

HIGH PROFILE NEW ISSUE

Massachusetts Municipal Wholesale Elec. Co.

Sale Details	
Power Supply Project Revenue Bonds	A3/STA
Security:	Take or Pay contracts
Bond Amount:	\$170 million
Sale Date:	TBD
Use of Proceeds:	Tender Series One bonds

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Moody's Assigns A3 Rating To Massachusetts Municipal Wholesale Electric Company's \$170 Million Power Supply Project Revenue Bonds, Series 2010; Outlook Is Stable

Upgrades To A, 3 From Baa1 The Rating On Projects 1, 3, 4, 6 And Affirms A3 Rating On Project 5; Five Projects Total \$444 Million Of Outstanding Debt

Moody's Investors Service assigns an A3 rating to Massachusetts Municipal Wholesale Electric Company's (MMWEC) \$170 million Power Supply Project Revenue Bonds, Series 2010, consisting of \$11.35 million Nuclear Mix No. 1 Issue, Series 2010, \$62.98 million Nuclear Project No. 3 Issue, Series 2010, \$35.33 million Nuclear Project No. 4 Issue, Series 2010, \$9.03 million Nuclear Project No. 5 Issue, Series 2010, \$52.1 million Nuclear Project No. 6 Issue, Series 2010. Concurrently, Moody's has upgraded to A3 from Baa1 the outstanding long-term rating on four MMWEC project based bond ratings, consisting of Nuclear Mix No. 1, Nuclear Project No. 3, Nuclear Project No. 4, and Nuclear Project No. 6. The A3 rating on Nuclear Project No. 5 has also been affirmed. The outlook for all five A3 ratings is stable affecting approximately \$444 million of post-refunding debt outstanding. The current offering is intended to refinance the outstanding Series One bonds, currently in Auction Rate mode, with long-term fixed rate bonds that do not extend the original bond maturity.

The rating upgrades are primarily related to the increased long-term value and competitiveness of the nuclear power relative to fossil fuel generation; the relatively stable asset performance that is expected to improve given recent reorganizations at Millstone Nuclear Station and upgrades at Seabrook Nuclear Station; and the lower debt service costs post 2010 from the 2001 bond refunding that is expected to lower each projects' total cost of power.

The A3 project ratings also reflect the project participants' Aa3 weighted average credit quality that heavily factors the strong relationship between the municipal light and power department and the municipal general government of towns in Massachusetts; the strength of the project participant take-or-pay contracts that have been upheld in court; the competitive retail rates of the project participants, which reduces pressure to find alternative power sources and/or challenge the project take-or-pay contracts; the satisfactory operating performance of the nuclear assets; and the moderated debt ratio due to rapid debt retirement that has resulted in a healthy asset to debt value as the nuclear asset life remaining extends well beyond the debt maturity. The ratings also incorporate MMWEC's relatively stable financial metrics, including sound available reserves and narrow essentially sum sufficient debt service coverage on a net revenue per project basis, and relatively stable cash flows due to monthly billing for cost recovery. Finally, given MMWEC's active role in managing many of the participant's power supply needs as members of MMWEC, the effectiveness of MMWEC's enterprise risk management program with regards to energy price hedging, contract negotiation, and the ongoing monitoring of member supply needs also remains a key rating consideration.

Outlook:

The stable outlook reflects our belief the general credit of the participants will remain stable, MMWEC management will continue to maintain healthy liquidity and effectively manage the power needs of its members, and the projects' value relative to other power providers will continue to increase.

What Could Change the Rating-UP

The rating could be upgraded should there be improvements in the projects' performance, each project's total cost of power, and the credit quality of the participants.

What Could Change the Rating- DOWN

The rating could be downgraded if an unexpected and extended forced outage or substantial additional capital costs lead to significant cost pressure resulting in non-competitive power rates from the projects and/or if the credit quality of the participants deteriorates.

