

CREDIT OPINION

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New Issue

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Transmission Agency of Northern California

New Issue-Moody's assigns Aa3 to Transmission Agency of Northern California's Revenue Refunding Bonds, Series 2016A

Summary Rating Rationale

Moody's Investors Service has assigned a Aa3 rating to Transmission Agency of Northern California's (TANC) revenue refunding bonds, Series 2016 A. Concurrent with this rating action Moody's has affirmed the Aa3 rating on TANC's outstanding 2009A bonds. All currently existing debt, including 2002A, 2003A, and the 2003B will be refunded in their entirety and the 2009B bonds will be legally defeased. A portion of the 2009A bonds will be refunded through the 2016 Series A issuance. The outlook is stable.

The Aa3 rating is supported by the strength of the member participants with an A1 average credit quality rating and strength of Joint Power Agreement. The Aa3 also reflects the strategically important nature of the project, the California-Oregon Transmission Project (COTP), which is a 339-mile, 1,600 MW transmission line extending from Oregon to central California, delivering clean, renewable energy in support of California renewable efforts. Further, the difficulty in siting and building new generation in California heightens the value of this transmission line and enables member participants to enjoy low cost power from the Pacific Northwest and avoid paying higher CAISO tariffs. Importantly, completion of this refunding issuance will further benefit TANC by reducing its annual debt service requirements by nearly 60% and by reducing debt outstanding by approximately 20% on a prospective basis.

That said, the Aa3 rating acknowledges that TANC is making a trade-off between eliminating its variable rate exposure and reducing leverage but simultaneously reducing the level of fixed, legally restricted reserve funds to 25% of maximum annual debt service from the current 100% of maximum annual debt service. Pursuant to TANC's 2009 Amended Indenture, TANC has discretion on how much reserves it will hold on a series by series basis. The rating further captures TANC's ability to issue additional bonds with a sum sufficient rate covenant and the lack of any minimum rate covenant.

Credit Strengths

- » The average weighted underlying credit quality of the TANC participants is A1 and all but one rated participant with more than 2% share is publicly rated by Moody's
- » TANC's California-Oregon Transmission Project (COTP) holds significant economic value as a transmission line that connects northern California to the abundant economic hydro-electric energy from the Pacific Northwest

- » Standard economic take or pay contracts
- » Project performance has been sound since inception with high transmission line availability
- » Healthy liquidity position as measured by Days Cash on Hand on a historical and prospective basis

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody.com for the most updated credit rating action information and rating history.

Credit Challenges

- » Several weak structural features including sum sufficient debt service coverage covenant and no minimum covenant for additional bond issuance
- » Demonstrated use of weak indenture provisions to reduce debt service reserve funding to 25% of maximum annual debt service compared to 100% of annual debt service reserve historically

Rating Outlook

The rating outlook is stable, reflecting the sound performance record including high availability of the COTP, the long-term economic value of the project to member utilities, and the A1 average credit quality of participants

Factors that Could Lead to an Upgrade

- » Improvement of participants' average credit quality
- » Legally restricted reserve levels funded at maximum annual debt service in addition to discretionary liquidity over 200 days cash on hand
- » Continued maintenance of high availability factors from the COTP

Factors that Could Lead to a Downgrade

- » Weakening record of project performance
- » Deterioration of TANC participants' average credit quality
- » Decline in discretionary liquidity to below 200 days cash on hand

Key Indicators

Below are TANC's key financial metrics that score in the "Baa" and "A" financial metric sub-factor of Moody's US Municipal Joint Action Agency methodology. Moody's Fixed Obligation Charge Coverage includes swap payments made by TANC as part of Moody's adjustments.

Exhibit 1

Transmission Agency of Northern California

	2011	2012	2013	2014	2015
Debt Outstanding (\$'000)	399,774	370,640	343,195	314,195	283,950
Debt Ratio (%)	89.4	84.5	86.3	84.3	77.3
Days Cash on Hand	491	551	584	390	425
Fixed Obligation Charge Coverage (if applicable)(x)	1.08	1.09	1.11	1.04	1.07

Source: Moody's Investors Service, based on Issuer financials

Recent Developments

As part of TANC's refunding, TANC will be extending its existing debt to mature in 2039, 15 years beyond the original stated maturity of 2024. The extension of maturity is designed to better match the remaining useful life of the asset, which has been deemed to exceed at least 30 additional years. In any event, the transmission line commenced operations in 1993 and had a 40-year straight line depreciable life and this debt extension represents only six additional years beyond the originally stated depreciable life according to the prudent utility practice then in place. Based on current Federal Energy Regulatory Commission accounting, and in the opinion provided to TANC by an independent consultant, is that the remaining useful life of the COTP should extend well beyond the 2039 maturity of the 2016 Refunding Bonds issuance.

