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Arizona Corporation Commission
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JUL 13 2011

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July 13, 2011

Docket Control
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

RE: Arizona Public Service Company Application for Authorization for the Purchase of Generating Assets from Southern California Edison
Docket No E-01345A-10-0474

Enclosed please find Arizona Public Service Company's Testimony Summaries in the above-referenced matter for Mark Schiavoni, Patrick Dinkel, Jeffrey Guldner and Judah Rose.

If you have any questions regarding this information, please contact Zachary Fryer at (602) 250-4167.

Sincerely,

Susan Casady

Susan Casady

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Summary of Testimony Provided by Mark A. Schiavoni

Summary of Testimony Provided by Mark A. Schiavoni

My testimony supports APS's application for authorization and other support needed to purchase Southern California Edison's ("SCE") current ownership interest in Four Corners Units 4 and 5 and retire Units 1-3 of that plant. Specifically, I describe the significance of Four Corners to Arizona and the three other states the plant serves, as well as its economic value to the Navajo Indian Reservation ("Navajo Nation") and surrounding community.

First to generally describe Four Corners, it is located on the Navajo Nation in Fruitland, New Mexico, about 25 miles west of Farmington. The plant is a mine-mouth generation station, and is fueled by coal exclusively provided by the Navajo mine, located adjacent to the plant. The mine is owned and operated by BHP Billiton.

The plant consists of five generating units. The first three units, wholly-owned by APS, went online in 1963-1964. Units 4 and 5 – co-owned by APS, SCE, and four other utilities – are newer, entering commercial operation in 1969-1970. Units 4 and 5 are also much larger than Units 1-3: Units 1-3 generate 170 MW, 170 MW, and 220 MW respectively, while Units 4 and 5 each generate 770 MW. Collectively, the five units generate enough electricity to power half a million homes. For more than 40 years, Four Corners has been a high-performing power plant, critical for economically meeting the region's energy needs.

As a base load resource, Four Corners generates energy night and day, and it has done very well by APS customers in that regard. Over the past decade, the plant has had an average annual capacity factor of above 85%, proving it a reliable, cost-effective resource. SCE owns 48% of Units 4 and 5 (receiving a total of 739 MW) and APS owns 15% (231 MW). The other owners of Units 4 and 5 include

Public Service Company of New Mexico (13%), Salt River Project ("SRP") (10%), El Paso Electric Company (7%) and Tucson Electric Power Company ("TEP") (7%). APS operates the plant on behalf of all participants.

Four Corners is the economic lifeblood of the Navajo Nation, contributing millions of dollars in payroll and tax revenue to the Navajo Nation and surrounding community. Together, Four Corners and the Navajo mine provide jobs to roughly 1,000 people, more than 75% of whom are Native American. The combined annual payroll is over $100 million, a key contribution to the local economy. The Navajo Nation receives approximately $65 million in tax and royalty payments annually as a result of plant operations, making up an impressive 35% of the Nation's total general fund. Federal, state, and local economies also benefit from nearly $40 million in tax payments that Four Corners and the Navajo mine make each year. Plant operations support local vendors as well, contributing an estimated $20 million annually for the services and goods those vendors provide.

The plant, mine, and their employees also contribute importantly to the community in other ways. APS and its employees alone donate over $600,000 each year to the local United Way and provide more than 10,000 hours of volunteer community services. APS and the Navajo mine also grant a number of college scholarships to the surrounding tribal community.

It is not an overstatement to say that plant operations stabilize the entire region's economy. The Navajo Nation reports that it already suffers from a more than 50% unemployment rate – five times the national average. In the words of the Nation's president, retiring all of Four Corners' five units would be "cataclysmic" to the economic well-being of the tribe and surrounding community.

Although the testimony has revealed certain areas of disagreement between the parties, there has been no dispute that the transaction proposed in the Company's Application (to acquire SCE's 48% interest in Units 4 and 5 and retire Units 1-3) brings a host of benefits that are unmatched by any conceived alternative. The Application presents an approach that balances what is good for the environment, what is good for the Navajo Nation, and what is good for APS customers. That type of equilibrium is not found in any alternative considered by APS or proposed by any other party. Nor should those benefits be risked by adding new processes or conditions that would only increase the complexity of an already highly complicated situation.

