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**DIRECT TESTIMONY OF JEFFREY B. GULDNER**  
**On Behalf of Arizona Public Service Company**  
**Docket No. E-01345A-19-0236**

October 31, 2019

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1                                   **DIRECT TESTIMONY OF JEFFREY B. GULDNER**  
2                                   **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**  
  **(Docket No. E-01345A-19-0236)**

3    I.    INTRODUCTION

4    **Q.    PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

5    A.    My name is Jeffrey B. Guldner. My business address is 400 N. 5<sup>th</sup> Street, Phoenix,  
6           Arizona 85004. I am currently President of Arizona Public Service Company (APS  
7           or Company) and Executive Vice President of Public Policy at Pinnacle West  
8           Capital Corporation (Pinnacle West). On November 15, 2019, I will transition into  
9           the role of Chairman of the Board, Chief Executive Officer and President of  
10          Pinnacle West and Chief Executive Officer and President of APS.

11   **Q.    WHAT IS YOUR PROFESSIONAL BACKGROUND?**

12   A.    I joined APS in 2004 as Director of Regulatory Compliance. Since then, I have  
13          held various executive positions at APS that have included responsibility for our  
14          Federal Regulation, Public Policy, Customer Service, and Legal Department. I was  
15          appointed APS's President in December of 2018. Prior to joining APS, I was a  
16          partner in the Phoenix office of Snell & Wilmer LLP, where I practiced energy and  
17          public utilities law. I was a Surface Warfare Officer in the United States Navy and  
18          an assistant professor of naval history at the University of Washington prior to  
19          practicing law and earned my Juris Doctorate degree from Arizona State  
20          University.

21   **Q.    HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE ARIZONA**  
22          **CORPORATION COMMISSION (ACC OR COMMISSION)?**

23   A.    Yes. I provided testimony in both the 2008 and 2011 APS rate cases before this  
24          Commission. I have also participated in numerous workshops, open meetings, and  
25          other proceedings at the Commission since 1997.

26  
27  
28

1 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**  
2 **PROCEEDING?**

3 A. Along with providing a high-level overview of the Company’s request in this  
4 proceeding, I discuss the future of the electric industry and how APS is moving  
5 forward to focus on meeting the needs of our customers. I also discuss APS’s clean  
6 generation fleet and the steps we are taking to become even cleaner.

7 II. SUMMARY

8 **Q. PLEASE SUMMARIZE YOUR DIRECT TESTIMONY.**

9 A. This is an exciting—and challenging—time to be involved in the electric industry.  
10 The industry is continuing to evolve rapidly, with a wide range of advanced  
11 technologies and innovative programs available to both APS and our customers.

12  
13 APS is focused on improving the service we provide to our customers and bringing  
14 innovation to them in a cost effective manner. Across the Company, our employees  
15 are looking for ways to better communicate with our customers and employ  
16 technology to assist them with managing their energy usage and controlling their  
17 bills. In my testimony, I highlight two technology-driven programs that APS is  
18 pursuing today on behalf of our customers: our award-winning Cool Rewards  
19 smart thermostat program, which provides our customers with both up-front  
20 enrollment and annual financial incentives for lowering demand and shifting  
21 energy use away from peak hours, and the Company’s Take Charge AZ pilot  
22 program, which will provide our customers with greater access to electric vehicle  
23 (EV) charging infrastructure.

24  
25 Another customer-driven initiative is the APS Strategic Fiber Program. This effort,  
26 which will better connect APS facilities and increase grid resiliency by building  
27 out our fiber optic cable communication systems, also provides opportunities to  
28

1 partner with internet service providers to increase access and improve  
2 communications for rural communities in Arizona by leasing access to surplus fiber  
3 optic capacity on our communications systems.

4  
5 APS is also continuing its leadership in deploying clean, sustainable energy sources  
6 to meet the needs of our customers. Today, the Company provides customers with  
7 an energy mix that is 50% clean—and getting cleaner. Additionally, in the last two  
8 years, APS has requested or contracted for over 1,100 MW of solar, wind, and  
9 battery resources that are expected to be in service prior to 2025, adding to the  
10 clean energy resources already available to our customers.

