# American Municipal Power, Inc.

Consolidated Financial Statements December 31, 2018 and 2017

# American Municipal Power, Inc.

# Index

# **December 31, 2018 and 2017**

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## **Report of Independent Auditors**

To the Board of Trustees and Members of American Municipal Power, Inc.

We have audited the accompanying consolidated financial statements of American Municipal Power, Inc. and its subsidiaries, which comprise the consolidated balance sheets as of December 31, 2018 and 2017, and the related consolidated statements of revenues and expenses, of changes in member and patron equities, and of cash flows for the years then ended.

# Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated 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 consolidated financial statements that are free from material misstatement, whether due to fraud or error.

# Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated 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 Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of American Municipal Power, Inc. and its subsidiaries as of December 31, 2018 and 2017, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

April 18, 2019

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# American Municipal Power, Inc. Consolidated Balance Sheets December 31, 2018 and 2017

	December 31, 2018	December 31, 2017
Assets		
Utility plant		
Electric plant in service	\$ 4,878,808,405	\$ 4,870,764,297
Accumulated depreciation	(586,625,010)	(441,404,628)
Total utility plant	4,292,183,395	4,429,359,669
Nonutility property and equipment		
Nonutility property and equipment	23,505,923	23,508,943
Accumulated depreciation	(13,945,084)	(11,551,654)
Total nonutility property and equipment	9,560,839	11,957,289
Construction work-in-progress	20,107,609	14,339,243
Plant held for future use	34,881,075	34,881,075
Coal reserves	21,945,584	22,750,012
Trustee funds and other assets		
Trustee funds	304,309,796	339,635,968
Trustee funds - restricted	166, 157, 567	264,492,038
Financing receivables - members	3,031,611	4,014,038
Notes receivable	-	2,672,296
Regulatory assets	534,392,822	515,101,733
Prepaid assets	55,493,606	40,369,917
Intangible and other assets, net of accumulated		
amortization of \$5,350,880 and \$4,395,329 respectively	42,948,772	36,837,341
Total trustee funds and other assets	1,106,334,174	1,203,123,331
Ourself and the		
Current assets Cash and cash equivalents	124,268,956	144,744,166
Cash and cash equivalents - restricted	22,261,566	15,116,816
Trustee funds	233,343,168	206,488,006
Trustee funds - restricted	101,703,014	710,339,257
Collateral postings	19,400,134	15,845,146
Accounts receivable	112,704,511	118,442,231
Interest receivable	27,015,633	39,471,820
Financing receivables - members	15,727,043	22,186,743
Inventories	14,039,009	10,855,620
Regulatory assets	23,599,557	19,819,750
Prepaid expenses and other assets	18,913,732	5,804,788
Total current assets	712,976,323	1,309,114,343
Total assets	\$ 6,197,988,999	\$ 7,025,524,962

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

# American Municipal Power, Inc. Consolidated Balance Sheets December 31, 2018 and 2017

	December 31, 2018	December 31, 2017		
Equities and Liabilities				
Member and patron equities				
Contributed capital	\$ 828,968	\$ 828,968		
Patronage capital	83,379,309	80,591,975		
Total member and patron equities	84,208,277	81,420,943		
Long-term debt				
Term debt	5,303,898,034	5,379,144,557		
Term debt on behalf of others	19,354,165	20,208,332		
Revolving credit loan	210,100,000	318,400,000		
Total long-term debt	5,533,352,199	5,717,752,889		
Current liabilities				
Accounts payable	108,735,245	114,499,624		
Accrued interest	118,105,405	133,161,390		
Term debt	161,049,412	757,014,412		
Term debt on behalf of others	29,805,167	17,778,039		
Regulatory liabilities	4,156,109	1,120,448		
Other liabilities	29,233,974	26,262,018		
Total current liabilities	451,085,312	1,049,835,931		
Other noncurrent liabilities				
Deferred gain on sale of real estate	-	1,109,589		
Asset retirement obligations	6,840,083	8,205,457		
Regulatory liabilities	66,529,229	97,437,996		
Other liabilities	55,973,899	69,762,157		
Total other noncurrent liabilities	129,343,211	176,515,199		
Total liabilities	6,113,780,722	6,944,104,019		
Total equities and liabilities	\$ 6,197,988,999	\$ 7,025,524,962		

# American Municipal Power, Inc. Consolidated Statements of Revenues and Expenses Years Ended December 31, 2018 and 2017

	December 31, 2018	December 31, 2017
Revenues		
Electric revenue	\$ 1,254,793,628	\$ 1,203,615,402
Service fees	11,679,120	10,981,725
Programs and other	13,393,319	14,362,362
Total revenues	1,279,866,067	1,228,959,489
Operating expenses		
Purchased electric power	535,284,459	522,503,950
Production	166,224,303	151,360,890
Fuel	144,526,906	123,873,793
Depreciation and amortization	151,353,252	135,118,275
Administrative and general	19,598,220	18,629,089
Property and real estate taxes	11,402,931	11,361,193
Programs and other	17,189,457	19,610,929
Total operating expenses	1,045,579,528	982,458,119
Operating margin	234,286,539	246,501,370
Nonoperating revenues (expenses)		
Interest expense	(322, 162, 001)	(314,836,225)
Interest income, subsidy	71,476,190	54,293,822
Interest and other income	19,186,606	17,571,558
Total nonoperating expenses	(231,499,205)	(242,970,845)
Net margin	\$ 2,787,334	\$ 3,530,525

# American Municipal Power, Inc. Consolidated Statements of Changes in Member and Patron Equities Years Ended December 31, 2018 and 2017

	 ntributed Capital	I	Patronage Capital	Total
Balances at December 31, 2016	\$ 828,968	\$	77,061,450	\$ 77,890,418
Net margin	 		3,530,525	 3,530,525
Balances at December 31, 2017	828,968		80,591,975	81,420,943
Net margin			2,787,334	 2,787,334
Balances at December 31, 2018	\$ 828,968	\$	83,379,309	\$ 84,208,277

# American Municipal Power, Inc. Consolidated Statements of Cash Flows Years Ended December 31, 2018 and 2017

	December 31, 2018		December 3 2017	
Cash flows from operating activities				
Net margin	\$	2,787,334	\$	3,530,525
Adjustments to reconcile net margin to net cash provided by operating activities				
Depreciation and amortization		151,353,252		135,118,275
Amortization of bond premium, net of amortization of bond				
discount and amortization of deferred financing costs		(12,540,272)		(4,445,444)
Accretion of interest on asset retirement obligations		237,714		1,004,321
(Gain) loss on disposal of utility property and equipment		(170,960)		1,168,176
Unrealized loss (gain) on investments		7,174,929		(1,509,944)
Changes in assets and liabilities				
Collateral postings		(3,554,988)		9,371,846
Accounts and interest receivable		18,193,907		(43,076,863)
Inventories		(3,183,389)		(2,451,972)
Regulatory assets and liabilities, net		(61,665,133)		(61,637,231)
Prepaid expenses and other assets		(22,529,199)		(39,480,523)
Accounts payable and other liabilities		(3,871,337)		7,432,886
Accrued interest		(15,055,985)		18,246,962
Asset retirement obligations		(1,603,088)		(571,421)
Net cash provided by operating activities		55,572,785		22,699,593
Cash flows from investing activities  Purchase of property plant, equipment and construction				
work-in progress		(20, 169, 371)		(117,005,893)
Sale of property, plant and equipment		1,217,157		1,425,317
Proceeds from sale of investments		1,122,681,404		470,129,123
Purchase of investments		(424,418,029)		(615,845,963)
Net cash provided by (used in) investing activities	\$	679,311,161	\$	(261,297,416)

# American Municipal Power, Inc. Consolidated Statements of Cash Flows Years Ended December 31, 2018 and 2017

	De	ecember 31, 2018	De	ecember 31, 2017
Cash flows from financing activities				
Proceeds from revolving credit loan		19,500,000		399,300,000
Payments on revolving credit loan		(127,800,000)		(284,400,000)
Cost of issuance of debt		(751,469)		(2,785,545)
Principal payments on term debt		(757,014,412)		(80,614,412)
Principal payments on term debt on behalf of others		(17,778,039)		(19,357,667)
Proceeds from issuance of term debt		99,236,387		220,999,448
Proceeds from issuance of term debt on behalf of others		28,951,000		16,923,872
Proceeds from financing receivables - members		10,001,604		7,708,637
Funding of financing receivables - members		(2,559,477)		(2,522,247)
Net cash (used in) provided by financing activities		(748,214,406)		255,252,086
Net change in cash, cash equivalents				
and restricted cash		(13,330,460)		16,654,263
Cash, cash equivalents and restricted cash				
Beginning of period		159,860,982		143,206,719
End of period	\$	146,530,522	\$	159,860,982
Supplemental disclosure of cash flow information Cash paid during the period for interest, net of amount capitalized	\$	337,217,986	\$	296,589,263
Supplemental disclosure of noncash investing and financing activities  Capital expenditures included in accounts payable	\$	36,555,181	\$	38,448,515
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# 1. Description of Business

American Municipal Power, Inc. ("AMP") is a not-for-profit Ohio corporation organized to provide electric capacity and energy and to furnish other services to its members on a cooperative basis. AMP is a tax-exempt organization for federal tax purposes under Section 501(c)(12) of the Internal Revenue Service Code ("IRC"). As AMP derives its income from the exercise of an essential government function and will accrue to a state or a political subdivision there of; AMP's income is excludable from gross income under IRC Section 115. AMP is a membership organization comprised of 84 municipalities throughout Ohio, 29 municipalities in Pennsylvania, six municipalities in Michigan, six municipalities in Kentucky, five municipalities in Virginia, two municipalities in West Virginia, one municipality in Indiana, one municipality in Maryland, and one joint action agency in Delaware, all but one of which own and operate electric systems. AMP purchases and generates electric capacity and energy for sale to its members. AMPO, Inc. is a for profit subsidiary that provides electric and natural gas aggregation consulting services to both members and nonmembers in Ohio.

In addition, AMP serves as a project manager for Ohio members participating in joint venture projects to share ownership of power generation and transmission facilities, known as Ohio Municipal Electric Generation Agency Joint Ventures: 1, 2, 4, 5, and 6 ("OMEGA" "JV1," "JV2," "JV4," "JV5," and "JV6") (collectively, the "OMEGA Joint Ventures"). AMP is closely aligned with Ohio Municipal Electric Association ("OMEA"), the provider of legislative liaison services to AMP and 80 Ohio public power communities. AMP members have also formed Municipal Energy Services Agency ("MESA") whose purpose is to provide administrative, management and technical services to AMP, its members, OMEA and the OMEGA Joint Ventures.

AMP has received approval pursuant to a private letter ruling from the Internal Revenue Service ("IRS") to issue tax-exempt securities on behalf of its members. In connection with the financing of projects undertaken by the electric systems of certain member communities, AMP has issued tax exempt debt on their behalf. Additionally, AMP has issued tax-exempt bonds to finance the construction of its generating projects.

AMP 368 LLC ("AMP 368"), a wholly owned and consolidated subsidiary of AMP, is the owner of a 23.26%, or 368 MW, undivided interest in the Prairie State Energy Campus ("PSEC"). PSEC, located in Washington County, Illinois, includes a coal-fired generating plant and adjacent coal mine.

Meldahl LLC, a wholly owned and consolidated subsidiary of AMP, is the owner of the 105 MW Meldahl project, a run-of-the river hydroelectric facility on the Ohio River near Maysville, Kentucky.

AMP Transmission LLC, a wholly owned and consolidated subsidiary of AMP, an Ohio not-for – profit, to own and provide transmission services in Delaware, Indiana, Kentucky, Maryland, Michigan, Ohio, Pennsylvania, Virginia and West Virginia for the Members.

# 2. Summary of Significant Accounting Policies

## **Basis of Consolidation**

The consolidated financial statements include the accounts of AMP and its wholly owned subsidiaries, AMPO, Inc., Meldahl LLC, AMP 368 and AMP Transmission LLC. All intercompany transactions have been eliminated in the preparation of the consolidated financial statements.

# **Utility Plant**

AMP records amounts expended in connection with the purchase or construction of utility plant assets at cost. Major renewals, betterments and replacements are capitalized, while maintenance and repair costs are charged to operations as incurred. Operations are charged with labor, material, supervision and other costs incurred to maintain the utility plant. When utility plant assets are retired, accumulated depreciation is charged with the cost of assets, plus removal costs, less any salvage value, and any resulting gain or loss is reflected in other nonoperating revenues (expenses), net in the consolidated statements of revenues and expenses.

