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Memorandum

From the office of
Commissioner Gary Pierce
Arizona Corporation Commission
1200 W. WASHINGTON
PHOENIX, ARIZONA
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ORIGINAL

Arizona Corporation Commission
DOCKETED
APR 18 2014
DOCKETED BY

TO: Docket Control

DATE: April 18, 2014

FROM: Commissioner Gary Pierce

SUBJECT: Energy Efficiency & Integrated Resource Planning
Docket # RE-00000C-09-0427

The agenda and presentations from the April 17, 2014 Energy Efficiency & Integrated Resource Planning workshop have been docketed.

Workshop 3 EE Standards and EE/IRP Rulemaking – April 17, 2014

Includes discussion of:

1.) Modification or suspension of EE standards.
2.) Incorporation of EE into IRP.
3.) Any proposed changes to EE and/or IRP rules.
4.) Arizona Public Service's overview of its annual DSM progress report required by Decision No. 73089.

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2013 Annual
DSM Progress Report

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APS Energy Efficiency Programs

RESIDENTIAL	
Consumer Products	CFL lighting, Pool pumps
Existing Homes HVAC	AC rebates, Duct repair, Diagnostics
Home Performance	Home energy audits and upgrades
New Homes	High performance new homes
Appliance Recycling	Refrigerators, freezers
Low Income	Weatherization, bill assistance
Conservation Behavior	Custom home energy reports
Multi-Family	Rental property efficiency upgrades
Shade Trees	Shade trees, planting workshops
NON-RESIDENTIAL	
Large Existing Facilities	•Comprehensive non-residential EE upgrades •Addresses all segments and end uses with custom and prescriptive measures •Marketed as "Solutions for Business"
New Construction	
Small Business	
Schools	

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2013 Program Results

	Program	Participation	2013 Savings (MWHs)
RESIDENTIAL EE	Consumer Products	3.2 MM bulbs, 6250 pumps	154,233
	Existing Homes HVAC	8700 AC; 2850 ducts; 800 diagnostics	12,062
	Home Performance	4700 home audits, 1850 upgrades	5404
	New Homes	3870 homes	19,427
	Appliance Recycling	7100 fridges/freezers	8787
	Low Income	800 homes	1491
	Conservation Behavior	74,000 households	24,944
	Multi-Family	9185 apartments	9487
	Shade Trees	4175 trees	351
NON-RES. EE	Large Existing Facilities	529 projects	184,207
	New Construction	79 projects	15,513
	Small Business	788 projects	14,155
	Schools	218 projects/59 districts	13,481
	Codes and Standards	Building codes and appliance standards	22,224
	Demand Response	Critical Peak Pricing, Peak Solutions, TOU	53,050
	TOTAL	101.6% of annual goal	538,841

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Energy Efficiency (EE) & Integrated Resource Planning (IRP)

Jeff Schlegel & Ellen Zuckerman

Southwest Energy Efficiency Project (SWEEP)

