PIEDMONT MUNICIPAL POWER AGENCY

Financial Statements and Schedules

December 31, 2019 and 2018

(With Report of Independent Auditor Thereon)

Cherry Bekaert LLP

CPAs & Advisors

PIEDMONT MUNICIPAL POWER AGENCY

Table of Contents

Report of Independent Auditor

To the Board of Directors
Piedmont Municipal Power Agency
Greer, South Carolina

Report on the Financial Statements

We have audited the accompanying financial statements of Piedmont Municipal Power Agency ("PMPA") (a South Carolina corporation), which comprise the statements of net position as of December 31, 2019 and 2018, and the related statements of revenues, expenses, and changes in net position and cash flows for the years then ended, and the related notes to the financial statements.

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.

Auditor's 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 auditor's 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 entity'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 entity'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 PMPA as of December 31, 2019 and 2018, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Management's Discussion and Analysis

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 9 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. Schedules 1 and 2 are presented for purposes of additional analysis and are not a required part of the 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 financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Cherry Bekaert LLP

Greenville, South Carolina
March 11, 2020

PIEDMONT MUNICIPAL POWER AGENCY

Management's Discussion and Analysis

December 31, 2019 and 2018

Overview of the Financial Statements

This section of Piedmont Municipal Power Agency's ("PMPA") annual financial statements presents our analysis of PMPA's financial performance during the fiscal years ended December 31, 2019 and 2018. Please read this discussion and analysis in conjunction with the financial statements that follow this section.

Financial Highlights

PMPA's total assets as of December 31, 2019 decreased by $35.0 million from the prior year. This decrease is due to decreases in current unrestricted assets, resulting from a billing credit provided to Participants during 2019. Additionally, there is a decrease in restricted assets, which is due to the defeasance of bonds during 2019. Deferred outflows, which include costs on advanced refundings and redemption losses, decreased by $7.5 million at December 31, 2019 when compared to the prior year.

PMPA's total assets as of December 31, 2018 decreased by $6.4 million from the prior year. This decrease is due to decreases in other noncurrent assets, a result of decreases in net costs recoverable from future Participant billings. Additionally, there is a decrease in restricted assets, which decreased due to the defeasance of bonds during 2018. Deferred outflows, which include costs on advanced refundings and redemption losses, decreased by $8.9 million at December 31, 2018 when compared to the prior year.

Total liabilities at December 31, 2019 decreased by $68.0 million when compared to December 31, 2018. Bond-related liabilities decreased $76.4 million; of this amount, $21.9 million represented a decrease in current debt service requirements. Reserves for decommissioning increased by $7.7 million due to $6.0 million in annual accretion and a $1.7 million increase in the decommission liability. Accrued interest payable increased by $11.0 million.

The change in deferred inflows was due to a $3.5 million increase in the Fair Value ("FV") liability of derivative instruments at December 31, 2019.

Total liabilities at December 31, 2018 decreased by $44.8 million when compared to December 31, 2017. Bond-related liabilities decreased $77.5 million; of this amount, $17.4 million represented a decrease in current debt service requirements. Reserves for decommissioning increased by $20.0 million due to $4.9 million in annual accretion and a $15.1 million increase in the decommission liability. Accrued interest payable increased by $11.3 million.

The change in deferred inflows was due to a $1.6 million decrease in the FV liability of derivative instruments at December 31, 2018.

Overview of the Financial Activities

The following is an overview of the financial activities of PMPA for the years ended December 31, 2019 and 2018.

PMPA's financial statements, which include the statements of net position, the statements of revenues, expenses and changes in net position, and the statements of cash flows, are presented to display information about the reporting entity as a whole in accordance with GASB Statement No. 34, as amended. The statements are prepared using the economic resources measurement focus and the accrual basis of accounting.

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Financial Information

The following summarizes the activities of PMPA for the years ended December 31, 2019, 2018, and 2017:

	2019	2018	2017
		(In thousands)	
Revenues:			
Sales of electricity to Participants	$ 183,111	$ 214,770	$ 232,803
Sales of electricity to other utilities and other operating revenues	22,347	22,648	23,288
Total operating revenues	205,458	237,418	256,091
Interest income	5,801	5,460	3,319
Net increase/(decrease) in fair value of investments and derivative instruments	(170)	1,489	(3,673)
Total Revenues	211,089	244,367	255,737
Expenses:			
Operation, maintenance, and nuclear fuel amortization	42,505	43,308	46,167
Purchased power, transmission, and power delivery	56,319	61,718	58,974
Administrative, general, and payment in lieu of property taxes	27,582	23,860	25,209
Depreciation	8,946	8,310	8,232
Interest and amortization expense	49,548	52,688	55,324
Other	13,350	10,424	11,728
Total Expenses	198,250	200,308	205,634
Revenues over expenses before deferred items	12,839	44,059	50,103
Change in net expenses recoverable from future Participant billings	8,758	(13,045)	(24,510)
Postemployment benefits	522	-	-
Change in net position	22,119	31,014	25,593
Net position – beginning	137,461	106,447	80,854
Net position – ending	$ 159,580	$ 137,461	$ 106,447

Results of Operations

Revenues

- Sales of electricity to Participants, PMPA's primary source of revenue, decreased in 2019 by 14.7% or approximately $31.7 million. An additional $28.7 million rate credit was the primary source of the revenue decrease (bringing the total rate credit in 2019 to $50 million). PMPA's primary source of revenue decreased in 2018 by 7.7% or approximately $18 million, driven by a $21.3 million rate credit.

- Surplus energy sales to other utilities decreased 1.3% in 2019 due to a decrease in surplus energy rates. Surplus energy sales to other utilities decreased 2.7% in 2018 due to a decrease in surplus energy available for sale. The majority of PMPA's surplus energy was contractually sold to Santee Cooper as part of a supplemental purchased power agreement. During 2015, PMPA cancelled the contract regarding selling surplus energy to The Energy Authority and entered into a contract with Duke Energy.

Expenses

- Purchased power (including transmission and power delivery) expenses decreased by 8.7% (or approximately $5.4 million) in 2019 due to a decrease in both the quantity and price of energy purchased compared to 2018. PMPA's purchased power expense increased 4.7% (or approximately $2.7 million) in 2018.

- Fuel amortization expense increased by $0.4 million in 2019 due to an increase in production at Catawba. Fuel amortization expense decreased by $3.0 million in 2018 due to a decrease in production at Catawba.

- PMPA entered into a floating-to-fixed rate, step-coupon swap ("swap") as part of the 2004 debt restructuring that helped to produce level debt service without issuing more capital appreciation debt and increased the benefits of the restructuring through January 1, 2025. Under this swap, PMPA will pay a below-market rate of interest for the first twenty years and an above-market rate for the last ten years resulting in approximate market rates over the entire term of the swap. This swap was designed to minimize the amount of capital appreciation bonds PMPA needed to issue as part of the 2004 restructuring. By paying an artificially low rate for the first twenty years, should the swap terminate during this period, it is likely that PMPA would owe a payment to the swap counterparty. In 2019, a $3.5 million increase in FV of the step-coupon swap liability was added to a $3.3 million increase in the FV of PMPA's other investments. In 2018, a $1.6 million decrease in FV of the step-coupon swap liability was added to a $0.1 million decrease in the FV of PMPA's other investments.

Assets, liabilities, and net position are summarized as follows:

	2019	2018	2017
		(In thousands)	
Assets:			
Capital assets	$ 382,546	$ 381,643	$ 359,146
Current unrestricted assets	152,189	170,502	163,369
Current restricted assets	191,518	217,828	240,824
Other noncurrent assets	488,968	480,238	493,312
Total Assets	$ 1,215,221	$ 1,250,211	$ 1,256,651
Deferred outflows:	$ 36,530	$ 44,003	$ 52,935
Liabilities:			
Long-term liabilities	$ 862,847	$ 919,984	$ 959,973
Current liabilities	177,922	188,817	193,631
Total Liabilities	$ 1,040,769	$ 1,108,801	$ 1,153,604
Deferred inflows:	$ 51,402	$ 47,952	$ 49,535
Net position:			
Net investment in capital assets	$ (344,307)	$ (426,802)	$ (520,203)
Other restricted assets	12,501	20,675	29,676
Unrestricted	491,386	543,588	596,974
Total Net Position	$ 159,580	$ 137,461	$ 106,447

Changes in PMPA's current unrestricted assets during 2019 are a reflection of the $23.2 million decrease to PMPA's working capital, when PMPA budgeted to decrease working capital by $28.4 million. Also, there was a decrease to Participant accounts receivable and an increase in materials and supplies. The decrease in current liabilities includes a decrease in bond principal payable on January 1, 2020, partially offset by an increase in bond interest payable on January 1, 2020.

Changes in PMPA's current unrestricted assets during 2018 are a reflection of the $9.3 million increase to PMPA's working capital, when PMPA budgeted to decrease working capital by $8.6 million. Also, there was a decrease to Participant accounts receivable and an increase in materials and supplies. The decrease in current liabilities includes a decrease in bond principal payable on January 1, 2019 and an increase in bond interest payable on January 1, 2019.

Restricted assets decreased in 2019 as a result of the defeasance of bonds in 2019 as well as funds being withdrawn from construction accounts for capital additions at Catawba.

Restricted assets decreased in 2018 as a result of the defeasance of bonds in 2018 as well as funds being withdrawn from construction accounts for capital additions at Catawba.

The 2019 increase in noncurrent assets was due, primarily, to an increase in net costs recoverable from future Participant billings resulting from deferral of depreciation expenses and the amortization of redemption and defeasance losses.

The 2018 decrease in noncurrent assets was due, primarily, to a decrease in net costs recoverable from future Participant billings resulting from a decrease in expenses included in Participant billings for debt principal payments and amortization of costs on advanced refundings of PMPA debt.

As bonds matured on January 1, 2019, long-term repayment obligations that were funded in the prior year were retired, resulting in a decrease in debt outstanding of $76.4 million. As bonds matured on January 1, 2018, long-term repayment obligations that were funded in the prior year were retired, resulting in a decrease in debt outstanding of $77.5 million.