Depreciation on utility plant assets is provided for by the straight-line method over the estimated useful lives of the property. The provisions are determined primarily by the use of functional composite rates as follows:

Production, plant	5%-10%
Transmission plant	5%
General plant	5%-33%
Station equipment	4%-20%

## **Nonutility Property and Equipment**

Nonutility property and equipment is recorded at cost. Major renewals, betterments and replacements are capitalized, while maintenance and repair costs are charged to operations as incurred. When nonutility property and equipment is retired or otherwise disposed of, the related cost and accumulated depreciation are removed from the accounts, and the related gains or losses are reflected in other nonoperating revenues (expenses), net in the consolidated statements of revenues and expenses.

Depreciation on nonutility property and equipment is provided for on the straight-line method over the estimated useful lives of the property as follows:

Building	25 years
Furniture and equipment	5-10 years
Computer software	3-5 years
Vehicles	3-5 years

## **Construction Work-in-Progress**

AMP records amounts expended in connection with construction work-in-progress projects at cost. Upon completion of a project, AMP places the asset in service and the related costs are recorded as either utility plant or nonutility property and equipment.

## **Plant Held for Future Use**

In November 2009, the participants in the AMP Generating Station Project (the "AMPGS Project") voted to terminate the development of the pulverized coal power plant in Meigs County, Ohio. The AMPGS Project was to be a 1,000 MW base load, clean-coal technology plant scheduled to go online in 2014. This pulverized coal plant was estimated to be a \$3 billion project, but the project's targeted capital costs increased by 37% and the engineer, procure and construct contractor could not guarantee that the costs would not continue to escalate. At the termination date, minimal construction had been performed on the AMPGS Project at the Meigs County site. AMP still intends to develop this site for the construction of a generating asset; however, at December 31, 2018, the type of future generating asset had not been determined.

The AMPGS Project participants signed "take or pay" contracts with AMP. As such, the participants of the project are obligated to pay any costs incurred for the project.

As a result of the decision to terminate further development of a coal plant at AMPGS, the AMPGS Project costs have been reclassified out of construction work-in-progress and into plant held for future use or regulatory assets in the consolidated balance sheets. At December 31, 2010, AMP reclassified \$34,881,075 of costs to plant held for future use in the consolidated balance sheets. These costs were determined to be associated with the undeveloped Meigs County site regardless of the type of generating asset ultimately developed on the site.

The remaining costs previously incurred were determined to be impaired but reclassified as a regulatory asset which is fully recoverable from the AMPGS Project participants as part of their unconditional obligation under the "take or pay" contract. These stranded costs are being recovered through collections from Participants and Members over a 15 year term and from service fee and other member related revenues over the same term. At December 31, 2018, AMP has a remaining regulatory asset of \$17,448,612 for the recovery of these abandoned construction costs.

## Impairment of Long-lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that full recoverability is questionable. The determination of whether an impairment has occurred is based on an estimate of undiscounted future cash flows attributable to the assets, as compared with the carrying value of the assets. If an impairment has occurred, the amount of the impairment recognized is the excess of the carrying value of the assets over fair value of the assets.

#### **Coal Reserves**

AMP has purchased coal reserves in conjunction with the construction of the PSEC. The coal reserves are recorded at cost. AMP also has a contractual right of first refusal for additional coal reserves. These reserves are valued at \$21,945,584 and \$22,750,012 (net of depletion) as of December 31, 2018 and 2017, respectively. Depletion occurs as the coal reserves are mined.

#### **Trustee Funds**

AMP maintains funds on deposit with the trustees ("trustee funds") under its various trust indentures securing bonds issued for its various projects. Investments of the trustee funds include money market funds and debt securities. The debt securities are classified as held-to-maturity in accordance with Accounting Standards Codification ("ASC") 320 *Investments – Debt and Equity Securities*, and are recorded at amortized cost. The debt securities mature at various dates through February 2046. The money market funds are valued at the net asset value of the underlying fund determined on the valuation date.

Realized gains and losses on investment transactions are determined on the basis of specific identification. Gross unrealized holding losses (gains) at December 31, 2018 and 2017 were \$7,178,349 and (\$1,509,944), respectively. Gross unrealized holding gains and losses are included in other, net in the consolidated statements of revenues and expenses.

On November 30, 2017, AMP issued, pursuant to the PSEC Master Trust Indenture ("MTI"), its Prairie State Energy Campus Project 2017A Revenue Bonds (see Note 9). A portion of the proceeds of the PSEC 2017A Bonds and other available funds under the MTI were applied to refund the PSEC 2008A Bonds and PSEC 2009A Bonds. To effect the refunding, a sufficient amount of the proceeds of the Series 2017A Bonds and certain other available funds under the MTI were deposited in an escrow account (the "Escrow Fund") established by AMP with U.S. Bank

National Association (the "Escrow Agent"), and were invested in certain noncallable direct obligations or obligations the principal of and interest on which are unconditionally guaranteed by the United States of America ("Defeasance Obligations") that mature in amounts and pay interest at rates sufficient to pay, when due, the principal, applicable redemption premiums, if any, and interest on the above-referenced bonds through their respective maturity or redemption dates, as applicable. The PSEC 2008A Bonds were redeemed on February 15, 2008 and the 2009A were redeemed on February 15 2019, each at the redemption prices of 100%.

On December 20, 2017, AMP issued, pursuant to the AFEC Master Trust Indenture, its AMP Fremont Energy Campus Project 2017A Revenue Bonds (see Note 9). A portion of the proceeds of the AFEC 2017A Bonds and other available funds under the Indenture, were applied to refund the AFEC 2012B Bonds. To effect the refunding, a sufficient amount of the proceeds of the Series 2017A Bonds and certain other available funds under the Indenture were deposited in an escrow account (the "Escrow Fund") established by AMP with U.S. Bank National Association (the "Escrow Agent"), and were invested in certain noncallable direct obligations or obligations the principal of and interest on which are unconditionally guaranteed by the United States of America ("Defeasance Obligations") that mature in amounts and pay interest at rates sufficient to pay, when due, the principal, applicable redemption premiums, if any, and interest on the above-referenced bonds through their respective maturity or redemption dates, as applicable. The sufficiency of the Escrow Fund, including Defeasance Obligations and the income thereon, to pay such amounts were verified by a third party CPA firm. On the date of issuance of the AFEC 2017A Bonds, the Escrow Agent was given irrevocable instructions to call the callable AFEC 2012B Bonds for redemption on February 15, 2022 at the redemption prices of 100%.

#### Financing Receivable-Members

Financing receivable - members is comprised of debt service obligations on AMP's limited recourse tax-exempt debt issued on behalf of its members (Note 9).

In connection with the issuance of municipal project notes, AMP has entered into loan agreements with individual member communities. The terms of these loan agreements provide that the member community will issue its note to AMP in the same amount as the related AMP project note. The member community note issued to AMP is payable solely from the net revenue of the member community's electric system. Certain of these loan agreements also provide that a portion of the proceeds from the issuance of municipal project notes shall be deposited in a project fund held for the purpose of making payments of project costs as designated by the member community. The project fund amounts are invested at the direction of the member community and are disbursed by AMP upon submission of a payment requisition satisfactory to AMP. Project fund deposits are restricted to the payment of designated project costs.

## **Investment in The Energy Authority**

On January 1, 2014 AMP entered into a membership agreement with The Energy Authority ("TEA"). As a condition of membership, AMP is subject to TEA operations and settlement procedures as AMP receives services from TEA for dispatch services and natural gas management. AMP is also subject to guaranty agreements where if TEA is unable to deliver capacity, energy or gas obligations, AMP is obligated to pay that amount to relevant counterparties the extent of the guaranty limit, which is \$28,928,571 for capacity and energy and \$5,500,000 for natural gas. AMP accounts for their ownership interest in TEA as a cost method investment.

# **Intangible and Other Assets**

Included in intangible assets are two interconnections contracts for offsite facilities which were a part of the acquisition cost for the AMP Fremont Energy Center ("AFEC") project. These contracts

were valued at \$28,665,190, and were net of \$5,350,835 and \$4,586,430 of accumulated amortization as of December 31, 2018 and 2017, respectively. The contracts are being amortized over a 37.5 year period at a rate of \$764,405 per year, which is recognized in depreciation and amortization.

## **Prepaid Assets**

AMP prepays for 25-year power supply solar agreements (the "Prepaid Agreements") which are included in prepaid assets in the accompanying consolidated balance sheets. The amount of the Prepaid Agreements was \$58,706,033 and \$40,749,014 as of December 31, 2018 and 2017, respectively. AMP is amortizing the cost of the power over the life of the Prepaid Agreements. AMP records the amount expected to be amortized over the next twelve months as a current asset in prepaid expenses and other assets in the accompanying consolidated balance sheets, which was \$3,782,419 and \$993,378 as of December 31, 2018 and 2017, respectively. AMP has concluded that the Prepaid Agreements qualify for the normal purchase sale exemption in accordance with FASB's standard on accounting for derivative instruments.

## **Cash and Cash Equivalents**

For purposes of the consolidated statements of cash flows, cash equivalents consist of highly-liquid cash and short-term investments with original maturities of three months or less.

#### **Restricted Cash**

Restricted cash consist of cash from members for contractual restrictions on rate stabilization plans is held in trust for the benefit of the members.

## **Collateral Postings**

At December 31, 2018 and 2017, AMP posted collateral deposits to the bank accounts of certain of its power suppliers related to long-term power supply agreements with the suppliers and collateral deposits with insurance companies in connection with long-term construction projects. AMP also has collateral posted to Midwest Independent Transmission System Operator, Inc. ("MISO") for the ability to participate in auctions for future transmission rights ("FTRs"). AMP has recorded these collateral postings as current assets in the accompanying consolidated balance sheets. The impact of utilizing FTRs is included in the transmission cost of purchased power.

#### **Concentration of Credit Risk and Accounts Receivable**

AMP periodically maintains cash balances in excess of the federally insured limit. At December 31 2018 and 2017, 17% of accounts receivable were due from two customers, and 17% and 19% of revenue were due from two customers, respectively, in each year.

## **Inventories**

Inventories consist of fuel inventory and materials and supplies inventories. Fuel inventory is the recorded amount of unused coal inventory at PSEC. This amount is verified semi-annually by a third party and is valued at the weighted average cost. Materials and supplies inventories are recorded at average cost. These items are used primarily for maintenance and daily operational requirements.

## **Member and Patron Equities**

Contributed capital represents initial capital contributions made by members. Should AMP cease business, these amounts, if available, will be returned to the members, and any available patronage capital will also be distributed to members and former members based on their patronage of AMP while they were members.

## **Asset Retirement Obligations**

AMP records, at fair value initially, legal obligations associated with the retirement or removal of long-lived assets that can be reasonably estimated. The recognition of a liability is accompanied by a corresponding increase in utility plant. The liability is adjusted for any revisions to the expected value of the retirement obligation (with corresponding adjustments to utility plant) and for accretion due to the passage of time. Certain AMP assets have an indeterminate life, such as hydroelectric facilities, and thus the fair value of the retirement obligation is not reasonably estimable. A liability for these asset retirement obligations will be recorded when a fair value is determinable.

## **Revenue Recognition and Rates**

Revenues are recognized when service is delivered. AMP's rates for capacity and energy billed to members are designed by the AMP board of trustees to recover actual costs. In general, costs are defined to include AMP's costs of purchased power and operations (except for depreciation and amortization) and debt service requirements.

Rates charged to members for nonproject power are based on the actual cost of purchased power. Members also pay a service fee based on kilowatt hours purchased through AMP and retail sales of kilowatt hours in each member electric system.

Programs and others revenues consist of the reimbursement for expenses incurred from programs that AMP offers to its members. Revenue from these programs is recorded as costs are incurred.

Accounts receivable includes \$100,722,569 and \$106,791,435 during the years ended December 31, 2018 and 2017, respectively, for capacity and energy delivered to members that were not billed until the subsequent year.

## **Project Power Sales Contracts**

AMP's member power sales contracts for AMPGS, AFEC, PSEC and the hydro projects are long-term take or pay agreements, which must be paid regardless of delivery, construction completion or power availability.

## **Regulatory Assets and Liabilities**

In accordance with the FASB standard for accounting for regulated entities, AMP records regulatory assets (capitalized expenses to be recovered in rates in future periods) and regulatory liabilities (deferred revenues for rates collected for expenses not yet incurred). Regulatory assets include the deferral of depreciation expense, the costs associated with the abandoned AMPGS Project, funds for member rate stabilization plans, unrecognized actuarial losses associated with the pension plan, and other capital expenditures not yet recovered through rates approved by the AMP board of trustees. Regulatory liabilities include revenues collected and intended to fund future capital expenditures, funds for member rate stabilization plans, and other differences between the rates collected from members and expense recognition. As the capital expenditures are depreciated and inventories are used, regulatory assets and liabilities are amortized to match revenues with the related expenditures. Regulatory liabilities or regulatory assets are also recognized for unrealized mark-to-market gains and losses on derivative instruments that are subject to the ratemaking process when realized (Note 6).