As part of the transaction, TANC will also be removing all of its variable rate debt, a credit positive. The combination of the debt extension in addition to the release of existing debt service reserve and debt service fund accounts, TANC will be able to reduce its outstanding total debt amount by approximately 20% to \$219 million from \$283 million after financial close, which is anticipated in March 2016. This will result in roughly \$15-16 million in annual debt service requirements on a prospective basis, nearly 60% below current annual debt service payments.

Detailed Rating Considerations

Revenue Generating Base

PARTICIPANT CREDIT QUALITY WEIGHTED AVERAGE CREDIT QUALITY OF A1

TANC's rating is predominantly driven by the A1 weighted average credit quality of TANC's 13 member participants in the COTP project. These members make payments to TANC pursuant to Project Agreement No. 3, the principle guiding document that requires each member participant to severally pay for operations, maintenance, capital costs and debt service on a sum-sufficient basis. These members make their payments to TANC as an operating expense and ahead of their respective direct debt obligations, if any.

Over 90% of the project allocation, based on the share of the TANC debt outstanding, represents the top five electric utilities that have a weighted average rating of A1 on their electric revenue bonds. Each of Sacramento Municipal Utility District (SMUD: Aa3, stable), Modesto Irrigation District (MID: A2, stable) and Turlock Irrigation District (TID: A2, stable) are districts governed by independent boards that can establish rates without external regulation. The other participants are municipal electric utilities that are also unregulated. Competitive retail rates, satisfactory financial operations and a still recovering regional economy are factors that describe the TANC participants.

Several of TANC's member participants under the COTP project have entered into a Long-Term Layoff Agreement (LTLA) beginning July 2014, where the entitlement rights of several small member participants (known as layoff entities) were acquired by MID, TID, and SMUD for 25 years (which coincides with the 2016 bond maturity). These three districts alone account for 80% of the total entitlement. The smaller member participants forgoing their usage per the LTLA do not remove their continued legal obligation as per the take-or-pay agreement to pay debt service for their originally allocated share of the COTP; however, on a current basis, those entities who acquired a higher share based on the LTLA are required to pay debt service and operating costs based on their newly allocated share. Based on our analysis, the weighted average credit quality of the large member participants, which includes SMUD, MID, TID, the City of Redding, the City of Santa Clara and the City of Roseville, has not changed.

COTP TRANSMISSION PROJECT HAS LONG-TERM ECONOMIC VALUE TO TANC PARTICIPANTS

While the fundamental rating is driven by the participant credit quality, the long-term economic value of the COTP to TANC participants cannot be understated. The COTP links the low-cost hydroelectric resources of the Pacific Northwest with central California. COTP is a 339-mile, 1,600MW, 500 kV alternating current (AC) transmission project that has been in commercial operation with a high availability record since March 17, 1993. TANC participants benefit from wholesale market purchases of energy and bilateral contracts with Bonneville Power Administration (BPA) (rated Aa1, stable outlook); Seattle (City of) WA Electric Enterprise (rated Aa2) and several other Pacific Northwest utilities. The project is operated in coordination with the Pacific AC Intertie as part of the 4,800 MW California-Oregon Intertie (COI). Almost 20% of northern California's peak load can be served by this intertie.

The significant economic value of the COTP can be estimated by replacement cost estimates to build a new transmission line in California to replicate COTP. Such replacement cost has been estimated to be far in excess of the current debt outstanding. Using recent comparisons such as the SunRise Power Link or Tehachapi Renewable Transmission Project - which cost in excess of \$10 million per mile - the cost to replace COTP would exceed \$3 billion if it had to be built today at those prices.

Operational and Financial Performance

Debt service coverage for TANC is ultimately structured to achieve sum-sufficient coverage, which is on the low-end for Aa3-rated entities. On an audited basis after accounting for timing differences from member billings, TANC generally achieves DSCRs slightly above 1.0 times as indicated in the table above. Positively, TANC can establish its rates and charges without state regulatory board approval if needed.

As noted above, the 2014 LTLA provides for the assignment of all rights and obligations of the assigning members entitlements to the acquiring Agency's members: MID, TID and SMUD. These LTLAs that allow for SMUD, TID, MID to increase their share of the line is seen as a positive development and reflective of the flexibility allowed within the operating agreements to allow for a mechanism to transfer power where it may be more efficiently and cost-effectively deployed.

LIQUIDITY

Pursuant to its 2009 Indenture, TANC has discretion over the funding of reserves on a series by series basis. For the 2016 refunding bonds, TANC has elected to fund the debt service reserve at 25% of maximum annual debt service, a credit negative.

While TANC currently has a healthy cash position with over 400 days cash on hand, this liquidity as measured by days cash on hand is likely to decline over time given its more discretionary use. That said, we recognize the limited operating risks associated with a transmission asset and acknowledge TANC's commission has an objective to maintain at least 90-120 days cash on hand on an all cash-needs basis, which includes debt service and capital expenses. This approximates 250-300 days cash on hand.

Debt and Other Liabilities

DEBT STRUCTURE

TANC has \$283 million in outstanding bonds. Following the refunding issuance, TANC anticipates it will have approximately \$219 million in outstanding revenue refunding bonds.

