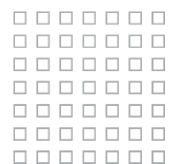


Meeting Objectives

- Recap March RPAC meeting and provide status of previous action items.
- Summarize the RFP review process and highlight how RPAC member feedback has been considered in the development of the RFP document.
- Solicit additional feedback from RPAC members to identify positives aspects and areas for improvement in the RFP process.
- Discuss APS’s approach on demand side resource acquisitions and highlight recent DSM programs that have been adopted and scaled.
- Finalize the RFP timeline.

Meeting Subject: April RPAC Meeting
 Meeting Date: 04/20/2021
 Start Time: 09:00am
 End Time: 12:00pm
 Location: Virtual

Attendees	Organization	Title/Role
Justin Joiner	APS	Vice President of Resource Management
Jessica Hankins	APS	RPAC Lead/Liaison
Todd Komaromy	APS	Manager of State Reg. Compliance
Mike Eugenis	APS	Supervisor, Resource Planning
Yessica Del Rincon	APS	Communications Consultant
David Peterson	APS	Advisor, Corporate Strategy
Jill Freret	APS	Director of Resource Acquisition
Daniel Haughton	APS	Director, Customer to Grid Solutions
Kent Walter	APS	Manager, RM Analysis & Engagement
Kerri Carnes	APS	Manager, Customer to Grid Solutions
Dawn Baker	APS	Consultant, Power Procurement
Tim Rusert	APS	Director, Fuel Procurement
Lakshmi Alagappan	E3	Partner
Nick Schlag	E3	Partner
Adrian Au	E3	Consultant
Matt Lind	E98	Director of Resource Planning
Debashis Bose	E98	Project Manager
Evan Lipsitz	E98	Consultant
Chase Kilty	E98	Consultant
Alex Routhier	Western Resource Advocates	Senior Clean Energy Policy Analyst
Nick Meyers	Arizona Corporation Commission	Policy Advisor
Erin Ford Faulhaber	Arizona Corporation Commission	Policy Advisor





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Autumn Johnson	Western Resource Advocates	AZ Gov. Affairs Manager
Gary Dirks	ASU	Director
Laurie Woodall	AZ RUCO	Director
Lisa Hickey	New Law Group	Attorney
Devi Glick	Synapse Energy Economics	Principal Associate
Johnny Key	Freeport-McMoRan	Director
Caryn Potter	SW Energy Efficiency Project	Utility Program Manager
Teresa Brown	PG&E	Operating Clerk
Brendon Blake	AARP	Associate State Director of Advocacy
Phil Jones	Alliance for Transportation	Executive Director
Diane Brown	Arizona PIRG	Executive Director

Matt Lind (E98/Director of Resource Planning) – Introduction/March RPAC Recap/Updated Meeting Guidelines/Summary of RFP Review

- **Slide 3 – March RPAC Meeting Recap**
 - APS is continuing to develop an All-Source RFP targeting resource needs between 2025 and 2027.
 - APS organized smaller RFP working group sessions to obtain more detailed feedback on the contents of the RFP document and made efforts to incorporate feedback into the RFP.
 - The RFP is designed to be a fair, objective, and flexible process that does not deter APS from its commitments to provide a sustainable, reliable, and affordable future.
- **Slide 4 – Following Up**
 - Action items from last month’s meeting included:
 - APS to provide the independent monitor agreement from the 2020 RFP.
 - APS to provide the draft RFP to the RPAC members.
 - Both action items were completed before the start of the April RPAC meeting.
- **Slide 5 – Meeting Guidelines**
 - Meeting guidelines were mostly unchanged from previous RPAC meetings.
 - Certain RPAC members were excused from the entirety of April’s meeting due to potential resource development interests.
- **Slide 7 – RFP Guiding Principles**
 - Goal is to develop a process that is objective, fair, and flexible to diverse resources.
 - Open to all commercially viable resources and technologies.
 - Prioritizes reliable and affordable proposals that enable clean energy commitments and have a commercial path forward.
- **Slide 8 – RPAC RFP Feedback Timeline**
 - Final RFP release is scheduled for early to mid-May
- **Slide 9 – Changes in Initial RFP Draft**
 - Changes made from the 2020 RFP to the 2022 RFP include:
 - Updated document organization



