

Massachusetts Municipal Wholesale Electric Company

Financial Statements
and
Supplementary Information

Years Ended December 31, 2018 and 2017

Massachusetts Municipal Wholesale Electric Company

FINANCIAL STATEMENTS Years Ended December 31, 2018 and 2017

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INDEPENDENT AUDITORS' REPORT

To the Board of Directors
Massachusetts Municipal Wholesale Electric Company
Ludlow, Massachusetts

We have audited the accompanying financial statements of Massachusetts Municipal Wholesale Electric Company and its fiduciary funds, as of and for the years ended December 31, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Massachusetts Municipal Wholesale Electric Company's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Massachusetts Municipal Wholesale Electric Company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Massachusetts Municipal Wholesale Electric Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Massachusetts Municipal Wholesale Electric Company and its fiduciary funds as of December 31, 2018 and 2017, and the respective changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the financial statements as a whole. The supplemental information as listed in the table of contents are presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplemental information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The Debt Service Coverage Calculation, which is the responsibility of management, as identified in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we express no opinion or provide any assurance on it.

Baker Tilly Virchow Krause, LLP

Madison, Wisconsin
March 29, 2019

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

The following discussion and analysis of the Massachusetts Municipal Wholesale Electric Company (MMWEC) provides an overview and analysis of MMWEC's financial performance during the years ended December 31, 2018 and 2017. This discussion and analysis should be read in conjunction with MMWEC's financial statements and the accompanying notes.

OVERVIEW OF THE FINANCIAL STATEMENTS

MMWEC is a public corporation and a political subdivision of the Commonwealth of Massachusetts formed to be a joint action agency to develop a bulk power supply for its member Massachusetts cities and towns having municipal electric systems (Members) and other utilities. Among other things, MMWEC is authorized to construct, own or purchase ownership interests in energy facilities and to issue revenue bonds for such purposes. MMWEC's ownership interest in energy generation facilities is through various Projects. Pursuant to its General Bond Resolution (GBR), the bonds of any bond issue relating to a Project are secured solely by revenues derived from that Project. Project revenues are derived primarily from Power Sales Agreements (PSAs) with MMWEC's Members and other utilities that are Participants in a Project (Project Participants). MMWEC's bulk power supply program consists of power purchase arrangements, power brokering services, related planning and other financial services.

MMWEC has a fiduciary responsibility over two defined benefit pension plans that are provided to its employees and has included fiduciary financial statements and disclosures for these pension plans.

The accounting records of MMWEC are maintained using the Governmental Accounting Standards Board (GASB), the Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC) and the Generally Accepted Accounting Principles of the United States (GAAP) using the economic resources measurement focus and the accrual basis of accounting. Application of the accounting methods for regulatory operations is also included in these financial statements. This accounting guidance relates to the deferral of revenues and expenses to future periods in which the revenues are earned or the expenses are recovered through the rate-making process, which is governed by the Board of Directors.

MMWEC's financial statements include Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position, Statements of Cash Flows, Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position. The Statements of Net Position report year-end assets and liabilities based on the original cost adjusted for any depreciation, amortization or unrealized gains/losses as appropriate. The Statements of Revenues, Expenses and Changes in Net Position present MMWEC's operating revenues and expenses incurred as a result of MMWEC's business activity. The Statements of Cash Flows report the cash provided and used for operating activities, as well as investing activities and capital and noncapital related financing activities. The Statements of Fiduciary Net Position report the financial resources available for future benefits for MMWEC's administrative and union pension plans. The Statements of Changes in Fiduciary Net Position reflect the additions, deductions and net increase or decrease in net position held in trust for pension benefits.

MMWEC FINANCIAL ANALYSIS

An analysis of MMWEC's financial position begins with the review of the Statements of Net Position, the Statements of Revenues, Expenses and Changes in Net Position and the Statements of Cash Flows. A summary of MMWEC's Condensed Statements of Net Position is presented in Table 1. The Condensed Statements of Revenues, Expenses and Changes in Net Position are summarized in Table 2 and the Condensed Statements of Cash Flows is summarized in Table 3.

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

MMWEC FINANCIAL ANALYSIS...continued

Table 1
Condensed Statements of Net Position

	2018	2017	2016
		(In Thousands)	
Current assets, less current portions of designated and restricted special funds	\$ 116,672	\$ 110,328	\$ 97,349
Restricted special funds, including interest receivable and current portion of restricted special funds	85,112	93,378	166,224
Other assets	271,575	243,089	204,906
Capital assets	572,023	570,002	578,337
Deferred outflows of resources	4,424	3,422	4,459
	<u>\$ 1,049,806</u>	<u>\$ 1,020,219</u>	<u>\$ 1,051,275</u>
Current liabilities, less current maturities of long-term debt and accrued interest	\$ 175,093	\$ 135,678	\$ 157,188
Long-term debt, net of premiums, including current maturities and accrued interest	26,504	31,414	57,602
Noncurrent liabilities	272,820	259,612	246,405
Deferred Inflow of resources	575,389	593,515	590,080
	<u>\$ 1,049,806</u>	<u>\$ 1,020,219</u>	<u>\$ 1,051,275</u>
Net position	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

MMWEC FINANCIAL ANALYSIS...continued

Table 2
Condensed Statements of Revenues, Expenses and Changes in Net Position

	<u>2018</u>	<u>2017</u> (In Thousands)	<u>2016</u>
Operating revenues	\$ 264,632	\$ 234,463	\$ 265,352
Depreciation expense	17,549	17,678	17,485
Other operating expenses	259,795	229,043	207,111
Total operating expenses	<u>277,344</u>	<u>246,721</u>	<u>224,596</u>
Operating income (loss)	(12,712)	(12,258)	40,756
Investment income (loss)	(1,082)	14,793	11,063
Interest and amortization expense	(1,841)	(1,104)	(2,136)
(Increase) Decrease in amounts payable under terms of the power sales agreements	15,635	(1,431)	(49,683)
Total non-operating income (expenses)	<u>12,712</u>	<u>12,258</u>	<u>(40,756)</u>
Change in net position	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Table 3
Condensed Statements of Cash Flows

	<u>2018</u>	<u>2017</u> (In Thousands)	<u>2016</u>
Net cash provided by operating activities	\$ 47,615	\$ 15,853	\$ 84,995
Net cash provided by (used in) investing activities	(37,450)	76,832	(20,116)
Net cash used in capital and related financing activities	(36,815)	(71,559)	(79,000)
Net cash provided by (used in) noncapital financing activities	21,967	4,543	3,142
Net change in cash and cash equivalents	(4,683)	25,669	(10,979)
Cash and cash equivalents – beginning of year	78,345	52,676	63,655
Cash and cash equivalents – end of year	<u>\$ 73,662</u>	<u>\$ 78,345</u>	<u>\$ 52,676</u>

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

STATEMENTS OF NET POSITION

The majority of MMWEC's Statements of Net Position consists of the financial activity relating to various Projects, representing ownership interests in various electric generation facilities for which MMWEC has corresponding PSAs with each Project Participant. MMWEC's joint ownership interests are shown in Note 14 – Project Joint Ownership Agreements in the accompanying notes of the accompanying financial statements.

Comparison of 2017 Financial Results to 2016 Financial Results

Current assets, excluding the current portions of restricted and designated funds, increased by \$13.0 million.

Cash and temporary investments increased by \$6.9 million, due to an increase of \$4.7 million in operating cash for power purchase and administrative expenses and the Intermediate and Mix One Projects, due to timing of payments to vendors and receipts from Members and Participants, and an increase of \$2.2 million in Project Four, as debt reserves were released from restricted funds in 2017 due to the maturity of all Project Four bonds as of July 1, 2017.

The increase in accounts receivable and unbilled revenue of \$7.3 million is chiefly attributable to an increase in pooled financing receivables (\$3.7 million) due to additional Member funding requests through this program in 2017, power purchase receivables (\$4.6 million) due to a capacity rate increase in 2017, and Stony Brook and Wyman Project receivables (\$0.8 million) due to slight increases in billings for fall outage expenses in 2017. These increases were offset by a decrease of \$1.8 million in principal and interest billings for the Millstone and Seabrook projects in 2017, as bonds continue to be paid down.

Inventories decreased \$1.1 million primarily due to fuel used during 2017 for generation without offsetting replacement purchases for Seabrook, Wyman and Stony Brook Peaking Projects (\$1.6 million). These decreases were offset by an increase (\$0.5 million) in Stony Brook Intermediate market adjustment market cost at December 31, 2017.

Current and noncurrent restricted special funds, including related interest receivable, decreased by \$72.8 million, primarily due to decreases in Seabrook and Millstone bond reserves of \$69.5 million because of the payoff of outstanding debt, and decreases in member power purchase working capital funds of \$3.3 million due to increases in capacity and transmission rates beginning in June 2017.

Other assets increased by \$37.6 million from 2016 to 2017, reflecting increases in designated funds (\$15.5 million) primarily due to reclassification of investments due to the maturity of outstanding bonds, improved investment performance and continued contributions made to nuclear decommissioning trust funds (\$14.7 million) and investment performance and valuation changes resulting in higher valuation of pension assets (\$3.0 million), and higher advances made to the lead owners for the Project operating costs of the Seabrook Station, offset by reduced advances made to the lead owners for the Project operating costs of the Millstone Projects (net \$4.5 million increase). These increases were offset by lower market valuation of fuel oil hedging derivatives purchased in 2016 (\$0.1 million decrease).

In 2017, total capital assets had a net decrease of \$8.3 million due primarily to continued depreciation of \$17.7 million and continued amortization of \$10.1 million, offset primarily by net in-service asset and construction work in progress additions of \$10.9 million, and net purchases of nuclear fuel of \$8.6 million.

Deferred outflows of resources decreased by \$1.0 million due to the lower deferrals of losses on pension assets (\$0.7 million) and fuel oil cash flow hedges in 2017 (\$0.3 million).

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

STATEMENTS OF NET POSITION...continued

Comparison of 2017 Financial Results to 2016 Financial Results...continued

The \$21.5 million decrease in current liabilities, excluding current maturities of long-term debt and accrued interest, was attributable to a portion of MMWEC's pooled loan program short-term debt being converted to long-term debt for in 2017 (net \$15.3 million), decreased advances by Members due to use of working capital for higher capacity and transmission expenses beginning mid-2017 (\$4.5 million) and use of operating reserve advances across all Projects for maintenance and outage expenses in 2017 (\$4.6 million). These decreases were offset by increases in accounts payable and accrued expenses of \$2.9 million as fewer payments were made to vendors prior to year-end for operational expenses incurred in 2017, whereas in the prior year, such payments were made before year-end.

Long-term debt, including current maturities and accrued interest, decreased by \$26.2 million primarily due to principal payments made and maturities of long-term debt during 2017.

Other noncurrent liabilities, excluding long-term debt, increased \$13.2 million due to accretion of asset retirement obligations and additional collections made for power purchase working capital due to capacity market price increases.

Deferred inflows of resources increased by \$3.4 million due to increases in deferred gain on pension assets (\$2.7 million), and amounts payable under the terms of the PSAs (\$1.4 million), which include temporary offsets of unbilled expenses, such as depreciation, unrealized gains/losses, and bond payment activity, offset by continued amortization of deferred gain on extinguishment of debt (\$0.3 million) and decreased pension regulatory liability (\$0.4 million).

Comparison of 2018 Financial Results to 2017 Financial Results

Current assets, excluding the current portions of restricted and designated funds, increased by \$6.3 million.

Cash and temporary investments increased by \$10.0 million, driven by an increase of \$5.8 million in operating cash for in the MMWEC service company, due to construction funds held as fiduciary agent for the Berkshire Cooperative and an increase of \$4.2 million in the nuclear Project and Stony Brook accounts, due to timing of payments to vendors and receipts from Participants and debt reserves that were released from restricted funds in 2018 due to the maturity of all Project Three and Five bonds as of July 1, 2018.

The increase in accounts receivable and unbilled revenue of \$4.0 million is chiefly attributable to an increase in pooled financing receivables (\$5.6 million) due to additional Member funding requests through this program in 2018. This increase was offset by a decrease of \$1.6 million in Project accounts due to increased volume of forward capacity market (FCM) credits pending return to participants in 2018 due to market price increases and zonal restriction of FCM self-supply option effective in 2018.

Inventories decreased \$7.5 million primarily due to fuel used during 2018 for generation without offsetting replacement purchases for Stony Brook Intermediate, Peaking and Wyman Projects.

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

STATEMENTS OF NET POSITION...continued

Comparison of 2018 Financial Results to 2017 Financial Results...continued

Current and noncurrent restricted special funds, including related interest receivable, decreased by \$8.3 million, primarily driven by decreases in Seabrook and Millstone bond reserves of \$22.8 million due to bond retirements in 2018, offset by an increase of \$9.8 million in pooled loan reserve requirements and program funds for loans issued in 2018 and an increase of \$4.7 million in Project Six bond reserves due to bond principal and interest collections from Participants in 2018.

Other assets increased by \$28.4 million from 2017 to 2018, reflecting increases in designated funds (\$33.6 million) primarily due to reclassification of investments due to the maturity of outstanding bonds and collections for future Project capital expenditures and maintenance outages, offset by decreases in nuclear decommissioning trust funds and pension assets (\$5.2 million) due to investment performance and market valuation of assets, which was lower as of December 31, 2018 than in 2017.

In 2018, total capital assets had a net increase of \$2.0 million due primarily due to additions in in-service asset and construction work in progress of \$18.8 million and net purchases of nuclear fuel of \$10.4 million offset by continued depreciation of \$17.1 million and continued amortization of \$10.1 million.

Deferred outflows of resources increased by \$1.0 million due to the higher deferrals of losses on pension assets (\$1.4 million) offset by fuel oil cash flow hedges in 2018 (\$0.4 million).

The \$39.4 million increase in current liabilities, excluding current maturities of long-term debt and accrued interest, was attributable to additional loans issued through MMWEC's pooled loan program in 2018 (net \$23 million), increased advances by Members for new generating facilities and Project operating expenses in advance of outages (\$8.7 million) and increased accounts payable and accrued expenses (\$8.7 million) due to timing of vendor payments.

Long-term debt, including current maturities and accrued interest, decreased by \$4.9 million primarily due to principal payments made and maturities of long-term debt during 2018.

Other noncurrent liabilities, excluding long-term debt, increased \$13.2 million due to accretion of asset retirement obligations and additional collections made for power purchase working capital due to capacity market price increases.

Deferred inflows of resources decreased by \$18.1 million due to decreases in deferred gain on pension assets (\$0.7 million), amounts payable under the terms of the PSAs (\$15.6 million), which include temporary offsets of unbilled expenses, such as depreciation, unrealized gains/losses, and bond payment activity, continued amortization of deferred gain on extinguishment of debt (\$0.2 million) and decreased pension regulatory liability (\$1.6 million).

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

The majority of MMWEC's Statements of Revenues, Expenses and Changes in Net Position consist of the financial activity relating to revenues and expenses from power purchases and the PSAs for the Projects. Project revenues are derived, primarily, from PSAs with Project Participants. Under all PSAs, the Project Participants are required to pay their respective shares of MMWEC's actual costs relating to the Projects, including debt service. Thus, MMWEC's revenues for an individual Project are dependent on debt service and the costs associated with that particular Project. Revenues for the individual Projects vary from year to year as the costs MMWEC incurs relating to a Project vary.

Comparison of 2017 Financial Results to 2016 Financial Results

For 2017, revenue decreased by \$30.9 million due to lower generation in the Stony Brook Intermediate and Seabrook Projects, lower maintenance costs for Millstone Projects and lower fuel used in generation for Seabrook Projects, and lower billings related to debt for the Seabrook and Millstone Projects, offset by higher overall operating costs for purchase power, Stony Brook and Wyman.

Purchased power expenses increased by \$12.3 million during 2017 as compared to 2016 primarily due to an increase in capacity and transmission charges and a new power contract, offset by a decrease in load and lower contract power prices in 2017 than in 2016.

The \$1.8 million increase in fuel used in electric generation was driven by increased generation at Stony Brook Peaking, Millstone and Wyman and extreme temperatures in late December 2017, which resulted in the Stony Brook Intermediate unit using more fuel oil than in the prior year, where most of the Stony Brook Intermediate output was generated with natural gas, a less expensive fuel source.

Other operating expense increased \$1.5 million primarily driven by Seabrook Station, as there was a planned refueling and maintenance outage at Seabrook Station in 2017, whereas in 2016, Seabrook Station had no planned refueling or major maintenance outage. In addition, Stony Brook Intermediate and Peaking expenses increased from the prior year due a higher pension contribution being made in 2017 than 2016.

