

Energy Efficient and Smart Appliance Agreement of 2010

August, 2010

Supporters

Association of Home Appliance Manufacturers
(representing GE, Whirlpool, Electrolux and 23 other companies)

American Council for an Energy-Efficient Economy

Appliance Standards Awareness Project

Natural Resources Defense Council

Alliance to Save Energy

Alliance for Water Efficiency

Northwest Power and Conservation Council

Northeast Energy Efficiency Partnerships

Consumer Federation of America

National Consumer Law Center

California Energy Commission

Demand Response and Smart Grid Coalition

Earthjustice

Agreement Overview

SAVES ENERGY/INCREASES ENERGY INDEPENDENCE

- Improves product energy efficiency and saves more than 9 Quads of energy over 30 years (U.S. uses ~100 quads)

SAVES WATER

- Requires and incentivizes clothes washers and dishwashers to use nearly 5 trillion less gallons of water over 30 years

REDUCES GHG EMISSIONS

- 30-year savings ~550 MMT CO₂

SAVES CONSUMERS MONEY

- ACEEE estimates present value net savings to consumers of nearly \$30 billion (from products sold 2013-2030)

SMART GRID AND ENERGY STAR

- Jump-starts the Smart Grid by helping to deploy smart appliances nationwide and enable consumers to better take advantage of demand-response and real-time pricing opportunities
- Recognizes smart appliance contributions through ENERGY STAR

Agreement Overview

JOBS

- Impacts 46,000 manufacturing jobs (19,000 direct; 27,000 supply chain/support) and creates new jobs, including bringing back to the U.S. jobs that were outsourced in earlier years

MANUFACTURER INCENTIVES

- Incentivizes manufacturers to increase the production of super-efficient products—over and above ENERGY STAR levels—thereby saving even more energy and water and encouraging more job creation

DOE EFFICIENCIES

- Frees up resources now devoted to rulemakings on these products

New Refrigerator Standards

- 20-30% energy savings relative to current standards for major product categories.
- New standards take effect Jan. 1, 2014
- DOE to develop new test procedure to measure ice-maker energy use by Dec. 31, 2012. This is used for standard effective ~2016.

Refrigerator/Freezer Energy Savings by Category

% Savings	Classes
30%	Auto defrost freezers
25%	Top-mount and side-by-side R/F Manual defrost freezers
20%	Bottom-mount R/F
10-25%	Various smaller categories
	Standards are 5% lower for built-in units

New Clothes Washer Standards

- Initial standards effective Jan. 1, 2015
- Different standards for top-loaders and front-loaders
 - Top-loader standards have two phases
- Front-loaders: 43% energy savings and 52% water savings relative to current standard
- Top-loaders: 26% energy savings and 16% water savings (2015), 37% energy savings and 37% water savings (2018)

Clothes Washer Standards (MEF/WF)

Category	Current Standard	2015 Standard	2018 Standard
Top-load, std size	1.26/9.5	1.72/8.0	2.0/6.0
Front-load, Std size		2.2/4.5	
Top-load, Compact	0.65/18.4	1.26/14.0	1.81/11.6
Front-load, Compact	N/A	1.72/8.0	

Clothes Dryer Standards

- 5% energy savings using current test procedure.
- In addition, test procedure modified to address effectiveness of auto termination. This provides significant additional energy savings from reduced over-drying.
- Standard takes effect Jan. 1, 2015

Room Air Conditioner Standards

(Effective June 1, 2014)

Product Description	Change in Standard	New Standard (EER)
<i>Without Reverse Cycle w/Louvers</i>		
<6,000	15%	11.2
6,000 to 7,999	15%	11.2
8,000-13,999	12%	11.0
14,000 to 19,999	11%	10.8
20,000-27,999	11%	9.4
≥28,000	6%	9.0
<i>Without Reverse Cycle w/o Louvers</i>		
< 6,000	13%	10.2
6,000 to 7,999	13%	10.2
8,000-10,999	14%	9.7
11,000-13,999	13%	9.6
14,000-19,999	11%	9.4
≥20,000	11%	9.4
<i>With Reverse Cycle</i>		
< 20,000 w/Louvers	10%	9.9
≥ 20,000 w/Louvers	11%	9.4
< 14,000 w/o Louvers	11%	9.4
≥ 14,000 w/o Louvers	10%	8.8
Casement		
Casement Only	10%	9.6
Casement-Slider	11%	10.5

Dishwasher Standards

- Improve efficiency of standard and compact dishwashers.
 - Standard units to 307 kWh/yr, 5.0 gal/cycle
 - Compact units to 222 kWh/yr, 3.5 gal/cycle
- Same as the July 2011 ENERGY STAR specification
- Reduces energy use 14% and water use 23%
- Takes effect Jan. 1, 2013