#### Taxes

The IRS ruled that AMP is tax-exempt under Section 501(a) as an organization described in Section 501(c)(12) of the IRC, provided 85% of its total revenue consists of amounts collected from its members for the sole purpose of meeting losses and expenses. As AMP derives its income

from the exercise of an essential government function and will accrue to a state or a political subdivision thereof; AMP's income is excludable from gross income under IRC Section 115. For the years ended December 31, 2018 and 2017, AMP complied with this requirement. Accordingly, no provision for federal or state income taxes has been made. AMP is subject to State of Ohio personal property, real estate and sales taxes. AMP has signed agreements with the taxing authorities in West Virginia and Kentucky obligating payment of agreed upon amounts in lieu of real estate taxes.

AMPO, Inc. is a for-profit entity subject to federal, state and local income taxes. Deferred taxes result from temporary differences between the book and tax basis of assets and liabilities. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized.

#### Market and Credit Risk

AMP is potentially exposed to market risk associated with commodity prices for electricity and natural gas. AMP manages this risk through the use of long-term power purchase contracts and long-term natural gas supply arrangements.

AMP has credit risk associated with the ability of members to repay amounts due from power sales and other services and of counterparties to long-term power supply arrangements. AMP regularly monitors receivables from its members. AMP does not require collateral with its trade receivables.

AMP has established a risk management function that regularly monitors the credit quality of counterparties to its power purchase arrangements. The risk management function uses multiple sources of information in evaluating credit risk including credit reports, published credit ratings of the counterparty and AMP's historical experience with the counterparty. Credit limits are established depending on the risk evaluation and, when warranted, AMP requires credit protection through letters of credit or other guarantees. The inability of counterparties to deliver power under power supply arrangements could cause the cost of power to members to be in excess of prices in the power supply arrangements.

## **Derivative Instruments**

AMP accounts for derivative instruments on its consolidated balance sheets at fair value unless the instruments qualify to be accounted for as normal purchases and normal sales. The fair values of derivative instruments accounted for using mark-to-market accounting are based on exchange prices and broker quotes, when available. If a quoted market price is not available, the estimate of fair value is based on the best information available including valuation models that estimate future energy prices based on existing market and broker quotes and supply and demand market data and other assumptions. The fair values determined are reduced by the appropriate valuation adjustments for items such as discounting, liquidity, credit quality and modeling risk. There is inherent risk in valuation modeling given the complexity and volatility of energy markets. Therefore, it is possible that results in future periods may be materially different as contracts are ultimately settled.

AMP has determined each of its power purchase and power sales contracts which meet the definition of a derivative instrument qualifies to be accounted for as normal purchases and normal sales.

AMP has adopted a fuel procurement and hedging program which contemplates that AMP will, subject to market conditions, undertake to secure, at times when AMP deems such advantageous and prudent, contracts with fuel providers and financial institutions, the effect which will be to

hedge, on a rolling 36-month basis, the price of up to 80% of the natural gas volume that AMP projects will be consumed by AFEC operating at its base capacity. AMP has entered into a number of International Swaps and Derivatives Association agreements that are specific to AFEC in managing its natural gas supply requirements. All of these agreements are with investment grade or higher counterparties (Baa3/BBB-). AMP utilizes fixed-for-floating swap contracts to economically hedge the total natural gas fuel expense and records them at fair value. AMP does not utilize derivative financial instruments for speculative purposes, nor does it have trading operations.

The maturities of the swaps highly correlate to forecasted purchases of natural gas, during time frames through December 2027. Under such agreements, AMP pays the counterparty at a fixed rate and receives from the counterparty a floating rate per MMBtu ("decatherm" or "Dth") of natural gas. Only the net differential is actually paid or received. The differential is calculated based on the notional amounts under the agreements. Notional amounts under contracts were \$208,243,970 and \$235,547,465 at December 31, 2018 and 2017, respectively.

On the short term agreements, there was an unrealized loss of \$13,453,375 and \$11,205,579 at December 31, 2018 and 2017, respectively, which is included in other liabilities. On the long-term agreements, there was an unrealized loss of \$50,025,466 and \$56,123,897 at December 31, 2018 and 2017, respectively, which is included in other liabilities. A net gain of \$3,850,635 and \$2,145,052 was recognized in fuel on AMP's consolidated statements of revenues and expenses for the years ending December 31, 2018 and 2017, respectively. Net loss or gain is deferred via regulatory liabilities or assets for recovery in future periods. The losses from the natural gas contracts do not result from other-than-temporary declines in market value.

#### **Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("US 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.

## **Recently Issued Accounting Pronouncements**

In 2014, the FASB issued Accounting Standards Update ("ASU") 606, *Revenue from Contracts with Customers*. The objective of this revenue standard is to provide a single, comprehensive revenue recognition model in which revenue is recognized to reflect the transfer of goods or services to customers at the amount expected to be collected. The new standard requires enhanced disclosures regarding the nature, amount, timing, and uncertainty of revenue and the related cash flows arising from contracts with customers. The Company adopted the new standard effective January 1, 2018, by means of the modified retrospective approach. The adoption did not have a material impact on the consolidated financial statements. Given the lack of material impact to the consolidated financial statements, the adoption of the new standard did not give rise to any material changes in the Company's previously established accounting policies for revenue recognition.

In 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. This standard is intended to improve financial reporting about leasing transactions. Amongst other changes, the standard will require both operating and capital leases to be recognized on the balance sheet and require incremental disclosures around the amount, timing and uncertainty of cash flows arising from leases. This standard is effective for the Company's 2019 fiscal year. Based on the Company's current leases, the impact of this standard is not expected to have a material impact on the consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses of Financial Instruments*. The new guidance requires an allowance to be recorded for all expected credit losses for financial assets. The allowance for credit losses is based on historical information, current conditions, and reasonable and supportable forecasts. This standard is effective for the Company's 2020 fiscal year, however early adoption is permitted. The impact of adopting this standard is not expected to have a material impact on the consolidated financial statements.

# 3. Utility Plant

Utility plant cost consists of the following:

	December 31,	December 31,	
	2018	2017	
Land	\$ 48,307,425	\$ 45,573,622	
Production Plant	4,387,678,445	4,383,302,594	
Station Equipment	41,285,118	41,285,118	
Transmission Plant	206,898,698	205,939,080	
General Plant	194,638,719	194,663,883	
	\$ 4,878,808,405	\$ 4,870,764,297	

Depreciation expense for utility plant for the years ended December 31, 2018 and 2017 was \$147,172,151 and \$130,288,733, respectively.

## **Jointly-Owned Utility Plant**

In May 2016, under an ownership agreement with the City of Hamilton, Ohio, AMP acquired a 48.6% undivided ownership in the Greenup Hydroelectric Power Plant ("Greenup"), a 70.2 MW hydroelectric plant located on the Ohio River near Franklin Furnace, Ohio. AMP's ownership

interest in Greenup is recorded in accordance with ASC 970-810-45, Undivided Interests. Each owner is obligated to pay its share of the costs of this jointly-owned facility in the same proportion as its ownership interest. Operating costs associated with Greenup are included in AMP's consolidated statements of revenues and expenses and the assets are reflected in AMP's consolidated balance sheets under total utility plant as follows:

	De	cember 31, 2018	D	ecember 31, 2017
<b>Greenup</b> Utility plant in service	\$	139,000,000	\$	139,000,000

AMP 368 has a 23.26% undivided joint ownership interest in PSEC. Kilowatt-hour generation and variable operating expenses are divided on an owner's percentage of dispatched power and fixed operating expenses are allocated by project ownership with each owner reflecting its respective costs in its statements of revenue and expenses. AMP 368's ownership interest in PSEC includes the proportionate share of PSEC's balance sheet as provided for under ASC 970-810-45, Undivided Interests. This Accounting Standard requires the recording of undivided interests in assets and liabilities when given conditions are met.

Information relative to AMP's ownership interest in the PSEC is as follows:

	December 31, 2018	December 31, 2017
Prairie State Utility plant in service Construction work-in-progress	\$ 1,152,778,050 1,441,680	\$ 1,156,379,425 4,451,123

## 4. Nonutility Property and Equipment

Nonutility property and equipment cost consists of the following:

	De	ecember 31, 2018	De	ecember 31, 2017
Land	\$	1,482,031	\$	1,482,031
Building		9,722,790		9,532,836
Furniture and equipment		499,373		499,373
Computer software		11,102,972		11,072,341
Vehicles		698,757		922,362
	\$	23,505,923	\$	23,508,943

Depreciation expense for nonutility property and equipment for the years ended December 31, 2018 and 2017 was \$2,612,268 and \$3,277,162, respectively.

# 5. Construction Work-in-Progress

Construction work-in-progress consists of the following:

	De	cember 31, 2018	De	cember 31, 2017
Prairie State Energy Campus Hydro Plants AMP Fremont Energy Center Other	\$	1,441,680 9,492,681 6,753,357 2,419,891	\$	4,451,123 4,894,210 4,203,905 790,005
	\$	20,107,609	\$	14,339,243

AMP capitalized interest costs in the amount of \$62,974 and \$23,458,317 for the years ended December 31, 2018 and 2017, respectively.

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# 6. Regulatory Assets and Liabilities

Regulatory assets and liabilities consist of the following:

	D	ecember 31, 2018	De	ecember 31, 2017
Regulatory assets				
Asset retirement costs	\$	780,385	\$	4,163,788
Debt service costs		378,967,525		336,157,013
Abandoned construction costs		17,448,612		23,905,151
Projects on behalf of		2,333,432		1,986,365
Operating and maintenance expenditures		53,033,590		60,256,383
Fair value of derivative instruments		63,478,841		67,329,476
Rate stabilization programs		9,623,061		13,226,681
Pension plan and postretirement healthcare plan obligations		9,428,405		10,595,347
Closure of Gorsuch Project costs		12,747,365		13,186,930
Other		10,151,163		4,114,349
Total regulatory assets		557,992,379		534,921,483
Current portion		(23,599,557)		(19,819,750)
Noncurrent portion	\$	534,392,822	\$	515,101,733
Regulatory liabilities				
Capital improvement expenditures	\$	1,091,635	\$	932,811
Debt service costs		977,279		41,451,154
Projects on behalf of		1,225,963		971,972
Operating and maintenance expenditures		23,795,989		12,042,469
Working capital expenditures		14,944,588		14,944,588
Rate stabilization programs		15,801,530		23,200,997
Other		12,848,354		5,014,453
Total regulatory liabilities		70,685,338		98,558,444
Current portion		(4,156,109)		(1,120,448)
Noncurrent portion	\$	66,529,229	\$	97,437,996

- a. Debt service costs Represents over or under recovery of depreciation expenses principally related to power received from generating assets. When the project expenses recorded in the consolidated statements of revenues and expenses exceed the billings, a regulatory asset is created. When the project expenses recorded in the consolidated statements of revenues and expenses are lower than the billings, a regulatory liability is created.
- b. Operating and maintenance expenditures Represents over (under) collection of operating and maintenance expenditures principally related to power received from generating assets.

- c. Abandoned construction costs See Notes 2
- d. Fair value of derivative instruments See Note 11

## 7. Related Parties

AMP has entered into agreements for management and agency services ("Service Agreements") with the OMEGA Joint Ventures, MESA, and OMEA. Participants in these organizations are all members of AMP. The AMP board of trustees has established a joint venture oversight committee that is responsible for reviewing financial information and operating matters related to the OMEGA Joint Ventures. Under these Service Agreements, AMP serves as agent and provides planning, construction and financial management, operations, and other professional and technical services. AMP is compensated based on an allocation of direct expenses and overhead. Compensation for these services for the years ended December 31, 2018 and 2017 was \$0 and \$1,153,026, respectively.

MESA provides engineering, administrative and other services to AMP and its members. The expense related to these services for the years ended December 31, 2018 and 2017 was \$11,756,400 and \$13,694,481, respectively.

Certain members of AMP are also members of OMEGA: JV1, JV2, JV4, and JV6. In addition, all of OMEGA JV5 generation is delivered to OMEGA JV5 members. AMP purchases power and fuel on behalf of OMEGA JV5. Power and fuel purchases for the years ended December 31, 2018 and 2017 were \$3,996,103 and \$3,020,382, respectively.

For each of the years ended December 31, 2018 and 2017, AMP made contributions of \$240,000 and \$200,000 to OMEA, respectively.

At December 31, 2018, accounts receivable and accounts payable include \$1,275,518 and \$924,572, respectively, of amounts due from/to affiliates. At December 31, 2017, accounts receivable and accounts payable include \$360,241 and \$895,158, respectively, of amounts due from/to affiliates.