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- Introduction of 1898 & CO.
- Providing a transparent scoring system
- Incorporating RPAC/stakeholder feedback
- Structural changes to the RFP include:
 - Reducing the minimum bid size to 5 MW
 - Creating a tiered proposal fee based on the size of the RFP bid
 - Including renewable plus storage BTA and PPA options.
- Slide 10 – RPAC RFP Feedback
 - RPAC members feedback was taken into consideration and action was taken to update the RFP document.
 - There were approximately 90 different feedback items taken into consideration that covered topics including communication transparency, schedule, evaluation process, and evaluation criteria.
- Slide 11 – Additional Changes
 - Additional changes made to the RFP document based on RPAC feedback include:
 - Sharing the bidder confidentiality agreement with the working group
 - RFP document to be publicly available at APS' website
 - Reducing the minimum previous experience requirement on smaller projects
 - Removing the maximum size for demand side options
 - Increasing the screening criteria weighting for carbon emission profiles
 - Comment: Appreciate the changes that have been made.
 - Response – Matt Lind: Thank you for sharing that comment. Hopefully we provided a good overview of the process.
 - Question: I appreciate the attempts that were made to make the demand side options more equitable. I wanted to confirm, it says here that you removed the maximum for demand side options, is there a minimum amount for demand side options?
 - Response – Matt Lind: The minimum size for all resource technologies submitted in the RFP is 5 MW. There is another section of today's agenda that will be dedicated to acquiring demand side resources. The intent would be that there are multiple avenues for demand side options of multiple sizes and scale to be a part of APS' portfolio but for this activity the 5 MW size is a minimum across all technology types whether they are demand or supply side.
- Slide 12 – Discussion & Questions
 - Question: Have you proposed some model interconnection rules? Are the rules the same for the small (under 25 MW) as well as the larger resources?
 - Response – Matt Lind: The RFP document has information about working with APS's interconnection team to go through an interconnection study process. The process is dependent on the voltage level, where you are interconnecting, and how you are interconnecting to the system to determine what transmission upgrades would be necessary to maintain the reliability of the system. We do not have a requirement that the interconnection study process must be complete before participating in the RFP.

RPAC Members – RPAC Member RFP Feedback

- Slide 13 – RPAC RFP Feedback

- Comment – **Autumn Johnson**: I want to echo some of the comments that have already been made in the RPAC meeting today. I am super impressed with how APS has conducted this process. To my knowledge, this is one of the first times one of the big utilities has sought stakeholder input before issuing an RFP. The engagement has been meaningful and has not felt like a type of “box checking” exercise. We have had multiple working group meetings and opportunities for red lines. We were able to provide feedback and saw that changes to the document were made based on that feedback. I am at the point where I want to encourage other utilities to follow this process. I think the utilization of E3 to provide a comparison to what other utilities are doing with their All-Source RFPs is a good practice and super helpful for stakeholders to understand industry norms. The only thing that I would flag for future processes is that I think there is a misconception that all RFPs are the same. Any quantitative exercise with the appearance of objectivity still has a lot of ways to bias the process. The two things that I noticed in the initial criteria was that fossil resources and experienced developers were favored but all in all I am very impressed with how this process has been executed. I hope this level of stakeholder engagement continues as the process moves forward.
- Response – Justin Joiner: Stakeholders will continue to be a part of our process now and going forward in perpetuity. If I could do one thing differently, I would have started this process six months ago but with the accelerated timeline things had to happen in a truncated fashion. I would expect that after we go through this RFP, get responses back, and see what went well and what did not, we will have an even lengthier process to get stakeholders involved and incorporate their expertise. I want to make that very clear that we will continue to include our RPAC members, and we greatly value their input and expertise.
- Comment – **Diane Brown**: Ditto on Autumn’s comments.
- Comment – **Phil Jones**: I would echo Autumn’s comments as well on the robust nature of the process, and responsiveness to comments and advice that was received.
- Comment – Justin Joiner: We wanted to be very responsive to the fact that we wanted to hear from you all today. I want to reflect on the history of this RPAC and its revitalization. The intent is to earn the trust and the faith of this group and the only way to do that is to work together, hear you out, and take action. I hope that it comes across as genuine and sincere and you see that we have made changes based on the feedback we have received. I want to make sure that we do what we say, and it is very transparent. There will be times that we have a differing viewpoint, but we want to be clear during those times. The things that are making me a little nervous are the headwinds that we are seeing with the generation fleet. Costs everywhere are going up. Cost of natural gas, solar panels, and batteries are all going up. We haven’t been able to finalize deals due to all the uncertainty in our industry. There is an investigation by the Department of Commerce on tariffs that would dramatically impact the solar industry. These are all things that we must recognize, live with, and adapt. We have to be aware of it, but it does not change anything with our Clean Energy Commitment. The cost of everything is going up across fuel sources. It is coal, it is gas, it is renewables, and it is storage. Affordability is something that is at the forefront of our concerns, but when everything is going up you realize there are some things that are unavoidable. We will see what the RFP responses look like, and we will share what we are seeing in the industry and what the cost impacts are to the RPAC members. We will always have that healthy discussion that when there is a flicker of the lights, that is on APS, but I see no reason why we can’t keep the lights on and still meet or exceed our Clean Energy Commitment. We must have creative solutions to allow APS to continue to move with speed and evaluate projects on a fair, equitable scene.

