

APS Energy Efficiency Program Update



Resource Alternative Stakeholder Meeting
June 6, 2008

Demand-Side Management (DSM) Programs

- Background
- Current Programs
- 2005-2007 Results
- Plans for 2008-2010



Energy Efficiency

What is DSM?

Demand-Side Management

Energy Efficiency (EE)

Reduce energy usage

- high efficiency equipment
- new construction efficiency standards
- energy use information

Load Shifting

Shift energy usage to off-peak times

- time of use rates

Demand Response (DR)

Reduce peak demand

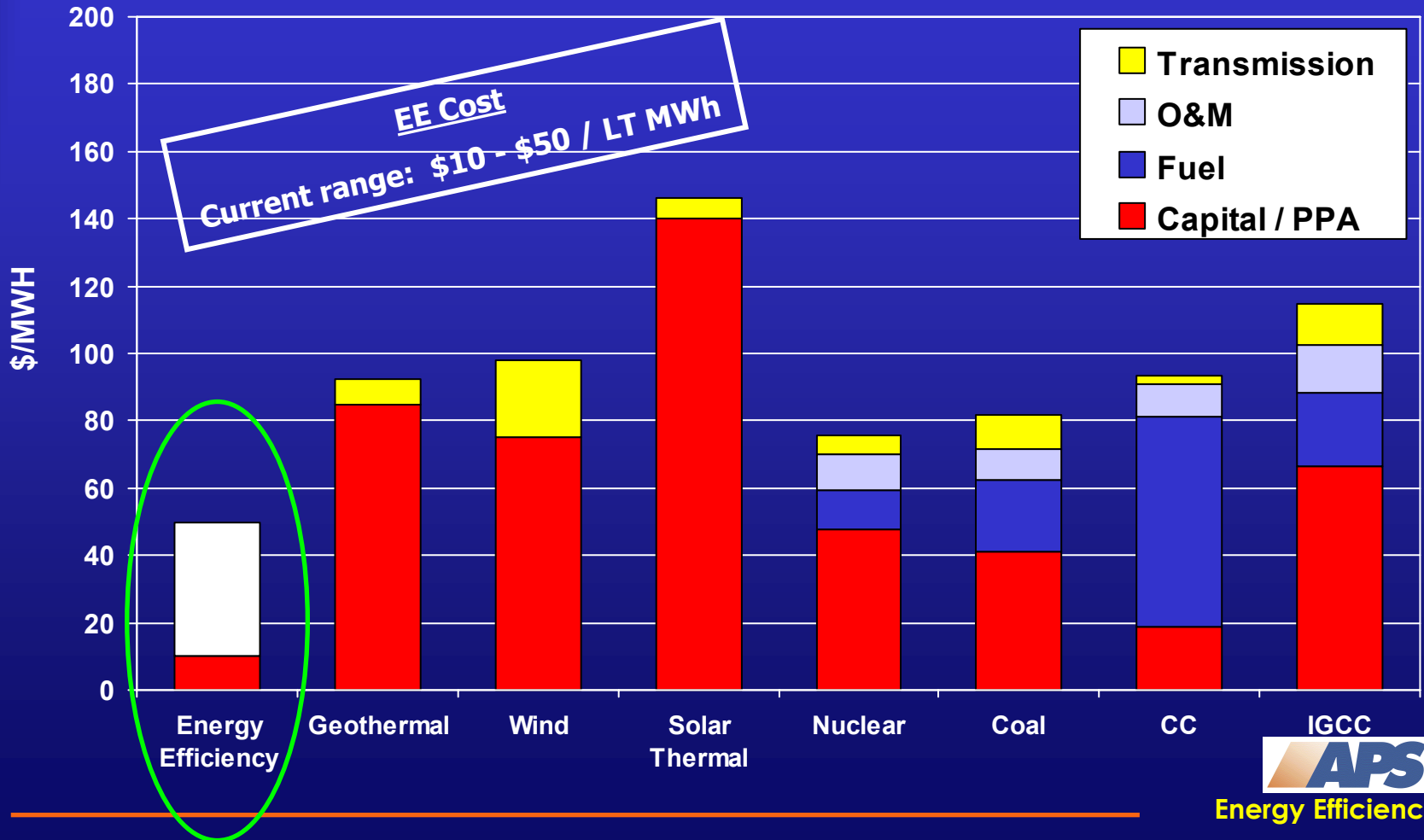
- direct load control
- critical peak pricing
- standby generation
- thermal storage