Unfortunately, Units 4 and 5 face a strong risk of closure in 2016 if the proposed transaction is not timely consummated. SCE will exit the plant by 2016, either in 2012 by virtue of this transaction or in 2016 when its current ownership obligations terminate. That is a hard deadline that will not change. No one but APS has stepped up to purchase SCE's 48% share of the plant, nor is it likely that anyone else will. APS is uniquely positioned to benefit from the purchase, which allows the Company's customers to maximize the value of APS's current interest in Units 4 and 5 and receive additional, highly cost-effective generation to replace less cost-effective coal generation from Units 1-3, thus maintaining the current balance of the Company's resource portfolio. No other would-be buyer is similarly situated.

Summary of Testimony Provided by Mark A. Schiavoni

Without a known buyer for SCE's interest, the other co-owners of Units 4-5 are left in the dark about how almost *half* of the hundreds of millions of dollars worth of capital expenditures required for Units 4 and 5 in next few years will be funded. This uncertainty makes it almost impossible for APS and the other co-owners to reach a consensus about how to proceed if this transaction is not approved. Whether and when the required environmental controls should be installed are not decisions that APS can unilaterally make; by contract, all co-owners must approve such investments. The result of continued uncertainty about whether anyone will take SCE's share if this transaction is not timely approved is a strong risk that Units 4 and 5 will retire and the benefits described in the Application will be lost.

Summary of Testimony Provided by Patrick Dinkel

Summary of Testimony Provided by Patrick Dinkel

My testimony supports APS's application for authorization and other support needed to purchase Southern California Edison's ("SCE") existing ownership interest in Four Corners Power Plant ("Four Corners") Units 4 and 5 and retire Units 1-3 of that plant. Specifically, I will describe how that transaction benefits APS customers and makes good business sense from a resource planning perspective because it preserves a lower cost source of energy and helps APS maintain a well diversified portfolio of resources.

APS's original economic analyses showed that the benefits to APS customers of the transaction with SCE was $500 million. The analysis was thorough, robust and based on direct market intelligence. The Company fully considered various risks and uncertainties including fuel volatility and future environmental regulation. As part of its rebuttal case, the Company asked a nationally-known expert on commercial transactions of this sort, Judah Rose, to review and provide his critique of the APS economic analyses. His independent analysis supported the Company's conclusions, characterizing them as conservative. Finally, APS' analyses also have been confirmed by Commission Staff experts, the independent consultant for the Residential Utility Consumer Office ("RUCO"), and Dr. David Berry of Western Resource Advocates ("WRA").

The advantages of APS acquiring SCE's interest go beyond a direct comparison of present value revenue requirements and levelized life cycle cost per MWH. Even if the costs of gas generation were hypothetically comparable to the proposed value of the Four Corners transaction, there are resource diversity and local economic benefits that no party has disputed. Increasing APS customers' already substantial bet on the future of natural gas prices, as suggested by Arizona Competitive Power Alliance ("ACPA") and the Sierra Club, is simply too risky and would effectively devastate what is already one of the most economically challenged portions of this region – the Navajo Nation.

Summary of Testimony Provided by Patrick Dinkel

Requiring APS to issue a formal RFP, as ACPA recommends, before proceeding with a Commission review of the proposed transaction with SCE is unnecessary and could easily result in the Four Corners deal being lost irrespective of its benefits for APS customers and the Navajo economy. The generation procurement provisions of the Commission's Resource Planning rules clearly envisioned precisely the circumstance in which we find ourselves – the fortuitous one-time opportunity to acquire a needed resource (and one needed in several ways) at a substantial discount.

Additionally, it is unnecessary and inappropriate in this proceeding to consider additional retirements of APS coal units or a coal/solar hybrid project at Four Corners. The Company already intends to conduct the sort of analysis of coal reduction options suggested by Dr. Berry in the context of its resource planning filings. In the resource planning process, the issue can be examined holistically as part of a broader examination of future APS resource options, with all interested parties having the opportunity to participate.

Summary of Testimony Provided by Jeffrey B. Guldner

Summary of Testimony Provided by Jeffrey B. Guldner

Arizona Public Service Company ("APS") proposes to acquire Southern California Edison's ("SCE") interest in Units 4 and 5 of the Four Corners power plant. If the Commission authorizes this purchase, approval for which is required under the terms of the "self-build moratorium" imposed in Decision No. 67744 (April 7, 2005), and grants the other requests made in its Application, APS will also retire Four Corners Units 1-3. This transaction essentially trades 560 MW of less efficient generation produced by Units 1-3 for 739 MW of more efficient generation produced by SCE's share of Units 4 and 5. The 179 MW difference, which is unavoidable under the circumstances, hedges the Company's energy mix against the possibility that output from other coal units also at risk could be retired, as well as helping further defer the need for new baseload resources.