11  
12 APS continues to provide reliable, affordable, and sustainable power for our  
13 customers by investing in grid modernization, developing integration technologies  
14 for renewable energy sources, providing customer programs that encourage energy  
15 savings, and operating and maintaining our generation and delivery systems.  
16 Arizona was the fastest-growing state in the nation in 2018, with a population  
17 increase of 2.2% over 2017 as estimated by the Census Bureau’s 2018 American  
18 Community Survey,<sup>1</sup> and APS is ready to serve these new customers with the  
19 investments in the overall electric system it is making today.

20  
21 To achieve the clean, sustainable energy future envisioned by the Commission, the  
22 Company, and its customers, and to maintain the financial health that is necessary  
23 to attract the investment that enables this future, APS is requesting an annual  
24 revenue increase of \$184<sup>2</sup> million in this filing. This includes the Four Corners  
25

26  
27 <sup>1</sup> United States Census Bureau, 2018 American Community Survey 1-Year Estimates,  
released September 26, 2019, data accessible at <https://data.census.gov/cedsci/>.

28 <sup>2</sup> The numbers in this testimony, including Table 1, have been rounded for ease of  
presentation. Exact numbers are used in the testimonies of APS witnesses Leland Snook  
and Jessica Hobbick.

1 Selective Catalytic Reduction (SCR) project, which is included in Test Year rate  
2 base, but is currently being decided in a separate proceeding before the  
3 Commission.

4  
5 APS desires to provide exceptional service to our customers, and we are committed  
6 to working with the Commission and stakeholders to find ways to communicate  
7 better with our customers and keep our rates as low as possible while meeting our  
8 mission to safely and efficiently deliver reliable energy to meet the changing needs  
9 of Arizona. I acknowledge that there is room for improvement in this ongoing  
10 pursuit to better serve our customers. I understand the concerns that the  
11 Commission and our customers have expressed in the last few months, and I assure  
12 Commissioners that my employees and I are listening and responding. We are  
13 working to streamline our business and reduce costs while at the same time provide  
14 better programs and services. We are committed to providing more accessible tools  
15 for our customers to monitor energy usage and save money, delivering  
16 individualized and more understandable information on our rate plans, and  
17 providing our employees with access to technologies that will allow them to meet  
18 our customers' expectations for reliable, affordable, and sustainable energy.

19 **III. OVERVIEW OF APS'S APPLICATION**

20 **Q. WHY IS APS FILING A RATE CASE NOW?**

21 **A.** At the direction of the Commission earlier this year, Commission Staff conducted  
22 a rate review of the Company. This rate review was intended to assess the  
23 Company's financial position for the first calendar year after the implementation  
24 of rates approved in Decision No. 76295 (Aug. 18, 2017), and to review the  
25 effectiveness of the Company's customer outreach and education campaign.

26  
27 At the conclusion of the rate review, Staff recommended, among other things, that  
28 APS file a full rate case by October 31, 2019, using a test year ending June 30,

1 2019 (Test Year). The Commission adopted Staff's recommendation in Decision  
2 No. 77270 (Jun. 27, 2019). This filing is the rate case required by that Decision.

3 **Q. PLEASE PROVIDE A BRIEF SUMMARY OF APS'S REQUEST.**

4 A. APS is requesting recovery of \$184 million, with a requested effective date of  
5 December 1, 2020. The average bill impact for all customers is 5.6%. The impact  
6 for residential customers is an average of 5.4%, with 95% of residential customers  
7 expected to see an increase between 3%-6%. The average bill impact for general  
8 service customers is 5.8%.