Smart Appliances

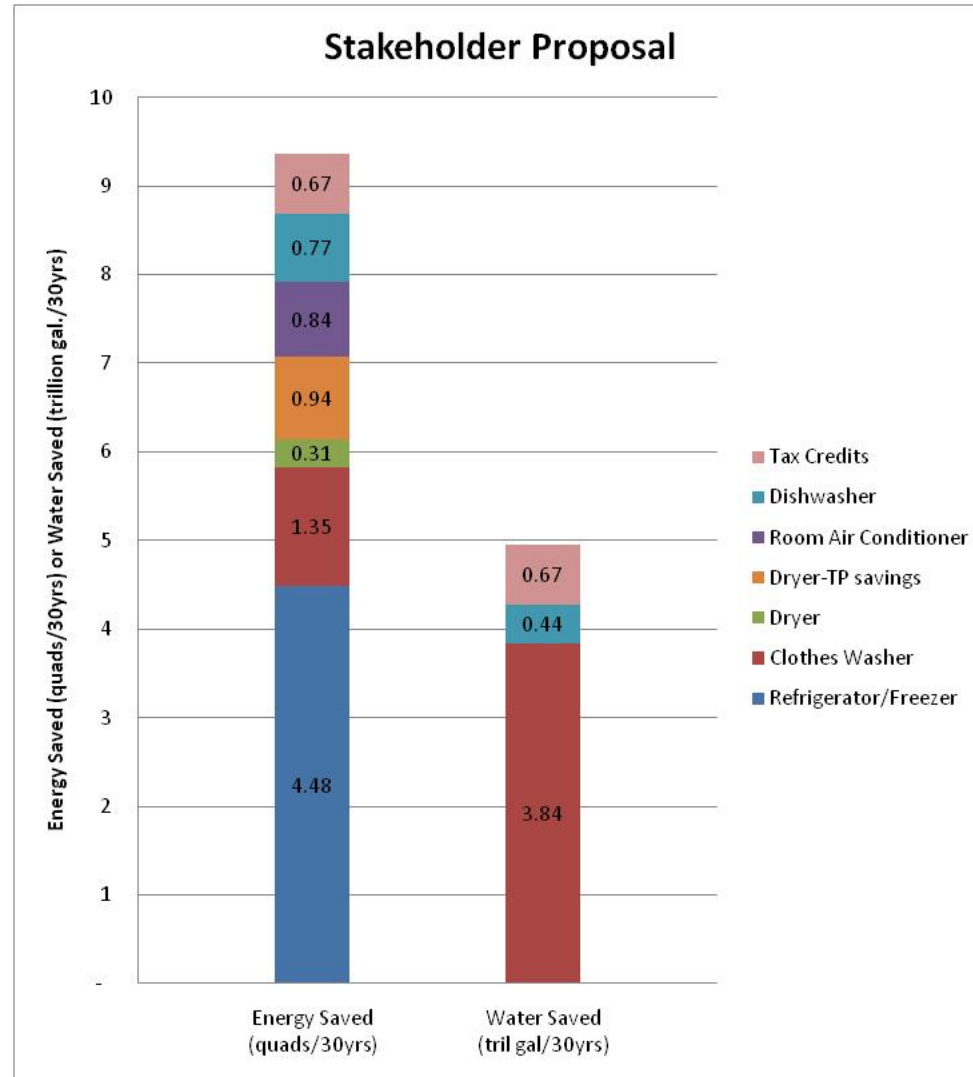
- Parties will jointly petition EPA to provide a 5% credit on energy use for products that meet an EPA-set definition of “smart appliance”.
 - Will include ability to push some energy use to off-peak periods when receive a signal from the utility.
- Parties will also work together to develop a proposal for tax or other incentives for appliances with “smart” capabilities.

Proposed Tax Incentives

(extension of current incentives that expire
12/31/10)