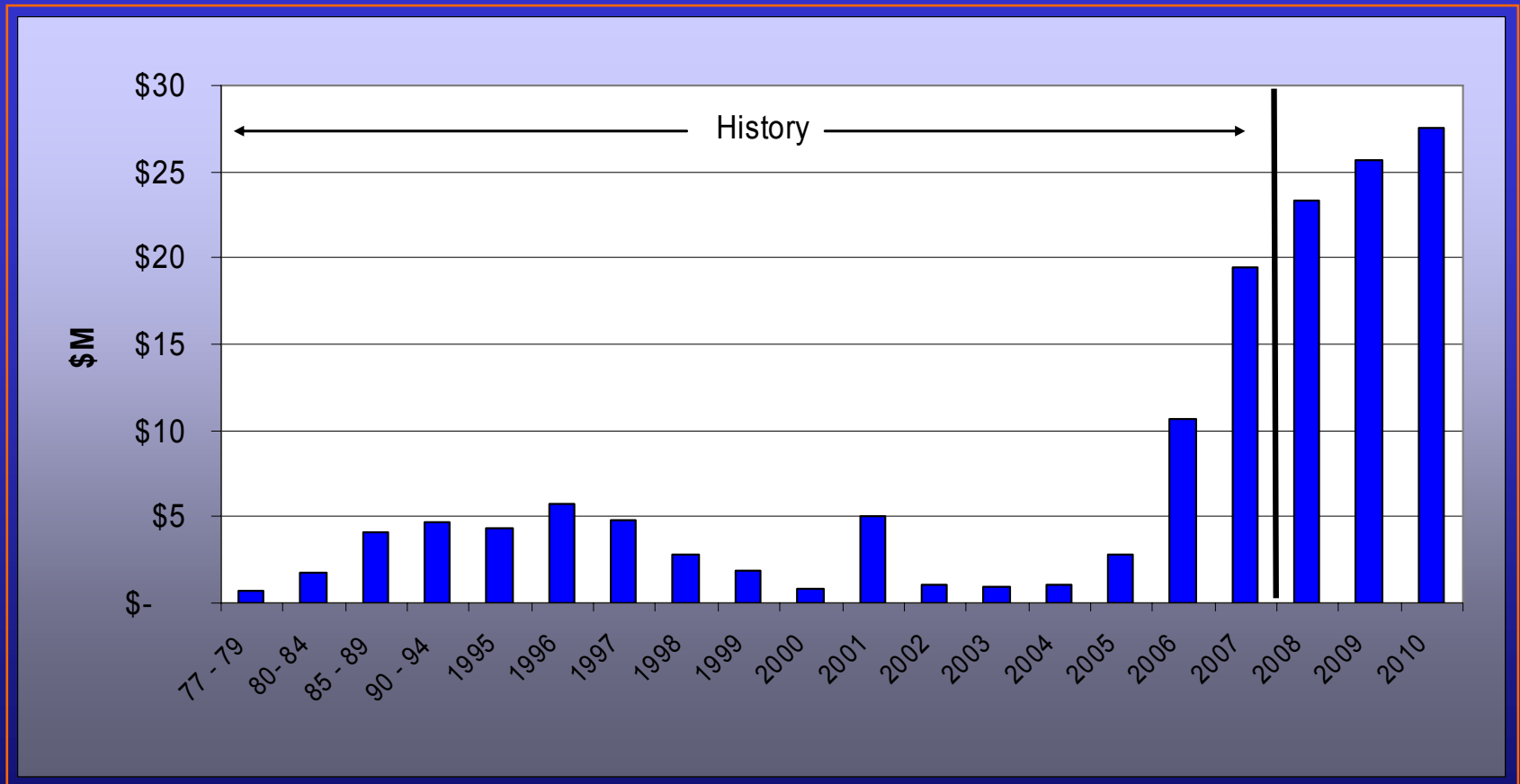
Energy Efficiency

Why Do Energy Efficiency?

Delivered Cost of New Resources Lifetime Levelized w/ 2007 In Service Date



History of DSM Spending at APS



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Current DSM Portfolio Milestones

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- April – Settlement Agreement → \$48 million spending 2005-2007 (\$16M/yr.)
- July – filed 10 programs for approval by ACC
- August – first program approved by ACC → Res. Consumer Products

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- February – interim approval by ACC of all 6 Non-Residential programs
- April – approval by ACC of all 3 remaining Residential programs

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- March – filed for final approval of Non-Residential programs
- June – ACC approved DSM Performance Incentive
- August – ACC approved addition of \$3.5 million to annual portfolio budget



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Criteria for EE Programs

Program development guided by stakeholders in DSM Collaborative Group

- Something for everybody
 - Residential / Non-Residential
 - Desert area / High country
 - All size customers
- Cost effective
 - Total Resource Cost (TRC) test > 1.0
- Easy to participate in
 - Pay up to 50% of incremental cost in incentives
- Efficiently administered
 - Program administration costs $< 10\%$ of total program costs



