

Utah Energy Efficiency Strategy

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Energy Efficiency Workshop
Albuquerque, NM
Nov. 15-16, 2007**

Background

- Utah Governor Jon Huntsman, Jr. adopted a strong energy efficiency goal in April 2006 – a 20% improvement in the efficiency of energy use statewide by 2015
- **Governors' Office requested preparation of a strategy to meet the goal**
- SWEEP assembled team including Utah Clean Energy, ACEEE, and Intermountain CHP Center to prepare the strategy
- **Funding provided by Governor's Office, U.S. EPA, and Hewlett Foundation**

Background (cont.)

- ❑ Oversight of strategy preparation provided by **Governor's Energy Advisor**
- ❑ Kick-off workshop organized to solicit ideas and feedback in December 2006
- ❑ Draft report issued in May 2007
- ❑ Report revised based on substantial and valuable feedback from stakeholders
- ❑ Final report represents views of the authors

Overview

- ❑ Study examines 23 major policies or initiatives that would help to achieve **Governor Huntsman's energy efficiency goal**
- ❑ Educational, incentive and regulatory options
- ❑ Addresses the efficiency of electricity, natural gas, gasoline, or diesel fuel use
- ❑ Defines 20% efficiency improvement as 16.7% reduction in energy use
- ❑ Analyzes energy savings potential, cost, cost effectiveness, environmental and social benefits, political viability, and priority

High Priority Policies

- ❑ Energy savings standards or targets for electric utility Demand-Side Management (DSM) programs
- ❑ Expansion of natural gas utility energy efficiency programs
- ❑ Upgrade building energy codes and fund code training and enforcement
- ❑ Lamp and appliance efficiency standards for products not covered by federal standards
- ❑ Expand low-income home weatherization

High Priority Policies (cont.)

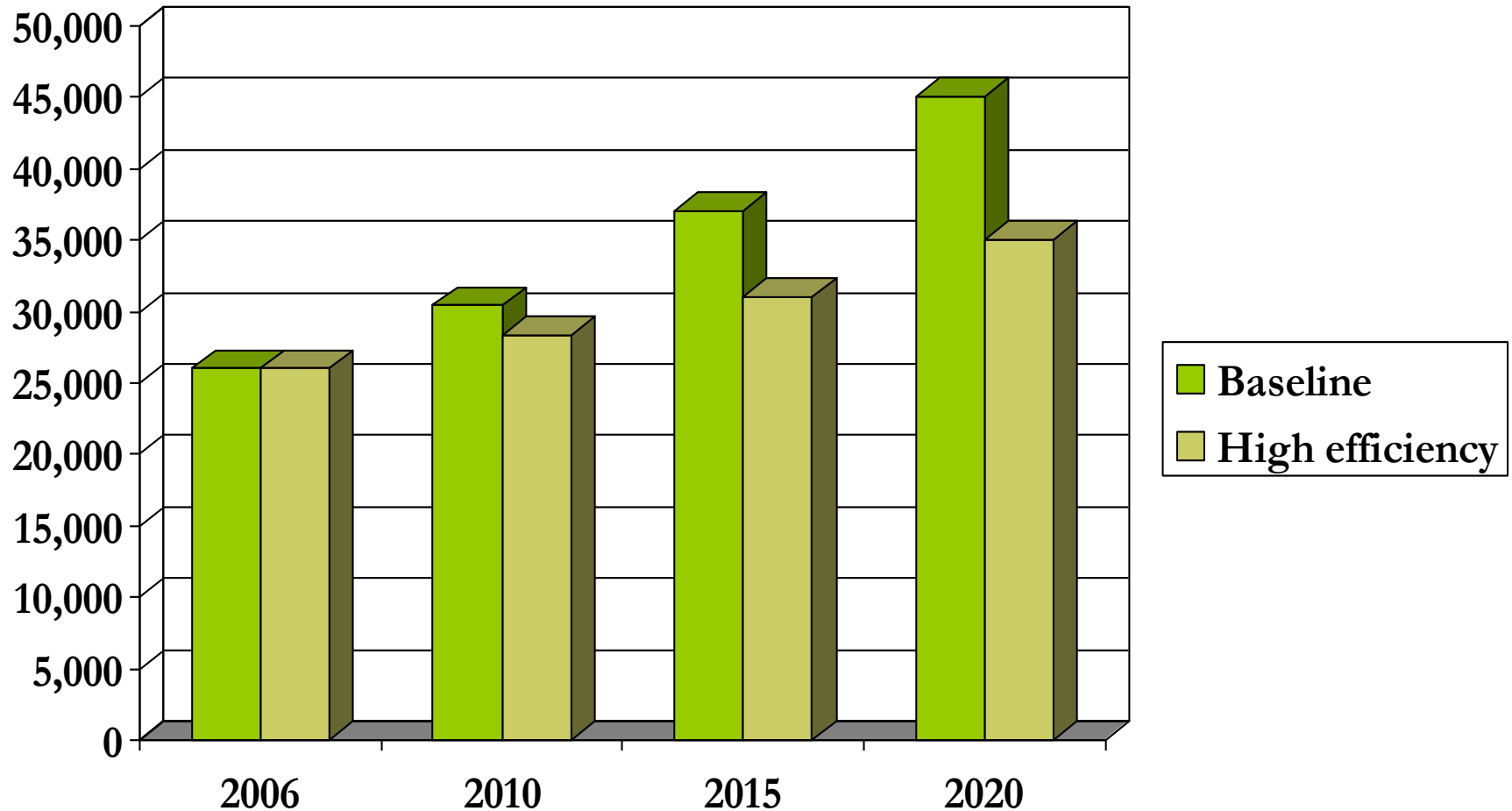
- Industry challenge and recognition program to stimulate industrial energy intensity reductions
- Energy savings targets for state agencies
- Clean car standards for new cars and light trucks
- Pay-as-you-drive insurance
- Reduce rate of growth of vehicle use
- Broad-based public education campaign

