AGENDA ITEM #5 – ATTACHMENT A

CENTRAL ARIZONA PROJECT FINANCIAL AND POWER ISSUES

Arizona Municipal Water Users Association
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Draft

Introduction

The Navajo Generating Station (NGS) is a 2,250 MW coal-fired power plant located on the Navajo Indian Reservation near Page, Arizona. Coal for the NGS is mined near Kayenta and is transported to the NGS via a train. The US Bureau of Reclamation (USBR) is the largest single participant in the NGS with a 24.3% stake representing a maximum capacity of 546.75 MW. Other participants include the Salt River Project (SRP), Los Angeles Department of Water & Power (LADWP), Arizona Public Service (APS), Nevada Energy, and Tucson Electric Power. SRP is responsible for operating and maintaining the NGS.

As originally conceived, energy associated with the USBR capacity would be used to pump and transport Central Arizona Project (CAP) water from Lake Havasu on the Colorado River to the Phoenix area and then on to Tucson. Any energy that was surplus to the pumping requirements of the CAP was to be sold on the energy market and the revenues from these sales would be deposited in the Lower Colorado River Basin Development Fund and used to offset the repayment obligation of the Central Arizona Water Conservation District (CAWCD). The CAWCD is responsible for repaying the Federal government the reimbursable costs of the CAP associated with the Municipal & Industrial (M&I) and Non-Indian Agricultural (NIA) water supplies. The CAWCD, pursuant to a contract with the USBR, is also responsible for operating and maintaining the physical works of the CAP. NGS energy is priced to the CAP at the cost of producing the energy, and for 2012, the CAWCD assumed a rate of $26.48/MWh.

In 2012, the actual NGS energy costs increased to about $30.89/MWh, primarily resulting from increased labor costs, and there was a significant downturn in the energy market. Additionally, energy shaping and displacement opportunities assumed by the CAWCD did not materialize due to the increased costs and the soft energy market. As a result, the cost of pumping energy to the CAWCD increased, and projected revenues to the Basin Development Fund from the sale of surplus energy were significantly lower than originally projected. These conditions are expected to maintain through 2013 and the CAWCD has estimated that the CAWCD Strategic Reserve Fund will be reduced by an additional $30 million over the original estimate of $20 million that was projected in the spring of 2012, for a total reduction of $50 million by the end of 2013. Almost all of this $50 million can be attributed to the energy situation.

The purpose of this paper is to evaluate the near-term financial impacts of the power situation and the impacts of additional external factors that are expected to increase the cost of NGS energy in the future.

CAWCD Revenues

The CAWCD has three major sources of revenue available to meet its expenses: water rates, ad valorem taxes, and revenues from the sale of surplus NGS energy. Water rates consist of capital charges, fixed OM&R charges, and energy charges. The capital charges are used to meet the repayment obligation in the event that the revenues from the sale of surplus NGS energy are not adequate to cover the annual obligation. Ad valorem tax revenues are also legally available for this purpose.

The CAWCD is on a two-year rate-setting cycle where, in June of even numbered years, it sets a firm water rate for the following two years, and advisory rates for the subsequent four years. For example, in June 2008, firm rates were set for 2009 and 2010. In 2010, firm rates were set for 2011 and 2012. In 2012, however, a firm rate was set for 2013, but a “provisional” rate was set for 2014. The 2012 and 2013 rates were set based on assumptions regarding the cost of NGS energy that were almost two years old, assumptions which turned out to be inaccurate when the rates became effective in 2012. It appears that the magnitude in the error of the assumptions did not become evident until the end of 2012.

The 2014 rate is provisional because the CAWCD was aware that the effects of the economic downturn would result in reduced ad valorem tax revenues. In 2012, the CAWCD projected that the Reserve Fund would be reduced by $20 million to about $185 million and would remain constant at that level until 2017 when the economy was expected to improve. The Reserve Fund target balance established by the CAWCD is $200 million. However, in 2012, increased costs of generating NGS energy resulted in increased energy costs of $12 million and a depressed power market resulted in $13 million less in sales of surplus power than was originally projected. In 2013, the CAWCD is projecting additional costs of $20 million for these two items. The net effect is that the Reserve Fund is expected to be reduced by an additional $30 million dollars by the end of 2013, with a balance projected at about $148 million.

The effect of the depressed power market on repayment is profound and is illustrated in the following table.

Year	***Repayment Obligation***	***Power Revenues***	***Revenues <Repayment***
2009	$56.6 million	$48.6 million	<$ 8.0 million
2010	$55.8 million	$59.4 million	$ 4.4 million
2011	$56.2 million	$46.8 million	<$ 9.4 million
2012	$55.3 million	$21.0 million	<$34.3 million

Between 2013 and 2020, the annual repayment obligation will range from a low of $53.6 million in 2014 to a high of $57.8 million in 2015.