9  
10 Table 1 below shows the major pieces that comprise this rate case, and it is  
11 important to note that this bill impact includes the SCR project at Four Corners.  
12 That environmental upgrade, which was mandated by federal government, has  
13 undergone its own regulatory process and currently has an existing recommended  
14 opinion and order (ROO) from an administrative law judge concluding the project  
15 was prudent and the cost should be included in APS's base rates. APS recommends  
16 the ROO be preserved, and the SCR project to stay on its own separate path. With  
17 that in mind, the additional revenue request from this rate case is \$111 million and  
18 the impact on customers is 3.4% (*see* Table 1 below). Should the Commission  
19 elect to rule on these two items simultaneously, the impact to customers would be  
20 \$184 million and 5.6%.

Table 1.

Revenue Request	Dollars	Bill % Impact
<i>Components of Increase:</i>		
Four Corners SCR	\$73M	2.2%
Other	\$111M	3.4%
<b>Total Revenue Request</b>	<b>\$184M</b>	<b>5.6%</b>
<i>Previous Revenue Request: (updated)<sup>3</sup></i>		
Four Corners SCR	(\$73M)	(2.2%)
<b>Net New Revenue Request</b>	<b>\$111M</b>	<b>3.4%</b>

Our request is supported by APS witnesses Barbara D. Lockwood, Elizabeth A. Blankenship, Leland R. Snook and Jessica E. Hobbick, who provide an in-depth discussion of the financial elements of this rate request. In addition, the Company’s requested return on equity (ROE) of 10.15% is supported by outside expert Ann E. Bulkley of Concentric Energy Advisors, Inc. APS witness Brad J. Albert addresses the Ocotillo Modernization Project and the Resource Comparison Proxy purchase rate, while depreciation expense and rates are addressed by outside expert Dr. Ronald E. White of Foster Associates Consultants, LLC.

IV. FOCUS ON THE FUTURE

**Q. HOW IS THE ELECTRIC INDUSTRY CHANGING TODAY?**

A. The transformation of the electric industry is continuing, building on innovative programs and technologies that utilities and our partners have implemented over the past several years. These programs and technologies have improved grid performance and engaged customers through increased availability of energy information, and a variety of ways to use that information.

APS’s ultimate goal remains—providing our customers with electric service that is reliable, affordable, and sustainable. We are achieving that goal, including

<sup>3</sup> Revenue requirement of \$73 million reflects current deferral of SCR costs through December 31, 2020 and full return at requested cost of capital.



1 transitioning to a sustainable energy future, through the adoption of grid  
2 modernization technologies and initiatives that enhance our service and encourage  
3 our customers to make informed energy choices that fit into each individual  
4 customer's lifestyle. The cost-aligned rates approved in Decision No. 76295 paved  
5 the way for adoption of new technologies and set the framework for customers to  
6 achieve meaningful bill savings by shifting energy usage to off-peak times. APS  
7 is moving forward with our customers by providing tools to access individualized  
8 energy data and information on how to optimize energy usage under our service  
9 plans. APS is committed to learning what technologies our customers are  
10 interested in and developing a wide variety of customer-focused, technology-based  
11 programs that will move us and our customers into the future. I highlight two of  
12 these below.

13 A. *Cool Rewards*

14 **Q. WHAT IS COOL REWARDS?**

15 A. Cool Rewards is an innovative, technology-driven demand response program that  
16 financially rewards customers via an enrollment rebate and an annual incentive for  
17 participating each year. Cool Rewards events help customers conserve energy  
18 when demand on the APS system is at its highest and encourages energy usage in  
19 the middle of the day when energy is less expensive and solar resources are robust.

20  
21 Participating residential customers install eligible smart thermostats that are  
22 internet-connected and capable of receiving signals from the thermostat provider.  
23 These signals will automatically increase the thermostat temperature a few degrees  
24 above the current set point during peak hours in the summer, when system load is  
25 high and energy is expensive. The program was designed with the customer in  
26 mind and allows participants to opt-out of demand response events without penalty  
27 if it is not convenient to participate. Most events also include a period of pre-  
28

1 cooling to improve customer comfort. The demand response season is currently  
2 limited to 20 events per summer.

