NON-CONFIDENTIAL REDACTED VERSION

REDACTED INTERVENOR TESTIMONY OF DAVID A. SCHLISSEL

On Behalf of the Sierra Club

Docket No. E-01933A-12-0291

December 21, 2012

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I. Introduction

Q. Please state your name, occupation, and business address.

A. My name is David A. Schlissel. I am the President of Schlissel Technical Consulting, Inc. My business address is 45 Horace Road, Belmont, Massachusetts 02478.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the Sierra Club.

Q. Please summarize your educational background and recent work experience.

A. I graduated from the Massachusetts Institute of Technology in 1968 with a Bachelor of Science Degree in Engineering. In 1969, I received a Master of Science Degree in Engineering from Stanford University. In 1973, I received a Law Degree from Stanford University. In addition, I studied nuclear engineering at the Massachusetts Institute of Technology during the years 1983-1986.

Since 1983 I have been retained by governmental bodies, publicly-owned utilities, and private organizations in 38 states to prepare expert testimony and analyses on engineering and economic issues related to electric utilities. My recent clients have included the U.S. Department of Justice, the Attorney General and the Governor of the State of New York, state consumer advocates, and national and local environmental organizations.

I have filed expert testimony before state regulatory commissions in Arizona, New Jersey, California, Connecticut, Kansas, Texas, New Mexico, New York, Vermont, North Carolina, South Carolina, Maine, Illinois, Indiana, Ohio, Massachusetts, Missouri, Rhode Island, Wisconsin, Iowa, South Dakota, Georgia, Minnesota, Michigan, Florida, North Dakota, Mississippi, Maryland, Virginia, Arkansas, Louisiana, Colorado, New Mexico, Oregon and West Virginia and before an Atomic Safety & Licensing Board of the U.S. Nuclear Regulatory Commission.

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A copy of my current resume is included as Exhibit DAS-1. Additional information about my work is available at www.schlissel-technical.com.

Q. Have you previously testified before the Arizona Corporation Commission?

A. Yes. I have testified in Commission Dockets Nos. U-1345-85, U-1345-90-007, U-1551-93-272, E-01345A-01-0822, E-01345A-03-0437, E-01345A-05-0816 and E-01345A-10-0474.

Q. Please summarize your testimony.

A. Schlissel Technical Consulting was retained to investigate the reasonableness of Tucson Electric Power Company's ("TEP" or "the Company") proposed Environmental Compliance Adjustor ("ECA"). This testimony presents the results of my evaluation.

Q. What information did you review as part of your analysis?

A. I reviewed TEP's Application and supporting testimony. I also reviewed the Company's data request responses.

As part of my review, I also examined the Company's April 2012 Integrated Resource Plan filing and the coal plant analyses that TEP presented in that document. In addition, I have reviewed materials from Arizona Corporation Commission Docket No. E-01345A-11-0224 concerning Arizona Public Service Company's proposed Environmental and Reliability Account.

II. Conclusions and Recommendations

Q. Please summarize your conclusions.

A. My conclusions are as follows:

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1. TEP's proposed Environmental Compliance Adjustor would allow the Company to recover costs associated with new investments in adding and acquiring new generating capacity, as well as environmental emissions controls, without waiting for the next general rate case.

2. TEP's proposed ECA is similar to the Environmental and Reliability Account ("ERA") that Arizona Public Service Company proposed but then withdrew in its last general rate case. The revised proposal that APS agreed to and that the ACC adopted was far more limited than either the original ERA or TEP's proposed ECA and limits APS's recovery to approximately $5 million in the financing costs for environmental compliance investments.

3. Under the Company's proposed procedure for the ECA, the Company's ratepayers could pay for months or even years the costs incurred due to imprudence.

4. The ACC's Integrated Resource Planning ("IRP") process, although beneficial and essential for prudent planning, does not allow for an adequate review/approval of proposed environmental compliance costs and other generating projects.

5. The Company has revised its projected natural gas prices since it prepared the coal plant economic analyses that it submitted as part of its 2012 IRP. Using TEP's newer natural gas price forecast has a significant impact on the cost of the natural gas-fired combined cycle alternative that the Company considered in those economic analyses. For example, just changing the natural gas prices makes building a new combined cycle unit a lower cost option in TEP's levelized cost analysis than retrofitting the San Juan Generating Station.

6. TEP is currently heavily dependent on coal-fired generation and plans to remain so throughout the 2012-2027 resource planning period.

7. There are significant risks and uncertainties created by TEP's heavy reliance on its existing coal-fired generating plants. These include: (a) the potential for higher coal prices; (b) the potential for lower than projected operating performance or higher than forecasted operating costs at the coal plants; (c) the potential for the adoption of a state, regional or federal greenhouse gas reduction regime that places a cost on CO_2 emissions; and (d) the potential need for larger investments to meet currently anticipated or future environmental regulations.