Electricity Savings by Option

(GWh per year)

OPTION	<u>2010</u>	<u>2015</u>	<u>2020</u>
Electricity DSM	894	2,375	4,108
Building codes	214	674	1,391
Appliance and lamp standards	137	1,334	2,137
Industrial challenge	130	615	1,183
Public sector initiatives	169	421	604
Public education	226	393	420
Other	202	377	476
TOTAL	1,972	6,189	10,319

Electricity Scenarios (GWh per year)

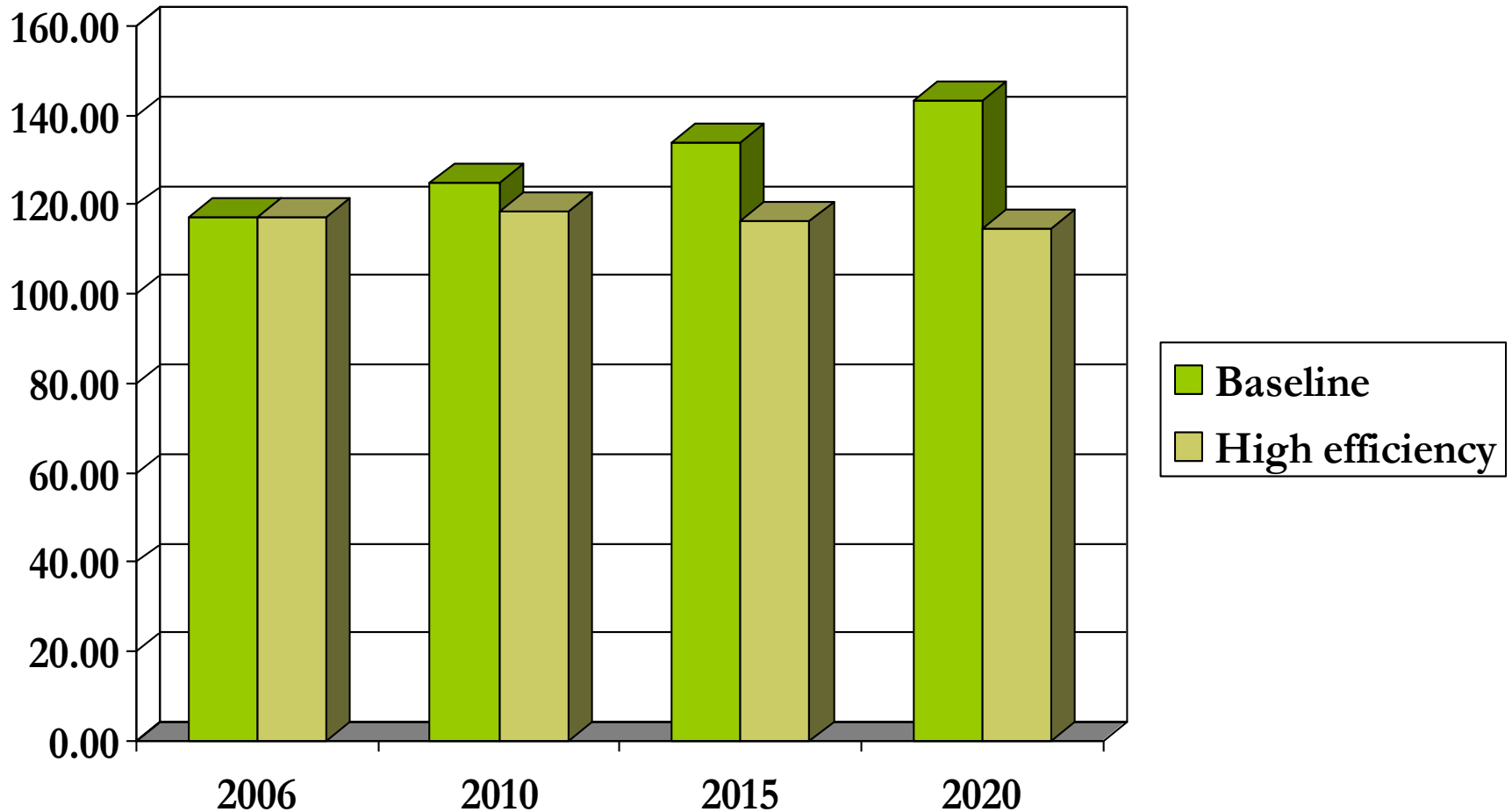