3  
4 In this way, Cool Rewards promotes long-term energy goals by shifting energy  
5 usage to daytime hours when the abundant energy from solar resources is readily  
6 available. This program is an excellent example of matching customers who are  
7 interested in new technologies to programs with a range of mutual benefits to them  
8 and the grid. The Commission has expressed its intent that energy savings efforts  
9 by APS should increasingly be aimed at reducing usage during the time of system  
10 peak demand, and ordered APS to increase its focus on programs that reduce  
11 customer energy demand during those hours.<sup>4</sup> The Cool Rewards program does  
12 just that.

13 **Q. HAS THE COOL REWARDS PROGRAM BEEN SUCCESSFUL?**

14 A. Yes, it certainly has. Our customers are embracing this easy, effective load  
15 reduction program and are reaping the benefits of their enrollment and annual  
16 financial incentives. Cool Rewards launched in 2018, and in the summer season  
17 of 2019 one of the events resulted in a significant reduction in load of over 18 MW.  
18 As we continue to promote this program, APS believes that more customers will  
19 recognize its benefits and will contribute to reducing peak load even further.

20 **Q. HAS THE COOL REWARDS PROGRAM RECEIVED ANY AWARDS?**

21 A. This program is market-leading and has received national attention. APS and our  
22 service and software platform provider EnergyHub were awarded the Smart  
23 Electric Power Alliance (SEPA) Power Players Innovator Partner of the Year for  
24 2019. This award recognizes a product or service that has significantly advanced  
25 clean energy, distributed energy resources, and grid modernization and its value as  
26 a resource to help meet customer needs. SEPA is a non-profit industry organization  
27

28  

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<sup>4</sup> See Decision No. 75679 (Aug. 5, 2016).

1 that envisions a future carbon-free energy system, and recognized the Cool  
2 Rewards program as contributing to a smart transition to a clean, modern grid. This  
3 recognition highlights APS’s ongoing work toward providing our customers with  
4 solutions that both meet their desire for energy and cost savings and support  
5 sustainable energy goals.

6 B. *Take Charge AZ*

7 **Q. PLEASE EXPLAIN THE COMPANY’S TAKE CHARGE AZ PROGRAM.**

8 A. We want Arizonans to have the choice and ability to drive EVs. Take Charge AZ  
9 is one of the first steps toward removing current obstacles to the availability of  
10 public charging stations and addressing “range anxiety” caused by the lack of  
11 available charging stations along public roadways. This pilot program offers free  
12 EV charging equipment, as well as installation and maintenance to businesses,  
13 government agencies, non-profits and multi-family communities. The program  
14 was developed in 2018 and began implementation in May 2019. APS plans to  
15 install and own approximately 100 Level 2 EV charging stations by the end of  
16 2020. Participants will pay for any electricity costs that come from using the  
17 equipment and customers will be encouraged to use the chargers during the  
18 daytime when solar energy is plentiful and energy costs are lower. To date, APS  
19 has received over 75 applications to participate in the program and is in the process  
20 of installing several charging stations across our service territory.

21  
22 In the second phase of the pilot, and in consultation with EV stakeholders  
23 throughout the state, the Company will install and own Level 3 charging  
24 infrastructure (also known as DC Fast Chargers), in strategic locations that will be  
25 determined through studies, research, and input from Arizonans. Additionally,  
26 APS plans to install Level 3 chargers at five separate underserved locations by the  
27 end of 2021.

28

1 **Q. IS THIS PILOT PROGRAM CONSISTENT WITH COMMISSION**  
2 **POLICY?**

3 A. Yes. The Commission adopted an EV policy that encourages Arizona utilities to  
4 propose EV pilot programs for Commission consideration and approval.<sup>5</sup> These  
5 pilots are to focus on such issues as infrastructure, education and outreach,  
6 incentives and rebates, make-ready infrastructure and underserved communities.  
7 This is exactly what the Take Charge AZ pilot program is designed to accomplish.

8 **Q. DOES APS SEEK RECOVERY IN THIS CASE OF ANY OF THE COSTS**  
9 **OF THE TAKE CHARGE AZ PROGRAM?**

10 A. Costs related to infrastructure and chargers that are in-service during the post-Test  
11 Year plant period are included in our request.