- Question – **Autumn Johnson**: I appreciate you bringing that up and it is very helpful to frame it that we are seeing cost increases across a number of technologies and not just solar and batteries. Do you have a sense of a projected solution for the uncertainty around the tariff on solar that will inevitably have a different timeline than the timeline of the RFP?
- Response – Justin Joiner: The insight I am getting from our regulatory support is that it could be a year long process and we expect bids back for the RFP in mid to late-July. That uncertainty will not go away during the bidding window so we would want the bids to provide bookends that would show what the cost would be with full implications of the tariff or having no tariff at all. This would allow us to see a high and low end for the projects and compare bids on an equal level. We do not want to end up selecting a bid that made an incorrect assumption on the tariff. The other option would be to sit on the sideline and wait until this uncertainty is resolved but this would be unacceptable with the timeline of our resource needs and the need to progress on our Clean Energy Commitments.
- Response: Thank you.
- Response – Justin Joiner: One other thing, I have talked to most, if not all of you now and I want to be frank. We have our Clean Energy Commitment, and I am 100 percent that we are going to hit that and hit it early. I have shared with this group that we have extended gas tolls at Arlington. The key to APS being able to keep the lights on, keep things affordable, and hit our targets, is to look closely at the extension of all of our gas resources for short term and mid-term periods. I have stated from day one that we will do nothing that compromises our Clean Energy Commitment. Anything that compromises those commitments during this RFP process is off the table. We would not make an investment in a new gas plant that would have to be online through 2050 or 2060 and interfere with our clean energy plans. What needs to be on the table are resources that are near term and can act as a bridge. If we can do it without that bridge then we will do it, but we owe this group a more detailed roadmap for how we are going to meet our Clean Energy Commitment. That is what we are going to be working on in resource planning and within the company. We are going to show that roadmap to success and we want the RPAC to join us during that journey.
- Question – **Gary Dirks**: I think that this has been great, and this engagement is exactly the kind of process that we need. A strong theme that we are seeing is how tight the situation is going to be next summer. The Germans are going to eliminate imports of Russian gas by 2024 by building LNG terminals in the range of two dcf each. They are going to be pulling a lot of gas from some place and most likely a substantial part of that will come from the United States, leading to more drilling. The entire supply chain will get backed up. I think it is going to be really important to stay alongside how tight this could get and what the implications are for us and our ability to meet next summer's demand. The second thing I would like to bring up would be the Texas power outage. The outage cost approximately \$130 billion dollars and 100 lives. Do we in Arizona have any idea what would happen if we had a substantial power outage for days in the summer? Related to that, how connected are these grids, and if one goes down do they all go down?
- Response – Justin Joiner: I want to note that I was previously at CenterPoint Energy based out of Houston. I had to go speak to our CEO and Texas representatives that were wanting to understand the outage. To your point, the deaths that occurred were our most vulnerable citizens. There are people that go around valuing lives with dollar amounts. I can't tell you what that dollar amount is, but I can tell you that it was totally unacceptable. When I moved here and realized how hot it gets here, I think that it is life or death here if power is out in the summer. It won't take long for lives to be at risk, and we cannot have that. The most important thing is loss of life, then there are long term considerations on whether or not Arizona or Phoenix would be a place to start a business or to put kids through school and there is a negative domino effect that occurs. Arizona does not need to wait; we know what happens when there