Maintenance expense increased \$3.6 million in 2017, primarily driven by Seabrook Station, as there were additional maintenance expenses incurred due to a planned refueling and maintenance outage at Seabrook Station in 2017, whereas in 2016, Seabrook Station did not have a planned refueling or major maintenance outage.

In 2017, depreciation expense increased \$0.2 million, as a result of depreciation from fixed asset additions, offset by retirements during 2017.

The increase in inventory market adjustment of \$2.4 million reflects adjustments made to present fuel oil inventory at the lower of cost or market. Market value of fuel oil inventory partially recovered as of December 31, 2017 for the Stony Brook Intermediate and Peaking Projects and fully recovered for the Wyman Project.

The \$0.3 million increase in taxes other than income was attributable to credits being taken in 2016 related to the valuation of Seabrook Station property, there were no additional credits to be taken in 2017.

Investment income, which is a result of varying fund balances and interest rates, increased by \$3.7 million in 2017, due to stronger investment performance in 2017 as opposed to 2016.

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
Years Ended December 31, 2018 and 2017

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION...continued

Comparison of 2017 Financial Results to 2016 Financial Results...continued

Interest expense decreased by \$1.6 million due to lower interest costs incurred in 2017 than in 2016 as a result of reduced long-term debt balances due to scheduled principal payments and maturities.

Amortization expense decreased by \$0.5 million due to continued amortization of premiums and gains associated with various bond issues.

The decrease in amounts payable under terms of the PSAs is primarily related to bond payments made during the period and is discussed in Notes 1 and 7 of the accompanying financial statements.

Comparison of 2018 Financial Results to 2017 Financial Results

For 2018, revenue increased by \$30.2 million due to higher generation across all Projects and higher overall operating costs for purchase power.

Purchased power expenses increased by \$21.8 million during 2018 as compared to 2017 primarily due to increases in capacity and transmission charges and higher average energy prices in 2018 driven by a period of extremely low temperatures in early January 2018 and extremely high temperatures in early September 2018, whereas in the prior year, temperatures were more moderate overall.

The \$4.3 million increase in fuel used in electric generation was driven by increased generation at Stony Brook Intermediate, Peaking, Millstone, Seabrook and Wyman due to extreme temperatures in early January and early September 2018, which caused the fossil fuel burning units to run and the timing of maintenance and refueling outages for Millstone and Seabrook.

Other operating expense decreased \$0.4 million primarily driven by lower service administrative costs and lead owner administration costs on Projects in 2018 (due to focus maintenance outages) offset in part by increased operating costs in service company due to increased Cooperative and service work order activity (rental generator program, distributed generation projects, other emerging tech-related initiatives).

Maintenance expense was level from the prior year. There was increased maintenance expense for Stony Brook Intermediate of \$ 2.4 million due to a major outage in the fall 2018. Seabrook also had increased maintenance expense of \$0.6 million due to an outage in 2017 and 2018, additional expenses due to 2018 outage and switchyard upgrade. These increases were offset by decreased maintenance expense for Millstone of \$2.4 million because there was no 2018 outage, however, there was a fall outage in 2017. Peaking maintenance expenses decreased by \$0.6 million due to major transformer replacement work in 2017, which elevated the prior year costs. Outage in 2018 for Peaking was routine maintenance.

In 2018, depreciation expense decreased \$0.1 million, as a result of depreciation from fixed asset additions, offset by retirements during 2018.

The change in inventory market adjustment of \$5.0 million reflects adjustments made to present fuel oil inventory at the lower of cost or market. Market value of fuel oil inventory was slightly lower than cost for the Stony Brook Intermediate and Peaking Projects and Wyman Project and lower than the market value in the prior year for all Projects.

Taxes other than income was level from 2017 to 2018.

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
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STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION...continued

Comparison of 2018 Financial Results to 2017 Financial Results...continued

Investment income, which is a result of varying fund balances and interest rates, decreased by \$15.9 million in 2018, due to market losses on the decommissioning funds offset by interest income. Interest income was higher in 2018 than 2017 due to increased interest rates and account balances.

Interest expense was level from the prior year. Lower interest costs incurred in 2018 as a result of reduced long-term debt balances due to scheduled principal payments and maturities were offset by increased interest on short-term borrowings.

Amortization expense decreased by \$0.7 million due to continued amortization of premiums and gains associated with various bond issues.

The increase in amounts payable under terms of the PSAs is primarily due to unrealized losses on the decommissioning funds offset by ongoing bond payments made during the period and is discussed in Notes 1 and 7 of the accompanying financial statements.

STATEMENTS OF CASH FLOWS

For purposes of the Statements of Cash Flows, cash equivalents are cash and investments having an original maturity of three months or less from the date of acquisition. Cash and cash equivalents increased by \$25.7 million from 2016 to 2017. This is primarily due to performance of investments during 2017 offset by principal payments on long term debt. Cash and cash equivalents decreased by \$4.7 million from 2018 to 2017. This is primarily due to performance of investments during 2018 offset by decreased principal payments on long term debt.

DEBT SERVICE COVERAGE

For the PSAs' contract years ended June 30, 2018 and June 30, 2017, MMWEC met the GBR debt service coverage requirements for all of MMWEC's Projects. In accordance with the provisions of MMWEC's GBR, MMWEC covenants that it will fix, revise and collect rates, tolls, rents and other fees and charges sufficient to produce revenues to pay all Project operating and maintenance expenses as well as principal, premium, if any, and interest on the Bonds associated with each Project. Revenues for each Project, which include applicable interest earnings from investments associated with funds required to be maintained by the GBR, are required to equal 1.10 times the annual debt service for the PSA contract year ending June 30, after deduction of certain operating and maintenance expenses and exclusive of depreciation. Further details can be found in the Supplementary Information to the financial statements.

DEBT RATINGS

During 2018, following their annual credit review of MMWEC, two major credit rating agencies rated the MMWEC bonds as follows:

Investment Type	Standard & Poor's	Fitch Ratings
Project No. 6, Series 2011	A-	Not rated
Project No. 6, Series One	A-	A+

Massachusetts Municipal Wholesale Electric Company

Management's Discussion and Analysis (unaudited)
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MMWEC PROJECT OPERATIONS

The following tables provide operating information for the MMWEC Projects for the corresponding years for which financial information and analysis was presented above. See Note 14 – Project Joint Ownership Agreements in the accompanying financial statements for additional information.

MMWEC Project Operations January 1 through December 31, 2018

	<u>Stony Brook Intermediate</u>	<u>Stony Brook Peaking</u>	<u>Seabrook</u>	<u>Millstone 3</u>	<u>Wyman</u>
Availability	84.40%	95.82%	92.37%	100.00%	91.37%
Capacity Factor	3.44%	0.47%	92.18%	100.84%	2.50%
Generation MWH	93,920	6,617	1,166,443	515,128	4,858

The capacity factor represents the percentage of electricity actually produced as compared with potential production.

MMWEC Project Operations January 1 through December 31, 2017

	<u>Stony Brook Intermediate</u>	<u>Stony Brook Peaking</u>	<u>Seabrook</u>	<u>Millstone 3</u>	<u>Wyman</u>
Availability	94.80%	92.17%	91.70%	91.00%	92.71%
Capacity Factor	3.20%	0.23%	91.28%	91.29%	1.74%
Generation MWH	86,911	3,260	1,158,213	466,358	3,375

CONTACT INFORMATION

This financial report is designed to provide a general overview of MMWEC's finances. Questions or requests for additional information should be addressed to MMWEC Attn: Director of Financial Reporting & Corporate Technology, 327 Moody Street, Ludlow, Massachusetts 01056.

Massachusetts Municipal Wholesale Electric Company
 Statements of Net Position
 December 31, 2018 and 2017
 (In Thousands)

	2018	2017
ASSETS		
Current assets:		
Cash and temporary investments	\$ 20,531	\$ 10,562
Accounts receivable	51,180	46,173
Unbilled revenues	18,763	19,775
Inventories	24,794	32,273
Prepaid expenses	1,404	1,545
Current portion of restricted special funds	64,030	47,112
Current portion of designated funds	6,553	969
Total current assets	<u>187,255</u>	<u>158,409</u>
Noncurrent assets:		
Restricted assets:		
Restricted special funds	20,862	45,993
Interest receivable	220	273
Nuclear decommissioning trust	119,440	121,959
Net pension asset	1,455	5,196
Noncurrent charges:		
Designated funds	128,244	100,353
Designated funds interest receivable	483	315
Other noncurrent charges	15,400	14,297
Total noncurrent assets	<u>286,104</u>	<u>288,386</u>
Capital assets:		
In service	1,430,351	1,423,737
Accumulated depreciation	(910,740)	(893,662)
Construction work in progress	29,054	16,884
Nuclear fuel, net of amortization	23,358	23,043
Total capital assets	<u>572,023</u>	<u>570,002</u>
DEFERRED OUTFLOWS OF RESOURCES		
Deferred loss on pension asset	4,424	2,988
Deferred loss on derivative	-	434
Total deferred outflows of resources	<u>4,424</u>	<u>3,422</u>
Total assets and deferred outflows of resources	<u>\$ 1,049,806</u>	<u>\$ 1,020,219</u>
LIABILITIES		
Current liabilities:		
Accounts payable	\$ 12,896	\$ 6,820
Member and participant advances	109,112	100,396
Short-term debt	28,476	5,419
Accrued expenses	24,609	23,043
Current liabilities payable from restricted assets:		
Accrued interest payable	705	401
Current maturities of long-term debt, net of premiums	8,699	5,214
Total current liabilities	<u>184,497</u>	<u>141,293</u>
Noncurrent liabilities:		
Long-term debt, net of premiums and current maturities	17,100	25,799
Asset retirement obligations	170,178	161,840
Long-term member and participant advances	102,642	97,772
Total noncurrent liabilities	<u>289,920</u>	<u>285,411</u>
DEFERRED INFLOWS OF RESOURCES		
Pension regulatory liability	2,914	4,478
Amounts payable under terms of the power sales agreements	570,369	586,004
Deferred gain on pension asset	2,049	2,791
Deferred gain on extinguishment of debt, net of amortization	57	242
Total deferred inflows of resources	<u>575,389</u>	<u>593,515</u>
Total liabilities and deferred inflows of resources	<u>\$ 1,049,806</u>	<u>\$ 1,020,219</u>
NET POSITION		
Net investment in capital assets	\$ 599,573	\$ 538,604
Restricted for:		
General bond resolution	8,228	11,802
Decommissioning Trust	119,440	121,959
Pension	1,455	5,196
Unrestricted	<u>(728,696)</u>	<u>(677,561)</u>
Total net position	<u>\$ -</u>	<u>\$ -</u>

The accompanying notes are an integral part of these financial statements.

Massachusetts Municipal Wholesale Electric Company

Statements of Revenues, Expenses and Changes in Net Position

Years Ended December 31, 2018 and 2017

(In Thousands)

	<u>2018</u>	<u>2017</u>
Operating revenues:		
Revenues	\$ 264,632	\$ 234,463
Operating expenses:		
Fuel used in electric generation	22,471	18,160
Purchased power	172,898	151,078
Other operating	46,522	46,944
Maintenance	13,259	13,229
Depreciation	17,549	17,678
Inventory market adjustment	285	(4,759)
Taxes other than income	4,360	4,391
	<u>277,344</u>	<u>246,721</u>
Operating income (loss)	<u>(12,712)</u>	<u>(12,258)</u>
Non-operating revenues (expenses):		
Investment income (loss)	(1,082)	14,793
Interest expense on long-term debt	(2,122)	(2,124)
Amortization of premium	96	707
Amortization of gain on extinguishment of debt	185	313
Decrease (Increase) in amounts payable under terms of the power sales agreements	15,635	(1,431)
Total non-operating revenues (expenses)	<u>12,712</u>	<u>12,258</u>
Change in net position	-	-
Net position, beginning of year	-	-
Net position, end of year	<u>\$ -</u>	<u>\$ -</u>

The accompanying notes are an integral part of these financial statements.

Massachusetts Municipal Wholesale Electric Company

Statements of Cash Flows

Years Ended December 31, 2018 and 2017

(In Thousands)

	2018	2017
Cash flows from operating activities:		
Received from sales to members and participants	\$ 274,223	\$ 241,253
Paid to suppliers for goods and services	(216,733)	(197,977)
Refund of debt service to participants	-	(17,648)
Paid to employees	(9,875)	(9,775)
Net cash provided by operating activities	<u>47,615</u>	<u>15,853</u>
Cash flows from investing activities:		
Purchases of investments	(379,641)	(188,667)
Proceeds from sales and maturities of investments	339,727	264,133
Investment income (loss) received	2,464	1,366
Net cash provided by (used in) investing activities	<u>(37,450)</u>	<u>76,832</u>
Cash flows from capital and related financing activities:		
Construction expenditures and purchases of nuclear fuel	(29,827)	(22,757)
Principal payments on long-term debt	(5,117)	(45,115)
Decommissioning trust payments	(1,142)	(1,284)
Interest payments on long-term debt	(729)	(2,403)
Net cash used in capital and related financing activities	<u>(36,815)</u>	<u>(71,559)</u>
Cash flows from noncapital financing activities:		
Proceeds from issuance of short-term debt	36,950	9,067
Proceeds from issuance of long-term debt	-	20,196
Principal payments on short-term debt	(13,893)	(24,400)
Interest payments on short-term debt	(1,090)	(320)
Net cash provided by (used in) noncapital financing activities	<u>21,967</u>	<u>4,543</u>
Net change in cash and cash equivalents	(4,683)	25,669
Cash and cash equivalents, beginning of year	<u>78,345</u>	<u>52,676</u>
Cash and cash equivalents, end of year	<u>\$ 73,662</u>	<u>\$ 78,345</u>

The accompanying notes are an integral part of these financial statements.

Massachusetts Municipal Wholesale Electric Company

Statements of Cash Flows...continued

Years Ended December 31, 2018 and 2017

(In Thousands)

	2018	2017
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	\$ (12,712)	\$ (12,258)
Noncash items included in operating income:		
Depreciation	17,549	17,678
Amortization of nuclear fuel and accretion of asset retirement obligations	18,706	21,091
Loss on market valuation of inventory	184	1,769
Revision of asset retirement obligation	(111)	-
Changes in assets and liabilities:		
(Increase) decrease in:		
Accounts receivable	(5,007)	(4,322)
Unbilled revenues	1,012	(2,958)
Inventories	7,295	(657)
Prepaid expenses	141	86
Derivative financial instruments	-	103
Net pension asset	3,741	(3,044)
Other deferred charges	(1,103)	(4,379)
Increase (decrease) in:		
Accounts payable	6,076	(919)
Member and participant advances	14,237	(3,669)
Accrued expenses	1,566	3,887
Long term member and participant advances	(651)	91
Pension regulatory liability	(1,564)	(414)
Changes in deferred outflows of resources	(1,002)	1,037
Changes in deferred inflows of resources	(742)	2,731
Net cash provided by operating activities	<u>\$ 47,615</u>	<u>\$ 15,853</u>
Reconciliation of cash and cash equivalents to the statement of net position:		
Cash and temporary investments	\$ 20,531	\$ 10,562
Total restricted and designated funds	<u>219,689</u>	<u>194,427</u>
Total cash and investments	<u>240,220</u>	<u>204,989</u>
Less - investments included in restricted and designated funds and decommissioning trust	<u>(166,558)</u>	<u>(126,644)</u>
Total cash and cash equivalents	<u>\$ 73,662</u>	<u>\$ 78,345</u>
Supplemental disclosures of cash flow information:		
Noncash investing, capital and financing transactions:		
Amortization of debt premiums	<u>\$ 96</u>	<u>\$ 707</u>
Amortization of gain on extinguishment of debt	<u>\$ 185</u>	<u>\$ 313</u>

The accompanying notes are an integral part of these financial statements.

