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November 20, 2012

OPEN MEETING AGENDA ITEM

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AZ CORPORATION COMMISSION
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Chairman Gary Pierce
Commissioners Bob Stump, Paul Newman, Sandra Kennedy, and Brenda Burns
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, Arizona 85007

Re: **2012 Tucson Electric Power Integrated Resource Plan** DOCKET No. *E-00000A-11-0113*

Dear Chairman Pierce and Commissioners:

I am submitting written public comments on the proposed Tucson Electric Power (TEP) 2012 Integrated Resource Plan on behalf of the Sierra Club's Grand Canyon (Arizona) Chapter and our 12,000 members, many of whom are TEP customers.

The Sierra Club's mission is "to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments." The Sierra Club and our members have a significant interest in Integrated Resource Planning. We place a high priority on the need to reduce dependence on fossil fuels, reduction of energy waste through improved energy efficiency, and a transition to clean renewable energy generation

Sierra Club appreciates the Arizona Corporation Commission (ACC) requiring the utilities to submit Integrated Resource Plans (A.A.C. R14-2-703). We participated in the stakeholder process and found the opportunity to ask questions along the way, informally, quite helpful. It helped us to better understand the planning process as well as where there may be opportunities for looking at alternative strategies to promote energy efficiency and renewables.

TEP plans to meet the Arizona Renewable Energy Standard (RES) by 2020 as indicated in its Integrated Resource Plan (IRP). Sierra Club supports TEP's focus on energy efficiency, since it could mean a decrease in their annual energy requirement by 1,700 GWh by 2020. Energy efficiency is the most cost-effective energy resource and it is clearly a very clean energy resource.

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However, we also think TEP should complement its efficiency efforts with an aggressive program to promote renewable energy resources and to retire coal combustion facilities. As you know from the IRP, 84 percent of TEP's energy generation is dependent on the combustion of dirty, toxic coal. There is obvious room for improvement. Money saved on costly coal emission retrofits can instead be invested in distributed generation (DG) and utility-scale solar and wind projects. Clean, local, renewable energy created through solar and wind generation provides green jobs, cuts pollution and greenhouse gas emissions, saves water, and improves public health.

Pollution from coal-fired power plants contributes to smog, which can exacerbate conditions such as bronchitis, emphysema, and asthma, plus cause chest pain, coughing, and breathing difficulties. In 2010, coal-fired power plants in Arizona and New Mexico alone emitted 53,000 tons of sulfur dioxide (SO₂) and 117,000 tons of nitrogen oxide (NO_x). Coal plant pollution is responsible for 13,000 premature deaths in this country every year, more than \$100 billion in annual health costs, and over 200,000 asthma attacks annually.¹ Burning coal also releases toxic mercury that pollutes rivers and streams and contaminates the fish that we eat. In Arizona, 13 lakes and streams have fish consumption advisories for mercury pollution² and a new mercury advisory was just issued for Lake Powell. Mercury is especially dangerous to pregnant women and young children because it is a powerful neurotoxin that can damage the brain and nervous system.

Coal plants emit more than 30 percent of the United States' annual carbon dioxide emissions, making them a major contributor to global climate change. Reducing emissions that contribute to climate change is imperative before we experience even more of its devastating impacts. Please see recent research by James Hansen.³ He states, "It follows that we can state, with a high degree of confidence, that extreme anomalies such as those in Texas and Oklahoma in 2011 and Moscow in 2010 were a consequence of global warming because their likelihood in the absence of global warming was exceedingly small."⁴ Furthermore, many scientists attribute the intensity of Hurricane Sandy to the impacts of climate change.

Finally, coal mining has devastating consequences for our natural resources. It pollutes waters, destroys lands, impacts wildlife habitat, and in some areas results in the loss of entire mountains.

Our future should be focused on phasing out coal and transitioning to clean energy technologies, including energy efficiency, solar, and wind. The costs of sustainable and renewable sources of energy such as wind and solar have been dropping quickly⁵, so should be considered more and more as the preferred direction for resource planning.

According to the IRP, TEP may face as much as \$486 million in purchase and retrofit costs for coal units over the next six years, with annual operating costs associated with these retrofits increasing as much as

¹ http://www.azdeq.gov/environ/water/assessment/download/fish-powell_faq.pdf

² http://www.azgfd.gov/h_f/fish_consumption.shtml as of July 11, 2011

³ Hansen, James, Makiko Sato, and Reto Ruedy. 2012. Perception of climate change. National Aeronautics and Space Administration Goddard Institute for Space Studies and Columbia University Earth Institute, New York, NY 10025.

<http://www.pnas.org/content/early/2012/07/30/1205276109.full.pdf+html>, accessed 08/06/2012

⁴ Ibid

⁵ Bloomberg News, Wind Power's Best Projects Rival Costs of New Coal-Fired Plants, BNEF Says, April 4, 2011; Bloomberg News, Solar Power May Already Rival Coal, Prompting Installation Surge, April 5, 2011

approximately \$1.5 million to \$2.5 million annually. This is a staggering sum to invest in a technology that is outdated, toxic, and expensive. Local clean energy generation and storage investment would ultimately provide TEP customers with lower rates, not only on their monthly electric bills, but also on their health care costs.

It is also worth noting that renewable energy and energy efficiency are stably priced and are thus hedges against fuel price increases. Unlike Arizona Public Service Company (APS), which is Arizona's largest investor-owned utility, TEP's IRP does not present a variety of feasible scenarios to meet its service area's energy needs. Instead, the only path forward given in-depth consideration is the reference case plan, while a few "potential contingency options" are only briefly discussed in the final chapter of the IRP. Among these "options" are superficial comparisons of the potential cost of retiring either the Four Corners, Navajo, or San Juan coal plants, and replacing them with a new, combined-cycle natural gas plant and the associated transmission resources. There is also a similar comparison made regarding the purchase of the Springerville unit and associated emissions control retrofits versus a new gas plant and transmission. All of these "potential contingency options" fail to explore a variety of feasible and environmentally responsible options, such as utility-scale renewable energy plants, aggressive DG programs, or replacement of generation through energy efficiency or market purchases. Overreliance on the reference case plan and failure to consider the true breadth of options that exist for TEP ratepayers is a glaring deficiency in TEP's 2012 IRP.

The IRP concludes that "TEP's continued participation in its existing coal facilities represents a cost-effective solution for TEP customers," even while recognizing that "40% of TEPs coal capacity may be at risk for early retirement by forces outside TEP's control." The future of coal is uncertain and risky, and TEP will need to approach the challenges of tomorrow with more creative thinking and dynamic planning than can be found in their 2012 IRP. We encourage the Arizona Corporation Commission to ask TEP to evaluate a coal retirement portfolio in its future resource plans.

Thank you for considering our comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sandy Bahr".

Sandy Bahr
Chapter Director
Sierra Club – Grand Canyon Chapter