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Update

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American Municipal Power, Inc.

Update - Moody's affirms A1 issuer rating on American Municipal Power, Inc.; outlook stable

Summary Rating Rationale

Moody's Investors Service has affirmed the A1 Issuer Rating on American Municipal Power, Inc. (AMP). The outlook is stable.

The A1 Issuer rating considers the well-established record and the unregulated ability for most AMP members to recover their costs on a timely basis; the strong all-requirements power supply contracts with the majority of AMP's members; sound liquidity; the A2 average credit quality of the members; and management's consistent strategic focus on providing members with a diverse, reliable and competitive power supply portfolio. AMP successfully completed work on 11 new hydroelectric units with the last one on line in 2017 thus eliminating ongoing construction risk.

The Issuer rating further takes into consideration the average weighted credit quality of AMP members of A2 with the 135 municipal electric utilities spread across a large geographic area in nine states. Several of the AMP participants have an improving credit profile. The diversity and limited obligation share of any one participant also factor into AMP's credit profile and rating.

Also an important consideration is the self-regulated rate setting and established record of recovery of AMP's wholesale power supply charges. Moreover, the broad service area economy of the members in the nine states has rebounded from the last recession. That said, slower retail electricity demand growth owing to energy efficiency programs have reduced demand relative to economic growth. Health care and manufacturing sectors in the region, in particular in Ohio, have experienced positive trends, and unemployment is near the US average in each of the AMP member states.

The issuer rating takes into consideration the important role AMP has played in managing the competitive and reliable power supply of its members, including the successful implementation of its fuel diversification strategy. AMP historically had derived most of its power supply from the regional wholesale energy markets with members entering into take-and-pay power supply contracts. Now about 40% of the AMP power supply is provided by purchased power with the rest coming from owned generation.

In the past few years, AMP has financed ownership interests in new coal and natural gas-fired generation and five hydro-electric projects (14 units) on the Ohio River. AMP project revenue bonds were issued on a take-or-pay basis with each participant electing to subscribe to the project. The legal security for the AMP revenue bonds is considered strong. Combined the

AMP project debt outstanding amounted to $5.9 billion as of January 1, 2017. AMP has a line of credit secured on a general obligation basis by all members.

Credit Strengths

» *Average weighted credit quality of the 135 AMP members is A2 spread over a large nine state geographic area

* AMP average all requirements levelized wholesale rate to its 135 members approximated $75/Mwh in 2016 and is projected to remain near that level through 2018

* Strong legal cost recovery provisions with most municipal electric utilities having unregulated rate setting

* Power supply all-requirement take-and-pay contract with 116 members (expiration varies amongst members in 2050 period) provides strong long-term support for AMP's role as a regional power supplier. Separate take-or-pay contracts for individual generation projects are long-term and extend beyond final debt maturity

* Within Ohio, AMP and AMP municipal utility members are exempt from provisions of the Ohio retail choice law and the state's renewable energy standard. Today, AMP and its members derive about 15-20% of the power supply from renewable energy.

*Competitive current and projected member retail rates

* AMP actively uses fiscal monitoring system to provide ongoing assessment of members' credit profiles

Credit Challenges

*No assurances that environmental regulation will remain the same. Any future EPA regulations on greenhouse gas emissions will place uncertainties around coal-fired generation but Prairie State coal-fired generation does meet all EPA environmental requirements.

*Regional energy prices have fallen due to the decline in natural gas prices. To the extent natural gas prices remain low and drive the regional energy price, this is a potential pressure for AMP's higher cost coal resources

*AMP derives about 15% of its power supply from hydro assets which could be subject to some operating variances due to river flow conditions. However, the historical record and the US Army Corps of Engineers managed flow for navigation should be a mitigating factor

Rating Outlook

The rating outlook is stable considering AMP's continued sound management of its power supply plan; the relative stability of the credit position of AMP's members and AMP's strong legal cost recovery provisions and ongoing oversight role which increases the certainty about enforceability of its contracts.

Factors that Could Lead to an Upgrade

The rating could be upgraded should AMP's participant credit quality improve and the joint agency's liquidity strengthens with internal cash remaining on the balance sheet on a sustained basis.

Factors that Could Lead to a Downgrade

The rating could be downgraded if AMP's financial liquidity weakens; or should member credit quality weaken; or there be a challenge to AMP's legal structure or its strong cost recovery provisions.

Recent Developments

*Completion of the commercialization of 4 new hydro projects along Ohio River including 11 new units.

*Reactivated its plan for new natural gas/diesel peaking behind the meter evaluation.

*Executed long-term natural gas hedges for AMP Fremont Energy Center (AFEC) due to the flat demand curve through 2027.

*Extended credit line with 9 banks through 2022 at $600 million with accordion feature to $850 million.

