DOCKETED

Docket Number:	15-WATER-03
Project Title:	Water Energy Appliance Rebate Program
TN #:	204996
Document Title:	AHAM Comments for the Water Appliance Rebate Program - Drought Response
Description:	N/A
Filer:	System
Organization:	AHAM/Kevin Messner
Submitter Role:	Public
Submission Date:	6/12/2015 10:53:44 AM
Docketed Date:	6/12/2015

Comment Received From: Kevin Messner
Submitted On: 6/12/2015
Docket Number: 15-WATER-03

AHAM Comments to Docket No. 15-WATER-03 for the Water Appliance Rebate Program - Drought Response

Additional submitted attachment is included below.

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

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June 12, 2015

Via E-mail

California Energy Commission
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Sacramento, CA 95814-5512

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Re: Docket No. 15-WATER-03 for the Water Appliance Rebate Program

Dear Commissioner McAllister:

The Association of Home Appliance Manufacturers (AHAM) would like to comment on the *Water Appliance Rebate Program* (Docket 15-WATER-03). AHAM supports and agrees with Governor Brown's Executive Order B-29-15 directing the California Energy Commission (CEC), jointly with the Department of the Water Board, to implement a statewide appliance rebate program to provide monetary incentives for the replacement of less efficient home appliances.

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes over 150 companies throughout the world. In the U.S., AHAM members employ tens of thousands of people and produce more than 95% of the household appliances shipped for sale. The factory shipment value of these products is more than $30 billion annually. The home appliance industry, through its products and innovation, is essential to U.S. consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to U.S. jobs and economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. New appliances often represent the most effective choice a consumer can make to reduce home energy use and costs.

New clothes washers and dishwashers use much less water than older units. Recently, new federal minimum water usage requirements became effective for residential clothes washers, commercial clothes washers and dishwashers. The levels and effective dates are shown in the Table 1 below.

Table 1: Federal Water Standards

Appliance	New Water Requirement	Effective Date
Residential Clothes Washer (Standard Top Load)	8.4 gal/cycle/ft^3	March 7, 2015
Residential Clothes Washer (Standard Front Load)	4.7 gal/cycle/ft^3	
Commercial Clothes Washer (Top Load)	8.5 gal/cycle/ft^3	January 8, 2013
Commercial Clothes Washer (Front Load)	5.5 gal/cycle/ft^3	
Dishwasher (Standard)	5.0 gal/cycle	May 30, 2013

These new products use much less water and AHAM has calculated the estimated water savings that California could achieve from a robust water appliance rebate program (see Table 2). The amount of water that can be saved across all of California is significant because there were 1,200,000 clothes washers and 785,000 dishwashers shipped to California in 2014. AHAM estimates that 2.45-2.720 billion gallons/year could be saved from the replacement of clothes washers and 2.85-8.55 billion gallons/year could be saved by installing dishwashers in homes that currently do not have one (see Appendix).

Table 2: Water Savings per Unit

Appliance	Water Use Per Unit (2002/2003)	Water Use Per Unit (2015, estimated)	Percent Savings
Residential Clothes Washer	10,250 gal/year	6,125 gal/year	40%
Commercial Clothes Washer	35,000 gal/year	20,000 gal/year	43%
Dishwasher	1,450 gal/year	1,075 gal/year	26%

Minimize Requirements that Confuse Consumers and Limit Participation and Water Savings
To maximize water savings, there should be uniformity and few, if any, unnecessary program requirements that could increase consumer confusion and reduce participation and water savings. For example, the program should not provide a minimum age requirement, which is virtually impossible to determine anyway in all circumstances. Water savings is based on two larger parameters: net water savings of the new versus the old unit and remaining useful life of the old unit. The older the replaced unit, the higher the net water savings, but a lower remaining useful life. These two factors move in opposite directions so the water savings is significant for both fairly "new" older units as well as the very "old" older units.

