



## Tucson Electric Power

### TEP Integrated Resource Plan (IRP) Advisory Council

#### Meeting Summary for June 20, 2019

#### Attendees:

- Julie Robinson, Pima County\*
- Andrea Gerlak, U of A
- Andrew Greenhill, City of Tucson\*
- Kevin Koch, TFS
- Rob Lamb, GLHN
- Caryn Massey, SWEEP\*
- Catalina Ross, Sierra Club\*
- Nick Germanos, Davis Monthan AFB\*
- Gary Krivokapich, Davis Monthan AFB\*
- David Welsh, Sun Corridor

*\*Alternate*

*Note: This summary is intended to capture key points of discussion during the meeting. Summaries will be drafted by TEP and submitted for review to Advisory Council (AC) members, who can request corrections, clarifications or amendments. Our goal is create a high-level record of our conversations to support our resource planning process and provide observers with a way to follow the AC's progress. These summaries are not designed to provide complete, detailed descriptions of slides, reports or other meeting materials. AC discussions will be summarized without attribution.*

#### Welcome - Jeff Yockey, TEP Manager of Resource Planning

- Participants introduced themselves and were asked to estimate how much time they spent on the TEP IRP since the last meeting
- TEP sent a draft summary of the May meeting to Council members and requested comments/suggestions
- Advisory Council documents will soon be available at <https://www.tep.com/resource-planning/>
- TEP prefers to have Advisory Council member physically present at the meetings, however, we will provide the ability to call in if requested to maintain as much continuity as possible. TEP also encourages alternates to attend as many meetings as possible even if the main delegate is attending

#### Load Forecast – Greg Strang, Lead Forecast Analyst (“Sales Presentation” slides)

- Questions and Responses relating to Electric Vehicles
  - In order to meet the “high” rate of EV adoption presented, within four years, 100% of new cars sold would need to be EVs
  - TEP anticipates that Tucson’s EV adoption rates will be slightly lower than the national average. While Tucson could get a positive impact from its proximity to California (due to secondary market effects), the relatively lower income levels and longer average vehicle turnover will likely have a larger, counterbalancing effect



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- TEP was encouraged to consider how rate structure and other incentives could mitigate peak load impacts of EVs (i.e. people plugging in their EVs at peak hours). Minnesota was noted as an area where 90% of EV charging is occurring off-peak because of the rate structure.
- Suggestions
  - TEP was asked to provide a list of assumptions that are relied upon for the forecasts.
  - A suggestion was made to compare TEP's forecast assumptions/methods to those of other utilities.

### **TEP's Supply-Side Resource Portfolio – Jeff Yockey, TEP Manager of Resource Planning (“Existing Resources Presentation” slides 2-14)**

- Questions and Answers
  - Springerville will need to negotiate a new coal supply agreement before the current one expires at the end of 2020
  - The ownership of the Luna Energy Facility is split in three equal shares between TEP, Public Service Company of New Mexico (PNM), and Samchully Co. who leases their share to Freeport MacMoran
  - What is the average price of generation from coal and natural gas? Coal in TEP's portfolio has an incremental dispatch price of \$25-\$35/MWh; with current low (sometime negative) natural gas prices, natural gas units are dispatching at \$10-\$20/MWh.
- There was discussion regarding the unprecedented low (and negative) gas prices currently being seen. A major contributor to that low gas price is the abundance of natural gas being produced from oil wells (i.e. wet gas) combined with environmental restrictions on flaring the gas.
- TEP was asked if natural gas prices remain low, would it make economic sense to close Springerville? TEP responded that low gas prices can make gas-fired resources more economical than coal, but gas price forecasts are uncertain. In addition, there is a capacity price benefit to Springerville.

### **New Resources – Lee Alter, Lead Supply-Side Planner (“Existing Resources Presentation” slides 15-23)**

- How are you calculating the cost of capital? The prices presented are the capital costs divided by the generation capacity.
- Are you planning to expand Storage? The need for additional energy storage is being evaluated through a Resource Adequacy study that is currently underway and will be presented at the August meeting. TEP expects to analyze portfolios with higher levels of storage as part of the IRP.
- What is the contract length of the RICE units? The RICE units will be owned assets with a useful life of 30 years.



**New Resources – Mike Sheehan, Sr. Director, Fuels and Resource Planning (“Existing Resources Presentation” slides 24-26)**

- What happens if gas prices go back up to \$5-7? The potential for a return to high natural gas prices is one of the primary drivers for maintaining coal in our resource portfolio.
- With such low gas prices, how did the original owner of Gila go Bankrupt? “Timing is everything.” When we were negotiating the purchase of Gila 2, natural gas prices were still in the \$3-\$4/mmBtu range and forecasts at that time did not show the low prices we see today.

**Revenue Requirement**

- Tabled for next meeting.

**Next Steps – Jeff Yockey, TEP Manager of Resource Planning**

- Next meeting will be the 3<sup>rd</sup> Thursday of July- July 18th
- TEP suggested extending the meeting to be from 10am to 1pm with lunch provided by TEP. There was general agreement to this idea.