Detailed Rating Considerations

Revenue Generating Base:

Strong Cost Recovery Protections

AMP was established pursuant to state statute (Ohio Revised Code Chapter 1702...) as a nonprofit corporation in 1971. AMP is governed by a 21 -member Board of Trustees made up of officials from member municipalities and Delaware Municipal Electric Corporation (Rated A2). AMP operates like a joint powers agency. AMP has obtained a determination letter and qualifies as a Section 501(c) 12 corporation and has a private letter ruling that in effect permits it to issue tax-exempt bonds.

AMP has a master services agreement with all its members that provides a legal framework for the relationship of the municipal electric utility and AMP as it relates to power pools, energy products, power supply arrangements and individual services. The AMP members from the other states have specific state statutes that govern their authority and participation in power sales contracts and take-or-pay contract obligations.

The non-coincident peak demand of AMP's 135 members was 3,419 MW registered in 2016. AMP electric revenues topped $1 billion for the first time in 2014. AMP provides wholesale power services to over 625,000 customers in the nine states.

AMP's municipal utility members purchase non-project capacity and energy from AMP pursuant to take-and-pay contracts. There are 116 all-requirements participants. The contracts are not secured by the full faith and credit of the respective cities. AMP members by their choice also participate on a take-or-pay basis in AMP-sponsored projects including AMP's share of the Prairie State Project, the 1,600 MW coal-fired generation plant; Fremont Energy Center, the two-unit 675 MW natural gas fired facility and AMP four new hydro plants built along the Ohio River. AMP members, who chose to participate in these projects have long-term take-or-pay contracts and are obligated to pay for their allocated share of the O&M and debt service costs.

Exhibit 1

American Municipal Power Projects

Performance Indicators, 2016

	Prairie State Energy Campus	Combined Hydroelectric Project*	Meldahl Hydropower Project	Fremont Energy Center	Greenup Hydroelectric Project
Credit Rating	A1/Stable	A2/Stable	A3/Positive	A1/Stable	A1/Stable
Fuel Type	Coal	Hydroelectric	Hydroelectric	Natural gas	Hydroelectric
Generating Units	2	8	3	3	3
AMP's Capacity (MW)	368	208	105	612	34.1
AMP Operating Capacity Ownership (%)	23.26	100	100	90.69	48.6
Number of AMP Participants	68	79	48	88	47
Power Plant Statistics:					
Heat Rate (Btu/kWh)	9,375			7,311	
Capacity Factor (%)	76.42		46.28	45.39	49.78
Net Generation (MWh)	10,619,157		379,397	2,683,617	306,968
Non-fuel Variable O&M Costs per MWh ($/MWh)	7.6		3.23	1.33	4.53
Fuel Cost per MWh ($/MWh)	13.09		0	32.08	0
Total O&M Expenses per MWh ($/MWh)	30.30		5.3	35.35	5.48

*Includes: Cannelton Project (88MW); Smithland Project (76MW); and Willow Island Project (44MW)

Power Plant Statistics for Combined Hydroelectric Project are unavailable as the individual plants have just begun commercial operations.

Source: SNL.com; Moody's Investors Service

If there is a payment default, AMP has the power to suspend delivery, which in Moody's opinion creates a significant incentive for members to pay given the essential nature of the electric service. Among Ohio members, if nonpayment persists, AMP could bring litigation against the non-paying member and seek a judgment against the city's assets, including non-utility general governmental assets. AMP has never experienced a payment default by a member.

Payment compliance is aided by AMP's credit monitoring program which produces early warning reports should a city be in fiscal distress. In Ohio, where most of AMP's participants are located, the Ohio state auditor has fiscal emergency powers to place a city on Fiscal Watch or Emergency to correct a fiscal stress problem. Moody's views the AMP and state level oversight mechanisms as positive credit considerations. Local governments also cannot be forced into bankruptcy. For Ohio for example, only the Ohio tax commissioner can recommend that an Ohio local government can file for Chapter 9 bankruptcy. In a Chapter 9 bankruptcy, the fiscal affairs of a local government are reorganized and debts can be adjusted but not reduced. Although there has not be much experience with Chapter 9 bankruptcies for municipal entities. AMP is not authorized to file for bankruptcy and cannot be forced into bankruptcy.

Operational and Financial Performance

AMP has historically operated on a break-even basis as a nonprofit wholesale power supplier with the bulk of its energy resources from market purchases resold to its municipal utility participants. AMP's move to be an owner of generation with operating risks has required a significant increase in operating liquidity. While AMP has an unregulated authority to set its rates to recover its costs, financial liquidity to manage changes in fuel prices and meet other capital requirements has become more important. AMP has a $600 million bank line (accordian feature to increase to $850 million) with strong counterparties and a five-year tenor with no MAC clause. AMP entered into an agreement with The Energy Authority, an entity owned by several public power utilities that has energy market trading, fuel purchase and risk management skills, useful to mitigate operating risks.