12 V. FOCUS ON OUR CUSTOMERS

13 **Q. PLEASE DESCRIBE HOW THE COMPANY INTENDS TO IMPROVE ITS**  
14 **CUSTOMER SERVICE AND ADDRESS RECENT CHALLENGES.**

15 A. We are committed to improving our customer service by implementing new  
16 strategies and policies designed to better support our customers, by engaging in  
17 aggressive cost management to keep rates low, and by providing customers with  
18 more ways to reduce their energy usage and better manage their monthly bills. We  
19 are determined to create a renewed focus on our customers throughout the  
20 Company.

21 **Q. WHAT STEPS IS APS TAKING TO BETTER SUPPORT ITS**  
22 **CUSTOMERS?**

23 A. We have recently completely revised our disconnection process with input from  
24 the Commission and interested stakeholders. We have lengthened the collection  
25 process, improved our customer communications and notices, increased the  
26 minimum threshold for disconnection from \$50 to \$300, among others. In addition,  
27

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<sup>5</sup> See Decision No. 77289 (July 19, 2019).

1 and as discussed in the testimony of Ms. Hobbick, we are eliminating a number of  
2 customer specific fees and charges from our Schedule 1.

3 **Q. WHAT IS APS DOING TO SUPPORT LIMITED-INCOME CUSTOMERS**  
4 **IN ITS SERVICE TERRITORY?**

5 A. We are proposing to increase the participation in our Energy Support Program  
6 (Rate Rider E-3) by making it easier for limited-income individuals who meet  
7 certain eligibility requirements to enroll in the program. We also propose to  
8 increase our funding for Crisis Bill assistance by \$1.25 million. These changes are  
9 discussed in more detail in Ms. Hobbick's testimony.

10 **Q. ARE THERE OTHER WAYS THAT APS IS FOCUSING ON ITS**  
11 **CUSTOMERS?**

12 A. APS has an obligation to our customers to make sure we are doing everything we  
13 can to deliver our services in the most cost-effective way possible. To enable the  
14 future, one that accommodates increased renewable generation and emerging  
15 technologies reliably and sustainably, APS and its employees must focus on  
16 operating as efficiently as we can and reducing costs where possible to keep our  
17 customers' bills affordable. In her testimony, Ms. Lockwood discusses an  
18 enterprise-wide customer affordability effort launched this past summer to re-  
19 examine the way we work at every level of the organization and reduce customer  
20 costs.

21  
22 APS is also committed to working with our customers to enable adoption of the  
23 technology that matters to them. For example, our customers have embraced  
24 rooftop solar technology. In fact, as of the end of September 2019, over 100,000  
25 APS customers have installed rooftop solar systems on their homes and businesses.  
26 APS is upgrading and modernizing our distribution system to integrate  
27  
28

1 technologies that will allow increased customer adoption of this technology while  
2 maintaining a safe and reliable grid for all customers.

3  
4 One of these technology-based programs is the California Independent System  
5 Operator (CAISO) Western Energy Imbalance Market (EIM), which APS joined  
6 in October of 2016. Our participation in this market not only provides greater  
7 ability to manage our grid and the intermittent resources in our service territory, it  
8 also provides access to the increasing availability of negatively priced energy  
9 which we procure on behalf of our customers to lower overall energy prices. Our  
10 customers have realized savings of \$102.6 million in the three years APS has been  
11 a member of EIM.<sup>6</sup>

12 **Q. YOU ALSO MENTIONED APS'S STRATEGIC FIBER PROGRAM IN**  
13 **YOUR SUMMARY. PLEASE DESCRIBE THAT PROGRAM.**

14 A. The APS Strategic Fiber Program is an effort that will better connect APS facilities  
15 and also support rural broadband expansion in Arizona by utilizing fiber optic  
16 technology to provide reliable internet service. Internet service has become a  
17 critical component of our everyday life, and many rural areas have little to no  
18 access to this important communication technology.

