

## Resource Planning Advisory Council – Kickoff Meeting

**Date** October 27, 2022  
**Time** 9:00 – 11:30 AM  
**Location** TEP Headquarters, Conf Rm-HQ-241-A (West) and Virtual

### Agenda

- Summary of 2020 IRPs
- Evolution of TEP/UNSE resource plans
- 2020 Action Plan updates
- Market trends
- Cost and reliability risk factors
- IRP basics and major requirements of 2023 plan
- The increasing role of resource procurement and status of all-source RFPs
- Clean energy tax incentives

Attendees	Organization
Jeff Powell	Sun Corridor
Stephen Jennings	AARP
Rob Lamb	GLHN
Eric Wilson	Pima County
Yves Khawam	Pima County
Allison Moore	Fresh Produce Association of the Americas
John Mitman	Arizona Solar Energy Industry Association
Kevin Koch	Technicians for Sustainability
Damian Rueda	Davis-Monthan Air Force Base
Alex Routhier	Western Resource Advocates

<b>George Hammond</b>	University of Arizona
<b>Sandy Bahr</b>	Sierra Club
<b>Catalina Ross</b>	Sierra Club
<b>Caryn Potter</b>	Southwest Energy Efficiency Project
<b>Jeff Powell</b>	Sun Corridor
<b>Nick Schlag</b>	E3
<b>Vignesh Venugopal</b>	E3
<b>Lakshmi Alagappan</b>	E3
<b>Lee Alter</b>	TEP
<b>Nonso Emordi</b>	TEP
<b>Victor Aguirre</b>	TEP
<b>Ilse Morales</b>	TEP
<b>Brianna Robles</b>	TEP
<b>Steve Allamano</b>	TEP
<b>Bonnie Medler</b>	TEP
<b>Joe Barrios</b>	TEP

**Lee Alter (Lead Analyst & IRP Program Manager): Introduction/Quick Facts /Summary of 2020 IRP**

**Slide 7-8**

- Question: RPAC Member: Can you be a bit more specific about what you mean by storage?
  - Response: Anything that stores energy, typically shifting it from day to night in a flexible way. The technology can be a hydroelectric electro-chemical (batteries), or anything else that doesn't produce energy but can store it, typically with a round-trip efficiency of 80-90%.

**Nonso Emordi (Lead Analyst & Project Coordinator) - IRP Action Plan Updates/Market Updates/Other Recent Developments**

**Slide 10**

- Question: RPAC Member: A few slides back we were talking about TEP's commitment towards helping the Springerville community due to the impact of the coal retirements, but what is going on with the communities of Navajo and

Four Corners, what is TEP doing to help those communities after the retirements of those plants?

- Response: TEP owns only 7.5% ownership of those plants, so we have less say there. However, we own 100% of Springerville units 1 and 2, so our focus is naturally there. The ACC also has an open docket for affected communities with plant closures, and TEP has and participated in these. See the docket or contact Bonnie Medler at TEP for more information.

#### Slide 10 & 12-13

- Question: RPAC Member: TEP does have a proportionate responsibility to those facilities, but my question is on the gas forecast, is that realistic considering the overall volatility of gas prices? It doesn't look like Putin will budge, so it is a little weird to see the lines go down and be so straight.
- Response: TEP doesn't generate these forecasts. The prices are volume-weighted averages of gas futures bought and sold on commodity exchanges, reflecting the expectations of 100s of analysts and traders. Nonetheless, forecasts can be wrong for gas or any other input, such as capital costs, so we should consider scenarios with alternative price forecasts.

#### Slide 14

- Question: RPAC Member: I am curious about the cost of solar, looking at the PPA prices, if you know the percentage of renewable PPA's TEP has versus utility owned. Have you seen a difference in those and how they impact the price we are seeing (capital costs rising vs the forecast assuming they would decline)?
- Response: One reason TEP has PPA's for most of its renewable sites instead of owning them is because developers can fully capitalize on tax credits whereas TEP could not (at least until passage of the IRA). Also, the fixed price offered gives stability in the long term for a 20-30yr contract.
- The RPAC members said it would be interesting to continue this conversation.

#### Lee Alter (Lead Analyst & IRP Program Manager) – 2023 IRP

#### Slide 23

- Question: RPAC Member: Can you explain the 2 hr battery and the MW meaning and so on?
- Response: If a 30 MW 2 hr battery is dispatching the full 30 MW, then it would be empty in 2 hours, but it doesn't have to be dispatched this way and it doesn't necessarily have to run for only 2 hours. Instead it can be dispatched at 15 MW for a total of 4 hours.

#### Victor Aguirre (Lead Analyst) – Procurement (All-Source Request for Proposals)

### Slide 41-44

- Question: RPAC Member: The ASRFP is seeking new capacity. Do those bids reflect the new tax credits in the Inflation Reduction Act (IRA)?
  - TEP will ask for price update for those that make the short list. There have been a lot of project delays, so the difficulty finding installers for customer-sited solar systems is very much felt at the utility scale as well.
- Question: RPAC Member: Would the proposed thermal projects be hydrogen ready?
  - Response: The illustration for the Levelized Cost of Energy includes a proxy for a natural gas combined cycle plant. This proxy assumes the combined cycle plant fueled at 50% hydrogen.
- Question: RPAC Member: Is nuclear power being considered?
  - Response: TEP did not receive any nuclear proposals. However, the DOE is funding the development of advanced small modular nuclear reactors (SMRs). The first commercial scale project is scheduled to come online in Idaho in 2030. More generally speaking, technologies with long development timelines won't have a chance to bid if we keep issuing RFPs for resources to be online within 2-3 years, so we may have to change the way we conduct our next round of procurement.
- Question: RPAC Member: Do the bidders talk about their supply chain issues?
  - Response: TEP did ask bidders to describe how they are managing supply chain risks.
- Question: RPAC Member: What is the scoring process? Are there incentives/extra points for sites located in communities affected by the closure of coal mines or coal plants?
  - Response: Yes there is, and we received some proposals in those locations.

### Steve Allamano (Director of Plant Accounting & Tax Services) – Clean Energy Tax Incentives

#### Slide 47

- Question: Lee Alter: Of the cost for Oso Grande, how much is offset by the production credit?
  - Response: The ITC is worth \$24 M/yr. and will increase with inflation. This is approximately 50% of the generation cost.

## Next Steps

- Lee Alter asked for suggestions for next meetings or comments on this meeting.
  - RPAC Member: It would be helpful to continue discussing some of the earlier slides about the relationship between the IRP and ASRFP, even if it's a side discussion. That was APS's approach when discussing the ASRFP with some of its RPAC members, but it doesn't have to be a separate group. Also, it would be good to know how things will be weighted in terms of scoring proposals.
  - Lee Alter mentioned that TEP and UNSE plan to issue another ASRFP in the Fall of 2023. We will take into consideration lessons learned from this ASRFP, insights gained from the IRP, and recommendations from the RAPC when writing the next ASRFP. It's also possible to conduct a supplemental ASRFP in situations where a certain class of bids was not received for certain reasons (e.g., trouble aggregating distribute resources in time or developing a technology in time with long construction times).