TEA provides various power scheduling and commodity management services to AMP as well as purchases natural gas on behalf of AMP. Expenses related to these services were \$106,737,942 for 2018 and \$85,042,386 for 2017, respectively.

# 8. Revolving Credit Loan and Term Debt

# **Revolving Credit Loan**

AMP has a revolving credit loan facility ("Facility") with a syndicate of nine lenders. The Facility allows AMP to obtain loans with different interest rates and terms and letters of credit. The Facility expires on May 3, 2022. AMP's base borrowing capacity under the Facility is \$600,000,000, with an accordion feature to expand to \$850,000,000. At December 31, 2018, AMP had \$210,100,000 outstanding under the Facility and the effective interest rate was 3.34738%. At December 31, 2017, AMP had \$318,400,000 outstanding under the Facility and the effective interest rate was 2.3782%.

The Facility contains various restrictions including a) proceeds of loans and letters of credit will be used only i) to refinance the existing revolving credit loan, ii) for general working capital purposes and iii) for transitional financing to bond financing and bond anticipation notes; b) AMP is required

to give notice of certain ERISA events exceeding \$500,000 in any year or \$1,000,000 for all periods; c) AMP is required to give notice of events causing a material adverse effect on the business, assets or condition of AMP or the rights or benefits of the lenders under the Facility; d) AMP will not incur indebtedness or make guarantees of indebtedness except for indebtedness fully supported by commitments of AMP members and except for i) indebtedness to finance any prepayment for power supply or indebtedness or capital lease obligations for acquisition, construction or improvement of assets up to \$35,000,000 or ii) other unsecured indebtedness up to \$25,000,000; e) AMP will not make loans to i) AMPO, Inc. in excess of \$500,000 or to ii) joint ventures in excess of \$5,000,000; f) cash dividends to members are prohibited; g) annual lease payments may not exceed \$1,000,000 and sale of leaseback transactions are limited to \$5,000,000; h) AMP must maintain financial covenants including i) minimum consolidated tangible net worth and ii) interest coverage ratio in excess of 2.50 to 1.00 measured on a trailing four quarter basis.

#### **Term Debt**

AMP has issued term debt in the form of notes payable and bonds for the financing of its own assets and on behalf of specific members. AMP is the primary obligor on term debt issued to finance its assets.

Bonds and notes payable related to financing AMP assets consists of the following:

	December 31, 2018	December 31, 2017
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2008A	\$ -	\$ 3,915,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2009A	11,835,000	20,290,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2009B	35,585,000	38,055,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2009C	385,835,000	385,835,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2010	300,000,000	300,000,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2015A	507,875,000	507,875,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2015B	135,350,000	135,350,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2015C	95,100,000	95,100,000
AMP Prairie State Energy Campus Project Revenue Bonds, Series 2017A	65,850,000	65,850,000
AMP Prairie State Energy Campus Project Revenue Bonds, Escrow	96,435,000	792,675,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2009B	497,005,000	497,005,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2009C	48,860,000	74,710,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2009D	9,305,882	10,635,294
AMP Combined Hydroelectric Project Revenue Bonds, Series 2010A	132,750,000	132,750,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2010B	1,109,995,000	1,109,995,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2010C	116,000,000	116,000,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2016A	209,530,000	209,530,000
AMP Combined Hydroelectric Project Revenue Bonds, Series 2018A	99,530,000	-
AMP Combined Hydroelectric Project Revenue Bond, Escrow	28,390,000	28,390,000
AMP Meldahl Hydroelectric Project Revenue Bonds, Series 2010A	21,190,000	29,660,000
AMP Meldahl Hydroelectric Project Revenue Bonds, Series 2010B	260,000,000	260,000,000
AMP Meldahl Hydroelectric Project Revenue Bonds, Series 2010C	20,000,000	20,000,000
AMP Meldahl Hydroelectric Project Revenue Bonds, Series 2010D	4,570,000	4,570,000
AMP Meldahl Hydroelectric Project Revenue Bonds, Series 2010E	300,000,000	300,000,000
AMP Meldahl Hydroelectric Project Revenue Bonds, Series 2016A	79,455,000	80,050,000
AMP Fremont Energy Center Project Revenue Bonds, Series 2012B	374,720,000	384,080,000
AMP Fremont Energy Center Project Revenue Bonds, Series 2017A	124,385,000	124,385,000
AMP Fremont Energy Center Project Revenue Bonds, Escrow	127,630,000	127,630,000
AMP Greenup Hydroelectric Project Revenue Bonds, Series 2016A	125,300,000	125,630,000
Subtotal	5,322,480,882	5,979,965,294
Less: Current portion	(161,049,412)	(757,014,412)
Plus: Unamortized premium and discount, net	176,100,510	191,259,128
Plus: Unamortized debt issuance costs, net	(33,633,946)	(35,065,453)
Long-term debt	\$ 5,303,898,034	\$ 5,379,144,557

# **Build America Bonds and New Clean Renewable Energy Bonds**

Certain AMP bonds have been designated as Build America Bonds ("BABs") and New Clean Renewable Energy Bonds ("New CREBs") pursuant to the provisions of the American Recovery and Reinvestment Act (the "Recovery Act.") As of the date of issuance of the bonds designated as BABs, AMP expected to receive a federal cash subsidy in the amount of 35% of the interest payable on or about each interest payment date. As of the date of issuance of the bonds designated as New CREBs, AMP expected to receive a cash subsidy payment from the United States Treasury over the term of the bonds equal to 70% of interest which would have been payable on the designated bonds if the interest on such bonds were determined by reference to the applicable tax credit rate under Section 54A (b)(3) of the Internal Revenue Code. These federal subsidies do not constitute a full faith and credit guarantee of the United States, but are required to be paid by the Treasury under the Recovery Act. AMP is obligated to make all payments of principal and interest on the bonds designated as BABs and New CREBs whether or not it receives the federal subsidy pursuant to the Recovery Act. The federal government mandated budget sequestration that went into effect beginning March 1, 2013, applied to direct credit subsidy payments. The federal subsidy payment to issuers of BABs and New CREBs was reduced by 6.6% and 6.9% in fiscal years 2018 and 2017, respectively. AMP has been notified by the IRS that the subsidy will be reduced by 6.2% in 2019. The reductions in subsidies related to the sequestration have been extended through 2024.

## **PSEC 2008A Bonds**

As of December 31, 2018 there were no remaining PSEC 2008A Bonds outstanding.

#### **PSEC 2009A Bonds**

The PSEC 2009A Bonds were issued on March 31, 2009, pursuant to the PSEC MTI, in the form of serial and term bonds with an aggregate par amount of \$166,565,000. The PSEC 2009A Bonds were issued with an aggregate discount of \$2,750,794. The PSEC 2009A Bonds mature between 2017 and 2039 and bear interest at fixed rates between 4.00% and 5.75%. Interest is payable semiannually, beginning August 15, 2009. Assured Guaranty Corp. issued a municipal bond insurance policy to insure the payment of the principal and interest on the PSEC 2009A Bonds.

The PSEC 2009A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	11,835,000	4.250 %
	\$ 11,835,000	

## **PSEC 2009B Bonds**

The Prairie State Energy Campus Project Revenue Bonds, Series 2009B ("PSEC 2009B Bonds") were issued on October 15, 2009, pursuant to the PSEC MTI, in the form of serial and term bonds with an aggregate par amount of \$83,745,000. Interest is payable semiannually, beginning February 15, 2010. AMP has the right to redeem the PSEC 2009B Bonds on any date, in whole or in part, at the make-whole premium.

The PSEC 2009B Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	2,635,000	5.055 %
2024	16,300,000	5.355 %
2028	16,650,000	5.803 %
	\$ 35,585,000	

The PSEC 2009B Bonds due on February 15, 2024 and February 15, 2028, are term bonds subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

The PSEC 2009B Bonds, maturing on February 15, 2024:

Year	Principa Amoun	
2020	\$ 2,845,	000
2021	3,055,	000
2022	3,260,	000
2023	3,455,	000
2024	3,685,	000
	\$ 16,300,	000

The PSEC 2009B Bonds, maturing on February 15, 2028:

Year	Principal Amount
2025	\$ 3,955,000
2026	4,245,000
2027	4,550,000
2028	 3,900,000
	\$ 16,650,000

## **PSEC 2009C Bonds**

The Prairie State Energy Campus Project Revenue Bonds, Series 2009C ("PSEC 2009C Bonds") were issued on October 15, 2009, pursuant to the PSEC MTI, in the form of serial and term bonds with an aggregate par amount of \$385,835,000. The PSEC 2009C Bonds mature between 2034 and 2043 and bear interest at fixed rates between 5.953% and 6.553%. Interest is payable semiannually, beginning February 15, 2010.

AMP designated the PSEC 2009C Bonds as BABs. See "Build America Bonds and New Clean Renewable Energy Bonds" above.

The PSEC 2009C Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2034	\$ 10,000,000	5.953 %
2034	25,885,000	6.453 %
2039	77,435,000	6.553 %
2043	272,515,000	6.053 %
	\$ 385,835,000	

From any available moneys, AMP may, at its option, redeem, prior to their respective maturities, in whole or in part, the PSEC 2009C Bonds stated to mature on (i) February 15, 2034 and bearing interest at 6.453%, and (ii) February 15, 2039, on any date beginning February 15, 2020, at the redemption price of par, together with interest accrued to the date fixed for redemption. In addition, AMP has the right to redeem any or all of the PSEC 2009C Bonds on any date, in whole or in part, at the make-whole premium. The PSEC 2009C Bonds are subject to redemption from any available funds, at the option of AMP, prior to their maturity, in whole or in part upon the occurrence of certain extraordinary events, at a make-whole redemption price.

The PSEC 2009C Bonds due on February 15, 2034, February 15, 2039 and February 15, 2043, are term bonds subject to mandatory sinking fund redemption on the principal payment date in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

The PSEC 2009C Bonds bearing interest at 5.953% and maturing on February 15, 2034:

Year	Principal Amount
2028	\$ 950,000
2029	1,330,000
2030	1,395,000
2031	1,460,000
2032	1,545,000
2033	1,625,000
2034	 1,695,000
	\$ 10,000,000

The PSEC 2009C Bonds bearing interest at 6.453% and maturing on February 15, 2034:

Year	Principal Amount	
2029	\$ 3,760,000	
2030	3,960,000	
2031	4,170,000	
2032	4,440,000	
2033	4,680,000	
2034	 4,875,000	
	\$ 25,885,000	

The PSEC 2009C Bonds bearing interest at 6.553% maturing on February 15, 2039:

Year	Principal Amount
2035	\$ 6,920,000
2036	7,290,000
2037	7,685,000
2038	8,090,000
2039	47,450,000
	\$ 77,435,000

The PSEC 2009C Bonds bearing interest at 6.053% maturing on February 15, 2043:

Year	Principal Amount
2040	\$ 64,140,000
2041	66,730,000
2042	69,425,000
2043	72,220,000_
	\$ 272,515,000

#### **PSEC 2010 Bonds**

The Prairie State Energy Campus Project Revenue Bonds, Series 2010 ("PSEC 2010 Bonds") were issued on September 29, 2010, pursuant to the PSEC MTI, in the form of term bonds due February 15, 2047 with an aggregate par amount of \$300,000,000. The PSEC 2010 Bonds will bear interest at a fixed rate of 5.939%. Interest is payable semiannually, beginning February 15, 2011.

AMP designated the PSEC 2010 Bonds as BABs. See "Build America Bonds and New Clean Renewable Energy Bonds" above.

The PSEC 2010 Bonds are subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

Maturity Date - February 15	Principal Amount
2044	\$ 87,695,000
2045	91,150,000
2046	94,735,000
2047	26,420,000
	\$ 300,000,000

AMP has the right to redeem the PSEC 2010 Bonds on any date in whole or in part, at the make-whole redemption price. The PSEC 2010 Bonds are subject to redemption from any available funds at the option of AMP, prior to their maturity, in whole or in party, upon the occurrence of certain extraordinary events, at a make-whole redemption price.

