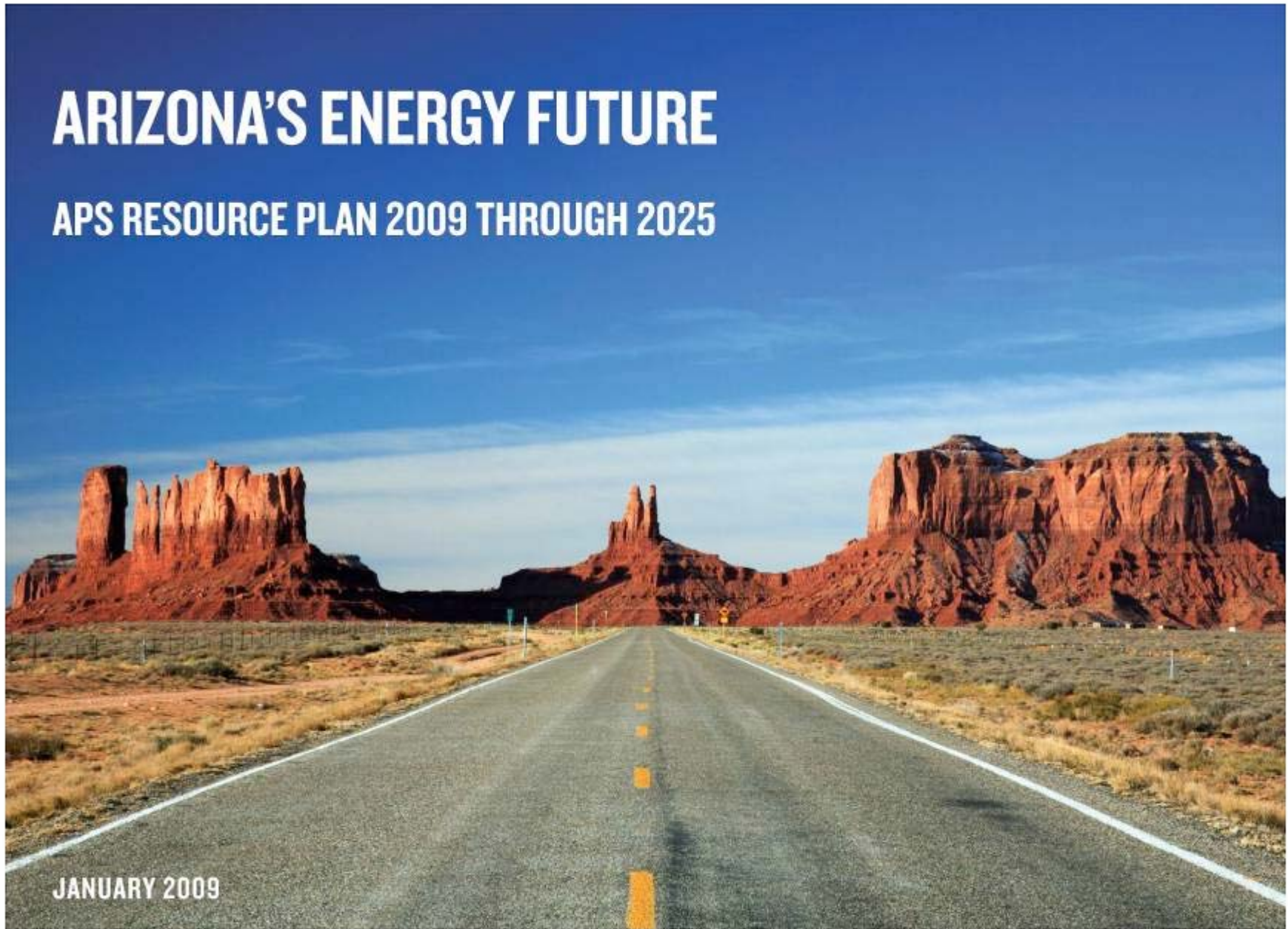


ARIZONA'S ENERGY FUTURE

APS RESOURCE PLAN 2009 THROUGH 2025

JANUARY 2009



A R I Z O N A ' S E N E R G Y F U T U R E

What type of energy infrastructure will be needed to power Arizona in 2025?

Consider that:

