

State Energy Efficient Appliance Rebate Program: An Assessment

Interim Findings

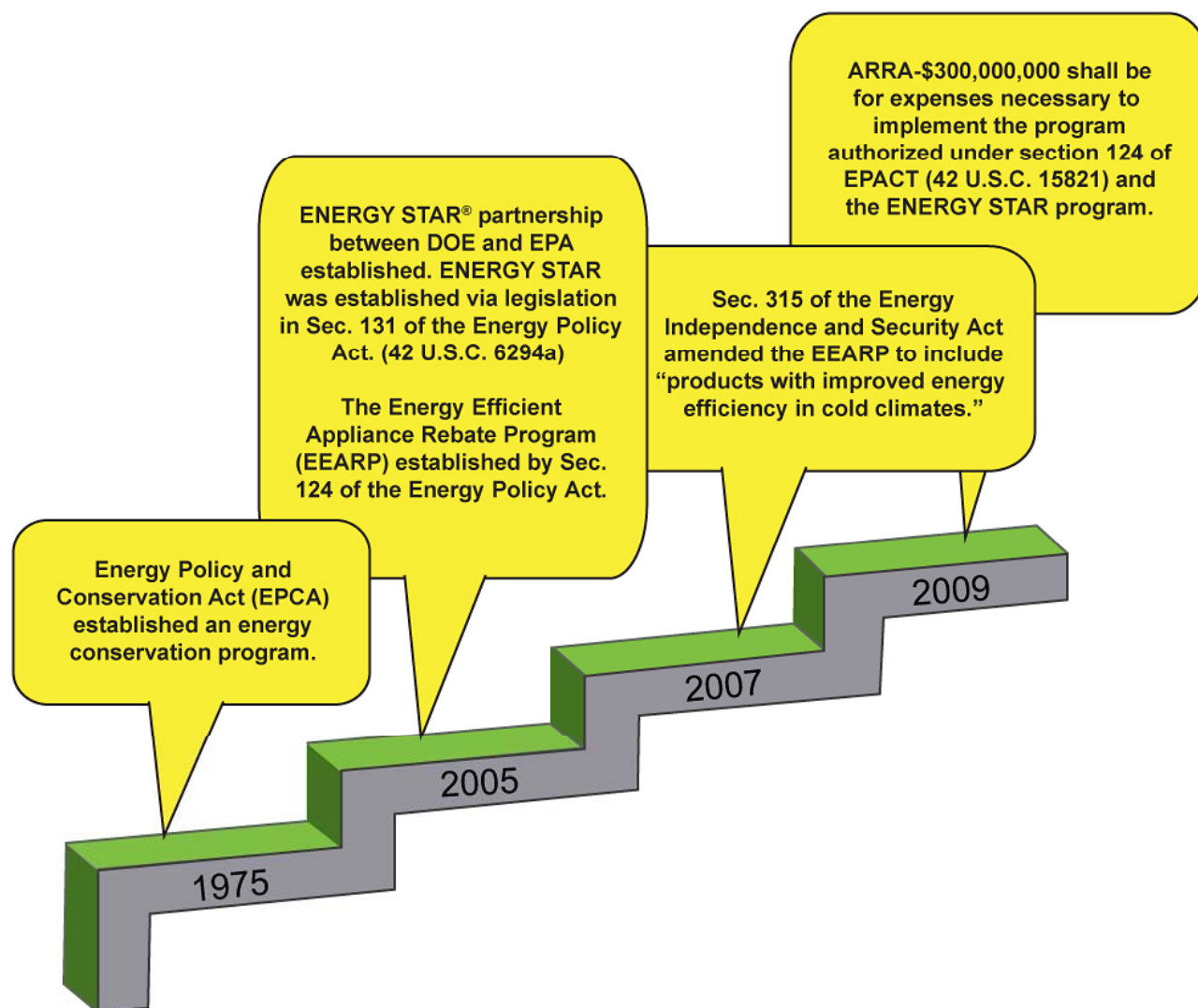
October 6, 2010

This Presentation

- Provides a brief overview of the program
- Offers initial findings on program implementation
- Examines projected versus actual (to date) results related to
 - Energy savings
 - Carbon savings
 - Dollar Savings
 - Water savings

- State Energy Efficient Appliance Rebate Program, aka SEEARP, aka “Dollars for Dishwashers”
- Funded by American Recovery and Reinvestment Act of 2009
 - \$300 million stimulus program
 - Funded programs in all 56 states and territories
 - Promotes replacement of old appliances with new, energy efficient models
 - Energy efficient = minimum of ENERGY STAR qualified
 - Provides consumer rebates

Major Steps to SEEARP



- Appliances approved by DOE for rebates
 - Clothes washers
 - Dishwashers
 - Refrigerators
 - Freezers
 - Room AC
 - Central AC
 - Heat pumps
 - Water heaters
 - Furnaces/boilers

