



# Austin Energy 2019 Resource Plan Studies

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# Resource Plan Studies

- Studies to be performed in 2019
  - Renewable Energy
  - Local Solar
  - Energy Efficiency & Demand Response
  - Emerging Technology & Energy Storage
  - Conventional Generation
  - Electric Vehicles



# Renewable Energy Studies

- Construct a model that achieves both a 75% and an 80% renewable energy goal by 2027.
- Construct a model that achieves a 100% carbon free energy goal by 2030.
- Assess feasibility of achieving 100% renewable energy by 2035.
  - Studies will commence next year leading into the summer months
  - Studies will be completed prior to start of September of 2019 and provide input into the 2019 Resource Plan
  - Staff will request a small EUC sub-committee to validate ideas and assumptions in the spring of 2019



# Local Solar Studies

- Study and possibly pilot a utility managed rooftop solar program that requires no investment from customer participants.
  - Preliminary identification and review of models
    - Rooftop solar host model (similar to CPS)
    - On-site community solar for MFAH / non-profits (sleeved PPA through AE)
    - On-bill solar rent-to-own tariff (similar to Pay-As-You-Save efficiency programs)
  - Preliminary stakeholder engagement and feedback
    - Multifamily Affordable Housing solar stakeholder meeting (Oct 2017)
    - Low-income customer solar survey (Dec 2017)
    - Low-Income Solar Stakeholder Meeting (Dec 2017)
    - Austin Housing Coalition meeting (Jan 2018)
    - CAP Plus 1 Partner Quarterly Meeting (March 2018)
    - Empowering Texas Communities conference (March 2018)
    - Affordable Energy Summit (forthcoming – July 2018)



# Local Solar Studies

- Study and possibly pilot a utility managed rooftop solar program that requires no investment from customer participants.
  - Next Steps
    - Deeper review of model pros and cons (FY18)
    - Legal and economic analysis of proposed model(s) (FY18-19)
    - Continued stakeholder engagement (FY19)
    - Decision on whether to move forward with a pilot of selected model (FY19)



# Local Solar Studies

- Reassess costs and benefits of raising local solar goals from 200MW by 2025 to 250MW by 2025 and 300MW by 2027, following first year of implementation of the commercial value of solar.
  - Review will commence following 1 year of experience with commercial VOS (i.e. Jan 2019) as per the Resource Plan.



# Energy Efficiency & Demand Response

- Evaluate Working Group's recommendation to achieve 1000 MW of energy efficiency by 2027 upon completion of a measurement and verification study (M&V), review of standards and technology, and an analysis of budget and progress to date. Reset goal if necessary to reflect demand reduction savings given any new methodology implemented.
- Assess potential to reach higher goal of 1,100 MW of energy efficiency and demand response by 2027
- Continue evaluate potential for demand response, if viable and cost effective, increase from 100 MW to 300 MW.
  - RFP to perform M&V study and to review feasibility of increased goals with Purchasing Department
  - Approval of RFP by Council expected late Fall 2018
  - Assessment to be conducted in 2019



# Emerging Technology & Energy Storage

- Complete Austin SHINES project by FY2019 includes assessing value and business case for integrating stationary distributed energy storage. Leverage findings to determine applicability to EV batteries.
  - Before FY19 generation plan update, Austin Energy should analyze potential value streams for energy storage that may include demand charge and peak load reduction, energy arbitrage, price responsive opportunities, voltage support, and congestion management and evaluate open standards and business cases that could be applied to future state of feasible and affordable EV distributed storage. Additionally, identify potential load and storage resulting from aggressive EV development.
  - On SCHEDULE – Austin SHINES DOE Grant funded project is currently in deployment phase through Sep 30, 2018, after that time it moves to a 12 month evaluation and reporting phase (so plans/studies will be complete by the resolution's FY2019 timeframe.)



# Emerging Technology & Energy Storage

- Study technical and economic feasibility of emerging technologies, including dispatchable renewable energy technologies, battery storage, compressed air energy storage, aggregated demand response and vehicle to grid.
  - Vehicle to Grid(V2G) – proposed to US Department of Energy V2G project scope to SHINES project in collaboration with UT Pecan Street Inc.
  - Fractal Consulting study initiated, timeline for completion late Fall 2018
- Study costs, benefits, risks and potential rate impacts of achieving a more aggressive electric storage goal, such as 50 MW and 100 MW of electrical storage by 2027
  - Results of SHINES project to be used in assessment
  - Fractal Consulting study initiated, timeline for completion late Fall 2018



