

**Statement of the Central Arizona Water Conservation District  
DOE/Western Area Power Administration "Defining the Future" Proceedings**

**August 15, 2012**

**Submitted electronically to: [JOT@wapa.gov](mailto:JOT@wapa.gov)**

Overview of CAP

The Central Arizona Project (CAP) is a multi-purpose water resource project authorized by Congress in 1968 and constructed by the U.S. Bureau of Reclamation. Central Arizona Water Conservation District (CAWCD) is a political subdivision of the State of Arizona created for the purpose of operating and maintaining the CAP and repaying to the United States the reimbursable costs of its construction. CAWCD's service area includes Maricopa, Pima and Pinal counties, which together make up about 80% of the State's population.

The CAP delivers about 1.6 million acre-feet of Arizona's annual share of Colorado River water to municipal and industrial, agricultural and Native American customers in central and southern Arizona. That water must be pumped uphill from the Colorado River, making the CAP the single largest end user of electricity in the State of Arizona, consuming about 2.8 million megawatt-hours each year. Power represents the single largest component of CAP's operating costs. Those costs are passed directly to CAP water users through cost-based rates.

Most of the electricity to operate the CAP comes from the U.S. share of the Navajo Generating Station (NGS), located on the Navajo Indian Reservation in northern Arizona. Some forty years ago, the United States elected to get the power needed for CAP by participating in a coal-fired plant at NGS instead of constructing additional hydroelectric dams on the Colorado River in areas that are now part of the Grand Canyon National Park.

A smaller but critical portion of CAP's energy needs is met with power from the Hoover Dam, which is marketed by the Western Area Power Administration (Western) and contracted to CAWCD through the Arizona Power Authority.

The CAP stretches 336 miles across Arizona, with 14 pumping plants located from the Colorado River to south of Tucson. Power from NGS, Hoover and other sources is transmitted to CAP loads using a combination of resources: the Navajo Project transmission system (operated by NGS partners); Pacific Northwest-Pacific Southwest Intertie and Parker-Davis Project (both operated by Western); network service from various electric utilities (including Salt River Project and Arizona Public Service Co.); and CAP's own transmission network (constructed by Reclamation and operated by Western at CAWCD's expense).

Because of our extensive reliance on the southwest transmission network, CAP is very concerned that the initiatives set forth in Secretary Chu's March 16, 2012 memorandum to the Power Marketing Administrators could result in increased costs to CAP and its customers.

## Other Federal Action Affecting CAP Power Costs

The Secretary's Power Marketing Administration initiative is not the only federal action threatening to increase CAP's power costs.

At NGS, CAWCD is awaiting a decision by EPA on what, if any, additional emission controls will be mandated as Best Available Retrofit Technology (BART) pursuant to EPA's regional haze program. If EPA requires the installation of Selective Catalytic Reduction (SCR) technology (estimated to cost \$544 million), possibly combined with polishing baghouses (increasing the total cost to about \$1.1 billion), NGS owners have told EPA that they will close the plant—requiring CAP to replace about 95% of its generation resources. Other EPA regulations, including the new Mercury and Air Toxic Standards and coal ash rules, will also increase NGS costs, assuming the plant remains in operation.

## Impact of Increased Power Costs on CAP and its Water Users

Many CAP customers tell us that even relatively small increases in our water rates would cause them to reduce their use of CAP water and return to groundwater pumping. Even relatively small increases in electric generation or transmission costs can have major impacts on CAP water users. For example, if the PMA initiatives resulted in even a one mill (1/10 of one cent) increase in the cost per kilowatt-hour of the electricity used by the CAP, it would result in an increase of approximately 3.5% in the costs per acre-foot that CAWCD must recover through its pumping energy water rate. A one cent per kilowatt-hour increase would result in an increase of nearly 35 percent.<sup>1</sup>

One of the express purposes of the CAP was to reduce groundwater overdraft in central Arizona by providing a renewable water supply alternative. H. R. Rep. No. 1312, 90th Cong., 2d Sess. 55 (1968). It would be a sad irony if the present-day actions of the EPA and DOE were to defeat the intent that led the U.S. Congress to invest more than \$4 billion to construct the CAP.

Capacity and energy from the U.S. share of NGS that is not needed to deliver CAP water is sold by Western as Navajo Surplus, the net proceeds of which are used first to assist in meeting CAWCD's repayment obligation for the CAP and second to fund Indian water rights settlement costs. Increases in the cost of Navajo generation or transmission will reduce the net value of Navajo Surplus available for these purposes.

