INVESTING IN A CLEAN FUTURE

2014 Resource Plan Update to Steering Committee on Net Zero Emission Goal

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Proposed Timeline to City Council

1Q 14	• Targeted briefings and stakeholder input meetings
1Q 14	• Present scenarios & stakeholder results to Commission 3/17
2Q 14	• Run and analyze scenario results
3Q14	• Present preliminary recommendations to Committee
3Q14	• Committee/Commission review
Sep 14	• Present 2014 Generation Plan Update to Council

Goals and Objectives

- **2020 Climate Protection Plan goals approved by Council**
  - 35% renewable resources
  - 200 MW solar, including 100 MW of local solar, at least half of which will come from customer based systems
  - CO_2 power plant emissions 20% below 2005 levels
  - 800 MW of energy efficiency and demand side management
- **Affordability**
  - Lower 50th percentile of Texas retail rates
  - Annual rate changes not to exceed 2%
- **Financial Stability**
  - Current and desired capital & debt and reserve levels

Austin Energy provides a generation update to Council every two years

Renewable Energy Goal Status

Generation Resources in MW

Year	Coal	Nuclear	Gas	Biomass	Wind[3]	Utility Scale Solar	Local Solar	Renewable Portfolio
2014	602	436	1497	112	850.9		48.0	23.2%
2015					200/300		12.0	28.3%
2016					200/(195.6)		8.0	35.1%
2017			200		(91.5)	150.0	8.0	36.0%
2018			800[2]		(34.5)		8.0	35.5%
2019							8.0	36.4%
2020							8.0	36.4%
2021								35.6%
2022								35.3%
2023								35.7%
TOTAL	367[1]	436	2,497	112	1,254	150	100	

Notes:

1) Capacity equivalent to meet CO2 goal

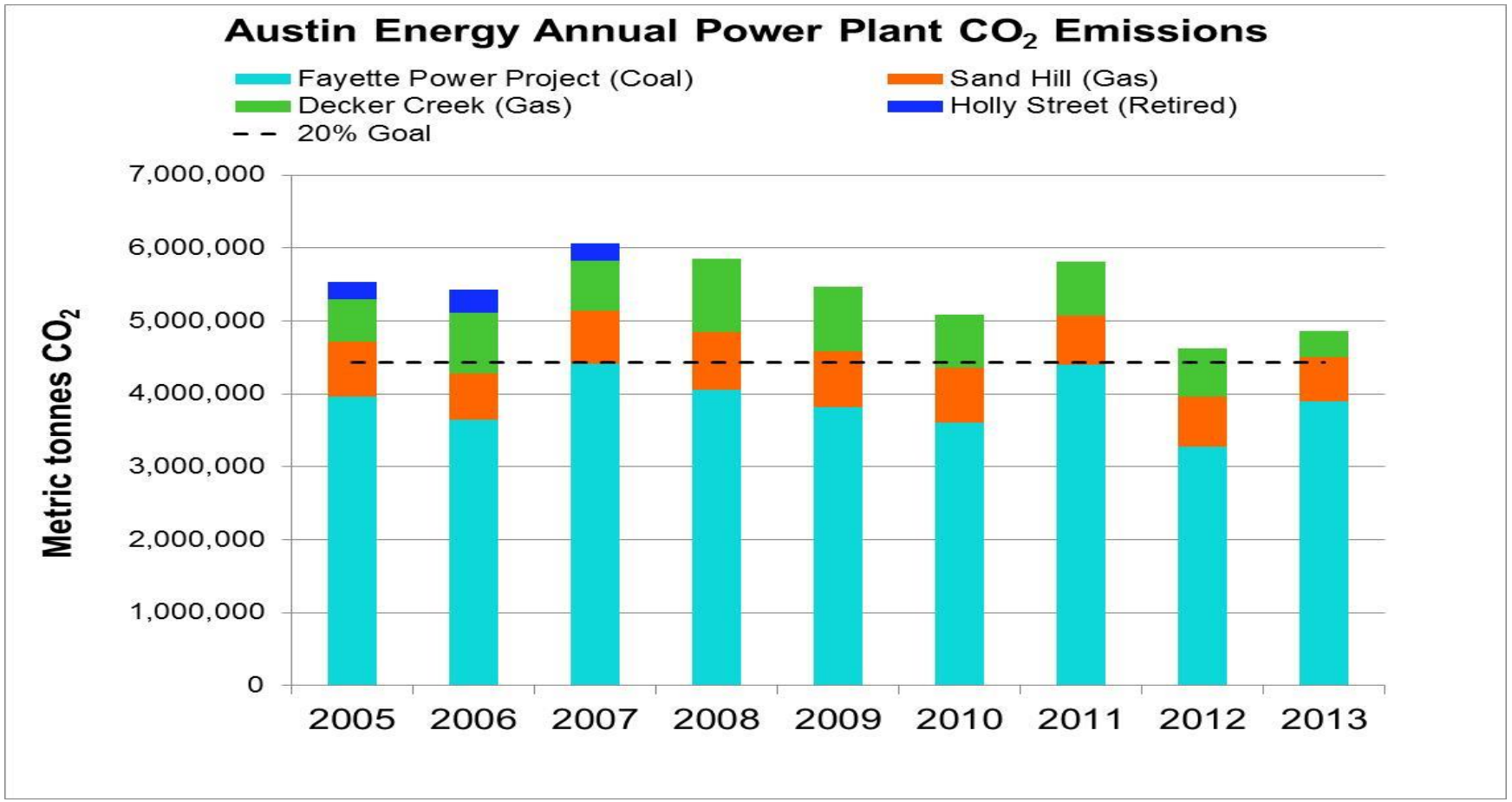
2) Potential natural gas combined cycle additions upto 1,000 MW by 2019, subject to change