8. TEP failed to allow for these risks and uncertainties in the coal plant analyses it presented in its 2012 IRP. Consequently, the information and analyses that TEP included in its IRP are not adequate for determining whether the large expenditures that the Company testifies it will need to retrofit its existing coal plants are economically justified.

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9. TEP does not present any analyses of the impact that adoption of the proposed ECA would have on its financing costs.

10. TEP has not demonstrated that its proposed ECA would reduce the number or frequency of general rate cases or that such a reduction would benefit its ratepayers.

Q. What are your recommendations?

A. I am recommending that the Commission:

1. Reject TEP's proposed ECA and, instead, require the Company to seek recovery of environmental compliance expenditures by demonstrating prudence in a general rate case.

2. Allow all interested parties a reasonable opportunity to review, and if they desire, to present expert testimony on TEP's plans for major environmental upgrades, plant divestiture or retirement decisions, or resource acquisition decisions before they are made.

III. Environmental Compliance Adjustor

Q. Please describe TEP's proposed Environmental Compliance Adjustor?

A. The proposed ECA would allow TEP to recover costs associated with new investments in environmental emissions controls and in adding and acquiring new generating capacity without waiting for the Company's next general rate case. For expenditures that are not yet in service by the end of the year, TEP would be allowed to recover the on-going carrying costs on the investments. For a plant that is placed in service by year-end, TEP would recover a return on the investment, depreciation expenses, taxes, and the associated O&M costs.[1]

Q. How does TEP explain how its proposed ECA would work?

A. According to TEP's proposed Plan of Administration, the Company would file its calculated ECA rate, including supporting data, on or before March 1. Unless the

[1] Direct Testimony of David G. Hutchens, at page 26, line 22, to page 27, line 7.

Commission has otherwise acted to suspend the filing by May 1, the new ECA rate proposed by TEP would go into effect with the first billing cycle in May and would remain in effect for the following 12-month period.

Q. How does TEP define the investments that would qualify for inclusion in the ECA?

A. TEP's proposed Plan of Administration ECA includes the following definitions for investments that would qualify for recovery through the ECA:

> ECA Qualified Investments – (Investments in Qualified Environmental Compliance projects.) Each ECA Qualified Investment shall: 1) be classified in one or more of the FERC Plant In-Service, Completed Construction no Classified or CWIP accounts listed in Section 3 of this document, or any other successor FERC account, upon going into service, and 2) be tracked by a specific project number.
>
> Qualified Environmental Compliance Projects – Qualified ECA investments include those projects designed to comply with current or prospective environmental standards required by federal, state, tribal, or local laws and regulations. In general, these environmental standards apply, but are not limited to the following: sulfur dioxide, nitrogen dioxide, carbon dioxide, ozone, particulate matter, volatile organic compounds, mercury and other toxics, coal ash and other combustion residuals and water intake.

Q. Would the ECA include more than environmental compliance costs?

A. Yes. Although TEP's testimony generally avoids this fact and instead focuses heavy emphasis on environmental compliance costs for its existing generating units in its testimony, the ECA also would allow recovery of costs associated with the acquisition and addition of new generating plant between general rate cases. In fact, I'm aware of only a single mention in TEP's testimony of the fact that the proposed ECA would provide recovery of the costs of generation capacity acquisitions or additions between general rate cases as well as the costs of required environmental improvement projects.[2]

[2] Direct Testimony of David G. Hutchens, at page 29, lines 22-25.

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Q. Is TEP's proposed ECA similar to the Environmental and Reliability Account ("ERA") that Arizona Public Service Company ("APS") proposed in its last general rate case in 2011?

A. Yes. TEP's proposed ECA is very similar to the ERA that APS originally proposed in Docket No. E-01345A-11-0224. However, APS ultimately withdrew that proposal during settlement negotiations and, instead, agreed to a much more limited modification to its existing Environmental Improvement Surcharge. ("EIS") Under the new proposal that was approved by the ACC as part of the Settlement Agreement for APS's general rate case, APS would no longer receive customer dollars through the EIS to pay for government mandated environmental controls. However, when APS invests capital to fund any environmental controls, the EIS would recover the associated capital carrying costs subject to a $0.00016/kWh cap, at least through the end of that Company's next general rate case.[3] This would be the same as the roughly $5 million in environmental compliance carrying costs that APS had been recovering annually prior to the general rate case. APS also "will be held responsible for demonstrating that the environmental controls were government-mandated and represented a reasonable and prudent option available to the Company at that time sufficient to meet the environmental requirements."[4]

Consequently, the environmental compliance cost recovery that was ultimately agreed to by APS and approved by the ACC was significantly more limited than what TEP is proposing through the ECA.