Massachusetts Municipal Wholesale Electric Company

Fiduciary Financial Statements

December 31, 2018 and 2017

(In Thousands)

STATEMENTS OF FIDUCIARY NET POSITION

	2018	2017
ASSETS		
Investments at fair value:		
Mutual funds	\$ 23,312	\$ 26,331
Guaranteed income funds	1,555	2,371
Total investments	<u>24,867</u>	<u>28,702</u>
Net position available for pension benefits	<u>\$ 24,867</u>	<u>\$ 28,702</u>

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

	2018	2017
ADDITIONS		
Employer contributions	\$ 394	\$ 1,159
Investment activity:		
Net appreciation in fair value of investments	-	4,311
Interest and dividends	51	122
Total investment activity	<u>51</u>	<u>4,433</u>
Total additions	<u>445</u>	<u>5,592</u>
DEDUCTIONS		
Benefits paid directly to participants	3,393	4,124
Administrative expenses	21	26
	<u>3,414</u>	<u>4,150</u>
Investment activity:		
Net depreciation in fair value of investments	866	-
Total investment activity	<u>866</u>	<u>-</u>
Total deductions	<u>4,280</u>	<u>4,150</u>
Net increase (decrease) in net position	<u>(3,835)</u>	<u>1,442</u>
Net position available for pension benefits, beginning of year	<u>28,702</u>	<u>27,260</u>
Net position available for pension benefits, end of year	<u>\$ 24,867</u>	<u>\$ 28,702</u>

The accompanying notes are an integral part of these financial statements.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS

Reporting Entity/Nature of Business

The Massachusetts Municipal Wholesale Electric Company (MMWEC) is a public corporation and a political subdivision of the Commonwealth of Massachusetts formed to be a joint action agency to develop a bulk power supply for its member Massachusetts cities and towns having municipal electric systems (Members) and other utilities, both public and private. Among other things, MMWEC is authorized to construct, own, or purchase ownership interests in energy facilities and to issue revenue bonds for such purposes. MMWEC's ownership interests in energy generation facilities are through various Projects (Note 14 – Project Joint Ownership Agreements). Pursuant to its General Bond Resolution (GBR), the bonds of any bond issue relating to a Project are secured solely by revenues derived from that Project. Project revenues are derived primarily from Power Sales Agreements (PSAs) with MMWEC's Members and other utilities who are Participants in a Project (Project Participants). MMWEC's bulk power supply program consists of power purchase arrangements, power brokering services, planning and financial services, and the Projects relating to generating facilities built and operated either by MMWEC or other entities.

A Massachusetts city or town having a municipal electric system, authorized by majority vote of the city or town, may become a Member of MMWEC by applying for admission and agreeing to comply with the terms and conditions of membership as MMWEC By-Laws may require. As of December 31, 2018 and 2017, twenty (20) Massachusetts cities and towns having municipal electric systems were Members.

MMWEC has determined it has a fiduciary responsibility over two defined benefit pension plans that are provided to its employees. The financial statement presentation includes business-type activities and the fiduciary fund financial statements for the defined benefit pension plans.

Measurement Focus, Basis of Accounting and Financial Statement Presentation

The accounting records of MMWEC are maintained using the Governmental Accounting Standards Board (GASB), the Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC) and the Generally Accepted Accounting Principles of the United States of America (GAAP) using the economic resources measurement focus and the accrual basis of accounting. Application of the accounting methods for regulatory operations is also included in these financial statements. This accounting guidance relates to the deferral of revenues and expenses to future periods in which the revenues are earned or the expenses are recovered through the rate-making process, which is governed by the Board of Directors.

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources

Cash and Investments

For purposes of the Statements of Cash Flows, cash equivalents are cash and investments having an original maturity of three months or less from the date of acquisition. Unrestricted cash and cash equivalents are presented within cash and temporary investments in the accompanying Statements of Net Position. Restricted cash and cash equivalents are presented within the current or long-term portion of restricted special funds in the accompanying Statements of Net Position.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Cash and Investments...continued

MMWEC has adopted an investment policy, which is approved annually by MMWEC's Board of Directors as required by MMWEC's GBR. Although certain cash and temporary investment amounts used for power purchases and working capital requirements of MMWEC are not subject to the provisions of the GBR, they are subject to the provisions of the investment policy.

Investments are stated at fair value, as defined under fair value measurements above. No investments are reported at amortized cost. Adjustments necessary to record investments at fair value are recorded in the Statements of Revenues, Expenses and Changes in Net Position as increases or decreases in investment income.

Through its investment policy, MMWEC is restricted to investing in certain types of securities and investments, which are:

- a. Direct obligations of the United States of America
- b. Bonds, debentures, notes or other indebtedness issued by various federal agencies
- c. New housing authority bonds issued by public agencies or municipalities
- d. Bonds or notes issued by states and municipalities that are rated in one of the two highest rated categories by rating agencies
- e. Bank time deposits
- f. Repurchase agreements
- g. Federal funds or bankers acceptances
- h. Investment agreements

Accounts Receivable

Accounts receivable are stated at the amount management expects to collect from outstanding balances. Based on the validity of contracts and collection history, an allowance for doubtful accounts is not considered necessary. Should these circumstances change, an allowance for doubtful accounts would be provided for those accounts receivable considered to be uncollectible at the end of the year, and the bad debts would be written off against the allowance when identified.

Unbilled Revenue

Unbilled revenues are revenues that are not yet billed under the MMWEC Member and Participant agreements and other power arrangements and represent a portion of December services rendered that are collectible in January of the subsequent year.

Prepaid Expenses

Prepaid expenses represent insurance premiums, property taxes, payment in lieu of taxes and other similar contracts and arrangements paid in the current fiscal year benefiting future periods.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Inventories

Fuel oil and spare parts inventories are valued at the lower of cost or market and recorded and accounted for by the average cost method. At December 31, 2018 and 2017, total fuel oil inventory was at \$10.3 million and \$17.9 million, respectively, and spare parts inventory amounted to \$14.5 million and \$14.4 million, respectively.

Adjustments resulting from valuation of inventory are operating costs charged to inventory market adjustment on the accompanying Statements of Revenues, Expenses and Changes in Net Position. Such adjustments resulted in a loss of \$0.3 million and gain of \$4.8 million for the years ended December 31, 2018 and 2017, respectively.

Restricted Funds

MMWEC's practice is to use restricted funds on hand before using unrestricted funds when an expense is incurred for purposes for which both restricted and unrestricted funds are available.

Nuclear Decommissioning Trust

As required by the Nuclear Regulatory Commission (NRC) and respective state statutes and/or regulations, as well as MMWEC's own determinations, MMWEC has funded trust funds maintained by external trustees to provide for the estimated future decommissioning activities of Millstone Unit 3 and Seabrook Station. The balances at December 31, 2018 and 2017 for Millstone Unit 3 were \$47.8 million and \$48.3 million, respectively, and for Seabrook Station were of \$71.6 million and \$73.6 million, respectively, and are stated at fair value and are included in noncurrent charges and amounts recoverable (payable) under terms of the PSAs on the Statements of Net Position. Decommissioning balances for the Seabrook Station include funds in the New Hampshire Nuclear Decommissioning Trust and in an escrow account into which payments are made by MMWEC as a funding assurance mechanism. Depending on future circumstances, the funds held in the escrow account will be placed either in the Decommissioning Trust Fund for Seabrook Station, or will be returned to MMWEC, per order of the Nuclear Decommissioning Financing Committee of the State of New Hampshire.

Net Pension Asset

The Massachusetts Municipal Wholesale Electric Company Pension Plans (Plans) are two single-employer, defined benefit pension plans administered by MMWEC. One plan covers union employees (Union Plan) and the other plan covers non-union employees (Administration Plan). All full-time active administration employees hired before December 1, 2006, and all full-time active union employees hired before January 1, 2008 are covered by their respective plans. At December 31, 2018 and 2017, the net pension asset was \$1.5 million and \$5.2 million, respectively. The calculation and related assumptions of the net pension asset and terms of the Plans are discussed in Note 13 – Benefit Plans.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Designated Funds

Designated funds are held by MMWEC for a specific internal use.

Derivative Financial Instruments

MMWEC enters into contracts to hedge its exposure to fluctuating fuel oil prices for its ownership interest in Stony Brook Intermediate. MMWEC applies hedge accounting for derivatives that are deemed effective hedges. MMWEC's outstanding derivative instruments at December 31, 2017 met the effectiveness tests. MMWEC has no outstanding derivative instruments at December 31, 2018.

Other Noncurrent Charges

MMWEC advances both Millstone Unit 3 and Seabrook Station operating and capital expenditures based on budgeted levels. These advances are reduced when actual expenditures are incurred. At December 31, 2018 and 2017 these advances totaled \$14.9 million and \$14.0 million, respectively and are included in other noncurrent charges on the Statements of Net Position. The remaining balance of noncurrent charges is primarily comprised of MMWEC's equity investment in Hydro-Quebec Phase II interconnection as described in Note 16 - Contracts and Commitments.

Capital Assets – In Service

Capital assets – in service are generally defined by MMWEC as assets with an initial, individual cost of more than \$1,000 and an estimated useful life in excess of one year. Capital assets of MMWEC are recorded at cost at the date of acquisition. MMWEC capitalizes interest as an element of the cost of electric plant and nuclear fuel in process. The amount of interest capitalized is based on the cost of debt, including amortization of premiums, related to each Project, net of investment gains and losses, and interest income derived from unexpended restricted special funds. MMWEC capitalized no interest costs for the years ended December 31, 2018 and 2017, respectively.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Capital Assets – In Service...continued

Provisions for depreciation are computed using the straight-line method based on estimated useful lives for the underlying assets at Stony Brook and the administrative and general office on MMWEC's site (Service). Seabrook Station, Millstone and Wyman are depreciated based on the group life basis. The lives are as follows:

Stony Brook

Building	25 years
Building improvements	20 years
Equipment	20-30 years
Computer equipment and vehicles	3-4 years

Service

Office equipment and software	3-8 years
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Other Generation Facilities

Seabrook Station	60 years
Millstone Unit 3	60 years
W.F. Wyman No. 4	51 years

On March 12, 2019, NextEra Energy Seabrook, LLC, the lead owner of Seabrook Station, received approval from the Nuclear Regulatory Commission to extend Seabrook Station's operating license for an additional 20 years to 2050.

Construction Work in Progress

Construction work in progress is stated at cost. Any internal costs that are capitalized are limited to those costs that can be directly identified with the design, engineering or construction of a specific Project and do not include any costs related to production, general corporate overhead or similar activities. Depreciation of these costs will commence once placed in service.

Nuclear Fuel

Nuclear fuel, net of amortization, includes MMWEC's ownership interest in spent nuclear fuel, fuel in reactor, in stock and in process for both Millstone Unit 3 and Seabrook Station. The cost of nuclear fuel is amortized to fuel used in electric generation for each nuclear unit based on the relationship of energy produced in the current period to total expected energy production for fuel in the reactor. Fuel amortization expense of \$10.1 million as of December 31, 2018 and 2017, respectively, is included in operating expense on the accompanying Statements of Revenues, Expenses and Changes in Net Position.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Nuclear Fuel...continued

Fuel used in electric generation includes the annual assessment, under the Energy Policy Act of 1992, for the cost of decontamination and decommissioning of uranium enrichment plants operated by the U.S. Department of Energy (DOE). This assessment was discontinued as of May 15, 2014. In addition, a provision for fuel disposal costs is included in fuel used in electric generation based upon disposal contracts with the DOE. MMWEC, along with all of the other joint owners of both Millstone Unit 3 and Seabrook Station, has filed claims against the DOE in the United States Court of Claims for partial breach of the disposal contracts with the DOE.

With respect to Seabrook Station, in 2009, MMWEC and the other Seabrook Station joint owners settled their claims against the DOE, with the U.S. Department of Justice (DOJ), who represented the DOE. As the DOE has agreed in principle to settlements in regard to ongoing costs incurred related to the disposal contracts, accounts receivable related to these ongoing cost settlements have been recorded at December 31, 2018 and 2017 in the amount of \$190,000 and \$1.4 million, respectively. During 2017, \$953,000 in cost settlements were received by MMWEC. During 2018, no cost settlements were received by MMWEC. All of the amounts received in 2017 were disbursed to Seabrook Station and Millstone Unit 3 Project Participants as a credit on billings.

Deferred Outflows of Resources

Deferred outflows of resources are comprised of pension-related amounts and changes in fair value of cash flow hedges.

Accounts Payable and Accrued Expenses

At December 31, 2018, accounts payable and accrued liabilities total \$38.2 million which include \$12.9 million related to standard operating supplier and vendor accounts payable; \$19.9 million for power purchase accruals; \$705,000 for accrued interest on long term debt; and \$4.7 million for other miscellaneous accounts payable and accrued liabilities.

At December 31, 2017, accounts payable and accrued liabilities total \$30.3 million which include \$6.8 million related to standard operating supplier and vendor accounts payable; \$18.7 million for power purchase accruals; \$401,000 for accrued interest on long term debt; and \$4.4 million for other miscellaneous accounts payable and accrued liabilities.

Member and Participant Advances and Reserves

MMWEC maintains numerous operating reserves and advances from its Members and Project Participants in accordance with the PSAs, Power Purchase Agreements (PPAs) and other contractual arrangements. Member and Participant advances that are considered current liabilities were \$109.1 million and \$100.4 million for the years ended December 31, 2018 and 2017, respectively.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Member and Participant Advances and Reserves...continued

Other Member and Participant reserves for 2018 and 2017, which are considered long-term, were \$102.6 million and \$97.8 million, respectively. A reconciliation of the beginning and ending aggregate carrying amount of long-term Member and Participant Advances for the years ended December 31, 2018 and 2017 is as follows:

	2018	2017
	(In Thousands)	
Long-term member and participant advances, beginning of year	\$ 97,772	\$ 92,242
Additions	6,227	6,027
Deletions	(1,357)	(497)
	<u>102,642</u>	<u>97,772</u>
Long-term member and participant advances, end of year	<u>\$ 102,642</u>	<u>\$ 97,772</u>

Asset Retirement Obligations

MMWEC has identified certain asset retirement obligations (AROs), which are primarily associated with the decommissioning of MMWEC's ownership interest in Millstone Unit 3 and Seabrook Station and Wyman. During 2018, MMWEC revised its estimate of decommissioning costs required for Wyman Unit 4 fossil-fuel burning plant, resulting in an increase in the recorded obligation. There were no additional liabilities incurred or revisions to the estimated cash flows during 2017. A reconciliation of the beginning and ending aggregate carrying amount of AROs for the years ended December 31, 2018 and 2017 is as follows:

	2018	2017
	(In Thousands)	
Asset retirement obligations, beginning of year	\$ 161,840	\$ 154,163
Revisions in estimated cash flows	276	-
Accretion expense	8,062	7,677
	<u>170,178</u>	<u>161,840</u>
Asset retirement obligations, end of year	<u>\$ 170,178</u>	<u>\$ 161,840</u>

Accretion expense is included in other operating expenses in the Statements of Revenues, Expenses and Changes in Net Position. MMWEC's AROs, other than those associated with these assets, are not significant.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources ...continued

Asset Retirement Obligations...continued

AROs are recorded at the present value of amounts expected to be paid and capitalized as part of the cost of the related tangible long-lived assets. In the absence of quoted market prices, MMWEC estimated the present value of AROs using techniques involving discounted cash flow analysis.

Using such measurement techniques is dependent upon many subjective factors, including the selection of discount and cost escalation rates, identification of planned retirement activities and related cost estimates, and assertions of probability regarding the timing, nature and costs of such activities. Inputs and assumptions are based on the best information available at the time the estimates are made. However, estimates of future cash flows are highly uncertain by nature and may vary significantly from actual results.

Long-term Obligations

Long-term debt and other obligations are reported as noncurrent liabilities. Bond premiums are amortized over the life of the bonds using the effective interest method. The balance at year end for premiums is shown as an increase to long-term debt in the liability section of the accompanying Statements of Net Position.

Deferred Inflows of Resources

Deferred inflows of resources are comprised of pension-related amounts, changes in fair value of cash flow hedges and deferred gain on extinguishment of debt. Gains on prior refundings are amortized over the remaining life of the old debt or the life of the new debt, whichever is shorter.

Amounts Payable Under Terms of the Power Sales Agreements

Billings to Project Participants are structured to recover costs in accordance with the PSAs, which generally provide for billing debt service, operating expenses and reserve requirements. Expenses are reflected in the Statements of Revenues, Expenses and Changes in Net Position in accordance with GAAP. The timing difference between amounts billed and expensed is charged, or credited, to amounts recoverable (payable) under terms of the PSAs.

The principal differences include depreciation, fuel amortization, costs associated with canceled Projects (or assets abandoned within a Project), asset retirement obligations, cost of refinancing, billing for certain interest, reserves, net unrealized gains or losses on investments and other costs. In accordance with the PSAs, these amounts have been offset in amounts payable under terms of the PSAs on the Statements of Net Position. The December 31, 2018 and 2017 amounts payable balances of \$570.4 million and \$586.0 million, respectively, reflect the Statements of Revenues, Expenses and Changes in Net Position net decrease of \$15.6 million and net increase of \$1.4 million for the years then ended.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Revenues and Expenses

Revenues

Operating revenues include electric sales for resale provided through MMWEC's bulk power supply program. Revenues consist, in significant part, of billings under the PSAs, PPAs, and other power arrangements, net of debt service refunds to participants. MMWEC also records service revenues by providing its Members with power supply planning and related services, which are billed pursuant to the MMWEC Service Agreement or the All-Requirements Bulk Power Sales Agreement. Revenues related to financing and other activities are reflected as non-operating.