Capital Assets

PMPA's capital assets include structures and improvements, reactor plant equipment, turbo generator units, other equipment, and nuclear fuel. Such amounts are detailed as follows:

	2019	2018	2017
		(In thousands)	
Structures and improvements	$ 164,489	$ 167,407	$ 163,579
Reactor plant equipment	276,682	279,403	277,930
Turbo generator units	74,009	73,924	73,277
Other equipment	97,892	97,276	94,194
Nuclear fuel	70,953	83,472	76,268
Other	60,102	59,131	48,246
Construction work-in-progress	18,935	10,473	9,876
Total	763,062	771,086	743,370
Less accumulated depreciation	(380,516)	(389,443)	(384,224)
Total, net	$ 382,546	$ 381,643	$ 359,146

PMPA's investment in capital assets at December 31, 2019 totaled $382.5 million (net of accumulated depreciation), a $0.9 million increase from 2018. Major capital transactions during 2019 included the addition of $9.7 million in nuclear fuel, $13.1 of capital additions and a $1.7 million increase in the decommissioning liability offset by depreciation and amortization expense of $23.5 million.

PMPA's investment in capital assets at December 31, 2018 totaled $381.6 million (net of accumulated depreciation), a $22.5 million increase from 2017. Major capital transactions during 2018 included the following:

- Increase in Catawba plant and decommissioning obligation of $10.7 million offset by $0.5 million in retirements and related accumulated depreciation.
- Net increase in nuclear fuel of $7.2 million ($17.8 million was added to fuel and $10.6 million of fully amortized fuel was written off).
- Depreciation and amortization expense of $22.4 million.
- Increase in construction work-in-progress of $0.6 million representing capital additions at Catawba ($12.0 million of additions offset by $11.4 million that was moved to plant accounts and written off).

Debt Management

PMPA's total debt decreased $76.4 and $77.5 million in 2019 and 2018, respectively.

Economic Factors and Next Year's Rates

Because the retail customers of PMPA Participants are mostly residential and small commercial accounts, PMPA is much less affected by economic downturns than a utility with larger commercial and industrial retail customers. The 2020 budget includes a decrease in PMPA's wholesale rates to the Participants of 5%.

Request for Information

This financial report is provided as an overview of PMPA's finances. Questions concerning any of the information in this report or requests for additional information should be directed to the Office of the Finance Director, Piedmont Municipal Power Agency, 121 Village Drive, Greer, South Carolina 29651.

PIEDMONT MUNICIPAL POWER AGENCY

Statements of Net Position

December 31, 2019 and 2018

(Dollars in thousands)

Assets	2019	2018
Capital Assets (Note 5):		
Utility plant assets being depreciated	$ 743,591	$ 760,077
Accumulated depreciation and amortization	(380,516)	(389,443)
Total utility plant assets being depreciated, net	363,075	370,634
Utility plant assets not being depreciated	19,471	11,009
Total Capital Assets, net	382,546	381,643
Current Unrestricted Assets (Note 8)		
Cash	146	318
Marketable debt securities	118,939	133,727
Accrued interest receivable	2	2
Participant accounts receivable	12,720	16,335
Other accounts receivable	334	474
Materials and supplies	20,048	19,646
Total Current Unrestricted Assets	152,189	170,502
Current Restricted Assets (Note 7)		
Restricted for debt service	90,447	117,714
Restricted for decommissioning	88,570	79,439
Restricted for other	12,501	20,675
Total Current Restricted Assets	191,518	217,828
Total Current Assets	343,707	388,330
Noncurrent assets:		
Net costs recoverable from future Participant billings (Note 9)	488,825	480,066
Other	143	172
Total Other Assets	488,968	480,238
Total Assets	$ 1,215,221	$ 1,250,211
Deferred Outflows:		
Redemption loss	$ 11,780	$ 13,934
Losses on advance refunding of debt, net	24,229	30,069
Postemployent benefits	521	-
Total Deferred Outflows	$ 36,530	$ 44,003

See accompanying notes to financial statements.

PIEDMONT MUNICIPAL POWER AGENCY

Statements of Net Position (continued)

December 31, 2019 and 2018

(Dollars in thousands)

Liabilities		**2019**		**2018**
Long-term liabilities (Notes 10 and 11)				
Bonds payable, net	$	737,257	$	802,764
Reserve for decommissioning (Note 12)		124,106		116,435
Accrued expense OPEB		1,484		785
Total long-term liabilities		862,847		919,984
Current liabilities:				
Accounts payable and accrued liabilities		10,666		10,682
Current liabilities payable from restricted assets:				
Accrued interest payable		153,431		142,385
Current installments of bonds payable		13,825		35,750
Total current liabilities payable from restricted assets		167,256		178,135
Total current liabilities		177,922		188,817
Total liabilities	$	1,040,769	$	1,108,801
Deferred Inflows:				
Derivative financial instrument	$	51,402	$	47,952
Net position				
Net investment in capital assets	$	(344,307)	$	(426,802)
Restricted for other		12,501		20,675
Unrestricted		491,386		543,588
Total net position	$	159,580	$	137,461

See accompanying notes to financial statements.

PIEDMONT MUNICIPAL POWER AGENCY

Statements of Revenues, Expenses and Changes in Net Position

Years ended December 31, 2019 and 2018

(Dollars in thousands)

	2019	2018
Operating Revenues:		
Sales of electricity to Participants	$ 183,111	$ 214,770
Sales of electricity to other utilities	20,757	21,029
Other	1,590	1,619
Total Operating Revenues	205,458	237,418
Operating Expenses:		
Operation and maintenance	27,973	29,219
Nuclear fuel amortization	14,532	14,089
Purchased power	48,016	53,458
Transmission	7,676	7,599
Power delivery	627	661
Administrative and general	19,504	16,309
Depreciation	8,946	8,310
Decommissioning	5,998	4,909
Payments in lieu of property taxes	8,078	7,551
Total Operating Expenses	141,350	142,105
Net operating income	64,108	95,313
Other Income (Expense):		
Interest income	5,801	5,460
Net change in fair market value of investments and derivative instruments	(170)	1,489
Interest expense	(45,570)	(48,855)
Amortization expense	(3,978)	(3,833)
Other	(7,352)	(5,515)
Total Other Expense, Net	(51,269)	(51,254)
Revenues over expenses before change in net expenses recoverable from future Participant billings	12,839	44,059
Net increase (decrease) in net costs recoverable from future Participant billings	8,758	(13,045)
Postemployment benefits	522	-
	9,280	(13,045)
Revenue over expenses	22,119	31,014
Net position at beginning of year	137,461	106,447
Net position at end of year	$ 159,580	$ 137,461

See accompanying notes to financial statements.

PIEDMONT MUNICIPAL POWER AGENCY

Statements of Cash Flows

December 31, 2019 and 2018

(Dollars in thousands)

	2019	2018
Cash flows from operating activities:		
Receipts from customers	$ 209,213	$ 239,354
Payments for operations and maintenance	(28,375)	(29,505)
Payments for purchased power, transmission and power delivery	(64,397)	(69,269)
Payments for administration and general	(19,342)	(14,922)
Net cash from operating activities	97,099	125,658
Cash flows from investing activities:		
Purchase of investment securities	(394,655)	(410,515)
Proceeds from sales and maturities of investments	438,912	424,661
Interest received on investments	5,715	5,149
Interest received on Duke advances	86	312
Net interest paid on derivative instruments	(924)	(952)
Net cash from investing activities	49,134	18,655
Cash flows from capital and related financing activities:		
Payment of bond principal	(84,265)	(74,120)
Interest payment on bonds	(31,799)	(34,208)
Debt issuance costs	-	(30)
Expenditures for electric plant in service	(13,083)	(12,013)
Expenditures for nuclear fuel	(9,652)	(17,843)
Payment to Duke Energy for other charges	(7,341)	(7,064)
Other	(265)	868
Net cash used in capital and related financing activities	(146,405)	(144,410)
Net change in cash	(172)	(97)
Cash, beginning of year	318	415
Cash, end of year	$ 146	$ 318
Non-cash investing and financing activities:		
Gain on sale of investment	$ (121)	$ 125
Amortization expense on discounts and premiums	$ 2,906	$ 3,179
Amortization of net redemption loss	$ (7,762)	$ (8,784)
Net change in fair value of investments	$ (170)	$ 1,489

See accompanying notes to financial statements.

PIEDMONT MUNICIPAL POWER AGENCY

Statements of Cash Flows (continued)

December 31, 2019 and 2018

(Dollars in thousands)

	2019	2018
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	$ 64,108	$ 95,313
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	8,946	8,310
Fuel amortization	14,532	14,089
Accretion of reserve for decommissioning	5,998	4,909
(Increase) decrease in:		
Participant accounts receivable	3,615	1,981
Other accounts receivable	140	(45)
Materials and supplies	(402)	(286)
Increase (decrease) in:		
Accounts payable and accrued liabilities	(16)	1,342
Accrued expense OPEB	178	45
Net cash from operating activities	$ 97,099	$ 125,658

See accompanying notes to financial statements.

(1) Description of the Entity, Industry Restructuring Developments, and Related Uncertainties

(a) Description of the Entity

Piedmont Municipal Power Agency ("PMPA") was incorporated in 1979 under the South Carolina Joint Municipal Electric Power and Energy Act (the "Act"). The Act, adopted April 1978, enabled the formation, by South Carolina municipalities and municipal commissions of public works, of a joint agency to plan, finance, develop, own, and operate electric generation and transmission facilities. Ten municipal utility systems ("Participants") comprise PMPA's membership. The Participants, located in northwestern South Carolina, are the cities of Abbeville, Clinton, Easley, Gaffney, Greer, Laurens, Newberry, Rock Hill, Union, and Westminster. PMPA is not a component unit of any other governmental entity.

PMPA has a 25% undivided ownership interest in Unit 2 of the Catawba Nuclear Station ("Catawba"). Pursuant to the Operating and Fuel Agreement between PMPA and Duke Energy Carolinas, LLC ("Duke"), Duke operates both Units 1 and 2 at Catawba. PMPA's power output entitlements (approximately 282 MW) come from both Catawba Units. PMPA pays 12.5% of the costs and receives 12.5% of the power output associated with each of these 1,129 MW units. The operating licenses for Catawba Unit 1 and Unit 2 expire on December 5, 2043.

Additionally, the terms of the McGuire Reliability Exchange Agreement ("MREA") allow transfers of energy between PMPA's entitlements from the Catawba Units and Duke's two nuclear units at the McGuire Nuclear Station ("McGuire"). The result spreads PMPA's entitlements across four similar nuclear units. The operating license for McGuire Unit 1 expires on June 12, 2041 and the operating license for McGuire Unit 2 expires March 3, 2043.

(b) Industry Restructuring Developments and Related Uncertainties

There is no deregulation debate underway in the South Carolina General Assembly. The well-publicized problems with deregulation in other parts of the country have caused the legislators and regulators in South Carolina to continue a regulated retail electricity market.