FIGURE 1

MMWEC Project Debt Outstanding as of 7/2/2010: (\$000)

	AMOUNT OUTSTANDING (\$000)	MATURITY DATE	RATING
Nuclear Mix No. 1	\$33,020	7/1/2014	A3/STA
Nuclear Project No. 3	\$88,810	7/1/2018	A3/STA
Nuclear Project No. 4	\$92,615	7/1/2017	A3/STA
Nuclear Project No. 5	\$26,710	7/1/2018	A3/STA
Nuclear Project No. 6	\$203,100	7/1/2019	A3/STA

FIGURE 2

MMWEC Project Legal Provisions

Bond Security:	Each project is separately secured by the pledge from take-or-pay obligations contained in the power sales agreements with MMWEC participants. There is no cross collateralization among the projects.
Rate Covenant:	Net Revenues and available funds must be sufficient to pay 1.10 times debt service, all project operating and maintenance expenses, and other MMWEC obligations. Participants are billed monthly at an amount equal to 1.10 times annual debt service, with the additional 10% deposited monthly in the Reserve and Contingency Fund for each project
Step-up Provision:	Each project contains a 25% step-up provision whereby each participant remains liable for up to 25% of its original share of the project's costs to cover any default by other project participants. Each project has not utilized this provision except for Project No. 6, which only has a minimal 1.8% of step-up remaining since six Vermont participants successfully challenged their participant contracts and stopped paying their obligations.
Debt Service Reserve Requirement:	Maximum annual interest for all projects, except Project No. 6 that has a higher debt service reserve level of \$30.5 million, which is 90% of the project's maximum annual debt service
Additional Bonds Test:	Permitted with no additional bonds test
Interest Rate Derivatives:	None

Credit Fundamentals**Strengths:**

1. MMWEC participants have average weighted credit quality in the Aa3 range
2. MMWEC participants have average weighted credit quality in the Aa3 range on a global scale
3. Most MMWEC participant retail rates are competitive compared to other regional electricity providers
4. MMWEC has court-tested take-or-pay power-sales contracts with the project participants where the Massachusetts State Supreme Judicial Court ruled in *MMWEC v. Town of Danvers, MA* that the participant agreements are unconditional and not subject to termination. The Rhode Island Supreme Court also upheld the validity of the power-sales contract (Project No. 6 has one RI participant)
5. Seabrook Nuclear Station has had a solid operating record and Millstone Nuclear Station 3 has recently taken significant steps in staffing changes that are expected to improve operations moving forward. Projected capital needs at the nuclear facilities are modest over the next five years, barring any significant issues like a prolonged outage.
6. Carbon regulatory environment increases the value of the nuclear power
7. Strong cost recovery mechanisms allow for monthly billing to participants, stabilizing project cash flows
8. MMWEC 2001 refunding savings lowers debt costs starting in 2010 lowering the total cost of power

9. Removal of variable rate debt exposure by fixing out auction rate securities that accounted for 38% of outstanding debt as of mid-2010.

Challenges:

1. Ownership of nuclear generation has attendant risks such as long-term decommissioning cost uncertainty
2. Project No. 5 and Project No. 3 have significant participant concentration and all five projects have a notable participant concentration with each project's top 10 participants accounting for nearly 80% of each project
3. Several participants have large commercial customers who could be the first to pressure for competitive choice of power supplier
4. MMWEC intends to obtain about 20% of capacity needs from wholesale market purchases and will address capacity needs through a new 280 MW combined-cycle generating unit at Stony Brook in Ludlow.
5. Weak legals that include a low debt service reserve requirement (unusual for JPAs), a 1.1x rate covenant that allows for rolling coverage, and no additional bonds test. The low debt service reserve is of concern given historical challenges to the participant contracts.
6. Should Massachusetts municipal utilities opt into retail competition, municipal electric utilities' stranded-cost-recovery charges could be established by local ordinance, limiting their flexibility. As a result, political and legal challenges could occur in a worst-case situation. We note that MMWEC and its members have available cash reserves to reduce some of the cost exposure.
7. Millstone Unit 3 had an outage in 2010, while Seabrook 1 has operated at 100% capacity year to date. Both units have scheduled refueling outages in 2011, which will lower output and raise the cost of power. Massachusetts Municipal Wholesale Electric Company (MMWEC) overview