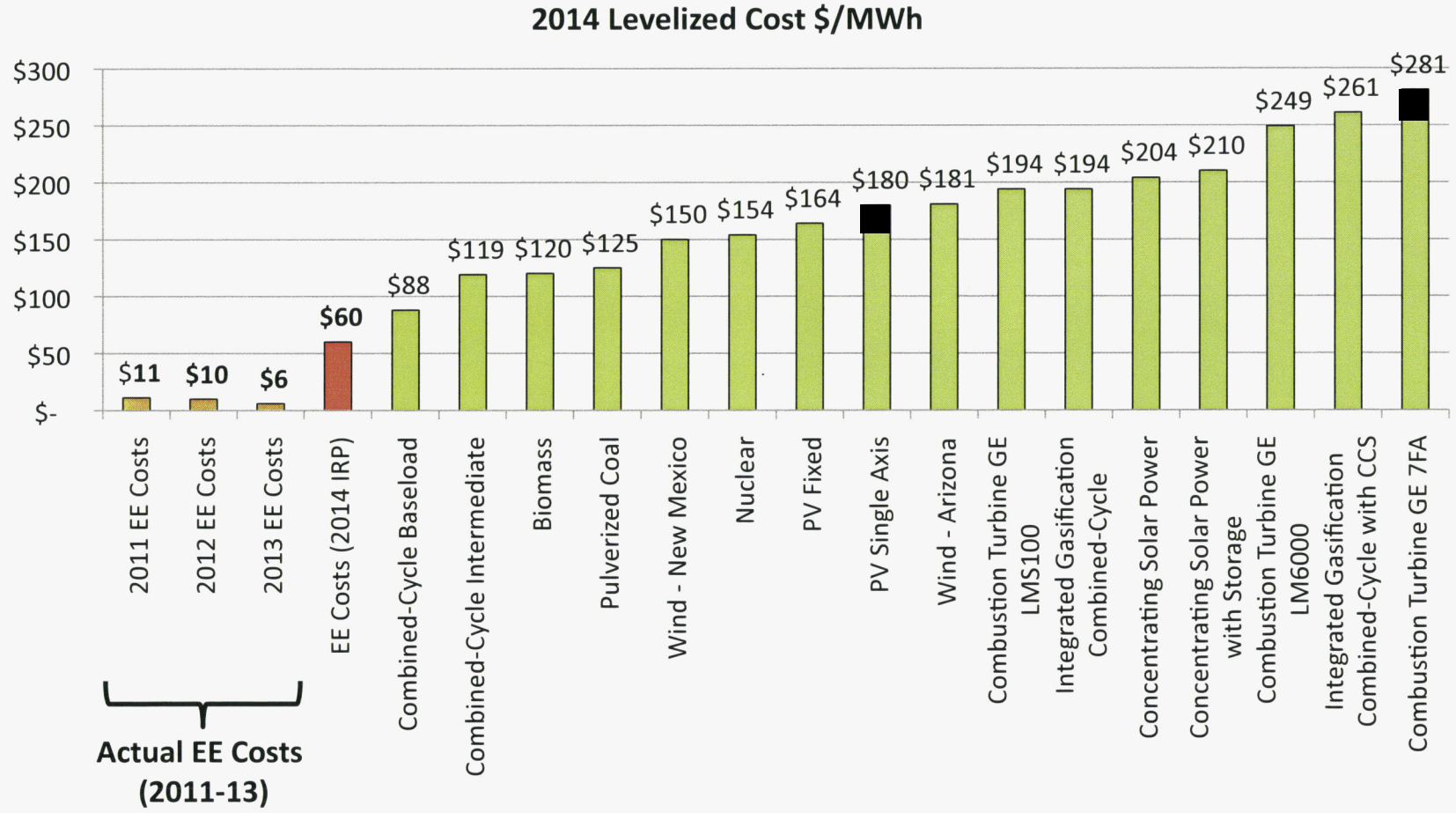
April 17, 2014

Outline

- EE is performing well – better than planned
- EE is an important resource in the IRPs in Arizona
  - Arizona utilities are relying on EE as a significant resource in their resource plans
- EE meets or exceeds a higher cost-effectiveness bar than other energy resources
- The EE Rule is effective in Arizona

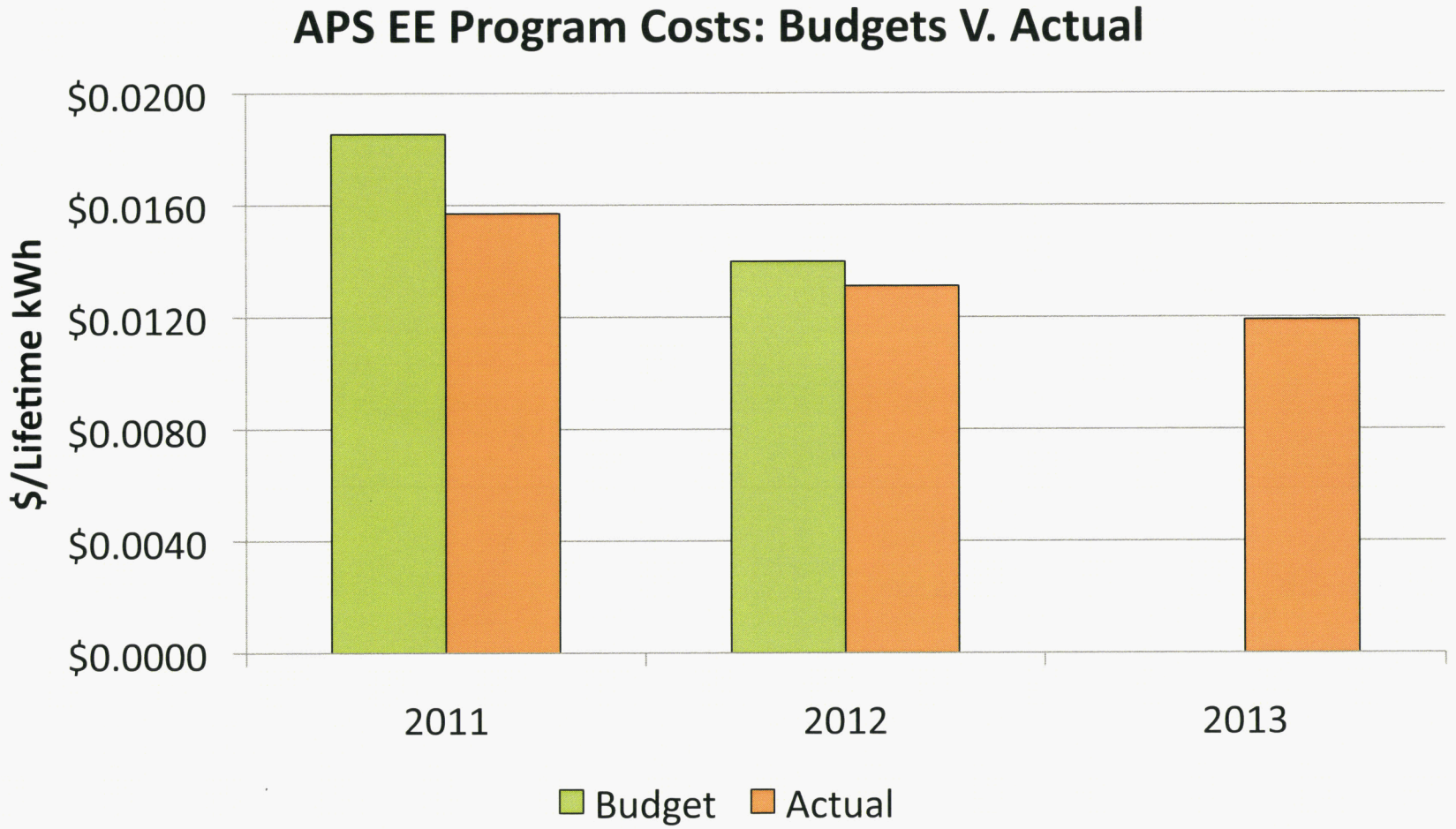
EE: The Least Expensive Resource

TEP New Resource Costs ($/MWh, 2014)