19  
20 The fastest and most reliable way to deliver broadband services is through fiber  
21 optics. As part of our grid modernization efforts, APS is currently expanding its  
22 high-speed fiber optic capacity along our transmission corridors.

23  
24 In this program, APS will lease surplus capacity on our fiber optic system to local  
25 telecommunications carriers, who will then deliver the broadband service to homes  
26

27  
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<sup>6</sup> California ISO, Western Energy Imbalance Market Reports, available at  
<https://www.westerneim.com/Pages/About/QuarterlyBenefits.aspx>.

1 and businesses in rural communities. The initial phase of the APS Strategic Fiber  
2 Program will focus on Payson and Flagstaff, and the surrounding areas.

3 **Q. WHAT ARE THE BENEFITS OF THIS TECHNOLOGY TO APS**  
4 **CUSTOMERS?**

5 A. APS customers will receive two major benefits from this program: reduced cost,  
6 and a more reliable communications network in areas of the state. This fiber optic  
7 communications network will give our system operators an increasingly reliable  
8 remote view of the health and status of our system, leading to fewer outages, shorter  
9 repair times, and greater grid resiliency. This is especially critical in the forested  
10 areas of our service territory to minimize and mitigate wildfire activity and its  
11 effects on our customers and the state as a whole.

12  
13 An enhanced fiber optic communications network will reduce customer costs over  
14 time. However, this program provides an additional benefit to customers because  
15 the revenue APS receives from telecommunications carriers for leasing surplus  
16 space on the system will be returned to our customers through the ratemaking  
17 process, again reducing overall costs.

18  
19 Increased broadband access is also an important step as APS looks to move forward  
20 together with our customers. As utility programs continue to explore management  
21 of smart devices, this expansion of broadband allows customers in this region to  
22 participate in these savings opportunities.

23 **VI. FOCUS ON CLEAN ENERGY**

24 **Q. WHAT IS APS'S VISION FOR OUR ENERGY FUTURE?**

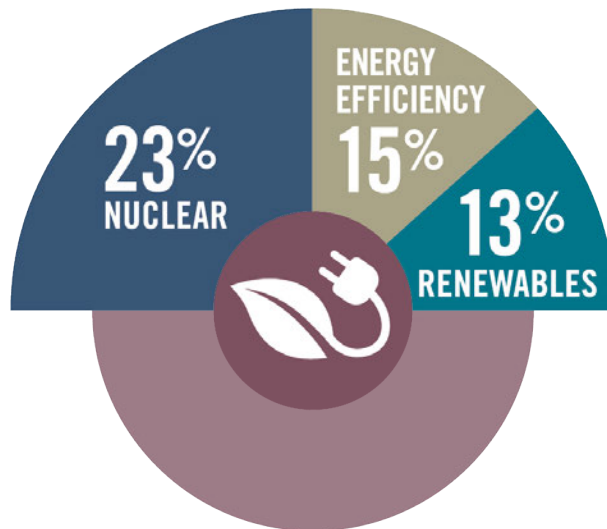
25 A. APS envisions a clean energy future for our customers and the state of Arizona that  
26 is reliable, affordable, and sustainable, and encourages innovative technologies of  
27 all kinds. This future includes partnerships between APS and its customers and  
28

1 stakeholders that will provide options for customers to adopt and deploy distributed  
2 technologies and effective load reduction programs. This vision requires APS to  
3 develop a flexible and dynamic distribution grid that will enable these  
4 technological solutions, and we are committed to providing this modernized,  
5 sustainable grid that will deliver these options to our customers now and in the  
6 future.

7  
8 We are well along the path to clean energy. Today, the energy mix that serves our  
9 customers is 50% clean.

10  
11 *Figure 1.*

12 APS's 2019 Clean Energy Mix



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22  
23 APS utilizes a diverse existing portfolio of renewable resources totaling over 2,000  
24 MW that includes solar, wind, geothermal, and biomass generation sources to serve  
25 our customers.