3) Includes Wind additions and expirations

4) Additional note: Plan assumes achievement of 800 MW of DSM goal

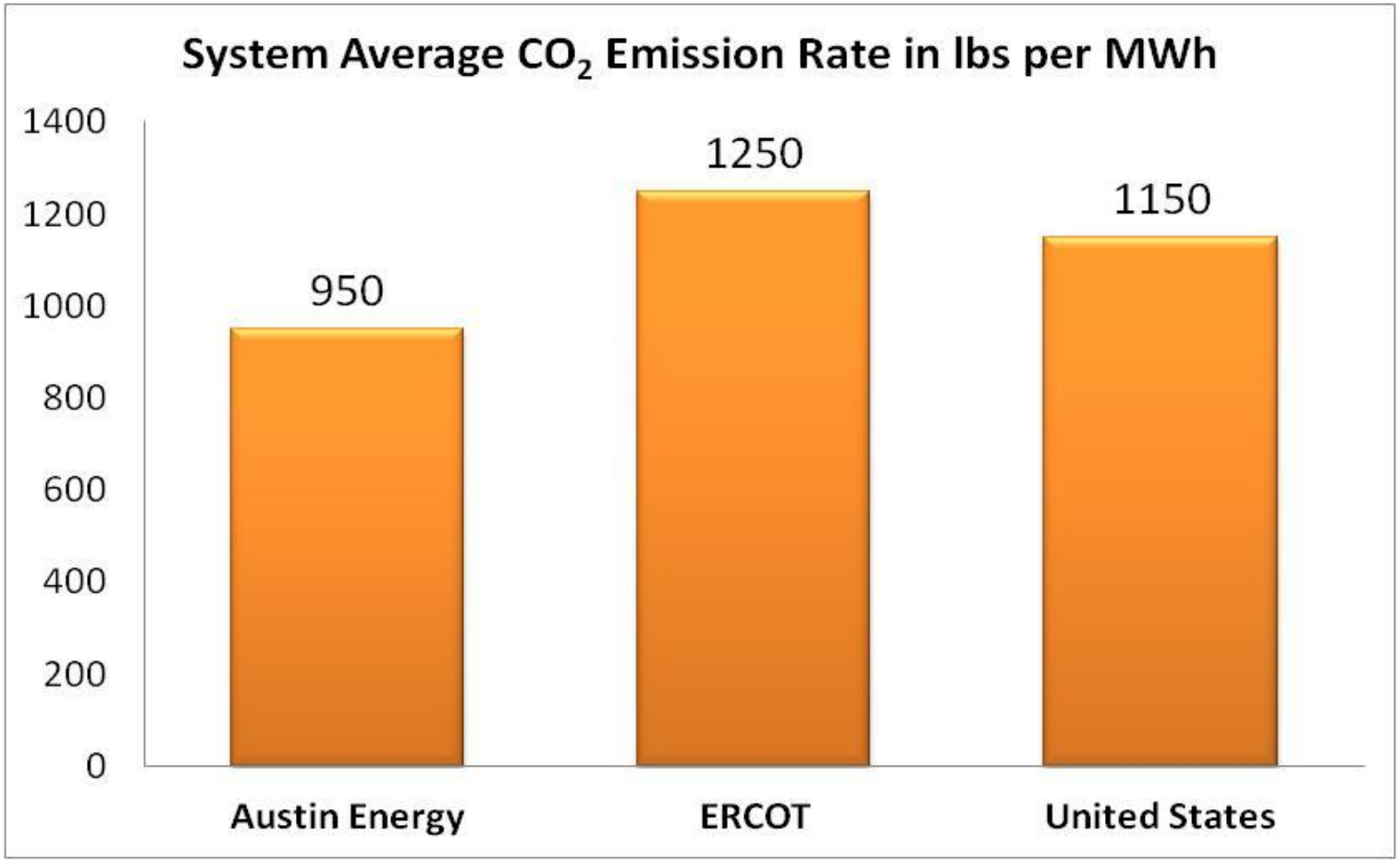
Key Performance Indicators: Total CO_2 Emissions

