APS RPAC Load Forecast Working Session 9/15/2021

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Welcome Jeff Burke Resource Planning



Load Forecast Evaluation Charlie Banke & Jess Hankins Resource Planning



Introduction Justin Joiner VP Resource Management



Load Forecast Tool Demo Charlie Banke Resource Planning



Load Forecast Review Jess Hankins Resource Planning



Discussion/Housekeeping/Next Steps

Meeting Objective

Load Forecast Tool

- Short review of APS load forecast process
- APS developed an excel based spreadsheet model to assist stakeholders with evaluation of load forecast sensitivity
- Stakeholders can select major components of the forecast to determine load forecast output
- Gain consensus for RPAC load forecast

Instructions: Change the sensitivies for each input to view changes for Total Peak and Total Energy Please Note: Total Peak = BAU - EE - DG + EV + Large Customers + Extreme Weather Please Note: Total Energy = BAU - EE - DG + EV + Large Customers







VP Resource Management Introduction

Justin Joiner



Load Forecast Review Jess Hankins

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Load Forecast in the IRP

- Load forecast is a foundational component of the IRP
- APS accounts for customer programs in the load forecast
- Load forecast and Needs Assessment covers 15 years
 - Action Plan window requires decisions (5 years)
 - Allows for development of strategy for resource procurement into the future
- Reliable, affordable energy production requires development of resources in advance



Caps Forecasting Fundamentals

- Peak and energy are both essential elements to a reliable and clean electric grid
 - Capacity Max output (reliability)
- Electric demand and energy is driven by:
 - Weather
 - Customer (mix)
 - Economy
 - Price
 - Policy
 - Other
- Load forecast includes unique variables associated with APS peak and energy needs





RPAC Model Drivers

Charlie Banke & Jess Hankins

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RPAC Model Inputs & Drivers





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⊘aps[®] BAU Drivers

Weather

Population Growth

C&I Floor Space





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Customer Programs: DSM





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Customer Programs: DG

DG Customer Spring Load Profile





Caps^e Electric Vehicles





🜔 aps

Large Customer Growth







Load Forecast Tool Demo

APS Load Forecasting Tool

- The load forecasting tool was designed with sub forecast sensitivities (base, low, medium, high)
- Intended to narrow the key areas of the forecast that interest the RPAC
- Tool is envisioned to promote discussion amongst stakeholders
- Prior to the meeting we ask that you consider elements of the forecast that are most relevant to the development of the IRP
 - Base forecast
 DSM
 - Distributed Energy
 Electric Vehicles
 - Weather

- Large Customers
- We plan to start off with a poll to show how the tool works and will move into discussion with the group
- Designed to compile subcomponents of the forecast and report on impacts to MW, GWhs, and associated growth rates