Source: TEP 2014 IRP; 2011, 2012, & 2013 TEP Annual DSM Reports

EE: Less Expensive than Planned



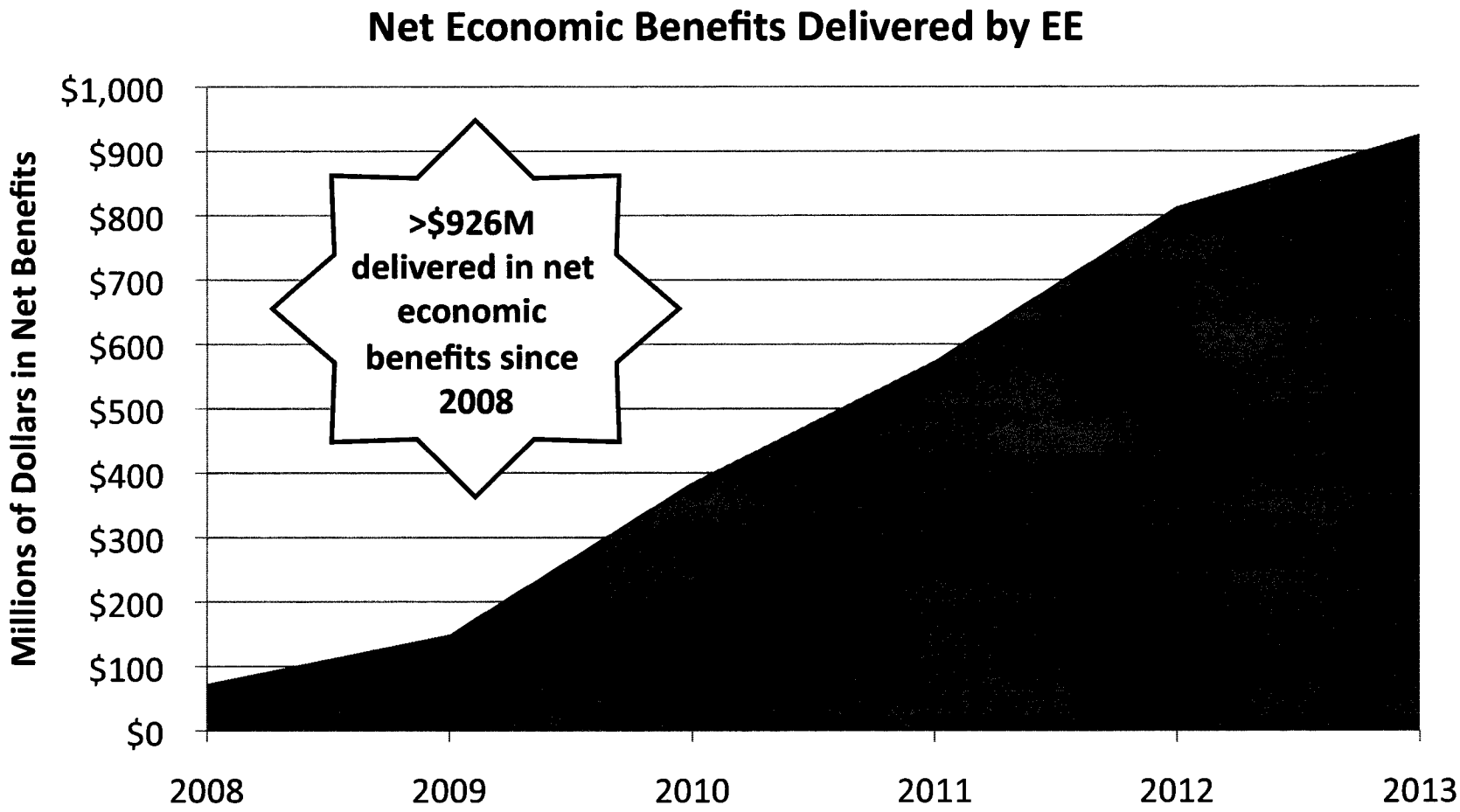
Costs include all EE program, measurement and evaluation, and performance incentive costs.
Source: APS DSM Annual Reports 2011-2013 and Commission Decisions on APS 2011 and 2012 EE Plans

EE: Liked by Customers

- APS Customer Satisfaction Index ranked in top 5 position among large IOU electric utilities nationally in past 4 years
- Customers familiar with APS EE programs have higher price satisfaction index

Source: APS; J.D. Power & Associates Overall Customer Satisfaction Index – Residential and Non-Residential customers