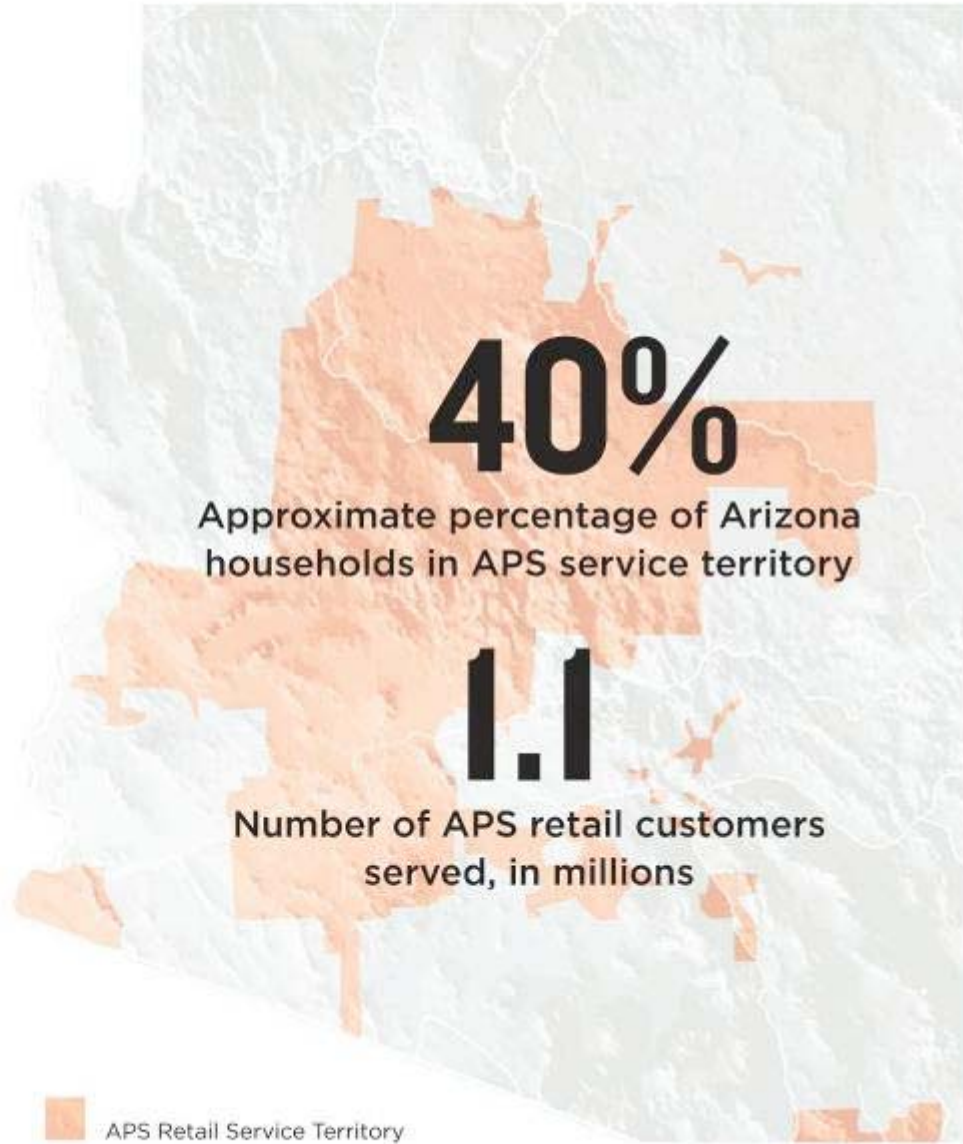
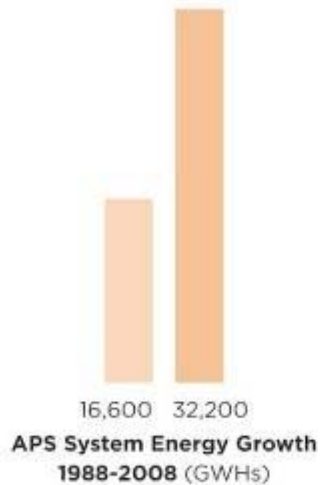
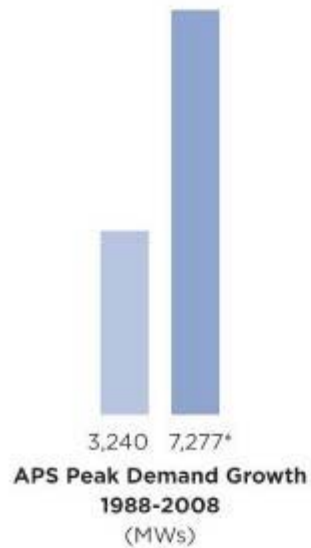
APS customers will grow from 1.1 million today to 1.7 million in 2025

Peak customer electric demand will grow from 7,300 MW today to 11,400MW in 2025

Key fuel and construction commodity prices remain volatile

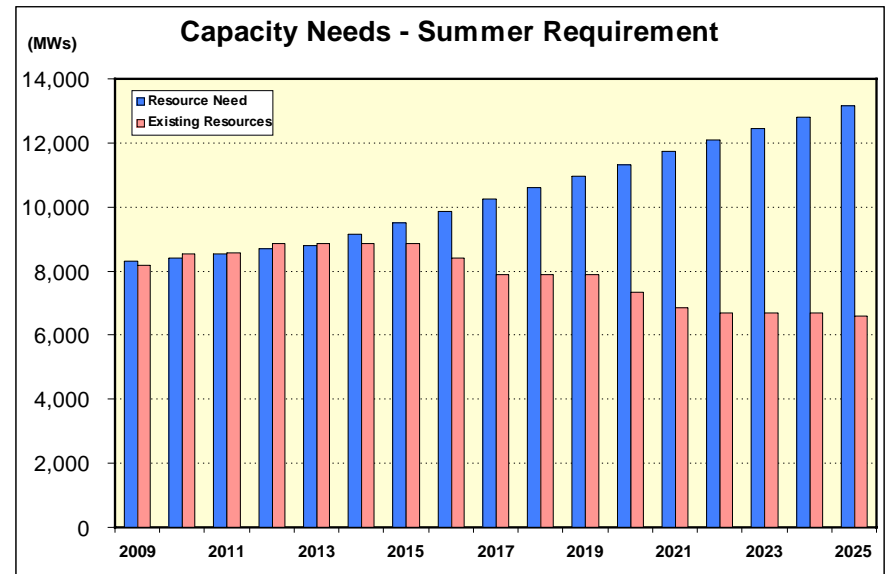
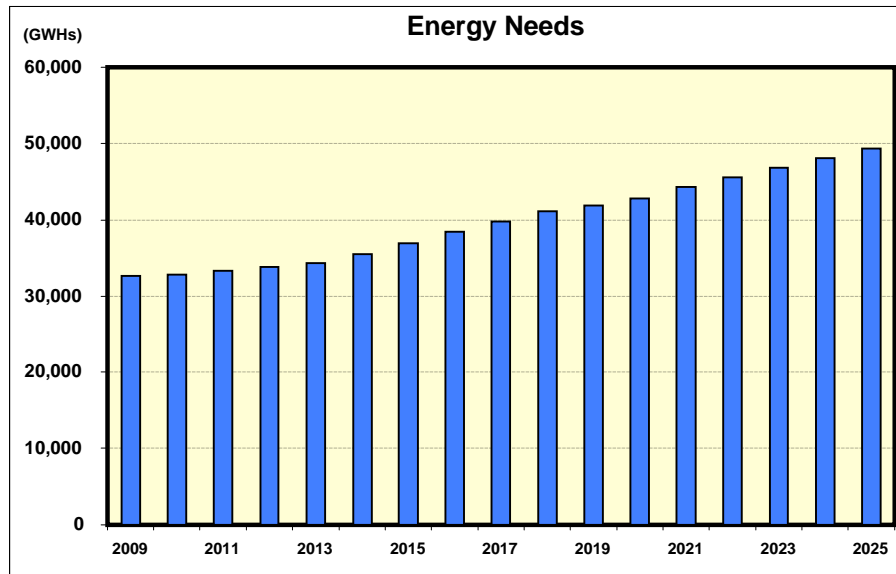
Climate legislation may add millions of dollars to customer costs and affect resource options