The PSEC includes adjacent coal reserves and all associated mine, rail, water, coal combustion waste storage and ancillary support. The generating station consists of two supercritical units with a nominal net output capacity of 800MW each. The plant incorporates state-of-the-art emissions control technology consistent with other plants that have been successfully permitted. All permits required for the construction of the power plant have been issued. PSEC Unit 1 was declared to be in commercial operation in June 2012 and PSEC Unit 2 was declared to be in commercial operation in November 2012. AMP entered into a power sales contract dated November 1, 2007 with 68 of its members (the "PSEC Participants") for its share of the electric output of the PSEC (the "AMP Entitlement"). The PSEC Participants' obligations to make payments pursuant to the power sales contract are limited obligations payable solely out of the revenues, and, with two exceptions, as an operating expense, of their respective electric systems. Each PSEC Participant's obligation to make payments pursuant to the power sales contract is a take-or-pay obligation. Therefore, such payments shall not be subject to any reduction, whether by offset, counterclaim, or otherwise; and such payments shall be made whether or not either unit of PSEC or any other power sales contract resource is completed, operable, operating and notwithstanding the suspension, interruption, interference, reduction or curtailment, in whole or in part, for any reason whatsoever, of the AMP Entitlement or the PSEC Participants' power sales contract resources share, including step-up power. The power sales contract contains a step-up provision that requires, in the event of default by an PSEC Participant, the nondefaulting PSEC Participants to purchase a pro rata share, based upon each nondefaulting PSEC Participant's original power sales contract resources share which, together with the shares of the other nondefaulting PSEC Participants, is equal to the defaulting PSEC Participant's power sales resources share. No nondefaulting participant is obligated to accept step-up power in excess of 25% of its original power sales contract resources share.

The proceeds of the PSEC 2008A Bonds, the PSEC 2009A Bonds, the PSEC 2009B Bonds, the PSEC 2009C Bonds and the PSEC 2010 Bonds were used to fund the cost of construction of the PSEC.

## **PSEC 2015A Bonds**

The PSEC 2015A Bonds will mature between 2020 and 2043 and will bear interest rates at fixed rates between 4.00% and 5.25%. Interest is payable semiannually, beginning August 15, 2015.

The PSEC Series 2015A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2020	\$ 18,380,0	5.000 %
2021	21,305,0	5.000 %
2022	24,760,0	5.000 %
2023	27,075,0	5.000 %
2024	29,290,0	5.000 %
2025	30,455,0	5.000 %
2026	31,785,0	5.000 %
2027	32,870,0	5.000 %
2028	34,510,0	5.000 %
2029	36,150,0	5.000 %
2030	35,195,0	5.250 %
2031	37,055,0	5.250 %
2032	31,945,0	5.250 %
2033	33,625,0	5.250 %
2039	40,890,0	5.000 %
2042	31,190,0	5.000 %
2043	11,395,0	<u>00</u> 4.000 %
	\$ 507,875,0	00

The PSEC 2015A Bonds due February 15, 2039 and February 15, 2042 are term bonds subject to mandatory sinking fund redemption on February 15 in the following years, in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

The PSEC 2015A Bonds bearing interest of 5.000% maturing on February 15, 2039:

Year	Principal Amount
2034	\$ 340,000
2035	355,000
2036	370,000
2037	7,975,000
2038	8,375,000
2039	23,475,000
	\$ 40,890,000

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The PSEC 2015A Bonds bearing interest of 5.000% maturing on February 15, 2042:

Year	Principal Amount
2040	\$ 9,895,000
2041	10,390,000
2042	10,905,000
	\$ 31,190,000

## **PSEC 2015B Bonds**

The PSEC 2015B Bonds will mature on February 15, 2034 and 2036 and bear interest at a fixed rate of 5.00%. Interest is payable semiannually, beginning August 15, 2015.

The PSEC 2015B Bonds outstanding at December 31, 2018 are as follows:

Year	Principal Amount	Interest Rate
2034 2036	\$ 71,980,000 63,370,000	5.000 % 5.000 %
	\$ 135,350,000	

The PSEC 2015B Bonds due on February 15, 2034 and February 15, 2036 are term bonds subject to mandatory sinking fund redemption on February 15 in the following years, in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

The PSEC 2015B Bonds bearing interest of 5.000% maturing on February 15, 2034:

Year	Principal Amount
2030	\$ 3,650,000
2031	3,845,000
2032	11,530,000
2033	11,865,000
2034	41,090,000
	\$ 71,980,000

The PSEC 2015B Bonds bearing interest of 5.000% maturing on February 15, 2036:

Year	Principal Amount
2035 2036	\$ 42,635,000 20,735,000
	\$ 63,370,000

#### **PSEC 2015C Bonds**

The PSEC 2015C Bonds are \$95,100,000 of privately placed bonds with Wells Fargo Municipal Capital Strategies, LLC. They were issued at a floating rate of interest based on the Securities Industry and Financial Markets Association Index, issued on Wednesday of each week, or if any Wednesday is not a Business Day, the next succeeding Business Day plus 0.59% per annum. The 0.59% rate is fixed until the initial mandatory tender date, which is February 15, 2019. Payments are made on February 15 and August 15 of each year. The interest rate at December 31, 2018 and 2017 was 2.30% and 2.30%, respectively.

The PSEC Series 2015C Bonds outstanding at December 31, 2018 are as follows:

Year	Principal Amount
2036	\$ 21,345,000
2037	36,285,000
2038	 37,470,000
	\$ 95,100,000

#### **PSEC 2017A Bonds**

The PSEC 2017A Bonds matures between 2019 and 2038 and bear interest at a fixed rate of 5.00%. Interest is payable semiannually, beginning February 15, 2019.

The PSEC 2017A Bonds outstanding at December 31, 2018 are as follows:

	Principal Amount
2019	\$ 940,000
2020	2,955,000
2021	3,125,000
2022	1,235,000
2023	1,210,000
2024	410,000
2025	710,000
2026	925,000
2027	1,465,000
2028	1,545,000
2029	1,745,000
2030	1,835,000
2031	1,925,000
2032	1,590,000
2033	1,665,000
2034	7,705,000
2035	8,090,000
2036	8,490,000
2037	8,920,000
2038	9,365,000
	\$ 65,850,000

# The PSEC Escrow Bonds

The PSEC Escrow Bonds outstanding at December 31, 2018 are as follows:

		ncipal nount	Interest Rate
2019	96	,435,000	5.350 %
	\$ 96	,435,000	

On February 15, 2019 \$96,435,000 of outstanding PSEC Escrow Bonds were retired.

# **Combined Hydroelectric Projects Financings**

The Combined Hydroelectric Projects Revenue Bonds, Series 2009A, 2009B and 2009C ("Hydro 2009A Bonds", "Hydro 2009B Bonds" and "Hydro 2009C Bonds") were issued on December 9, 2009, pursuant to the terms of a Master Trust Indenture, dated as of November 1, 2009 (as amended and supplemented, ("Hydro MTI"), in the form of serial and term bonds with an aggregate par amount of \$643,835,000. Interest is payable semiannually, beginning February 15, 2010.

AMP designated the Hydro 2009B Bonds as BABs. See "Build America Bonds and New Clean Renewable Energy Bonds" above.

# Hydro 2009B Bonds

The Hydro 2009B Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2020	\$ 3,465,000	5.264 %
2021	10,745,000	5.514 %
2022	12,675,000	5.664 %
2023	13,155,000	5.814 %
2024	13,890,000	5.964 %
2027	45,390,000	6.000 %
2029	33,505,000	6.449 %
2032	55,810,000	6.424 %
2044	 308,370,000	6.449 %
	\$ 497,005,000	

From any available moneys, AMP may, at its option, redeem, prior to their respective maturities, in whole or in part, the Hydro 2009B Bonds stated to mature on February 15, 2021 through February 15, 2024, inclusive, February 15, 2027 and February 15, 2029, on any date beginning February 15, 2020 at the redemption price of par, together with interest accrued to the date fixed for redemption. AMP has the right to redeem any or all the Hydro 2009B Bonds, on any date, in whole or in part, at the make-whole redemption price.

The Hydro 2009B Bonds due on February 15, 2027, February 15, 2029, February 15, 2032 and February 15, 2044, are term bonds subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

The Hydro 2009B Bonds maturing on February 15, 2027:

Year	Principal Amount
2025	\$ 14,525,000
2026	15,125,000
2027	 15,740,000
	\$ 45,390,000

The Hydro 2009B Bonds maturing on February 15, 2029:

Year	Principal Amount
2028 2029	\$ 16,405,000 17,100,000
	\$ 33,505,000

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The Hydro 2009B Bonds maturing on February 15, 2032:

Year	Princi Amou	•
2030	\$ 17,83	5,000
2031	18,59	0,000
2032	19,38	5,000
	\$ 55,81	0,000

The Hydro 2009B Bonds maturing on February 15, 2044:

Year	Principal Amount
2033	\$ 20,210,000
2034	21,070,000
2035	21,975,000
2036	22,910,000
2037	23,885,000
2038	24,910,000
2039	25,965,000
2040	27,080,000
2041	28,230,000
2042	29,435,000
2043	30,695,000
2044	 32,005,000
	\$ 308,370,000

# **Hydro 2009C Bonds**

The Hydro 2009C Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	27,250,000	5.250 %
2020	 21,610,000	5.000 %
	\$ 48,860,000	

From any available moneys, AMP may, at its option, redeem prior to their respective maturities, in whole or in part, the Hydro 2009C Bonds stated to mature after February 15, 2020 on any date beginning February 15, 2020, at a redemption price of par, together with interest accrued to the date fixed for redemption.

On October 6, 2016, AMP issued, pursuant to the Hydro MTI, its Combined Hydroelectric Project Revenue Bonds, Series 2016A, ("Hydro 2016A Bonds") with an aggregate par amount of \$209,530,000. The Hydro 2016A Bonds were issued at an aggregate premium of \$34,152,726. The Hydro 2016A Bonds were issued to in order to (i) finance construction of the Combined Hydroelectric Projects, (ii) repay draws on the line of credit used as interim financing, (iii) fund a

Parity Common Reserve Account, (iv) refund a portion of the Hydro 2009C Bonds ("Hydro Escrow Bonds"), and (v) pay the cost of issuance. Specifically, a portion of the proceeds of the Hydro 2016A Bonds were deposited in an Escrow Fund established by AMP to be used exclusively to advance refund portions of Hydro 2009C Bonds. In the consolidated balance sheets, the funds held in escrow are presented in Trustee funds – restricted.

## Hydro 2009D Bonds

The Combined Hydroelectric Project Revenue Bonds, Series 2009D ("Hydro 2009D Bonds") were issued on December 2, 2009, pursuant to the Hydro MTI, as clean renewable energy bonds, pursuant to the Energy Tax Incentive Act of 2005, at a par amount of \$22,600,000. The Hydro 2009D Bonds were issued at a discount of \$3,000,000 and do not bear interest. AMP is required to make annual debt service payments on the Hydro 2009D Bonds in the amount of \$1,329,412 on December 15 of each year, beginning in 2009 and ending in 2025. The Hydro 2009D Bonds are subject to redemption in whole or in part in the case of certain extraordinary events.

## Hydro 2010A, 2010B and 2010C Bonds

The Combined Hydroelectric Projects Revenue Bonds, Series 2010A, 2010B and 2010C ("Hydro 2010A Bonds", "Hydro 2010B Bonds" and "Hydro 2010C Bonds", collectively "Hydro 2010 Bonds") were issued on December 21, 2010, pursuant to the Hydro MTI, with an aggregate par amount of \$1,378,990,000. Interest is payable semiannually, beginning February 15, 2011.

AMP designated the Hydro 2010B Bonds as BABs and the Hydro 2010C Bonds as New CREBs. See "Build America Bonds and New Clean Renewable Energy Bonds" above.

#### **Hydro 2010A Bonds**

The Hydro 2010A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2020	\$ 2,365,000	6.123 %
2021*	8,060,000	6.223 %
2029	22,570,000	7.200 %
2030	24,265,000	7.300 %
2033	75,490,000	7.734 %
	\$ 132,750,000	

<sup>\*</sup> Assured Guaranty Corp issued a municipal bond insurance policy to insure the payment of the principal and interest on these Hydro 2010A Bonds.

The Hydro 2010A Bonds due on February 15, 2033 are term bonds subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption.

Year	Principal Amount
2031	\$ 26,165,000
2032	28,270,000
2033	 21,055,000
	\$ 75,490,000

## Hydro 2010B Bonds

The Hydro 2010B Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2041	\$ 324,130,000	7.834 %
2050	785,865,000	8.084 %
	\$1,109,995,000	

The Hydro 2010B Bonds due on February 15, 2041 and due on February 15, 2050 are term bonds subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

The Hydro 2010B Bonds maturing on February 15, 2041:

Year	Principal Amount
2033	\$ 9,405,000
2034	32,420,000
2035	34,185,000
2036	36,055,000
2037	38,030,000
2038	40,100,000
2039	42,300,000
2040	44,600,000
2041	47,035,000
	\$ 324,130,000

The Hydro 2010B Bonds maturing on February 15, 2050:

Year	Principal Amount
2042	\$ 49,645,000
2043	52,435,000
2044	55,380,000
2045	91,900,000
2046	96,685,000
2047	101,725,000
2048	107,025,000
2049	112,600,000
2050	 118,470,000
	\$ 785,865,000

## **Hydro 2010C Bonds**

The Hydro 2010C Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Princi Amou	•	Interest Rate
2022*	\$ 9,73	5,000	6.473 %
2023*	9,50	0,000	6.623 %
2024	16,09	5,000	6.973 %
2028	80,67	0,000	7.334 %
	\$ 116,00	0,000	

<sup>\*</sup> Assured Guaranty Corp issued a municipal bond insurance policy to insure the payment of the principal and interest on these Hydro 2010C Bonds.