Massachusetts Municipal Wholesale Electric Company (MMWEC) is a joint power agency that sells wholesale power to its members and provides energy related services including tax-exempt financing of generation resources and energy supply management. MMWEC leverages its economies of scale to generate savings for its members through collective financings and negotiating forward power purchase agreements, including energy price hedges. MMWEC currently has 20 total members, with nine participating in an all-requirements program. The primary difference between the two relates to MMWEC's enhanced ability to procure bulk power for the all-requirements members and the regular members can and do obtain power on their own, but all-requirements members must utilize MMWEC for all their power needs. However, MMWEC continues to provide the same forward planning, modeling, hedging, and contract negotiation services to all members. There are a total of 29 project participants remaining that have financial obligations related to the five outstanding project bonds, consisting of nine all-requirements members, nine regular members, and eleven participants that are not MMWEC members. Of note, five members terminated their membership contracts with MMWEC in 2008, yet in 2009 two former members rejoined MMWEC. While this may indicate some historic customer dissatisfaction, the recent rejoining of old members reflects a perceived improvement in the value of MMWEC's services. Moody's believes MMWEC will continue to provide strong power supply and price management services to its members in order to provide the

lowest cost of power possible. All project participants are responsible for their debt service payments regardless of their MMWEC membership status.

MMWEC also manages the state's contract with the New York Power Authority (rated A1) through which all the state's municipal utilities receive a share of inexpensive hydroelectric preference power from NYPA. Overall, Moody's believes MMWEC has effectively managed its member's power supply needs, as well as the financing and repayment of \$4.4 billion in generation debt over the last 35 years. We note that the bonds issued for the Stony Brook Peaking Project, the Stony Brook Intermediate project, and the Wyman Project have all been repaid.

Strong Legal Foundation with Court Validated Participant Take-or-pay Power Sales Agreements

All projects are secured by the payments from the municipal light and power departments to MMWEC under the take-or-pay power sales agreements. The light department manager has the authority to enter into power purchase contracts pursuant to Chapter 164, Section 56, of the Massachusetts General Laws and Massachusetts law prohibits the light department from declaring bankruptcy, as retail rates must be set sufficient to meet all obligations, including power purchase contracts.

The power-sales agreements were court tested in the *MMWEC v. Town of Danvers, Massachusetts*, decision in which the Supreme Court said, "The Project 6 power sales contract executed by the defendants are valid and the step-up provisions therein have been properly invoked." The court ruled that the obligations of the project participants under the agreements are unconditional and not subject to termination. The agreements obligate the project participants to set rates at levels sufficient to provide revenues adequate to meet all their payment obligations to MMWEC under the agreements. Given the sound court-tested legal basis for the repayment of the MMWEC bonds, the agency should not face legal challenges on the same legal grounds in the future. Of note, the contract was also upheld in Rhode Island Supreme Court, key as one participant is located in RI. However, a different set of circumstances and pressures could arise in the future resulting in new challenges.

Although municipal electric utilities are not required to offer their customers choice of power supplier, and none have opted into this option to date, pressures may exist to offer customer choice if retail rates become uncompetitive. However, MMWEC's participants' retail rates remain competitive against other retail electricity suppliers in the state.

Participants demonstrate strong credit quality given close relationship to general government

Nuclear Mix No. 1 has 25 participants; Nuclear Project No. 3 and Nuclear Project No. 4 have 27 participants and Nuclear Project No. 5 has 28 participants. Project No. 6 has 21 due to the exodus of the six Vermont participants in 1988 and there are 29 different participants overall. Only one of the 29 project participants is located outside of Massachusetts, Pascoag Utility District in Rhode Island. Favorably, the participants are located in multiple regions throughout the state.