Austin Energy today has almost the same total generating capacity (MW) that emits CO_2 as in 1990, despite Austin's growth – compared to Texas up 42%.



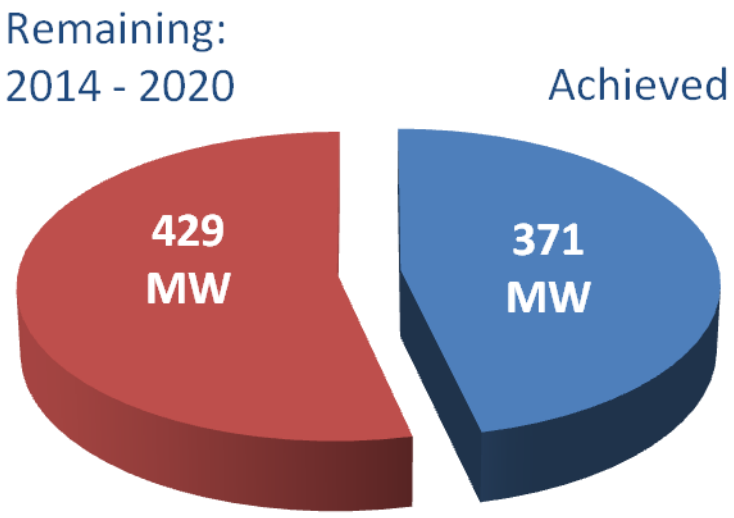
Key Performance Indicators: Average CO_2 per MWh Generation

Austin Energy's system average CO_2 emissions rate has decreased 14% since 2005 due to renewable additions. It will continue to decrease as new wind resources come online.