The Hydro 2010C Bonds due on February 15, 2028 are term bonds subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

Year	Principal Amount
2025	\$ 18,730,000
2026	19,930,000
2027	20,640,000
2028	21,370,000
	\$ 80,670,000

From any available moneys, AMP may, at its option, redeem, on any business day, prior to their respective maturities, in whole or in part, the Hydro 2010 Bonds at the make whole-redemption price.

The Hydro 2010B Bonds and Hydro 2010C Bonds are subject to redemption from any available moneys, at the option of AMP, prior to their maturity, in whole or in part upon the occurrence of certain extraordinary events, at a make-whole.

The proceeds of the Hydro 2009 and 2010 Bonds were used to fund the cost of construction of the Hydro projects.

## **Hydro 2016A Bonds**

The Hydro 2016A Bonds mature between 2020 and 2046 and bear interest at fixed rates ranging from 4.000% to 5.000%. Interest is payable semiannually, beginning February 15, 2017.

Maturity Date - February 15	Principal Amount	Interest Rate
2020	\$ 835,000	4.000 %
2021	10,885,000	5.000 %
2022	8,590,000	5.000 %
2023	9,565,000	5.000 %
2024	3,490,000	5.000 %
2025	1,510,000	5.000 %
2026	5,445,000	5.000 %
2027	5,665,000	5.000 %
2028	5,895,000	5.000 %
2029	6,165,000	5.000 %
2030	6,450,000	4.000 %
2031	6,715,000	5.000 %
2032	6,985,000	5.000 %
2033	7,230,000	5.000 %
2034	7,485,000	5.000 %
2035	7,755,000	4.000 %
2036	8,040,000	5.000 %
2037	8,365,000	5.000 %
2038	8,710,000	5.000 %
2041	28,315,000	5.000 %
2046	21,935,000	4.000 %
2046	 33,500,000	5.000 %
	\$ 209,530,000	

The Hydro 2016A Bonds due on February 15, 2041 and February 15, 2046 are term bonds subject to mandatory sinking fund redemption on the principal payment date in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption.

Hydro 2016A Bonds bearing interest at 5.00% and maturing February 15, 2041:

Year	Principal Amount
2039	\$ 9,060,000
2040	9,435,000
2041	 9,820,000
	\$ 28,315,000

Hydro 2016A Bonds bearing interest at 4.00% and maturing at February 15, 2046:

Year	Principa Amoun	
2042	\$ 4,085,0	000
2043	4,210,	000
2044	4,335,0	000
2045	4,520,	000
2046	4,785,0	000
	\$ 21,935,0	000

Hydro 2016A Bonds bearing interest at 5.00% and maturing on February 15, 2046:

Year	Princ Amo	cipal ount
2042	\$ 6,7	115,000
2043	6,3	360,000
2044	6,6	320,000
2045	6,9	975,000
2046	7,4	130,000
	\$ 33,5	500,000

## **Hydro 2018A Bonds**

The Hydro 2018A Bonds mature between 2022 and 2048 and bear interest at a fixed rate of 2.250%. Interest is payable semiannually, beginning February 15, 2019.

Year       Amount         *2022       \$ 2,720,000         *2023       2,780,000         *2024       2,845,000         *2025       2,995,000         *2026       2,970,000         *2027       3,040,000         *2028       3,110,000         *2029       3,180,000         *2030       3,250,000         *2031       3,320,000         *2032       3,395,000         *2033       3,475,000         *2034       3,550,000
20232,780,00020242,845,00020252,905,00020262,970,00020273,040,00020283,110,00020293,180,00020303,250,00020313,320,00020323,395,00020333,475,00020343,550,000
2024       2,845,000         2025       2,905,000         2026       2,970,000         2027       3,040,000         2028       3,110,000         2029       3,180,000         2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2025       2,905,000         2026       2,970,000         2027       3,040,000         2028       3,110,000         2029       3,180,000         2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2026       2,970,000         2027       3,040,000         2028       3,110,000         2029       3,180,000         2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2027       3,040,000         2028       3,110,000         2029       3,180,000         2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2028       3,110,000         2029       3,180,000         2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2029       3,180,000         2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2030       3,250,000         2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
2031       3,320,000         2032       3,395,000         2033       3,475,000         2034       3,550,000
*2032       3,395,000         *2033       3,475,000         *2034       3,550,000
*2033       3,475,000         *2034       3,550,000
2034 3,550,000
2035 3,630,000
2036 3,715,000
2037 3,795,000
2038 3,880,000
2039 3,970,000
2040 4,060,000
2041 4,150,000
2042 4,245,000
2043 4,340,000
2044 4,435,000
2045 4,535,000
2046 4,640,000
2047 4,745,000
2048 4,850,000
\$ 99,530,000

The Hydro 2018A Bonds due on February 15, 2021 are term bonds subject to mandatory sinking fund redemption on the principal payment date in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption.

AMP has entered into a power sales contract dated as of November 1, 2007 with 79 of its members (the "Hydro Participants") by the terms of which AMP agrees to sell, and the Hydro Participants agree to buy on a take-or-pay basis, the electric output of three hydroelectric facilities with an aggregate capacity of 208 MW on the Ohio River. The take-or-pay obligations of the Hydro Participants under the Hydro power sales contract are limited obligations payable solely out of the revenues, and, with two exceptions, as an operating expense, of their respective electric systems and are subject to step up to the same extent as are the obligations of the PSEC Participants under the PSEC power sales contract.

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## **Hydro Escrow Bonds**

The Hydro Escrow Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2020	\$ 28,390,000	5.000 %
	\$ 28,390,000	

## **Meldahl Financings**

The Meldahl Hydroelectric Project Revenue Bonds, Series 2010A, 2010B, 2010C, and 2010D ("Meldahl 2010A Bonds", "Meldahl 2010B Bonds", "Meldahl 2010C Bonds" and "Meldahl 2010D Bonds", collectively "Meldahl A-D Bonds") were issued on December 7, 2010, pursuant to a Master Trust Indenture, dated as of October 1, 2010 (as amended and supplemented, "Meldahl MTI"), with an aggregate par amount of \$330,065,000. Interest is payable semiannually, beginning February 15, 2011.

AMP designated the Meldahl 2010B Bonds and the Meldahl 2010E Bonds as BABs and the Meldahl 2010C Bonds as New CREBs. See "Build America Bonds and New Clean Renewable Energy Bonds" above.

## Meldahl 2010A Bonds

The Meldahl 2010A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	8,905,000	5.272 %
2020	9,375,000	5.472 %
2021	2,910,000	5.672 %
	\$ 21,190,000	

## Meldahl 2010B Bonds

The Meldahl 2010B Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2035	\$ 10,000,000	7.000 %
2050	250,000,000	7.499 %
	\$ 260,000,000	

The Meldahl 2010B Bonds due on February 15, 2050 are term bonds subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

Year		Principal Amount
2024	\$	3,710,000
2025		3,985,000
2026		4,285,000
2027		4,600,000
2029		4,945,000
2030		5,310,000
2031		5,705,000
2032		6,130,000
2033		6,585,000
2034		7,075,000
2036		7,605,000
2037		8,170,000
2038		8,775,000
2039		9,430,000
2040		10,130,000
2041		10,885,000
2042		11,695,000
2043		12,565,000
2044		13,500,000
2045		14,505,000
2046		15,585,000
2047		16,745,000
2048		17,990,000
2049		19,325,000
2050		20,765,000
	\$ 2	50,000,000

## Meldahl 2010C Bonds

The Meldahl 2010C Bonds were issued at a par amount of \$20,000,000, bearing interest at a rate of 6.849% per annum and mature on February 15, 2028. From any available moneys, AMP may, at its option, redeem, on any business day, prior to their respective maturities, in whole or in part, the Meldahl 2010A Bonds, the Meldahl 2010B Bonds and the Meldahl 2010C Bonds, at the make whole-redemption price. The Meldahl 2010B Bonds and the Meldahl 2010C Bonds are subject to redemption from any available moneys, at the option of AMP, prior to their maturity, in whole or in part upon the occurrence of certain extraordinary events, at a make-whole redemption price.

#### Meldahl 2010D Bonds

The Meldahl 2010D Bonds were issued at a par amount of \$4,570,000, bearing interest at a rate of 5.000% per annum and mature on February 15, 2021.

## **Meldahl Series 2010E Bonds**

The Meldahl Hydroelectric Project Revenue Bonds, Series 2010E ("Meldahl 2010E Bonds") were issued on December 17, 2010, pursuant to the Meldahl MTI, with an aggregate par amount of \$355,035,000. From the date of issuance to May 23, 2011, the bonds bore interest at the three-month LIBOR rate plus a 2.95% fixed spread per annum.

On May 23, 2011, \$300,000,000 of the Meldahl 2010E Bonds was remarketed. The Meldahl 2010E Bonds will mature in 2050 and bear interest at a fixed rate of 6.270%. Interest is payable semiannually, beginning August 15, 2011.

The Meldahl 2010E Bonds are term bonds with an interest rate of 6.27% per annum, subject to mandatory sinking fund redemption on February 15 in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption:

Year		Principal Amount
2021	\$	2,065,000
2022		8,900,000
2023		9,340,000
2024		6,665,000
2025		6,915,000
2026		7,170,000
2027		2,125,000
2028		125,000
2029		7,965,000
2030		8,250,000
2031		8,545,000
2032		8,845,000
2033		9,145,000
2034		9,455,000
2035		7,735,000
2036		10,535,000
2037		10,890,000
2038		11,260,000
2039		11,625,000
2040		11,995,000
2041		12,365,000
2042		12,745,000
2043		13,120,000
2044		13,500,000
2045		13,875,000
2046		14,245,000
2047		14,615,000
2048		14,980,000
2049		15,330,000
2050	_	15,675,000
	\$	300,000,000

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From any available funds, AMP may, at its option, redeem, on any business day, prior to their respective maturities, in whole or in part, the Meldahl 2010E Bonds at the make whole-redemption price. The Meldahl 2010E Bonds are subject to redemption from any available funds, at the option of AMP, prior to their maturity, in whole or in part upon the occurrence of certain extraordinary events, at a make-whole redemption price.

## Meldahl 2016A Bonds

The Meldahl Hydroelectric Project Revenue Bonds, Series 2016A ("Meldahl 2016A Bonds"), were issued on July 27, 2016, pursuant to the terms of Meldahl MTI, with an aggregate par amount of \$80,050,000. The Meldahl 2016A Bonds were issued at an aggregate premium of \$13,247,689. The Meldahl 2016A Bonds mature between 2018 and 2046 and bear interest at fixed rates ranging from 2.000% to 5.000%. Interest is payable semiannually, beginning February 15, 2017. AMP has the option to redeem the Meldahl 2016A Bonds on any date in whole or in part, at the make-whole premium on or after February 15, 2026.

The Meldahl 2016A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	630,000	3.000 %
2020	675,000	4.000 %
2021	1,035,000	4.000 %
2022	2,185,000	5.000 %
2023	2,240,000	5.000 %
2024	1,735,000	5.000 %
2025	1,780,000	5.000 %
2026	2,735,000	5.000 %
2027	1,780,000	5.000 %
2028	1,305,000	2.000 %
2029	3,000,000	5.000 %
2030	3,080,000	5.000 %
2031	3,160,000	5.000 %
2032	3,235,000	5.000 %
2033	3,320,000	5.000 %
2034	3,385,000	4.000 %
2035	3,060,000	4.000 %
2036	3,550,000	3.000 %
2041	18,225,000	4.000 %
2046	19,340,000	5.000 %
	\$ 79,455,000	

The Meldahl 2016A Bonds due February 15, 2041 and February 15, 2046 are term bonds subject to mandatory sinking fund redemption on the principal payment date in the following years in the following principal amounts as a redemption price equal to par, together with interest accrued to the date of redemption.

Meldahl 2016A Bonds bearing interest at 4.000% and maturing on February 15, 2041:

Year	Principal Amount	
2037	\$ 3,580,000	)
2038	3,610,000	)
2039	3,645,000	)
2040	3,680,000	)
2041	3,710,000	)_
	\$ 18,225,000	)

Meldahl 2016A Bonds bearing interest at 5.000% and maturing on February 15, 2046:

Year	Principal Amount
2042	\$ 3,750,000
2043	3,815,000
2044	3,870,000
2045	3,925,000
2046	 3,980,000
	\$ 19,340,000

The proceeds of the Meldahl 2016A funds were used to (i) repay draws on the line of credit used as interim financing, (ii) fund a parity common reserve account, and (iii) pay the cost of issuance.