Each of the five projects has a participant weighted average general obligation credit quality of Aa2 or Aa3, which reflects the solid credit characteristics of Massachusetts municipal governments, including above average income and wealth levels and generally strong management. Given the close relationship between the light and power department and the general government, the light and power departments' credit quality are closely related to that of the general government, as reflected in the Aa3

or A1 weighted average credit quality of the participating light and power departments. Of note, only Project No. 3 has considerable (41%) exposure to its lowest rated participants (all A1), which weighs down the project's weighted average credit quality. Few participants have stand alone electric revenue bond ratings, and the participants have different shares in the MMWEC projects based on their initial election of the level of project capability for which they contracted. The weighted average credit quality is determined by the participants rating weighted according to its ownership interest in each project as well as the default rate associated with the rating level.

The participating light and power departments obtain, on average, nearly 50% of their revenues from commercial and/or industrial users, which presents a vulnerability in the current economic climate if these large users relocate or shut down. In a couple of cases, there is a single user that provides the majority of the light and power department's revenues, as is the case with Intel (Senior unsecured rated A1/stable) and Hudson Light and Power Department, MA (Issuer rating Aa3). This level of revenue concentration is contrary to the total customer mix, of which residential customers comprise 80% to 90%. The generally healthy liquidity levels of the light and power plants help mitigate this concentration, as well as the maintenance of competitive rates compared to the regional investor owned utilities.

Project Fundamentals Differ With Respect To Participant Concentration, Nuclear Assets Financed, And Step-Up Utilized

Each of MMWEC's five different power supply projects are separately secured with similar legal provisions and power-sale contracts with mostly the same participants, yet the projects have different degrees of participant ownership concentration and different mixes of financed assets. This latter component impacts each project's total cost of power and its economic competitiveness. See figure 3 below for detail on the participant credit quality and concentration as well as detail on the nuclear assets financed. All projects have a share of a single nuclear asset, except Project No. 1 that derives 90% of its power from Millstone 3 and 10% from Seabrook, thus Millstone 3's performance drives the competitiveness of the power and the multiple asset ownership does not significantly differentiate the project from the others.

All projects have a notable degree of participant concentration, as the top 10 participants in each project (40% of the project's participants) represent an average of 80% of total ownership in the projects. Some projects, like No. 5 and No. 3 have one large participant that drives the weighted average credit quality of the project and Project No. 6 has three large participants that heavily impact its weighted average credit quality. On the other hand, Project No. 1 and Project No. 4 demonstrate better diversification with less concentration, yet the top two participants in these projects comprise 26% of No. 1 and 21% of No. 4. The level of concentration is mitigated by the strong credit quality as reflected by the high ratings of the large participants. Notably, Project No. 5 has one participant, Braintree (GO rated Aa2) that comprises 56% of the project and is not an MMWEC member and thus MMWEC has no direct influence on the management of its power supply that is primarily derived from power purchase agreements (65%). Braintree has historically managed its power needs well and maintains a healthy amount of liquidity.

Project No. 6 is the largest and most expensive of all the projects, given the larger 69 MW share of Seabrook Unit 1. The project has a degree of concentration with Hudson comprising 23%. Project No. 6 has also used all but 1.8% of the 25% step-up provision when the six Vermont participants defaulted on their obligation in 1988, and the remaining participants had to pick up the difference up to 25% of the original entitlement. Moody's believes there are several key factors that mitigate this

credit weakness, including MMWEC's decision to covenant that the debt service reserve for Project No. 6 be sized near MADS in order to offset the worst-case situation of additional participant defaults. This larger reserve allows for up to 18% of the remaining participants to default on their remaining debt service obligations and bondholders will still be paid.