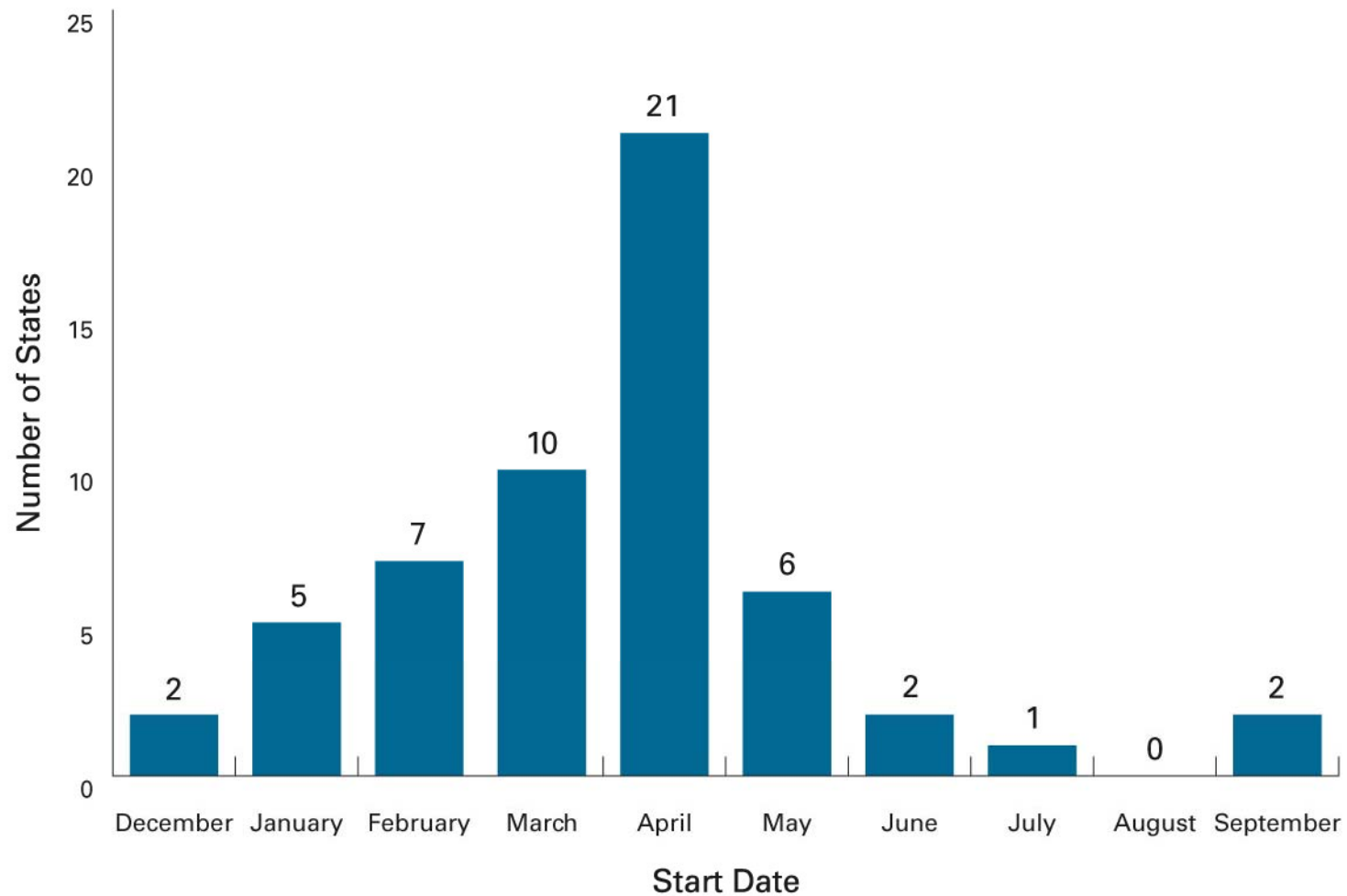
**State could petition DOE
to add additional products**

- Rebates for residential customers only
- Funds must be used for a rebate – no up-stream or mid-stream buydowns
- For replacement products only
- Programs run by states but could be outsourced or run in partnership with utilities
- States could tailor program to meet their energy needs

- This was a stimulus program – not evaluated by cost-benefit tests
- Administrative costs capped at 25% of state grant award
- States could use grant funds for 50% of total administrative costs
- Almost all programs began between December 2009

promote stimulus.