Ad valorem tax revenues have been less than originally projected because of the depressed housing market and the resulting reduction in net assessed valuations. In 2008, a one-cent levy produced revenues in the $7 million dollar range across the three county CAWCD service area. In 2013, a one cent levy will produce revenues of about $4.5 million. At the present time the CAWCD tax rate is 6 cents for the “base” 10 cent ad valorem rate, and 4 cents for the 4 cent water storage tax. Revenues from the 4 cent water storage tax may be used to repay construction costs of the CAP, including interest, and annual OM&R costs of the CAP, as annually determined by the CAWCD. Any 4 cent tax funds not used for these purposes must be deposited in the Arizona Water Banking Fund.

Virtually the entire 6 cent levy is being used to fund the required subsidy of the Agricultural Settlement Pool established by the settlement of the water claims of the Gila River Indian Community.

The depressed energy market and continued lower net assessed valuations are expected to continue through 2013, and probably beyond.

<u>Future CAP Financial Issues</u>

Beyond the NGS and ad valorem issues described in the previous section, there are several more issues that can be expected to affect CAWCD revenues before 2020.

Proposition 117: Proposition 117, amending the Arizona Constitution, was passed by the voters in 2012. Beginning in 2015, the annual increase in the full cash value of real property will be capped at 5% over the value of the property for the previous year. The CAWCD taxing authority is levied against the assessed value associated with a property’s full cash value.[1]

The following table identifies the annual figures for full cash value and associated assessed value for the CAWCD service area for the 10-year period, 2002 - 2011. The table clearly indicates that full cash value, the valuation figure that will be affected by the provisions of Proposition 117, increased more than 5% annually until the economic recession took effect in 2009. The last column indicates that the assessed value as a proportion of the full cash value appears to be more or less constant at about 11%. Proposition 117 takes effect in 2015.

[1] Briefly, the County Assessor determines a property’s full cash value. The assessed value is determined by multiplying the full cash value by the assessment ratio established in Arizona statute. The assessment ratio varies depending on the nature of the property. For example, the assessment ratio for a residential property is 10% while the assessment ratio for a mining property is 25%. The assessed value is then divided by 100 and multiplied by the tax rate to determine the tax revenues collected against a property by, in this case, the CAWCD.

Presently, the CAWCD is levying 6 cents of their authorized 10 cent "base" tax rate. Recently, the CAWCD estimated that a total of $10.5 million less in ad valorem tax revenues would be collected between 2016 and 2018 as a result of the implementation of Proposition 117.

Tax Year	***Full Cash Value (FCV) (billions)***	***Annual Increase***	***Assessed Value (AV) (billions)***	***AV as a Proportion of FCV***
2002	$242.2		$30.2	12.5%
2003	$278.9	15%	$33.9	12.1%
2004	$303.5	9%	$36.8	12.1%
2005	$336.8	11%	$40.5	12.0%
2006	$374.9	11%	$44.7	11.9%
2007	$523.9	40%	$60.1	11.5%
2008	$632.4	21%	$71.4	11.3%
2009	$632.3	0%	$71.1	11.2%
2010	$546.3	-14%	$60.7	11.1%
2011	$456.2	-16%	$49.0	10.7%

Emission Controls: The Environmental Protection Agency (EPA) recently issued a proposed decision that, if finalized, will require the installation of additional controls on nitrogen oxide emissions, to improve visibility, at the NGS by 2023. The capital cost of the additional controls is estimated at $1.1 billion, or $267.3 million for the USBR share of NGS. These figures assume the worst-case financial impact of the visibility decision. The final EPA decision could result in control costs of about half of these figures.

There is also the possibility that EPA will require additional controls on NGS emissions to reduce hazardous air pollutants, with an EPA decision for these additional controls possible some time before 2020. The cost of any additional emission controls is unknown at the present time.

In both cases, annual NGS OM&R costs could be expected to increase as well, and passed on to CAP water users in the form of increased water rates.

Leases: The land and coal leases for the NGS expire at the end of 2019. The parties to the leases, the NGS participants, Peabody Coal Company, and the Navajo and Hopi Indian tribes are currently negotiating extensions to the leases. The costs of the lease extensions is unknown at the present time, but are expected to increase.

LADWP Capacity: LADWP has decided that, after the existing leases expire in 2019, it will no longer participate in the NGS. The LADWP share of NGS is 21.2%. The fate of this capacity, 477.00 MW, is unknown, although it has been reported that SRP may acquire this share.

NGS Closure: The remaining NGS electric utility participants (SRP, APS, Nevada Energy and Tucson Electric Power) have indicated that they may be forced to abandon the power plant after 2019. The conditions under which this rather drastic action would be taken are presently speculative, at best. This action would likely depend on the additional cost which may be imposed by the renegotiated leases, the cost of any additional emission controls, and the required timing of the nitrogen oxide controls, assuming that EPA finalizes the proposed action. If the NGS is shut down, the CAWCD will have to purchase power on the energy market to meet its pumping needs, and there will be no surplus energy that could be sold to assist in repayment, requiring additional revenues, at least in the range of $35 to $45 million per year, in order to meet the repayment obligation.