FIGURE 3

Project Debt, Assets Financed, Participant Credit Quality, and Participant Concentration

	NUCLEAR MIX 1	NUCLEAR PROJ. 3	NUCLEAR PROJ. 4	NUCLEAR PROJ. 5	NUCLEAR PROJ. 6
Debt outstanding (7/2/2010, mil)	\$33.02	\$88.81	\$92.615	\$26.71	\$203.1
Debt Maturity Date	7/1/2014	7/1/2018	7/1/2018	7/1/2018	7/1/2019
Asset(s) Financed					
Nuclear Reactor	Millstone 3 and Seabrook 1	Millstone 3	Seabrook 1	Seabrook 1	Seabrook 1
% ownership of reactor	1.6% Mill and 0.163% Sea	3.196%	4.333%	1.097%	6.001%
MW owned	18.4MW Mill & 1.9 MW Sea	36.8 MW	49.8 MW	12.6 MW	69 MW
Participant General Obligation Credit Quality (weighted average)	Aa2	Aa3	Aa3	Aa2	Aa2
Participant Credit Quality (weighted average)	Aa3	A1	A1	Aa3	Aa3
Participant Concentration as % of project total					
Top 1	15%	31% (Westfield rated A1)	13%	56% (Braintree rated Aa2)	23% (Hudson rated Aa3)
Top 2	26%	49%	21%	62%	39%
Top 5	51%	66%	42%	74%	66%
Top 10	74%	83%	68%	85%	86%
Lowest rated participants as % of project total (A1 is lowest rating)	19%	41%	18%	8%	8%

Nuclear Asset Value Increases With Carbon Regulation; Solid Operating Record Continues With Improvements Expected; Asset To Debt Value Strong

The five Moody's rated MMWEC projects collectively own 4.8% of Millstone Nuclear Station No. 3 and 11.6% of Seabrook Nuclear Station No. 1. The major cost component of both projects is the financing costs related to the minority ownership interests. Millstone 3 is primarily owned and operated by Dominion Resources (Senior unsecured rated Baa2/stable) and Seabrook 1 is primarily owned and operated by NextEra, a Florida Light & Power subsidiary (LT issuer rated Baa1/stable). To help protect its minority interest, MMWEC obtains quarterly independent engineer inspection reports on the nuclear plants to remain informed and ahead of any potential problems. MMWEC also remains in close communication with the majority owner/operator. MMWEC's major exposure to the plants would come from a prolonged unplanned outage whereby MMWEC must purchase replacement power on the open market at higher prices. Future competitive success will be derived from shortening the planned outages and maximizing the plant's output of low cost nuclear power. Favorably, both plants have averaged about 90% capacity and availability factors over the last five

years. Both plants continue to have their safety records verified by the Nuclear Regulatory Commission (NRC) and Seabrook's INPO score of 1 and Millstone's INPO score of 2 were recently affirmed in the first quarter of 2010.

Both plants have demonstrated improved operations over time, with Seabrook emerging from difficult start ups and now pending a review of its accepted application to extend its plant life and license by 20 years to 2050, which only increases its debt to asset value further. Notably, the debt on all projects matures well before the license expiration date on either plant, providing a strong asset to debt value. As the debt is rapidly repaid, the total cost of power from each plant should decline relative to other suppliers, further increasing the future value of the nuclear power. Moreover, in the current carbon regulation environment where CO2 pricing may be implemented, the value of carbon free nuclear power will be relatively higher should CO2 pricing pass.

FIGURE 4

Millstone 3 and Seabrook 1 asset details

	MILLSTONE 3	SEABROOK 1
Location	Near New London, CT	Near Portsmouth, NH
Operator	Dominion Nuclear CT	NextEra (Florida Light & Power subsidiary)
License Issued	1986	1990
License Expires	2045	2030
License Renewal	N/A	NRC accepted application to extend to 2050 in July 2010
Total Capacity	1237 MW	1245 MW
MMWEC Project's total Owned Capacity	55.2 MW (4.799% of total)	133.3 MW (11.594% of total)
Reactor Type	Pressurized Water Reactor	Pressurized Water Reactor
Reactor Vendor/Type	Westinghouse Four-Loop	Westinghouse Four-Loop
Containment Type	Dry, Subatmospheric	Dry, Ambient Pressure
MMWEC Project's Average annual cash funded Capital Expenditures thru 2015	\$1 million	\$5.5 million
INPO Score	2 (81.69 Q1 2010)	1 (85.07 Q1 2010)

