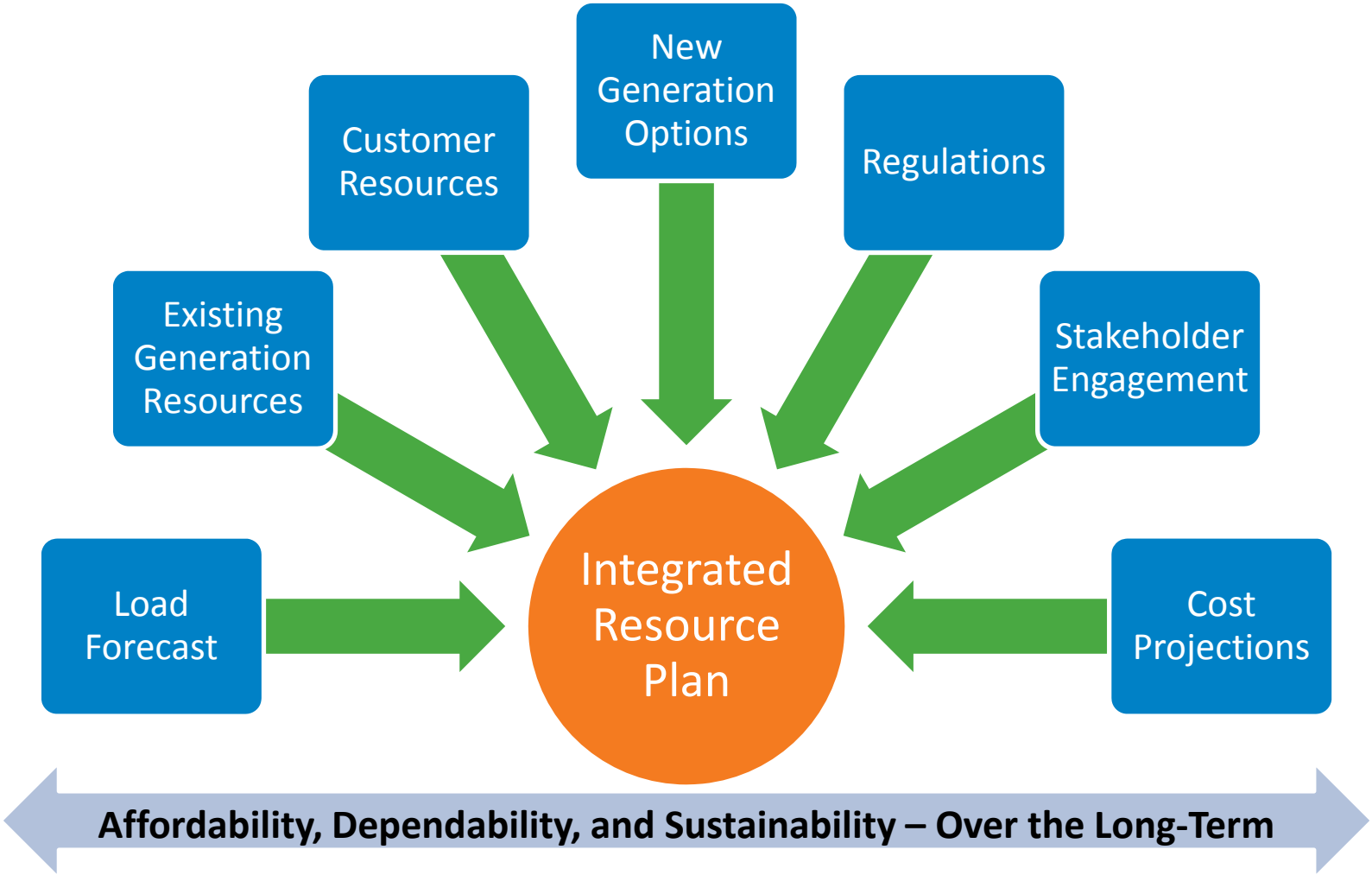
2012 Integrated Resource Plan Workshop

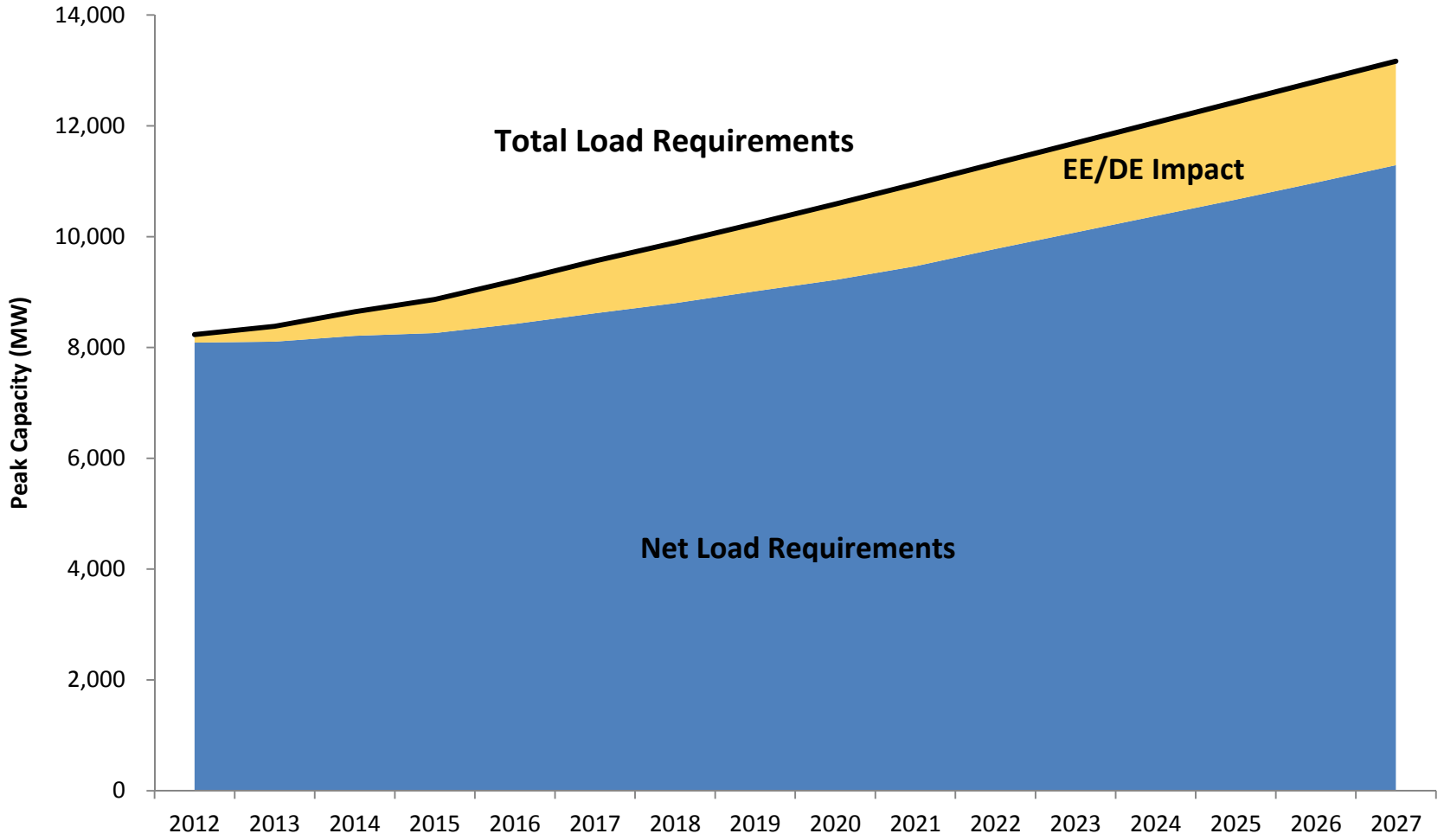
August 22, 2012

Arizona Public Service

Resource Planning Considerations



Peak Demand Forecast

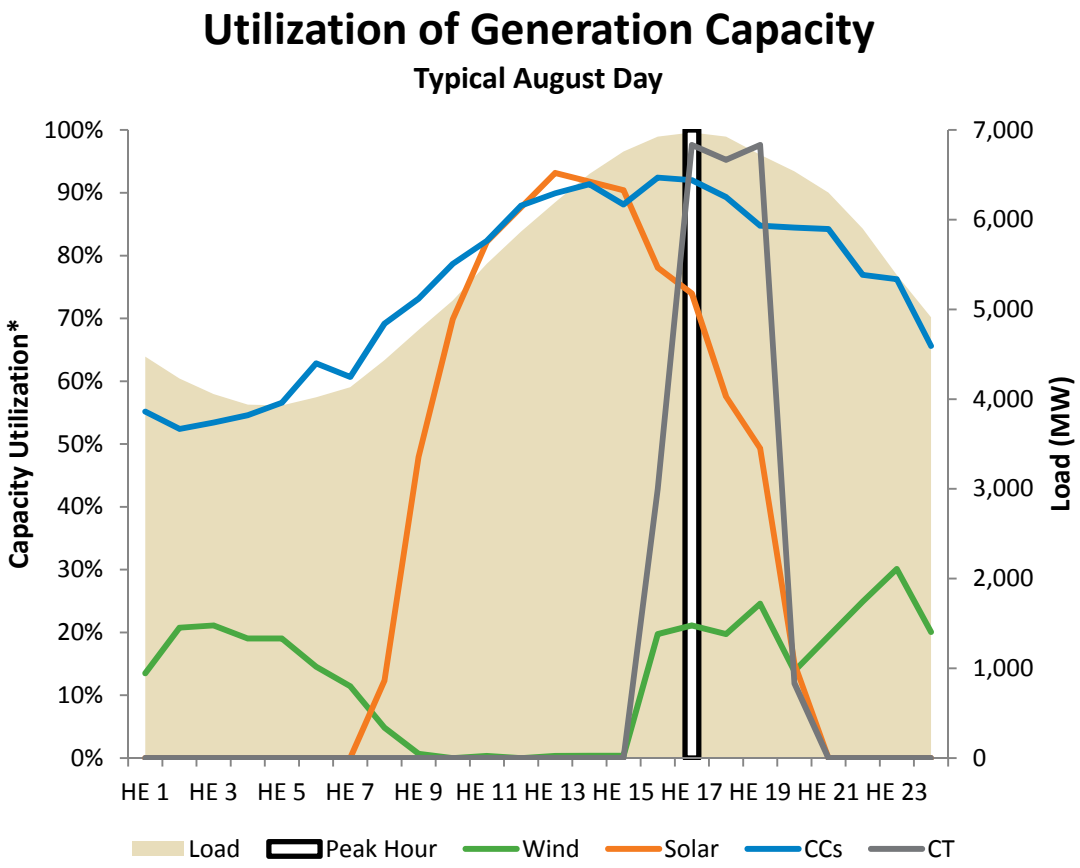


Sources of Power

Nuclear	Coal	Natural Gas	Energy Efficiency	Wind	Solar
					
• Reliable • No air emissions • Large water user • Spent fuel storage issues • High construction costs	• Abundant • Reliable • Inexpensive to operate • Higher emissions • Environmental compliance costs	• Abundant • Reliable • Limited emissions • Inexpensive to build and operate • Variable fuel prices	• Most economic resource available today • Dependent on customer adoption • Future costs uncertain	• Requires backup sources of power • No emissions • No fuel costs but high cost to build • Remote resource • Shorter construction time	• Abundant in AZ • Requires backup sources of power • No emissions • No fuel costs but high cost to build • Shorter construction time

