Arizona Public Service - September RPAC Meeting Minutes

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<th>Date</th>
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<tr>
<td>09/22/2023</td>
<td>Virtual</td>
<td>9:00 a.m.</td>
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**MEETING OBJECTIVES**

- Recap the August RPAC meeting and provide the status of previous action items.
- Discuss the latest updates to the ongoing 2023 All-Source RFP.
- Provide the results of the Western Market Exploratory Group - Western Day Ahead Market Production Cost Impact Study.
- Discuss the importance of new transmission for increased renewables and look at factors that impact the timing of transmission projects.
- Update RPAC members on the current IRP modeling results and explain key themes.
- Discuss next steps and future RPAC engagement opportunities.

<table>
<thead>
<tr>
<th>Attendees</th>
<th>Organization</th>
<th>Title/Role</th>
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<tbody>
<tr>
<td>Chaunce De Roos</td>
<td>Arizona Corporation Commission</td>
<td>Policy Advisor</td>
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<tr>
<td>Luke Hutchison</td>
<td>Arizona Corporation Commission</td>
<td>Engineering Supervisor</td>
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<tr>
<td>Steve Jennings</td>
<td>AARP</td>
<td>Associate State Director</td>
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<tr>
<td>Gregory Blackie</td>
<td>Arizona Free Enterprise Club</td>
<td>Deputy Director of Policy</td>
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<tr>
<td>Jackie Solares</td>
<td>CalMich Produce</td>
<td>Director, Sales and Business Development</td>
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<tr>
<td>Nick Schlag</td>
<td>E3</td>
<td>Partner</td>
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<tr>
<td>Michelle King</td>
<td>Holland &amp; Hart</td>
<td>Partner, Public Utilities Attorney</td>
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<tr>
<td>TJ Higgins</td>
<td>Griffith Energy</td>
<td>Carolina Power Partners Asset Manager</td>
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<tr>
<td>Lisa Hickey</td>
<td>Interwest Energy Alliance</td>
<td>Senior Regulatory Counsel</td>
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<tr>
<td>Sam Johnston</td>
<td>Interwest Energy Alliance</td>
<td>Policy Manager</td>
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<tr>
<td>Nitin Luhar</td>
<td>Mitsubishi Power</td>
<td>Director, Regional Sales &amp; Marketing</td>
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<tr>
<td>Dugan Marieb</td>
<td>Pine Gate Renewables</td>
<td>Regulatory Associate</td>
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<tr>
<td>Jeffrey Allmon</td>
<td>Pinnacle West - APS</td>
<td>Senior Attorney</td>
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<tr>
<td>Scott Yaeger</td>
<td>Rockland Capital</td>
<td>Vice President, Power Marketing</td>
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<tr>
<td>Tyler Fitch</td>
<td>Rocky Mountain Institute</td>
<td>Manager</td>
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<tr>
<td>Patrick Woolsey</td>
<td>Sierra Club</td>
<td>Associate Attorney</td>
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<tr>
<td>Sandy Bahr</td>
<td>Sierra Club</td>
<td>Director, Grand Canyon Chapter</td>
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<tr>
<td>Caryn Potter</td>
<td>SWEEP</td>
<td>Arizona Representative</td>
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<tr>
<td>Autumn Johnson</td>
<td>Tierra Strategy</td>
<td>CEO</td>
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<tr>
<td>Kate Bowman</td>
<td>Vote Solar</td>
<td>Regulatory Director</td>
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<tr>
<td>David Millar</td>
<td>Wärtsilä Energy</td>
<td>Principal, Markets, Legislative, and Regulatory Policy</td>
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Matt Lind | 1898 & Co./Director of Resource Planning | August RPAC Recap

Slide 4 - August Meeting Recap

- No questions.

Slide 5 - Follow Up

- No questions.

Derek Seaman | APS/Director, Resource Acquisition | 2023 ASRFP Update

Slide 7 - Overview & Schedule

- Question - RPAC Member: What technologies are being bid in at the Cholla location?
  - Answer - Derek Seaman: APS is seeing a variety of projects (e.g., solar, storage) that could use the existing equipment or land.

- Question - RPAC Member: Regarding queue reform, what tariff applies to these bids?
  - Answer - Derek Seaman: APS will use the existing rules until a final determination is received from FERC.

Brian Cole | APS/General Manager, Western Market Affairs | Update on Western Markets Exploratory Group (WMEG) - Western Day Ahead Market Production Cost Impact Study Results

Slide 15 - Goals of Market Participation

- Question - RPAC Member: What is the difference between the Main Split and the Markets Plus Bookend scenarios?
  - Answer - Brian Cole: They have effectively the same footprint, with the only difference being that a WAPA- Sierra Nevada region is included in EDAM in the Main Split, and in Markets Plus in the bookend scenario.
• Question - RPAC Member: These results are for 2026. How will those change over time?
  Answer - Brian Cole: In the main report, there was additional work done for 2030 and 2035. As you add resources and market functions, the results change slightly, but effectively, the overall results do not change substantially and are directionally the same.

• Question - RPAC Member: Is there no scenario where APS joins the Extended Day-Ahead Market (EDAM) unless the entire West joins the EDAM?
  o Answer - Brian Cole: In Alt Split 1, APS is in EDAM, while the Northwest is not. The areas and groupings were chosen intentionally to understand the potential costs and benefits of differing footprints.