are blackouts. We started in December showing how close we have been to a shortfall in the past. We need to turn over every stone on existing resources. Where we can avoid the need of new fossil or new pipelines, we have to avoid that. Extensions and efficiency gains with existing PPAs (Power Purchase Agreement) and resources provide a security valve that provide confidence that when we sign new deals, we can withstand delays and supply chain issues. We have an all of the above resource mix until 2031. Right now, the coal is hedging gas volatility as well as our gas hedge program which has shielded us from 85 percent of the natural gas volatility. However, we can't hedge forever. I do share the same concerns that other utilities have but I feel like APS is in a different position with a longer landing period. We want to approach this as Arizona as a whole and we will help our neighbors as much as we can, but the honest fact of the matter is that we have to take care of our customers first. I hope that this RPAC will help us work together to keep the lights on and we must consider life as the number one item. We have a long enough glide path with our Clean Energy Commitment that we are in a better position than others, but we need to keep picking up the low hanging fruit for interim solutions.

- Comment – **Caryn Potter**: Thank you Justin for this sobering conversation. It is a reminder of the very real and significant implications of this entire process. Especially in a state like Arizona with a high percentage of mobile homes that are unlivable in the summer in terms of heat related morbidity. It is a reminder that it is important to think through programs that can help avoid the need for new units. The policies that the commission has done with the Energy Efficiency Standard has allowed Arizona to avoid 14 combustion turbines. When you look at all these policies together it can have significant implications for being able to avoid certain projects, save costs, and achieve the comfort and quality of live that we want APS's customers to achieve. We want to work with you all to achieve that until the very end.
- Response – Justin Joiner: We have to make sure that our customers have the tools to make the best decisions. Kerri is going to talk later on in the presentation on demand side resources. We need to utilize our relationship with our customers as part of our solutions. We don't just want to build more resources. We want our customers to be able to consume our product as efficiently and effectively as possible.
- Question – Gary Dirks: Within narrow limits, there is some ability to help others in Arizona, but I took from what you said that you have the ability to isolate yourself. If one of the other utilities in Arizona were to have a problem, would that cascade to APS?
- Response – Justin Joiner: Thank you for asking for that clarity. It depends on the size of the issue or the shortfall but there could definitely be impacts on APS customers as a result of neighboring shortfalls. I'll use Palo Verde as an example. If that were to go down, it would impact a lot more than just Arizona. Depending on the size and the duration there would be collateral impacts. We are not an island and that is good, but it also has other implications.
- Question – Gary Dirks: I think that it would be good for us to collectively think about how close to the edge we would like to run these systems. Going back to Texas, you could buy a lot of generation capacity or any other form of supply for \$130 billion dollars. While our economy isn't as big or likely wouldn't be affected to the same degree, you can also buy a lot for \$10 billion dollars.
- Response – Justin Joiner: I hope that there is not a misnomer among our customers, but I wouldn't blame them if there is because people that don't follow this every day would not be attune to it. There is a cost involved with keeping the lights on and there is a cost involved with the energy transition. We are going to have to make capital investments and it can be difficult to talk dollars and cents when you are talking about something as essential as energy. I think that we

owe it to our customers and our commission that we are clear on why we need to make investments and we can't wait until after the fact like Texas. It is far better that we get ahead of it, and if these investments are helpful to our neighbors, I have to remind people that every dollar made from off system sales goes back to our customers. That can be a big compensation when there are dire situations or dire timeframes.

- Response – Matt Lind: I appreciate the discussion and the engagement.
- Slide 14 – Break

Matt Lind (E98/Director of Resource Planning) – RFP Schedule / Looking Forward

- Slide 16 – Anticipated Schedule: 2022 All Source RFP
 - May 16th is the targeted release date for the final RFP document.
 - Early July is timeline to receive initial bids
 - Evaluation and shortlisting will be completed by late August
 - September – December is the timeline for bidder due diligence and contract negotiations.
- Slide 17 – Discussion & Questions
 - Comment – Jill Freret: The only thing I would like to say is that we are making a really concerted effort with this RFP to move negotiations along at an appropriate clip recognizing the hill that we have to climb. We need to meet our 2025 needs in a really constrained market with our peers seeking the same resources at the same time. There have been many RFPs released for the same time period. It is one of the reasons why it has been so critical to get all the feedback that we have gotten to build the RFP and put it together so that there is transparency. It will be different than previous RFPs that have swelled and taken up time that we can't afford to take up with this effort.
- Slide 19 – May and Future RPAC Meetings
 - May RPAC meeting will be a hybrid setting. In-person and virtual attendance will both be supported.
 - There will be no RPAC meetings through the Summer and the cadence will start back up in the third and fourth quarter of the year.
 - RPAC meetings after the break will be focused on an update to the RFP process and then shift the focus to the 2023 integrated resource plan.