The program should not require that an old unit is working. Many older units are refurbished and resold on the secondary market and still others are simply transferred to another person for continued use. AHAM research shows approximately 20 percent of older units are refurbished and resold on the secondary market, and this does not include units that are transferred to neighbors, children or others.

There should be no minimum water level requirement, such as requiring an ENERGY STAR level or above. This requirement will reduce participation and only serve to offer the generally more fully featured products that may not be as accessible to potential lower income participants. AHAM analyzed the potential water savings that could be derived from clothes washers and dishwashers (see Appendix). The analysis found that there would be nine to thirteen times more water savings for a tiered rebate program (rebate for non-ENERGY STAR unit and a higher amount for an ENERGY STAR unit) versus an ENERGY STAR-only rebate program.

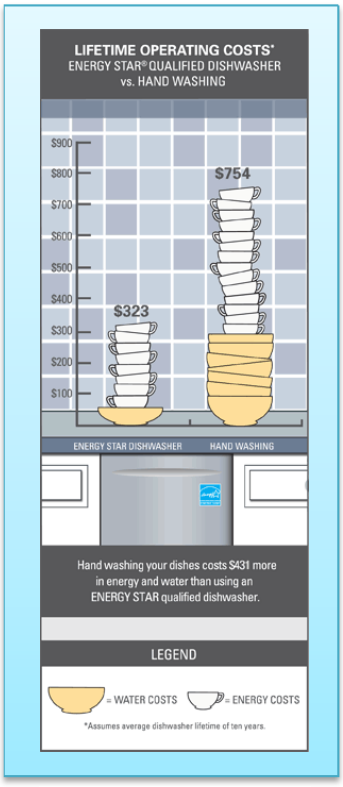

Figure 1: Source ENERGY STAR

Dishwashers vs. Handwashing
ENERGY STAR states that 5,000 gallons/year can be saved by dishwashing versus handwashing.[1] The AHAM analysis found that the potential water savings from installing dishwashers in homes that do not have a dishwasher is 28,500 million gallons/year. See the AHAM analysis in the Appendix for additional details in this area.

[1] ENERGY STAR website - https://www.energystar.gov/index.cfm?c=dishwash.pr_handwash_dishwash, last visited on June 8, 2015.

Regarding the amount of the rebate, AHAM's view is that the amount should be at least $100 for a new clothes washer or dishwasher, an additional amount for a higher ENERGY STAR level, and an additional amount to help defray the cost of the installation of a new, built-in dishwasher. This amount will increase the participation and drive a more robust consumer behavioral change to replace older units and obtain the water savings for the State and to ongoing savings to the consumer on their household water costs. Importantly, a new portable dishwasher would not require major modifications to the kitchen and, therefore, an additional amount for installation. Portable dishwashers provide the same efficiency and convenience of built-in dishwashers, without the significant expense to modify plumbing and/or cabinetry. Portable dishwashers have wheels to allow it to be brought near the sink when someone wants to wash dishes. Then, by simply attaching a faucet adapter, a consumer can quickly have access to a dishwasher and avoid hand washing dishes (see Figure 2).

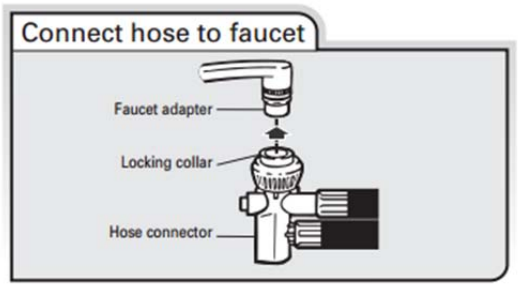

Figure 2: Example of a portable dishwasher connection

AHAM appreciates the opportunity to comment on the proposed Water Appliance Rebate Program. Please contact me or Kevin Messner at kmessner@politicalogic.net and we would be glad to further discuss these matters with the Commission.