Natural Gas Savings by Option (million decatherms per year)

OPTION	<u>2010</u>	<u>2015</u>	<u>2020</u>
Gas DSM	2.33	8.27	14.94
Building codes	1.25	3.74	7.48
Conservation ordinances	0.40	1.20	1.60
Industrial challenge	0.78	3.71	7.25
Public sector initiatives	0.78	2.10	2.96
Public education	1.09	1.75	1.69
Other	0.52	1.42	2.05
TOTAL	7.23	22.19	37.97

Natural Gas Scenarios

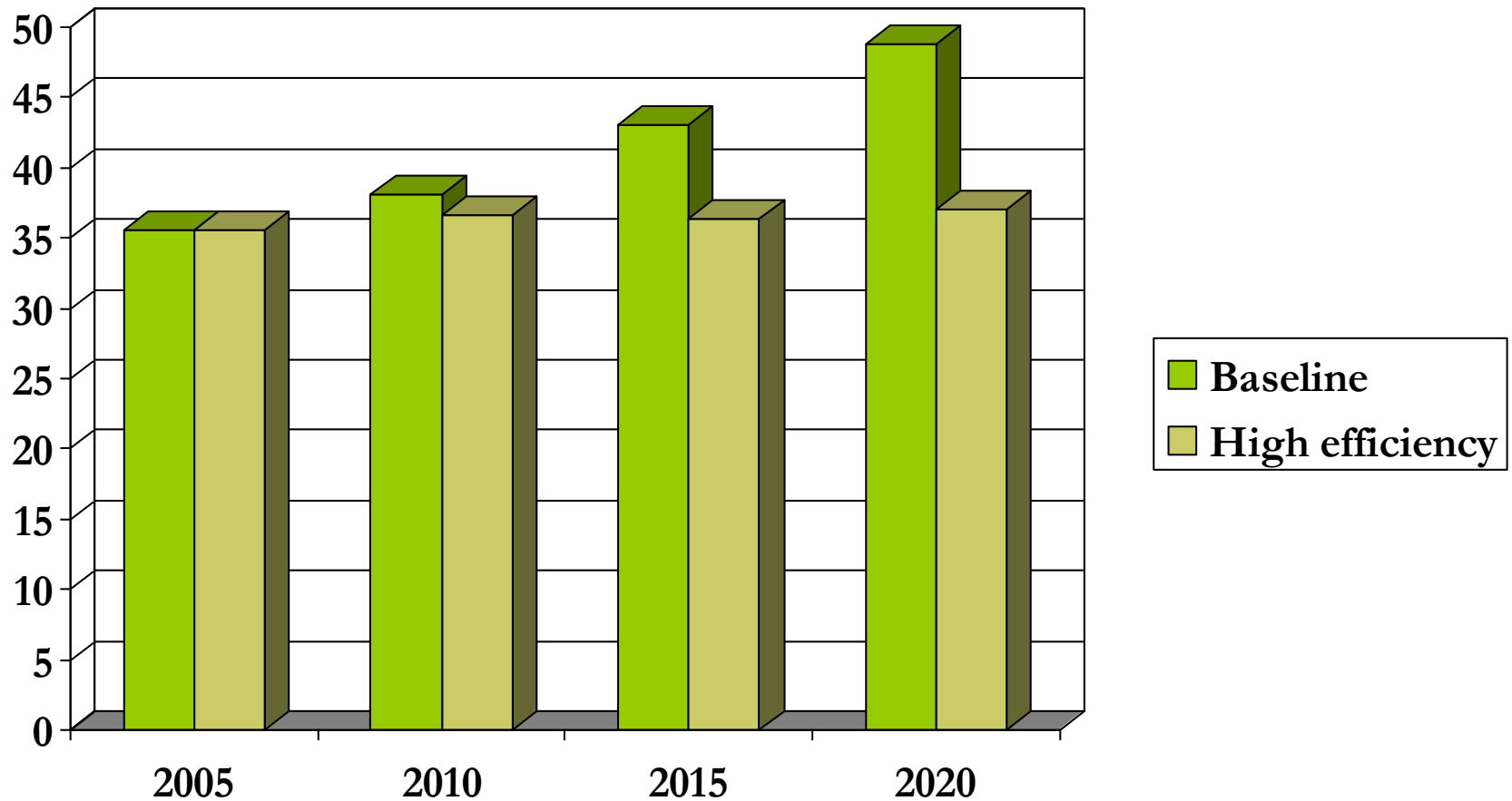
(million decatherms per year)