(2) Summary of Significant Accounting Policies

(a) Basis of Accounting

The financial statements have been prepared in accordance with the provisions of the Governmental Accounting Standards Board ("GASB") Statement No. 34, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments* as amended by GASB Statement No. 37, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments: Omnibus,* GASB Statement No. 38, *Certain Financial Statement Disclosures* and GASB Statement No. 61, *The Financial Reporting Entity – Omnibus – An Amendment of GASB Statement No. 14 and No. 34.* Statement No. 34 requires as supplementary information Management's Discussion and Analysis, which includes an analytical overview of PMPA's financial activities.

PMPA's accounting records are maintained on the accrual basis in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") and substantially in conformity with the Federal Energy Regulatory Commission's Uniform System of Accounts.

PMPA follows the accounting practices set forth in U.S. GAAP, Accounting for the Effects of Certain Types of Regulation, as amended. This standard allows PMPA to capitalize or defer certain costs or revenues based on PMPA's ongoing assessment that it is probable that such items will be recovered through future revenues based on the rate-making authority of PMPA's board of directors. The criteria require consideration of anticipated changes in levels of demand or competition during the recovery period for any capitalized cost.

PMPA's General Bond Resolution requires that its rate structure be designed to produce revenues sufficient to pay operating, debt service, and other specified costs. PMPA's board of directors, which is comprised of representatives of the Participants, is responsible for reviewing and approving the rate structure. The application of a given rate structure to a given period's electricity sales may produce revenues not intended to pay that period's costs, and conversely, that period's costs may not be intended to be recovered in period revenues. The affected revenues and/or costs are, in such cases, deferred for future recognition. The ultimate recognition of deferred items is correlated with specific future events, primarily payment of debt principal.

PMPA maintains a single enterprise fund to record its activities which consists of self-balancing set of accounts. Enterprise funds are used to account for activities similar to those found in the private sector, where the determination of net income is necessary or useful for sound financial administration.

(2) Summary of Significant Accounting Policies – Continued

(b) Losses on Advanced Refundings of Debt and Redemption Losses

Losses on advanced refundings of debt at December 31, 2019 and 2018 of $36,009 and $44,003, respectively, (net of accumulated amortization of $270,076 and $325,254, respectively) have been deferred in accordance with U.S. GAAP and are being amortized over the term of the debt issued on refunding using the effective interest method. The remaining costs on advanced refundings will be amortized over the next 14 years (2020 through 2033) based on the shorter of the original debt maturity dates or the maturity dates of the new debt.

(c) Discounts on Bonds Payable

The discounts on bonds payable at December 31, 2019 and 2018 of $855 and $1,032, respectively, (net of accumulated amortization of $3,177 and $2,999, respectively) are being amortized on the bonds outstanding method, which approximates the effective interest method.

(d) Premiums on Bonds Payable

The premiums on bonds payable at December 31, 2019 and 2018 of $12,177 and $15,521, respectively, (net of accumulated amortization of $20,268 and $25,607, respectively) are being amortized on a method which approximates the effective interest method.

(e) Income Taxes

PMPA is recognized as a public utility for federal income tax purposes. As such, gross income of PMPA is excluded from federal income taxes under Internal Revenue Code Section 115.

(Dollars in thousands)

(2) Summary of Significant Accounting Policies – Continued

(f) Marketable Debt Securities

As authorized by the General Bond Resolution, investment securities at December 31, 2019 and 2018 consist only of direct obligations of the United States government and obligations of United States government agencies. These investments are uninsured and unregistered and are held by PMPA's trustee in PMPA's name.

Marketable debt securities are recorded at fair value based on market prices. Unrealized holding gains and losses on marketable debt securities are included in income. Interest income is recognized when earned.

(g) Capital Assets

Electric plant in service, including unclassified assets, is stated at cost and is depreciated on a straight-line basis at rates calculated to depreciate the composite assets over their respective estimated useful lives. Depreciation begins when assets are placed into service. PMPA's annual provision for depreciation expressed as a percentage of the average balance of depreciable utility plant was 1.2% and 1.1% for 2019 and 2018, respectively.

PMPA's capital assets are currently being depreciated according to the following table:

	Years		Years
Structures and improvements	40	Station equipment	40
Reactor plant equipment	40	Transmission equipment	40
Turbo generator units	40	Other	35-40
Accessory electric equipment	40	Unclassified	40
Miscellaneous plant equipment	40	Nuclear fuel	4-5

(h) Materials and Supplies

Materials and supplies inventories are stated at the lower of cost or market value using the average cost method.

(i) Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(2) Summary of Significant Accounting Policies – Continued

(j) Net Position

Equity is classified into net positions and is displayed in three components:

- *Net Investment in Capital Assets* – consists of capital assets including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.
- *Restricted* – consists of net position with constraints placed on the use either by (1) external groups such as creditors, grantors, contributors, or laws or regulations of other governments or (2) law through constitutional provision or enabling legislation.
- *Unrestricted* – all other net position that does not meet the definition of "restricted" or "net investment in capital assets."

(k) Revenue Recognition

PMPA recognizes revenue on sales when the electricity is delivered to the Participants.

(l) Operating and Non-operating Expenses

PMPA's funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services in addition to producing and delivering goods in connection with the principal ongoing operations. The principal operating revenues of PMPA's funds are charges to Participants for sales and services. Operating expenses for PMPA's funds include the costs of sales and services, general and administrative services and depreciation of capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

(m) Derivative Financial Instrument

The derivative financial instrument is recognized on the statements of net position at its fair value. PMPA has not designated its derivative financial instrument as a hedge. Changes in the fair value of the derivative financial instrument are reported in current-period revenues and expenses and in the changes to the net increase or decrease in net expenses recoverable from future Participant billings.

(2) Summary of Significant Accounting Policies – Continued

(n) Recent Pronouncements

Recently Adopted Pronouncements

The GASB issued Statement No. 83, *Certain Asset Retirement Obligations.* This Statement addresses accounting and financial reporting for certain asset retirement obligations ("AROs"). Among other things, GASB Statement No. 83 establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for AROs. The requirements of this Statement are effective for periods beginning after June 15, 2018. The adoption of this Statement had no effect on PMPA's financial statements.

The GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements.* This Statement defines debt for purposes of disclosure in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established. It requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. For notes to financial statements related to debt, this Statement also requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt. The adoption of this Statement resulted in certain disclosure enhancements.

The GASB issued Statement No. 92, *Omnibus 2020.* This Statement addresses practice issues that have been identified during implementation and application of certain GASB statements. The requirements of this Statement are effective for periods beginning after June 15, 2020. During 2019, PMPA chose to early adopt this Statement. The adoption of this Statement had no material effect on PMPA's financial statements.

(2) Summary of Significant Accounting Policies – Continued

(n) Recent Pronouncements - Continued

Recently Issued Pronouncements

The GASB issued Statement No. 87, *Leases.* This Statement establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use the underlying asset. As a result, recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources (revenues) or outflows of resources (expenses) based on the payment provisions of the contract. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The requirements of this Statement are effective for periods beginning after December 15, 2019, although early adoption is permitted. This Statement is not expected to have a material impact on PMPA.

The GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period.* This Statement simplifies accounting for interest cost incurred before the end of construction and requires those costs to be expensed in the period incurred. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of the capital asset. The requirements of this Statement are effective for periods beginning after December 15, 2019. This Statement is not expected to have a material impact on PMPA.

The GASB issued Statement No. 91, *Conduit Debt Obligations.* This Statement provides state and local governments with a single financial reporting method for conduit debt obligations by users, ending the diversity in reporting. The requirements of this Statement are effective for periods beginning after December 15, 2020. This Statement is not expected to have a material impact on PMPA.

(Dollars in thousands)

(3) Power Sales Agreements

(a) Catawba Project Power Sales Agreements

PMPA and each Participant are parties to Catawba Project Power Sales Agreements ("Power Sales Agreements"). These Power Sales Agreements obligate PMPA to provide each Participant a share of the undivided 25% interest in Unit 2 of Catawba power output and, in turn, each Participant must pay its share of the Catawba costs. Participants make their payments on a "take-or-pay" basis whether or not Catawba is operable or operating. Such payments are not subject to reduction or offset and are not conditioned upon performance by PMPA or any given Participant. The Power Sales Agreements are in effect until the earlier of August 1, 2035 or the completion of payments on the bonds and satisfaction of obligations under the Project agreements.

The Participants' Shares of PMPA's Catawba Output are as follows:

City of Abbeville	2.68%
City of Clinton	7.84
City of Easley	13.24
City of Gaffney	10.05
City of Greer	9.34
City of Laurens	6.49
City of Newberry	10.47
City of Rock Hill	28.04
City of Union	10.01
City of Westminster	1.84
	100.00%

(b) Supplemental Power Sales Agreements

PMPA and each Participant are also parties to Supplemental Power Sales Agreements ("Supplemental Agreements") under which each Participant has agreed to pay, in exchange for All Requirements Bulk Power Supply, its share of All Requirements Bulk Power Supply costs. The Supplemental Agreements terminate December 20, 2034; however, a Participant may terminate its Supplemental Agreement with ten years advance notice. On December 31, 2018 the Participants Greer, Rock Hill and Westminster turned in the ten year written notice to terminate their Supplemental Power Sales Agreement with PMPA. The effective date of termination will be December 31, 2028. In December 2019, the remaining seven Participants turned in the ten year written notice to terminate their Supplemental Power Sales Agreement with PMPA. The effective date of termination will be December 31, 2029.

(4) Project and Other Agreements

Project Agreements between PMPA and Duke consist of the Purchase, Construction, and Ownership Agreement ("Sales Agreement"), the Operating and Fuel Agreement (the "Operating Agreement"), the Joint Ownership Support Agreement, (the "JOSA"), and the MREA.

(a) Sales Agreement

The Sales Agreement generally provides for (i) the purchase of Catawba by PMPA; (ii) PMPA's contract with Duke to act as engineer contractor for PMPA for completion of construction, initial fueling, and placing Catawba into commercial operation; (iii) PMPA's payment to Duke for construction completed to date of closing on Catawba and for construction thereafter; and (iv) PMPA's payment to Duke of certain profits and fees.

(b) Operating Agreement

The Operating Agreement generally provides that PMPA employs Duke, as operator of Catawba, to be responsible for the (i) operation, maintenance, and fueling of Catawba; (ii) making of renewals, replacements, and capital additions to Catawba; and (iii) ultimate decommissioning of Catawba at the end of its useful life.