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3 See the Direct Settlement Testimony of Leland R. Snook on behalf of Arizona Public Service Company in Docket No. E-01345A-11-0224, filed January 18, 2012, at page 7, line 19, to page 8, line 5.

4 General rate case Settlement Agreement, Paragraph 11.3, attached as part 16 of 22 to the ACC's Decision No. 73183 in Docket No. E-01345A-11-0224.

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Q. Would the Commission have a reasonable opportunity to review the prudence of the investments and related costs that TEP seeks to recover from ratepayers through the ECA before the new rates go into effect?

A. No. According to TEP's Plan of Administration, the Company would file the calculated ECA rate for the upcoming year on or before March 1. Unless the Commission has otherwise acted to suspend the filing by May 1, the new ECA rate proposed by TEP would go into effect. Consequently, the Commission would have only two months to review the prudence of the investments that the Company is seeking to recover through the ECA unless it decided to suspend the filing.

Q. What opportunities would the Commission then have to review the prudence of the investments and the related costs that TEP is seeking to recover through the ECA?

A. There seem to be three possibilities. First, the Commission could suspend the ECA and then set a contested case for determining the prudence of the investments and the costs that the Company is seeking to recover. Second, the Commission could allow the new ECA rates to go into effect, presumably subject to refund, while conducting a prudence review. And third, the Commission also could allow the new ECA rates to go into effect, presumably subject to refund, while deferring the question of prudence to the Company's next general rate case. Under the second and third options, ratepayers could be paying imprudent costs until the question of prudence was finally decided by the Commission, a period that could last months, if not years.

The Company has claimed that the implementation of the ECA might reduce the frequency of, and the need to file, general rate cases, thereby reducing the impact on its customers and the amount of Commission resources expended on TEP-related issues.[5] This might not be true if the Commission needs to suspend each year's ECA rates in order to conduct a prudence review of TEP's major generation-related expenditures.

[5] Direct Testimony of David G. Hutchens, at page 29, line 22, to page 30, line 4.

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Adoption of the ECA also would remove the incentive for efficiency that is created by regulatory lag.

Q. Consequently, is it correct that imprudent costs could be passed along to ratepayers under TEP's proposed ECA?

A. Yes.

A) The Integrated Resource Plan Does not Provide Adequate Review/Approval of the Proposed Environmental Compliance Costs

Q. Doesn't the Commission's new Integrated Resource Planning ("IRP") process represent an adequate review/approval of proposed environmental compliance and other generating projects?

A. No. The IRP process, although beneficial and essential, does not substitute for the in-depth analyses, based on the most current circumstances and data, which a contested proceeding such as a pre-approval docket or rate case provides. Companies need to conduct detailed and specific analyses before they decide whether to make expensive investments in environmental compliance modifications at existing power plants or to add or acquire new generating capacity. The Company acknowledges this in its April 2012 IRP when it states:

> It is important to note that while the Reference Case includes TEP's existing coal portfolio, the decisions as to whether or not TEP continues to maintain its ownership and leasehold interests in each coal plant is subject to numerous, changing variables, such as retrofit costs, replacement power costs and availability, coal and natural gas price forecasts, other plant owner's decisions, site lease extensions and associated costs, final Environmental Protection Agency (EPA) and legal proceeding's outcomes and ACC policy directives. TEP will continue to evaluate each such investment decision in this evolving environment and supplement the IRP as appropriate.[6]

[6] TEP 2012 IRP, at pages 17 and 18.

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And:

> As with any planning analysis, the 2012 IRP represents a snapshot in time based on existing conditions and reasonable planning assumptions. Even after the 2012 IRP filing date, TEP anticipates that the plant participants will continue to work through the complex issues surrounding plant operating agreements, fuel contracts, land leases, transmission contracts and lease purchase options before the final resource decisions are made. As shown in Figure 1, the final decision on whether TEP continues to invest in its existing coal-fired facilities or in other replacement resources will be determined on a plant by plant basis over the course of the next 12-18 months after the 2012 IRP filing…..[7]

The Company's plant-by-plant analyses that provide the level of detail necessary to determine prudence are not fully addressed in an IRP. The IRP therefore is not a substitute for the detailed review, including the right for parties to intervene and conduct confidential discovery that a pre-approval docket or a rate case would provide.

Q. Can you give any examples of a key variable that has changed since TEP filed its 2012 IRP last spring?

A. Yes. Figure 1, below, shows that TEP's current natural gas price projections are significantly [redacted] than the natural gas prices it used in the coal plant analyses in its 2012 IRP.

[7] Id, at page 18.

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Figure 1: TEP's IRP versus Current as of October 22, 2012 Natural Gas Price Projections

[redacted]

In fact, as can be seen from Figure 1, the Company's current natural gas price forecast is [redacted] even the "low" forecast it used in the coal plant economic analyses in its IRP.