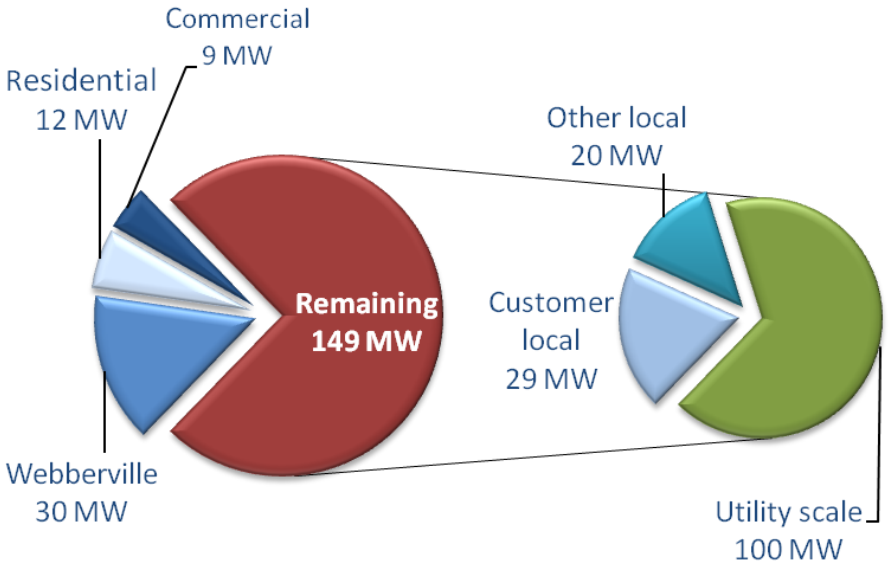


Energy Efficiency (EE) & Solar Goal Status 2007- 2013

EE Savings



Solar - Installed & In Progress

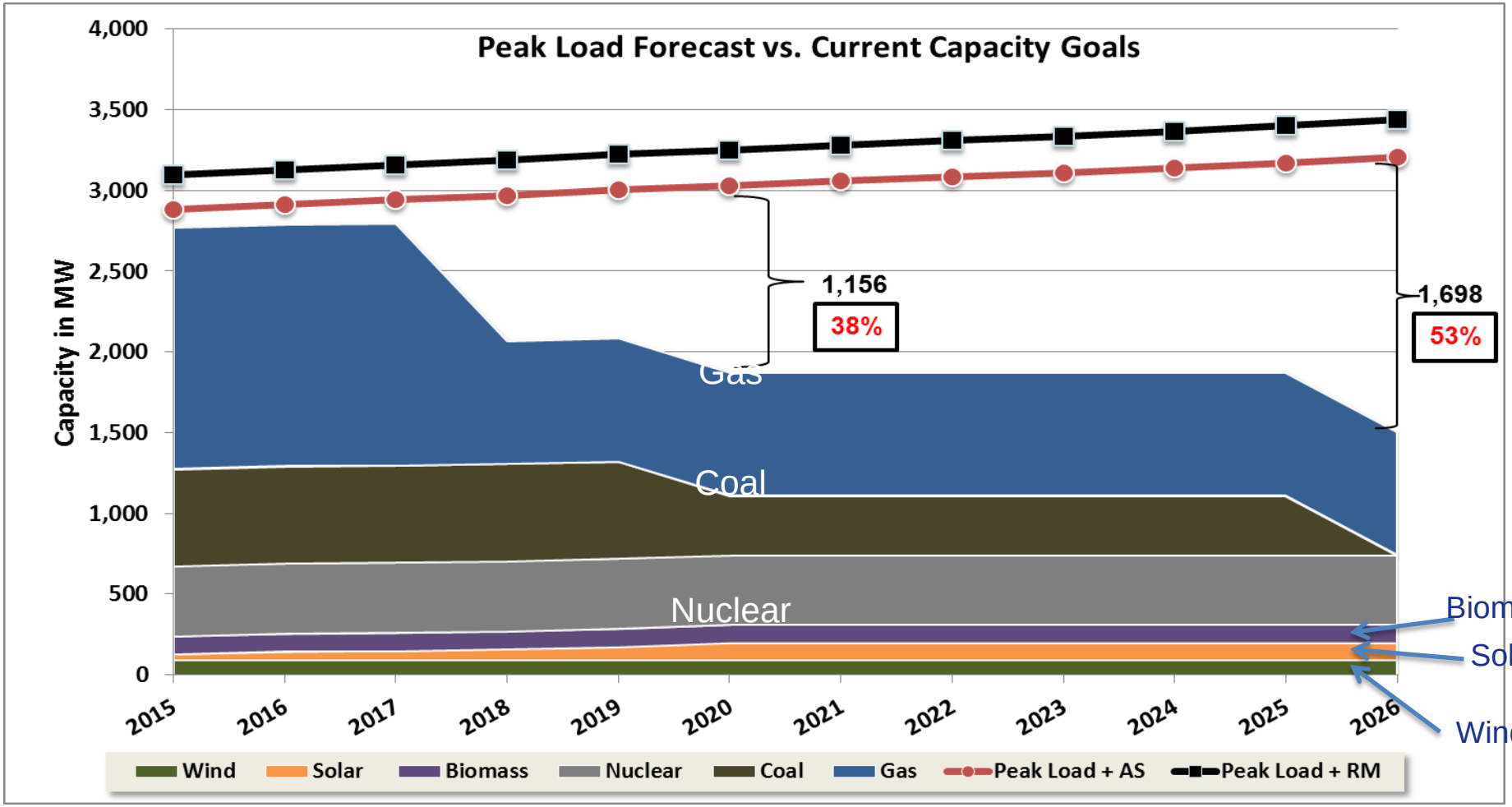


Resource Planning has Changed

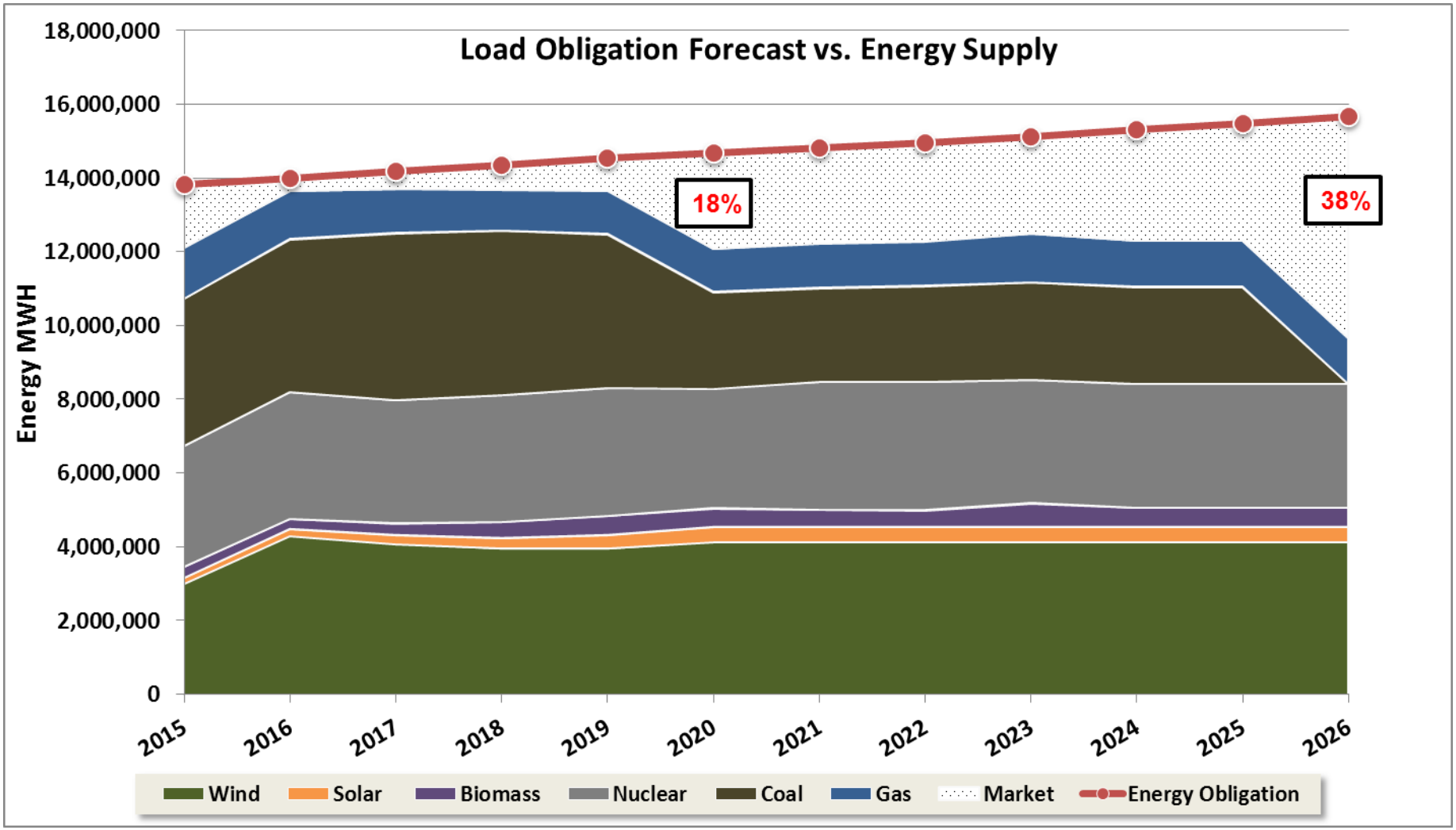
- Resource planning used to be an exercise of developing the least cost capacity plan to meet the peak load of the utility
- Generation in the nodal market is now one of many tools used to mitigate risk to customers and the utility
- Given the objectives of ERCOT to maintain reliability and efficient markets and Austin Energy's objectives to manage cost for its customers, the following tools are used to manage market risk:
  - Physical assets
  - Financial strategies
  - Fuel diversity
  - Congestion rights
  - Demand side resources

