

# Resource Planning Process & 2016 Market Update

November 2016



# Why do Resource Planning?

- To support the Austin Energy Strategic Plan
- To meet the objectives of the Austin Climate Protection Plan (ACPP)
  - net zero carbon emissions by 2050 (among other goals)
- To manage cost and risk of energy to our customers– Affordability goals and rate volatility
- Manage customer load with behind the meter programs such as rooftop solar, energy efficiency, demand response and storage
- Other complimentary strategies and objectives such as those related to low income customers

What Resource Planning is not?  
A way to supply power to our customers



# Resource Planning at Austin Energy

- A process that includes a measured system of choices and milestones over time

Set general direction by policy consistent with Austin Climate Protection Plan (ACPP) – City Council with advice from Austin Energy and stakeholders

Establish future path and milestones through Generation Plan to support ACPP

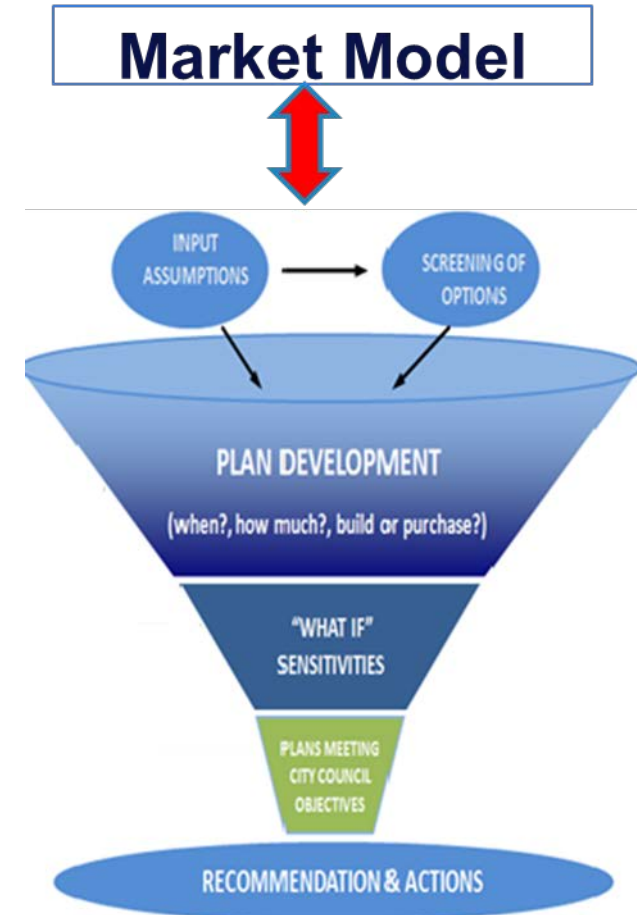
Pursue Generation Plan through budget, capital improvement plan, and financial strategies

Implement decisions through request for Council actions after competitive purchasing processes

2-year updates to Generation Plan – allows for change in direction due to new inputs, market & regulatory forces, and stakeholder preferences

*City Council will have numerous approval steps in implementing the approved resource plan*