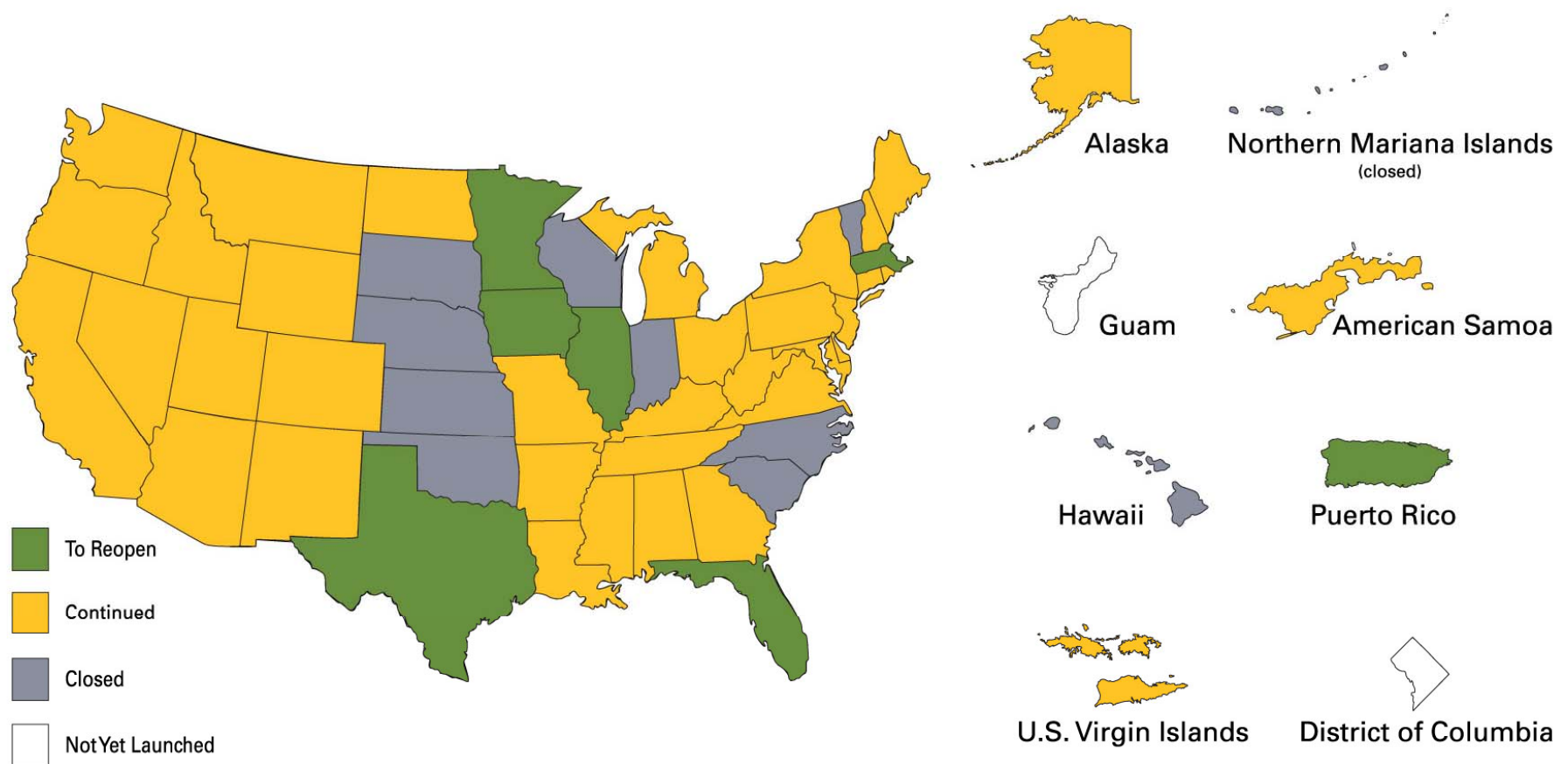
Program Launch by Month



Current Status of Programs

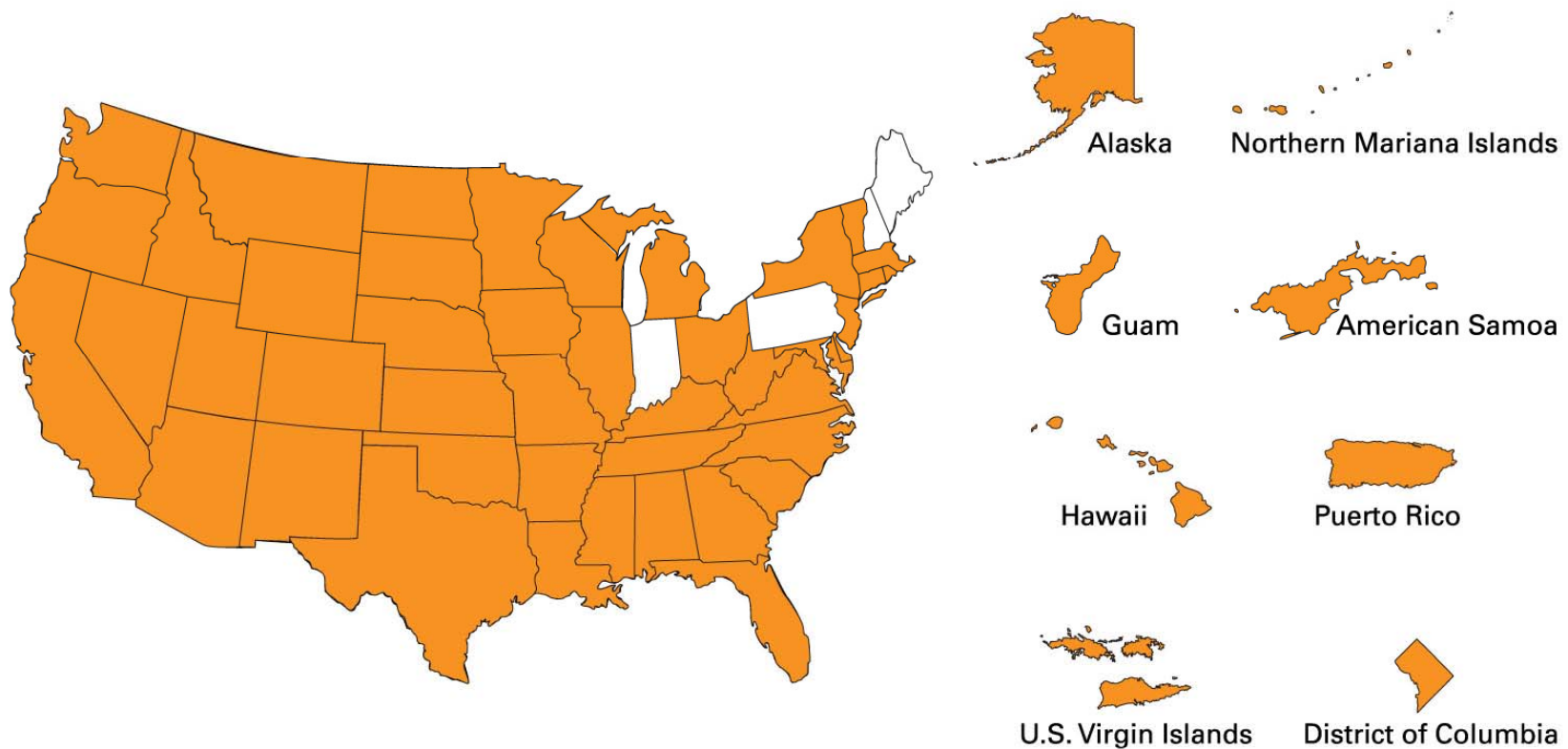
U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