AMP has entered into a power sales contract dated as of March 1, 2009 with 48 of its members (the "Meldahl Participants") by the terms of which AMP agrees to sell, and the Meldahl Participants agree to buy on a take-or-pay basis, the electric output of a hydroelectric facility with an aggregate capacity of 105 MW on the Ohio River. The take-or-pay obligations of the Meldahl Participants under the Meldahl power sales contract are limited obligations payable solely out of the revenues, and, with two exceptions, as an operating expense, of their respective electric systems and are subject to step up to the same extent as the obligations of the PSEC Participants under the PSEC power sales contract, except that the maximum step-up percentage is 106%.

## **AMP Fremont Energy Center 2012B Bonds**

The AMP Fremont Energy Center Revenue Bonds, Series 2012B (the "AFEC 2012B Bonds") were issued June 29, 2012, pursuant to a Master Trust Indenture, dated as of June 1, 2012, as supplemented ("AFEC MTI"), in the form of serial and term bonds with an aggregate par amount of \$525,545,000. Interest is payable semiannually beginning February 15, 2013. AMP has the right to redeem the AFEC 2012B Bonds maturing after February 15, 2022, prior to their respective maturities, in whole or in part, on any date beginning February 15, 2022, at a redemption price of par, plus accrued interest.

On December 20, 2017, AMP issued, pursuant to the AFEC MTI, its AMP Fremont Energy Campus Project Revenue Bonds, Refunding Series 2017A, ("AFEC 2017A Bonds") with an aggregate par amount of \$124,385,000. The AFEC 2017A Bonds were issued to in order to (i) refund a portion (\$127,630,000) of the AMP's Fremont Energy Campus Project Bonds, Series 2012B ("the AFEC 2012B Bonds"), issued on June 29, 2012 in the aggregate principal amount of \$525,545,000, and (ii)pay the costs of issuance of the AFEC 2017A Bonds. Specifically, a portion of the proceeds of the AFEC 2017A Bonds were deposited in an Escrow Fund established by AMP to be used exclusively to advance refund portions of AFEC 2012B Bonds. In the consolidated balance sheets, the funds held in escrow are presented in Trustee funds – restricted

The AFEC 2012B Bonds outstanding at December 31, 2018 were as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	9,825,000	5.000 %
2020	10,315,000	5.000 %
2021	10,830,000	5.000 %
2022	11,375,000	5.000 %
2030	16,965,000	5.250 %
2031	17,645,000	4.000 %
2032	18,525,000	5.000 %
2037	107,485,000	5.000 %
<b>"</b> 2041	107,000,000	4.000 %
2044	64,755,000	4.375 %
	\$ 374,720,000	

The AFEC 2012B Bonds due on February 15, 2037, February 15, 2042 and February 15, 2044 are term bonds subject to mandatory sinking fund redemption on the principal payment date in the following years in the following principal amounts at the redemption price equal to par, together with interest accrued to the date of redemption.

The AFEC 2012B Bonds maturing on February 15, 2037:

Year	Principal Amount
2033	\$ 19,450,000
2034	20,425,000
2035	21,445,000
2036	22,520,000
2037	23,645,000
	\$ 107,485,000

The AFEC 2012B Bonds maturing on February 15, 2042:

Year	Principal Amount
2038	\$ 24,825,000
2039	26,065,000
2040	27,370,000
2041	28,740,000
	\$ 107,000,000

The AFEC 2012B Bonds maturing on February 15, 2044:

Year	Principal Amount
2043 2044	\$ 31,685,000 33,070,000
	\$ 64,755,000

AMP has entered into a power sales contract dated as of June 1, 2012 with 87 of its members (the "AFEC Participants") by the terms of which AMP agrees to sell, and the AFEC Participants agree to buy, on a take-or-pay basis, the electric output of an AMP 90.69% undivided ownership interest in AFEC with an aggregate capacity of 641 MW. The take-or-pay obligations of the AFEC Participants under the AFEC power sales contract are limited obligations, payable solely out of the revenues, and, with two exceptions, as an operating expense, of their respective electric systems and are subject to step up to the same extent as the obligations of the PSEC Participants under the PSEC power sales contract.

## **AMP Fremont Energy Center 2017A Bonds**

AFEC 2017A Bonds matures beginning February 15, 2018 through 2042. Interest is payable semiannually beginning February 15, 2023. AMP has the right to redeem the AFEC 2017A Bonds maturing after February 15, 2042, prior to their respective maturities, in whole or in part, on any date beginning February 15, 2023, at a redemption price of par, plus accrued interest.

The AMP Fremont Energy Center 2017A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2023	\$ 11,640,000	5.000 %
2024	12,225,000	5.000 %
2025	12,835,000	5.000 %
2026	13,480,000	5.000 %
2027	14,150,000	5.000 %
2028	14,860,000	5.000 %
2029	15,605,000	5.000 %
2042	 29,590,000	4.000 %
	\$ 124,385,000	

## **AMP Fremont Energy Center Escrow Bonds**

The AMP Fremont Energy Center Escrow Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate		
2022	\$ 127,630,000	5.117 %		
	\$ 127,630,000			

## **Greenup Hydroelectric Project 2016A Revenue Bonds**

The Greenup Hydroelectric Project Revenue Bonds, Series 2016A ("Greenup 2016A Bonds") were issued May 11, 2016 in the form of serial and term bonds with an aggregate par amount of \$125,630,000. The Greenup 2016A Bonds were issued at an aggregate premium of \$21,832,548. The bonds will mature between 2018 and 2046 and bear interest at fixed rates between 3.00% and 5.00%. Interest is payable semiannually beginning August 15, 2016. AMP has the option to redeem the Greenup 2016A Bonds on any date in whole or in part, at the make-whole premium on or after February 15, 2026.

The Greenup 2016A Bonds outstanding at December 31, 2018 are as follows:

Maturity Date - February 15	Principal Amount	Interest Rate
2019	1,265,000	3.000 %
2020	1,685,000	4.000 %
2021	1,750,000	5.000 %
2022	1,840,000	5.000 %
2023	1,930,000	5.000 %
2024	2,030,000	5.000 %
2025	2,130,000	5.000 %
2026	3,235,000	5.000 %
2027	3,395,000	5.000 %
2028	3,565,000	5.000 %
2029	3,745,000	5.000 %
2030	3,930,000	5.000 %
2031	4,130,000	5.000 %
2032	4,335,000	4.000 %
2033	4,550,000	5.000 %
2034	4,780,000	3.000 %
2035	4,920,000	4.000 %
2036	5,120,000	4.000 %
2041	29,420,000	5.000 %
2046	37,545,000	5.000 %
	\$ 125,300,000	

The Greenup 2016A Bonds due on February 15, 2041 and February 15, 2046 are term bonds subject to mandatory sinking fund redemption on the principal payment date in the following years in the following principal amounts at a redemption price equal to par, together with interest accrued to the date of redemption.

Greenup 2016A Bonds bearing interest at 5.000% and maturing on February 15, 2041:

Year	Principal Amount	
2037	\$ 5,325,00	00
2038	5,590,00	00
2039	5,870,00	00
2040	6,165,00	00
2041	6,470,00	00
	\$ 29,420,00	00

Greenup 2016A Bonds bearing interest at 5.000% and maturing on February 15, 2046:

Year	Principal Amount
2042	\$ 6,795,000
2043	7,135,000
2044	7,490,000
2045	7,865,000
2046	 8,260,000
	\$ 37,545,000

The proceeds of the Greenup 2016A Bonds were used to (i) finance the purchase price of the 48.6% undivided ownership interest in the Greenup Hydroelectric facility (see Note 3), (ii) provide funds for capital construction, (iii) repay draws on the line of credit used as interim financing, (iv) fund a portion of interest due on the Greenup 2016A Bonds, and (v) pay the cost of issuance.

## **Term Debt on Behalf of Others**

## **Central Virginia Electric Cooperative**

AMP and CVEC entered into a power sales contract dated July 26, 2011 under which AMP sells and CVEC purchases on a take-or-pay basis, the output associated with the "4.15% Interest". On June 26, 2012, to finance the cost of the 4.15% Interest, AMP obtained from the National Cooperative Services Corporation, an affiliate of the Rural Utilities Cooperative Financial Corporation (commonly known as "CFC"), a \$25,000,000 term loan to be amortized over 30 years.

This loan is secured by the CVEC power sales contract, a mortgage on and security interest in the 4.15% Interest and a CVEC payment guaranty. AMP's obligations for the term loan are nonrecourse to AMP except to the extent of AMP's rights under the CVEC power sales contract and the mortgage on and the security interest in the 4.15% Interest.

The term loan has fixed interest rates ranging from 2.75% to 5.60% through the life of the loan and the term loan matures on February 15, 2042.

As of December 31, 2018 and 2017, \$20,208,332 and \$21,062,499 remained as outstanding principal, respectively.

## **Term Debt on Behalf of Members (Nonrecourse)**

The individual municipality is the primary obligor on term debt issued on its behalf. "On behalf of" financings are nonrecourse to AMP and are presented in the consolidated balance sheets with a corresponding receivable from the project or member to which the on-behalf-of financing relates. Bonds and notes payable issued by AMP on behalf of member communities consist of the following at December 31:

	2018	2017
Municipal project notes, due on various dates through December 2019 with interest from 2.75% to 3.00%		
at December 31, 2018 and 2017	\$ 28,951,000	\$ 16,923,872
	 28,951,000	 16,923,872
Current portion	(28,951,000)	(16,923,872)
Noncurrent portion	\$ _	\$ _

## **Aggregate Future Maturities**

The aggregate amounts of future maturities for AMP's revolving credit loan, term debt and term debt on behalf of others are as follows:

Years Ending December 31	Term Debt AMP	Term Debt On Behalf Of Others	Revolving Credit Line
2019	161,049,412	29,805,167	-
2020	104,224,412	854,167	-
2021	81,664,412	854,167	-
2022	216,234,412	854,167	210,100,000
2023	93,219,412	854,167	-
2024 and Thereafter	4,666,088,822	15,937,497	-
	\$ 5,322,480,882	\$ 49,159,332	\$ 210,100,000

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## 9. Trustee Funds

Bond proceeds and funds collected in advance of contractually scheduled principal and interest payments for certain bond offerings are held in trust. Trustee funds related to these bond offerings consist of the following at December 31:

		2018	2017
PSEC Parity Common Reserve	\$	112,114,465	\$ 111,000,212
PSEC Revenue 2008A Bonds	·	-	4,102,385
PSEC Revenue 2009A Bonds		11,255,086	8,145,139
PSEC Revenue 2009B Bonds		3,399,823	3,448,889
PSEC Revenue 2009C Bonds		6,922,634	6,926,449
PSEC Revenue 2010 Bonds		5,109,830	8,126,280
PSEC Revenue 2015A Bonds		10,862,592	10,586,341
PSEC Revenue 2015B Bonds		2,848,565	3,006,509
PSEC Revenue 2015C Bonds		929,653	854,170
PSEC Revenue 2017A Bonds		2,487,449	638,611
PSEC Escrow		97,738,826	806,212,342
Hydro Parity Common Reserve		141,957,321	136,401,289
Hydro 2009B Bonds		15,145,552	14,586,804
Hydro 2009C Bonds		26,352,715	26,257,504
Hydro 2009D Bonds		129,823	10,295
Hydro 2010A Bonds		4,642,191	3,784,107
Hydro 2010B Bonds		42,640,488	41,062,691
Hydro 2010C Bonds		5,255,526	5,630,245
Hydro 2016A Bonds		4,395,371	4,183,766
Hyrdo 2018A Bonds		1,046,261	-
Hydro Escrow		29,795,890	30,356,664
Meldahl Parity Common Reserve		41,785,429	41,527,876
Meldahl 2010A Bonds		8,746,279	8,405,475
Meldahl 2010B Bonds		9,095,070	14,800,996
Meldahl 2010C Bonds		789,239	510,606
Meldahl 2010D Bonds		278,046	359,699
Meldahl 2010E Bonds		8,747,865	14,880,890
Meldahl 2016A Bonds		3,450,376	3,333,037
AFEC Parity Common Reserve		35,435,124	35,919,107
AFEC 2012A Bonds		5,627,154	5,576,471
AFEC 2012B Bonds		17,501,130	16,699,849
AFEC 2017A Bonds		2,571,489	224,783
AFEC Escrow		140,325,866	143,155,502
Greenup 2016A Bonds		5,840,368	5,222,724
Rate Stabilization Plans		290,049	5,017,561
		805,513,545	1,520,955,269
Current portion		(335,046,182)	(916,827,263)
Noncurrent portion	\$	470,467,363	\$ 604,128,006

Investments held in the trustee funds consist of the following at December 31:

	2018	2017
Money market funds	\$ 185,712,973	\$ 189,824,262
Debt securities	 619,800,572	1,331,131,007
	\$ 805,513,545	\$ 1,520,955,269

## **PSEC Bonds**

The PSEC MTI contains a provision, among others, that AMP will at all times fix, charge and collect rates and charges for the use of, and for the services and facilities furnished by, the PSEC. These rates and charges are to provide net revenues at least 110% of the net annual debt service requirements of the PSEC Bonds.