# Resource Planning: It's a Process...



# EUC 2016 Resource Planning Working Group



## **EUC**

Karen Hadden – EUC Chair

Brent Heidebrecht–EUC Vice Chair

Michael Osborne – Member EUC

Cary Ferchill– Member EUC

## **RMC**

Leo Dielmann – RMC Chair

Cyrus Reed –RMC Vice Chair & Lone Star Sierra Club Representative

Kaiba White – Member RMC & Public Citizen Representative

Suzanne Vaughn – Member RMC

## **Industrial Customer Representatives**

Todd Davey – NXP, Manager Corporate Services - Global Procurement

Betty Dunkerley – Hospital/large Commercial Representative

## **Other Community Members and Representatives**

Paul Robbins – Environmentalist & Low Income Advocate

Bob Batlan – Low Income Representative

Janee Briesemeister – Low Income Advocate/Residential Customers

Carlos Castañeda – Attorney /Community Member

Rebecca Melancon - AIBA /small and midsize commercial customers

Richard Halpin – Austin Interfaith Energy Group

Provides input during progressive phases of the plan to AE Staff

Monthly presentations to RMC and EUC and then AEUOC

Final plan developed

Final presentations to RMC and EUC and then AEUOC



# Resource Planning Update Timeline

Nov 2016

- Overview to Austin Energy Utility Oversight Committee

Jan 2017

- Present scenarios & Input assumptions to Committee

Feb 2017

- Present preliminary recommendations to Committee

Mar 2017

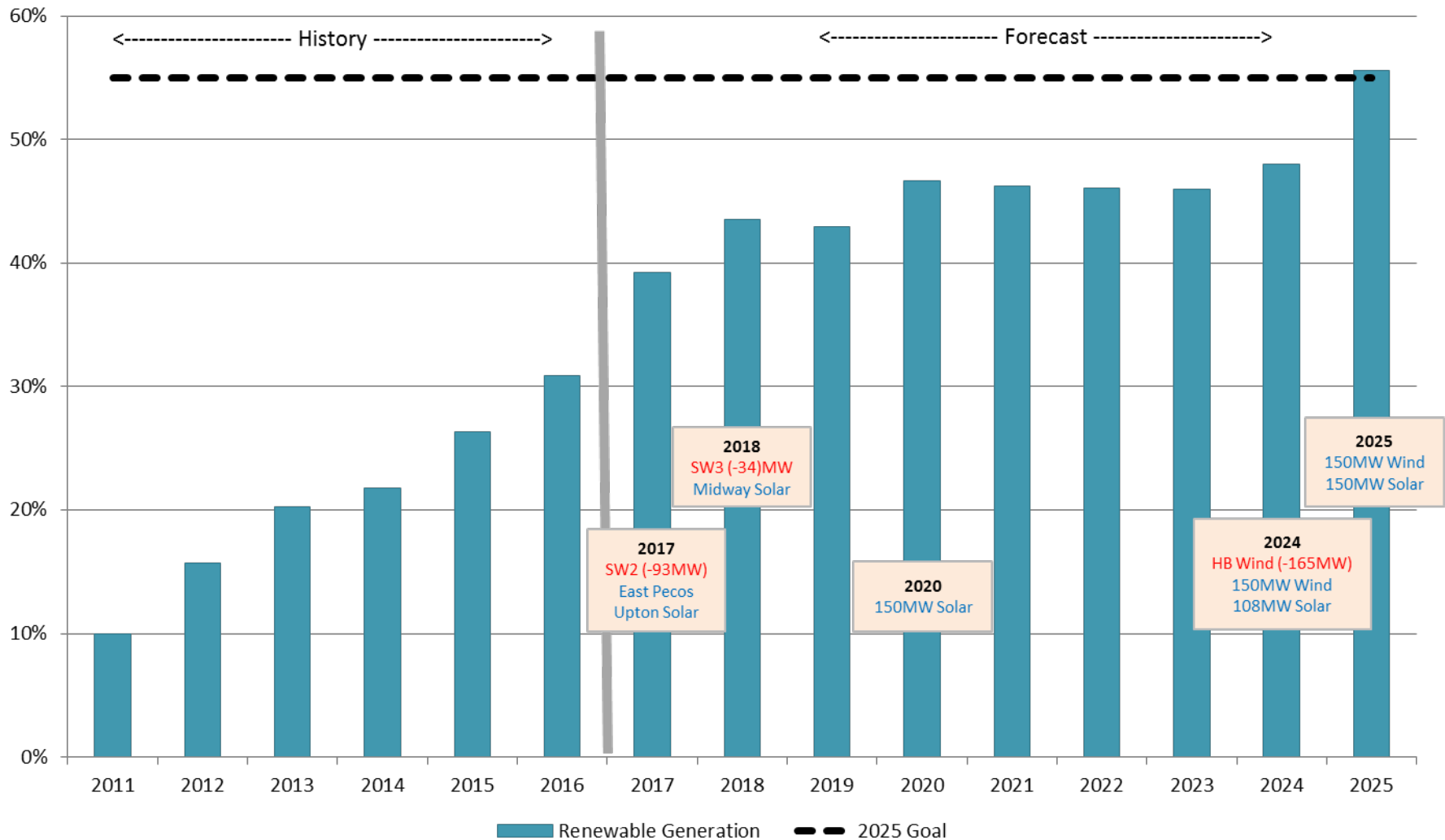
- Present 2016 Generation Plan Update to Council