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Current EE Programs

Residential

- Consumer Products
 - CFLs

- Existing Home HVAC
 - Rebates (SEER)
 - * ■ Quality install
 - Duct test & repair

- New Construction
 - Energy Star

- Low Income
 - Bill assistance
 - Weatherization

Features

- ✓ Upstream buydown of retail price of bulbs

- ✓ \$250 rebate for 14 SEER
- ✓ \$400 rebate for 16 SEER
- ✓ \$100 rebate for Quality Install
- ✓ Up to \$250 for testing and repairing duct leaks

- ✓ \$400 builder incentive to build home using at least 15% less energy than standard home

- ✓ Provide free weatherization for limited income households and occasional bill assistance



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Current EE Programs

Non-Residential

- Large Existing Facilities
 - > 200 kW
- Small Businesses
 - \leq 200 kW
- Schools
- New Construction

- Building Operator Training
- Energy Information Services

Features

- ✓ Prescriptive or custom incentives for installation of high efficiency ...
 - ✓ Lighting
 - ✓ Cooling
 - ✓ Refrigeration
 - ✓ Motors

- ✓ Education for facility managers on energy efficient operations
- ✓ Information on hourly usage patterns



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Current DSM Portfolio Results*

	<u>ANNUAL</u>		<u>CUMULATIVE</u>
2005	\$3.2 M	<i>Spending **</i>	
	24,000 MWh	<i>Annual MWh</i>	
	140,000 MWh	<i>Lifetime MWh</i>	
2006	\$10.6 M	<i>Spending **</i>	\$13.8 M
	104,000 MWh	<i>Annual MWh</i>	128,000 MWh
	780,000 MWh	<i>Lifetime MWh</i>	920,000 MWh
2007	\$19.4 M	<i>Spending **</i>	\$33.2 M
	273,000 MWh	<i>Annual MWh</i>	401,000 MWh
	2,356,000 MWh	<i>Lifetime MWh</i>	3,276,000 MWh

* Subject to final MER verification

** Includes Performance Incentive



Current DSM Portfolio

Summary of Results*

2005-2007

- \$33.2M total spending (0.6% of revenue in '07)
- 3,276 Lifetime GWh energy reduction
 - Approx. cost of \$11/LT MWh
- Over \$250M savings on customer bills during lifetime of measures installed
- 64 MW peak demand reduction
- \$84M of Net Benefits
- 1.5M tons of GHG emission reductions



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Current EE Program Achievements

Awards / Recognition:

- Consumer Products Program (CFLs)
 - 2007 EPA/DOE Energy Star Partner of the Year Award
 - 2007 ACEEE Exemplary Program Award
- Energy Star Homes Program (New Construction)
 - 2008 EPA/DOE Energy Star Partner of the Year Award
 - 2008 EPA Leadership in Housing Award
- Solutions for Business Program
 - Acknowledged by AESP for quick startup and significant impacts
- Overall Program Portfolio recognized by local media and national trade publications for contributions to Sustainability



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Current DSM Portfolio

Reporting of Results

- Semi-annual reports
 - March 1 and September 1
- Measurement, Evaluation, Research (MER)
 - Preliminary results under review
 - Will be incorporated into Sept. 1 reporting
- 2008-2010 Program Budget
 - Filed Dec. 28, 2007 for ACC approval



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Future EE Plans 2008 - 2010

- Spending:
 - \$76M over 3-yr. period
 - \$19.5M/yr. commitment X 3 yrs. \$60M
 - Est. make-up of '05-'07 shortfall \$16M
 - Total 3-yr. spending \$76M
- Expected Savings:
 - 657,000 MWh cumulative annual savings
 - 6,814,000 MWh lifetime savings
- Flexibility in program management



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Current Questions ??

- How much Energy Efficiency savings can APS achieve?
- What impact does increased Energy Efficiency have on APS earnings?
 - Cost recovery
 - Lost sales
 - Earnings on investment / performance incentive



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Future Market Potential for Energy Efficiency

- Depends on ...
 - Baseline level of energy usage
 - Incremental cost of efficiency and % paid by utility
 - Customer willingness to take action
 - New technologies
- Savings potential can be achieved by ...
 - Utility incentive programs
 - Higher building efficiency codes
 - Higher appliance efficiency standards



Summary

- Current programs very successful in short time and continue gaining momentum
- Potential for more MWh savings from Energy Efficiency exists
- Amount of future savings depends on continued cost effectiveness to APS and impact on APS' earnings
- Energy Efficiency plays a key role in future resource planning



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