In addition to environmental, community, and cost benefits, the proposed transaction will save customers as much as four percentage points on their electric bills, compared to the likely alternatives. To move forward on this path, however, APS needs the Commission's support of the proposed approach in certain important ways. First, APS cannot acquire SCE's ownership interest in Units 4 and 5 without authorization to do so under the terms of the "self-build moratorium." APS believes that the circumstances of this transaction fully support this request and respectfully asks that the Commission grant it.

Moreover, while undeniably cost-effective compared to the alternatives and a good value for customers, this transaction requires significant investment by APS. To address the timing mismatch between costs and benefits that will occur between when the transaction closes and when associated costs are recovered in rates, the Company's Application also requests an accounting order that allows the Company to defer for future recovery depreciation and amortization costs, operations and maintenance costs, property taxes, final coal mine reclamation, and carrying charges associated with APS acquiring SCE's share of Units 4 and 5; and provides assurance that APS will be allowed to fully recover its investment in and carrying costs of Units 1-3, and any additional costs incurred in connection with the closure of those units.

With the exception of Commission Staff, each of the six parties in this matter is viewing APS's request through their own particular lens. The Commission should look at this request broadly, and consider the complexity and many competing interests that APS's proposal addresses. Specifically, the Sierra Club, though exclaiming its primary focus is economics, is really an advocate for closing coal-fired generation. The Environmental Defense Fund ("EDF") and Western Resource Advocates ("WRA") are also advocates for environmental reforms but take a constructive view in that regard in this proceeding. RUCO is focused on the short term rate impacts to APS's residential customers. And the Arizona Competitive Power Alliance ("ACPA") represents the interests of merchant generation, who profit by selling wholesale power generation (primarily natural gas) to APS and others. Each of the recommendations these various parties make, unsurprisingly, is based on their assessments of how the transaction will affect their interests.

APS has wrestled with competing interests like these since SCE first told the Company and its Four Corners co-owners that it would not make "life extending" investments in the plant after 2011 and would withdraw from the plant entirely in 2016, whether there was a buyer for its share or not. Faced with competing demands, looming environmental compliance expenditures, contractual uncertainty with the Navajo Nation and the plant's fuel supplier, the Company landed on a solution that balanced all of the competing interests involved. APS's proposal to acquire SCE's interest in Units 4 and 5 and retire its wholly-owned Units 1-3 was not based on cost alone (though it is a clear value for APS customers); it is not just about the environment (though the environmental benefits of closing three of five coal units and installing environmental compliance upgrades on the remaining two are undisputed); it is not just about communities (though the benefits to the Navajo Nation of continuing the viability of the community's primary economic driver are beyond a doubt). It is about balancing all of these interests to progress to a common goal.

Only three real disagreements exist among the parties: (1) whether APS's cost analysis was reasonable; (2) whether APS should have conducted a Request for Proposals before executing the purchase contract with SCE, and (3) whether the circumstances of this unique opportunity merit the accounting treatment that the Company has requested. APS Witnesses Pat Dinkel and Judah Rose (from ICF International) will address the first and second issues. As to the third, the only parties to address the Company's request for an accounting order are Commission Staff and RUCO. Each of those parties also appears to support the transaction. RUCO's witness, Dr. Thomas Fish, even comments that "In my opinion, no one could reasonably envision situations where the Company's requested alternative is not best."[1]

But while RUCO agrees with APS about the clear benefits of the transaction, it would deprive APS of the critical regulatory accounting treatment needed to achieve them. Customer growth – once strong in Arizona –is no longer at a level that it is able to even partially offset the effects of regulatory lag that would arise

[1] Direct Testimony of Thomas Fish ("Fish Testimony") at 14.

without a deferral order, and the PSA prevents APS from using the approximately $40 million of annual fuel savings or any incremental off-system sales that result from the proposed transaction to offset the $71 million per year increase in non-fuel costs associated with owning, operating and maintaining the plant. Neither can this mismatch be addressed by filing a rate case sooner-- the Rate Case Filing Plan in the Company's 2009 Settlement agreement would prevent it. Granting a deferral will not bias the ultimate ratemaking treatment of the asset, but denying it does.

Although Commission Staff recognizes that the present circumstances warrant the Company's requested accounting treatment, it would dramatically limit the allowed deferral such that the accounting order would no longer adequately serve its intended purpose. As a practical matter, if the Commission adopts either of these recommendations, it simply increases the risk that the proposed transaction will not be consummated and its benefits lost.