# Recap of Goals & Directives from 2014 Update



- 2014 Austin Energy Resource Plan (Progress to date)
  - 55% renewables by 2025 (31%)
  - 900 MW Demand Side Management by 2025 (576MW)
    - 700 MW energy efficiency by 2020
    - Demand Response 100 MW by 2020 and additional 100 MW by 2025 (54MW)
  - 950 MW solar by 2025
    - 110 MW Local Solar by 2020 and additional 90 MW by 2025 if affordable (76MW)
    - 750 MW Utility Scale Solar by 2025 (180MWs Operational/450 under contract)
  - CO2 emissions
    - 20% reduction from 2005 levels by 2020 (Meeting)
    - Retirement of Fayette Coal Plant beginning in 2023 (in progress)
  - Affordability
    - 2% limit per year (meet)
    - Rates should be in the lower 50th percentile statewide (slightly above trending lower)
  - 10 MW (lithium ion batteries) local storage by 2025 + 20 MW of thermal storage (17MWt/3 MWe in progress)
  - Retire Decker steam units by 2019 and replace with 500 MW efficient combined-cycle (pending) – subject to a third party study (complete)

# Renewable Generation to Date



*The 150MW of Solar in 2020 reflects language from Council meeting minutes: “... to build or purchase at least 150 MWs to be online by the end of 2019...” For purposes of this chart, a project that is online by the end of 2019 will show production in 2020.*



# Current Solar Portfolio



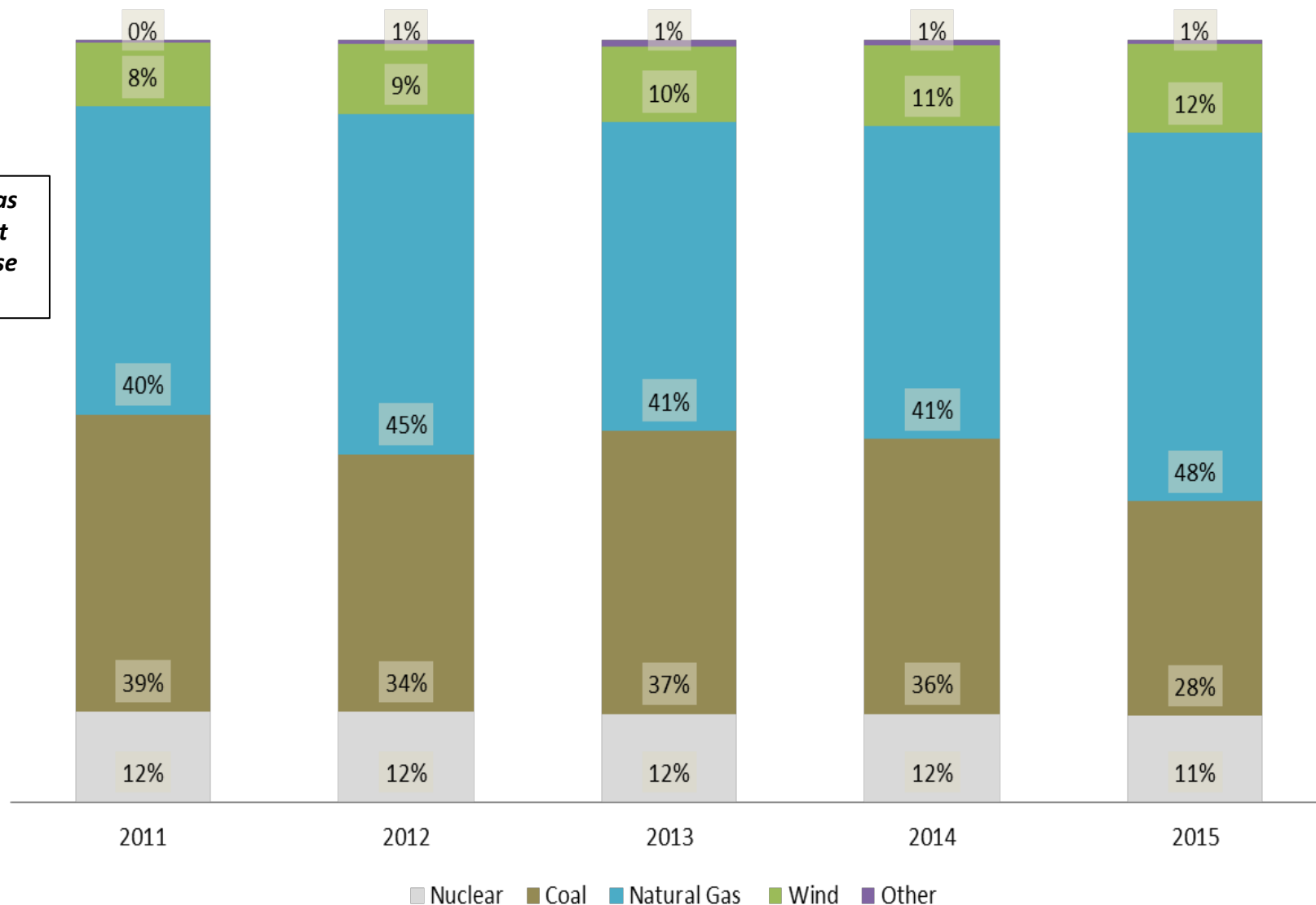
Contract Name	Type	Size (MW)	Start Date
Webberville	Utility	30	12/28/2011
Roserock solar	Utility	157.5	11/23/2016
East Pecos solar	Utility	118	1/31/2017
Upton solar	Utility	150	8/31/2017
Kingsbery	Community	2.3	4/26/2017
Midway solar	Utility	<u>170</u>	9/01/2018
Total		627.8	