Revenues are comprised of the following:

	2018	2017
	(In Thousands)	
Electric sales for resale	\$ 259,976	\$ 229,485
Service and other	4,656	4,978
	<u>\$ 264,632</u>	<u>\$ 234,463</u>

Taxes

Chapter 775 of the Massachusetts Acts of 1975 (the Act) specifically exempts MMWEC from paying any taxes upon its income, existence or franchise, and any revenues from the transfer or sale of bonds issued by MMWEC. Chapter 775 exempts real and personal property situated within the Commonwealth from property taxation. However, the Act requires MMWEC to pay an amount in lieu of property taxes with respect to MMWEC assets in Massachusetts to any governmental body authorized to levy local taxes in Massachusetts. MMWEC pays an amount in lieu of property taxes for its interest in the Stony Brook Peaking and Intermediate fossil-fuel burning plants located in Ludlow, Massachusetts.

MMWEC pays property taxes for its ownership interest in Millstone Unit 3 located in Waterford, Connecticut, Seabrook Station, which is mostly located in Seabrook, New Hampshire and Wyman Unit 4 fossil-fuel burning plant, which is located in Yarmouth, Maine. In addition, MMWEC pays taxes for electric generation related to Millstone Unit 3.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND NATURE OF OPERATIONS...continued

Net Position Classification

Net position is required to be classified into three components – net investment in capital assets; restricted; and unrestricted. These classifications are defined as follows:

Net investment in capital assets - consists of capital assets, net of accumulated depreciation and costs recoverable from future billings, reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt also should be included in this component of net position. If there are significant unspent related debt proceeds at year-end, the portion of the debt attributable to the unspent proceeds is not included in the calculation of net investment in capital assets.

Restricted - consists of restricted assets, reduced by liabilities related to those assets, with constraints placed on their use either by a) external groups such as creditors (such as through debt covenants), contributors, or laws or regulations of other governments or b) law through constitutional provisions or enabling legislation.

Unrestricted - consists of the assets, deferred outflows of resources, liabilities and deferred inflows of resources that are not included in the net investment in capital assets or restricted component of net position.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes, and disclosure of contingent liabilities at the date of the financial statements. Estimates are used for, but not limited to, the selection of the useful lives of capital assets, provision necessary for contingent liabilities, accrued expenses, asset retirement obligations and other similar charges. Management believes that the estimates utilized in preparing its financial statements are reasonable and prudent. Actual results could differ from these estimates.

Effect of Future Accounting Standards on Current Period Financial Statements

GASB has approved Statement No. 83, *Certain Asset Retirement Obligations*, Statement No. 84, *Fiduciary Activities*, Statement No. 85, *Omnibus 2017*, Statement No. 86, *Certain Debt Extinguishment Issues*, Statement No. 87, *Leases*, Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period* and Statement No. 90, *Majority Equity Interests—an amendment of GASB Statements No. 14 and No. 61*. When they become effective, application of these standards may restate portions of these financial statements.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS

MMWEC's cash and investments (exclusive of the fiduciary funds and decommissioning trust) at December 31, 2018 and 2017 were comprised of the following:

Type of Investment or Cash Equivalent	2018		2017		Associated Risks
	Carrying Value	Bank & Investment Value	Carrying Value	Bank & Investment Value	
	(In Thousands)				
Cash and Cash Equivalents:					
Government Money Market Funds	\$ 6,909	\$ 6,909	\$ 204	\$ 204	Custodial Credit Risk
U.S. Treasury Bills	25,096	25,096	49,381	49,381	Credit Risk, Interest Rate Risk
U.S. Treasury Notes	1,367	1,367	-	-	Credit Risk, Interest Rate Risk
U.S. Agency Bonds	140	140	-	-	Credit Risk, Concentration of Credit Risk, Interest Rate Risk
U.S. Agency Discount Notes	5,423	5,423	16,635	16,635	Credit Risk, Concentration of Credit Risk, Interest Rate Risk
Municipal Bonds	3,149	3,149	-	-	Credit Risk, Concentration of Credit Risk, Interest Rate Risk
Deposits	21,580	21,501	22,973	23,550	Custodial Credit Risk
Total Cash and Cash Equivalents	<u>63,664</u>	<u>63,585</u>	<u>89,193</u>	<u>89,770</u>	
Other Investments:					
U.S. Treasury Bills	11,516	11,516	2,069	2,069	Credit Risk, Interest Rate Risk
U.S. Treasury Notes	17,939	17,939	17,455	17,455	Credit Risk, Interest Rate Risk
U.S. Agency Bonds	135,903	135,903	72,742	72,742	Credit Risk, Concentration of Credit Risk, Interest Rate Risk
U.S. Agency Discount Notes	3,200	3,200	234	234	Credit Risk, Concentration of Credit Risk, Interest Rate Risk
Municipal Bonds	7,998	7,998	23,296	23,296	Credit Risk, Concentration of Credit Risk, Interest Rate Risk
Total Other Investments	<u>176,556</u>	<u>176,556</u>	<u>115,796</u>	<u>115,796</u>	
Totals	<u>\$ 240,220</u>	<u>\$ 240,141</u>	<u>\$ 204,989</u>	<u>\$ 205,566</u>	

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

MMWEC's investments in the Decommissioning Trust are held by independent trustees. Investments are limited to those defined by the investment policy, and are comprised of the following at December 31:

Type of Investment or Cash Equivalent	2018		2017		Associated Risks
	Carrying Value	Bank & Investment Value	Carrying Value	Bank & Investment Value	
	(In Thousands)				
Cash and Cash Equivalents:					
Money Market Fund	\$ 12,018	\$ 12,018	\$ 11,538	\$ 11,538	Custodial Credit Risk
Total Cash and Cash Equivalents	<u>12,018</u>	<u>12,018</u>	<u>11,538</u>	<u>11,538</u>	
Other Investments:					
Mutual Funds - equity	51,305	51,305	54,463	54,463	Credit Risk, Concentration of Credit Risk
FPL Minority Owner Trust	23,479	23,479	23,438	23,438	Credit Risk, Interest Rate Risk, Concentration of Credit Risk, Credit Risk, Concentration of Credit Risk
Common stock - equities	10,820	10,820	11,359	11,359	Credit Risk, Interest Rate Risk, Concentration of Credit Risk
US Treasury securities	7,901	7,901	7,973	7,973	Credit Risk, Interest Rate Risk, Concentration of Credit Risk
Corporate Bonds	8,727	8,727	8,875	8,875	Credit Risk, Interest Rate Risk, Concentration of Credit Risk
US Agency Securities	4,369	4,369	3,544	3,544	Credit Risk, Interest Rate Risk, Concentration of Credit Risk
Municipal Bonds	616	616	480	480	Credit Risk, Interest Rate Risk, Concentration of Credit Risk
Mutual Funds - fixed	205	205	289	289	Credit Risk, Concentration of Credit Risk
Total Other Investments	<u>107,422</u>	<u>107,422</u>	<u>110,421</u>	<u>110,421</u>	
Totals	<u>\$ 119,440</u>	<u>\$ 119,440</u>	<u>\$ 121,959</u>	<u>\$ 121,959</u>	

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

MMWEC's investments in the defined benefit pension plans fiduciary funds are held by an independent trustee. Investments are limited to those defined by the investment policy, and are comprised of the following at December 31:

Type of Investment or Cash Equivalent	2018		2017		Associated Risks
	Carrying Value	Bank & Investment Value	Carrying Value	Bank & Investment Value	
(In Thousands)					
Other Investments:					
Mutual Funds - equity	\$ 20,284	\$ 20,284	\$ 21,033	\$ 21,033	Credit Risk, Concentration of Credit Risk
Mutual Funds - bonds	3,028	3,028	5,299	5,299	Credit Risk, Interest Rate Risk, Concentration of Credit Risk
Guaranteed Income Account	1,555	1,555	2,371	2,371	Credit Risk, Concentration of Credit Risk
Total Other Investments	<u>\$ 24,867</u>	<u>\$ 24,867</u>	<u>\$ 28,703</u>	<u>\$ 28,703</u>	

Investments are stated at fair value, which is the amount at which an investment could be exchanged in a current transaction between willing parties. Fair values are based on methods and inputs as outlined below. No investments are reported at amortized cost. The difference between the bank and investment value and carrying value is due to outstanding checks and/or deposits in transit.

Custodial Credit Risk

Deposits and Money Market Funds

Custodial credit risk is the risk that, in the event of a financial institution failure, MMWEC's deposits may not be returned to MMWEC. The aggregate amount of noninterest bearing and interest bearing accounts are insured by the FDIC up to at least \$250,000. There was \$28.2 million and \$23.5 million uninsured and uncollateralized bank balances subject to custodial credit risk at December 31, 2018 and 2017, respectively. There was \$11.3 million and \$10.8 million uninsured and uncollateralized decommissioning trust balances subject to custodial credit risk at December 31, 2018 and 2017, respectively.

MMWEC's investment policy and decommissioning trust investment policy do not address custodial credit risk.

Investments

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, MMWEC will not be able to recover the value of its investment or collateral securities that are in the possession of the custodians.

At December 31, 2018 and 2017, all investments were held in MMWEC's name by custodians consisting of the Bond Fund Trustee (as defined in the GBR), or MMWEC's depository bank.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

Custodial Credit Risk...continued

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

As of December 31, MMWEC's investments were rated as follows:

Investments Type	Fair Value		Credit Rating
	2018	2017	
	(In Thousands)		
U.S. Agency	\$ 144,666	\$ 89,612	AA+
Municipal Bonds	11,147	23,296	AAA - AA-
U.S. Treasuries	55,918	68,904	AA+
Totals	<u>\$ 211,731</u>	<u>\$ 181,812</u>	

MMWEC's investment policy addresses credit risk by defining allowable investments and a maximum allocation to each asset class.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of MMWEC's investment in a single issuer.

At December 31, 2018 and 2017, MMWEC's investment portfolio was concentrated as follows:

Issuer	Investment Type	Percentage of Portfolio	
		2018	2017
Federal National Mortgage Assn.	U.S. Agency Securities	7.95%	8.20%
Federal Farm Credit Bank	U.S. Agency Securities	9.46%	7.65%
Federal Home Loan Bank	U.S. Agency Securities	27.83%	18.26%
Federal Home Loan Mortgage	U.S. Agency Securities	14.83%	9.43%
Municipal Bond Anticipation Notes	Municipal Bonds	4.64%	11.36%

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

Concentration of Credit Risk...continued

MMWEC's investment policy minimizes concentration of credit risk in a single issuer by diversification of investment types using the following maximum limits, which are established for MMWEC's total portfolio at December 31, 2018 and 2017, as follows:

Repurchase Agreements	10%
Certificates of Deposits	10%
U.S. Treasury Securities	100%
U.S. Agencies	65%
Municipal Securities	20%

Deviation from the approved portfolio limits requires written authorization and approval from the MMWEC Board of Directors.

In accordance with the investment policy for the decommissioning trust, exposure to concentration of credit risk is managed through diversification by limiting investments to no more than 5% of the total portfolio's value in one single issuer, with the exception of fixed income permissible direct investments listed below:

Foreign Securities	10%
Mortgage-backed Securities	25%
Individual Corporate Sector	20%

In accordance with the investment guidelines for the defined benefit pension fiduciary funds, assets should be invested to provide a rate of return sufficient to meet the investment assumptions inherent in the actuarial projection for the plans.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment.

At December 31, 2018, the maturities of MMWEC's investments were as follows:

Investment Type	Fair Value	Maturity In Years		
		Less than 1	1 – 5	Over 5
(In Thousands)				
U.S. Treasury Securities	\$ 55,918	\$ 52,755	\$ 2,761	\$ 402
U.S. Agency Securities	144,666	18,424	122,292	3,950
Municipal Bonds	11,147	5,891	5,256	-
Totals	<u>\$ 211,731</u>	<u>\$ 77,070</u>	<u>\$ 130,309</u>	<u>\$ 4,352</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

At December 31, 2017, the maturities of MMWEC's investments were as follows:

Investment Type	Fair Value	Maturity In Years		
		Less than 1	1 – 5	Over 5
(In Thousands)				
U.S. Treasury Securities	\$ 68,904	\$ 55,846	\$ 11,634	\$ 1,424
U.S. Agency Securities	89,612	47,667	41,945	-
Municipal Bonds	23,296	12,099	11,197	-
Totals	<u>\$ 181,812</u>	<u>\$ 115,612</u>	<u>\$ 64,776</u>	<u>\$ 1,424</u>

MMWEC's investment policy specifies that MMWEC shall seek to maximize the return on investments consistent with requirements for safety, minimization of risk and liquidity. Monies will not be invested for terms in excess of the projected use of funds nor exceed an average life of ten years.

Decommissioning Trust - Credit Risk and Interest Rate Risk

As of December 31, 2018, MMWEC's decommissioning trust investments were rated as follows:

Investment Type	Credit Rating	Fair Value	Maturity In Years		
			Less than 1	1 – 5	Over 5
(In Thousands)					
U.S. Treasuries	n/a	\$ 7,901	\$ 1,440	\$ 3,819	\$ 2,643
Corporate Bonds	AAA - BBB, n/a	8,727	506	3,628	4,592
U.S. Agency Securities	AAA, n/a	4,369	-	15	4,354
Municipal Bonds	AA+ - A-, n/a	616	-	66	550
Totals		<u>\$ 21,613</u>	<u>\$ 1,946</u>	<u>\$ 7,528</u>	<u>\$ 12,139</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

Decommissioning Trust - Credit Risk and Interest Rate Risk...continued

As of December 31, 2017, MMWEC's decommissioning trust investments were rated as follows:

Investment Type	Credit Rating	Fair Value	Maturity In Years		
			Less than 1	1 – 5	Over 5
(In Thousands)					
U.S. Treasuries	n/a	\$ 7,973	\$ 735	\$ 3,595	\$ 3,643
Corporate Bonds	AAA - BBB-, n/a	8,874	82	3,940	4,853
U.S. Agency Securities	AAA, n/a	3,544	45	3,027	472
Municipal Bonds	AAA - A-, n/a	480	193	99	188
Totals		<u>\$ 20,871</u>	<u>\$ 1,055</u>	<u>\$ 10,661</u>	<u>\$ 9,156</u>

Investments held in mutual funds and common stock are not rated and do not have a specified maturity date. MMWEC's decommissioning trust investment policy does not address credit risk or interest rate risk.

Fiduciary Funds - Credit Risk and Interest Rate Risk

MMWEC's investments in the defined benefit pension fiduciary funds were rated as follows at December 31:

Investment Type	Fair Value		Credit Rating	Maturity Date
	2018	2017		
(In Thousands)				
Mutual Funds - bonds	\$ 3,028	\$ 5,299	A-	Less than 1 year

Investments held in equity mutual funds and guaranteed income account are not rated and do not have a specified maturity date. MMWEC's fiduciary fund investment policy does not address credit risk or interest rate risk.

Investment Income

For the year ended December 31, 2018, net unrealized losses on investments totaled \$6.4 million. For the year ended December 31, 2017, net unrealized gains on investments totaled \$10.0 million. The net unrealized losses and gains are excluded from operating revenue and are reported within investment income on the Statements of Revenues, Expenses and Changes in Net Position.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

2. CASH AND INVESTMENTS...continued

Investment Income...continued

During the years ended December 31, 2018 and 2017, investment income (loss) consisted of interest income, realized gains/(losses) and unrealized gains/(losses) as follows:

	<u>2018</u>	<u>2017</u>
	(In Thousands)	
Interest income:		
Unrestricted funds	\$ 422	\$ -
Restricted funds	1,133	1,567
Designated funds	1,091	630
Decommissioning funds	<u>2,710</u>	<u>2,357</u>
Total interest income	<u>5,356</u>	<u>4,554</u>
Realized gains:		
Restricted funds	8	180
Designated funds	-	3
Decommissioning funds	<u>-</u>	<u>-</u>
Net realized gains	<u>8</u>	<u>183</u>
Unrealized gains (losses):		
Restricted funds	(79)	(454)
Designated funds	6	(321)
Decommissioning funds	<u>(6,373)</u>	<u>10,831</u>
Net unrealized gains	<u>(6,446)</u>	<u>10,056</u>
Total investment income (loss)	<u>\$ (1,082)</u>	<u>\$ 14,793</u>

3. RESTRICTED AND DESIGNATED ASSETS

Mandatory segregations of assets are presented as restricted funds. Such segregations are required by bond agreements and other external parties.

