

THE ROLE OF VOLUNTARY INITIATIVES IN DRIVING THE ENERGY EFFICIENCY OF APPLIANCES

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What is AHAM?

- **Represents the home appliance industry**
 - ▣ Major appliances (*White Goods*)
 - ▣ Portable appliances (*Personal care products, kitchen appliances*)
 - ▣ Floor care appliances
- **Providing**
 - ▣ Technical Services
 - ▣ Government Relations
 - ▣ Data Program

Federal Energy Efficiency Stds.

- **National Appliance Energy Conservation Act (NAECA)**
 - ▣ Appliance standards that are national in scope
 - ▣ Establishes minimum efficiency standards for certain appliances
 - ▣ Requires Department of Energy to conduct rulemakings to revise standards
 - Analyses to determine if standards are warranted – *technologically feasible and economically justified*
 - ▣ Preempts states from enacting standards
 - Except with waiver of federal preemption

Federal Energy Efficiency Std.

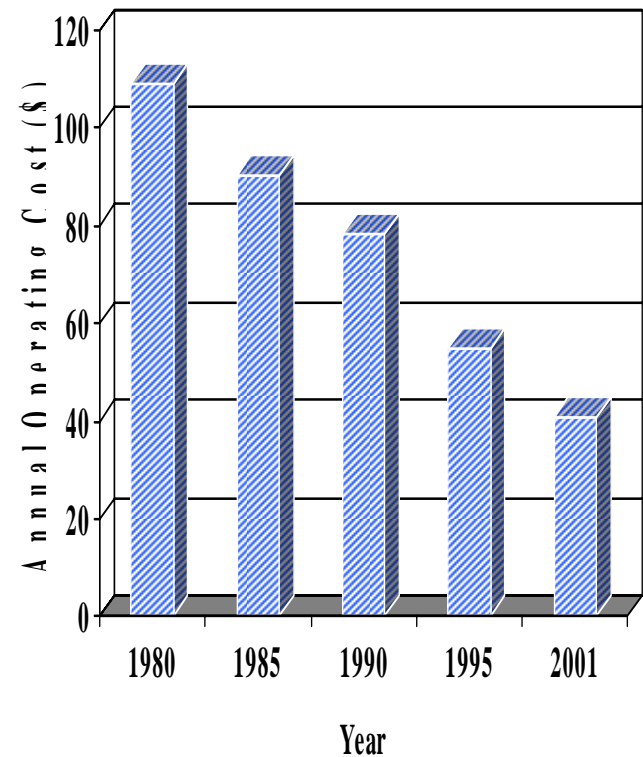
- **NAECA “covered products”**
 - Refrigerators
 - Cooking Products
 - Ovens
 - Ranges
 - Microwave Ovens
 - Dishwashers
 - Dryers
 - Room Air Conditioners
 - Residential and Commercial Clothes Washers
 - Dehumidifiers

Federal Energy Efficiency Std.

- In 2007 DOE commenced Rulemakings on:
 - Cooking Products
 - Dishwashers
 - Room Air Conditioners
 - Dehumidifiers
 - Dryers
 - Commercial Clothes Washers

Effect of Federal Standards

- 60 quadrillion BTUs of energy saved
- R/F use less energy than a 75 watt light bulb.
 - ▣ From 974 kwh/year in 1987 – to 500 kwh/year today
 - ▣ A 49% decrease despite the fact that R/F are getting larger



Voluntary Initiatives

- ***Provide incentives to manufacturers and consumers to produce and consume highly efficient products***
 - ▣ Incentives to manufacturers
 - Market push – encourages them to produce higher efficiency products
 - ▣ Incentive to consumers
 - Purchase appliances that protect the environment and save money on energy bills

Voluntary Initiatives

- **State-based utility programs rebates**
 - ▣ Available for purchase of appliances that meet certain energy efficiency specifications
 - Energy Star and above
 - Dishwashers
 - Refrigerator/Freezers
 - Clothes Washers
 - ▣ E.g. PG&E program includes purchase rebates for Dishwashers in the amount of \$30 to \$50

Voluntary Initiatives

□ **State Sales Tax Holidays**

- No sales tax on sales of certain appliance products for specified period of time
 - Weekend, month, year
 - Energy Star qualified and above

□ **Tax Rebates**

- Deduction from earned income for purchase of certain appliance products

Energy Star Program

- **Goal – *to increase the prevalence of energy efficient products in marketplace***
 - ▣ Provides information to consumers on energy efficiency
 - ▣ Establishes partnership between industry and government
 - ▣ Jointly managed by Department of Energy and Environmental Protection Agency

Energy Star Program

□ Covered Products

- Dehumidifiers
- Clothes Washers
 - 2007 specification – 1.42 MEF/8.0 WF
- Refrigerator/Freezers
 - 2008 Program –
 - Refrigerators – 20% more stringent than federal standard
 - Freezers – 15% more stringent than federal standard
- Room Air Conditioners
 - 8.8 to 10.5 EER depending on product category
- Dishwashers
 - 2007 Specification – 0.65 EF

