

CREDIT OPINION

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Update

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Pennichuck Water Works, Inc. (NH)

Update - Moody's upgrades Pennichuck's Water Revenue Note to A3

Summary Rating Rationale

Moody's Investors Service has upgraded to A3 from Baa2 the rating on Pennichuck Water Works, Inc.'s Water Revenue Notes, Series 1996. The rating affects \$3.6 million in outstanding debt.

The upgrade to A3 reflects Pennichuck Water Works Inc.'s (NH) (PWW), a subsidiary of Pennichuck Corporation, stable operating transition from a publicly-traded corporation to a privately-held corporation wholly owned by City of Nashua, New Hampshire (Aa2 stable). The rating further incorporates the system's moderate size, satisfactory liquidity with strong debt service coverage, and limited legal provisions. The rating further reflects the regulatory constraints that PWW operates under compared to other municipal owned utilities.

Credit Strengths

- » Healthy debt service coverage
- » Stable service area and customer base
- » Conservative fiscal and capital management

Credit Challenges

- » Rate case approval subject to the New Hampshire Public Utility Commission (NHPUC)
- » Capital improvement plan funded almost entirely with long term debt

Rating Outlook

Moody's does not usually assign outlooks to municipal water utilities with this amount of debt outstanding.

Factors that Could Lead to an Upgrade

- » Continued stability in operations and debt service coverage
- » Maintenance of a manageable debt burden

Factors that Could Lead to a Downgrade

- » Significant increase in debt beyond current expectations
- » Multi-year trend of reduced debt service coverage

» Material growth in the Corporation's unregulated subsidiaries

Key Indicators

Exhibit 1

Pennichuck Water Works, Inc., NH

System Characteristics

Asset Condition (Net Fixed Assets/ Annual Depreciation)	31 years
System Size - O&M (in \$000s)	21,407
Service Area Wealth: MFI % of US median	122.10%

Legal Provisions

Pate Covenant (x)	None
Debt Service Reserve Requirement	No explicit DSFR

Management

Pate Management	Ba
Regulatory Compliance and Capital Planning	Aa

Financial Strength

	2013	2014	2015	2016
Operating Revenue (\$000)	27,755	28,211	29,685	30,923
System Size - O&M (in \$000s)	15,176	15,519	16,453	21,407
Net Funded Debt (\$000)	50,311	97,895	83,771	82,757
Annual Debt Service Coverage (x)	3.47x	3.38x	2.29x	2.04x
Cash on Hand	134 days	124 days	127 days	111 days
Debt to Operating Revenues (x)	1.8x	3.5x	2.8x	2.6x

Source: Moody's Investors Service and PWW's financial statements

Detailed Rating Considerations

Service Area and System Characteristics: Service area expected to remain stable while system remains in good condition

PWW is the largest of Pennichuck Corporation's three regulated water utility subsidiaries, providing service to 28,076 customers in Nashua and 11 surrounding municipalities. The system is small compared to regulated water utilities but is more of a moderate in size relative to other municipal-owned utilities.

The city of Nashua is the largest community in PWW's service area with a population of approximately 86,000 and city residents account for 66% of the customer base. The city's median family income is equal to 122% of the US median. The customer base has been stable over the last five years with modest growth and will likely remain stable over the near term. The top ten customers by consumption reflect some concentration at 21% of total sales with Anheuser Bush Inc., representing the top customer with 7.5%. PWW has a contract with the company to provide water through 2021. The top ten customers by revenue are much more diverse representing only 9.7% of sales revenue, with Nashua representing almost the total amount at 9.5%.

The system has ample water capacity derived from 14 wells and four ponds providing a total of 212.3 million gallons of storage capacity. PWW pumps water from the Merrimack River in the summer months. The system has one water treatment plant located in Nashua with a permitted capacity of 35 MGD. The 2016 average daily demand was 13.3 MGD with a peak of 24.5 MGD during the month of July. From 2005 through 2009 PWW completed a complete renovation to the treatment plant.

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's.com for the most updated credit rating action information and rating history.