Q. Have recent NYMEX Permian Basin natural gas futures prices changed since October 22, 2012?

A. Yes. NYMEX Permian Basin natural gas futures prices for 2013 and 2014 actually were slightly lower in the past week than they were on October 22nd.

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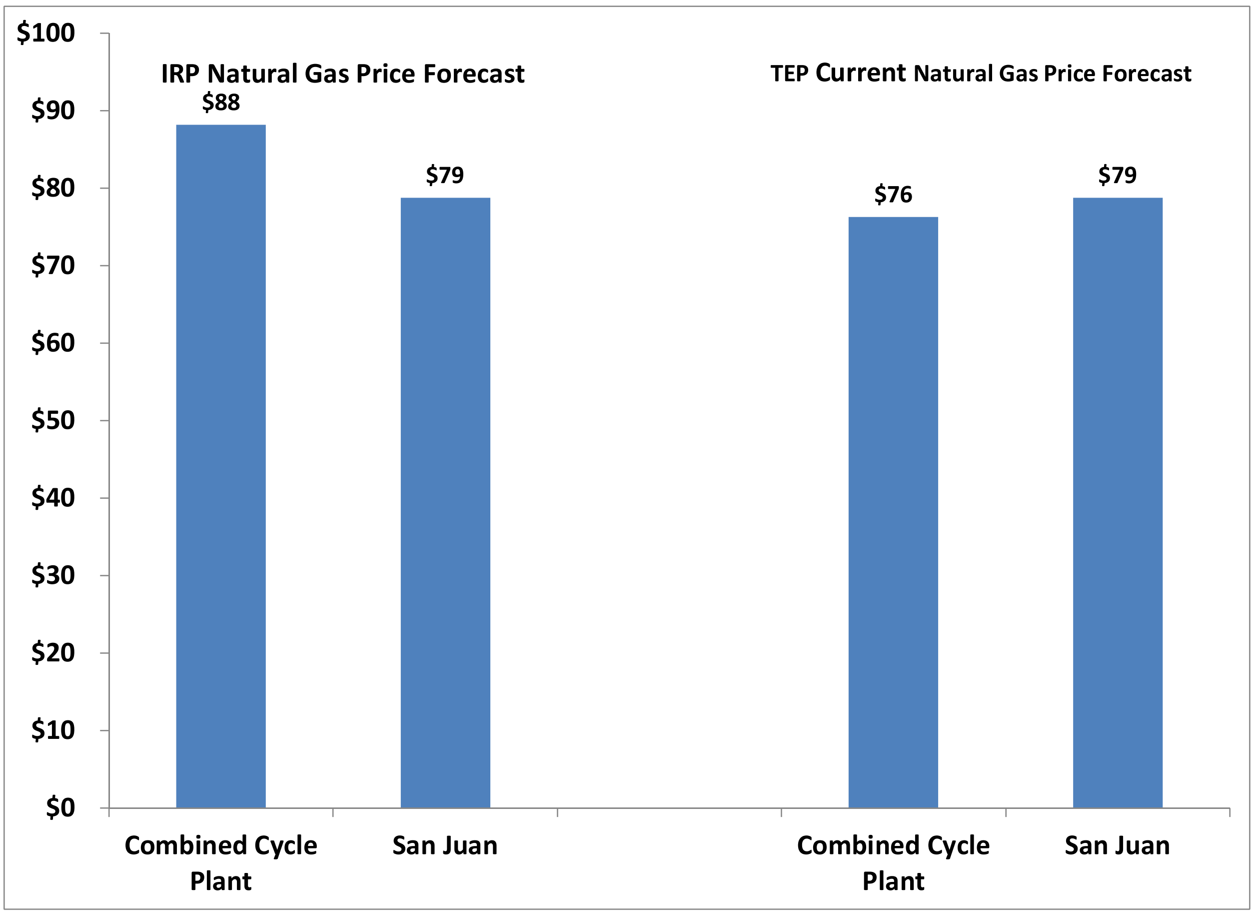
Q. What impact would using TEP's current natural gas price forecast have on the results of the individual coal plant economic analyses presented in the IRP?

A. Using TEP's [redacted] current natural gas price forecast would reduce the cost of the new natural gas-fired combined cycle alternative and improve the relative economics of that alternative compared to the continued operation of the coal units.

In fact, just changing the natural gas prices makes building a new combined cycle unit a lower cost option in TEP's levelized cost analysis than retrofitting the San Juan Generating Station, as shown in Figure 2, below.

Figure 2: San Juan Levelized Cost Comparison - TEP's IRP versus Current Natural Gas Price Forecasts



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Q. Would TEP's [redacted] current natural gas price forecast costs also affect the NPV of Portfolio Cost comparisons presented in the IRP?