ARIZONA'S LARGEST UTILITY



CUSTOMER NEEDS IN 2025

Growing Resource Needs



RESOURCE OPTIONS



Baseload

Coal and Nuclear



- Long lead-time to develop
- Capital cost is \$2,500 - \$5,000/KW
- Operating costs (capital and fuel) are relatively low and stable



Intermediate

Solar

- Development times are relatively short
- Capital cost is \$4,500 - \$7,500/KW
- Operating costs are low and stable



Combined Cycle Gas

- Development times are relatively short
- Capital cost is \$1,300/KW
- Operating costs are moderate and volatile



Peaking

Combustion Turbine

- Development times are short
- Capital cost is \$1,000/KW
- Operating costs are high and volatile



Intermittent

Wind

- Development times are short
- Capital cost is \$2,000 - \$2,500/KW
- Operating costs are low

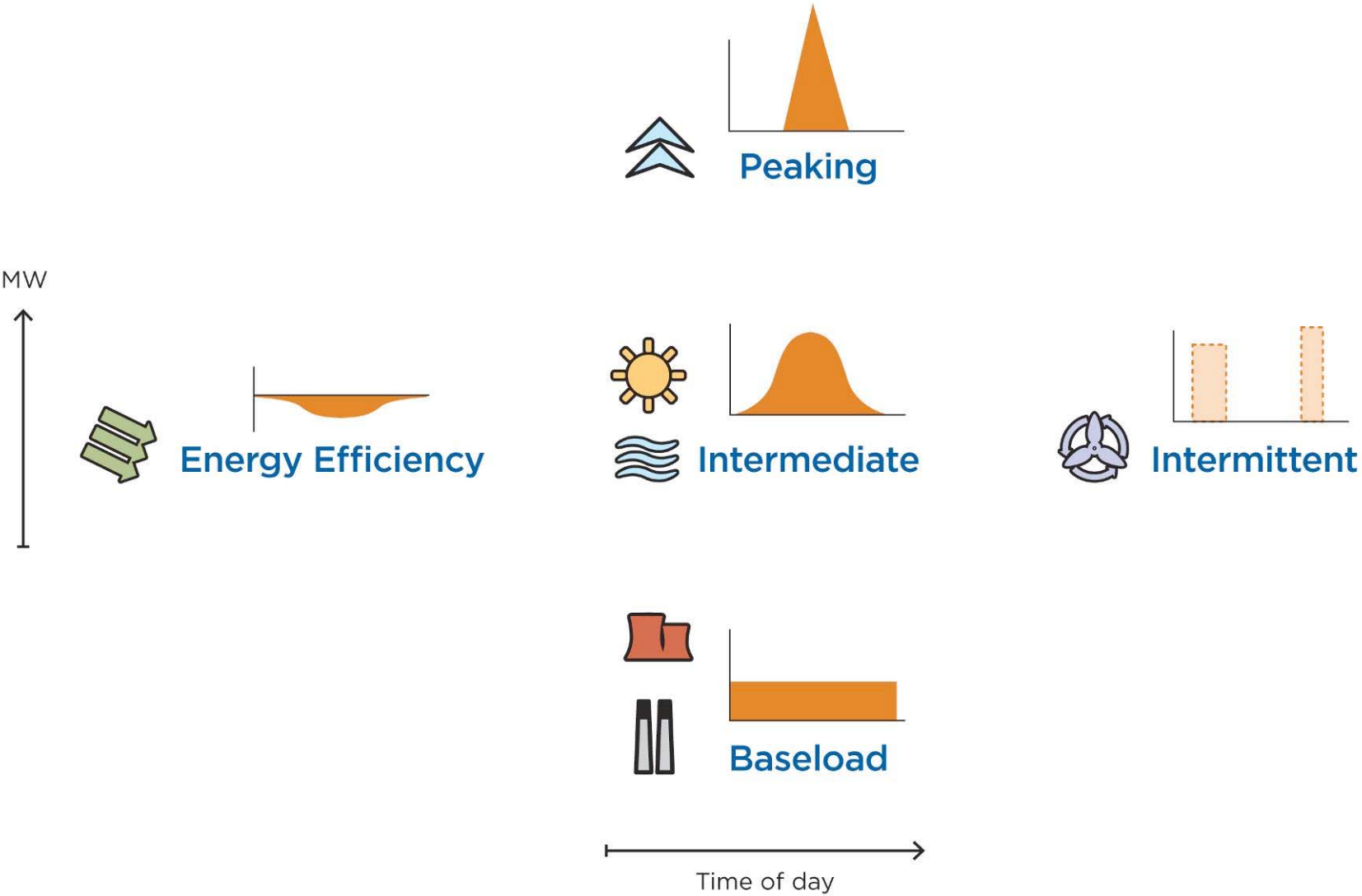


Energy Efficiency

Reduced consumption

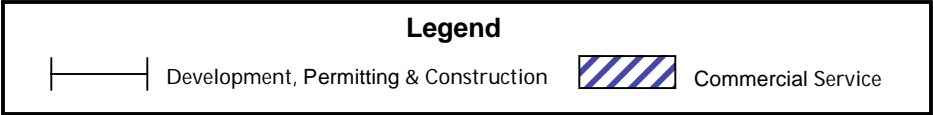
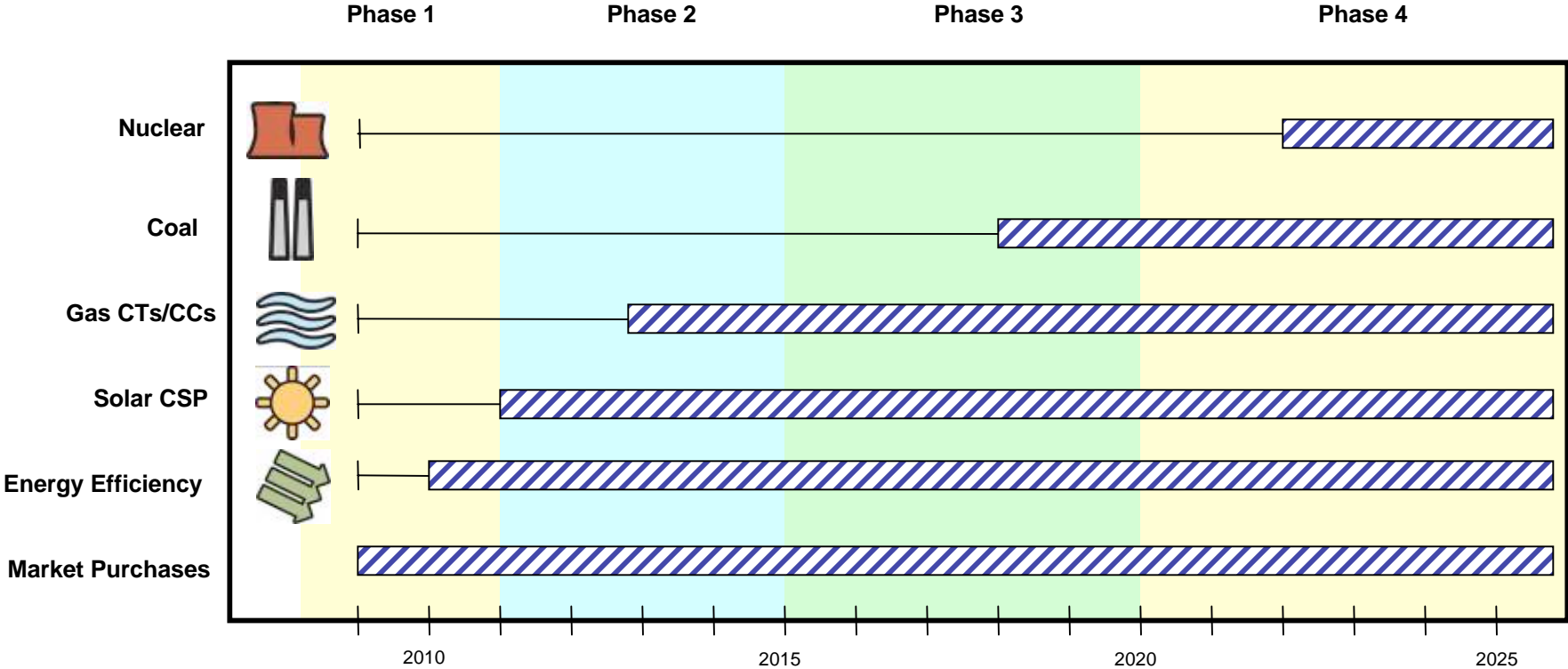
- Cost effective source of energy
- Investment is initial rebate/incentive
- Achieves energy conservation and reduces peak load