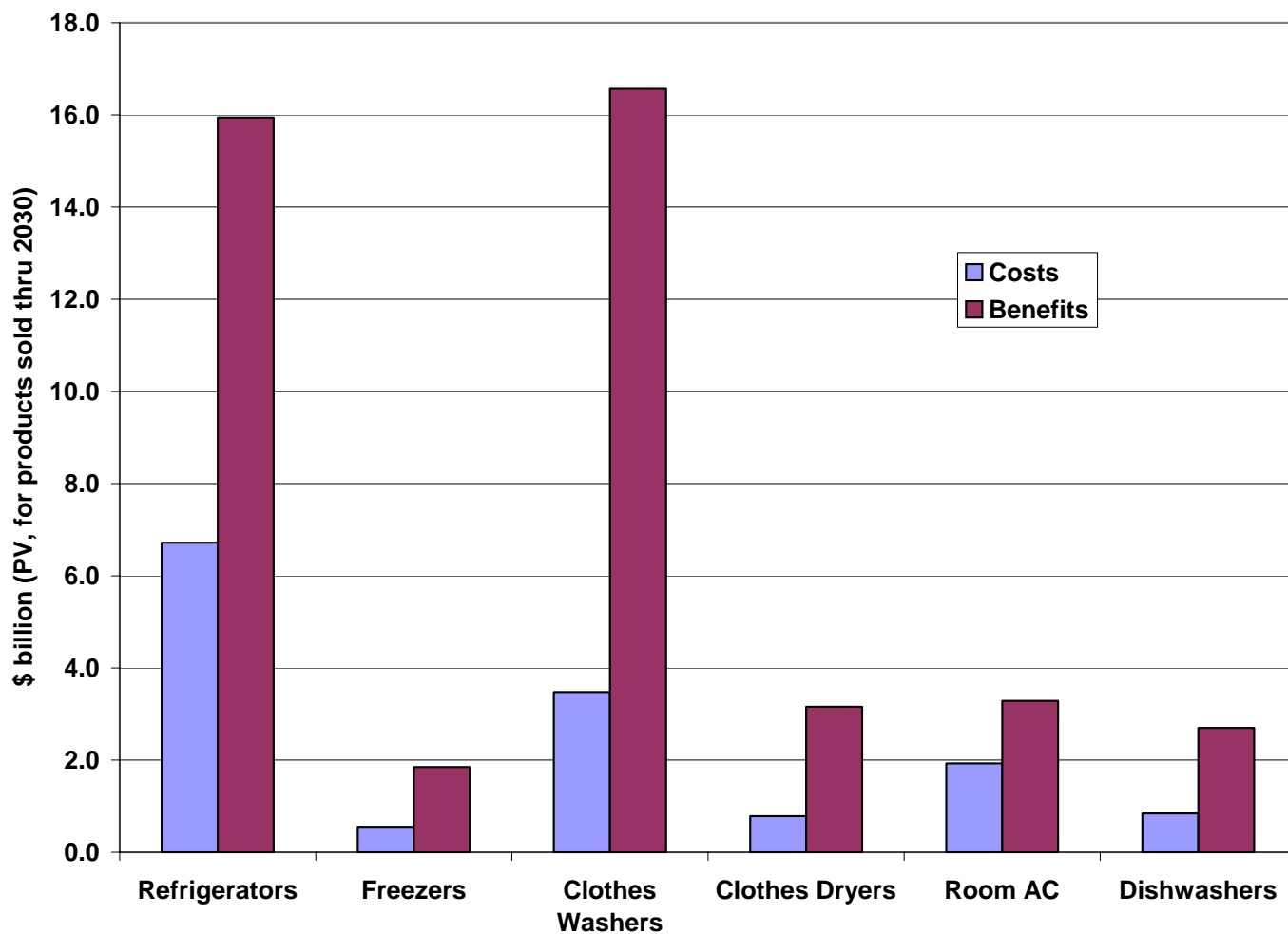
Product	Level	Amount	Year
Clothes washer-Top Load	2.2 MEF/4.5 WF	\$175	capped in 2011, nothing after 2011
Clothes washer-Top Load	2.4 MEF/4.2 WF	\$200	uncapped in 2011-2013
Clothes washer-Front and Top Load	2.8 MEF/3.5 WF	\$250	uncapped in 2011-2013
Refrigerator	30% better than current standard	\$150	capped in 2011-2013
Refrigerator	35% better than current standard	\$200	uncapped in 2011-2013
Freezers	30% (auto defrost) and 25% (manual defrost) better than current standards	\$150	capped in 2011-2012; no incentive 2013
Freezers	40% (auto defrost) and 35% (manual defrost) better than current standards	\$200	uncapped in 2011-2013
Dishwasher*	307 kWh/5.0 WF	\$25	capped in 2011, no incentive after 2011
Dishwasher*	295 kWh/4.25 WF	\$50	capped in 2011-2013
Dishwasher*	280 kWh/4.0 WF	\$75	uncapped in 2011-2013
* extra 0.5 WF for greater than 12 place settings			

Energy and Water Savings from Standards



Source: LBL analysis except for dryer TP which was estimated by ASAP.

Costs and Benefits of New Appliance Standards



Source: ACEEE