Summary of Testimony Provided by

Judah Rose

SUMMARY OF TESTMONY OF JUDAH ROSE

My name is Judah L. Rose. After receiving a degree in economics from the Massachusetts Institute of Technology and a Masters Degree in Public Policy from the John F. Kennedy School of Government at Harvard University, I joined ICF in 1982. I have worked at ICF for over 29 years and am Managing Director of ICF's wholesale power practice.ICF has been the principal power consultant to the U.S. Environmental Protection Agency (EPA) continuously for over 35 years, specializing in the analysis of the impact of air emission programs, especially cap and trade programs. We also have worked with the Federal Energy Regulatory Commission (FERC) on transmission issues and the U.S. Department of Energy (DOE). In addition, we have worked with state regulators and state energy agencies, including those in California, Connecticut, Kentucky, New Jersey, New York, Ohio, Texas, and Michigan, as well as with numerous foreign governments.

ICF also has utility clients. For over 35 years, ICF has provided forecasts and other consulting services to major United States and Canadian electric utilities. ICF also works with Regional Transmission Organizations and similar organizations including the Western Electric Coordinating Council, Midwest Independent Transmission System Operator, the Electric Reliability Council of Texas, and the Florida Regional Coordinating Council. Lastly, ICF also works with numerous Independent Power Producers.

I have extensive experience in assessing wholesale electric power issues, including regulatory analysis, investment analysis, forecasting wholesale electricity prices and valuing power plants. I also have extensive experience assessing environmental regulations and their impacts on supply and demand conditions in wholesale power markets.

I have testified extensively on the topics of electric power prices and markets, utility planning and the development of new generation resources and transmission. In addition, I have authored numerous articles in industry journals and spoken at scores of industry conferences.

I am testifying on behalf of Arizona Public Service Company ("APS"). My testimony supports the Application of Arizona Public Service Company for authorization for the purchase a portion of Four Corners Units #4 and #5 from Southern California Edison (SCE) and rebuts the May 31, 2011 testimony of David Schlissel on behalf of the Sierra Club. My testimony also rebuts the May 31, 2011 testimony of Greg Patterson on behalf of the Arizona Competitive Power Alliance (ACPA).

My response to the Sierra Club and ACPA has twelve main points:

I. I disagree with Sierra Club's assertion that APS does not properly address the economic risks of operating Four Corners Units #4 and #5. In addition to responding to each of Sierra Club's points, I conducted my own analysis of the proposed transaction using my own data in part and my own methodology. My analysis concludes that the potential to purchase SCE's share creates a unique opportunity to decrease APS customer costs relative to what they would otherwise be. I estimate the net present value of the transaction in terms of cost savings to APS customers to be very high $712 million[1] in 2012 dollars. This assumes that in the absence of the transaction, Units #4 and #5 will be retired.

II. My estimate of the value for APS's ownership of Four Corners Units #4 and #5 is moderately higher than that of APS (+22 percent). ICF believes that APS uses conservatively high CO_2 and conservatively low natural gas prices. However, this is partly offset by lower market prices for "pure" capacity in my analysis. This, in turn is associated with my assumption, based on the projections of the North American Electric Reliability Corporation (NERC),[2] that electricity demand growth in the Desert Southwest will be a fraction of pre-recession historical levels. This NERC forecast is similar to APS's forecast. If electricity demand growth turns out to be higher than forecast by NERC or APS, ICF's value would be significantly higher than estimated.

III. Contrary to Sierra Club's assertion that there is no evidence that Units #4 and #5 will be shut down if APS does not purchase SCE's share of the units, I believe that failure to

[1] This value is net of the cost of the SCR and the $294 million payment to SCE. This value is also a present value as of October 2012.
[2] NERC is the Electricity Reliability Organization of the U.S.

expeditiously implement the proposed APS purchase of the SCE share creates risks that Units #4 and #5 would retire and that a rare opportunity to lower APS customer costs would be lost. Thus, the benefits of the additional capacity (*i.e.*, SCE's share) would be lost, as would the value of APS's current 231 MW interest in Units #4 and #5 would also be lost.

IV. Evidence supporting this risk includes the experience with the only other major coal power plant owned by SCE, the Mohave power station, which retired December 31, 2005. These risks should be well known to the Sierra Club in light of its special role in the Mohave coal plant retirement. Sierra Club should also be aware of these risks in light of its extensive efforts against existing coal power plants elsewhere in the region and throughout the U.S.

V. The deal is sufficiently attractive to APS customers, that California regulators may be pressured by intervenors in California's regulatory proceeding (*e.g.*, Sierra Club, The Utility Ratepayer Network) to prevent the sale. Thus, I do not recommend any delays in the process that might jeopardize uniquely large cost savings to Arizona.