AE Peak load Forecast vs Resource Capacity Gap

- Resource planning is about optimizing capacity mix
- Austin Energy strategies provide low cost, diversity and flexibility



AE Energy Req. Forecast vs. Resource Generation Gap



New Resource Considerations and Tradeoffs

- Considerations
  - Cost-effective and mature technology
  - Good operating history and performance
  - Multiple suppliers and fuel availability
  - Defined permitting requirements
- Tradeoffs
  - Dispatchable vs. non-dispatchable
  - Fixed vs. variable operating costs
  - Flexibility

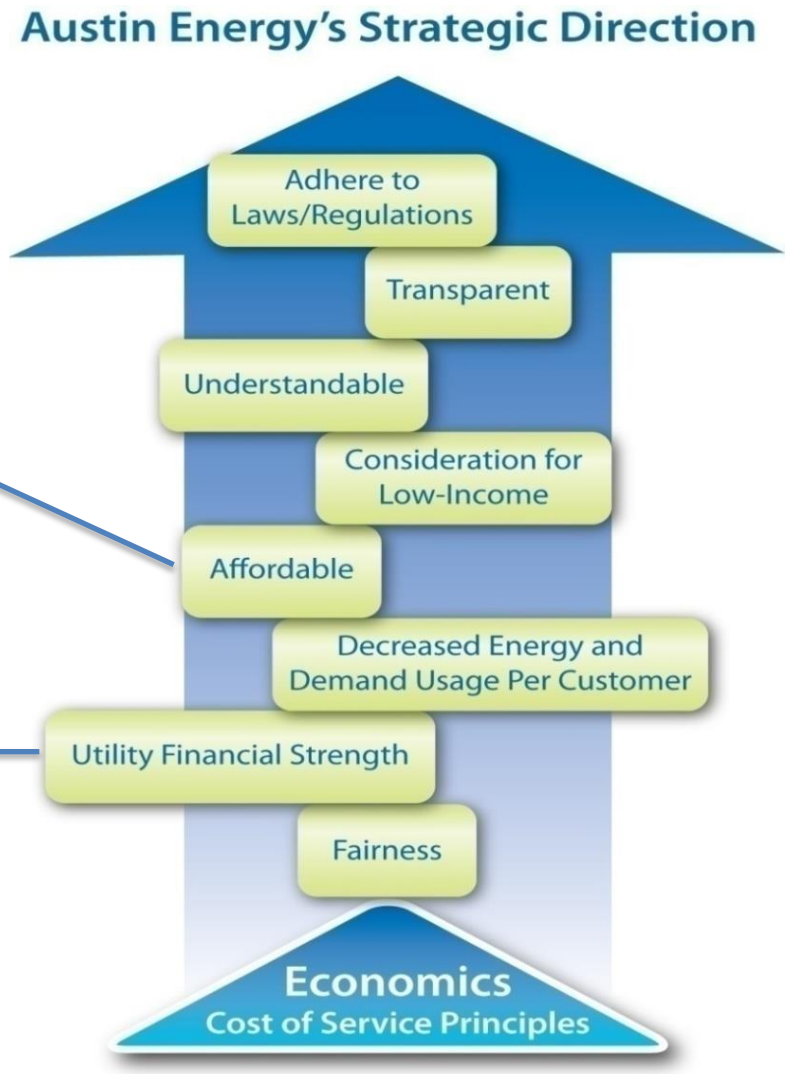
Resource Planning Guiding Principals

- All Resources are evaluated in the context of ERCOT Nodal Market
  - Resource costs include
    - Capital, Fuel/PPA, Operations & Maintenance wherever applicable
    - Based on EIA, AE estimates & other sources
  - Revenues include
    - Energy & Ancillary services applies to all if they can provide
    - Reserve adder (Operating Reserve Demand Curve) applies to all, except renewables
- Consider entire AE portfolio net cost
  - 10-year horizon: 2015-2024 (Extended to consider end effects)
  - ERCOT market LMP forecast fundamentals
  - Load cost + resource cost – resource revenue
  - Across sensitivities per key uncertainties
    - Load (ERCOT & AE)
    - Gas price
    - Carbon
    - Market design
    - PTC/ITC