# Market Update

# Changes in ERCOT Generation Mix

*Wind & Gas  
growing at  
the expense  
of Coal*

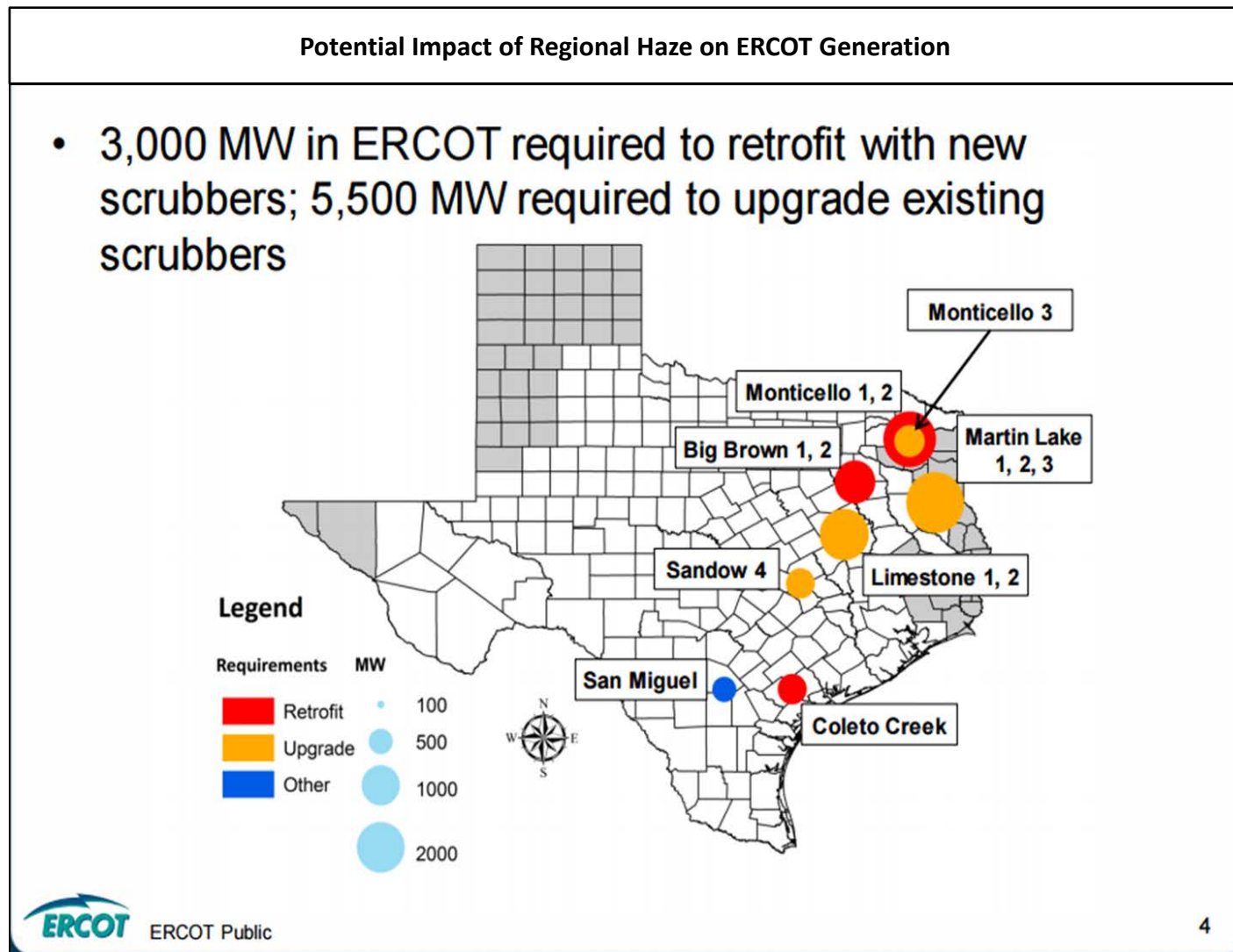


# Changing Generation Landscape in ERCOT - *Regulation*



***Regional Haze Rule has