EE: Providing Significant Consumer Benefits



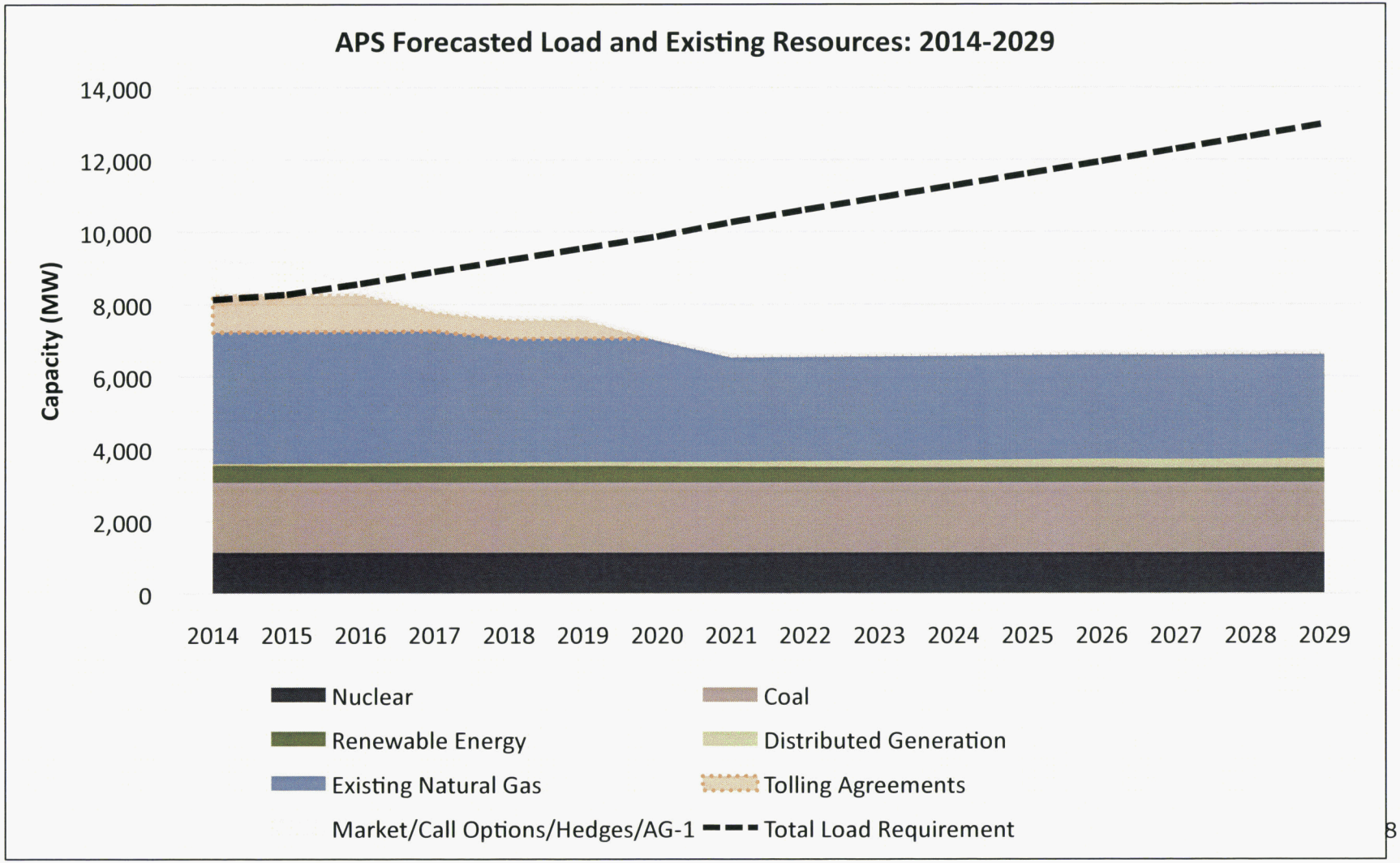
Source: APS and TEPAnnual DSM Reports 2008-2013. TEP's delivered benefits not included in 2008. Benefits do not include all benefits of EE.

The EE Standard Goals are Achievable and Are Being Met

- APS has met the EE Standard (EES) goals each year while delivering programs under budget
- APS plans to be in compliance again in 2014
- SRP is also achieving high savings equivalent to EES levels ahead of schedule