FIGURE 5

Millstone 3 and Seabrook 1 Asset Performance

	2005	2006	2007	2008	2009	2010 YTD	5-YEAR AVG (05-09)
Millstone 3							
Capacity Factor (%)	86.4%	99.6%	85.9%	87.1%	96.1%	74.9%	91.0%
Availability Factor (%)	87.7%	100.0%	87.8%	88.1%	96.7%	76.2%	92.1%
Outage Length (days)	28	0	42	43	0	39	22.6
Seabrook 1							
Capacity Factor (%)	90.8%	87.8%	98.8%	85.5%	80.9%	100.1%	88.8%
Availability Factor (%)	90.5%	88.1%	99.0%	86.5%	83.8%	100%	89.6%
Outage Length (days)	32	40	0	37	60	0	33.8

FIGURE 6

MMWEC Individual Project Performance**NUCLEAR MIX 1**

ASSET PERFORMANCE	2005	2006	2007	2008	2009
Net Generation (MWh)	155,602	176,995	156,970	156,756	181,354
Capacity Factor (%)	86.8%	99.5%	87.2%	86.4%	88.5%
Availability Factor (%)	86.8%	98.8%	88.9%	87.9%	95.4%
Fuel Costs (cent/kWh)	0.4	0.4	0.5	0.5	0.5
Total Costs (cent/kWh)	9.3	8.6	10.1	10.6	10.2

NUCLEAR PROJ. 3

ASSET PERFORMANCE	2005	2006	2007	2008	2009
Net Generation (MWh)	279,544	322,390	278,032	282,201	332,966
Capacity Factor (%)	86.4%	99.6%	85.9%	87.1%	96.1%
Availability Factor (%)	87.7%	100.0%	87.8%	88.1%	96.7%
Fuel Costs (cent/kWh)	0.4	0.4	0.5	0.4	0.5
Total Costs (cent/kWh)	7.8	7.1	8.7	9.2	8.7

NUCLEAR PROJ. 4

ASSET PERFORMANCE	2005	2006	2007	2008	2009
Net Generation (MWh)	409,687	407,181	466,369	405,112	382,004
Capacity Factor (%)	90.8%	87.8%	98.8%	85.5%	80.9%
Availability Factor (%)	90.5%	88.1%	99.0%	86.5%	83.8%
Fuel Costs (cent/kWh)	0.4	0.5	0.5	0.6	0.7
Total Costs (cent/kWh)	7.1	7.8	9.3	8.7	10.1

NUCLEAR PROJ. 5

ASSET PERFORMANCE	2005	2006	2007	2008	2009
Net Generation (MWh)	103,698	103,062	118,046	102,544	96,692
Capacity Factor (%)	90.8%	87.8%	98.8%	85.5%	80.9%
Availability Factor (%)	90.5%	88.1%	99.0%	86.5%	83.8%
Fuel Costs (cent/kWh)	0.4	0.5	0.5	0.6	0.7
Total Costs (cent/kWh)	8.8	8.7	8.3	9.9	11.1

NUCLEAR PROJ. 6

ASSET PERFORMANCE	2005	2006	2007	2008	2009
Net Generation (MWh)	567,403	563,936	645,909	561,069	529,065
Capacity Factor (%)	90.8%	87.8%	98.8%	85.5%	80.9%
Availability Factor (%)	90.5%	88.1%	99.0%	86.5%	83.8%
Fuel Costs (cent/kWh)	0.4	0.5	0.5	0.6	0.7
Total Costs (cent/kWh)	10.0	10.0	9.3	11.2	12.5