HOW RESOURCES CONTRIBUTE TO MEET ENERGY NEEDS

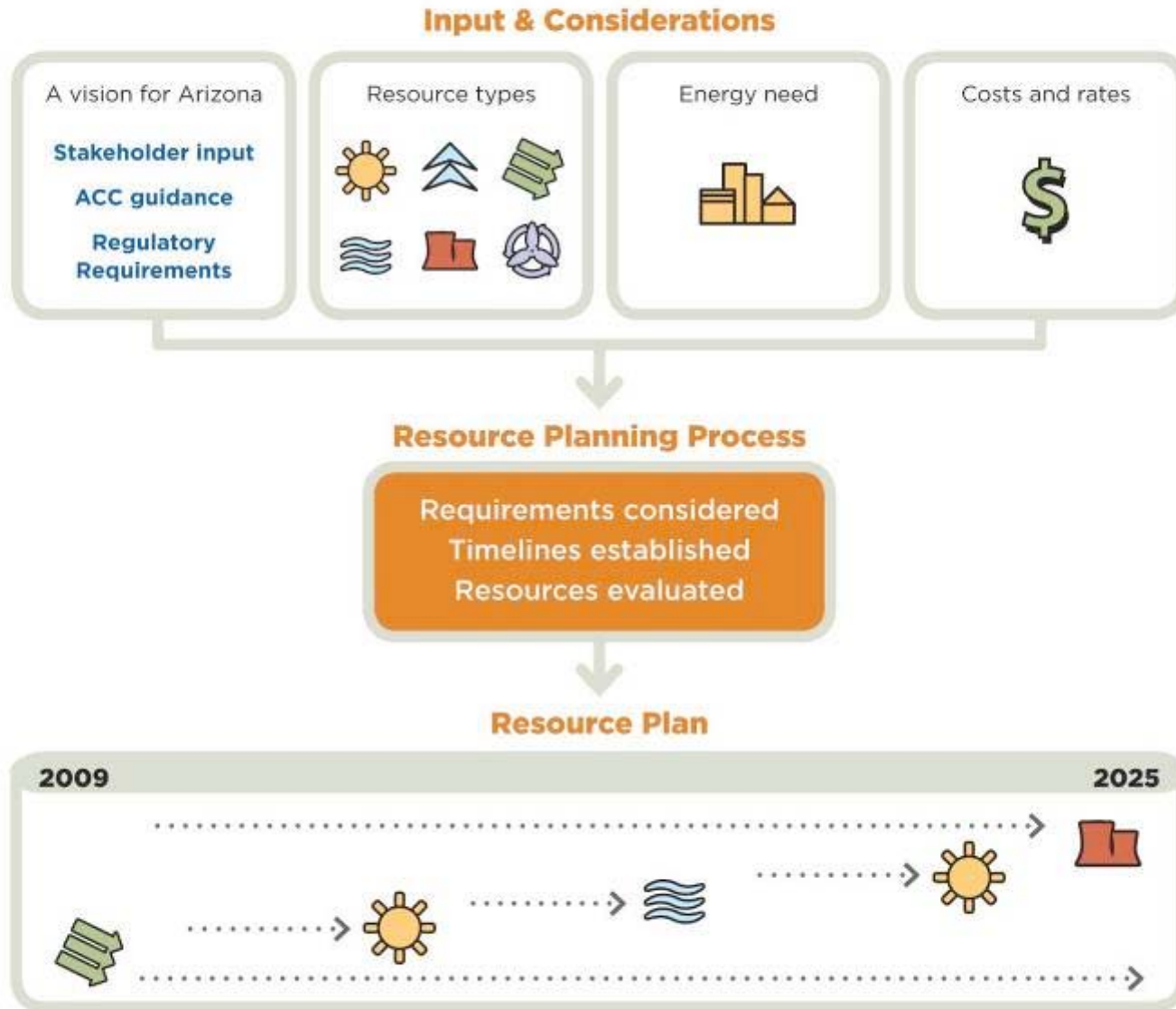


RESOURCE OPTIONS