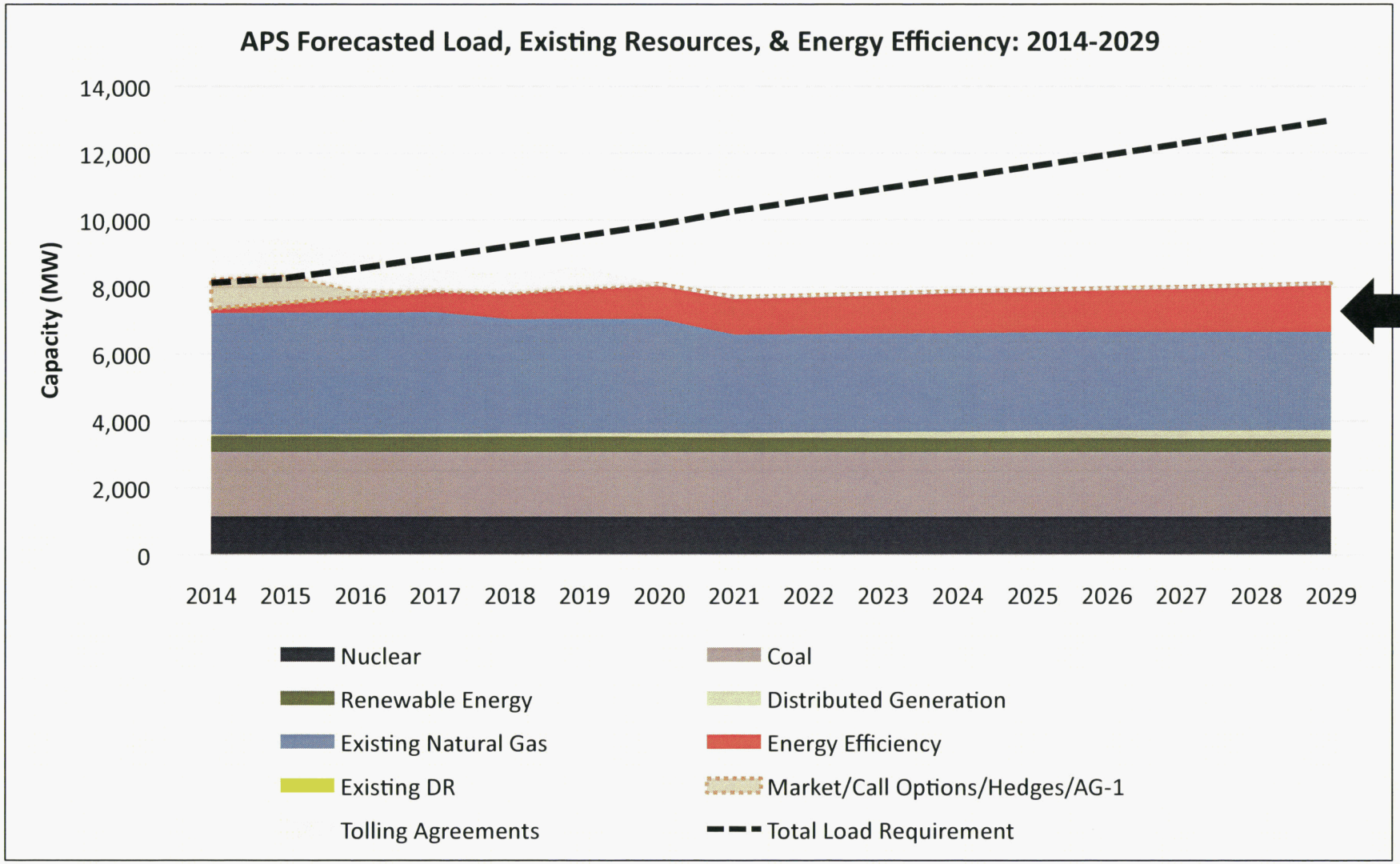
Source: SRP Annual DSM Reports

2014 IRPs: A Need for Resources

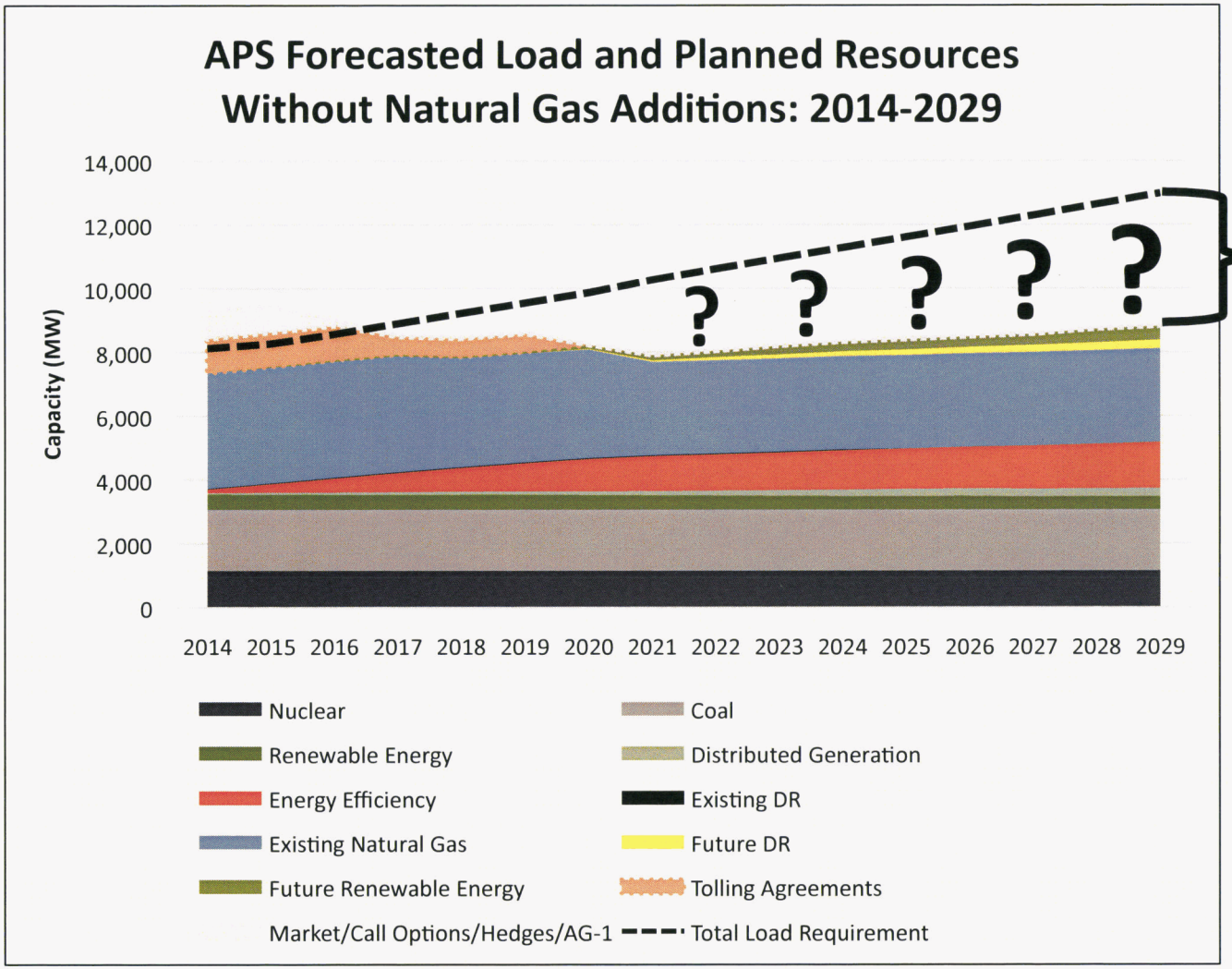


Source: APS 2014 IRP

2014 IRPs: EE Resource Makes a Significant Contribution Toward Meeting Needs