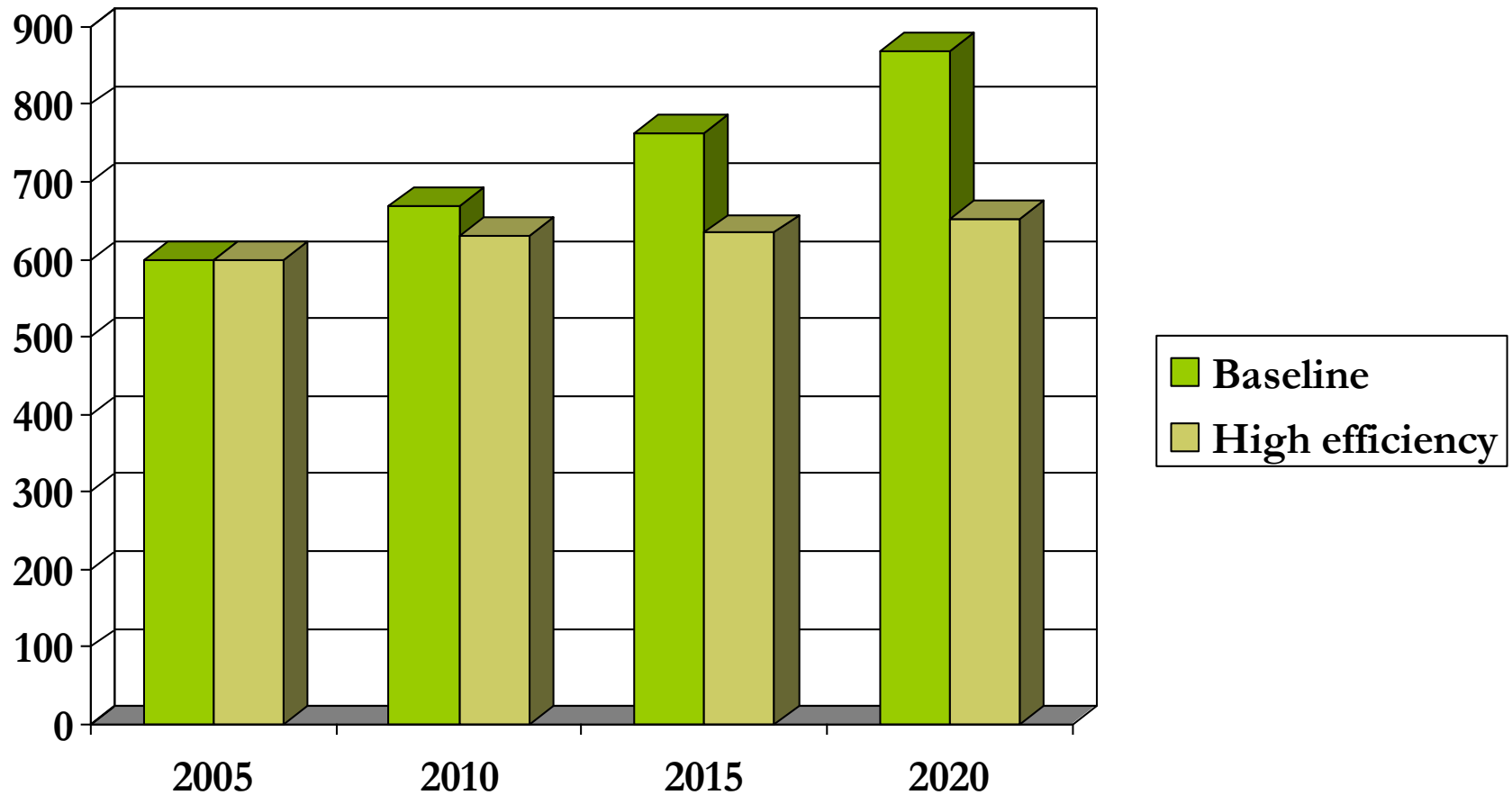
Gasoline and Diesel Fuel Savings by Option (million barrels per year)