been stayed by 5<sup>th</sup> Circuit Court of Appeals***

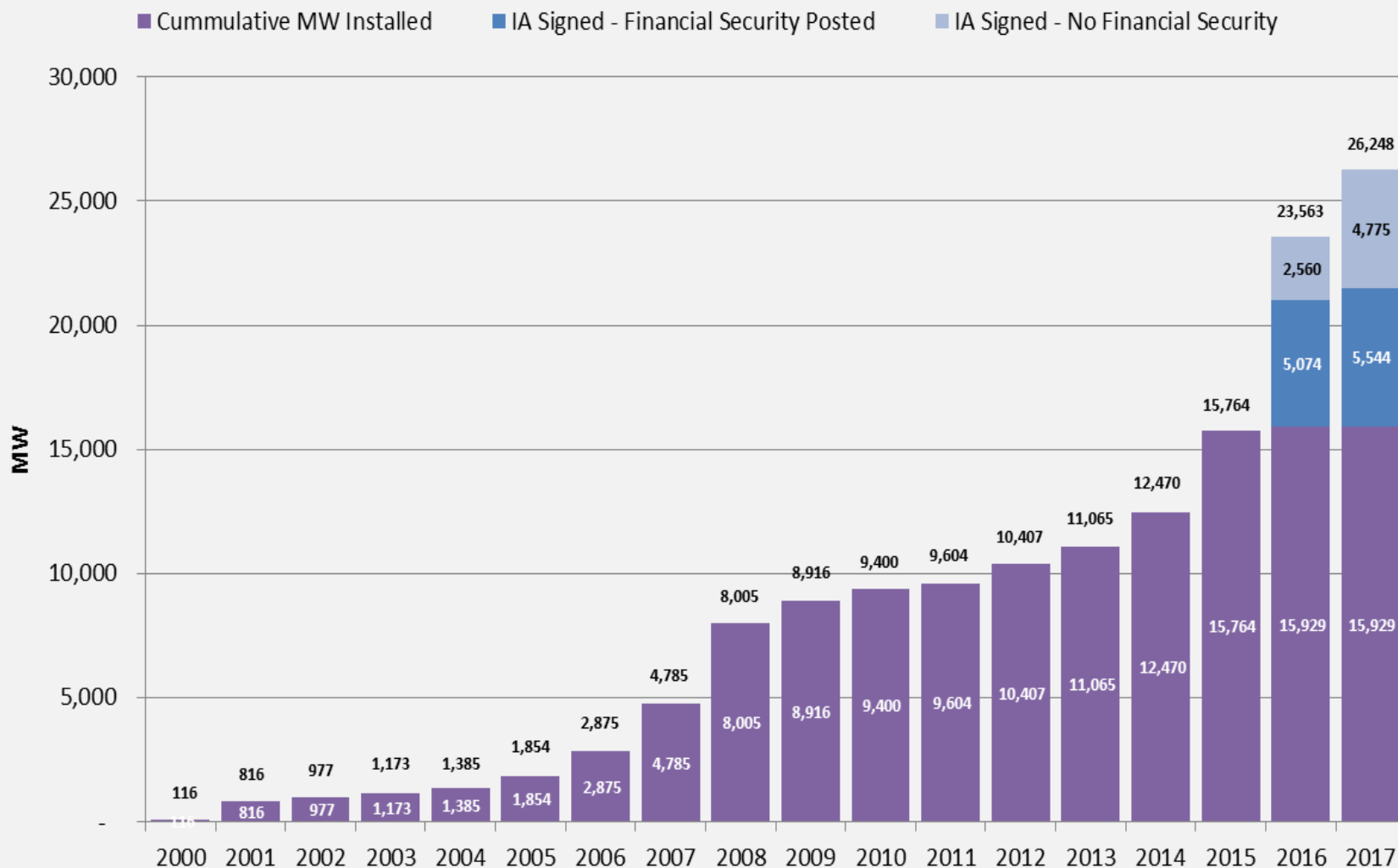
***Texas haze plans have to wait until all regional haze court challenges conclude, if the regulation is not rejected outright.***