Segregations of assets determined internally by MMWEC management are presented as designated funds.

Numerous restricted funds are required by the GBR pursuant to which MMWEC issued its long-term debt. The restricted funds are invested in accordance with the provisions of the GBR. Certain working capital and other funds are not mandated by the GBR and are classified as designated funds; however, they are invested in accordance with the provisions of the investment policy under the GBR. The restricted net position is less than the total restricted funds, as the advances collected from Project Participants are in excess of the related restricted funds.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

3. RESTRICTED AND DESIGNATED ASSETS...continued

The composition of restricted and designated fund is as follows for the year ended December 31:

	2018	2017
	(In Thousands)	
<u>Restricted Funds</u>		
Bond Fund Interest, Principal and Retirement Accounts to pay principal and interest on bonds	\$ 3,721	\$ 2,015
Bond Fund Reserve Account set at the maximum annual interest obligation to make up any deficiencies in the Bond Fund Interest, Principal and Retirement Account	8,243	10,001
Reserve and Contingency Fund to make up deficiencies in the Bond Funds and pay for repairs and extraordinary costs	7,565	12,261
Revenue Fund to receive revenues and disburse them to the Bond Funds and other funds	24,492	37,781
Funds obtained from terminated power purchase contract	6,668	6,695
Working Capital Funds to maintain funds to cover operating expenses	20,171	20,250
Pooled loan lines of credit	<u>14,252</u>	<u>4,375</u>
Total Restricted Funds and Interest Receivable	<u>85,112</u>	<u>93,378</u>
Less – current portion	(64,030)	(47,112)
Interest receivable	<u>(220)</u>	<u>(273)</u>
Total Restricted Funds, Long-term	<u>\$ 20,862</u>	<u>\$ 45,993</u>
<u>Nuclear Decommissioning Funds</u>		
Nuclear decommissioning funds	<u>\$ 119,440</u>	<u>\$ 121,959</u>
<u>Designated Funds</u>		
Capital Reserve Fund to pay Nuclear Capital Expenditures	\$ 1,888	\$ 5,519
Other Funds for indemnification or purchase of insurance, funds contributed for an agreement where MMWEC acts as agent and long-term investments for the Nuclear Mix No. 1, Nuclear Project 3,4, and 5 Intermediate, Peaking and Wyman Projects and fuel line of credit	<u>133,392</u>	<u>96,118</u>
Designated Funds and Interest Receivable	135,280	101,637
Less - current portion	(6,553)	(969)
Interest receivable	<u>(483)</u>	<u>(315)</u>
Total Designated Funds, Long-Term	<u>\$ 128,244</u>	<u>\$ 100,353</u>

For financial reporting purposes, interest receivable has been disclosed separately on the Statements of Net Position.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

4. CHANGES IN CAPITAL ASSETS

A summary of changes in capital assets for 2018 and 2017 is as follows:

	Balance 1/1/2018	Additions/ Reclassifications	Deletions/ Reclassifications	Balance 12/31/2018
	(In Thousands)			
Capital assets not being depreciated:				
Land	\$ 3,869	\$ -	\$ -	\$ 3,869
Capital assets being depreciated:				
Plant in service	1,419,868	7,095	(481)	1,426,482
Less - accumulated depreciation	<u>893,662</u>	<u>17,556</u>	<u>(478)</u>	<u>910,740</u>
Net plant	<u>\$ 530,075</u>	<u>\$ (10,461)</u>	<u>\$ (3)</u>	<u>\$ 519,611</u>

At December 31, 2018 there were no insurance reimbursements included in fixed assets.

	Balance 1/1/2017	Additions/ Reclassifications	Deletions/ Reclassifications	Balance 12/31/2017
	(In Thousands)			
Capital assets not being depreciated:				
Land	\$ 3,869	\$ -	\$ -	\$ 3,869
Capital assets being depreciated:				
Plant in service	1,411,443	9,696	(1,271)	1,419,868
Less - accumulated depreciation	<u>877,254</u>	<u>17,650</u>	<u>(1,242)</u>	<u>893,662</u>
Net plant	<u>\$ 538,058</u>	<u>\$ (7,954)</u>	<u>\$ (29)</u>	<u>\$ 530,075</u>

At December 31, 2017 an insurance reimbursement of \$837,000 is included in fixed assets.

A summary of changes in construction work in progress for 2018 and 2017 is as follows:

Year	Balance at January 1,	Additions	Transfers to In Service	Balance at December 31,
	(In Thousands)			
2018	<u>\$ 16,884</u>	<u>\$ 12,450</u>	<u>\$ (280)</u>	<u>\$ 29,054</u>
2017	<u>\$ 15,764</u>	<u>\$ 2,308</u>	<u>\$ (1,188)</u>	<u>\$ 16,884</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

4. CHANGES IN CAPITAL ASSETS...continued

A summary of changes in nuclear fuel for 2018 and 2017 is as follows:

Year	Balance at January 1,	Additions	Deletions	Amortization	Balance at December 31,
			(In Thousands)		
2018	\$ 23,043	\$ 10,369	\$ -	\$ (10,054)	\$ 23,358
2017	\$ 24,515	\$ 8,653	\$ (27)	\$ (10,098)	\$ 23,043

5. SHORT-TERM DEBT

MMWEC maintains a \$25.0 million loan facility which allows for borrowings by MMWEC to finance, temporarily, certain power purchases made by MMWEC for resale to the Members and other municipal systems under various power contracts between MMWEC and the municipal systems (Power Contracts). Borrowings attributable to a Power Contract under this loan facility are secured by the following: a lien on and/or security interest in all proceeds of any loans prior to disbursement by MMWEC, all amounts payable to MMWEC by the Power Contract Participants under the Power Contract, and earnings from MMWEC's temporary investments of such proceeds and amounts payable. The amount payable by a Power Contract Participant with respect to a Power Contract is limited to the amount allocated to that Participant.

At December 31, 2018 and 2017, there was \$21.4 million and \$0, respectively, outstanding under the loan facility. During 2018 and 2017, the maximum outstanding balance under the line of credit was \$2.7 million and \$1.8 million, respectively. The interest rate for the borrowings under this line of credit is at MMWEC's election prior to the last day of any interest period of either the LIBOR rate plus 1.50% per annum, or at a variable rate selected by MMWEC, which is either the prime rate or the BBA LIBOR Daily Floating Rate plus 1.50%. In addition, a commitment fee of .250% per annum is charged on the unused portion of the loan facility based on the average daily principal amount of the borrowing outstanding. This loan facility expires December 15, 2019. MMWEC has historically renewed this line of credit annually.

MMWEC also maintains a \$15.0 million revolving line of credit for the purpose of financing purchases of fuel oil and selling such fuel oil from the Stony Brook Fuel Oil Project to the Intermediate and Peaking Projects. Borrowings under this line of credit are secured by the following: a lien on and/or security interest in all proceeds of any borrowings prior to disbursement by MMWEC, all amounts payable by the Intermediate and Peaking Projects to the Stony Brook Fuel Oil Project for fuel oil, and all earnings from MMWEC's investments of any such proceeds and amounts payable to the bank. There were no borrowings outstanding under the loan facility as of December 31, 2018 and 2017. During 2018 and 2017, the maximum outstanding balance under the line of credit was \$0 and \$0, respectively. The interest rate for the borrowings under this line of credit after December 31, 2018 is at MMWEC's election prior to the last day of any interest period of either the LIBOR rate plus 1.50% per annum, or at a variable rate selected by MMWEC, which is either the prime rate or the BBA LIBOR Daily Floating Rate plus 1.50%. If no such selection is made, the variable rate is in effect.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

5. SHORT-TERM DEBT...continued

In addition, a commitment fee of .250% per annum is charged on the unused portion of the loan facility based on the average daily principal amount of the borrowing outstanding. This line of credit expires December 15, 2019. MMWEC has historically renewed this line of credit annually.

In 2014, MMWEC established a \$50.0 million short term revolving facility for the purpose of borrowing funds to either make loans to Members to finance the acquisition of various utility assets, or to purchase various utility assets to be leased to Members. In March 2017, MMWEC converted a portion of the short-term debt outstanding under the Pooled Loan Program to individual term loans for each of the three Members in the Program. At December 31, 2018 and 2017, the outstanding balance under this line of credit was \$28.5 million and \$5.4 million, respectively. The maximum outstanding balance during 2018 and 2017 was \$28.6 million and \$20.8 million, respectively. Subject to certain tax and default events, the interest rate for the borrowings under the line of credit is set at a rate per annum equal to the sum of (i) 70% of the LIBOR daily floating rate plus (ii) 1.15%. At December 31, 2018, the outstanding borrowings are at 2.9157%. In addition, a commitment fee of .250% per annum is charged on the unused portion of the revolving loan facility based on the average daily principal amount of the borrowing outstanding. On December 15, 2017, this loan facility was amended to \$42.5 million. On September 11, 2018, this loan facility was amended to \$30.2 million. This loan facility expires March 31, 2019.

The following short-term debt activity occurred in 2018 and 2017:

Year	Balance at January 1,	Additions	Deletions	Balance at December 31,
		(In Thousands)		
2018	\$ 5,419	\$ 36,950	\$ (13,893)	\$ 28,476
2017	\$ 20,752	\$ 9,067	\$ (24,400)	\$ 5,419

6. LONG-TERM DEBT

General Bond Resolution and Power Supply System Revenue Bonds

MMWEC issued separate issues of Bonds for each Project, which are payable solely from, and secured solely by, the revenues derived from the Project to which such issue relates, plus available funds pledged under the GBR for the Bonds of such issues. The revenues derived from each Project are used solely to provide for the payment of the Bonds of any Bond issue relating to such Project, and to pay MMWEC's cost of owning and operating such Project, and are not used to provide for the payment of the Bonds of any Bond issue relating to any other Project.

Pursuant to all of the Project PSAs, each Project Participant is obligated to pay its share of the actual costs relating to the Project's generating units, and its share of all principal, premium and interest associated with the Bonds for the Projects in which the Project Participant has a PSA, and for which the Project Participant is obligated to set rates at levels sufficient to pay such costs. These obligations are not contingent upon the operational status of the Project's units.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

6. LONG-TERM DEBT...continued

General Bond Resolution and Power Supply System Revenue Bonds...continued

MMWEC's issuance of debt, other than obligations with a maturity of less than one year, requires authorization by the Massachusetts Department of Public Utilities.

Series 2011 Revenue Bonds

Interest on the Series 2011 bonds dated June 2011 is payable in semi-annual installments on January 1 and July 1. The Series 2011 bonds bear interest at a fixed rate ranging from 4.0% to 5.0% for the various issues.

Series One Revenue Bonds

The Series One bonds dated November 2001 of each issue are subject to redemption at the option of MMWEC, in whole or in part, at a redemption price of 100% of the principal amount.

Pooled Loan Program Bond Series 2017A - Term Notes

In March 2017, MMWEC converted a portion of the short-term debt outstanding under the Pooled Loan Program to individual term loans for each of the three Members in the Program. The loans issued totaled \$20.2 million with fixed interest rates ranging between 3.05% and 3.15% and terms ranging between ten and fifteen years. Principal, interest and any fees associated with the loans are payable solely by each Member for which each loan was issued.

Long-term Debt Issues

At December 31, 2018 and 2017, long-term debt is comprised of the following serial and variable-rate bonds and term notes:

<u>Issue</u>	<u>Net Interest Cost</u>	<u>December 31,</u>	
		<u>2018</u>	<u>2017</u>
		(In Thousands)	
Nuclear Project No. 3, Series 2011 (Original Issue \$31,895)	2.40%	\$ -	\$ 1,495
Project No. 6, Series 2011 (Original Issue \$36,180)	3.10%	5,260	5,260
Nuclear Project No. 3, Series One (Original Issue \$62,975)	Variable	-	1,700
Nuclear Project No. 5, Series One (Original Issue \$9,025)	Variable	-	225
Project No. 6, Series One (Original Issue \$52,100)	Variable	1,850	2,000
Pooled Loan Program Bond Series 2017A - Term Note	3.05% - 3.15%	18,648	20,196
Long-term debt		25,758	30,876
Unamortized premium		41	137
Less: Current maturities, including unamortized premiums		(8,699)	(5,214)
Total Long-Term Debt, net of premiums and current maturities		<u>\$ 17,100</u>	<u>\$ 25,799</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

6. LONG-TERM DEBT...continued

The following is a summary of total estimated debt service requirements for long-term debt outstanding at December 31, 2018:

	<u>Principal</u>	<u>Interest</u> (In Thousands)	<u>Total</u>
2019	\$ 8,658	\$ 737	\$ 9,395
2020	1,548	518	2,066
2021	1,548	468	2,016
2022	1,548	418	1,966
2023	1,548	372	1,920
2024-2028	7,136	1,128	8,264
2029-2032	3,772	240	4,012
Totals	<u>\$ 25,758</u>	<u>\$ 3,881</u>	<u>\$ 29,639</u>

Future interest requirements on variable rate debt were calculated using 4.5% per annum.

The interest rates on the Series One variable rate Bonds may be converted, at the option of MMWEC, to a daily, weekly, flexible, term or fixed mode. The realized interest rate on the Series One variable rate Bonds during 2018 and 2017 was 2.87% and 1.63%, respectively.

Financial and credit market disruption in 2008 resulted in failed auctions for MMWEC Series One variable rate debt. MMWEC Series One variable rate bonds have subsequently priced at the Maximum Auction Rate. The Maximum Auction Rate means, as of any Auction Date, the product of the Index multiplied by the Auction Mode Multiple. The index on any Auction Date with respect to the Series One Bonds of a particular Issue in any Auction Period of 35 days or less will be the Seven-Day "AA" Composite Commercial Paper Rate on such date. The Auction Mode Multiple, means, as of any Auction Date and with respect to the Series One Bonds of a particular Issue, the Percentage of Index determined based on the prevailing Rating of the Series One Bonds.

At December 31, 2018, the following are the detail terms of all variable rate debt:

<u>Project</u>	<u>2018 Average Auction Rate</u>	<u>Auction Mode</u>
clear Project No. 3, Series One	2.73%	Weekly
clear Project No. 5, Series One	2.83%	Weekly
ject No. 6, Series One	3.06%	Daily

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

6. LONG-TERM DEBT...continued

Long-Term Debt Issues...continued

The following summarizes changes in long-term debt, net of premiums, for 2018 and 2017:

Year	Balance at January 1,	Additions	Payments (In Thousands)	Amortization of Premium	Balance at December 31,
2018	\$ 31,013	\$ -	\$ (5,117)	\$ (97)	\$ 25,799
2017	\$ 56,640	\$ 20,196	\$ (45,115)	\$ (708)	\$ 31,013

Interest paid for long-term debt during 2018 and 2017 was \$729,000 and \$2.4 million, respectively.

7. AMOUNTS PAYABLE UNDER TERMS OF THE POWER SALES AGREEMENTS

Differences between amounts billed to Members and Project Participants and revenues and expenses recognized are included in amounts payable under the terms of the power sales agreements. These differences are made up of debt service collections, including amounts collected for the Reserve & Contingency fund, capital expenditures funded through reserve billings and unbilled operating and non-operating expenses and revenues. A summary of the items included in amounts payable in the future under the terms of the power sales contract for the years ended December 31, 2018 and 2017 is as follows:

	2018	2017
	(In Thousands)	
Beginning balance - January 1	\$ 586,004	\$ 584,573
Unbilled operating and nonoperating expenses and revenues:		
Depreciation/amortization	(17,364)	(17,358)
Accretion	(8,227)	(7,678)
Financing costs	36	(91)
Amortization of bond premiums and discounts	96	708
Fuel inventory loss due to market adjustment	(285)	4,641
Realized and unrealized gains and interest income	(3,806)	12,326
Lease revenue	38	38
Capital funded through reserve billings	9,104	9,712
Decommissioning fund contributions, net of fees	1,143	1,525
Debt service collections:		
Billed principal on long-term debt	3,630	(2,392)
Ending Balance - December 31	<u>\$ 570,369</u>	<u>\$ 586,004</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

8. DERIVATIVE INSTRUMENTS

Summary of Notational Amounts and Fair Values

MMWEC enters into contracts to hedge its exposure to fluctuating fuel oil prices for its ownership interest in Stony Brook Intermediate. These contracts are evaluated pursuant to GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, to determine whether they meet the definition of derivative instruments, and, if so, whether they effectively hedge the expected cash flows associated with fuel oil.