A. Yes. Using [redacted] natural gas prices would reduce or eliminate the cost advantage shown to continued operation of each of the Company's coal plants.

Q. Were you able to review the workpapers for these Portfolio Cost comparisons?

A. No. TEP declined to provide them, saying that they were the property of Ventyx, the Company's modeling consultant.

Q. Does the Company's Levelized Cost comparison understate the long-term value of adding a new generating unit in 2017 as compared to continuing to operate TEP's existing coal plants?

A. Yes. The Company's Levelized Cost comparison for the years 2012-2027 does not consider that a new generating unit will have a much longer remaining service life at the end of 2027 than TEP's existing coal plants.

For example, TEP currently assumes that a new combined cycle power plant will have a 45 year operating life and that the expected service lives for simple cycle steam-generating units should be set at 60 years.[8] Table 1, below, shows the expected remaining lives for all of TEP's coal units and a new combined cycle unit added in 2017.

[8] Direct Testimony of Mark C. Mansfield, at page 3, lines 23-26.

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Table 1: Expected Remaining Service Lives in 2027

Unit	Age in 2027 (Years)	Remaining Expected Service Life in 2027 (Years)
Springerville Unit 1	42	18
Springerville Unit 2	37	23
San Juan Station Unit 1	51	9
San Juan Station Unit 2	54	6
Navajo Station Unit 1	53	7
Navajo Station Unit 2	52	8
Navajo Station Unit 3	51	9
Four Corners Unit 4	58	2
Four Corners Unit 5	57	3
New Natural Gas-Fired Combined Cycle Unit	10	35

Thus, a new combined cycle unit will have a far longer expected remaining life in 2027 even if each of the Company's existing coal plants were expected to operate beyond a 60 year operating life. The Levelized Cost comparison does not reflect this possibility. TEP's NPV Portfolio Cost analyses also may not. However, I can't be certain because I have not had access to those materials.

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Q. Is it your testimony that TEP should pursue a new natural gas-fired combined cycle plant?

A. Not at all. I used the example of a new combined cycle unit to demonstrate how the Company's least-cost resource analysis can substantially change from its last IRP. The purpose of this example is to show that TEP should engage in comprehensive and detailed analyses that are subject to review by the Commission and intervenors before committing to the large capital expenditures that would be within the scope of the ECA. TEP would have to complete a thorough resource evaluation analysis before committing its customers to the construction of a new generating resource. Such an analysis is beyond the scope of my testimony here.

B) <u>TEP's Heavy Reliance on Coal Fired Power Plants Creates Risks for its Customers</u>

Q. How dependent is TEP on generation from coal-fired power plants?

A. The Company's 2012 IRP shows that TEP obtains 80.1% of its generation from its coal-fired facilities.[9]

Q. Doesn't the Company's 2012 IRP also show that TEP's proposed resource plan would reduce its dependence on coal-fired generation?

A. The IRP does show that, under its proposed resource plan, by 2027 coal would represent only 64.7% of its total generation. However, there are two important facts to emphasize about this figure. First, depending on coal for nearly 65% of its generation is still a heavy dependence. Second, and most significantly, TEP is not projecting any reduction in the generation of coal at its existing coal-fired power plants. The percentage of coal in its fuel mix would drop from 80.1% in 2012 to 64.7% in 2027 in its resource plan due to the

[9] TEP 2012 IRP, at Chart 1, on page 22.

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addition of new energy efficiency, utility scale renewable resources and distributed generation and not as the result of any reduced generation from coal.[10]

Q. What are the risks posed by such a continued heavy dependence on coal-fired generation?

A. There are several significant risks and uncertainties created by TEP's planned continued heavy reliance on its existing coal-fired generation plants. These include: (a) the potential for higher coal prices; (b) the potential for lower than projected operating performance or higher than forecast operating costs at the coal plants; (c) the potential for the adoption of a state, regional or federal greenhouse gas reduction regime that places a cost on CO_2 emissions; and (d) the potential need for larger investments to meet currently anticipated or future environmental regulations.

Q. Did TEP's IRP coal plant analyses adequately reflect these risks faced by existing coal-fired power plants?

A. No. Although TEP prudently looks at ranges of future natural gas prices and wholesale power prices as sensitivities to reflect the potential uncertainties in those prices, it does not do the same for coal prices, future plant operating performance or operating costs, the cost of future CO_2 emissions and/or the cost of meeting current and future environmental regulations.

For example, although the Company's average coal prices increased at an average of 6.2% annually between 2005 and 2011 (7.5% annually between 2007 and 2011), TEP optimistically has assumed that coal prices will only escalate at an average annual 2.7% rate between 2012 and 2027.[11] The Company also does not allow for any uncertainty or risk that the actual non-fuel O&M (both fixed and variable) at its existing coal plants will be higher than it now projects.