2014 IRPs: Which Resources Should Meet the Remaining Need?



How Should this Remaining Need Be Met?

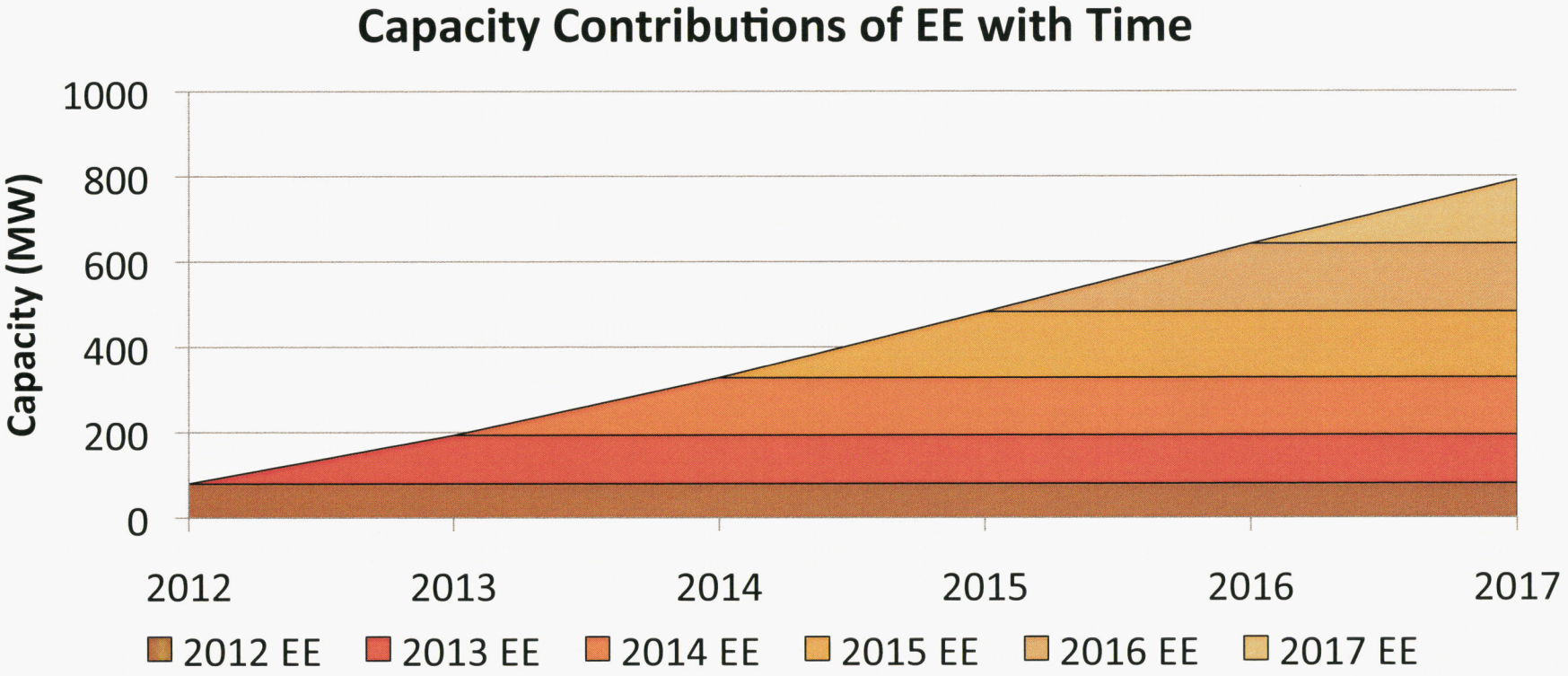
With EE: $10 - 50/MWh?

With Natural Gas: $88 - ~200/ MWh?

Source: APS 2014 IRP. Cost data from TEP 2014 IRP.