## The Proposed PMA Initiatives Are Unneeded and Will Increase Costs to CAP

Western has long been a leader in Integrated Resource Planning (IRP) and has worked well with other

---

<sup>1</sup> CAP uses approximately 2.7 million megawatt-hours to pump and deliver approximately 1.6 million acre-feet of renewable Colorado River water each year. A one mill increase in electricity generation or transmission costs resulting from the PMA initiatives would result in additional annual costs of \$2.7 million, or about \$1.69 per acre-foot. The current (2012) pumping energy rate is \$49 per acre-foot, therefore a \$1.69 increase in pumping costs would cause an increase of about 3.5 percent in the pumping energy water rate. A one cent per kilowatt-hour increase in electricity costs would cause a 35 percent increase.

regional transmission providers to create the strong transmission system we have today. Recently, Western has worked with its customers, renewable generation proponents and interconnected utilities to evaluate, select, fund and construct new transmission under its TIP authority, including, in Arizona, the Electrical District No. 5—Palo Verde Hub Project. Western is seeking project proposals from parties interested in providing contributed funds under Section 1222 of EPAct for upgrading Western lines or constructing new lines to integrate renewable resources. Western has also been studying the cost, benefits, and risks of and alternatives to an Energy Imbalance Market (assuming, rightly or not, that there will be a net benefit from EIM). Over a year ago, Western began offering intra-hour transmission scheduling (currently with a thirty-minute schedule) to help address variable resource needs and decrease the exposure of variable resources to imbalance penalties (although to our knowledge no variable generators have used that tool, suggesting that the need for it may not be overwhelming). As a participant in WestConnect, Western is also participating with other regional utilities on initiatives such as area control error (ACE) diversity interchange, dynamic scheduling systems (DSS) and others. Western has managed to proceed with all of these activities without any of the proposed PMA initiatives having been adopted.

In CAP's view, Western and other regional transmission providers have been fully engaged in assuring a flexible and resilient electric grid for years. DOE's proposed initiatives appear to be solutions in search of a problem.

In addition, in the FERC's recent Order 764 the Commission declined to order the formation of intra-hour imbalance markets (EIMs), finding that "a more measured approach is appropriate at this time". Instead FERC, directed public utility transmission providers to allow 15-minute scheduling intervals in their OATTs. Like FERC, CAWCD believes that this measure will provide much of the flexibility sought by Variable Energy Resource developers without the added costs of an EIM, which FERC noted could be "significant." DOE should accept FERC's findings and back away from EIM.

#### The Proposed PMA Initiatives are Inconsistent with Western's Authorized Mission

Western's basic mission is "to market and deliver reliable, cost-based hydroelectric power and related services." [<http://www.wapa.gov/dsw/about/>] In the transmission arena, Western's "core mission focus" is to:

"Develop, operate and maintain the transmission system necessary to deliver reliable firm electric and project use power to our customers at the lowest possible cost consistent with sound business principles."

[Western Strategic Plan, September 2011, at 4.]

CAWCD is concerned that the proposed PMA initiatives go well beyond Western's authorized mission and that their implementation will force federal power and transmission customers to bear increased costs to subsidize other users. Such a result is inconsistent with cost-based ratemaking.

Specific Concerns Related to the Proposed Initiatives

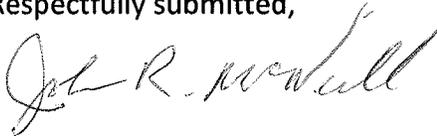
DOE has not identified any federal generation or transmission resources that would be available to Western to establish a regional Energy Imbalance Market. Certainly the Hoover resource is unavailable for that purpose, since Congress has fully committed Hoover power, not just today, but in allocations for post-2017 sales to the Arizona Power Authority and other direct Hoover customers. Nor is CAWCD aware of any other power resource that might be available to Western to implement an EIM.

Secretary Chu's memorandum acknowledged that Western "may incur costs during the initial transition to an EIM," but those expected costs have not been adequately quantified, nor has there been any sufficient cost-benefit analysis. CAWCD and other ratepayers should not be required to pay for EIM costs of uncertain benefit through "cost-based" rates.

We expect that other questions and concerns will arise as Western further embarks on implementation of the Secretary's directives.

Thank you for the opportunity to comment.

Respectfully submitted,



John R. McNeill  
Senior Attorney  
Central Arizona Water Conservation District  
P.O. Box 43020  
Phoenix, AZ 85020-3020  
jmcneill@cap-az.com  
623-869-2333