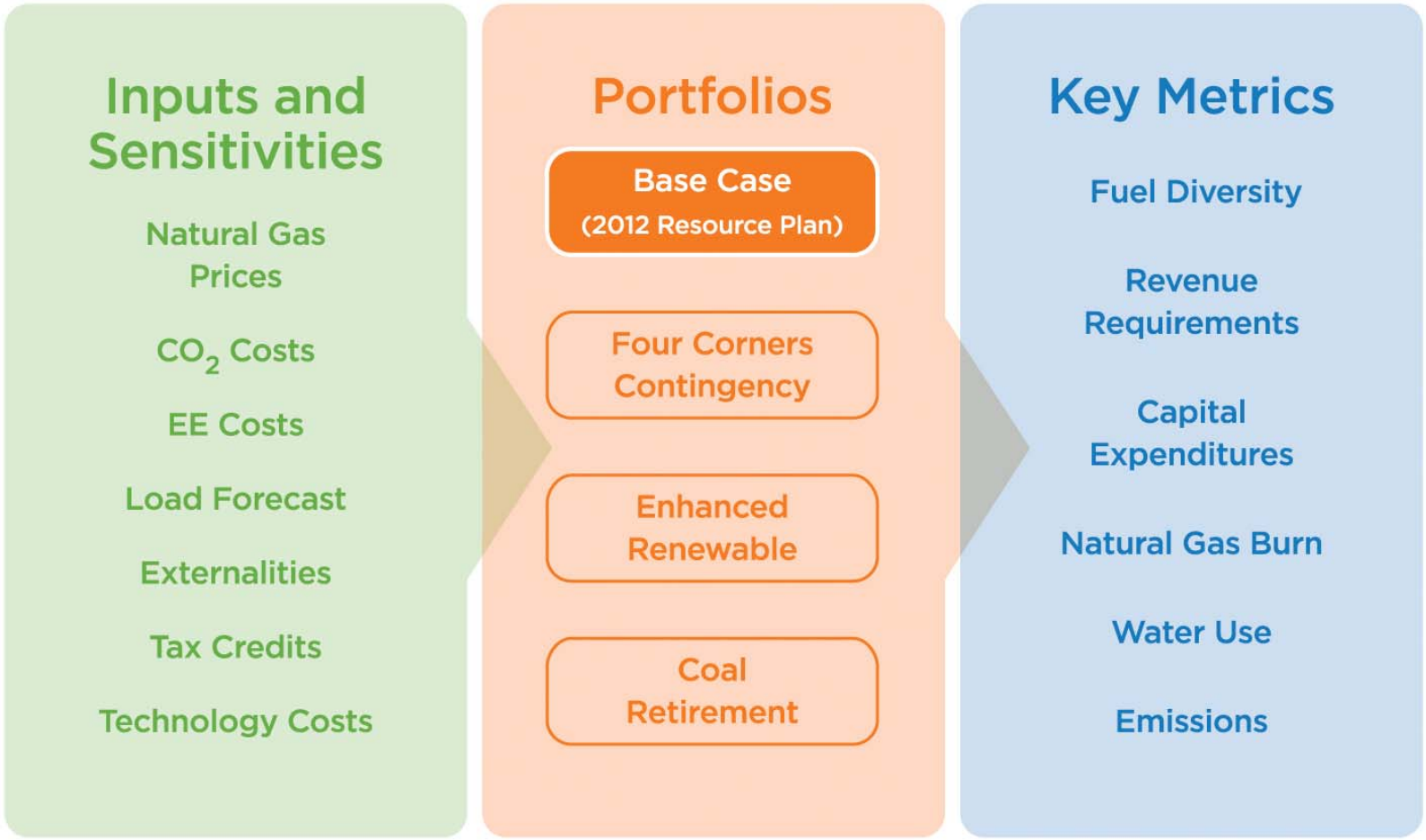
Capacity Utilization at Peak

- Conventional generators allow APS to follow load or bring on generation at time of peak
- Renewable resources are "must take" and do not correlate perfectly to when APS customers use the most energy