(c) JOSA

The JOSA generally provides for certain joint ownership rights and obligations, including the Catawba Reliability Exchange. This agreement became effective January 1, 2006.

(d) MREA

The MREA generally provides for the continued exchange of energy from PMPA's entitlements to the Catawba units for energy from units at Duke's McGuire Nuclear Station. This agreement became effective January 1, 2006, and can be terminated by either party by giving a three-year written notice.

(4) Project and Other Agreements – Continued

Other Agreements

(a) Requirements Service Agreement

On December 13, 2010, PMPA entered into a Power Sales Agreement with the South Carolina Public Service Authority ("Santee Cooper"). This agreement became effective on January 1, 2014. The contract requires that PMPA purchase power from Santee Cooper, approximately 200 MW, to meet all of its load demand beyond the amounts served by Catawba, the Participants' share of electricity from SEPA ("Southeastern Power Administration") hydroelectric facilities, and load requirements met by individual generating resources owned by certain Participants.

(b) Transmission Services

PMPA entered into a service agreement with Duke to begin taking transmission service under Duke's Open Access Transmission Tariff ("OATT") on January 1, 2006.

(c) Power Purchase Agreement

On December 28, 2010, PMPA entered into a Power Purchase Agreement with Duke. This agreement generally provides for PMPA to purchase capacity and energy from Duke in order to obtain backstand services for PMPA's entitlement to capacity and energy from the Catawba and McGuire Nuclear Stations. This agreement became effective on January 1, 2014. On December 31, 2018, PMPA turned in the two years written notice to terminate their Power Purchase Agreement with Duke. The effective date of termination will be December 31, 2020.

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(Dollars in thousands)

(5) Capital Assets

The following is a summary of capital asset activity for the years ended December 31, 2019 and 2018:

	December 31, 2019			
	Beginning Balance	Increase	Decrease	Ending Balance
Utility plant being depreciated:				
Structures and improvements	$ 167,407	$ 657	$ (3,575)	$ 164,489
Reactor plant equipment	279,403	527	(3,248)	276,682
Turbo generator units	73,924	548	(463)	74,009
Accessory electric equipment	58,776	2,256	(1,979)	59,053
Miscellaneous plant equipment	24,806	174	(80)	24,900
Station equipment	7,491	265	-	7,756
Transmission equipment	6,203	3	(23)	6,183
Other	18,500	1,683	(23)	20,160
Unclassified	40,095	13,705	(14,394)	39,406
Nuclear fuel	83,472	9,652	(22,171)	70,953
Total utility plant assets being depreciated	760,077	29,470	(45,956)	743,591
Less accumulated depreciation and amortization	(389,443)	(23,478)	32,405	(380,516)
Total utility plant assets being depreciated, net	370,634	5,992	(13,551)	363,075
Utility plant assets not being depreciated:				
Land	536	-	-	536
Construction work-in-progress	10,473	13,083	(4,621)	18,935
Total utility plant assets not being depreciated	11,009	13,083	(4,621)	19,471
Total capital assets, net	$ 381,643	$ 19,075	$ (18,172)	$ 382,546

(Dollars in thousands)

(5) Capital Assets – Continued

	December 31, 2018			
	Beginning Balance	Increase	Decrease	Ending Balance
Utility plant being depreciated:				
Structures and improvements	$ 163,579	$ 3,828	$ -	$ 167,407
Reactor plant equipment	277,930	6,363	(4,890)	279,403
Turbo generator units	73,277	1,007	(360)	73,924
Accessory electric equipment	58,099	1,416	(739)	58,776
Miscellaneous plant equipment	24,352	730	(276)	24,806
Station equipment	5,570	1,921	-	7,491
Transmission equipment	6,173	30	-	6,203
Other	3,231	15,292	(23)	18,500
Unclassified	44,479	8,778	(13,162)	40,095
Nuclear fuel	76,268	17,844	(10,640)	83,472
Total utility plant assets being depreciated	732,958	57,209	(30,090)	760,077
Less accumulated depreciation and amortization	(384,224)	(22,399)	17,180	(389,443)
Total utility plant assets being depreciated, net	348,734	34,810	(12,910)	370,634
Utility plant assets not being depreciated:				
Land	536	-	-	536
Construction work-in-progress	9,876	12,013	(11,416)	10,473
Total utility plant assets not being depreciated	10,412	12,013	(11,416)	11,009
Total capital assets, net	$ 359,146	$ 46,823	$ (24,326)	$ 381,643

Unclassified assets are in service and being depreciated but are not yet classified to specific plant accounts.

(Dollars in thousands)

(5) Capital Assets – Continued

Nuclear fuel represents costs associated with acquiring and processing reload fuel assemblies as well as the cost of nuclear fuel in the reactor. Nuclear fuel is amortized based on burn rates using a unit of production basis. PMPA regularly removes fully amortized nuclear fuel costs when fuel batches are replaced during core refueling operations. Fully amortized fuel costs of $22,171 and $10,640 were removed during 2019 and 2018, respectively.

A summary of accumulated depreciation and amortization at December 31, 2019 and 2018 is as follows:

	2019	2018
Accumulated depreciation of electric plant in service	$ 341,808	$ 343,098
Accumulated amortization of nuclear fuel	38,708	46,345
	$ 380,516	$ 389,443

The depreciation charge for the year on PMPA's generation plant has been determined based on revised estimated useful lives for these assets. The remaining estimated useful lives were revised to recognize a 19-year extension of the operating license for Catawba Unit 1 and a 17-year extension of the operating license for Catawba Unit 2 through 2043 which Duke received during 2003.

(6) Cash, Cash Equivalents and Investments

At December 31, 2019, the carrying value of deposits included in cash and cash equivalents was $146. Bank deposits were covered by federal depository insurance, as described in Note 8.

As of December 31, 2019, PMPA had the following investments (all are listed at fair value):

	Time Segmented Distribution					
Investment Type	**Under 1 Year**	**1-2 Years**	**2-3 Years**	**3-4 Years**	**>4 Years**	**Total**
Cash/Money Market	$ 164,594	$ -	$ -	$ -	$ -	$ 164,594
Government Agency	-	2,219	-	-	-	2,219
Government Treasury	4,814	35,422	36,328	38,099	27,726	142,389
Mortgage Backed Securities	-	36	38	309	265	648
Total fair value	$ 169,408	$ 37,677	$ 36,366	$ 38,408	$ 27,991	$ 309,850

(Dollars in thousands)

(6) Cash, Cash Equivalents and Investments – Continued

At December 31, 2018, the carrying value of deposits included in cash and cash equivalents was $318. Bank deposits were covered by federal depository insurance, as described in Note 8.

As of December 31, 2018, PMPA had the following investments (all are listed at fair value):

	Time Segmented Distribution					
Investment Type	Under 1 Year	1-2 Years	2-3 Years	3-4 Years	>4 Years	Total
Cash/Money Market	$ 189,160	$ -	$ -	$ -	$ -	$ 189,160
Government Agency	14,422	-	2,192	-	-	16,614
Government Treasury	25,661	41,651	29,707	27,055	20,226	144,300
Mortgage Backed Securities	-	-	224	179	452	855
Total fair value	$ 229,243	$ 41,651	$ 32,123	$ 27,234	$ 20,678	$ 350,929

Interest Rate Risk

Interest rate risk is the risk that rising interest rates will adversely affect the fair value of PMPA's investments. As outlined in PMPA's investment policy, investment maturities shall be less than 20 years and maturities shall be staggered in a way that avoids undue concentration in a specific maturity sector and provides for stability of income and reasonable liquidity.

Credit Risk

PMPA's investment policy for managing credit risk is in accordance with the statutes of the State of South Carolina. The policy allows for the investment of money in the following investments:

a) Direct obligations of, or obligations for, which the principal and interest are unconditionally guaranteed by the United States or its Agencies.

b) Direct and general obligations, to the payment of which the full faith and credit of the issuer is pledged, of the State of South Carolina or any political subdivision thereof that at the time of investment are assigned a rating of at least "A".

c) Certificates of deposit issued by any bank, trust company, or national banking association whose principal place of business is in the State of South Carolina or that is a member of the Federal Reserve System and authorized to do business in any state of the United States.

(Dollars in thousands)

(6) Cash, Cash Equivalents and Investments – Continued

d) Bills of exchange or time drafts drawn on and accepted by a domestic or foreign bank, otherwise known as Bankers' Acceptances, which are eligible for purchase by the Federal Reserve, the short-term commercial paper of which is rated in the highest category.

e) Investments in repurchase agreements and reverse repurchase agreements with any bank, savings and loan association, credit union, or trust company organized under the laws of any state of the United States or any national banking association or government bond dealer reporting to, trading with and recognized as a primary dealer by the Federal Reserve Bank of New York, which are collateralized by securities as set forth in (a) and (b).

PMPA's investments in U.S. Agencies and U.S. Government Sponsored Enterprises including Federal Home Loan Bank System, Federal National Mortgage Association, and Federal Home Loan Mortgage Corporation, are rated AA+ by Standard and Poor's and Aaa by Moody's Investors Service. U.S. Treasury and Agency Mortgage-Backed Securities are unrated but are considered equivalent to an AAA rating.

The following represents securities in an unrealized loss position as of December 31, 2019:

	Continuous Unrealized Loss Position					
	Less than 12 months		12 months or more		Total	
Investment Type	**Fair Value**	**Unrealized Loss**	**Fair Value**	**Unrealized Loss**	**Fair Value**	**Unrealized Loss**
Government Agency	$ -	$ -	$ 20,108	$ (123)	$ 20,108	$ (123)
Total	$ -	$ -	$ 20,108	$ (123)	$ 20,108	$ (123)

The following represents securities in an unrealized loss position as of December 31, 2018:

	Continuous Unrealized Loss Position					
	Less than 12 months		12 months or more		Total	
Investment Type	**Fair Value**	**Unrealized Loss**	**Fair Value**	**Unrealized Loss**	**Fair Value**	**Unrealized Loss**
Government Agency	$ -	$ -	$ 108,064	$ (1,935)	$ 108,064	$ (1,935)
Total	$ -	$ -	$ 108,064	$ (1,935)	$ 108,064	$ (1,935)

(Dollars in thousands)

(6) Cash, Cash Equivalents and Investments – Continued

Custodial Credit Risk

PMPA's policy for managing custodial risk requires all securities owned by PMPA to be held in safekeeping by a third-party custodian bank in PMPA's name under a custody agreement. For an investment, custodial credit risk is the risk that in the event of the failure of the counterparty, PMPA will not be able to recover the value of its investments or collateral that is in the possession of an outside party.