Kerri Carnes (APS/Manager of Product Development Strategy) – Acquiring DSM Resources

- Slide 21 – Scaling Up APS's DER Aggregation Programs
 - Doubled the size of APS's "Cool Rewards" program in 2021. Raising size from 113 MW to 150+ MW in 2022
 - "Peak Solutions" program is expected to increase from 28 MW in 2021 to 45 MW in 2022.
 - Residential Battery Pilot program is new in 2022 to provide a rebate for data share and on-peak dispatch. Goal is to be up to 8 MW by 2023.
 - Managed EV Charging program is new in 2022 to provide rebates for data sharing.
 - Connected Water Heating Controls program is new in 2022 and is continuing to look at new technologies to expand DER aggregation.
 - APS very much believes that customer resources are a part of the overall resource to meet APS's goals.
- Slide 22 – Partial List of DSM Program Partners



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- The DSM programs take a wide network to deliver the programs and make sure awareness is brought to the different programs.
- APS has developed strategic partnerships to increase the customer value of the DSM programs being offered.
- **Slide 23 – Recent DSM RFP Opportunities**
 - There have been recent DSM RFP opportunities that led to partnerships and better DSM pricing.
 - Running DSM RFPs is important to constantly refresh pricing, bring in new partners, and ensure APS is offering the best possible DSM opportunities.
 - The online marketplace has provided an exciting education opportunity for APS customers to understand how to use electricity as efficiently as possible.
- **Slide 24 – 2021 All-DDSR RFP**
 - The commission asked for APS to create a tariff and in order to make the most informed recommendation, APS decided to run an All-DDSR RFP.
 - The All-DDSR RFP went through a similar stakeholder process to the current All-Source RFP.
 - APS received 12 total bids from six bidders, with at least two bids for each of these services.
- **Slide 25 – DDSR Tariff Approach**
 - APS is still working through the contract negotiations on the DDSR contracts.
 - APS is considering issuing periodic DDSR RFPs, specifically identifying resource needs and grid services that are being requested.
 - DDSR Tariff will be filed by June 1st of 2022.
- **Slide 26 – Discussion & Questions**
 - Comment: The work that you all have done to bring customers in early on and keeping up the level of engagement is critical to success, and I just wanted to say thank you for that.
 - Response – Kerri Carnes: Thank you and I really do believe that it is important to bring in as many perspectives as possible and it is how we are getting to the best possible solution.
 - Question: Can you continue the conversation for how this is going to work in the regulatory construct or when you are going to put some of these services in practice?
 - Response – Kerri Carnes: The bulk of what I spoke about is already in practice and we plan to continue to rapidly scale these programs. The DDSR is newer and came as a result of specific commission orders. The RFP ran last summer. We are still working through the negotiations, and we plan for deliveries to occur in early 2023 but I can't speak to specifics quite yet. The tariff is required to be filed this year and we are on track to file that in compliance on the date of June 1st.
 - Question: With the DDSR, do you have to receive regulatory approval first before you can start contracting? Or are you free to contract with them?
 - Response – Kerri Carnes: We are currently contracting with them. We will need commission approval in a couple of different areas. First, the tariff which will propose that customers can sign on to it later down the road. Also, the budgeting for the services on our side will require commission approval.
 - Question: Will the DDSR stakeholder process continue?



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- Response – Kerri Carnes: We will meet two more times before the June 1st filing. I have not thought much beyond that, but I would definitely be open to continuing the conversation. At a minimum, we should check in with the DDSR group about actual performance. We should take the data that we are gathering and compiling and share that because that data and that performance should inform future program development. I don't see it sunsetting in the near term but the cadence or frequency will slow down in the near term.
- Slide 27 – Open Discussion and Next Steps
 - Comment – Matt Lind: I really appreciate the discussion and participation during today's meeting. We really appreciate the tone and the engagement, and we hope that you all are seeing good progress on these items. Thank you.
 - Comment – Justin Joiner: Thank you all for your time and I look forward to meeting some of you all in person for the first time in May.

New Action Items:

- APS to complete RFP document for release on May 16th.
- APS will coordinate logistics for hybrid setting of the May RPAC meeting. In-person meeting details will be provided once date and time are finalized.