MMWEC applies hedge accounting for derivatives that are deemed effective hedges. Under hedge accounting, the increase (decrease) in the fair value of a hedge is reported as a deferred inflow (outflow) on the Statements of Net Position. Outstanding hedging derivative instruments were evaluated for effectiveness as of December 31, 2017 using the consistent critical terms method. MMWEC purchases oil puts in the same quantity of the hedged item at the same delivery location and uses reference pricing from the same hub. The derivative instruments outstanding at December 31, 2017 meet the effectiveness tests. MMWEC has no outstanding derivative instruments at December 31, 2018.

The fair value of MMWEC's effective cash flow hedges, fuel oil put options contracts, was \$0, representing a notional value of 2.7 million gallons, at December 31, 2017, respectively. The fair value from date of purchase to December 31, 2017 decreased \$434,000, respectively, and is included in deferred outflows of resources on the accompanying Statements of Net Position. Fair value was determined using an estimate obtained from MMWEC's counterparty, which was independently verified.

Objectives and Terms of Hedging Derivative Instruments

The objectives and terms of MMWEC's fuel oil options that were outstanding at December 31, 2017 are summarized in the table below.

Objective	Effective Date	Maturity Date	Terms	Counterparty Rating (Standard & Poor's)
Hedge cash flows on Stony Brook Intermediate fuel oil purchases	May-16	Mar-18	Puts with \$1.33/gal; Settle on NYMEX	BBB+

MMWEC hedges its fuel oil costs so that it can offer predictable rates to the Stony Brook Intermediate Project Participants. MMWEC maintains an Enterprise Risk Management Program, which controls the credit and operational risks arising from its fuel oil market activities.

Credit Risk

Credit risk is the risk of loss due to a counterparty defaulting on its obligations. MMWEC seeks to minimize credit risk by transacting with creditworthy counterparties. MMWEC's Enterprise Risk Management Program restricts MMWEC from executing transactions with counterparties rated lower than BBB-, or equivalent

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

8. DERIVATIVE INSTRUMENTS...continued

Basis Risk

Basis risk is the risk that arises when a hedged item and a derivative that is attempting to hedge that item are based on different indices. MMWEC's hedged items and derivatives are priced on the same index, so there is no basis risk for the derivative instruments outstanding at December 31, 2017.

Termination Risk

Termination risk is the risk that a derivative will terminate prior to its scheduled maturity due to a contractual event. Contractual events include bankruptcy, illegality, default and mergers in which the successor entity does not meet credit criteria. Termination risk is associated with MMWEC's derivative instruments outstanding at December 31, 2017 up to the fair value amounts.

9. FAIR VALUE MEASUREMENT

MMWEC records assets and liabilities in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, which determines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurement.

Fair value is defined in Statement No. 72 as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). Fair value is a market-based measurement for a particular asset or liability based on assumptions that market participants would use in pricing the asset or liability. Such assumptions include observable and unobservable inputs of market data, as well as assumptions about risk and the risk inherent in the inputs to the valuation technique.

As a basis for considering market participant assumptions in fair value measurements, Statement No. 72 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

- **Level 1** inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date. Equity securities and U.S. Government Treasury securities are examples of Level 1 inputs.
- **Level 2** inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Government agency and mortgage-backed securities are examples of Level 2 inputs.
- **Level 3** inputs are unobservable inputs that reflect MMWEC's own assumptions about factors that market participants would use in pricing the asset or liability (including assumptions about risk).

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

9. FAIR VALUE MEASUREMENT...continued

Valuation methods of the primary fair value measurements disclosed below are as follows:

- The majority of investments in equity securities are valued using Level 1 measurements. Investments in equity securities are typically valued at the closing price in the principal active market. For equity securities, these markets include published exchanges such as the National Association of Securities Dealers Automated Quotations and the New York Stock Exchange.
- Most investments in debt securities are valued using Level 2 measurements because the valuations use interest rate curves and credit spreads applied to the terms of the debt instrument (maturity and coupon interest rate) and consider the counterparty credit rating.
- Commodity derivatives, such as futures, swaps and options, which are ultimately settled using prices at locations quoted through clearinghouses are valued using level 1 inputs. Options included in this category are those with an identical strike price quoted through a clearinghouse.

Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. MMWEC's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of fair value assets and liabilities and their place within the fair value hierarchy levels.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

11. POOLED LOAN PROGRAM...continued

MMWEC issues Promissory Notes to Members who borrow funds under this program and the interest and any fees associated with the Notes are payable solely by each Member who utilizes the program funds for their portion of the funds used. As of December 31, 2018 and 2017, loans receivable of \$25.7 million and \$21.8 million are included in accounts receivable on the accompanying Statement of Net Position. The accounts receivable relate to five and three Members as of December 31, 2018 and 2017, respectively.

12. LEASES

During 2018, MMWEC entered into contracts with three Members which qualify as capital leases. Under the contracts, MMWEC acts as lessor of certain generating facilities to each Member. The generating facilities are under construction as of December 31, 2018 and are included in capital work in progress on the accompanying Statement of Net Position. The future minimum lease payments related to the capital leases total \$9.8 million and are due in January 2019.

13. BENEFIT PLANS

Defined Benefit Plans

The Massachusetts Municipal Wholesale Electric Company Pension Plans (Plans) are two single-employer, defined benefit pension plans administered by MMWEC. One plan covers union employees (union plan) and the other plan covers non-union employees (administration plan). All full-time active administration employees hired before December 1, 2006, and all full-time active union employees hired before January 1, 2008 are covered by their respective plans. The Plans provide a defined benefit to employees based on years of service and average earnings. The Plans provide retirement, disability, and death benefits to plan members and beneficiaries. Administrative or union employees hired after these dates qualify for a Defined Contribution plan as described below. Certain other financial information concerning the plans, in addition to the information contained here, is provided annually to plan participants. No standalone financial statements are issued for the Plans.

Plan participants providing the basis of the actuarial valuations used to calculate, as of the measurement dates, the net pension liability for the years ended December 31, were:

Status	Administrative		Union	
	2018	2017	2018	2017
Active	23	25	9	11
Terminated vested	24	26	13	9
Retirees and beneficiaries	21	21	4	4
	<u>68</u>	<u>72</u>	<u>26</u>	<u>24</u>

All MMWEC employees are eligible to make a voluntary contribution in accordance with prescribed annual dollar limits to a deferred compensation plan sponsored by the Commonwealth of Massachusetts. The deferred compensation plan is maintained pursuant to Section 457(b) of the Internal Revenue Code and the General Laws of Massachusetts.

MMWEC's net pension asset at December 31, 2018 and 2017 was measured as of December 31, 2018 and 2017, respectively. The total pension liability used to calculate the net pension asset was determined by actuarial valuations as of January 1, 2018 and 2017 rolled forward using generally accepted actuarial procedures to the December 31, 2018 and 2017, measurement dates, respectively.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

13. BENEFIT PLANS...continued

Defined Benefit Plans...continued

MMWEC's change in net pension asset for the years ended December 31, 2018 and 2017 are as follows:

	Administration Plan		Union Plan	
	2018	2017	2018	2017
	(In Thousands)			
<u>Total pension liability</u>				
Service cost	\$ 130	\$ 155	\$ 96	\$ 109
Interest cost	1,271	1,433	312	299
Difference between expected and actual experience	1,037	602	(142)	(128)
Changes of assumptions	(31)	(73)	200	(15)
Changes of benefit terms	426	-	-	-
Benefit payments	(3,347)	(4,078)	(46)	(46)
Net change in total pension liability	(514)	(1,961)	420	219
Total pension liability, beginning of period	19,036	20,997	4,470	4,251
Total pension liability, end of period	<u>\$ 18,522</u>	<u>\$ 19,036</u>	<u>\$ 4,890</u>	<u>\$ 4,470</u>
<u>Plan fiduciary net position</u>				
Employer contributions	\$ 275	\$ 361	\$ 119	\$ 657
Net investment income	(709)	3,807	(106)	626
Benefit payments	(3,347)	(4,078)	(46)	(45)
Administrative expenses	(11)	(16)	(10)	(10)
Net change in fiduciary net position	(3,792)	74	(43)	1,228
Fiduciary net position, beginning of period	24,062	23,988	4,640	3,412
Fiduciary net position, end of period	<u>20,270</u>	<u>24,062</u>	<u>4,597</u>	<u>4,640</u>
Net pension (asset) liability, end of period	<u>\$ (1,748)</u>	<u>\$ (5,026)</u>	<u>\$ 293</u>	<u>\$ (170)</u>

MMWEC recorded \$2.0 million and \$1.4 million in pension expense related to these Plans for the years ended December 31, 2018 and 2017, respectively, which are included in other operating expenses on the accompanying Statements of Revenues, Expenses and Changes in Net Position.

The annual contribution was determined as part of the January 1 actuarial valuation using the entry age normal with frozen initial liability cost method. All contributions to the plans are authorized by the Board of Directors and made by MMWEC. Since 2008, MMWEC has targeted its contributions with the goal of establishing a funding ratio of approximately 100%, giving consideration to actuarial information and budget controls. The actuarial assumptions for both Plans included a 7.0% investment rate of return, a discount rate of 7.0% on Plan liabilities and a 3.0% projected salary increase. Mortality rates for the Administrative Plan were based on the RP-2014 White Collar Employee Annuitant Table for Males or Females, as appropriate, projected using Scale MP-2018 generational improvements from 2006. Mortality rates for the Union Plan were based on the RP-2014 Blue Collar Table for Males or Females, as appropriate, projected using Scale MP-2018 generational improvements from 2006.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

13. BENEFIT PLANS...continued

Defined Benefit Plans...continued

The long-term expected rate of return on Plan investments was determined based on a blend of historical performance data and future expectations for each major asset class, while also reflecting current capital market conditions, developed on a geometric basis.

The assumed allocation and expected real rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Administrative</u>		<u>Union</u>	
	<u>Target Asset Allocation</u>	<u>Long Term Expected Rate of Return</u>	<u>Target Asset Allocation</u>	<u>Long Term Expected Rate of Return</u>
Fixed income	26.00%	3.00%	40.00%	3.00%
Mutual Funds	74.00%	9.60%	60.00%	9.60%
Total investments	<u>100.00%</u>		<u>100.00%</u>	

The following table presents the sensitivity of net pension (asset) liability calculation to a 1% increase and 1% decrease in the discount rate to measure the total pension (asset) liability:

<u>Discount rate</u>	<u>Administrative</u>		<u>Union</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
	(In Thousands)			
1% decrease - 6.0%	\$ 155	\$ (2,970)	\$ 668	\$ 221
Current discount rate - 7.0%	(1,748)	(5,026)	293	(170)
1% increase - 8.0%	(3,376)	(6,789)	(34)	(512)

The following table presents information about the pension-related deferred outflows and inflows of resources at December 31:

<u>Deferred outflows (inflows) of resources</u>	<u>Administration Plan</u>			
	<u>2018</u>		<u>2017</u>	
	(In Thousands)			
Difference between expected and actual experience	\$ 809	\$ -	\$ 406	\$ (117)
Changes of assumptions	-	(39)	418	(54)
Difference between projected and actual earnings on plan investments	2,309	(1,294)	804	(1,726)
Total deferred outflows (inflows) of resources	<u>\$ 3,118</u>	<u>\$ (1,333)</u>	<u>\$ 1,628</u>	<u>\$ (1,897)</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

13. BENEFIT PLANS...continued

	Union Plan			
	2018		2017	
<u>Deferred outflows (inflows) of resources</u>	(In Thousands)			
Difference between expected and actual experience	\$ 210	\$ (474)	\$ 382	\$ (561)
Changes of assumptions	650	(22)	800	(35)
Difference between projected and actual earnings on plan investments	446	(220)	178	(298)
Total deferred outflows (inflows) of resources	<u>\$ 1,306</u>	<u>\$ (716)</u>	<u>\$ 1,360</u>	<u>\$ (894)</u>

The following table presents the future amortization of pension-related deferred outflows (inflows) of resources, which will be recognized in pension expense, at December 31:

	Administration		Union	
	(In Thousands)			
2019	\$ 902	\$ 340		
2020	379	166		
2021	36	(3)		
2022	468	87		
2023	-	-		
	<u>\$ 1,785</u>	<u>\$ 590</u>		

The Required Supplementary Information following the Notes to the Financial Statements presents additional multiyear trend information demonstrating the components of change in the net pension liability from year to year, as well as trends in related statistical information and employer contributions to the Plans.

Defined Contribution Plan

In 2007, MMWEC established a defined contribution (DC) pension plan in compliance with Section 401 (a) of the Internal Revenue Code for non-union employees hired after December 1, 2006 and for union employees hired after January 1, 2008. Thereafter, all new employees are no longer eligible to participate in MMWEC Defined Benefit plans. Under the DC plan, MMWEC contributes 6% of an employee's base salary and matches 50% of employee contributions to the defined contribution plan up to a maximum employee contribution of 6%. For the years ended December 31, 2018 and 2017, MMWEC contributed \$322,000 and \$275,000 and the employees contributed \$1,000 and \$11,000, respectively.

Employee Savings Plan

MMWEC contributes to an employee savings plan administered by a mutual insurance company. All eligible full-time employees meeting the service and eligibility requirements participate in this plan. Under the provisions of the plan, MMWEC's contributions are vested immediately. For the years ended December 31, 2018 and 2017, MMWEC contributed \$62,000 and \$67,000, respectively, and the employees contributed \$109,000 and \$118,000, respectively. All employees eligible or participating in the DC pension plan established in 2007 are not eligible to participate in the employee savings plan.

Benefit provisions of all plans are determined and authorized by the MMWEC Board of Directors.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

14. PROJECT JOINT OWNERSHIP AGREEMENTS

MMWEC's power supply capacity includes ownership interests in the Stony Brook Peaking and Stony Brook Intermediate Units, both of which MMWEC operates. MMWEC is a nonoperating joint owner in the W.F. Wyman Unit No. 4, Millstone Unit 3 and Seabrook Station. Electric plant in service and construction work in progress also includes assets related to MMWEC's service company operations, which totaled \$17.3 million and \$7.3 million at December 31, 2018 and 2017, respectively.

The following is a summary of the balances by Project included in electric plant in service and construction work in progress, as well as MMWEC's share of capability in megawatts (MW).

Projects	Facility and MMWEC Share of Capability in MW	Amount as of December 31,	
		2018	2017
		(In Thousands)	
Peaking Project	Stony Brook	172.7	
Intermediate Project	Stony Brook	321.3	
Wyman Project	W.F. Wyman No. 4	22.4	
Nuclear Project No. 3	Millstone Unit 3	39.5	
Nuclear Mix No. 1	Millstone Unit 3	19.8	
Nuclear Mix No. 1	Seabrook Station	2.0	
Nuclear Project No. 4	Seabrook Station	54.0	
Nuclear Project No. 5	Seabrook Station	13.7	
Project No. 6	Seabrook Station	74.7	
		575,476	572,728
Totals		\$ 1,442,076	\$ 1,433,314

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

15. RELATED PARTY TRANSACTIONS

MMWEC, together with Massachusetts municipal utility systems, has formed six cooperatives under Massachusetts General Laws to conduct business for the mutual benefit of the members of the cooperatives. The following is a summary of each Cooperative and the associated Cooperative members and purpose for each Cooperative.

<u>Cooperative Name</u>	<u>Other Cooperative Members</u>	<u>Year Founded</u>	<u>Cooperative Purpose</u>
Southwest Cooperative Corporation	Westfield Gas & Electric Light Department (WG&E)	2006	Financing, constructing and operating a natural gas pipeline to provide natural gas transportation service to WG&E
Massachusetts Municipal Light Department Wind Energy Cooperative Corporation	Princeton Municipal Light Department and Templeton Municipal Light Department	2007	Financing, owning, constructing and operating wind generation facilities located in the town of Princeton & Templeton
Berkshire Wind Power Cooperative Corporation	Sixteen municipal light departments	2008	Financing, owning, constructing and operating wind turbines and ancillary equipment located in Hancock and Lanesborough, Massachusetts
Massachusetts Municipal Light Department Solar Energy Cooperative Corporation	West Boylston Municipal Light Plant	2008	Financing, owning, constructing and operating a solar energy production facility in West Boylston, Massachusetts
Wakefield Municipal Cooperative Corporation	Wakefield Municipal Gas & Light Department	2012	Financing, constructing, purchasing, owning, leasing, maintaining and operating real and personal property located in Wakefield
Massachusetts Clean Energy Cooperative Corporation	Holyoke Gas & Electric Department (HG&E)	2013	Purchasing, acquiring, generating, transforming, distributing, selling, reselling, supplying and providing energy, telecommunications, or any related products or service and financing, owning, leasing or otherwise acquiring, holding, using and improving interests therein for the benefit of HG&E

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

15. RELATED PARTY TRANSACTIONS...continued

Pursuant to contracts, MMWEC provides accounting, financial, power supply and administrative services to all six of these cooperatives. As such, although MMWEC is a member of each cooperative and has one representative on the Board of each cooperative, MMWEC has no rights to the entities' assets nor has management oversight of the six cooperatives. Thus, the entities are not required to be reported as component units of MMWEC under rules established GASB 61, *The Financial Reporting Entity*.