Concentration of Credit Risk

The investment policy of PMPA permits a maximum portfolio percentage of 100% for U.S. Treasuries, Federal Agencies and U.S. Government sponsored enterprises and permits a maximum portfolio percentage of 50% in any one federal agency or government sponsored enterprise.

As of December 31, 2019, 0.7% of the portfolio was held in Federal Agency bonds and 0.2% was held in Agency Mortgage-Backed Securities. As of December 31, 2018, 5% of the portfolio was held in Federal Agency bonds and 0.2% was held in Agency Mortgage-Backed Securities.

A reconciliation of cash and investments for PMPA, at December 31, shown in the statements of net position is as follows:

	2019	2018
Fair value of investments	$ 309,850	$ 350,929
Accrued interest receivable	607	626
Total	$ 310,457	$ 351,555
Statement of Net Position:		
Marketable debt securities	$ 118,939	$ 133,727
Restricted for debt services	90,447	117,714
Restricted for decommissioning	88,570	79,439
Restricted for other	12,501	20,675
Total investments, including accrued interest receivable	$ 310,457	$ 351,555

(Dollars in thousands)

(7) Restricted Assets

The General Bond Resolution and Project agreements restrict the use of bond proceeds, PMPA revenues, and PMPA funds on hand. Certain restrictions define the order in which available funds may be used to pay costs; other restrictions require minimum balances or accumulation of balances for specific purposes. At December 31, 2019 and 2018, management believes PMPA was in compliance with all such restrictions and held the following restricted assets:

	2019		2018	
	Fair Value	Amortized Cost	Fair Value	Amortized Cost
Debt services - bond principal	$ 13,872	$ 13,872	$ 35,795	$ 35,797
Debt services - bond fixed rate interest	12,719	12,719	14,935	14,934
Debt service - bond retirement principal	187	187	187	187
Debt service reserve	57,939	57,300	60,654	61,433
Reserve and contingency	5,730	5,730	6,143	6,143
Decommissioning	88,570	87,541	79,439	80,273
Construction	10,901	10,901	19,075	19,075
Special reserve	1,600	1,600	1,600	1,600
	$ 191,518	$ 189,850	$ 217,828	$ 219,442
Funds are comprised of:				
Marketable debt securities	$ 190,911	$ 189,243	$ 217,202	$ 218,816
Accrued interest receivable	607	607	626	626
	$ 191,518	$ 189,850	$ 217,828	$ 219,442

(8) Current Unrestricted Assets and Current Liabilities

Current unrestricted assets are used in PMPA's day-to-day operations. The assets are allocated at December 31, for the following purposes:

	2019		2018	
	Fair Value	Amortized Cost	Fair Value	Amortized Cost
Working capital assets	$ 140,222	$ 140,203	$ 163,417	$ 163,397
Cash for fuel acquisition	11,967	11,967	7,085	7,085
	$ 152,189	$ 152,170	$ 170,502	$ 170,482

(8) Current Unrestricted Assets and Current Liabilities – Continued

Current unrestricted assets include $146 and $318 in cash at December 31, 2019 and 2018, respectively. Bank balances at December 31, 2019 and 2018 were $203 and $563, respectively, of which $0 and $313 are uninsured and uncollateralized at December 31, 2019 and 2018, respectively. Accounts payable and accrued liabilities of $10,666 and $10,682 at December 31, 2019 and 2018, respectively, will be paid from working capital assets.

(9) Net Expenses Recoverable from Future Participant Billings

As described in Notes 1 and 2, rates charged to Participants are structured to systematically provide for debt requirements and operating costs of PMPA. The expenses and revenues excluded from rates are capitalized and expensed in such periods as they are intended to be included in rates.

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(Dollars in thousands)

(9) Net Expenses Recoverable from Future Participant Billings – Continued

Net expenses recoverable from future Participant billings, at December 31 are as follows:

	2019	2018	Change
	(Cumulative totals)		
Items to be recovered in future			
Participant billings:			
Interest expense	$ 500,260	$ 486,976	$ 13,284
Depreciation expense	396,454	392,587	3,867
Amortization of redemption and defeasance losses	343,322	334,637	8,685
Debt issuance costs and amortization of bond discounts and premiums	82,235	85,141	(2,906)
Nuclear fuel expenses	873	873	-
Letter of credit fees	5,649	5,649	-
Other	2,390	2,390	-
	1,331,183	1,308,253	22,930
Items reducing future Participant billings:			
Investment income	(76,528)	(76,528)	-
Increase in fair value of investments and derivative instruments	49,715	49,545	170
Rate stabilization (revenue received to reduce future billings to Participants)	(537,784)	(537,784)	-
Reserve and contingency deposits	(111,261)	(106,979)	(4,282)
	(675,858)	(671,746)	(4,112)
Revenues (expenses) recognized:			
Interest, depreciation, amortization expense included in Participant billings for debt principal payments	(708,103)	(694,278)	(13,825)
Capital appreciation bond interest deposits	(39,720)	(39,720)	-
Rate stabilization draws applied to expenses	537,784	537,784	-
Reserve and contingency revenue applied to expenses	43,539	39,773	3,766
Total	(166,500)	(156,441)	(10,059)
Net costs recoverable from future Participant billings	$ 488,825	$ 480,066	$ 8,759

(9) Net Expenses Recoverable from Future Participant Billings – Continued

The following expenses will be recognized in future periods when rates charged to Participants produce revenues sufficient to retire the debt that funded those costs:

- Interest expense on PMPA's bonds and variable rate demand obligations along with associated letter of credit, banking, and remarketing fees (except interest and fees related to capital appreciation bonds) paid from bond proceeds during a defined "Construction Period," (net of income earned on the temporary investment of those bond proceeds);
- Interest expense on capital appreciation bonds accrued but not paid until maturity;
- Debt issuance expenses, amortization of bond discounts and premiums, defeasance losses, redemption losses, and organization costs paid from or included in bond proceeds;
- Depreciation on utility plant constructed with bond proceeds and amortization of nuclear fuel acquired with bond proceeds; and
- Certain other project costs paid from bond proceeds.

PMPA has also capitalized Participant revenues that, during the Construction Period, were established at levels to cover Project costs not paid from bond proceeds, as well as scheduled deposits to a Rate Stabilization account. The revenue associated with those scheduled deposits and the interest income thereon will be recognized when those funds are drawn upon to pay Project costs. Also, certain settlement revenues and excess revenues in certain funds have been transferred to the Rate Stabilization account and have been deferred for recognition until the time the funds are applied to the payment of Project costs. The remaining balance of the Rate Stabilization account was applied to the payment of Project costs in 2007.

Revenues or costs associated with increases or decreases in the fair value of investments have been capitalized until such time the securities have matured or are sold.

Additionally, PMPA's General Bond Resolution requires Participant revenues to be established at levels sufficient to provide specified deposits into a Reserve and Contingency fund. Monies in that fund are used for the construction or acquisition of utility plant assets. The recognition of such revenues is considered unearned until such time as the depreciation is recorded on the assets constructed or acquired with those monies.

(Dollars in thousands)

(10) Long-Term Liabilities

Long-term liabilities at December 31, 2019 and 2018 consist of the following:

	2018	Additions	Reductions	2019	Due within one year
1991 Refunding Series Electric Revenue Bonds, payable from 2019 to 2021 with interest ranging from 6.25% to 6.75%	$ 55,040	$ -	$ 13,975	$ 41,065	$ 13,825
1993 Refunding Series Electric Revenue Bonds, payable in 2021 to 2025 with interest ranging from 5.38% to 5.75%	32,975	-	-	32,975	-
2004A Capital Appreciation Electric Revenue Bonds, payable annually from 2022 to 2024, 2026 to 2032 and 2034 with interest ranging from 5.38% to 5.80%	102,670	-	-	102,670	-
2008E Refunding Series Electric Revenue Bonds, payable from 2033 to 2034 with variable interest rates (2.28% at December 31, 2019)	60,000	-	-	60,000	-
2009A-4 Refunding Series Electric Revenue Bonds, payable 2019 to 2021 with interest ranging from 4.25% to 5.00%	73,310	-	48,515	24,795	-
2009B Electric Revenue Bonds (Build America Bonds), payable 2031 to 2034 with interest at 7.036% (35% interest federally refunded yielding net interest at 4.5734%)	26,490	-	-	26,490	-

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

	2018	Additions	Reductions	2019	Due within one year
2010A-2 Refunding Series Electric Revenue Bonds, payable 2021 to 2022 with interest at 5.00%	$ 45,250	$ -	$ -	$ 45,250	$ -
2010A-3 Refunding Series Electric Revenue Bonds, payable from 2023 to 2024 with interest at 5.00%	18,435	-	-	18,435	-
2010A-4 Refunding Series Electric Revenue Bonds, payable from 2024 to 2025 with interest at 4.00% to 5.00%	23,385	-	-	23,385	-
2010A-5 Refunding Series Electric Revenue Bonds, payable from 2021 to 2023 with interest at 5.00%	15,165	-	-	15,165	-
2008C Refunding Conv Series Electric Revenue Bonds, payable from 2026 to 2034 with interest ranging from 4.75% to 5.75%	90,000	-	-	90,000	-
2008D Refunding Conv Series Electric Revenue Bonds, payable from 2026 to 2034 with interest ranging from 4.75% to 5.75%	30,000	-	-	30,000	-
2011B Refunding Series Electric Revenue Bonds, payable annually from 2026 to 2034 with variable interest rate 2.51% at December 31, 2019	53,950	-	-	53,950	-
2011C Refunding Series Electric Revenue Bonds, payable annually from 2026 to 2034 with variable interest rate 2.52% at December 31, 2019	53,950	-	-	53,950	-