EE: Builds Up Capacity Over Time

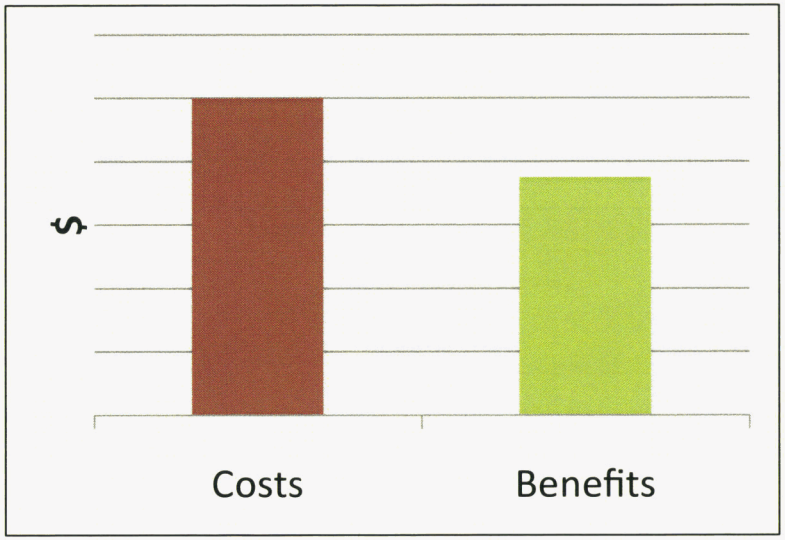
- EE resources build up over time to meet capacity needs
- EE should be captured when there are opportunities in the market
- Cost-effective EE built up over time provides benefits today



EE Cost Effectiveness

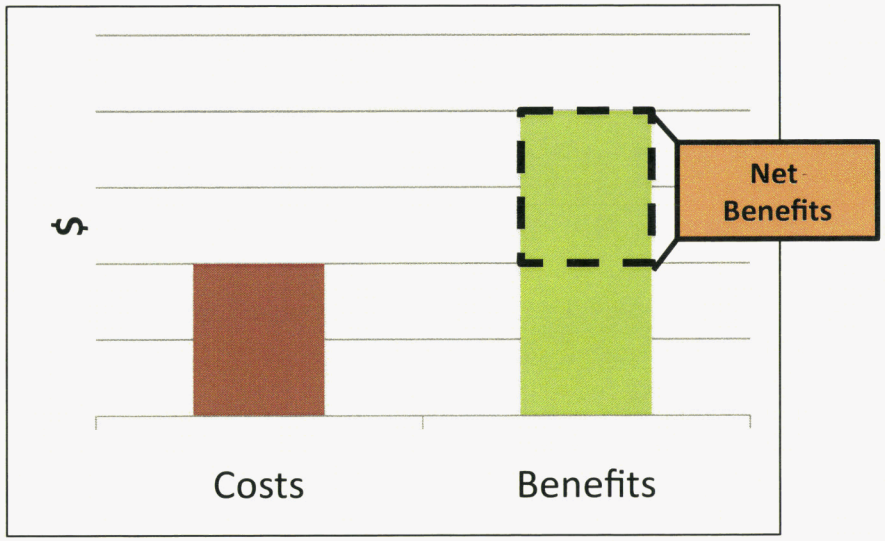
- What does "cost effective" mean?
  - Every $1 spent delivers at least $1 back in benefits (benefit/cost ratio ≥ 1.0)
  - The benefits of EE ≥ its costs

NOT Cost Effective



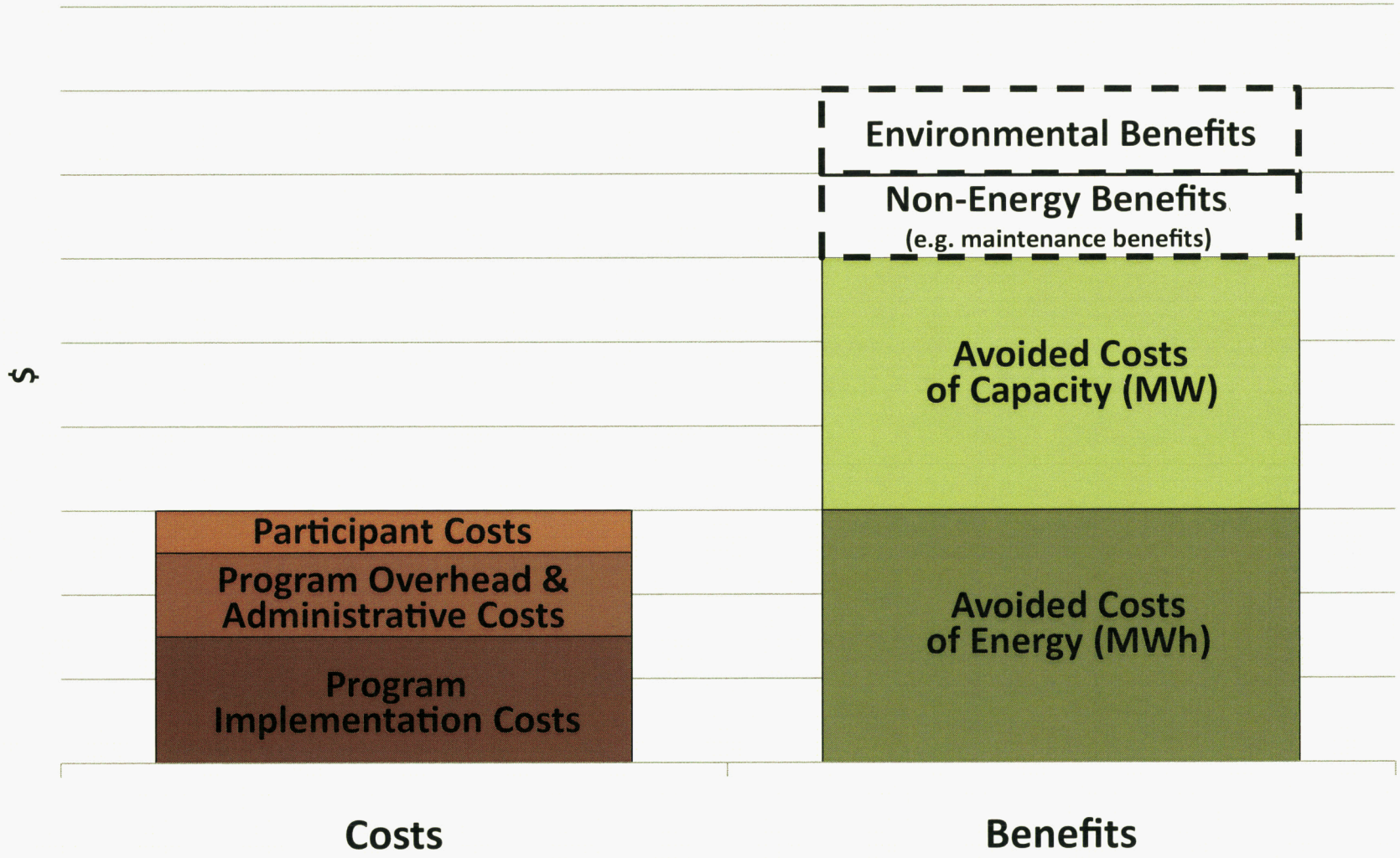
Costs exceed benefits; benefit/cost ratio < 1