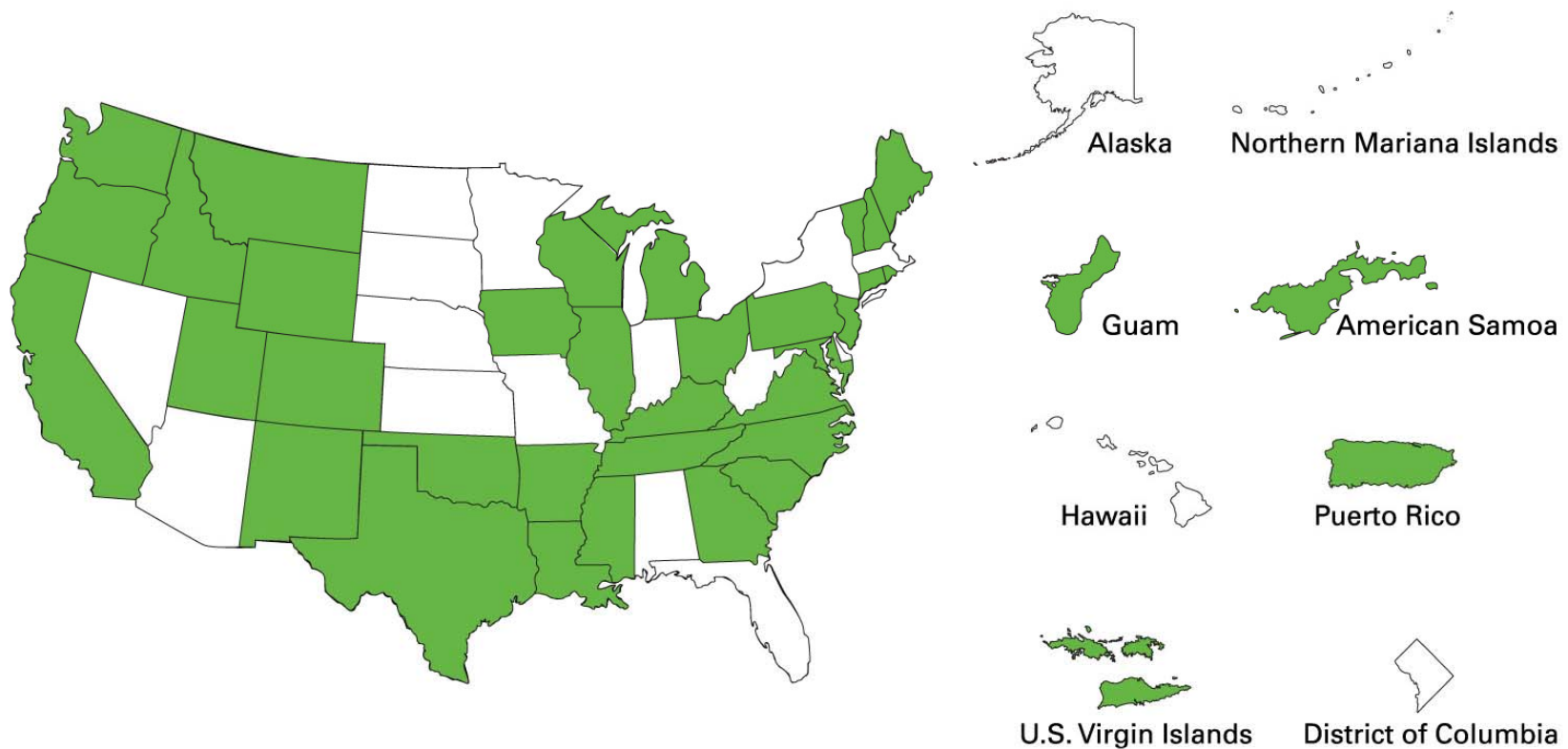
Overview of State Rebates

52 PROGRAMS OFFERED REBATES ON AT LEAST 1 MAJOR APPLIANCE



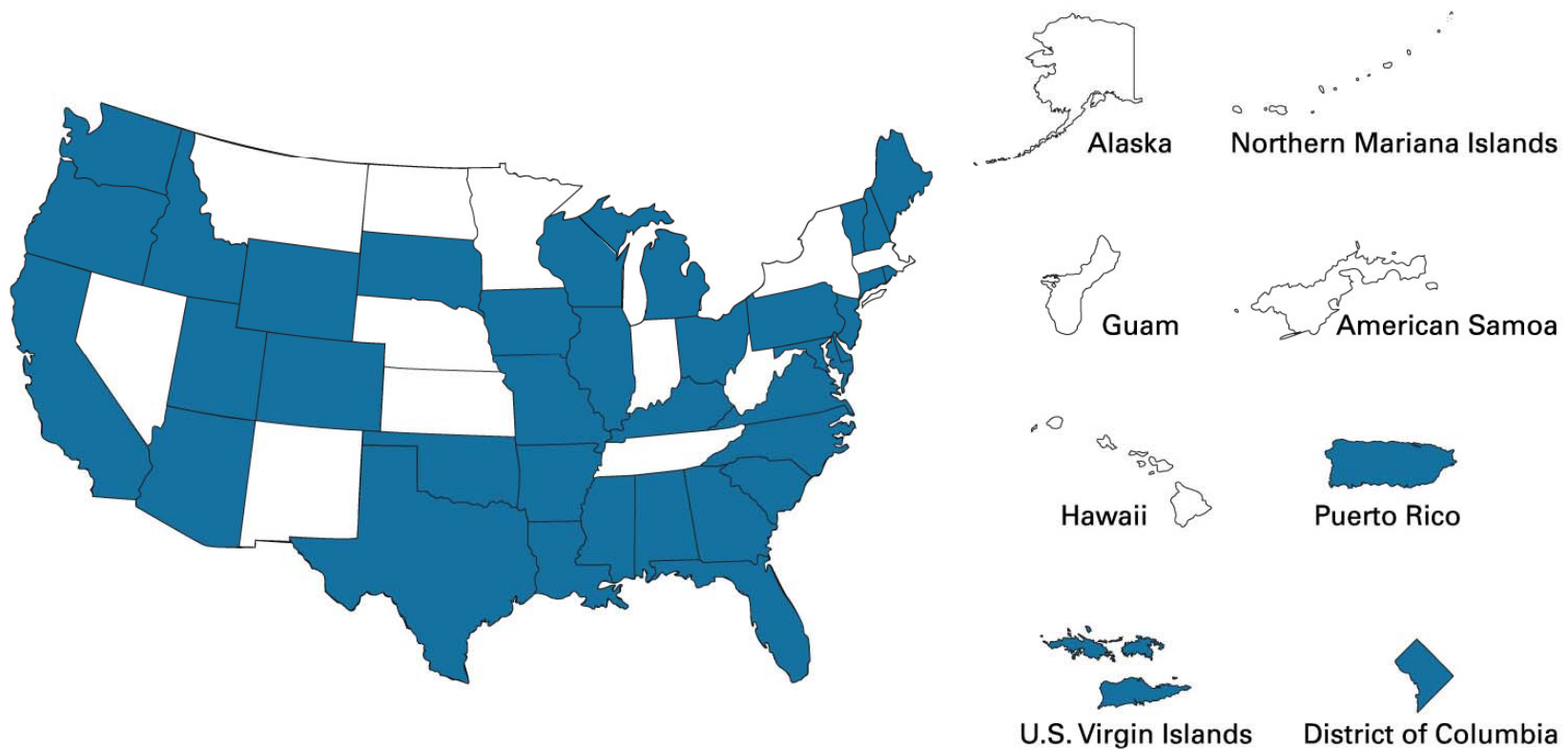
Overview of State Rebates

37 PROGRAMS OFFERED REBATES ON AT LEAST 1 HVAC PRODUCT



Overview of State Rebates

39 PROGRAMS OFFERED REBATES ON AT LEAST 1 WATER HEATER



Appliance Rebates

PRODUCT TYPE	NUMBER OF STATES GIVING REBATES	LOWEST REBATE AMOUNT	HIGHEST REBATE AMOUNT
AIR CONDITIONERS (ROOM)	26	\$20	\$200
CLOTHES WASHERS	47	\$35	\$800
DISHWASHERS	38	\$25	\$400
FREEZERS	28	\$25	\$600
REFRIGERATORS	47	\$50	\$700

HVAC Rebates*

PRODUCT TYPE*	NUMBER OF STATES GIVING REBATES	LOWEST REBATE AMOUNT	HIGHEST REBATE AMOUNT
AIR CONDITIONERS (CENTRAL)	24	\$75	\$1,000
BOILERS (GAS)	14	\$100	\$1,200
BOILERS (OIL)	8	\$199	\$1,000
BOILERS (PROPANE)	2	\$200	\$300
FURNACES (GAS)	28	\$100	\$500
FURNACES (OIL)	10	\$99	\$500
FURNACES (PROPANE)	6	\$150	\$500
HEAT PUMPS (AIR-SOURCE)	26	\$75	\$1,600
HEAT PUMPS (GROUND-SOURCE)	11	\$75	\$1,000

*Does not include 1 boiler reset control (\$100).

Water Heater Rebates*

PRODUCT TYPE*	NUMBER OF STATES GIVING REBATES	LOWEST REBATE AMOUNT	HIGHEST REBATE AMOUNT
ELECTRIC HEAT PUMP	27	\$50	\$425
GAS CONDENSING	12	\$99	\$400
GAS STORAGE	29	\$25	\$300
GAS TANKLESS	32	\$100	\$400
SOLAR	18	\$100	\$2,000

*Does not include 1 indirect (\$150) and 1 propane condensing (\$300).