DEBT-RELATED DERIVATIVES

TANC will not have any debt related derivatives following the issuance of the Series 2016A bonds.

PENSIONS AND OPEB

The financial impact of unfunded and OPEB obligations of this issuer are minor and thus not currently a major factor in our assessment of its credit profile.

Management and Governance

TANC is a joint action agency currently consisting of 15 members (13 of which participate specifically in the COTP project). Each participating member pays for all costs associated with the operation of TANC and is entitled to an undivided interest in all rights and properties of TANC. The project participants and their respective legal entitlements in the project are: SMUD (27.56%); Santa Clara (20.47%); MID (21.30%); TID (12.54%); Redding (8.41%); Palo Alto (3.68%); Plumas-Sierra (0.147%); Roseville (2.11%); Lodi (1.92%); Alameda (1.23%); Lompoc (0.19%); Ukiah (0.19%); Healdsburg (0.25%).

TANC is governed by a commission with commissioners representing each agency member. SMUD serves as TANC treasurer and controller. TANC's transmission asset is part of the Control area operated by the Balancing Authority of Northern California. TANC is the majority owner of the COTP and operates COTP (86.9%), with Western Area Power Administration (WAPA) at (9.37%) and several regional participants owning the remaining balance of the project.

Legal Security

The bonds are principally secured by the pledge of TANC's revenues, which are primarily derived from a take-or-pay arrangement under Project Agreement No. 3. Each member participant severally agrees to pay TANC its respective participant share of TANC project debt service including TANC project costs, TANC O&M costs and TANC Capital Improvement costs and that these funds are paid as an operating expense of each member participant. The security is also supported by a 25% step-up requirement to support a defaulting member. All project fund accounts, including reserve accounts also act as security for bondholders. TANC's debt service reserve account under the 2016 bonds will be funded at 25% of maximum annual debt service.

The bonds are authorized by the indenture of Trust and by Articles 10 and 11 of Chapter 3 of Division 2 of Title 5 of the Government Code of the State of California. Payments under the take-or-pay contracts are required even if the project is inoperable or terminated. The contracts have not been tested in state courts but the participants have authorization as electric utilities to enter into the transmission contracts pursuant to the state's Constitution or a city's Home Rule Charter.

Use of Proceeds

The 2016 Series A bonds are being issued to refund all of TANC's Outstanding California-Oregon Transmission Project Revenue Refunding Bonds, 2002 Series A; 2003 Series A and 2003 Series B; and a portion of the 2009 Series A bonds. The 2009B bonds will be defeased.

TANC will also utilize a portion of the proceeds to terminate in full several interest rate swap agreements relating to the 2002A Bonds and 2003A&B Bonds; to fund a debt service reserve account for the 2016A Bonds; and to pay for issuance costs of the 2016 Bonds.

Obligor Profile

TANC is a joint powers authority (JPA) consisting of 15 associate and full members who are Northern California public power utilities. TANC provides electric transmission service to be used by its members. TANC is project manager for the COTP and the TANC board is comprised of one commissioner from each member utility.

Rating Methodology and Scorecard Factors

The application of Moody's rating methodology for US Municipal Joint Action Agencies results in a grid-indicated rating of Aa3 for the Transmission Agency of Northern California, in line with the assigned Aa3 bonds rating.

Exhibit 2

Factor	Subfactor/Description	Score	Metric
1. Participant Credit Quality and Cost Recovery Framework	a) Participant credit quality. Cost recovery structure and governance	A1	A1
2. Asset Quality	a) Asset diversity, complexity and history	Aa	Aa
3. Competitiveness	a) Cost competitiveness relative to market	Aaa	Aa
4. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	466	Aaa
	b) Debt ratio (3-year avg) (%)	82.60%	Baa
	c) Fixed obligation charge coverage ratio (3-year avg) (x)	1.05x	Baa
Material Asset Event Risk	Does agency have event risk?		No
Notching Factors		Notch	
	1 - Contractual Structure and Legal Environment	0	
	2 - Participant Diversity and Concentration	0	
	3 - Construction Risk	0	
	4 - Debt Service Reserve, Debt Structure and Financial Engineering	-0.5	
	5 - Unmitigated Exposure to Wholesale Power Markets	0	
Scorecard Indicated Rating:		Aa3	

Source: Moody's Investors Service

Methodology

The principal methodology used in this rating was US Municipal Joint Action Agencies published in October 2012. Please see the Ratings Methodologies page on www.moody.com for a copy of this methodology.

Ratings

Exhibit 3

NCTA - CALIFORNIA-OREGON TRANSMISSION

Issue	Rating
Revenue Refunding Bonds 2016 Series A	Aa3
Rating Type	Underlying LT
Sale Amount	\$174,805,000
Expected Sale Date	03/09/2016
Rating Description	Revenue: Government Enterprise

Source: Moody's Investors Service

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