VI. Arguendo, even if there is an absolute certainty that an alternative to the transaction exists that prevents the retirement of Units #4 and #5, and the loss of APS's current ownership of 231 MW, the transaction still has a value of $472 million (2010$).[3] I believe this value to be unrealistically low because any alternative is hypothetical and reliance on it ignores the risks that the alternative might fail. However, $472 million is still a large value, and hence, the transaction provides large cost savings for APS customers even under unrealistically adverse assumptions.

VII. Sierra Club's proposed consideration of alternatives is not worth the risks of delay to this unique opportunity. There is very little chance that any alternative would approach the cost savings potential of the proposed transaction. This includes a RFP directed at the competitive market. Unless owners of merchant combined cycles were willing to sell

[3] This value is net of the cost of the SCR and the $294 million payment to SCE and is present value as of October 2012. This is the value of SCE's 739 MW only.

their plants at a price close to zero, there is no prospect that the RFP would result in options that save APS customers more.

VIII. I estimated the value of existing combined cycles with similar capacity to APS's ownership of Four Corners Units #4 and #5. I also expect the price of these plants resulting from a RFP to be similar to the value, and therefore, the cost savings will be close to zero. In contrast, the value of Four Corners is $712 million even after paying the $294 million purchase price. Even if I am too high in my estimate of the price of combined cycles in a RFP, the breakeven price that makes APS customers indifferent between combined cycle and Four Corners supply is extremely low. The combined cycle price must be below the lowest prices ever recorded anywhere. In fact, prices have been many times this level.

IX. Even under the unrealistically low value of $472 million, *i.e.*, under a case in which there is an absolutely certain alternative to preventing the loss of Units #4 and #5, the breakeven price is still extremely low. No such price has ever been recorded, and no price has ever been even close to this level.

X. For similar reasons, I reject ACPA's proposal for a RFP process. This special situation should be embraced with special attention and treatment to avoid cancellation.

XI. Sierra Club's assertions about the risks to APS and its customers due to the aging of Four Corners Units #4 and #5 are not supported by evidence and are wrong. The U.S. EPA uses an 80-year[4] lifetime while APS uses a 70 year lifetime. Other analysts such as the U.S. Department of Energy also assume similarly long potential lifetimes. As large coal plants age, their availability, a critical measure of their performance, has in fact actually been increasing. Sierra Club also ignores the attractive economies of scale at the Units #4 and #5 which are large compared to the average U.S. coal units. They also ignore: (1) the widespread investments in coal power plants of similar age, (2) the ages of Units #4

[4] http://www.epa.gov/airmarkets/progsregs/epa-ipm/BaseCasev410.html#documentation. Table 4-10 Life Extension Cost Assumptions Used in EPA Base Case v.4.10. There are estimated costs for what EPA defines as life extension, but there may be mitigating factors to these costs as discussed in the body of my testimony.

and #5 are almost precisely equal to the average age of U.S. coal-fired power plants, (3) the tens of thousands of MW of existing coal power plants older than Units #4 and #5, (4) the absence of historical evidence which is relevant to whether modern controlled U.S. coal plants cannot last 70 or 80 years, and (5) that Four Corners Units #4 and #5 are highly distinguished from and advantaged relative to typical coal-fired units which have been retired or have announced their retirements by virtue of Units #4 and #5 having already existing SO_2 control equipment (*i.e.*, scrubbers), already existing fabric filter particulate control devices, and a nearby low sulfur fuel source.

XII. Sierra Club's claim that the APS economic analysis is biased in favor of Units #4 and #5 and against natural gas is not correct. With respect to two key parameters, *i.e.*, national CO_2 and natural gas prices, APS makes conservative assumptions that bias the results in the opposite direction – *i.e.*, against coal options. Moreover, the risks of natural gas and coal options are treated similarly by virtue of APS using the same discount rate for both natural gas and coal options.

In conclusion, the APS proposal has several elements that the Commission might find attractive, but which my analysis did not address. The retirement of Units #1 - #3 lowers CO_2 emissions, lowers existing power plant supply, and increases demand for the region's merchant IPP natural gas power plants. My analysis addresses cost savings from the proposed transaction. I conclude that this is a unique cost savings opportunity for APS and its customers that deserves special attention and treatment. From the standpoint of minimizing customer costs, the recommendations of Sierra Club and ACPA regarding purchasing SCE's share of Units #4 and #5 should be rejected and the APS proposal expeditiously approved.