Key Preliminary Findings

- Major appliances outperforming projections
 - Clothes washers and refrigerators the most popular rebated items
 - HVAC products meeting projections
 - Water heaters underperforming
- Partner support has been essential to program success
 - Assisted in meeting administrative cost match
 - Provided additional incentives on rebated products in most states
 - Provided recycling services for replaced units

- Administering 56 separate statewide programs was challenging
 - For retail and manufacturer partners
 - Tracking program details
 - Required multiple go-to-market strategies
 - For consumers (Why isn't my state open/rebating this product/offering higher rebates?)

Projected versus actual: An overview of the data

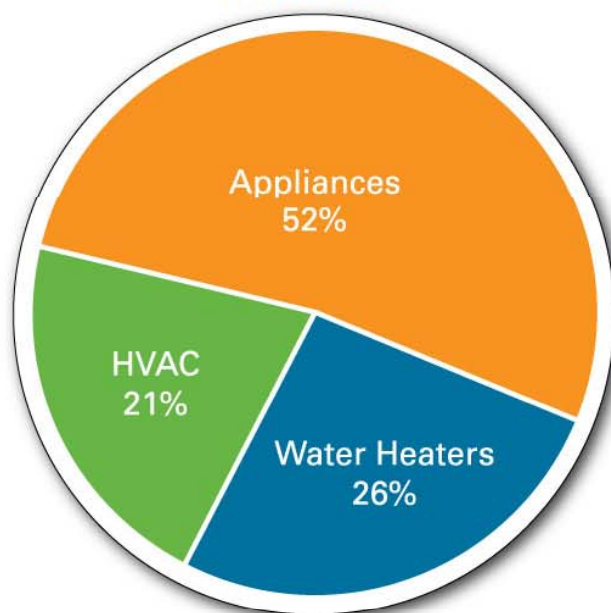
- All 56 states projected
 - Number of rebates by product
 - Energy savings
- DOE collected actuals through June 30, 2010:
 - Represents over \$98 million in rebate funds spent
 - Total of 689,000 rebates paid
 - Received reports from 53 of 56 states

What Data is in Special Progress Reports?

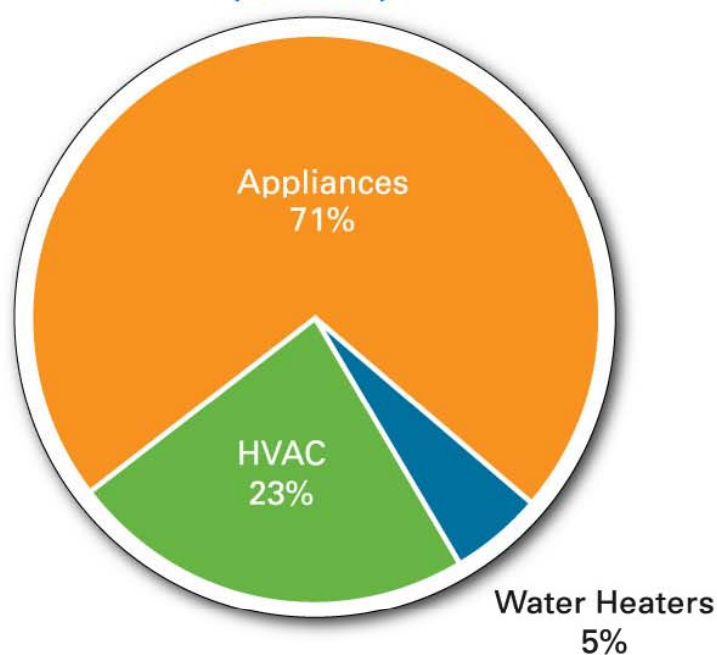
- State
- Product type
- Product brand
- Sub-brand
- Model number
- AHRI number
- SRCC number
- Date of purchase
- Date application received
- Date rebate paid
- Purchase price
- Rebate amount
- ZIP code of delivery
- Replaced product removed
- Replaced product recycled
- Additional recycling rebate

Electric Savings

**PROJECTED SAVINGS
(ANNUAL)**



**ACTUAL SAVINGS*
(ANNUAL)**



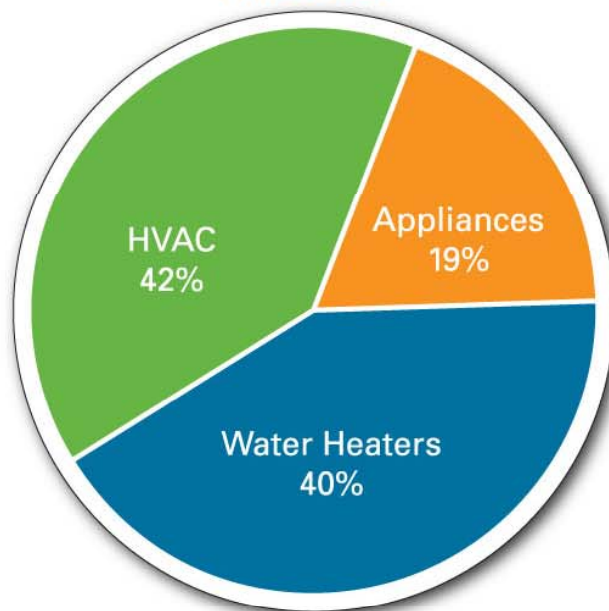
**TOTAL PROJECTED
ANNUAL SAVINGS**
296,923,185
kWh HOURS