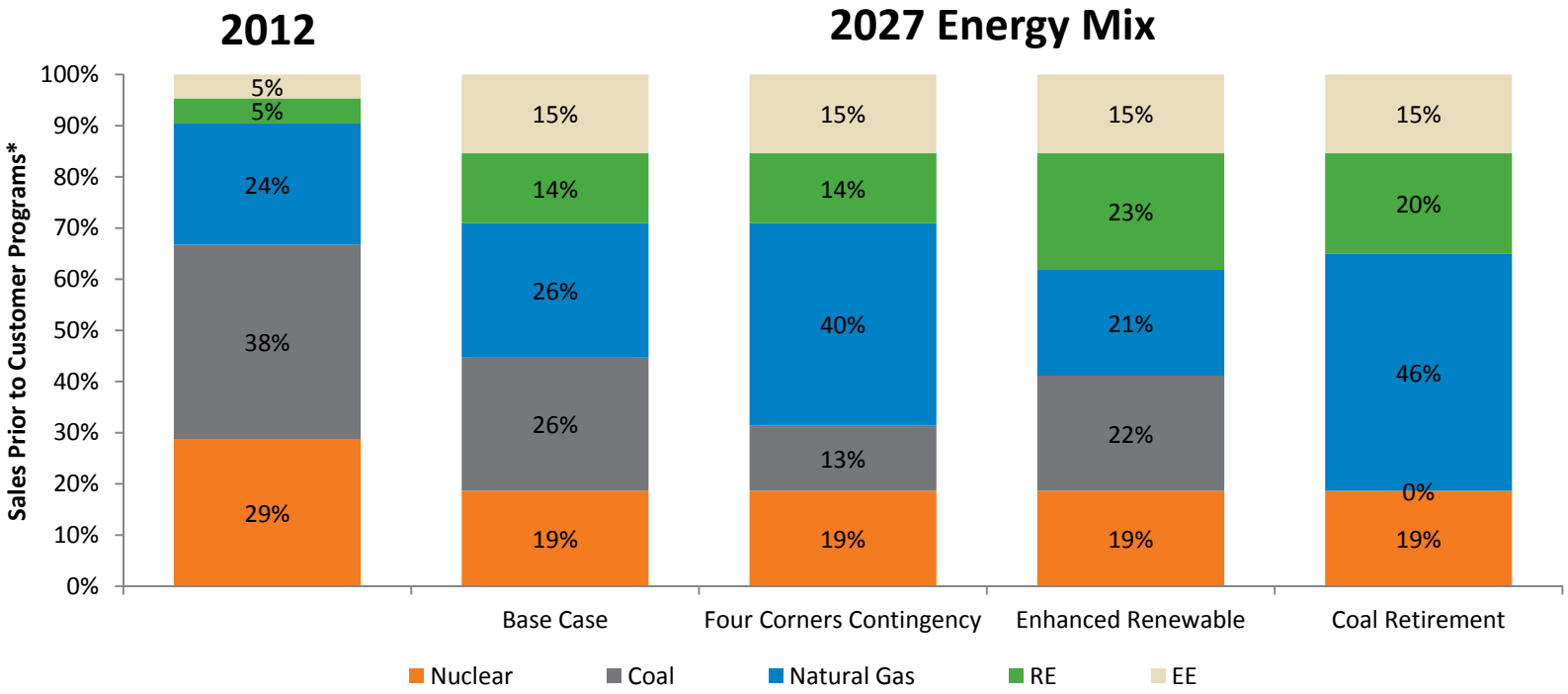


*Capacity Utilization is a measure of the unit's output at hourly intervals compared to its maximum capable output, and does not represent a resource stack

2012 IRP Analytics



Composition of Portfolios



*Measured as a percentage of total resources, not retail sales which is used for energy efficiency and renewable energy calculations

	Base Case (2012 Resource Plan)	Four Corners Contingency	Enhanced Renewable	Coal Retirement
Description	Plan includes APS closing Four Corners units 1-3 and purchasing SCE's share of units 4-5; continues the current trajectory of EE and RE compliance	Contingency plan depicting the retirement of the Four Corners coal-fired plant; energy replaced by additional natural gas resources	Assumes 30% (after EE/DE) of energy needs met by renewable resources; includes the consummation of the Four Corners transaction	Assumes APS retires all coal-fired generation; energy replaced with a combination of natural gas and renewable resources

Comparative Analysis:
Differences from Base Case Portfolio in 2027

	Base Case	Four Corners Contingency	Enhanced Renewable	Coal Retirement
		Delta from Base Case		
Cumulative CapEx ($M)	$8,726	$990	$3,914	$4,543
NPV Rev. Req. ($M)	$26,917	$388	$636	$981
Gas Burn (BCF)	99	48	(18)	76
CO_2 (MM Metric Tons)	17	(3)	(3)	(8)
Water (000 Acre-Feet)	59	(8)	(2)	(23)