MMWEC'S Energy Supply Management Remains Key To Members Maintaining Competitive Rates Given Competitive Market And Potential Political Risk If Rates Are Too High

In 2009, the reported peak demand of 28 of the 29 MMWEC project participants (excluding Pascoag, RI) was 1,240 MW with total energy sales of 5,550 MWh. Of note, MMWEC manages the power supply needs of its 20 members and has enhanced capability to purchase bulk power for its nine all requirements members. While there are 11 project participants that are not MMWEC members, half of the 11 derive about 50% to 70% of their power from long-term PPAs, most of which are with Integrys (Senior unsecured rated Baa1/STA) or Energy New England. The majority of the non-members derive an average of 30% of their power from their owned capacity in the MMWEC projects.

MMWEC owns an intermediate and peaking unit that both rarely operate given the higher cost of fuel and lower efficiency of the plants resulting in a higher cost of generation relative to the open spot market. Therefore, MMWEC focuses its supply management on its hedging and power purchase agreements to supplement its own generation resources to meet the power demands of its members. Looking forward, MMWEC intends to finance a new 280 MW combined cycle gas plant, Stony Brook 3, located next to MMWEC's intermediate and peaking units, Stony Brook 1 and 2, in order to meet future capacity needs. In addition, MMWEC has slowly entered into renewable generation resources as a member of a cooperative that is financing a 15 MW Berkshire wind farm, as well as the development of some small scale solar projects. MMWEC and its members remain vulnerable to regional price shocks given its smaller amount of cost effective generation it can provide to its participants and its intention to maintain about 20% exposed to the open market. Therefore, MMWEC's successful hedging and PPA procurement activities will continue to remain critical to the future competitiveness of its member power rates. Over the last five years, MMWEC's non-nuclear plants that it fully or partially owns had capacity factors averaging 6.3% for Stony Brook Intermediate (oil/gas with 311 MW owned), 4.9% for Wyman (oil with 22.7MW owned), and less than 1% for Stony Brook Peaking (gas with 170MW owned). The Stony Brook plants represent the majority of total capacity at about 35% with contracted purchases being the second largest at about 30%. MMWEC has diversified its power resources and is no longer dominated by nuclear that now represents about 25% of the energy mix.

For 2009, the participant's power resource mixes varied depending on their degree of hedging activity with MMWEC. About 15 MMWEC project participants engage in notable power hedging activity and these participants have a power resource profile consisting of, on average, 33% from MMWEC generation resources, 33% from MMWEC hedging activities, 22% from spot market purchases, and 10% from Power Purchase Agreements. The remaining 14 MMWEC participants (excluding Pascoag, RI) that do not engage in hedging activity (or a minor amount only) generally derive a higher percentage of their power supply from Power Purchase Agreements instead. The average power supply profile of one of these participants consist of, on average, 45% from Power Purchase Agreements, 32% from MMWEC generation resources, and 22% from spot market purchases. These are general averages and exclude two outliers, Holyoke and Braintree, that have a more substantial source of their own generation resources. While these are averages, individual power profiles differ with varying concentrations of 40% in MMWEC resources, 35% to 50% from hedging, and 50% to 65% from PPAs, with the spot market exposure generally ranging from 15% to 25%. The differing power supply profiles do impact overall rate competitiveness, but in general most participants have competitive retail rates.

In Massachusetts, deregulation has allowed consumers to choose their power supplier, but municipal light and power departments are not required to offer choice and none have opted into this provision to date. As previously noted, many participants obtain a significant portion of their revenues from commercial and industrial customers, with some having one or two customers contributing the majority of system revenues. This customer dominance represents a vulnerability since the larger/high-margin customers are more likely to either seek concessions from the utility or lobby to mandate that municipal utilities offer power supplier choice to its customers. By maintaining competitive rates compared to the investor owned utilities in the area, the municipal utilities have been able to minimize this type of customer push back. However, should retail rates become uncompetitive, the larger customers would be the most affected and may lobby for a legislation change so they can choose a different power supplier. Overall, MMWEC participant utilities have had competitive retail rates versus those of neighboring investor owned utilities, but their average rates are well above the averages for the US, as is true for all utilities in Massachusetts. One offsetting factor is the higher income and wealth profile of the users, indicating an ability to absorb higher rates in the long run.