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

	2018	Additions	Reductions	2019	Due within one year
2012A Refunding Series Electric Revenue Bonds, payable annually from 2023 to 2026 with interest ranging from 3.38% to 5.00%	$ 13,050	$ -	$ -	$ 13,050	$ -
2012B Refunding Series Electric Revenue Bonds, payable 2023 with interest at 4.00%	19,970	-	-	19,970	-
2012C Refunding Series Electric Revenue Bonds, payable 2023 with interest at 4.25%	4,485	-	-	4,485	-
2015A Series Electric Revenue Bonds, payable annually from 2022 to 2034 with interest ranging from 3.50% to 5.00%	51,935	-	-	51,935	-
2017A Series Electric Revenue Bonds, payable annually from 2019 to 2025 with interest at 5.00%	15,850	-	6,285	9,565	-
2017B Series Electric Revenue Bonds, payable annually from 2019 to 2025 with interest at 4.00%	38,115	-	15,490	22,625	-
Total bonds payable	824,025	-	84,265	739,760	13,825
Less unamortized discount	(1,032)	-	(177)	(855)	-
Plus unamortized premium	15,521	-	3,344	12,177	-
Bonds payable, net	$ 838,514	$ -	$ 87,432	$ 751,082	$ 13,825

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

Long-term liabilities at December 31, 2018 and 2017 consist of the following:

		2017		Additions		Reductions		2018		Due within one year
1991 Refunding Series Electric Revenue Bonds, payable from 2019 to 2021 with interest ranging from 6.25% to 6.75%	$	55,040	$	-	$	-	$	55,040	$	13,975
1993 Refunding Series Electric Revenue Bonds, payable in 2021 to 2025 with interest at 5.38%		33,305		-		330		32,975		-
2004A Capital Appreciation Electric Revenue Bonds, payable annually from 2022 to 2024, 2026 to 2032 and 2034 with interest ranging from 5.38% to 5.80%		102,670		-		-		102,670		-
2008A-3 Refunding Series Electric Revenue Bonds, payable annually through 2019 with interest at 5.00%		24,550		-		24,550		-		-
2008E Refunding Series Electric Revenue Bonds, payable from 2033 to 2034 with variable interest rates (2.17% at December 31, 2018)		60,000		-		-		60,000		-
2009A-3 Refunding Series Electric Revenue Bonds, payable through 2019 with interest ranging from 3.00% to 5.00%		22,030		-		22,030		-		-

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

	2017	Additions	Reductions	2018	Due within one year
2009A-4 Refunding Series Electric Revenue Bonds, payable 2019 to 2021 with interest ranging from 4.25% to 5.00%	$ 92,305	$ -	$ 18,995	$ 73,310	$ -
2009B Electric Revenue Bonds (Build America Bonds), payable 2031 to 2034 with interest at 7.036% (35% interest federally refunded yielding net interest at 4.5734%)	26,490	-	-	26,490	-
2010A-2 Refunding Series Electric Revenue Bonds, payable 2021 to 2022 with interest at 5.00%	51,525	-	6,275	45,250	-
2010A-3 Refunding Series Electric Revenue Bonds, payable from 2023 to 2024 with interest at 5.00%	18,435	-	-	18,435	-
2010A-4 Refunding Series Electric Revenue Bonds, payable from 2024 to 2025 with interest at 4.00% to 5.00%	23,385	-	-	23,385	-

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

	2017	Additions	Reductions	2018	Due within one year
2010A-5 Refunding Series Electric Revenue Bonds, payable from 2021 to 2023 with interest at 5.00%	$ 15,165	$ -	$ -	$ 15,165	$ -
2008C Refunding Conv Series Electric Revenue Bonds, payable from 2026 to 2034 with interest ranging from 4.75% to 5.75%	90,000	-	-	90,000	-
2008D Refunding Conv Series Electric Revenue Bonds, payable from 2026 to 2034 with interest ranging from 4.75% to 5.75%	30,000	-	-	30,000	-
2011A Refunding Series Electric Revenue Bonds, payable 2018 with interest at 5.75%	1,940	-	1,940	-	-
2011B Refunding Series Electric Revenue Bonds, payable annually from 2026 to 2034 with variable interest rate 2.49% at December 31, 2018	53,950	-	-	53,950	-
2011C Refunding Series Electric Revenue Bonds, payable annually from 2026 to 2034 with variable interest rate 2.07% at December 31, 2018	53,950	-	-	53,950	-

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

	2017	Additions	Reductions	2018	Due within one year
2012A Refunding Series Electric Revenue Bonds, payable annually from 2023 to 2026 with interest ranging from 3.375% to 5.00%	$ 13,050	$ -	$ -	$ 13,050	$ -
2012B Refunding Series Electric Revenue Bonds, payable 2023 with interest at 4.00%	19,970	-	-	19,970	-
2012C Refunding Series Electric Revenue Bonds, payable 2023 with interest at 4.25%	4,485	-	-	4,485	-
2015A Series Electric Revenue Bonds, payable annually from 2022 to 2034 with interest ranging from 3.50% to 5.00%	51,935	-	-	51,935	-
2017A Series Electric Revenue Bonds, payable annually from 2019 to 2025 with interest at 5.00%	15,850	-	-	15,850	6,285
2017B Series Electric Revenue Bonds, payable annually from 2019 to 2025 with interest ranging from 4.00% to 5.00%	38,115	-	-	38,115	15,490
Total bonds payable	898,145	-	74,120	824,025	35,750
Less unamortized discount	(1,213)	-	(181)	(1,032)	-
Plus unamortized premium	19,058	-	3,537	15,521	-
Bonds payable, net	$ 915,990	$ -	$ 77,476	$ 838,514	$ 35,750

(Dollars in thousands)

(10) Long-Term Liabilities – Continued

The bonds are special obligations of PMPA and are secured by future revenue and pledged monies and securities as provided by the Bond Resolution.

The bonds generally provide for early redemption beginning ten years after issuance at prices ranging from 100% to 103% of the bond principal amounts.

PMPA has advanced refunded certain bond issues as described in Note 11. PMPA is in compliance with its covenants under the Bond Resolution.

Variable Rate Terms

Interest rates on PMPA's variable rate debt are determined by PMPA's Remarketing Agents based on market conditions. These rates are reset monthly.

The following is a summary of total debt service deposit requirements for bonds outstanding at December 31, 2019:

Year	Principal	Interest	Total
2020	$ 13,825	$ 30,267	$ 44,092
2021	63,355	29,334	92,689
2022	54,224	37,396	91,620
2023	54,120	37,495	91,615
2024	55,051	33,838	88,889
2025-2029	212,942	243,529	456,471
2030-2034	286,243	173,237	459,480
	$ 739,760	$ 585,096	$ 1,324,856

All principal payments are due on January 1 of the year subsequent to the deposit requirement. Future interest requirements on variable rate debt are estimated as follows at December 31, 2019: for Bonds, Series 2011B through C, the estimated interest rates plus annual liquidity and remarketing fees are 4.85%; for Bonds Series 2008E, the estimated interest rate plus annual liquidity and remarketing fees is 4.5% through January 1, 2025 and 17.5% thereafter.

(10) Long-Term Liabilities – Continued

PMPA has pledged future total revenues, net of Catawba operating expenses, to repay substantially all outstanding bonds issued in prior years. Proceeds from these bonds provided financing for the construction of Catawba. The bonds are payable solely from electrical net revenues and are payable through 2034. The total principal and interest remaining to be paid on the bonds is $1,324,856. Principal and interest deposited for the years ended December 31, 2019 and 2018 were $66,939 and $87,382, respectively. Total operating revenues for the years ended December 31, 2019 and 2018 were $205,458 and $237,418, respectively.

(11) Defeasance of Debt

In March and May 2019, PMPA used excess cash in the Revenue Fund to defease $48,515 of refunding series 2009A4 Electric Revenue Bonds by placing the cash in an irrevocable trust fund to provide for future debt service payments on the above mentioned debt through redemption date of January 1, 2020. Due to the timing of this defeasance, no gain or loss was incurred.

In February 2018, PMPA used excess cash in the Revenue Fund to defease $20,945 of refunding series 2009A3 and refunding series 2009A4 Electric Revenue Bonds by placing the cash in an irrevocable trust fund to provide for future debt service payments on the above mentioned debt through redemption date of January 1, 2019. Due to the timing of this defeasance, no gain or loss was incurred.

In prior years, PMPA defeased in-substance certain Electric Revenue Bonds by placing the proceeds of new bonds in an irrevocable trust fund to provide for future debt service payments on the old debt. Accordingly, the trust account asset and the liability for the defeased bonds are not included in the accompanying financial statements. On December 31, 2019 and 2018, $96,430 and $69,475 of the bonds are considered defeased in-substance, respectively.

(Dollars in thousands)

(12) Reserve for Decommissioning

The owners of Catawba, including PMPA, have an obligation for decommissioning the station after the expiration of its operating licenses. Management believes PMPA is in compliance with Nuclear Regulatory Commission requirements for funding future decommissioning costs. Since 1985, PMPA has been making regular deposits to segregated decommissioning accounts. Deposits pertaining to contaminated portions of the Project are held by a trustee. As of December 31, 2019 and 2018, the fair value of PMPA's assets that are legally restricted for purposes of settling the decommissioning obligation is $88,570 and $79,439, respectively.

Planned deposits into the decommissioning fund, together with interest earnings, are expected to be sufficient to pay PMPA's share of the projected cost of decommissioning the entire Catawba Station.

During 2003, Duke received a 19-year extension of the operating license for Catawba Unit 1 and a 17-year extension of the operating license for Catawba Unit 2 through 2043. In connection with the license extensions, PMPA received an updated decommissioning study in 2003 and has subsequently received updated decommissioning studies in December 2008, 2013 and 2018. The latest study as of December 2018 estimates total decommissioning costs of $1,802,550 in 2018 dollars and presumes the Catawba Nuclear Station will be decommissioned as soon as possible following the expiration of its operating licenses in 2043. PMPA used the estimates from this study to determine its decommissioning liability to be recorded in accordance with U.S. GAAP accounting for asset retirement obligations.

PMPA used the following assumptions in determining its reserve for decommissioning:

	2019	2018
Period in which decommissioning liability was incurred	1985	1985
Agency's share of decommissioning costs per study (in 2018 dollars respectively)	$ 225,319	$ 222,190
Estimation of inflation	2.4%	2.4%
Credit adjusted risk-free interest rate	5.0%	5.0%
Estimated life of corresponding asset	25 years	25 years

The following is a roll forward of the reserve for decommissioning for the years ended December 31, 2019 and 2018:

	2019	2018
Reserve for decommissioning at January 1	$ 116,435	$ 96,418
Accretion expense (decommissioning)	5,998	4,909
Increase in decommissioning liability	1,673	15,108
Reserve for decommissioning at December 31	$ 124,106	$ 116,435

(Dollars in thousands)

(13) Employee Benefit Plans

PMPA maintains a defined contribution money purchase plan in compliance with Section 401(a) of the Internal Revenue Code ("IRC"). On behalf of all full-time employees, PMPA contributes 10% of base salary into the money purchase plan. PMPA contributions totaled $167 and $158 in 2019 and 2018, respectfully. Employee contributions may also be made to the Plan, providing combined employer and employee annual contributions do not exceed 25% of eligible employee compensation, or $30, whichever is less.