26  
27 The cornerstone of Arizona's clean energy—both today and in the future—is the  
28 continued operation of the Palo Verde Generating Station (Palo Verde). Palo



1 Verde has been in operation since 1986 and is the largest producer of carbon-free  
2 energy in the United States, adding an estimated \$10.6 billion in economic benefit  
3 to Arizona from 2017 to 2021. Palo Verde employs over 2,500 people, and  
4 provides clean energy to over four million people in the Southwest. APS operates  
5 Palo Verde and owns 29.1% of the station, receiving 1,146 MW of clean energy  
6 the Company uses to serve our customers.

7  
8 APS is planning on clean energy production from Palo Verde for many years to  
9 come. The Company is honored to have been selected in September 2019 by the  
10 Department of Energy's Office of Nuclear Energy to partner with the Idaho  
11 National Laboratory, FirstEnergy Solutions, and Xcel Energy in an evaluation of  
12 the economic production of hydrogen using nuclear power. This partnership will  
13 look at taking another step toward a clean energy future by exploring the  
14 production of hydrogen from non-carbon emitting processes. This project is  
15 scheduled to begin in 2020.

16 **Q. HOW IS APS WORKING TOWARD A CLEAN ENERGY FUTURE?**

17 A. APS has made some significant commitments to future clean energy. In 2018, the  
18 Company partnered with Arizona-based First Solar to provide clean power by  
19 pairing solar energy with advanced battery technology that will allow the Company  
20 to use stored energy to serve customers into the peak hours of the evening. In  
21 February of this year, APS announced three major clean energy initiatives that will  
22 add 850 MW of battery storage and at least 100 MW of new solar generation to  
23 APS's resources by 2025. The first of these will leverage our existing AZ Sun  
24 solar plants by upgrading them to include a total of 200 MW of battery storage  
25 systems. Secondly, Company plans to build an additional 500 MW of solar storage  
26 and stand-alone battery storage by 2025. The third of these initiatives is the  
27 purchase of energy from an additional 150 MW of battery storage. In addition, the  
28

1 Company recently announced it is requesting proposals for up to 250 MW of wind  
2 resources to be in service no later than 2022.

3  
4 These projects reinforce Arizona's progress toward a reliable clean energy future.  
5 They will provide APS customers with solar resources to power homes and  
6 businesses with solar energy after sunset, and add to APS's already substantial  
7 clean resource portfolio.

8 **Q. HOW DOES APS DETERMINE FUTURE RESOURCE NEEDS?**

9 A. APS continually plans for the future needs of our customers. Many divergent  
10 issues must be examined when planning for resources needed in the future. In its  
11 planning, APS considers a multiplicity of issues including new technologies,  
12 expected load growth, economic development, forecasted energy prices,  
13 penetration of customer resources, demand-side management programs, necessary  
14 planning and operating reserves, regulatory requirements, and environmental  
15 issues, among others.

16  
17 APS formalizes its plans within the Commission's Integrated Resource Planning  
18 process. The Company is currently developing its 2020 Integrated Resource Plan  
19 (IRP), which will be filed in April of 2020. The scenarios and calculations that  
20 will be included in this IRP are being discussed with stakeholders to ensure that  
21 APS's future plans are cost-effective and sustainable, providing a reliable energy  
22 future for our customers.

23 **VII. CONCLUSION**

24 **Q. DO YOU HAVE ANY CONCLUDING REMARKS?**

25 A. Yes. I look forward to being a part of the future of energy in the state of Arizona.  
26 The new programs and technologies I have discussed here are just a few of the  
27 improvements APS is undertaking to serve our customers better in today's energy  
28

1 environment. We are looking for ways to do our jobs more efficiently, looking for  
2 cost savings in every corner of our operations, and working to bring economic  
3 development opportunities to Arizona.

4  
5 Across the entire APS organization, my employees and I are committed to  
6 continuing to provide our customers with options, including expanded access to  
7 technology and energy savings tools. We are committed to continuing to reach out  
8 to customers, listening to their energy needs and developing programs that will  
9 allow us to move forward together to the sustainable energy future that we all  
10 envision.

11 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

12 A. Yes.

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