MMWEC billed a total of \$633,000 and \$508,000 for MMWEC services and outside professional services during 2018 and 2017, respectively, for all cooperatives. At December 31, 2018 and 2017, \$183,000 and \$105,000 was due to MMWEC from all cooperatives. MMWEC, acting as fiduciary agent for the Berkshire Cooperative, maintains construction funds totaling \$7.0 million at December 31, 2018, which are included in cash and cash equivalents on the Statements of Net Position.

16. CONTRACTS AND COMMITMENTS

Letter of Credit

MMWEC has posted a letter of credit in the amount of \$2.0 million with a power counterparty in order to meet its collateral obligations under the bilateral agreement with the counterparty.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

16. CONTRACTS AND COMMITMENTS...continued

Long-Term Contracts – Cooperatives

MMWEC has contracts with each Cooperative described in Note 16 – Related Party Transactions, whereby MMWEC is to serve as the Cooperative's agent in the sale of power, transportation or lease to the municipal utility systems. The sale agreements between MMWEC and the Cooperatives are offset in each case by a purchase agreement between the Cooperative and the municipal utility systems, the revenues and expenses associated with these agreements are not included in the accompanying Statements of Revenues, Expenses and Changes in Net Position and are disclosed below.

<u>Contract</u>	<u>2018</u>	<u>2017</u>
	(In Thousands)	
Transportation Agreement between MMWEC and the Southwest Cooperative Corporation	\$ 540	\$ 540
Power Sales Agreement between MMWEC and the Massachusetts Municipal Light Department Wind Energy Cooperative Corporation	280	574
Power Sales Agreement between MMWEC and the Berkshire Wind Power Cooperative Corporation	6,687	6,376
Power Sales Agreement between MMWEC and the Massachusetts Municipal Light Department Solar Energy Cooperative Corporation	109	111
Lease Agreement between MMWEC and the Wakefield Municipal Cooperative Corporation	179	247
Power Sales Agreement between MMWEC and the Massachusetts Clean Energy Cooperative Corporation	(111)	103
Total	<u>\$ 7,684</u>	<u>\$ 7,951</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

16. CONTRACTS AND COMMITMENTS...continued

Long-Term Contracts – Power Purchases

MMWEC entered into agreements for participation in the transmission interconnection between New England utilities and the Hydro-Quebec electric system near Sherbrooke, Quebec (Phase I), which began commercial operation in October 1986. The New England portion of the interconnection was constructed at a total cost of approximately \$140.0 million, of which 3.65% (or initially \$5.0 million) was MMWEC's share to support Phase I. In 1990, MMWEC's participation share in Phase I changed to 3.45% (or initially \$4.8 million). MMWEC also entered into similar agreements for participation in the interconnection between New England utilities and the Hydro-Quebec electric system. This agreement is for the expansion of the Hydro-Quebec interconnection (Phase II), which went into commercial operation in November 1990. MMWEC's Phase II equity investment is approximately 0.6% (or initially \$3.3 million). MMWEC has corresponding agreements with certain of its Members and another utility to recover MMWEC's share of the costs associated with the Phase II interconnection. Beginning in 1995, capital refunds from Phase II have been received, reducing MMWEC's total equity investment. In March 2017, MMWEC made a required equity contribution of \$147,700. The equity balance of \$182,000 at December 31, 2018 and 2017, is included in other noncurrent charges on the Statement of Net Position.

On a limited basis, MMWEC may enter into agreements providing financial assurance to third parties. At December 31, 2018 and 2017, there were no outstanding guarantees related to its equity interest in the Hydro-Quebec transmission companies. Management believes that the likelihood MMWEC would be required to perform or otherwise incur any significant losses associated with this guarantee is remote.

In 2013, MMWEC entered into a twenty-year power purchase agreement with Clement Dam Hydroelectric LLC, Franklin Power LLC, Greggs Falls Hydroelectric Associates LP, Pembroke Hydro Associates LP and HDI Associates I Partnership for 100% of the output of five hydroelectric generating facilities in New Hampshire with a combined nominal rating at 11.53 MW, effective January 1, 2014. This resource has been subscribed to by thirteen Members. Power purchased under this contract totaled \$2.2 million and \$2.1 million for the years ended December 31, 2018 and 2017, respectively.

Also, in 2013, MMWEC entered into a twenty-five year power purchase agreement with Hancock Wind LLC for 73.5% of the output of a wind generating facility in Hancock County, Maine (Hancock Facility) with a nominal rating at 51 MW. This resource has been subscribed to by seventeen Members. The Hancock Facility began commercial operations on December 14, 2016. The total power purchased under this contract was \$4.9 million and \$5.1 million for the years ended December 31, 2018 and 2017, respectively.

Claims and Judgments

MMWEC is involved in various legal actions. Management believes that the ultimate resolution of litigation in which MMWEC is currently involved will not have a material, adverse effect on the financial position of MMWEC.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

17. RISK MANAGEMENT

MMWEC is exposed to various risks of loss related to torts; theft of, damage to, or destruction of assets; errors and omissions; workers compensation; and health care of its employees. These risks are covered through the purchase of commercial insurance, with minimal deductibles. There were no settled claims in any of the past three years. There has been no material decrease in insurance coverage of MMWEC in the past year.

Nuclear Insurance

The Price-Anderson Act (the Act), a federal statute, mandates an industry-wide program of liability insurance for nuclear facilities. The \$375.0 million primary layer of insurance for the liability has been purchased in the commercial insurance market. Secondary coverage is to be provided through an assessment on each of the currently licensed nuclear units in the United States of approximately \$137.6 million, not to exceed \$20.5 million per incident in any year. The assessment is to be adjusted for inflation every five years. Under the Act, MMWEC's ownership interests in Millstone Unit 3 and Seabrook Station could result in a maximum assessment of approximately \$6.6 million and \$16.0 million, respectively, limited to payments of \$1.1 million and \$2.4 million per incident per year, respectively. Originally enacted in 1957, the Act has been renewed several times and in July 2005, Congress extended the Act until the end of 2025, as part of the Energy Policy Act of 2005.

Insurance has been purchased from Nuclear Electric Insurance Limited (NEIL) to cover the cost of repair, replacement, decontamination or premature decommissioning of utility property resulting from insured occurrences at Millstone Unit 3 and Seabrook Station. The NEIL insurance is subject to retroactive assessments if losses exceed the accumulated funds available to the insurer. MMWEC is potentially subject to a \$1.1 million and \$2.4 million assessment for its participation in Millstone Unit 3 and Seabrook Station, respectively, for excess property damage, decontamination and premature decommissioning.

18. CONCENTRATION OF CREDIT RISK / SIGNIFICANT CUSTOMERS

Credit risk represents the risk of loss that would occur if customers do not meet their financial obligations to MMWEC. Concentration of credit risk occurs when significant customers possess similar characteristics that would cause their ability to meet contractual obligations to be affected by the same events.

As of December 31, 2018, MMWEC had two municipal customers who were considered significant customers, which accounted for approximately \$40.5 million (15%) and \$37.9 million (14%) of MMWEC revenues in 2018. In 2017, MMWEC had two municipal customers who were considered significant customers, which accounted for approximately \$38.3 million (15%) and \$33.3 million (13%) of MMWEC revenues in 2017. As of December 31, 2018, three municipal customers had significant account receivable balances of \$3.4 million (14%), \$3.3 million (14%), and \$2.4 million (10%). At December 31, 2017, two municipal customers had significant account receivable balances of \$4.5 million (20%) and \$3.2 million (14%).

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

19. ENVIRONMENTAL AND OTHER ISSUES

Nothing has come to management's attention concerning any material pollution liability claims made during 2018 and 2017 or outstanding as of December 31, 2018 and 2017.

MMWEC has established a trust fund to enhance its Directors' and Officers' liability coverage. The purpose of the trust fund is to make available funds for the purchase of Directors' and Officers' liability insurance and/or as a supplement to insurance for indemnification of the Directors or Officers. At December 31, 2018 and 2017, MMWEC has \$10.6 million and \$10.4 million, respectively, recorded in designated funds related to the trust fund with a corresponding liability in the same amount, representing advances from Members.

MMWEC has a guaranty with ISO New England, Inc. (ISO-NE) with respect to certain MMWEC Members' financial assurance obligations to ISO-NE. These Members do not have credit ratings and MMWEC provides financial assurances for their transactions in ISO-NE. MMWEC's financial assurance is backed by the NEPEX Account Agreement between MMWEC and each of these Members. Pursuant to the NEPEX Account Agreement, each Member has an absolute and unconditional obligation to pay MMWEC for its respective ISO-NE transactions. Management believes that the likelihood MMWEC would be required to perform or otherwise incur any significant losses associated with this guarantee is remote.

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

20. SEGMENT INFORMATION

MMWEC issues separate revenue bonds for each Project, which are payable solely from, and secured solely by, the revenues derived from the Project to which such bond issue relates, plus available funds pledged under the GBR for the bonds of such issues. Each Project operates various electric generation facilities, as shown in Note 14 – Project Joint Ownership Agreements. Following is a summary of the financial information for each Project.

CONDENSED STATEMENT OF NET POSITION	NUCLEAR	NUCLEAR	NUCLEAR
	PROJ. 3	PROJ. 5	PROJ. 6
Assets:	(In Thousands)		
Advances from projects	\$ (8)	\$ (45)	\$ (56)
Other current assets	2,950	1,680	31,896
Noncurrent assets	52,344	12,877	62,578
Capital assets, net	62,645	39,463	257,103
Total assets	117,931	53,975	351,521
Liabilities:			
Current liabilities	18,138	5,152	37,965
Noncurrent liabilities	17,465	13,536	74,062
Deferred inflows of resources:	82,328	36,693	239,494
Total liabilities	117,931	55,381	351,521
Net position:			
Net investment in capital assets	64,215	41,804	270,794
Restricted for general bond resolution	-	-	8,228
Decommissioning Trust	31,845	6,776	37,079
Pension	-	-	-
Unrestricted	(96,060)	(48,580)	(316,101)
Total net position	\$ -	\$ -	\$ -

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

20. SEGMENT INFORMATION...continued

	2018		
	NUCLEAR PROJ. 3	NUCLEAR PROJ. 5	NUCLEAR PROJ. 6
	(In Thousands)		
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION			
Operating revenues	\$ 10,701	\$ 3,619	\$ 23,257
Depreciation	(1,952)	(1,170)	(7,722)
Other operating expenses	(10,252)	(3,732)	(20,153)
Operating loss	(1,503)	(1,283)	(4,618)
Non-operating revenues (expenses):			
Investment loss	(411)	(118)	(840)
Interest expense on long-term debt	(63)	(5)	(327)
Other nonoperating expenses	79	7	195
Decrease in amounts payable under terms of the power sales agreements	1,898	1,399	5,590
Total non-operating revenues	1,503	1,283	4,618
Change in net position	-	-	-
Net position, beginning of year	-	-	-
Net position, end of year	\$ -	\$ -	\$ -
CONDENSED STATEMENT OF CASH FLOWS			
Net cash provided by (used in):			
Operating activities	\$ 9,505	\$ 1,078	\$ 9,160
Investing activities	(5,084)	(2,189)	(19,631)
Capital and related financing activities	(10,617)	(1,029)	(4,850)
Net change in cash and cash equivalents	(6,196)	(2,140)	(15,321)
Cash and cash equivalents, beginning of year	7,400	2,523	18,996
Cash and cash equivalents, end of year	\$ 1,204	\$ 383	\$ 3,675

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

20. SEGMENT INFORMATION...continued

	2017			
	NUCLEAR	NUCLEAR	NUCLEAR	NUCLEAR
	PROJ. 3	PROJ. 4	PROJ. 5	PROJ. 6
	(In Thousands)			
CONDENSED STATEMENT OF NET POSITION				
Assets:				
Advances from projects	\$ (50)	\$ (14)	\$ (9)	\$ (19)
Other current assets	7,252	6,875	3,938	23,951
Noncurrent assets	48,721	48,404	10,729	67,122
Capital assets, net	61,619	151,332	40,306	263,032
Total assets	<u>117,542</u>	<u>206,597</u>	<u>54,964</u>	<u>354,086</u>
Liabilities:				
Current liabilities	16,629	19,216	5,376	31,181
Noncurrent liabilities	16,623	50,944	12,895	77,707
Deferred inflows of resources	84,290	136,437	36,693	245,198
Total liabilities and deferred inflows of resources:	<u>117,542</u>	<u>206,597</u>	<u>54,964</u>	<u>354,086</u>
Net position:				
Net investment in capital assets	56,684	141,790	37,664	250,181
Restricted for general bond resolution	5,790	-	1,020	4,992
Decommissioning Trust	32,179	27,525	6,967	38,121
Pension	-	-	-	-
Unrestricted	(94,653)	(169,315)	(45,651)	(293,294)
Total net position	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements
Years Ended December 31, 2018 and 2017

20. SEGMENT INFORMATION...continued

	2017			
	NUCLEAR PROJ. 3	NUCLEAR PROJ. 4	NUCLEAR PROJ. 5	NUCLEAR PROJ. 6
	(In Thousands)			
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION				
Operating revenues	\$ 15,198	\$ 16,275	\$ 4,656	\$ 13,846
Depreciation	(1,893)	(4,317)	(1,155)	(7,636)
Other operating expenses	(11,789)	(14,438)	(3,709)	(20,085)
Operating income (loss)	1,516	(2,480)	(208)	(13,875)
Non-operating revenues (expenses):				
Investment income	3,595	3,195	821	4,650
Interest expense on long-term debt	(153)	(150)	(45)	(947)
Other nonoperating expenses	166	106	27	720
(Increase) decrease in amounts payable under terms of the power sales agreements	(5,124)	(671)	(595)	9,452
Total non-operating revenues (expenses)	(1,516)	2,480	208	13,875
Change in net position	-	-	-	-
Net position, beginning of year	-	-	-	-
Net position, end of year	\$ -	\$ -	\$ -	\$ -
CONDENSED STATEMENT OF CASH FLOWS				
Net cash provided by (used in):				
Operating activities	\$ 7,199	\$ 2,652	\$ 2,836	\$ 2,011
Investing activities	5,860	(2,177)	3,716	48,836
Capital and related financing activities	(9,415)	(11,994)	(5,422)	(39,870)
Net change in cash and cash equivalents	3,644	(11,519)	1,130	10,977
Cash and cash equivalents, beginning of year	3,756	5,530	1,393	8,019
Cash and cash equivalents, end of year	\$ 7,400	\$ (5,989)	\$ 2,523	\$ 18,996

Massachusetts Municipal Wholesale Electric Company

Notes to Financial Statements

Years Ended December 31, 2018 and 2017

21. SUBSEQUENT EVENTS

In February 2019, MMWEC redeemed the Variable Rate Power Supply Project No. 6, Series One Revenue Bonds totaling \$1.9 million.

In March 2019, MMWEC converted a portion of the short-term debt outstanding under the Pooled Loan Program to a fixed rate term loan. The term loan totaled \$26.3 million with a fixed interest rate of 3.20% due semi-annually and a fifteen year payment term. Principal, interest and any fees associated with the loan are payable solely by each Member for which each original loan was issued.

MMWEC has evaluated subsequent events through March 29, 2019, the date which the financial statements were available to be issued, and did not note any additional subsequent events requiring recording or disclosure in the financial statements for the year ended December 31, 2018.