PMPA also maintains a deferred compensation plan under Section 457 of the IRC. In the past, on behalf of selected employees, PMPA has contributed to the deferred compensation plan; however, no such contribution was made in 2019 or 2018. Employee contributions may also be made to the deferred compensation plan providing combined employer and employee annual contributions do not exceed certain limitations.

Assets of the money purchase and deferred compensation plans are held by Prudential Financial, administrator and trustee for PMPA, for the exclusive benefit of the employees.

(14) Postemployment Benefits

PMPA's Postemployment Benefit Plan (the "Plan") provides for retiree medical benefits as follows: PMPA will maintain and pay up to 100% of premiums for group medical and dental insurance for each qualified retiree and up to 60% of premiums for the retiree's dependent spouse and/or children of the retiree for the retiree's lifetime. After the retiree and/or dependent qualifies for Medicare, he or she will be covered under a supplemental insurance plan, which will be secondary to Medicare.

Membership in the healthcare benefit plan consisted of the following at December 31:

	2019	2018
Retirees	3	3
Active Employees	15	14
Total	18	17

Funding Policy

The required contribution is based on pay-as-you-go financing requirements.

Plan liabilities and disclosures are immaterial to the PMPA financial statements.

(15) Disclosures Regarding Fair Value of Financial Instruments

U.S. GAAP requires disclosure of fair value information about financial instruments, whether or not recognized in the balance sheet, for which it is practicable to estimate fair value. Fair value estimates are made as of a specific point in time based on the characteristics of the financial instruments and the relevant market information. Where available, quoted market prices are used. In other cases, fair values are based on estimates using present value or other valuation techniques. These techniques involve uncertainties and are significantly affected by the assumptions used and the judgments made regarding risk characteristics of various financial instruments, discount rates, prepayments, estimates of future cash flows, future expected loss experience and other factors. Changes in assumptions could significantly affect these estimates. Derived fair value estimates cannot be substantiated by comparison to independent markets and, in many cases, may or may not be realized in an immediate sale of the instrument.

Under U.S. GAAP, fair value estimates are based on existing financial instruments without attempting to estimate the value of anticipated future business and the value of the assets and liabilities that are not financial instruments. Accordingly, the aggregate fair value amounts presented do not represent the underlying value of PMPA.

The following describes the methods and assumptions used by PMPA in determining carrying value and estimated fair value of financial instruments:

(a) Cash

Carrying value equals estimated fair value.

(b) Marketable Debt Securities

Marketable debt securities are reported at fair value and categorized within the fair value hierarchy established under U.S. GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. Gains or losses that result from market fluctuation are reported in the current period. As of December 31, 2019 and 2018, the Agency’s investments included money market investments of $164,594 and $189,160, respectively, which were valued at amortized cost which approximates fair value and marketable debt securities of $145,256 and $161,769, respectively, which were valued using significant other observable inputs (Level 2 inputs).

(c) Participant Accounts Receivable and Other Accounts Receivable

Carrying amount approximates fair value due to the short-term nature of these instruments.

(Dollars in thousands)

(15) Disclosures Regarding Fair Value of Financial Instruments – Continued

(d) Long-Term Debt

Carrying value of long-term debt coupon securities includes par, less unaccreted discounts, plus unamortized premiums, plus accrued interest payable. Carrying value also includes capital appreciation term bonds valued at original price plus accrued interest payable.

Estimated fair value of all long-term debt securities is derived from quoted market prices and includes accrued interest.

The estimated fair values of PMPA's long-term debt with carrying values which are different from their estimated fair values at December 31, 2019 and 2018 are as follows:

	2019		2018	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
1991 Electric Revenue Refunding Bonds	$ 42,321	$ 43,721	$ 56,706	$ 59,669
1993 Electric Revenue Refunding Bonds	33,620	39,767	33,571	39,021
2004A-2 Electric Revenue Refunding Bonds	243,413	312,135	230,131	306,209
2008C Electric Revenue Refunding Bonds	92,514	96,330	92,504	97,647
2008D Electric Revenue Refunding Bonds	30,837	32,109	30,833	32,548
2008E Electric Revenue Refunding Bonds	60,096	60,096	60,133	60,133
2009A-4 Electric Revenue Refunding Bonds	25,463	25,189	75,645	79,165
2009B Build America Bonds	27,422	37,994	27,422	35,860
2010A-2 Electric Revenue Refunding Bonds	47,120	47,722	47,540	48,850
2010A-3 Electric Revenue Refunding Bonds	19,274	19,426	19,383	20,293
2010A-4 Electric Revenue Refunding Bonds	24,399	24,589	24,490	25,061
2010A-5 Electric Revenue Refunding Bonds	15,815	15,993	15,943	16,358
2011B Electric Revenue Refunding Bonds	54,038	54,038	54,077	54,077
2011C Electric Revenue Refunding Bonds	54,045	54,045	54,055	54,055
2012A Electric Revenue Refunding Bonds	14,066	14,081	14,195	14,217
2012B Electric Revenue Refunding Bonds	20,911	21,229	21,047	21,336
2012C Electric Revenue Refunding Bonds	4,580	4,771	4,580	4,771
2015A Electric Revenue Refunding Bonds	57,613	60,167	58,264	59,239
2017A Electric Revenue Refunding Bonds	10,841	11,103	17,632	17,438
2017B Electric Revenue Refunding Bonds	26,125	26,189	42,748	41,795
	$ 904,513	$ 1,000,694	$ 980,899	$ 1,087,742

The carrying amount of the bond is shown net of all discounts, premiums, and accrued interest on capital appreciation bonds.

(16) Nuclear Insurance and Other Risk Management

Nuclear Insurance. Duke owns and operates McGuire with two nuclear reactors. In addition, Duke operates and has a partial ownership interest in Catawba with two nuclear reactors. Nuclear insurance coverage is maintained in three program areas: nuclear liability coverage; property, decontamination and premature decommissioning coverage; and business interruption and/or extra expense coverage. The other joint owners of Catawba reimburse Duke for certain expenses associated with nuclear insurance premiums per the Catawba joint owner agreements. The Price-Anderson Act requires Duke to provide for public nuclear liability claims resulting from nuclear incidents to the maximum total financial protection liability. Effective January 1, 2010, this adjustment increased the maximum total financial protection liability, which currently is $14,100,000.

Primary Liability Insurance. Duke has purchased the maximum reasonably available private primary nuclear liability insurance as required by law, which currently is $450,000.

Excess Liability. This policy currently provides $13,600,000 of coverage through the Price-Anderson Act's mandatory industry-wide excess secondary financial protection program of risk pooling. The $13,600,000 of coverage is the sum of the current potential cumulative retrospective premium assessments of $138,000 per licensed commercial nuclear reactor. This $13,600,000 would be increased by $138,000 as each additional commercial nuclear reactor is licensed or reduced by $138,000 for nuclear reactors that are no longer operational and may be exempted from the risk pooling insurance program. Under this program, licensees could be assessed retrospective premiums to compensate for public nuclear liability damages in the event of a nuclear incident at any licensed facility in the U.S. If such an incident should occur and public nuclear liability damages exceed primary liability insurance, licensees may be assessed up to $138,000 for each of their licensed reactors, payable at a rate not to exceed $20,500 a year per licensed reactor for each incident. The $138,000 amount is subject to indexing for inflation and may be subject to state premium taxes.

Duke is a member of Nuclear Electric Insurance Limited ("NEIL"), which provides property and accidental outage insurance coverage for Duke's nuclear facilities under the following two policy programs:

(16) Nuclear Insurance and Other Risk Management – Continued

Accidental Property Insurance. This policy provides excess property, decontamination, and decommissioning liability insurance in the following amounts: $1,500,000 for Catawba and McGuire. Catawba has a dedicated $1,250,000 insurance limit above this excess. McGuire also shares an additional $1,250,000 insurance limit with another nuclear station above this excess. This shared limit is not subject to reinstatement in the event of a loss. NEIL sublimits property damage losses to $750,000 for non-nuclear accidental property damage.

Accidental Outage Insurance. This policy provides business interruption and/or extra expense coverage resulting from an accidental property damage outage of a nuclear unit. Coverage is provided on a weekly limit basis after a significant waiting period deductible. Coverage amounts per unit decline if more than one unit is involved in an accidental outage. Initial coverage begins after a 12-week deductible period for Catawba and a 26-week deductible period for McGuire and continues at 100% for 52 weeks and 80% for the next 110 weeks. The McGuire and Catawba policy limit is $490,000. Effective April 1, 2013, NEIL sublimits the accidental outage recovery to approximately $328,000 for non-nuclear accidental property damage.

Losses resulting from non-certified acts of terrorism are covered as common occurrence, such that if non-certified terrorist acts occur against one or more commercial nuclear power plants insured by NEIL within a 12-month period, they would be treated as one event and the owners of the plants, where the acts occurred, would share one full limit of liability (currently $3,200,000). Effective April 1, 2013, NEIL sublimits the total aggregate for all of their policies for non-nuclear terrorist events to approximately $1,830,000.

In the event of large industry losses, NEIL's board of directors may assess Duke retroactive premiums of amounts up to ten times its annual premiums for up to six years after a loss, NEIL has never exercised this assessment. The maximum aggregate annual retrospective premium obligations for Duke are $159,000.

Pursuant to regulations of the Nuclear Regulatory Commission, each company's property damage insurance policies provide that all proceeds from such insurance be applied, first, to place the plant in a safe and stable condition after a qualifying accident, and second, to decontaminate before any proceeds can be used for decommissioning, plant repair or restoration.

In the event of a loss, the amount of insurance available might not be adequate to cover property damage and other expenses incurred. Uninsured losses and other expenses, to the extent not recovered by other sources, could have a material adverse effect on Duke's results of operations, cash flows or financial position.

(Dollars in thousands)

(16) Nuclear Insurance and Other Risk Management – Continued

The maximum assessment amounts include 100% of Duke's potential obligation to NEIL for Catawba. However, the other joint owners of Catawba are obligated to assume their pro rata share of liability for retrospective premiums and other premium assessments resulting from the Price-Anderson Act's excess secondary financial protection program of risk pooling or the NEIL policies.