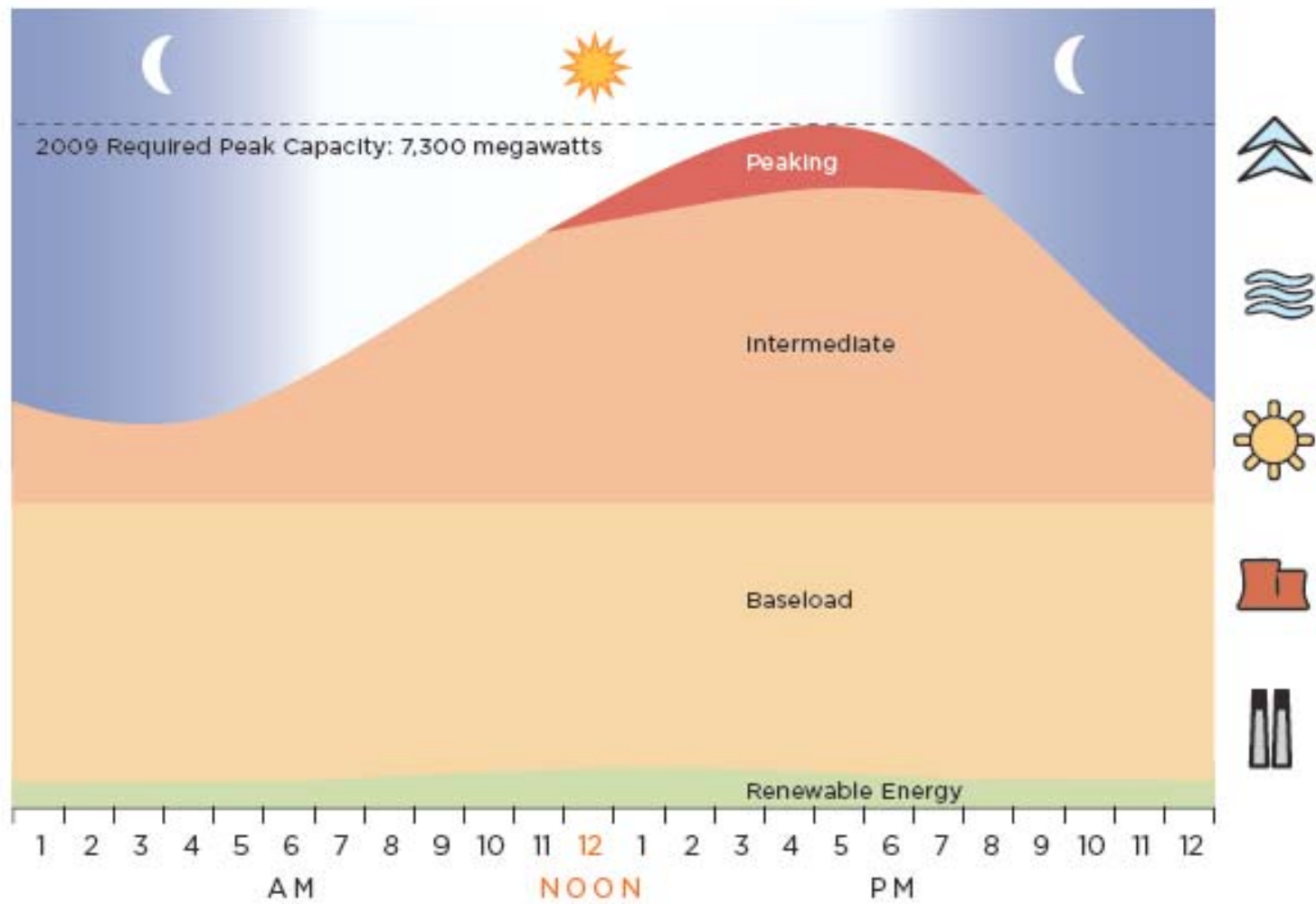
Developing New Generation



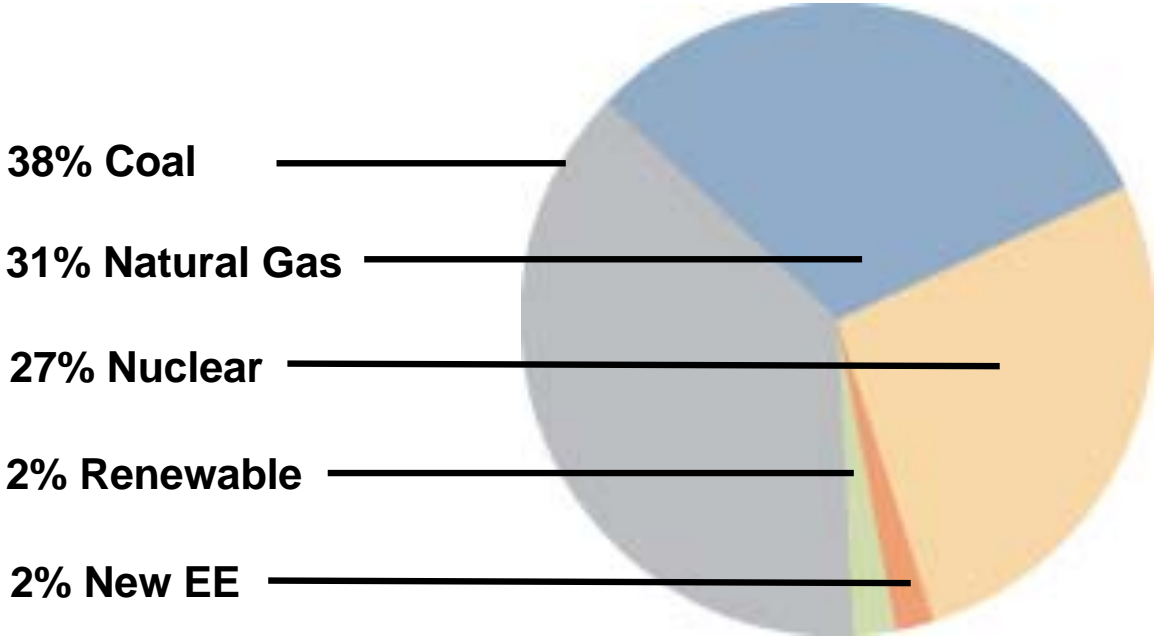
WHAT IS RESOURCE PLANNING?