# Conventional Generation Studies

- Austin Energy should study methane emissions associated with gas production and delivery and best practices to prevent methane and hydrocarbon leaks in the gas fields.
  - Austin Energy has joined the Natural Gas Supply Collaborative, an industry initiative that seeks to influence the Gas Supply market relative to fugitive emissions  
<https://www.mjbradley.com/content/natural-gas-supply-collaborative-0#about>
  - Staff reviewing all conducted studies available, in communication with Environmental Defense to further understand the landscape, expect to produce memo communicating findings
- Conduct analysis of the community economic development impact of Austin Energy generation facilities and potential replacements.
  - Scope to be determined
- Conduct an analysis of the use of water by Austin Energy's generation facilities and its impact on the community.
  - Analysis of current generation requirements will be completed next year
  - Work with Austin Water's forward resource planning group to determine future water supply versus demand projections along the Colorado

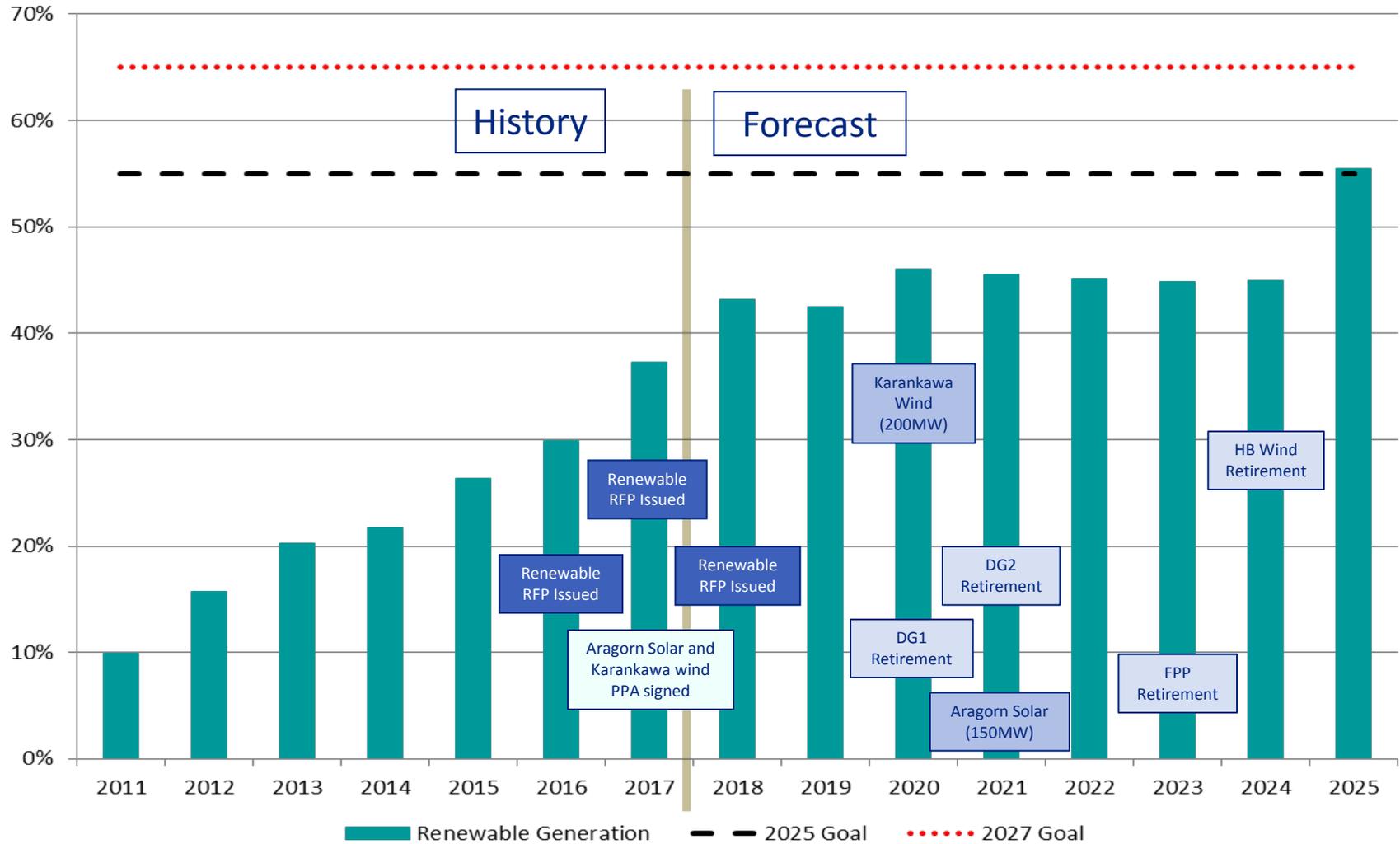


# Electric Vehicle Studies

- Leverage residential EV time of use rate pilot “EV360” launched in 2017, to develop lessons learned and best practices in FY2018 for consideration in a wider roll out of this service.
  - EV360 pilot deployment is currently underway (41 installed) and lessons learned are already being gathered based on back-office process, eligibility, contractor installation, and customer feedback.



# Climate Protection Plan On-going Progress





# Questions