MMWEC's Financial Metrics Are Stable With Narrow Margins And Solid Liquidity

MMWEC manages each project with slim margins, but each project's solid to strong internally maintained liquidity coupled with monthly billing for cost recovery mitigates against the narrow margins. The monthly billing also increases the project's cash flow predictability. Each project's liquidity helps cash finance ongoing capital needs at the plants and can be made available for rate stabilization to reduce any above market costs. Each project is accounted for separately with individual project debt service coverage ratios (DSCR) and days cash on hand listed in figure 7 below. MMWEC's overall financial performance as an organization reflects that of the individual projects with low DSCRs in order to help maintain a low total cost of power. As seen in figure 8, MMWEC has reduced its leverage over time, improving its asset to debt value. The current 60% debt ratio is well below that of other JPAs and allows for additional debt issuance if necessary.

FIGURE 7
MMWEC Individual Project DSCR and Days Cash on Hand

PROJECT NAME	YEAR	DSCR*	DAYS CASH ON HAND
NUCLEAR MIX 1	2009	1.09	616
	2008	1.00	364
	2007	1.05	473
NUCLEAR PROJ. 3	2009	1.12	614
	2008	1.02	319
	2007	1.07	409
NUCLEAR PROJ. 4	2009	1.14	322
	2008	0.99	157
	2007	1.05	277
NUCLEAR PROJ. 5	2009	1.08	379
	2008	0.99	203
	2007	1.04	317
NUCLEAR PROJ. 6	2009	1.04	420
	2008	0.96	223
	2007	1.04	341

*Debt Service Coverage calculated on a Net Revenue Basis - Including Investment Income as Revenue and Decommissioning Payments as Debt; Notably, the rate covenant allows for the use of available reserves so all projects exceed the requirement on a bond ordinance basis.

FIGURE 8
MMWEC's Overall Financial Performance Fiscal year ends 12/31, \$'000

BALANCE SHEET	2005	2006	2007	2008	2009
Gross fixed assets	1,320,811	1,333,997	1,351,219	1,356,653	1,366,700
Net Fixed Assets	617,548	608,000	615,159	606,998	608,751
Net Working Capital	196,283	159,427	163,932	66,408	68,617
Long-term Debt	784,995	714,635	641,630	570,245	502,245
Debt-service Reserve and Debt Service Reserve Funds	109,364	109,530	107,682	100,797	93,109
Net Funded Debt	675,631	605,105	533,948	469,448	409,136
INCOME STATEMENT	2005	2006	2007	2008	2009
Operating revenues	\$372,398	354,498	362,042	404,617	286,246
Gross revenue and income	375,357	367,796	375,390	400,799	291,375
Total O&M Expenses	260,481	248,597	256,573	300,779	189,596
Net revenues	114,876	119,199	118,817	100,020	101,779
Aggregate Annual Debt Service ('000)	108,416	106,625	106,888	98,639	90,957
KEY RATIOS	2005	2006	2007	2008	2009
Operating ratio (%)	69.9	70.1	70.9	74.3	66.2
Net take-down (%)	30.6	32.4	31.7	25.0	34.9
Debt-service coverage (x)	1.06	1.12	1.11	1.01	1.12
Debt-service safety margin (%)	1.7	3.4	3.2	0.3	3.7
Debt ratio (%)	83.0	78.8	68.5	69.7	60.4
Days Cash on Hand	256	257	217	151	293

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- » [Global Macro-Risk Scenarios 2010-2011 – On the Hook for Some Time Yet, January 2010 \(122431\)](#)

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- » [2009 U.S. Public Power Electric Utility Sector Outlook, February 2009 \(114400\)](#)
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