# Changing Generation Landscape in ERCOT - *Wind*



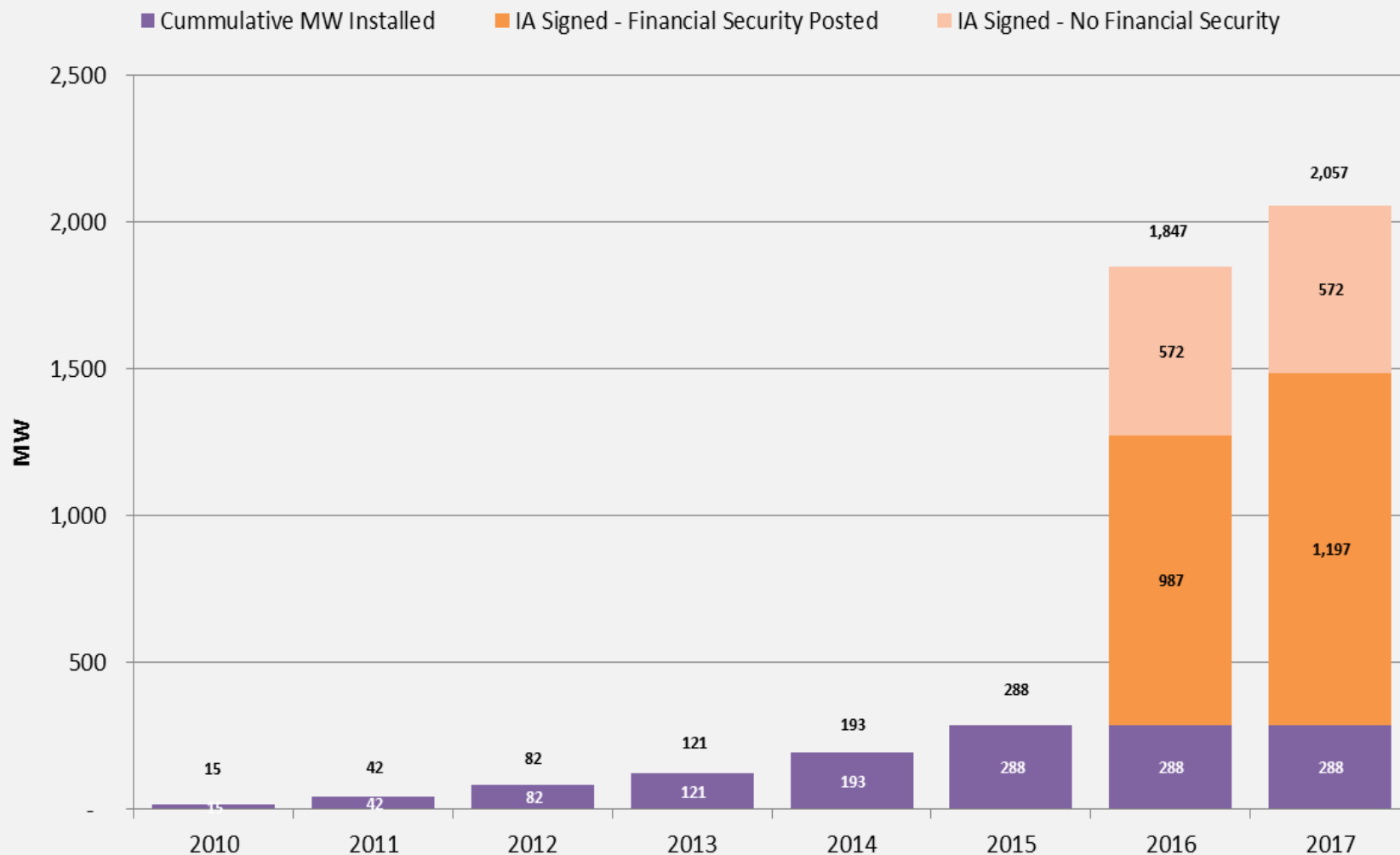
## ERCOT Wind Installations by Year (as of January 2016)