PMPA also carries building and personal property insurance for the administrative offices, health insurance for all active employees, and workers' compensation insurance in accordance with statutory requirements. The policy limits for the building and personal property insurance is $3,445.

(17) Derivative Financial Instrument

In August 2004, PMPA entered into a floating-to-fixed rate, step-coupon swap ("swap") as part of the 2004 debt restructuring that helped to produce level debt service without issuing more capital appreciation debt and increased the benefits of the restructuring through January 1, 2025.

Objectives. The objectives of the swap were to achieve a lower fixed rate of interest on PMPA's debt and to push debt service out into later years in order to produce level debt service by deferring payments until later years.

Terms. Under the terms of the swap agreement, PMPA receives a variable interest rate based on the SIFMA Municipal Swap Index on a notional amount of $60 million and pays a low rate of 3% for the first twenty years and a higher rate of 16% for the last ten years of the swap life. The average rate that PMPA will pay over the life of the swap will be 4.84%.

Outstanding Notional Amount Schedule

Effective From:	Effective To:	Floating Rate Payer Notional Amount (USD)	Fixed Rate Payer Notional Amount (USD)
Effective Date	January 1, 2025	$ 60,000	$ 40,000
January 1, 2025	January 1, 2033	60,000	213,333
January 1, 2033	Termination Date	15,000	53,333

Fair Value. The fair value of this swap agreement was a credit of approximately $51,402 and $47,952 at December 31, 2019 and 2018, respectively. The fair value was estimated using a proprietary pricing service.

(17) Derivative Financial Instrument – Continued

Net Effect from Swap. The swap is designed to push debt service out into later years in order to produce level debt service by deferring payments until later years. Through December 31, 2019, and 2018, PMPA has realized a net loss from the swap of $17,074 and $16,150, respectively, with the counterparty having paid or obligated to pay aggregate variable rate payments under the swap of $10,621 and $9,745 respectively, to PMPA, and PMPA having paid or obligated to pay aggregate fixed payments under the swap of $27,695 and $25,895, respectively, to the counterparty.

Credit Risk. Credit risk is the failure of the counterparty to perform under the terms of the derivative contract. When the fair value of the derivative contract is positive, the counterparty owes PMPA, creating no repayment risk for PMPA. When the fair value of the derivative contract is negative, PMPA owes the counterparty and, therefore does create repayment risk. PMPA minimizes the credit or repayment risk in derivative instruments by entering into transactions with high-quality counterparties.

Market Risk. Market risk is the adverse effect on the value of financial instruments that results from a change in interest rates. The market risk associated with interest rate contracts is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken.

Termination Risk. PMPA or the counterparty may terminate the swap if the other party fails to perform under the terms of the contract. An additional termination event occurs if PMPA's or the counterparty's ratings falls below BBB by Standard & Poor's, Baa3 by Moody's, and BBB by Fitch. If at the time of termination, the swap has a negative fair value, PMPA would be liable to the counterparty for a payment equal to the swap's fair value.

Renewal Risk. PMPA elected to enter into the swap for a term of approximately 29 years. Since the term of the swap does match the stated long-term maturities of its fixed rate debt, PMPA is not subject to renewal risk.

(Dollars in thousands)

(17) Derivative Financial Instrument – Continued

Swap Payments. PMPA expects to realize the following net benefits from the swap through the stated expiration date:

Period Ended	Variable Rate Payments Received	Fixed Rate Payments Made	Net Benefit (Expense) From Interest Rate Swap
December 31, 2004	$ 361	$ 695	$ (334)
December 31, 2005	1,468	1,800	(332)
December 31, 2006	2,067	1,800	267
December 31, 2007	2,175	1,800	375
December 31, 2008	1,348	1,800	(452)
December 31, 2009	248	1,800	(1,552)
December 31, 2010	158	1,800	(1,642)
December 31, 2011	119	1,800	(1,681)
December 31, 2012	98	1,800	(1,702)
December 31, 2013	55	1,800	(1,745)
December 31, 2014	31	1,800	(1,769)
December 31, 2015	20	1,800	(1,780)
December 31, 2016	246	1,800	(1,554)
December 31, 2017	503	1,800	(1,297)
December 31, 2018	848	1,800	(952)
December 31, 2019	876	1,800	(924)
Total realized	10,621	27,695	(17,074)
December 31, 2020-2024	9,000	9,000	-
December 31, 2025-2029	9,000	48,000	(39,000)
December 31, 2030-2033	5,850	31,200	(25,350)
Total unrealized	23,850	88,200	(64,350)
Fair value adjustment			12,948
Derivative financial instrument			(51,402)

(18) Commitments and Contingencies

PMPA has been named as a defendant in a lawsuit by certain PMPA Participants with respect to billing practices and the allocation of charges to the PMPA Participants. The lawsuit seeks among other things, a declaratory judgment to affirm past and future billing and rate calculation practices. The impact of this lawsuit, if any, to the PMPA financial statements is currently unknown and no provision for this litigation has been made in the accompanying financial statements.

(19) Subsequent Events

The Agency intends to use excess cash in the Revenue Fund to defease $29,520 of refunding Series 2009A4 and 2010A2 Electric Revenue Bonds by placing the cash in an irrevocable trust fund to provide for future debt service payments on the above mentioned debt. The anticipated closing date of the transaction in May of 2020.

On January 28 2020, PMPA provided a notice of termination to Santee Cooper for the Requirements Service Agreement referenced in Note 4. This cancellation is a result of all Participants providing notice to cancel their Supplemental Agreements as discussed in Note 3.

SUPPLEMENTARY INFORMATION

PIEDMONT MUNICIPAL POWER AGENCY

Schedule of Revenues and Expenses Actual and Budget

Per the Bond Resolution and Other Agreements

Year Ending December 31, 2019

(Dollars in thousands)

	Actual Revenues and Expenses	Budgeted Revenues and Expenses	Actual Over (Under) Budget
Revenue:			
Sales of electricity to participants	$ 183,111	$ 184,458	$ (1,347)
Sales of electricity to Duke	12,356	12,502	(146)
Sales of electricity to Others	8,401	3,975	4,426
Interest income	5,801	8,092	(2,291)
Other	1,590	1,383	207
Total Revenue	$ 211,259	$ 210,410	$ 849
Expenses:			
Catawba operating expenses:			
Operation & maintenance	$ 27,973	$ 28,744	$ (771)
Nuclear fuel	14,532	13,946	586
Purchased power-Duke	12,820	13,004	(184)
Payments in lieu of taxes	8,078	7,928	150
Interconnection services:			
Purchased power:			
Duke	21,071	25,260	(4,189)
Participants	12,462	12,952	(490)
Other	1,663	2,071	(408)
Transmission Services	7,676	7,915	(239)
Distribution services	627	698	(71)
Administrative and general:			
Agency	6,330	6,989	(659)
Duke	13,174	11,544	1,630
Other	6,624	6,188	436
Special fund deposits(withdrawals):			
Bond fund:			
Deposits from revenues	43,722	44,292	(570)
Reserve and Contingency fund:			
Deposits from revenue	4,283	4,341	(58)
Capital additions	(4,283)	(2,763)	(1,520)
Transfer excess funds	-	(1,578)	1,578
Decommissioning fund:			
Deposits from revenue	5,717	5,607	110
Interest income(1)	1,551	1,551	-
Revenue fund:			
Working capital	(23,178)	(28,411)	5,233
Fuel	(9,650)	(10,592)	942
Debt service reserve release	(4,546)	(4,429)	(117)
Construction Fund:			
Interest income(1)	358	465	(107)
Supplemental power reserve:			
Interest income(1)	33	37	(4)
Transfer excess funds	(33)	(37)	4
Other capital transactions:			
Bond Refunding:			
Bond payments	50,077	50,000	77
Plant additions:			
Reserve and contingency fund	4,283	2,763	1,520
General plant	57	113	(56)
Transmission plant	(18)	100	(118)
LDMSS/SCADA	206	1,120	(914)
Fuel acquisitions	9,650	10,592	(942)
Total Expenses	$ 211,259	$ 210,410	$ 849

(1) Included in "Revenue: Interest Income."

PIEDMONT MUNICIPAL POWER AGENCY

Schedule of Revenues and Expenses
Per the Bond Resolution and Other Agreements
Year Ending December 31, 2019
(Dollars in thousands)

		FUNDS							
		Revenue		Operating	Bond		Reserve Contingency	Decommission	Supplemental Power
		Working Capital	Construction	Fuel Account	Principal Interest Retirement	Reserve			
Balances at beginning of year:									
Assets		$ 163,397	$ 19,075	$ 7,085	$ 50,918	$ 61,433	$ 6,143	$ 80,273	$ 1,600
Liabilities		(10,682)	-	-	-	-	-	-	-
Net		152,715	19,075	7,085	50,918	61,433	6,143	80,273	1,600
Project revenues:									
Participants-Electric	(1)	183,111							
-Facilities rent	(1)	394							
-Other	(1)	1,196							
Duke Power-Electric	(1)	12,356							
Other-Surplus Electric	(1)	8,401							
Interest income	(1)	3,892	358					1,551	
Project costs (see note):									
Operations and maintenance	(2)	(27,973)							
Fuel	(3)	(14,532)		14,532					
Purchased power-Duke	(2)	(12,820)							
Decommissioning	(3)	(5,717)						5,717	
Administrative and general	(2)	(17,741)							
Payments in lieu of taxes	(2)	(7,960)							
Other	(2)	(6,624)							
Debt service	(3)	(43,722)			43,722				
Reserve and contingency	(3)	(4,283)					4,283		
Supplemental power costs:									
Purchased power-Duke/SoCo	(2)	(21,071)							
-Participant	(2)	(12,462)							
-Other	(2)	(1,663)							
Transmission services	(2)	(7,676)							
Distribution services	(2)	(627)							
Administrative and general	(2)	(1,763)							
Payments in lieu of taxes	(2)	(118)							
Other fund changes:									
Transfers in (out):									
Construction	(3)	4,283					(4,283)		
Payments:									
Debt retire/interest	(2)	4,546			(67,863)	(4,133)	(413)		
Capital additions	(2)	(4,528)	(8,532)	(9,650)					
Debt Refunding:									
Defeasance	(2)	(50,077)							
Balances at December 31, 2019		$ 129,537	$ 10,901	$ 11,967	$ 26,777	$ 57,300	$ 5,730	$ 87,541	$ 1,600
Assets		140,203							
Liabilities		(10,666)							
		$ 129,537							

(1) Deposited in appropriate fund
(2) Paid to third parties
(3) Transfers between funds