Sincerely,

Robert McArver
Vice President, Policy & Government Relations

APPENDIX

CA Clothes Washer & Dishwasher Water Savings

April 2015

Leadership ➤ Knowledge ➤ Innovation

Clothes Washers Water Savings

Overall Inputs

- CA Shipments (2014) =1,189,300
- Top Load vs. Front Load = 69%/31%
- DOE TSD Annual Water Savings of Water Factors

Overall Assumptions

- Estimated increased water efficiency, 2012 to 2015
  - 21% (due to standards adjustment in March 2015)
- Estimated ENERGY STAR saturation in 2015
  - High = 40%
  - Low = 20%

Scenarios & Assumptions

- Scenario #1: One Rebate for All Units
  - Assumes shipments increase 40%
  - Assumes shipments increase is in same ENERGY STAR vs. Non-ENERGY STAR proportion
- Scenario #2: Tiered Rebate

  (eg, $100 for Non-ENERGY Star and $125 for ENERGY STAR)
  - Assumes shipments increase 40%
  - Assumes 30% shift of Non-ENERGY STAR to ENERGY STAR
- Scenario #3: ENERGY STAR Only Rebate
  - Assumes shipments do not increase
  - Assumes 30% shift of Non-ENERGY STAR to ENERGY STAR

Clothes Washer Water Savings

Scenarios	WATER Savings (millions gals/year)	
	ENERGY STAR Penetration- Lo	ENERGY STAR Penetration- Hi
Scenario #1 One Rebate for All	2,450	2,720
Scenario #2 Tiered Rebates for All	2,760	3,300
Scenario #3 ENERGY STAR Only Rebates	220	420

9-13 Times the Water Savings for
Tiered Rebate vs. ENERGY STAR Only Rebate
(Note: If you assume a 10% increase in shipments for an ENERGY STAR only rebate, it is 3 times the water savings)

ENERGY STAR Price Differential

- In order to understand how much a rebate would need to be to maximize purely a shift to an ENERGY STAR unit from a Non-ENERGY STAR unit, it is important to know the incremental price increase.

	Non- ENERGY STAR	ENERGY STAR	Difference
Average Price	$480	$950	$470

Source: Sears website

Dishwasher Water Savings

Overall Inputs

- CA Shipments (2014) = 729,988
- DOE RECs Saturation = 53%
- CA Homes = 12.2 million

Overall Assumptions

- Estimated increased water efficiency from handwashing vs. dishwashing = 5,000 gallons/year (Source: ENERGY STAR)
- Estimated increased water efficiency from 2012 to 2015 = 20% (same percentage change as DOE standard change in 2013)
- Estimated ENERGY STAR saturation = 80%

Scenarios & Assumptions

- Scenario #1: One Rebate for All Units
  - Assumes shipments increase 40%
  - Assumes shipment increase is in same ENERGY STAR vs. Non-ENERGY STAR proportion
- Scenario #2: Tiered Rebate

  (eg, $100 for Non-ENERGY Star and $125 for ENERGY STAR)
  - Assumes shipments increase 40%
  - Assumes 10% shift of Non-ENERGY STAR to ENERGY STAR
- Scenario #3: ENERGY STAR Only Rebate
  - Assumes shipments do not increase
  - Assumes 10% shift of Non-ENERGY STAR to ENERGY STAR

Dishwasher Water Savings

Handwashing vs. Dishwashing

- "Potential" water savings for installing a new dishwasher in homes that handwash dishes is 28,500 million gallons/year (5,000 gals/yr * 5.7 million homes).

	WATER Savings (millions gals/year)
%-tage of Homes Captured w/o DW	All Units
10%	2,850
30%	8,550

Average of All Values = 5,700 million gallons/year

Dishwasher Water Savings

Early Replacement

Scenarios	WATER Savings (millions gals/year)
Scenario #1 One Rebate for All	150
Scenario #2 Tiered Rebates for All	160
Scenario #3 ENERGY STAR Only Rebates	9.4