Debt Service Coverage and Liquidity: Healthy debt service coverage with liquidity that is bolstered by a rate stabilization fund

The rate-making structure under the 2011 settlement agreement with Nashua and the NHPUC, and further modified by more recent rate cases, has resulted in favorable debt service coverage and positive operating results that will likely continue. In practice, the rate making structure is based on historical test years and the revenue components are almost entirely fixed (96%). Under the current 2017 rate case (pending approval, and based upon the 2015 test year) there are essentially three components; the City Bond Fixed Revenue Requirement - the debt service obligation of roughly \$7.5 million per year due to Nashua so the city can repay bonds issued to acquire Pennichuck Corporation, the Operating Expense Revenue Requirement which covers PWW's material and non-material operating expenses, and third, the Debt Service Revenue Requirement - that equals 1.1 times PWW's debt service.

The rate case in 2013, which was required by the merger order resulted in a 0% rate change and has provided for stable operations and strong debt service coverage, including 2.04 times in 2016 based on Moody's definition of net revenues. Over the last four years, coverage has averaged 2.8 times with coverage gradually declining to the 2016 level. When adjusted for the payment made to Nashua (city bond fixed revenue requirement) to cover repayment on the city's acquisition bonds by deducting that payment from operating costs and adding it to debt service, debt service coverage is 1.4 times.

Currently, a 2017 rate case (based upon the 2015 test year) is in the final stages of being approved by the NHPUC. PWW expects a rate increase of 10.81%, more in-line with 2008 and 2010 rate increases. Rates after that increase generate ample coverage as PWW issues additional debt from 2018 through 2021.

LIQUIDITY

As of 2016 fiscal year-end PWW's cash plus the \$5 million rate stabilization funds represent 111 days cash on hand, which is average for a municipal utility.

Debt and Legal Covenants

PWW's debt to operating revenues is strong at 2.57 times but will increase over the next several years given additional borrowing plans. Additionally, when adding the \$111 million of Nashua's acquisition bonds to PWW's debt profile, the debt to operating revenues increases to a more moderate 6 times. As part of the acquisition, PWW's capital funding plan has been converted from a 50% equity and 50% debt funding source to a 100% debt financed structure. Positively, this new structure has eliminated large bullet maturities, replacing them with fixed-rate bonds that amortize over the long term from level debt service payments. Future debt plans include the issuance of \$32.5 million in three tranches from 2018 through 2020.

The 1996 notes rated by Moody's have no rate covenant or debt service reserve fund requirement. The notes are on parity with all other unsecured debt of Pennichuck, which includes the Series 2014A, 2014B, 2015A and 2015B bonds that were issued under a 2014 loan and trust agreement. Under the agreement the 2014 and 2015 bonds are subject to a rate covenant and additional bonds test of 1.1 times. In practice and under the current rate case, PWW applies the 1.1 times covenant to all debt service obligations including the 1996 notes and SRF loans. Payments for debt service flow together into the system's debt service requirement fund.

DEBT STRUCTURE

The 1996 note is a bullet maturity with a principal amount of \$2.4 million due in 2021. PWW pays an annual \$400,000 principal payment plus interest on the \$4 million that is currently outstanding.

Including the \$4 million in notes rated by Moody's, PWW has a total of \$82.8 million in debt outstanding including the Series 2014 and 2015 bonds and SRF loans. All debt is fixed rate. The final maturity is in 2046.

DEBT-RELATED DERIVATIVES

PWW is not party to any interest rate swaps or other derivative agreements.

PENSIONS AND OPEB

Pennichuck Corporation has a non-contributory, defined benefit pension plan that covers substantially all employees. As of the latest valuation report dated January 1, 2017, the plan is 92.6% funded. In fiscal 2016, the company contributed \$970,000 or 4.5% of operating and maintenance costs. The company also provides a defined contribution plan for employees to which it contributed \$215,000 in fiscal 2016.

The corporation makes pay-as-you-go contributions towards its OPEB liability, contributing \$10,000 in 2016. The unfunded liability for OPEB is 21% funded as of the valuation report dated January 1, 2016 and totals \$2.2 million.

Management and Governance

PWW management provides conservative fiscal management and capital planning that supports the company's stable operating environment.

Legal Security

The notes are unsecured obligations of Pennichuck Water Works, Inc. paid from net water revenues of the system.

Use of Proceeds

Not applicable

Obligor Profile

PWW is the largest subsidiary of Pennichuck Corporation owned by the City of Nashua. The water system serves Nashua and 11 surrounding communities with approximately 28,000 in customers.

Methodology

The principal methodology used in this rating was US Municipal Utility Revenue Debt published in December 2014. Please see the Rating Methodologies page on www.moody's.com for a copy of this methodology.

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