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Sources of Energy Growth

- APS already has plans in place to meet near-term needs
  - In the near term, renewable energy and energy efficiency additions meet APS resource needs
- Several options exist for future resource decisions
  - In the longer term, renewable energy and natural gas will play key roles
  - Renewable energy additions will help mitigate natural gas price uncertainty
  - New technology, such as new nuclear, will continue to be monitored

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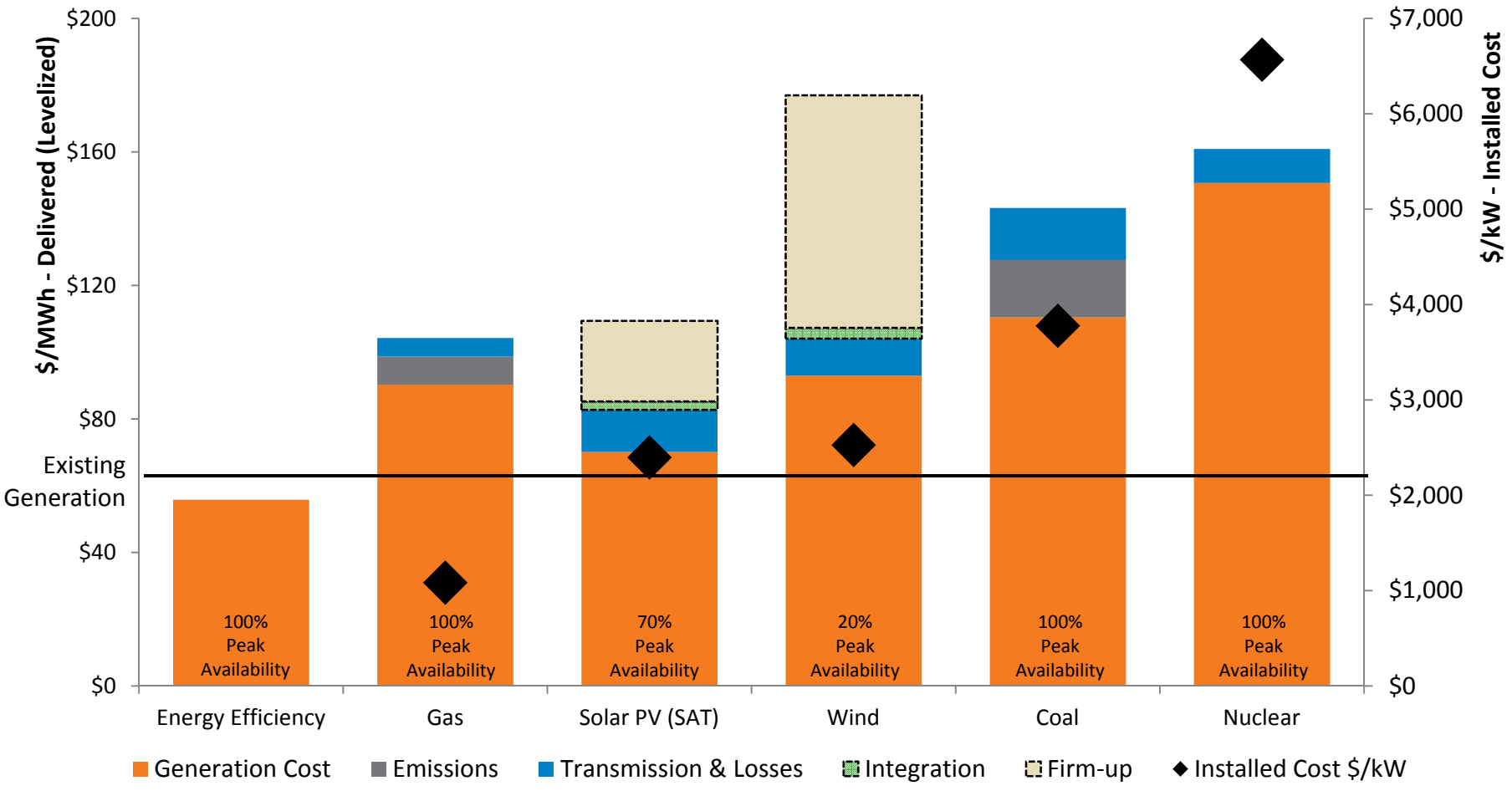
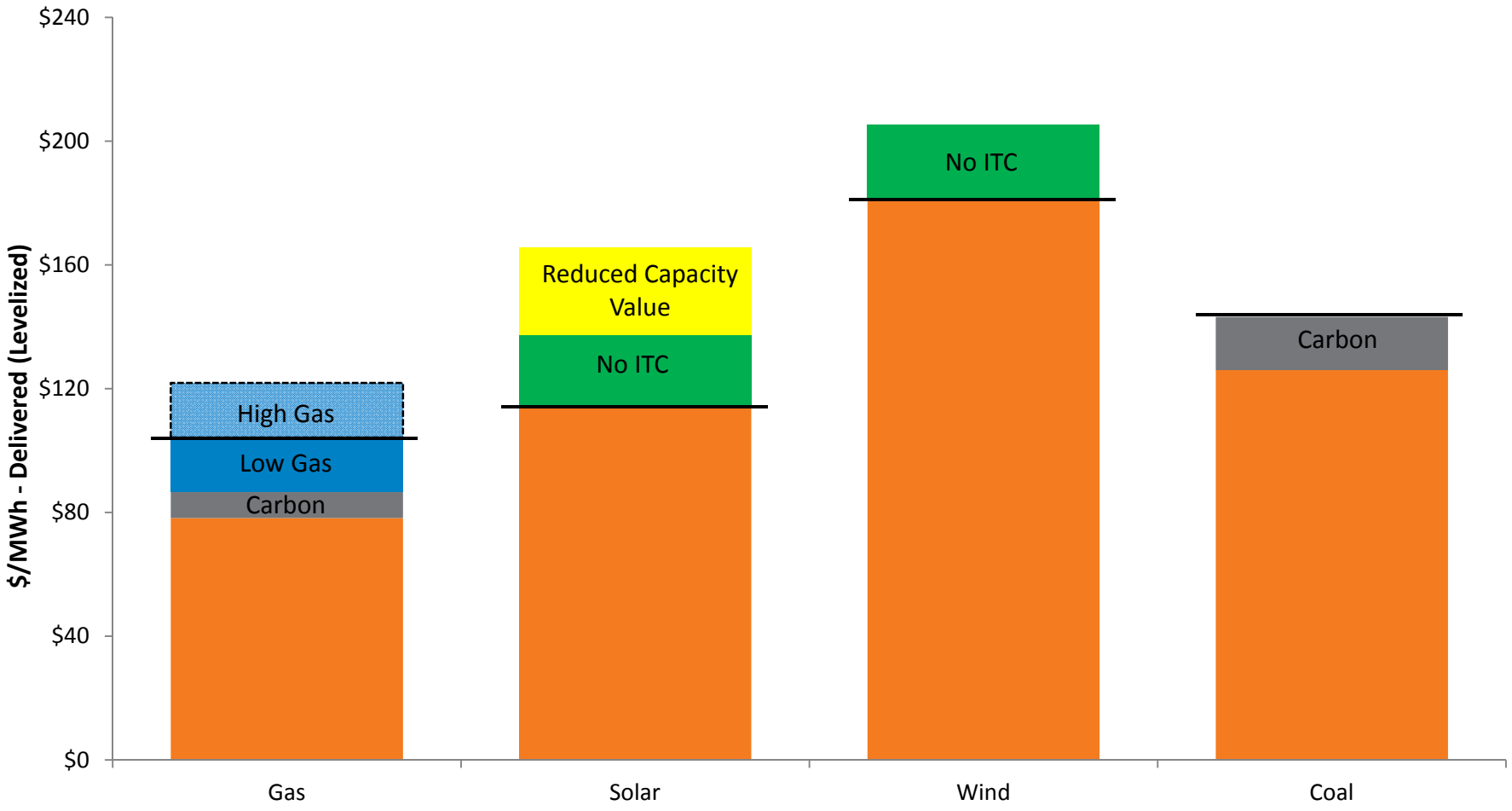
Technology Cost Screen

Forecasted costs in 2015 dollars, including Allowance for Funds Used During Construction (AFUDC)



Technology Cost Uncertainty



Note: Prepared in response to Commissioner Burns letter dated Aug. 17, 2012