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[10] See Chart 7 on page 36 of TEP's 2012 IRP.
[11] Id, at Chart 63 on page 289.

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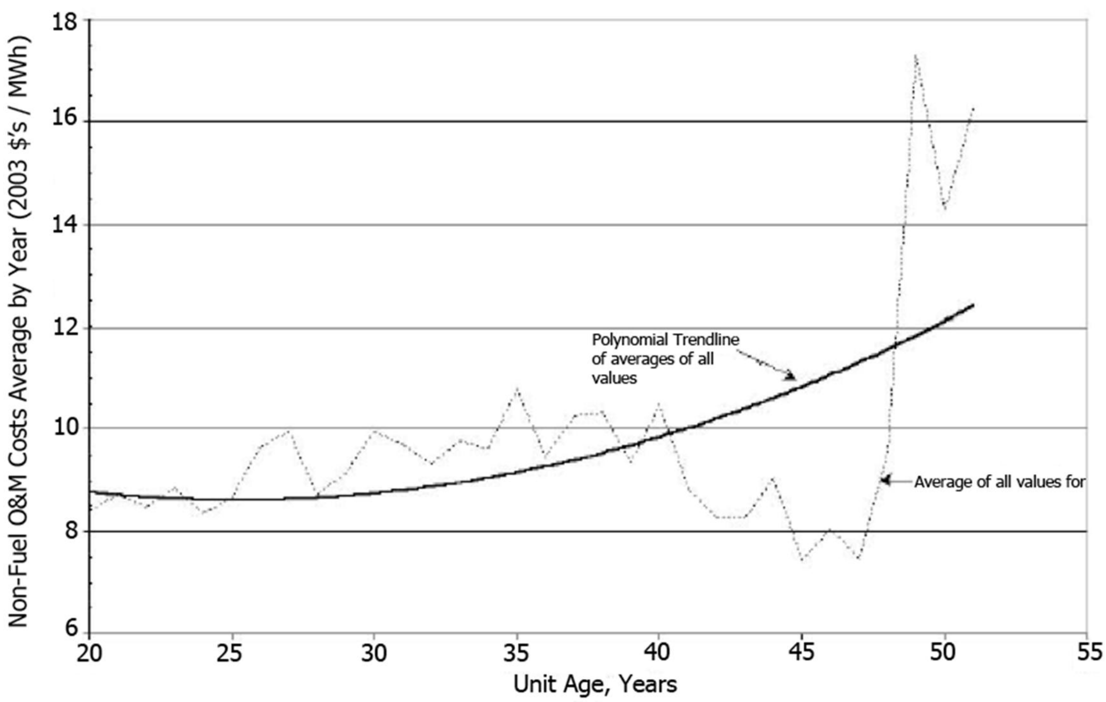
Q. Have you seen any evidence that suggests that coal plant non-fuel O&M is expected to increase significantly as a coal plant ages?

A. Yes. Figure 3, below, is taken from Public Service of New Mexico's San Juan Generating Station Harvesting Study. It reflects the expectation that as the San Juan Generating Station ages, its non-fuel O&M will increase at a rate significantly higher than the overall rate of inflation.

Figure 3: Non-Fuel O&M Cost vs. Age from PNM's SJGS Harvest Study



Q. Does TEP assume in its coal plant analyses that some of its existing coal units will operate better in the next 15 years than they have in recent years?

A. Yes. TEP assumes in its Levelized Cost comparisons that each of its existing coal plants will operate at an 85 percent capacity factor for the period 2012 through 2027. This 85 percent capacity factor would be higher than the capacity factors that most of the

