.95:1

* National average price of electricity

*** Undiscounted



Statewide Savings

First Year Electricity Savings (GWh)	Annual Electricity Savings After Stock Turnover (GWh)	First Year Monetary Savings (\$)*	Annual Monetary Savings After Stock Turnover(\$)**
36.9	369	\$4.97 million	\$49.68 million

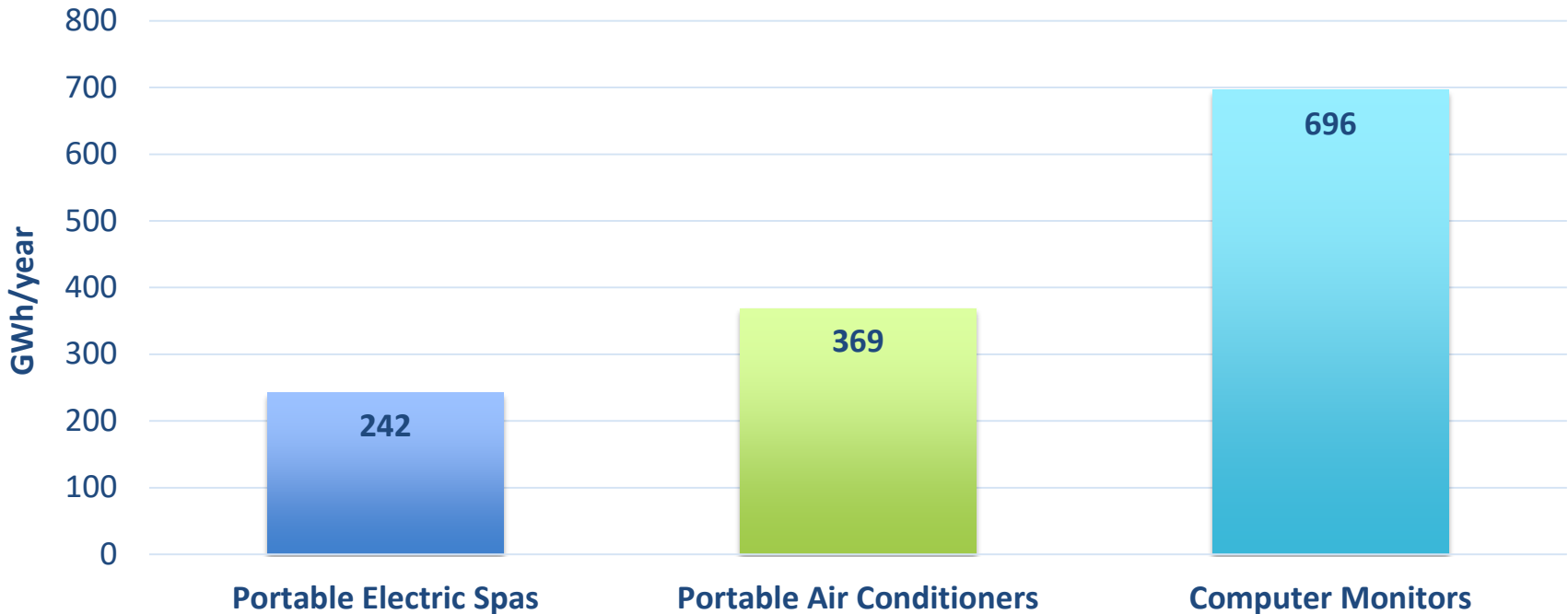
* National average price of electricity

** Undiscounted



Energy Savings Comparison

Annual GWh/year after full stock turnover





Conclusion

- Staff finds the proposed standards are
 - Technically feasible
 - Cost-effective to the consumer over the lifetime of the appliance
- Staff will recommend that the Energy Commission adopt the proposed regulations at the December 10, 2018, business meeting



Written Comments Received

- Three written comments received by 5 p.m. deadline on November 26, 2018
 - Northeast Energy Efficiency Partnerships (NEEP)
 - California Investor Owned Utilities Statewide Codes and Standards Enhancement (CASE) Initiative
 - Association of Home Appliance Manufacturers (AHAM)



Written Comments Received

- NEEP supports the proposed regulations
- CASE
 - Supports the proposed regulations
 - Suggested revisions to five definitions
 - Suggested products with dehumidification functionality be required to meet dehumidifier standards
 - Proposed efficiency level three (EL 3) for PACs
 - Requested an additional field for data submittal
 - Proposed product specific marking requirements



Written Comments Received

- AHAM
 - Supports publication of the DOE final rule and a national standard at EL 2
 - Proposed removal of definitions that are in test procedure
 - Does not oppose definition of seasonally adjusted cooling capacity (SACC)
 - Proposes reducing the number of fields required for data submittal
 - Does not oppose inclusion of SACC in data submittal



Written Comments Received

- AHAM (continued)
 - Strongly opposes the proposed effective date of February 1, 2020
 - Supports five year period between adoption and effective date
 - Notes differences between CASE initiative and DOE technical support document
 - Supports incorporation of DOE test procedure
 - If the Commission continues to pursue an efficiency standard for PACs, supports EL2 as the requirement



Public Comments

- Public comments from in-person participants
 - Come to microphone
 - Please state name and affiliation for court reporter
 - A copy of your comments is appreciated but not required
- Public comments from Webex
 - Use raise-hand feature and you will be un-muted
 - Please state name and affiliation for court reporter
or
 - Type comment into chat-box and it will be read into record
 - Please include name and affiliation for court reporter
- Phone only participants
 - All lines will be un-muted
 - Please state name and affiliation for court reporter



Proposed Adoption

Energy Commission business meeting

December 10, 2018, 10 a.m.

1516 Ninth Street

Art Rosenfeld Hearing Room – First Floor

Sacramento, California 95814

(Wheelchair Accessible)

Webex:

<https://energy.webex.com/energy/onstage/g.php?t=a&d=926263154>

Thank You!

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