Cost Effective

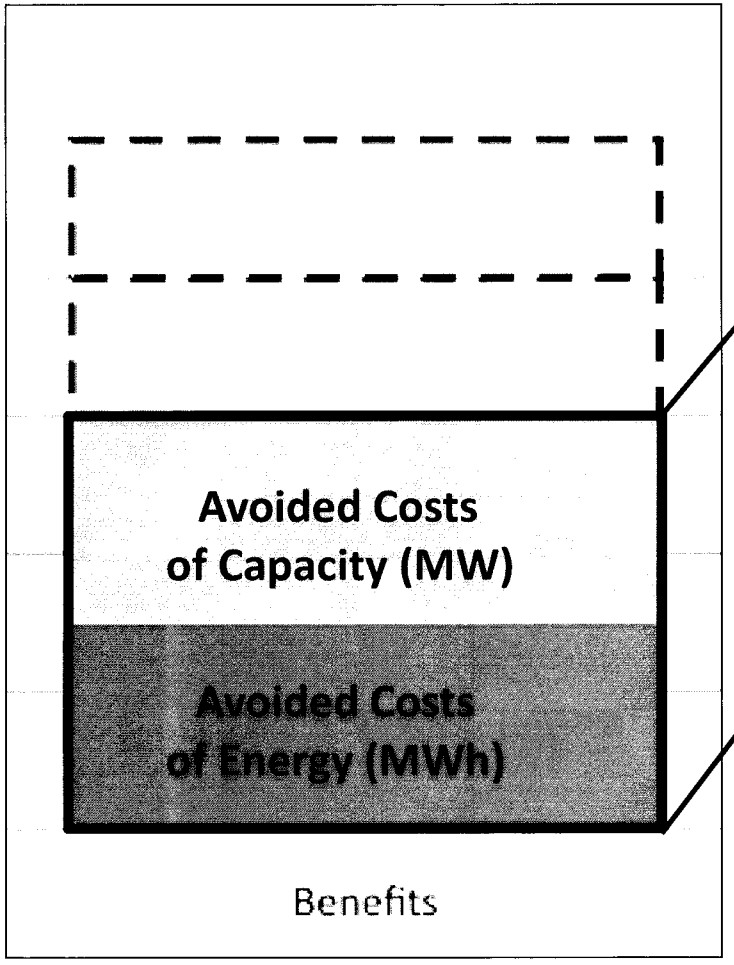


Benefits exceed costs; benefit/cost ratio ≥ 1

Arizona's Cost Effectiveness Test



What the Benefit-Cost Ratio Means



The test uses
avoided *marginal* costs

Therefore the test compares EE with the best supply resource (e.g. natural gas plant)

A benefit-cost ratio ≥ 1.0 means the EE investment is an equal or better investment than the next best available option
(and this is without considering all the benefits)

The Commission does not pose this question explicitly for any resource other than EE

Conclusions

- Commission targets ***really*** make a difference
  - All states achieving > 1% savings have targets
  - States with a sharp focus on customer savings and options, including states with retail competition, have effective targets
- EE is an important resource in Arizona utility IRPs
- EE is the least expensive resource
- EE is performing better than planned
- The EE Standard goals are being met
- Arizona utility IRPs demonstrate a need for DSM resources above the level of the EE Standard
- The EE Rule is effective and is working fine
  - Any adjustments of EE can be addressed through Implementation Plans

Thank you!

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