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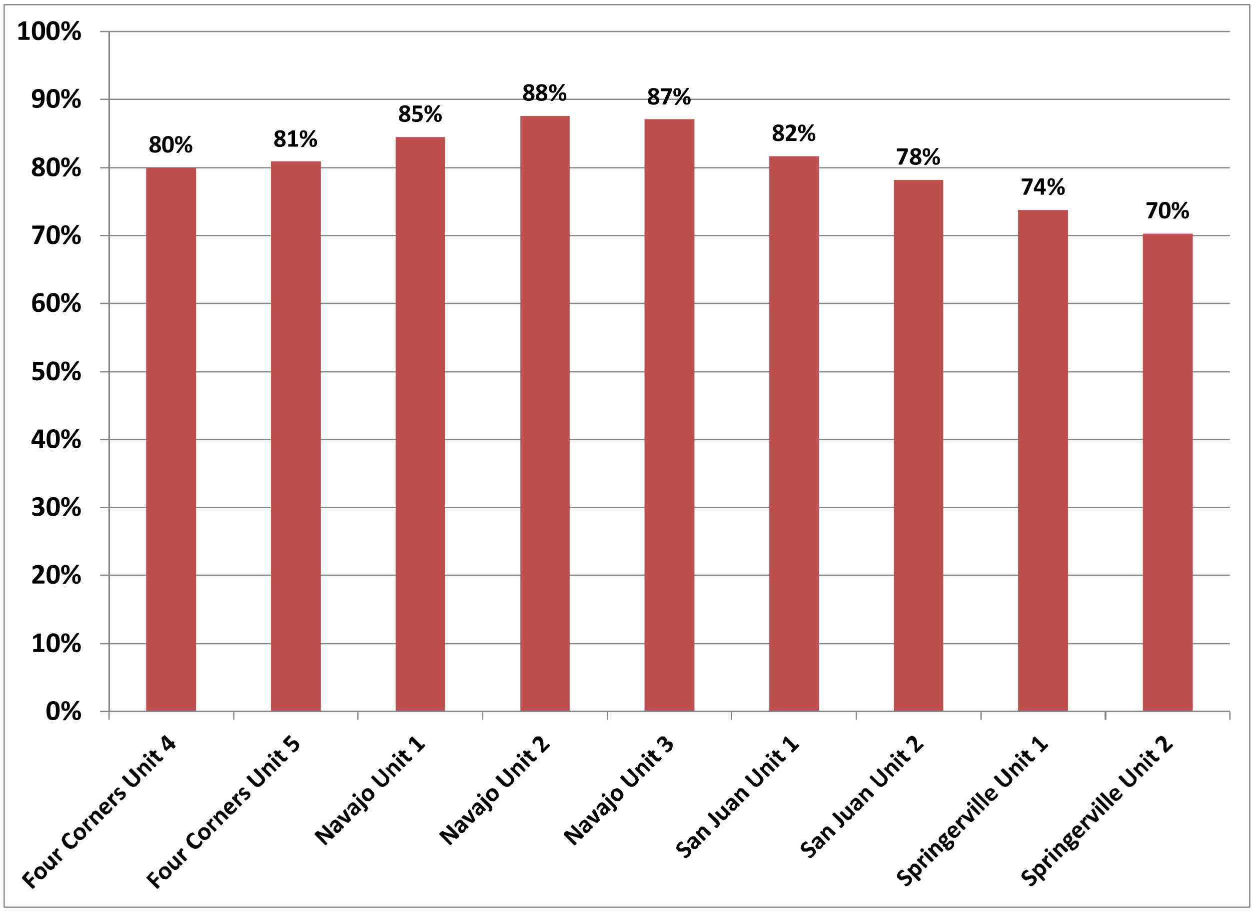
Company's coal units achieved during the seven year period 2005-2011[12], as shown in Figure 4, below:

Figure 4: TEP Coal Unit Average Annual Capacity Factors for the years 2005-2011.



Thus, only the three Navajo Units actually have achieved 85% or higher average annual capacity factors in the most recent 7 year period.

Q. Does TEP allow for any uncertainty in the future CO_2 prices it assumed in its IRP coal plant analyses?

A. Although TEP is to be commended for including a CO_2 price in its IRP analyses, the Company failed to consider a range of possible future CO_2 prices. This is significant

[12] 2007 is the last full year for which operating data is available.

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given the substantial uncertainty associated with the timing, design and stringency of a possible CO_2 regulatory regime. The Company has requested Commission approval to pass through future greenhouse gas costs to its ratepayers through its PPFAC, without any restriction on how high those prices may be.[13] It should, then, be required to look at a range of possible CO_2 prices that is higher than the single price trajectory in its IRP.

Q. In its testimony, does the Company acknowledge the uncertainty regarding the scope, cost, and schedule of new environmental regulations?

A. Yes. The Company discusses the uncertainties surrounding new environmental regulations at some length in its testimony in this proceeding. For example, at pages 30 and 31 of his Direct Testimony, TEP witness Michael J. DeConcini discusses anticipated environmental controls that will be required at the Company's generating units.

Q. Does TEP identify the potential costs of these anticipated environmental controls?

A. Yes. TEP witness Paul J. Bonavia testifies that the Company is facing "capital investments of approximately $300 million over the next five years to cover the costs associated with new environmental mandates affecting several power plants."[14] Mr. Hutchens then testifies that, depending on the final outcome of certain proposed regulations, TEP's total capital outlays could approach $400 million, in addition to annual increases in O&M costs in the tens of millions of dollars."[15]

[13] Direct Testimony of David G. Hutchens, at page 41, lines 12-21.
[14] Direct Testimony of Paul J. Bonavia, at page 14, lines 18-26.
[15] Direct Testimony of David GT. Hutchens, at page 24, line 17, to page 25, line 15.