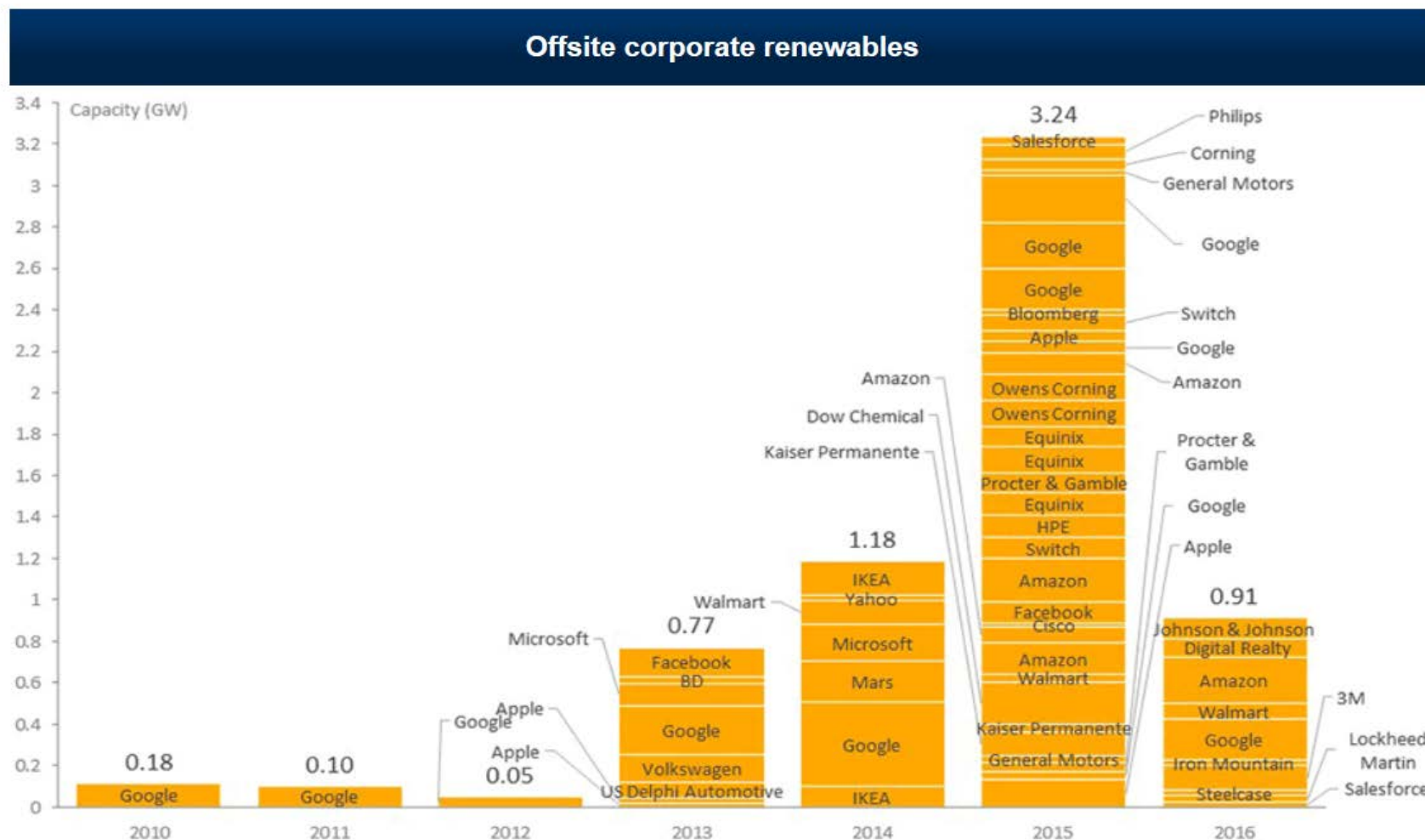
# Changing Generation Landscape in ERCOT - *Solar*



## ERCOT Solar Installations by Year (as of January 2016)



# What are the corporations doing with renewables?



The gigawatt capacity of announced off-site corporate renewable power deals surged in 2015. Figures mostly reflect wind and solar transactions in the United States and Mexico. Graph courtesy of the Rocky Mountain Institute's Business Renewables Center.