**TOTAL ACTUAL*
ANNUAL SAVINGS**
83,665,176
kWh HOURS

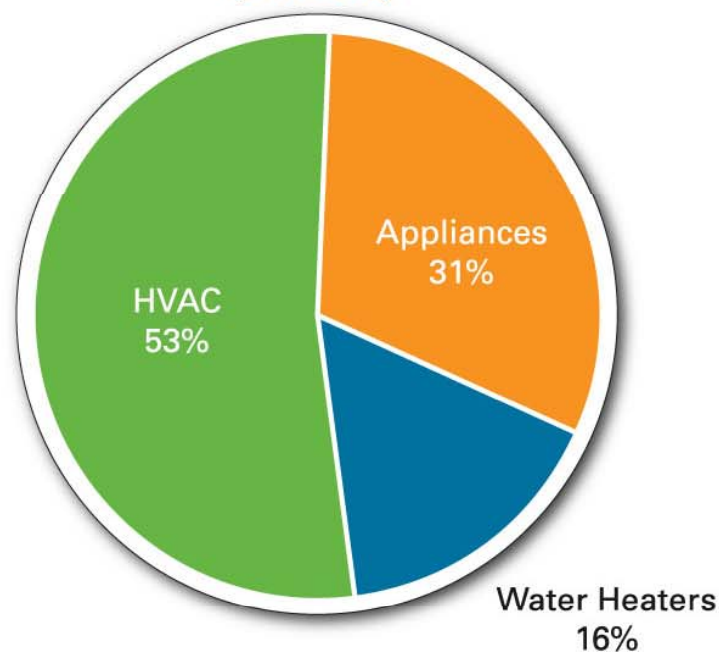
* Actual savings based on products rebated and reported through June 30, 2010.

Therm Savings

**PROJECTED SAVINGS
(ANNUAL)**



**ACTUAL SAVINGS*
(ANNUAL)**



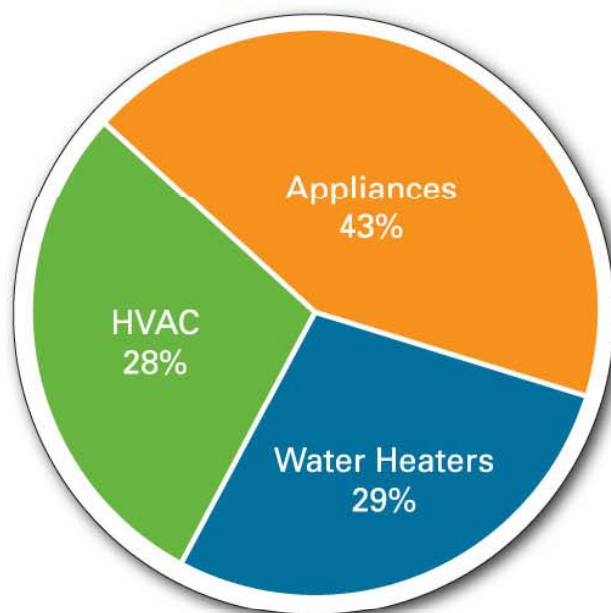
**TOTAL PROJECTED
ANNUAL SAVINGS**
13,603,474
THERMS

**TOTAL ACTUAL*
ANNUAL SAVINGS**
3,630,169
THERMS

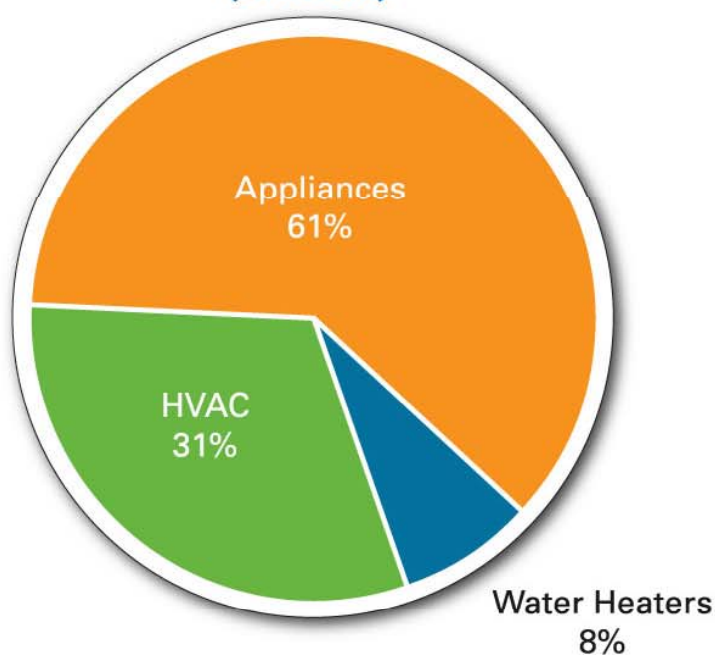
* Actual savings based on products rebated and reported through June 30, 2010. Includes Natural Gas Products Only.