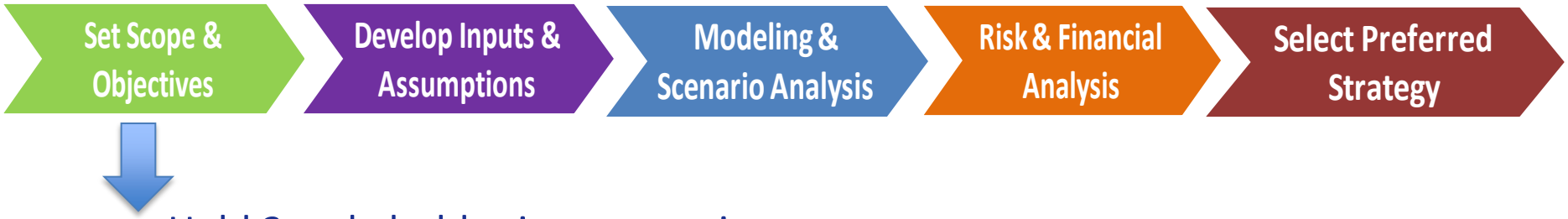
Financial Goals, Balancing Competing Objectives

Rate Design
Base Rates/Power Supply
Affordability Goals

Margins
Days Cash on Hand
Capitalization

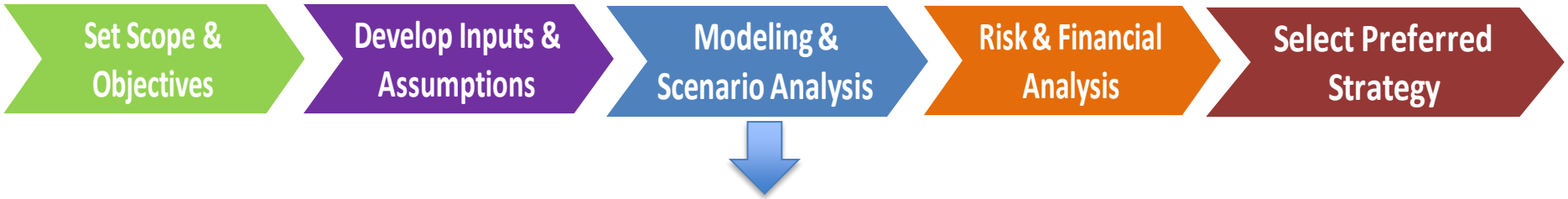


Resource Planning Process



- Held 3 stakeholder input meetings
  - ✓ Tuesday 2/25 – 10 a.m. to noon
  - ✓ Tuesday 2/25 – 6 to 8 p.m.
  - ✓ Thursday 2/27 – 1 to 3 p.m.
- 102 total stakeholders attended meetings
- Requested feedback from stakeholders
  - ✓ Presentation + Q & A (Video taped)
  - ✓ Interactive booths : deep dive with subject matter experts
  - ✓ Note cards & online Q&A
  - ✓ Resource allocation excercise
  - ✓ Online survey
- Supported Generation Resource Planning Task Force - April - June

Resource Planning Process



- Currently working on the scenario analysis
- Potential scenarios include
  - Increased renewable goals
  - Replacement / Retirement scenarios
  - Increased demand side management goal
- Scenarios cover a wide range of values for key uncertainties such as gas price, carbon price, capacity market, extension of PTC/ITC variations
- In total
  - 8 Broad Scenarios
  - 30+ Base plans
  - 210+ Sensitivities
- Plan is to Present to the Council the 2014 Generation Plan update by end of Sep-2014

Questions?

The original and complete slide decks as well as further updates can be found on Austin Energy's home web page:

austinenergy.com

Follow the 2014 Generation Plan Update link