OPTION	<u>2010</u>	<u>2015</u>	<u>2020</u>
Clean Car standards	0.24	2.08	4.59
Feebates	0.16	0.98	1.78
PAYD insurance	0.03	1.50	3.30
Reduce VMT growth	0.11	0.71	1.42
Enforce speed limits	0.62	0.70	0.80
Truck efficiency measures	0.25	0.99	1.44
Replacement tire standards	0.20	0.68	0.74
TOTAL (Totals do not equal sum of rows)	1.52	6.72	11.80

Gasoline and Diesel Fuel Scenarios (million barrels per year)

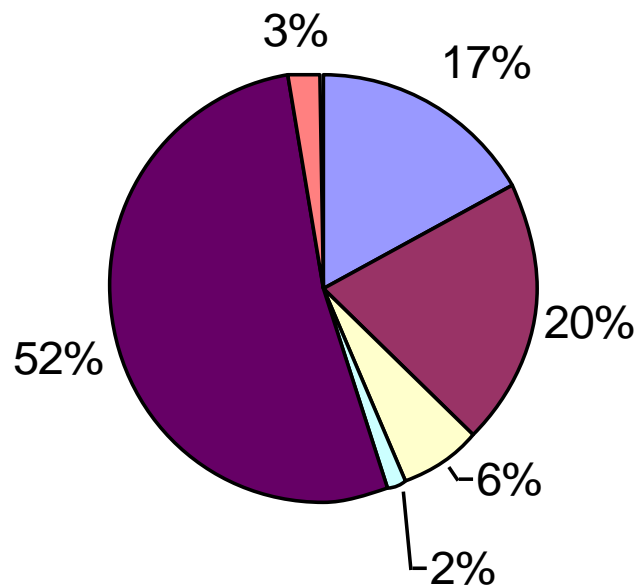


Primary Energy Use (trillion Btu per year)



Net Economic Benefit

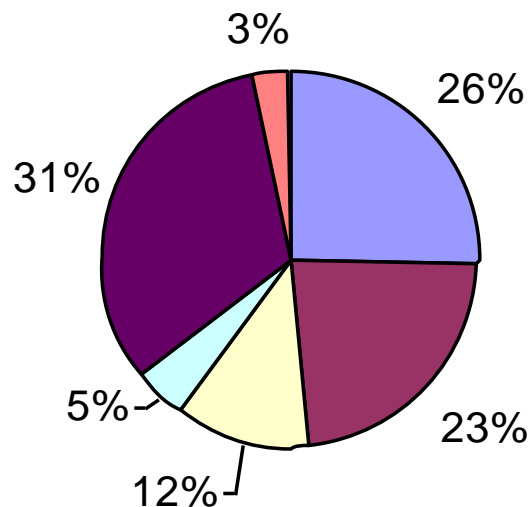
Total Economic Benefit - \$7.1 billion



- DSM options
- Building and appliance options
- Industrial options
- Public sector options
- Transportation options
- Education options

CO₂ Emissions Reduction

**Total CO₂ Emissions Reduction in 2015 -
7.9 million metric tons per year**



- DSM options
- Building and appliance options
- Industrial options
- Public sector options
- Transportation options
- Education options

Overall Results and Benefits

- ❑ Policies in combination meet Governor **Huntsman's energy efficiency goal** for energy types considered
- ❑ Net economic benefit of over \$7 billion for households and businesses in the state
- ❑ Substantial reduction in CO₂ emissions – 7.9 million metric tons per year by 2015
- ❑ Policies also reduce emissions of other pollutants, reduce water consumption, help businesses be more competitive and profitable, and increase employment

Next Steps

- ❑ A number of the policies already being implemented to some degree – utility DSM programs, statewide building code, public sector initiatives, VMT reduction
- ❑ Policies and analysis were presented to the **Governor's office, legislature, PUC, and** other interested parties
- ❑ Policies and analysis feed into state climate action plan now under development
- ❑ Further elaboration of policies of interest to decision makers in Utah

SWEEP:

Dedicated to More Efficient Energy Use in the Southwest

Resources available online at:

www.swenergy.org

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