CO₂e Savings

**PROJECTED SAVINGS
(ANNUAL)**



**ACTUAL SAVINGS*
(ANNUAL)**



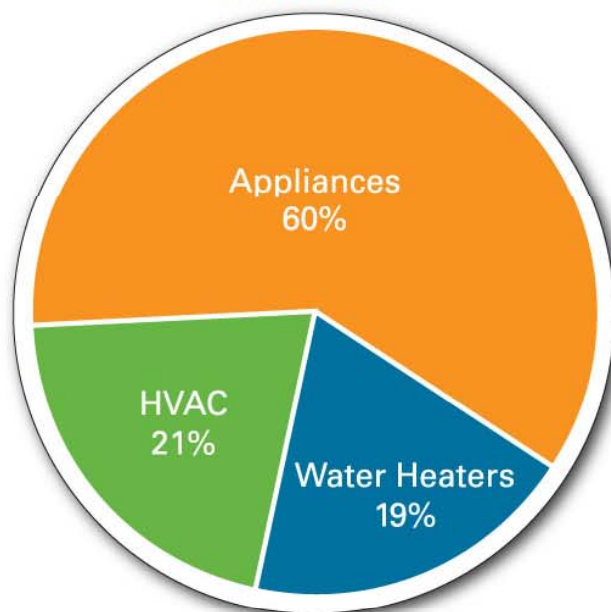
**TOTAL PROJECTED
ANNUAL SAVINGS**
650,467,951
POUNDS OF CO₂e

**TOTAL ACTUAL*
ANNUAL SAVINGS**
177,488,431
POUNDS OF CO₂e

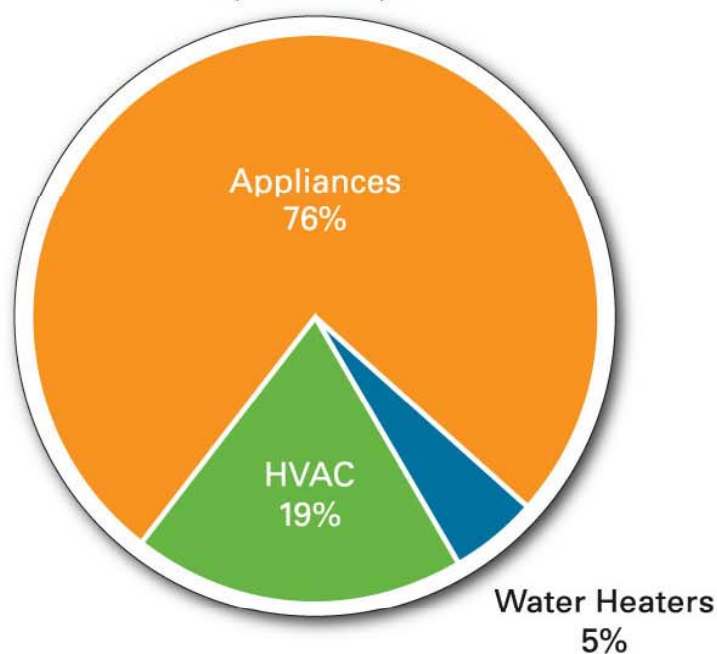
* Actual savings based on products rebated and reported through June 30, 2010.

Dollar Savings

**PROJECTED SAVINGS
(ANNUAL)**



**ACTUAL SAVINGS*
(ANNUAL)**



**TOTAL PROJECTED
ANNUAL SAVINGS**

\$84,252,361

**TOTAL ACTUAL*
ANNUAL SAVINGS**

\$27,525,678

* Actual savings based on products rebated and reported through June 30, 2010.

Energy Savings by Product Category*

PRODUCT	REBATES	kWh per REBATE	TOTAL kWh	THERM per REBATE	TOTAL THERM	ENERGY AND WATER SAVINGS per REBATE	TOTAL ENERGY AND WATER SAVINGS**
APPLIANCES	615,764	96.77	59,592,047	1.8	1,113,024	\$34	\$21,052,840
HVAC	56,499	346.32	19,566,688	34	1,934,228	\$91	\$5,153,992
WATER HEATERS	17,265	261	4,506,440	33	582,916	\$76	\$1,318,846

*Actual savings based on products rebated and reported through June 30, 2010. **Dollar savings represent annual savings, not lifetime.

Water Savings



* Actual savings based on products rebated and reported through June 30, 2010.

SEEARP's Leveraged Sales*

PRODUCT	REBATES	AVERAGE REBATE AMOUNT	TOTAL VALUE OF REBATES	AVERAGE SALES PRICE	TOTAL SALES
APPLIANCES	615,764	\$121	\$74,689,183	\$876	\$539,456,136
HVAC	56,499	\$360	\$20,354,663	\$5,137	\$290,222,674
WATER HEATERS	17,265	\$191	\$3,294,691	\$1,106	\$19,096,992

*Actual savings based on products rebated and reported through June 30, 2010.

- Continue support for active programs
- Assure Phase II programs are successful
- Continue robust data analysis
- Share program lessons and outcomes

For Further Information



Energy Efficiency &
Renewable Energy

- Lani Macrae, US DOE
Lani.MacRae@ee.doe.gov
202.586.9193
- Ely Jacobson, US DOE
Ely.Jacobson@ee.doe.gov
202.287.1333
- Chris Cloutier, D&R International, Ltd.
ccloutier@drintl.com
651.644.4017