REQUIRED SUPPLEMENTARY INFORMATION

Massachusetts Municipal Wholesale Electric Company

Required Supplementary Information (Unaudited)
Years Ended December 31, 2018 and 2017

The following schedules present Administration Plan multiyear trend information that demonstrates the components of change in the net pension (asset) liability from year-to-year, as well as trends in related statistical information. Information is present related to all periods for which the required data is available. Amounts presented are determined as of the measurement date of the net pension liability for the following years ended December 31:

	Administrative Plan				
	2018	2017	2016	2015	2014
<u>Total pension liability</u>	(In Thousands)				
Service cost	\$ 130	\$ 155	\$ 139	\$ 191	\$ 210
Interest cost	1,271	1,433	1,401	1,353	1,156
Difference between expected and actual experience	1,037	602	(391)	748	26
Changes of assumptions	(31)	(73)	1,395	(200)	1,789
Changes in benefit terms	426	-	-	-	-
Benefit payments	(3,347)	(4,078)	(1,789)	(1,275)	(313)
Net change in total pension liability	(514)	(1,961)	755	817	2,868
Total pension liability, beginning of period	19,036	20,997	20,242	19,425	16,556
Total pension liability, end of period	<u>18,522</u>	<u>19,036</u>	<u>20,997</u>	<u>20,242</u>	<u>19,424</u>
<u>Plan fiduciary net position</u>					
Employer contributions	275	361	174	480	877
Net investment income	(709)	3,807	1,303	314	1,593
Benefit payments	(3,347)	(4,078)	(1,789)	(1,275)	(313)
Administrative expenses	(11)	(16)	(19)	(16)	(16)
Net change in fiduciary net position	(3,792)	74	(331)	(497)	2,141
Fiduciary net position, beginning of year	24,062	23,988	24,319	24,816	22,675
Fiduciary net position, end of year	<u>20,270</u>	<u>24,062</u>	<u>23,988</u>	<u>24,319</u>	<u>24,816</u>
Net pension (asset) liability, end of period	<u>\$ (1,748)</u>	<u>\$ (5,026)</u>	<u>\$ (2,991)</u>	<u>\$ (4,077)</u>	<u>\$ (5,392)</u>
Plan fiduciary net position as a percentage of the total pension liability	109.44%	126.40%	114.25%	120.14%	127.76%
Covered -employee payroll	\$ 2,060	\$ 2,354	\$ 2,371	\$ 2,785	\$ 3,104
Net pension (asset) liability as a percentage of covered -employee payroll	(84.86%)	(213.48%)	(126.19%)	(146.30%)	(173.60%)

Massachusetts Municipal Wholesale Electric Company

Required Supplementary Information (Unaudited)
Years Ended December 31, 2018 and 2017

The following schedules present Union Plan multiyear trend information that demonstrates the components of change in the net pension (asset) liability from year-to-year, as well as trends in related statistical information. Information is present related to all periods for which the required data is available. Amounts presented are determined as of the measurement date of the net pension liability for the following years ended December 31:

	Union Plan				
	2018	2017	2016	2015	2014
	(In Thousands)				
<u>Total pension liability</u>					
Service cost	\$ 96	\$ 109	\$ 89	\$ 106	\$ 106
Interest cost	312	299	327	340	338
Difference between expected and actual experience	(142)	(128)	(764)	709	226
Changes of assumptions	200	(15)	1,238	(52)	191
Changes in benefit terms	-	-	-	-	-
Benefit payments	(46)	(46)	(1,302)	(1,281)	(856)
Net change in total pension liability	420	219	(412)	(178)	5
Total pension liability, beginning of period	4,470	4,251	4,663	4,841	4,836
Total pension liability, end of period	4,890	4,470	4,251	4,663	4,841
<u>Plan fiduciary net position</u>					
Employer contributions	119	657	197	118	255
Net investment income	(106)	626	194	104	416
Benefit payments	(46)	(45)	(1,302)	(1,281)	(856)
Administrative expenses	(10)	(10)	(10)	(10)	(10)
Net change in fiduciary net position	(43)	1,228	(921)	(1,069)	(195)
Fiduciary net position, beginning of year	4,640	3,412	4,333	5,402	5,597
Fiduciary net position, end of year	4,597	4,640	3,412	4,333	5,402
Net pension (asset) liability, end of period	\$ 293	\$ (170)	\$ 839	\$ 330	\$ (561)
Plan fiduciary net position as a percentage of the total pension liability	94.02	103.81%	80.27%	92.91%	111.59%
Covered -employee payroll	\$ 776	\$ 903	\$ 1,067	\$ 1,232	\$ 1,210
Net pension (asset) liability as a percentage of covered -employee payroll	37.69%	(18.86%)	78.59%	26.83%	(46.38%)

Massachusetts Municipal Wholesale Electric Company

Required Supplementary Information (Unaudited)
Years Ended December 31, 2018 and 2017

The following schedules present multiyear trend information regarding employer contributions to the Plans. Information is presented related to all periods for which the required data is available. The amounts presented are determined as of the years ended December 31:

Administration Plan

Year	Actuarial Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered- Employee Payroll	Contributions
					as a Percentage of Covered- Employee Payroll
(In Thousands)					
2018	\$ 56	\$ 275	\$ (219)	\$ 2,060	13.35%
2017	435	361	74	2,354	15.31%
2016	334	174	159	2,371	7.35%
2015	1	480	(479)	2,785	17.24%
2014	48	877	(829)	3,104	28.25%

Union Plan

Year	Actuarial Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered- Employee Payroll	Contributions
					as a Percentage of Covered- Employee Payroll
(In Thousands)					
2018	\$ 110	\$ 119	\$ (9)	\$ 776	15.33%
2017	233	658	(425)	903	72.78%
2016	175	197	(22)	1,067	18.48%
2015	123	118	5	1,232	9.57%
2014	65	255	(190)	1,210	21.10%

Massachusetts Municipal Wholesale Electric Company

Required Supplementary Information (Unaudited)
Years Ended December 31, 2018 and 2017

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest valuation follows:

	<u>Administration Plan</u>	<u>Union Plan</u>
Valuation date	1/1/2018	1/1/2018
Actuarial cost method	Entry Age Normal with Frozen Initial Liability	Entry Age Normal with Frozen Initial Liability
Amortization method	Level dollar open	Level dollar open
Remaining amortization period	30 years	30 years
Asset valuation method	Fair Market Value	Fair Market Value
Actuarial assumptions:		
Investment rate of return	7.0%	7.0%
Projected salary increases	3.0%	3.0%
Cost-of-living adjustments	N/A	N/A
Mortality	RP-2014 White Collar Employee Annuitant Table for Males or Females, as appropriate, projected using Scale MP-2018 generational improvements from 2006	RP-2014 Blue Collar Employee Annuitant Table for Males or Females, as appropriate, projected using Scale MP-2018 generational improvements from 2006

There were no changes in benefit terms, in the size or composition of the population covered by the benefit terms, in the use of different assumptions or other factors that significantly affected trends from year to year in the amounts reported in the required supplementary information above.

SUPPLEMENTARY INFORMATION

Massachusetts Municipal Wholesale Electric Company
Project Statement of Cash Flows
Year Ended December 31, 2018
(In Thousands)

	SERVICE	NUCLEAR MIX 1	NUCLEAR PROJ. 3	NUCLEAR PROJ. 4	NUCLEAR PROJ. 5	PROJECT PROJ. 6	PEAKING	INTERMEDIATE	WYMAN	TOTAL
Cash flows from operating activities:										
Received from sales to members and participants	\$ 184,587	\$ 7,384	\$ 13,265	\$ 14,108	\$ 3,580	\$ 22,735	\$ 4,936	\$ 22,253	\$ 1,375	\$ 274,223
Paid to suppliers for goods and services	(171,817)	(2,252)	(3,760)	(9,693)	(2,502)	(13,575)	(3,625)	(8,516)	(993)	(216,733)
Paid to employees	(4,869)	-	-	-	-	-	(962)	(4,044)	-	(9,875)
Net cash provided by (used in) operating activities	7,901	5,132	9,505	4,415	1,078	9,160	349	9,693	382	47,615
Cash flows from investing activities:										
Purchases of investments	(90,828)	(11,626)	(35,525)	(35,391)	(11,874)	(71,476)	(19,801)	(97,843)	(5,277)	(379,641)
Proceeds from sales and maturities of investments	95,768	9,878	31,759	40,811	10,129	51,400	14,974	81,615	3,393	339,727
Interest received	247	177	335	246	121	445	177	698	18	2,464
Net cash provided by (used in) investing activities	5,187	(1,571)	(3,431)	5,666	(1,624)	(19,631)	(4,650)	(15,530)	(1,866)	(37,450)
Cash flows from capital and related financing activities:										
Construction expenditures and purchases of nuclear fuel	(10,070)	(3,578)	(6,913)	(2,960)	(749)	(4,101)	(52)	(1,404)	-	(29,827)
Principal payments on long-term debt	(1,547)	-	(3,195)	-	(225)	(150)	-	-	-	(5,117)
Decommissioning trust payments	-	(212)	(408)	(198)	(50)	(274)	-	-	-	(1,142)
Interest payments on long-term debt	(298)	-	(101)	-	(5)	(325)	-	-	-	(729)
Net cash provided by (used in) capital and related financing activities	(11,915)	(3,790)	(10,617)	(3,158)	(1,029)	(4,850)	(52)	(1,404)	-	(36,815)
Cash flows from noncapital financing activities:										
Proceeds from issuance of short-term debt	36,950	-	-	-	-	-	-	-	-	36,950
Principal payments on short-term debt	(13,893)	-	-	-	-	-	-	-	-	(13,893)
Interest payments on short-term debt	(1,052)	-	-	-	-	-	(6)	(32)	-	(1,090)
Net cash provided by (used in) noncapital financing activities	22,005	-	-	-	-	-	(6)	(32)	-	21,967
Net change in cash and cash equivalents	23,178	(229)	(4,543)	6,923	(1,575)	(15,321)	(4,359)	(7,273)	(1,484)	(4,683)
Cash and cash equivalents, beginning of year	26,490	2,888	7,400	(3,785)	2,523	18,996	5,043	16,765	2,025	78,345
Cash and cash equivalents, end of year	\$ 49,668	\$ 2,659	\$ 2,857	\$ 3,138	\$ 948	\$ 3,675	\$ 684	\$ 9,492	\$ 541	\$ 73,662
Reconciliation of operating income (loss) to net cash provided by (used in) operating activities:										
Operating income (loss)	\$ 1,318	\$ (751)	\$ (1,503)	\$ (4,834)	\$ (1,283)	\$ (4,618)	\$ (319)	\$ (341)	\$ (381)	\$ (12,712)
Noncash items included in operating income:										
Depreciation	134	976	1,952	4,379	1,170	7,722	140	1,006	70	17,549
Amortization of nuclear fuel and accretion of ARO	-	2,553	4,777	4,199	1,063	5,814	-	-	300	18,706
Loss on market valuation of inventory	-	-	-	-	-	-	81	103	-	184
Revision of asset retirement obligation	-	-	-	-	-	-	-	-	(111)	(111)
Changes in assets, liabilities and deferred outflows and inflows:										
(Increase) decrease in:										
Accounts receivable	(6,618)	131	202	(63)	75	257	211	540	258	(5,007)
Unbilled revenues	1,012	-	-	-	-	-	-	-	-	1,012
Inventories	-	1	-	35	8	48	(379)	7,637	(55)	7,295
Prepaid expenses	120	(3)	(6)	18	5	25	(2)	(16)	-	141
Derivative financial instruments	-	-	-	-	-	-	-	-	-	-
Net pension asset	3,278	-	-	-	-	-	-	463	-	3,741
Other deferred charges	-	(317)	(632)	10	3	13	(8)	(180)	8	(1,103)
Increase (decrease) in:										
Accounts payable	150	1,219	2,395	478	121	668	6	848	191	6,076
Member and participant advances	11,628	1,324	2,320	217	(78)	(742)	583	(1,104)	89	14,237
Accrued expenses	157	(1)	-	(24)	(6)	(27)	36	1,418	13	1,566
Other noncurrent liability:	-	-	-	-	-	-	-	(651)	-	(651)
Pension regulatory liability	(1,224)	-	-	-	-	-	-	(340)	-	(1,564)
Amounts payable under terms of the power sales agreement	-	-	-	-	-	-	-	-	-	-
Changes in deferred outflows of resources	(1,490)	-	-	-	-	-	-	488	-	(1,002)
Changes in deferred inflows or resources	(564)	-	-	-	-	-	-	(178)	-	(742)
Net cash provided by (used in) operating activities	\$ 7,901	\$ 5,132	\$ 9,505	\$ 4,415	\$ 1,078	\$ 9,160	\$ 349	\$ 9,693	\$ 382	\$ 47,615
Reconciliation of cash and cash equivalents to the statement of net position:										
Cash and temporary investments	\$ 11,781	\$ 1,955	\$ 1,653	\$ 1,912	\$ 565	\$ -	\$ 436	\$ 2,185	\$ 44	\$ 20,531
Restricted and designated funds - noncurrent	54,088	9,140	16,275	19,364	5,264	45,755	13,345	53,080	3,378	219,689

Massachusetts Municipal Wholesale Electric Company

Combining Fiduciary Financial Statements

December 31, 2018 and 2017

(In Thousands)

STATEMENTS OF FIDUCIARY NET POSITION

	Administrative Plan		Union Plan		Total Fiduciary Funds	
	2018	2017	2018	2017	2018	2017
ASSETS						
Investments at fair value:						
Mutual funds	\$ 19,757	\$ 22,758	\$ 3,555	\$ 3,573	\$ 23,312	\$ 26,331
Guaranteed income funds	513	1,304	1,042	1,067	1,555	2,371
Total investments	<u>20,270</u>	<u>24,062</u>	<u>4,597</u>	<u>4,640</u>	<u>24,867</u>	<u>28,702</u>
Net position available for pension benefits	<u>\$ 20,270</u>	<u>\$ 24,062</u>	<u>\$ 4,597</u>	<u>\$ 4,640</u>	<u>\$ 24,867</u>	<u>\$ 28,702</u>

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

	Administrative Plan		Union Plan		Total Fiduciary Funds	
	2018	2017	2018	2017	2018	2017
ADDITIONS						
Employer contributions	\$ 275	\$ 501	\$ 119	\$ 658	\$ 394	\$ 1,159
Investment activity:						
Net appreciation in fair value of investments	-	3,704	-	607	-	4,311
Interest and dividends	20	103	31	19	51	122
Total investment activity	<u>20</u>	<u>3,807</u>	<u>31</u>	<u>626</u>	<u>51</u>	<u>4,433</u>
Total additions	<u>295</u>	<u>4,308</u>	<u>150</u>	<u>1,284</u>	<u>445</u>	<u>5,592</u>
DEDUCTIONS						
Benefits paid directly to participants	3,347	4,078	46	46	3,393	4,124
Administrative expenses	11	16	10	10	21	26
	<u>3,358</u>	<u>4,094</u>	<u>56</u>	<u>56</u>	<u>3,414</u>	<u>4,150</u>
Investment activity:						
Net depreciation in fair value of investments	729	-	137	-	866	-
Total deductions	<u>4,087</u>	<u>4,094</u>	<u>193</u>	<u>56</u>	<u>4,280</u>	<u>4,150</u>
Net increase (decrease) in net position	(3,792)	214	(43)	1,228	(3,835)	1,442
Net position available for pension benefits, beginning of year	<u>24,062</u>	<u>23,848</u>	<u>4,640</u>	<u>3,412</u>	<u>28,702</u>	<u>27,260</u>
Net position available for pension benefits, end of year	<u>\$ 20,270</u>	<u>\$ 24,062</u>	<u>\$ 4,597</u>	<u>\$ 4,640</u>	<u>\$ 24,867</u>	<u>\$ 28,702</u>

OTHER INFORMATION

Massachusetts Municipal Wholesale Electric Company

Debt Service Coverage Calculation
 Years Ended December 31, 2018 and 2017
 (In Thousands)

NET REVENUE AVAILABLE FOR DEBT SERVICE

In accordance with the provisions of MMWEC's GBR, MMWEC covenants that it shall fix, revise and collect rates, tolls, rents and other fees and charges sufficient to produce revenues to pay all Project operating and maintenance expenses, and principal, premium, if any, and interest on the Bonds. Revenues for each Project, which include applicable interest earnings from investments, are required to equal 1.10 times the annual debt service for each contract year ending June 30, after deduction of certain operating and maintenance expenses and exclusive of depreciation. As such, amounts included in the table below do not reflect December 31 balances. For the contract years ended June 30, 2018 and 2017, MMWEC met the GBR debt service coverage requirements for all of MMWEC's Projects.

	2018	2017
Revenues	\$ 29,703	\$ 84,382
Other billings	-	50
Reserve and contingency fund billings	400	4,588
Total	<u>30,103</u>	<u>89,020</u>
Less – operating and maintenance expenses	<u>25,701</u>	<u>38,556</u>
Available revenues net of expenses	<u>\$ 4,402</u>	<u>\$ 50,464</u>
Debt service requirement	<u>\$ 4,002</u>	<u>\$ 45,881</u>
Coverage (110% required)	110%	110%