Appliance Tax Credit

□ Purpose

- Spur market transformation
- Provide manufacturers with incentives to produce super-efficient units
 - Credit for each unit of super-efficient appliances produced over a baseline amount

□ History

- Result of negotiations on federal clothes washer standard in 2000
- Included in failed 2003 Energy Bill
- Enacted into law as a part of Energy Policy Act of 2005

Appliance Tax Credit

- Maximum benefit \$75,000,000 per company
- Effective for products produced in 2006 and 2007
- Three-year rolling average baseline for clothes washers and dishwashers
 - Three-year average rolling baseline, with a 110% multiplier, for refrigerator/freezers.
- Qualified production only includes those products *produced* in the United States

Appliance Tax Credit

□ Clothes Washers

- \$100 for units produced in 2006 and 2007 meeting 2007 Energy Star Clothes Washer specification

□ Refrigerator/Freezers

- \$75, \$125 and \$175 for production that meets corresponding efficiency levels
 - 15%, 20% and 25% more efficient than current DOE standard.

□ Dishwashers

- Credit of varying amount depends upon how much more efficient the 2007 Energy Star specification is compared to the current Energy Star specification
 - \$3 per each 1% increase in efficiency with maximum of \$100 for each unit produced over baseline.

Product	Efficiency Level	Credit	Year(s) effective
Clothes Washers	2007 Energy Star Level	\$100	2006-2007
Refrigerator/Freezers	15%	\$75	2006
	20%	\$125	2006-2007
	25%	\$175	2006-2007
Dishwashers	Energy Star Level effective in 2007 that is established through legislation that directs DOE to announce a new Dishwasher Energy Star Level in 2005 that is effective in 2007	Incentive amount equals \$3 per 1% increase in efficiency from the 2007 Energy Star specification	2006-2007

Appliance Tax Credit

- **2008 Energy Bill extension of Credit**
 - Credit available for production of super efficient clothes washers, refrigerators and dishwashers
 - Credit amount varies (from \$45 to \$250):
 - depending upon how much products exceed federal efficiency standards; and
 - current Energy Star levels; and
 - the amount of expected energy savings and benefits to consumers, the economy and the environment.
 - Only for production which exceeds past production

Success of Voluntary Initiatives

□ Energy Star Program

- Label placed on over 85% of Dishwashers in 2005
- Since program inception over 1,000,000,000 Energy Star appliances have been purchased
- Over 40% of the public recognize the Energy Star logo
- From 2000 to 2005 there were 62 million Energy Star qualifying appliances sold
 - Delivering an additional 110 trillion BTUs of energy savings and over \$3 billion in consumer savings above and beyond the minimum energy efficiency standards

Success of Voluntary Initiatives

□ Energy Star in California

▣ Clothes Washers

- Energy Star clothes washers represented 56% of total sales in 2004
- Sold units significantly exceeded the Energy Star levels – average unit was 20% to 27% more efficient than Energy Star specification

▣ Refrigerator/Freezers

- 61% were Energy Star rated

▣ Room Air Conditioners

- 75% were Energy Star rated.

Success of Voluntary Initiatives

- **Appliance Manufacturers' Tax Credit**
 - ▣ Incentivizes manufacturers to increase production of super-efficient appliances that exceed Energy Star levels
 - ▣ Only rewards incremental production
 - Rolling base period ensures that production in succeeding years must be more efficient than in previous years
 - ▣ Encourages capital expenditures in new products and technology

Success of Voluntary Initiatives

- **Appliance Manufacturers' Tax Credit**
 - ▣ Will increase production of super-efficient products – AHAM estimates are that
 - Top-Freezer production will increase to 45% from 25% of the market
 - Side-by-side production will increase to 80% of the market
 - ▣ Consumers will benefit
 - Reduction in amount of water to wash clothes by almost 1.2 trillion gallons over 20 years
 - 0.574 Quads savings

Success of Voluntary Initiatives

- **Appliance Manufacturers' Tax Credit**
 - Consumers will save
 - \$33 million per year in electricity, gas and water costs
 - \$360 million over the life of purchased appliances (\$290 million present value).
 - Models currently covered by tax credits will remain in production for many years.
 - consumer savings over the production cycle for these products – \$2.5 billion (\$1.7 billion present value)

Success of Voluntary Initiatives

□ Sales Tax Rebates

- ▣ Only effective if in effect for an extended period of time

□ Consumer Tax Credits

- ▣ Not effective – benefit cannot be derived for year or so after purchase

Conclusion

- **Voluntary initiatives are effective**
 - ▣ Provides market-based incentives to manufacturers and consumers
 - ▣ Encourages innovation and technology improvements
 - ▣ Provides real energy savings and benefit to environment