• Question - RPAC Member: Are the technical details of the study publicly available?
  o Answer - Brian Cole: The data is confidential, but APS will share the main report, including assumptions, methods, and outline. The full WMEG Western Day-Ahead Market Production Cost Impact Study, filed with the ACC on 9/28/23, can be found at the following link: E000031018.pdf (azcc.gov).

• Question - RPAC Member: Are the loss of savings from leaving the Western Energy Imbalance Market (WEIM) captured in the study?
  o Answer - Yes, the EIM savings are currently being captured in the Business As Usual (BAU) case. All alternative cases assume inclusion in the market identified (both real time and day ahead) - so the results effectively include either being in or being out of the WEIM. The results include the net effect of whichever market the entity is included in and would, therefore, take the inclusion or non-inclusion of being in WEIM into account.

• Question - RPAC Member: Is there any consideration about losing access to low California solar prices?
  o Answer - Brian Cole: Arizona is now creating its own overbuild of solar along with building more batteries. Therefore, Arizona is likely to look more like California moving into the future.

• Question - RPAC Member: What are some cost drivers leading in this direction?
  o Answer - Brian Cole: Early in the process, all members of WMEG updated their information, including transmission, resource plans, and more. Trying to pin down a single cost driver is not feasible, but one takeaway is that joining a large footprint is better if you share the benefits amongst all parties and in APS’s case, being in the same market as the Northwest has better results likely due to the increased load and resource diversity.

• Question - RPAC Member: Is PacifiCorp (PAC) soaking up some of the benefits from APS?
  o Answer - Brian Cole: It is unclear, but it is possible that APS could have seen better results if PAC was included with the rest of the West.

• Question - RPAC Member: If California energy prices are higher, it is an assumption that Arizona plants will be called on more often to transmit power into California. How would this impact revenue for APS? Does it increase costs for Arizona customers?
  o Answer - Brian Cole: The costs are net, so they are effectively savings. Based on the study results, California will see an increase in cost when it is not included with the rest of the West in the same market. Even when in separate markets, Arizona and other entities will still have sales to California.

Nick Schlag | E3/Partner | Transmission Timelines
Slide 31 - Multiple Studies Point to the Importance of Transmission to Enable Access to High-Quality Renewable Resources

• Question - RPAC Member: Are utilities doing anything to get a jump on transmission projects and help facilitate the connection of solar resources?
  o Answer - Todd Komaromy: The IRP documents identify the best plan to serve the load, including the expertise of APS’s transmission planners.

• Question - RPAC Member: Is APS planning transmission based on the new projects in the queue and where they are sited?
  o Answer - Todd Komaromy: APS is actively working on their processes, including interconnection reform, and working with their neighboring utilities to be as efficient as possible.

Mike Eugenis | APS/Manager, Resource Planning & Analysis | IRP Key Themes
Slide 40 - Key Themes & Development Strategy

• Question - RPAC Member: Why is 2032 the year of the second pie chart?
Answer - Mike Eugenis: 2032 was selected because it is after the exit of Four Corners in all scenarios.

- Question - RPAC Member: Are you assuming no additional nuclear by 2032?
  - Answer - Mike Eugenis: Yes, the generation we receive from Palo Verde is fixed. The model has new nuclear as an option but has not selected it.

- Question - RPAC Member: How many total portfolios are you running? Do you have a preferred portfolio?
  - Answer - Mike Eugenis: There are about 16 portfolios, and there is no preferred portfolio selected yet.

- Question - RPAC Member: How do you consider including microgrids as part of Demand Response (DR)?
  - Answer - Mike Eugenis: Both Microgrids and Demand Response products provide dispatchable capacity to the system. They can provide resource adequacy by controlling and responding to system fluctuations at any time. This is why they were grouped together on slide 42.

- Question - RPAC Member: Why will stakeholders not see the final results until two weeks before the filing?
  - Answer - Mike Eugenis: The timeline has been impacted by APS's intentionality and tremendous work put into the modeling. APS has engaged with industry leading consultants in the development of our planning reserve margin and resource accreditation. This is also the first time APS has leveraged the Long-Term Capacity Expansion portion of the Aurora tool for an IRP, which has taken a significant amount of research and troubleshooting as we have run cases.

- Question - RPAC Member: How will the Clean Energy Commitment (CEC) impact the preferred portfolio selection?
  - Answer - Mike Eugenis: The CEC is included in the cases, and the result will reveal the impact on the preferred portfolio.

- Question - RPAC Member: Can APS select a portfolio that does not support the CEC?
  - Answer - Mike Eugenis: That is not anticipated, but the portfolio will be selected based on reliability and affordability.

- Question - RPAC Member: What information will be shared before the filing?
  - Answer - Mike Eugenis: If you have a list of outstanding questions, please send them to APS at RPAC@aps.com.

Matt Lind | 1898 & Co./Director of Resource Planning | Next Steps

Slide 45 - Next Steps

- Question - RPAC Member: Will you send out information before the RPAC meeting on October 25th? What will we be doing that day?
  - Answer - Todd Komaromy: APS plans to report results and allow others from the RPAC to present. Before the RPAC meeting, we will provide the necessary information as soon as it is complete.