MEETING CUSTOMERS' ENERGY NEEDS

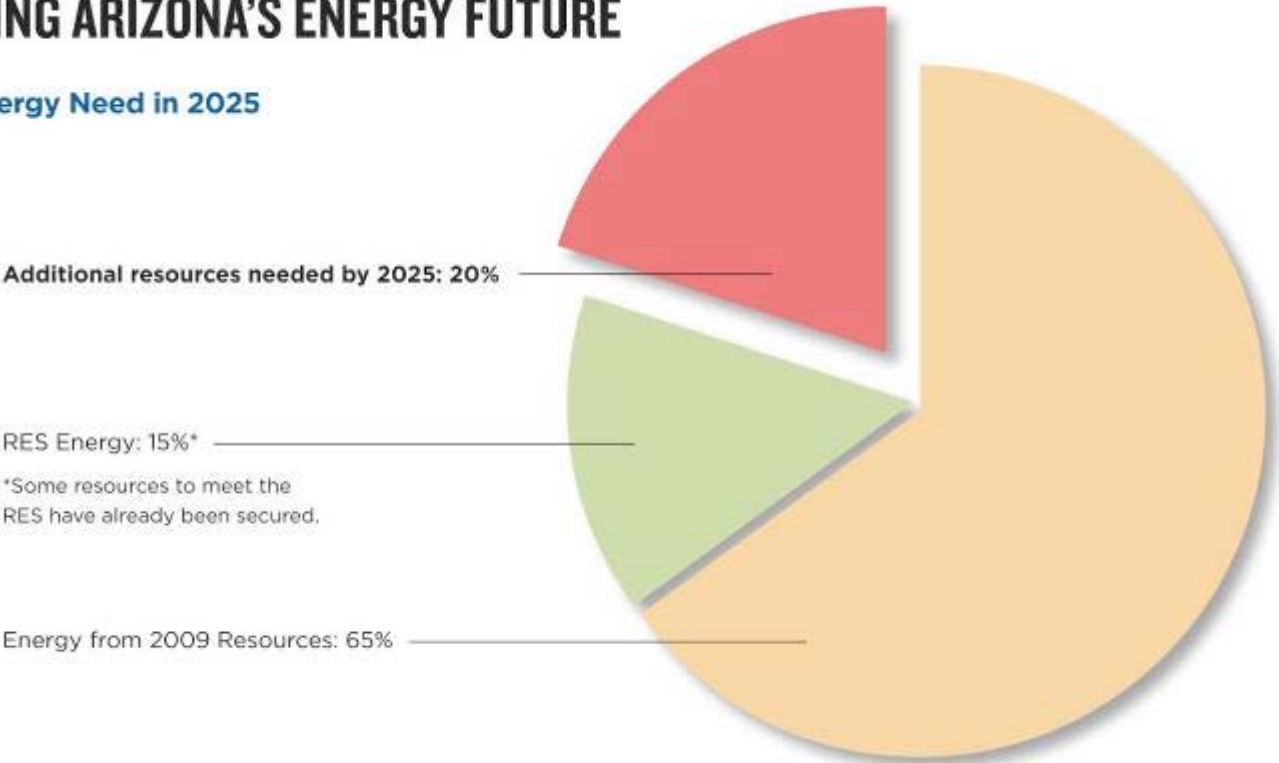


PROJECTED ENERGY MIX 2009



DEFINING ARIZONA'S ENERGY FUTURE

APS's Energy Need in 2025

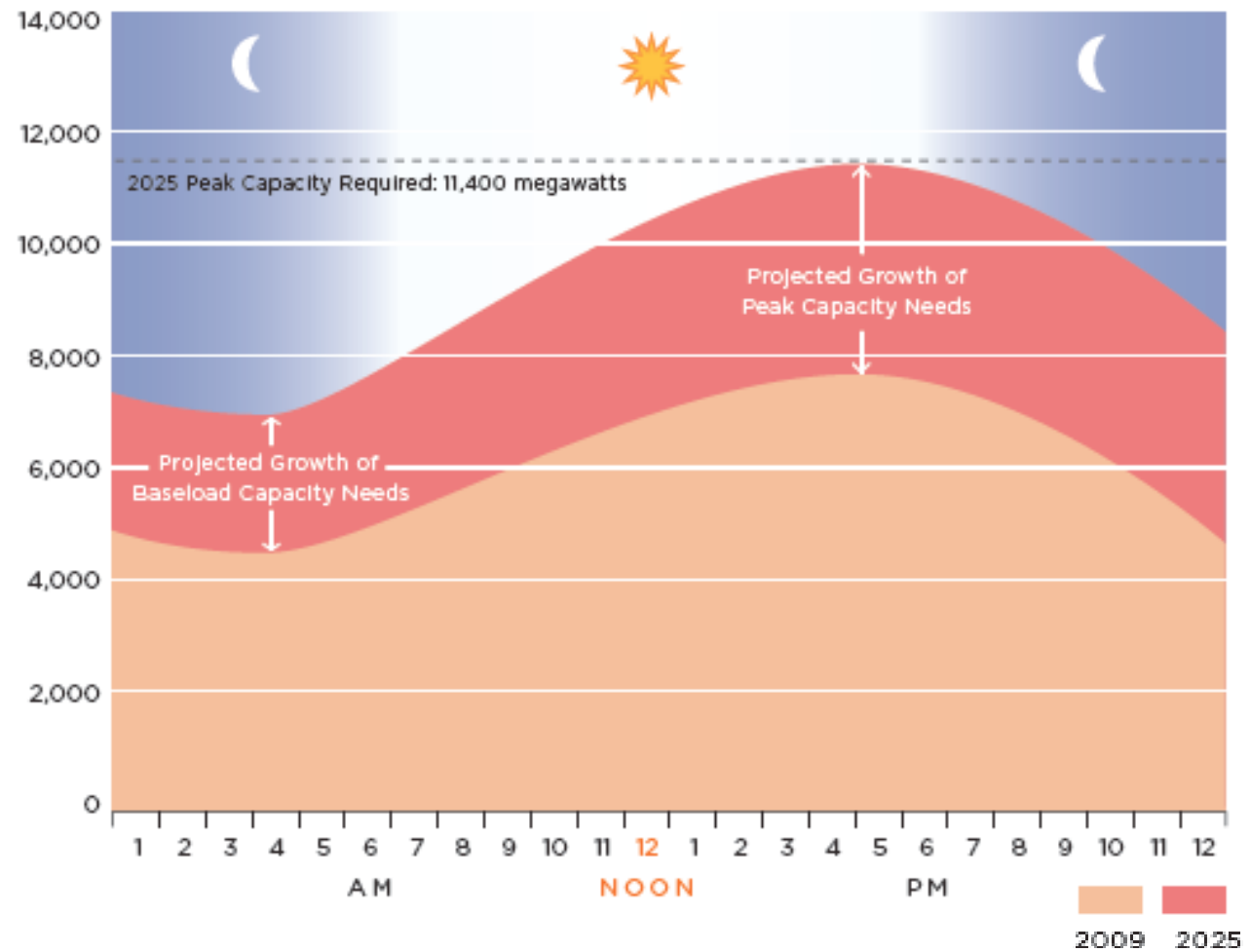


Projected increases 2009-2025



CUSTOMER NEEDS IN 2025

Peak Load Day Comparison (MWs)



APS RESOURCE PLAN

Renewables



- Rapidly accelerates adoption of renewables
- 1,650+ MW
- Doubles the RES by 2015
- 50% more energy than required by the RES through 2025

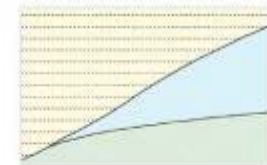


Exceeding the RES

Energy Efficiency



- Seizes opportunity to partner with customers on energy future
- 587 MW of energy offset
- 3,100 GWHs
- Substantial increase in annual customer incentives

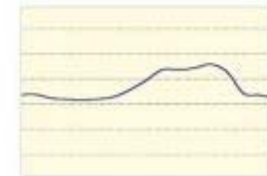


Increased Energy Efficiency

Nuclear



- Carbon emission free baseload resource
- 800 MW of 2022-23 capacity
- 6,400 GWHs/year

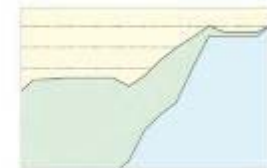


Managing CO2 Emission

Gas Combined Cycle Gas Combustion Turbine

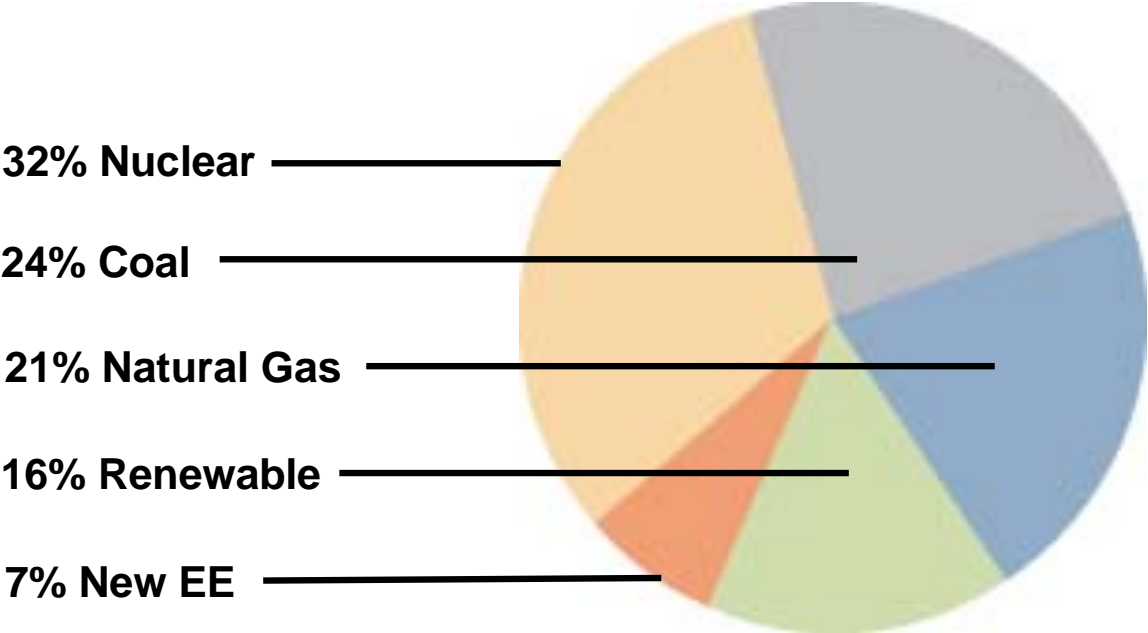


- Limit natural gas consumption to within 10% of 2009 level
- Realigns resources more towards peaking role
- 3,500 MW (about 70% replacing expiring contracts)
- Wholesale market or demand response opportunities



Replacing Expiring Contract Capacity

PROJECTED ENERGY MIX 2025



BENEFITS OF THE APS RESOURCE PLAN

Accelerates

Realizing opportunities for renewables

- Driving Arizona and regional markets
- Increasing APS experience
- Advancing technology

Capitalizes

Energy efficiency capitalizes on low cost resources and partners with APS customers

Mitigates

- Risks of CO₂ Legislation
- Customer price risks

Maintains

- Natural gas consumption near 2009 levels

NEXT THREE YEARS – ACTION PLAN

Increase Renewables

Procurement of renewables

About 450 MW of renewables planned to be
in service between 2013 and 2016

Empower Customers

Ramp up energy efficiency investments
Expand distributed energy

Baseload Planning

Work to maintain baseload options

Monitor Markets

**Observe markets for
prospective opportunities**

PARTNERING FOR ARIZONA'S ENERGY FUTURE