AMP financial operations are reported on a consolidated basis. Operating sales revenue have grown largely due to the addition of new all-requirement municipal electric utilities to the AMP organization and wholesale power rate increases to start debt repayment on the financed generation projects.

AMP ended FY 2015-16 with consolidated revenues in excess of $1 billion. In 2017, major construction work was completed with the final new hydro unit going online which reduced construction risk.

LIQUIDITY

Earlier this year, AMP established a $600 million revolving line of credit (down from $750 million) with 9 banks (with ratings ranging from A3 to Aa2) with a five year maturity due on May 3, 2022. The LOC has an accordion feature that can expand the line to $850 million.

Debt and Other Liabilities

DEBT STRUCTURE

AMP participants subscribe for a share of the generation projects whose debt is secured by their take-or-pay obligation. Each project is separately secured and there is no cross default between projects. The municipal electric utility subscription to a generation project is done after a comprehensive needs analysis is performed to determine forecasted demand and the resources that are required that would achieve the lowest cost. Assumptions incorporate energy efficiency programs; forecasted regional power prices; and expected greenhouse gas regulation and renewable energy requirements. AMP may utilize loans to fund on an interim basis the cost of construction of a new generation unit.

AMP has no major construction financing planned but continues to evaluate ways to diversify the power supply mix of its participants. Separate power supply plans are conducted periodically for most members focusing on the optimal plan. AMP has begun evaluation of the peaking needs of AMP participants.

DEBT-RELATED DERIVATIVES

None

PENSIONS AND OPEB

Not a material credit factor.

Management and Governance

AMP was established by state statute (Ohio Revised Code Chapter 1702) as a non-profit corporation in 1971 to provide its members, which are municipal electric utilities, a reliable and competitive power supply. AMP is governed by a 21-member Board of Trustees made up of officials from 19 member municipalities and DEMEC. AMP operates like a joint powers agency and most of its members have home rule powers which permit retail rates to be set by the local governing boards with no external regulation.

Legal Security

Most of AMP members (116) have all-requirement supply contracts although some have partial requirements. The power contracts are not secured by the full faith and credit of the respective cities. But the unregulated ability of AMP to pass power supply costs through to its members, and the municipal utilities unregulated ability to recover these costs from their customers is an important credit factor. AMP members by their choice also participate on a take-or-pay basis in AMP-sponsored projects including AMP's share of the Prairie State Project, the 1,600 MW coal-fired generation plant. AMP members who chose to participate in that project, for example, have long-term take-or-pay contracts and are obligated to pay for the their allocated share of the O&M and debt service costs.

The take-and-pay and take-or-pay contracts are payable from municipal electric utility enterprises, the funds of which are accounted for separately from municipal general government funds.

Use of Proceeds

Not applicable.

Obligor Profile

AMP was established by state statute (Ohio Revised Code Chapter 1702) as a non-profit corporation in 1971 to provide its members, which are 135 municipal electric utilities, a reliable and competitive power supply.

Other Considerations:Mapping to the Grid: US Municipal Joint Action Agency Rating Methodology

As indicated below in Exhibit 2, the grid indicated rating for American Municipal Power, Inc. issuer rating is A1, the same as the current rating assigned. The grid is a reference tool that can be used to approximate credit profiles in the public power electric utility sector in most cases. However, the grid is a summary that does not include every rating consideration. Please see Methodology on US Municipal Joint Action Agencies (All-Requirements) for more information about the limitations inherent to grids.

Exhibit 2

American Municipal Power, Inc.

Rating Factors

Factor	Subfactor/Description	Score	Metric
1. Participant Credit Quality and Cost Recovery Framework	a) Weighted Average participant credit quality. Unregulated rate setting including participants. Cost recovery structure and governance.	A2	
2. Resource Risk Management	a) Resource Diversity. Asset quality and complexity. Resource supply contract terms and counterparty credit quality. Wholesale market purchase exposure	A	
3. Competitiveness	a) Cost competitiveness relative to regional peers	A	
4. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	Aa	182
	b) Debt ratio (3-year avg) (%)	Baa	100
	c) Fixed obligation charge coverage ratio (3-year avg) (x)	Ba	1
5. Willingness to Recover Costs with Sound Financial Metrics	a) Rate Setting Record. Timeliness of rate recovery. Stability and strength of financial metrics	A	
Notching Conventions		**Notch**	
	1 - Contractual Structure and Legal Environment	0.5	
	2- Participant Diversity and Concentration		
	3 - Construction Risk	1	
	4 - Debt Service Reserve, Debt Structure and Financial Engineering		
	5 - Unmitigated Exposure to Wholesale Power Markets		
Scorecard Indicated Rating:		**A1**	

Source: Moody's Investors Service

Methodology

The principal methodology used in this rating was US Municipal Joint Action Agencies published in October 2016. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

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