Financial Impacts on CAP Water Users

The financial impacts on CAP water users have been evaluated to the extent that the future additional costs are known. The CAWCD has suggested that, starting in 2014, water rates will have to be increased to bear at least a portion of the additional costs.

2012 and 2013 Water Rate Reconciliation: For 2012, the CAWCD has determined that the OM&R charges, both fixed OM&R and pumping energy, were $12.378 million more than originally projected. The shortfall was funded though the Reserve Fund. The following table indicates the financial impact of this shortfall. The table does NOT reflect the shortfall in the sales of surplus NGS energy.

Total 2012 water deliveries	1,620,000 af
M&I water deliveries	490,200 af
Federal water deliveries	559,200 af
Excess water deliveries	570,600 af
Additional OM&R costs	$12,378,000
Unit additional OM&R costs	$7.64/af

There were three types of water delivered in 2012, M&I water, Federal water (Indian deliveries), and excess water. The CAWCD has indicated that the additional OM&R costs associated with the M&I and Federal deliveries could be collected from these two water user categories, and that costs associated with the excess water are uncollectable. If the costs were collected in a reconciliation, then M&I water users would be required to pay an additional $7.64/af for their 2012 deliveries. If the costs of the excess water were also assessed against the 2012 M&I deliveries, then the $7.64/af would increase to $16.53/af. In fact, even though the additional costs of the excess water deliveries may be considered "uncollectable", they would have to be recovered in some manner to restore the Reserve Fund.

In addition, there is the cost of the repayment obligation, the $16.0 million that was funded though the Reserve Fund because of a shortfall in revenues from NGS surplus energy sales. If this amount is collected against the 620,678 af M&I allocation, then all M&I water subcontractors would be required to pay an additional $25.78/af of allocation, in effect, an additional capital charge.

For 2013, CAWCD has projected a $13 million shortfall in OM&R charges, and a $11.0 million shortfall in repayment obligation related costs, primarily from reduced revenues from NGS surplus energy sales.

Assuming that the water delivery schedule remains unchanged in 2013, then the M&I OM&R costs would increase by $7/af. If the M&I water is also expected to carry the additional OM&R cost for the excess water deliveries, then the $7/af figure would increase to $17/af.

The additional $11.0 million shortfall in repayment obligation costs represents an additional capital charge of $18/af based on the M&I allocation.

2014 and Beyond: If the 2012-2013 $50 million shortfall in the Reserve Fund is collected in the 2014 M&I rates exclusively from M&I subcontractors, it represents a unit increase of $81/af assessed against the 620,678 af CAP M&I water allocation. This figure may be considered as a worst-case scenario. To the extent that any excess water not associated with the Agricultural Settlement Pool is delivered, then at least a portion of this $50 million could be collected through the excess water rates. If the ad valorem tax rate is increased from 6 cents to 10 cents then the water rate would increase by $52/af for the CAP M&I allocation. If the 4 cent water storage tax is dedicated entirely to CAP purposes in addition to raising the 6 cent tax to 10 cents, then the CAP M&I water rate would increase by $23/af. It should be noted that, based on the current rate structure and energy market, an additional deficit could be expected in 2014.

At the present time, the assessment of the additional $267.3 million for the nitrogen oxide controls is unknown. Assuming a 3.2% interest rate and a repayment period of 25 years, the annualized cost is $15.69 million. If this is assessed against both the 620,678 af CAP M&I water allocation and the 555,806 CAP Indian water allocation, it represents an increase of about $13/af/yr.

A case could be made that the Reserve Fund shortfall should also be assessed against the 96,295 af of NIA water that will be reallocated to M&I water users. The costs of the additional emissions controls should be assessed against both the 67,300 af of NIA water that has been reserved by the Federal government for future Indian settlements and the 96,295 af of NIA water. In this case the above rate increases would be reduced.

The CAWCD has indicated that $7 million of SO_2 credits are still available. For the past few years, the CAWCD has applied SO_2 credits at the year's end reconciliation to avoid requiring that the CAP M&I water users make up any budget shortfalls.

Finally, the CAWCD has accumulated about $137 million from revenues gleaned from the 4 cent water storage tax assessment to date, primarily collected in Maricopa County, which could increase by the end of 2013. The CAWCD may attempt to apply some or all of this money to recover some or all of the costs identified in this report, although this action may be of questionable legality. These funds are currently held by the CAWCD for use by the Arizona Water Banking Authority.

Conclusion

The CAWCD is studying various alternatives to:

a. Recover the projected 2013 Reserve Fund shortfall; and,
b. Fund additional near-term costs as they become known

through increased water rates, increased ad valorem taxes, application of remaining SO_2 credits, and the use of already-collected water storage tax revenues.

CAP M&I water rates and tax rates will be increasing significantly in the near future. Most likely, the CAP 2014 provisional water rates will be increased, but the amount of the increase is unknown at the present time. The CAWCD will make a final decision for the 2014 water rate schedule and the ad valorem tax rate in June of 2013.