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Q. Is it reasonable to expect that there will be other potential environmental regulations, beyond those discussed by TEP in this docket that could affect the future operating costs or the need for further capital investments at any of TEP's existing coal-fired generating units?

A. Yes. There are other possible environmental compliance costs due to further changes in other regulations such as stricter national ambient air quality standards (NAAQS) for emissions such as ozone and fine particulate matter.

Q. Have you seen any evidence that the Company reflected any uncertainty in future environmental compliance costs in its IRP coal plant economic analyses?

A. No.

Q. Was it reasonable for TEP to exclude from its IRP coal plant economic analyses any consideration of uncertainty in future environmental compliance costs?

A. No. Arizona Administrative Code R14-2-704 provides that TEP must consider in its resource plan all relevant resources, risks, and uncertainties, as well as the best combination of expected costs and associated risks for TEP and its customers. As the Company's testimony notes, there is significant uncertainty regarding the future timing, stringency and cost of federal environmental regulations. For this reason, it would have been prudent for TEP to have considered a range of future environmental costs in the Company's IRP coal plant economic analyses.

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Q. You have identified a number of significant risks for existing coal-fired power plants: low natural gas prices, higher than projected coal and non-fuel O&M costs, CO_2 emissions costs, lower than expected operating performance, and the potential costs of meeting environmental standards. Have other electric companies faced these same risks and the need to decide whether to retrofit or retire their existing coal plants?

A. Yes. This is not an issue that only TEP faces. Virtually all other electric utilities around the nation are facing the same risks and the same questions about the continued economic viability of their existing coal plants. Many companies have decided to retire coal-fired generating capacity on the basis of the types of detailed risk and economic analyses I have discussed in this testimony. Some examples of companies that have decided to retire coal plants include Duke Energy, Progress Energy, AEP, FirstEnergy, Portland General Electric, and Pacificorp.

In fact, according to an October 2012 study by the Brattle Group, attached here as Exhibit DAS-2, as of July 2012, approximately 30 gigawatts ("GW") of coal plant capacity had announced plans to retire by 2016.[16] The study further found that another 29-47 GW of coal plant capacity (for lenient vs. strict scenarios) was likely to retire instead of retrofit with environmental equipment.[17] These retirements are expected to occur absent any future regulations restricting carbon emissions.

When utilities and their regulatory commissions take a close look at their coal plants in rate or resource-specific dockets, they often realize that making further major investments in these plants is not the least cost alternative.

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16 *Potential Coal Plant Retirements: 2012 Update*, the Brattle Group, October 2012.
17 Id.

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Q. Is the information and analyses that TEP included in its IRP adequate for making a determination of whether large capital expenditures at its coal plants are economically justified?

A. No. As I have discussed above, the coal plant analyses in TEP's IRP do not reasonably account for the significant risks and uncertainties associated with continued operation of the Company's existing coal-fired power plants.

Q. TEP stated in its 2012 IRP that it plans to communicate any major environmental upgrade, plant divestiture decision or resource acquisition decision to the ACC.[18] Should other parties have an opportunity to review and comment on these decisions?

A. Yes. It is important to thoroughly evaluate the prudence or reasonableness of a major investment decision before it is made. Decisions on major environmental upgrades, plant divestments, or resource acquisitions will affect rates for years, if not decades. All interested parties should have a reasonable opportunity to review and, if they desire, present expert testimony critique and/or offer potential alternative options.

Q. TEP witness Hutchens discusses the theoretical impact of adoption of the proposed ECA on the Company's financing costs.[19] Does the Company have any analyses of the impact that adoption of the proposed ECA would have on its financing costs?

A. No. TEP has said that "While the proposed ECA would clearly reduce the cost recovery lag on environmental investments, no analyses were done to quantify the impact on the Company's financing costs."[20]

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18 TEP's 2012 IRP, at page 337.

19 Direct Testimony of David G. Hutchens, at page 29, line 22, to page 30, line 4.

20 TEP's response to Data Request SC 1.21.

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IV. Conclusion

Q. What is your conclusion regarding the Company's proposed ECA?

A. The Commission should reject TEP's proposed ECA and, instead, require the Company to seek recovery of environmental compliance expenditures by demonstrating prudence in a general rate case.

Q. Does this complete your testimony?

A. Yes.

Index of Exhibits

Exhibit DAS-1: Curriculum vitae of David A. Schlissel

Exhibit DAS-2: The Brattle Group Discussion Paper: Potential Coal Plant Retirements: 2012 Update (October 2012)

PROOF OF SERVICE

I hereby certify that I have this day served the foregoing non-confidential documents on the following parties in this proceeding by mailing a copy thereof, properly addressed, with either FedEx or U.S. Mail first class, postage prepaid.

Docketing Supervisor (13 Copies)
Docket Control
Arizona Corporation Commission
1200 W. Washington
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