As supplemented by supplemental trust agreements executed in connection with each series of the PSEC Bonds, the trust agreement also provides for the creation with the trustee of the following subfunds and accounts for each such series of PSEC Bonds: (a) Acquisition and Construction Subfund (containing amounts to be paid for costs incurred by AMP in connection with the construction of the PSEC); (b) Cost of Issuance Account (containing amounts to be paid for costs incurred by AMP in connection with the issuance of the PSEC Bonds);c) Bond Subfund (consisting of the Capitalized Interest Subaccount, the Interest Subaccount, the Principal Subaccount, the Sinking Subaccount, the Redemption Subaccount, and the Parity Common Reserve Account; (d) Subordinate Obligations Subfund; and (e) Reserve and Contingency Subfund (consisting of the Overhaul Account, the Renewal and Replacement Account, the Capital Improvement Account, the Rate Stabilization Account, the Environmental Improvement Account and the Self -Insurance Account).

Certain of the supplemental trust indentures also create Tracking Interest Subaccounts for the series of BABs and tax-exempt bonds to hold capitalized funds to pay interest on such bonds subsequent to the commercial operation dates of the project units.

## **Hydro Bonds**

The Hydro MTI contains a provision that AMP will at all times fix, charge and collect rates and charges for the use of, and for the services and facilities furnished by, the Hydro plants. These rates and charges should provide net revenues at least 110% of the net annual debt service requirements of the Hydro Bonds.

As supplemented by supplemental trust agreements executed in connection with each series of the Hydro Bonds, the trust agreement also provides for the creation with the trustee of the following subfunds and accounts for each such series of Hydro Bonds: (a) Acquisition and Construction Account (containing amounts to be paid for costs incurred by AMP in construction of the Hydro plants); (b) Cost of Issuance Account (containing amounts to be paid for costs incurred by AMP in connection with the issuance of the series of Hydro Bonds); (c) Bond Subfund (consisting of the Capitalized Interest Subaccount, the Interest Subaccount, the Derivatives Payments Subaccount, the Principal Subaccount, the Sinking Subaccount, the Redemption Subaccount and the Parity Common Reserve Account; (d) Subordinate Obligations Subfund; and (e) Reserve and Contingency Subfund (consisting of the Overhaul Account, the Renewal and Replacement Account, the Capital Improvement Account, the Rate Stabilization Account, the Environmental Improvement Account and the Self-Insurance Account).

Certain of the supplemental trust agreements also create (i) Tracking Interest Subaccounts for the series of BABs, New CREBs and tax-exempt bonds to hold capitalized funds to pay interest on such bonds subsequent to the commercial operation dates of the project units and (ii) Special Reserve Accounts to hold amounts pledged particular series of BABs and New CREBs.

#### **Meldahl Bonds**

The Meldahl MTI contains a provision that AMP will at all times fix, change and collect rates and charges for the use of, and for the services and facilities furnished by, the Meldahl Hydro plant. These rates and charges should provide net revenues at least equal to 110% of the net annual debt service requirements of the Meldahl Bonds.

As supplemented by supplemental trust agreements executed in connection with each series of the Meldahl Bonds, the trust agreement also provides for the creation with the trustee of the following subfunds and accounts for each such series of Meldahl Bonds: (a) Acquisition and Construction Account (containing amounts to be paid for costs incurred by AMP in construction of the Meldahl Hydro plant); (b) Cost of Issuance Account (containing amounts to be paid for costs incurred by AMP in connection with the issuance of the Meldahl Bonds); (c) Bond Subfund (consisting of the Capitalized Interest Subaccount, the Interest Subaccount, the Derivatives Payments Subaccount, the Principal Subaccount, the Sinking Subaccount, the Redemption Subaccount and the Parity Common Reserve Account (containing amounts to be paid for debt service and amounts to be paid should a redemption be triggered); (d) Subordinate Obligations Subfund; and (e) Reserve and Contingency Subfund (consisting of the Overhaul Account, the Renewal and Replacement Account, the Capital Improvement Account, the Rate Stabilization Account, the Environmental Improvement Account and the Self-Insurance Account).

Certain of the supplemental trust agreements also create (i) Tracking Interest Subaccounts for the series of BABs, New CREBs and tax-exempt bonds to hold capitalized funds to pay interest on such bonds subsequent to the commercial operation date of the project units and (ii) Special Reserve Accounts to hold amounts pledged to particular series of BABs and New CREBs.

## **AFEC Bonds**

The AFEC MTI contains a provision that AMP will at all times fix, change and collect rates and charges for the use of, and for the services and facilities furnished by, the AFEC plant. These rates and charges should provide net revenues equal to at least 110% of the net annual debt service requirements of the AFEC Bonds.

As supplemented by the first and second supplemental trust indentures executed in connection with the two series of the AFEC Bonds, and a third supplemental trust agreement that secures AMP's fuel hedge agreement counterparties, the trust agreement also provides for the creation with the trustee of the following subfunds and accounts for each such series of AFEC Bonds: (a) Acquisition and Construction Account (containing amounts to be paid for costs incurred by AMP in construction of the AFEC plant); (b) Cost of Issuance Account (containing amounts to be paid for costs incurred by AMP in connection with the issuance of the series of AFEC Bonds); (c) Revenue Subfund (consisting of the Operating Subaccount, the Fuel Reserve Subaccount, the Working Capital Subaccount, the Derivative Receipt Subaccount, and the General Subaccount and the Fuel Hedge Subaccount to be held by the trustee); (d) Bond Subfund (consisting of the Capitalized Interest Subaccount, the Interest Subaccount, the Derivatives Payment Subaccount, the Principal Subaccount, the Sinking Subaccount, the Redemption Subaccount, and the Parity Common Reserve Account; containing amounts to be paid for debt service and amounts to be paid should a redemption be triggered); (e) Subordinate Obligations Subfund; (f) Reserve and Contingency Subfund (consisting of the Overhaul Account, the Renewal and Replacement Account, the Capital Improvement Account, the Environmental Improvement Account, the Rate Stabilization Account, the Self-Insurance Account and with the trustee the Fuel Hedge Reserve Account).

#### 10. Fair Value of Financial Instruments

As defined in the fair value measurements standard, fair value is the price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants on the measurement date. This standard establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted market prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3).

The three levels of the fair value hierarchy defined by the fair value measurement standard are as follows:

- Level 1 Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those where transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. AMP's Level 1 assets primarily consist of money market funds which are included in trustee funds on the consolidated balance sheets. AMP does not have any liabilities that meet the definition of Level 1.
- Level 2 Pricing inputs are either directly or indirectly observable in the market as of the reporting date, other than quoted prices in active markets included in Level 1. Level 2 includes those financial instruments that are valued using models or other valuation methodologies based on assumptions that are observable in the marketplace throughout the full term of the instrument, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace. These models are primarily industry-standard models that consider various assumptions, including quoted forward prices for commodities, time value, volatility factors, and current market and contractual prices for the underlying instruments, as well as other relevant economic measures. Liabilities in this category include natural gas swaps.
- Level 3 Pricing inputs include inputs that are generally less observable from objective sources. These inputs may be used with internally developed methodologies that result in management's best estimate of fair value. AMP does not have any assets or liabilities that met the definition of Level 3.

AMP utilizes market data and assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. These inputs can be readily observable, market corroborated, or generally unobservable. AMP primarily applies the market approach for recurring fair value measurements using the best information available. Accordingly, AMP maximizes the use of observable inputs and minimizes the use of unobservable inputs.

The following table presents the carrying amounts and fair values of financial instruments not recognized at fair value in the consolidated balance sheets:

	December 31, 2018		Decembe	r 31, 2017
	•	Estimated Fair		Estimated Fair
Financial Instruments	Carrying Value	Value	Carrying Value	Value
Assets				
Debt securities held in trustee funds, restricted and non-restricted	\$ 619,800,572	\$ 630,473,514	\$1,331,131,007	\$1,351,434,625
Liabilities				
Fixed rate term debt, including current maturities, AMP	5,403,481,392	6,464,674,005	6,076,124,422	7,478,694,517
Fixed rate term debt, including current maturities, on behalf of others	49,159,332	49,159,332	37,986,371	37,986,371
Variable rate term debt, including current maturities, AMP	95,100,000	95,100,000	95,100,000	95,100,000

The carrying amounts of cash, accounts receivable, accounts payable, the AMP project note, the municipal project notes, and the revolving credit loan approximate their fair value due to their short maturities. The fair value of trustee funds is determined based on market observable inputs that include, but are not limited to, benchmark yields, reportable trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, and offers. The fair value of debt securities included trustee funds is within Level 2 of the fair value hierarchy. The fair value of long-term debt reflects the present value of cash outflows relating to those obligations based on the current call price or the yield to maturity as deemed appropriate at the end of each respective year. The yields assumed were based on municipal bond ratings offered by organizations similar to AMP. The fair value of long-term debt is within Level 2 of the fair value hierarchy.

The estimated fair values of the natural gas swaps were determined using New York Mercantile Exchange ("NYMEX") futures settlement prices for delivery of natural gas at Henry Hub adjusted by the price of NYMEX ClearPort basis swaps, which reflect the difference between the price of natural gas at a given delivery basin and the Henry Hub pricing points.

The following tables set forth AMP's financial assets and financial liabilities that are accounted for on a recurring basis at fair value by level within the fair value hierarchy as of December 31, 2018 and December 31, 2017. As required by the fair value measurement standard, assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. AMP's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

	December 31, 2018						
	Leve	el 1		Level 2	Le	vel 3	Total
Assets							
Money market funds	\$ 185,7	12,973	\$	-	\$	-	\$ 185,712,973
	\$ 185,7	12,973	\$	-	\$	-	\$ 185,712,973
Liabilities							
Natural gas swaps	\$	-	\$	63,478,841	\$	-	\$ 63,478,841
	\$	-	\$	63,478,841	\$	-	\$ 63,478,841
				Decembe	r 31, 20	17	
	Leve	el 1		Level 2	Le	vel 3	Total
Assets							
Money market funds	\$ 189,8	24,262	\$	-	\$	-	\$ 189,824,262
	\$ 189,8	24,262	\$	-	\$	-	\$ 189,824,262
Liabilities							
Natural gas swaps	\$	-	\$	67,329,476	\$	-	\$ 67,329,476
	\$	_	\$	67,329,476	\$	_	\$ 67,329,476

The determination of the above fair value measures takes into consideration various factors required under the fair value measurement standard. These factors include nonperformance risk, including counterparty credit risk and the impact of credit enhancements (such as cash deposits, line of credit and priority interests). The impact of nonperformance risk was immaterial in the fair value measurements.

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## 11. Asset Retirement Obligations

Asset retirement obligations consist of the following:

	2018	2017
Asset retirement obligation, beginning of year	\$8,205,457	\$7,772,557
Accretion	237,714	1,004,321
Liabilities settled	(1,603,088)	(571,421)
Asset retirement obligation, end of year	\$6,840,083	\$8,205,457

## 12. Commitments and Contingencies

#### **Environmental Matters**

AMP is subject to regulation by federal and state authorities with respect to air and water quality control and other environmental matters. All referenced legislative and regulatory comment filings can be found on AMP's website.

## **Federal Greenhouse Gas Emission Standards**

On August 31, 2018, USEPA proposed the Affordable Clean Energy rule, designed to impose greenhouse gas emissions reductions at large power plants by improving operating efficiency. AMP submitted comments on October 30, 2018 that were generally supportive of the proposal. A final rule is expected in the second quarter of 2019.

#### **RICE NESHAP**

This USEPA rule regulates emissions of hazardous air pollutants from reciprocating internal combustion engines ("RICE") by establishing emission limits and work practice standards. Some diesel engines owned or operated by AMP are affected and maintain compliance by using pollution control equipment.

#### **Cross-State Air Pollution Rule**

This USEPA rule requires large electric generating units to purchase allowances for air pollutant emissions impacting air quality in downwind states. AMP owned or operated facilities subject to this rule either have been allocated sufficient allowances for continued operation or, if necessary, are able to purchase allowances as needed to comply.

## Clean Water §401/§404 permits

Permits are required when performing activities that impact streams and other water bodies, such as the construction of generation or distribution assets. The jurisdictional boundary between the state and federal authority is delineated in the definition of "waters of the United States" (or WOTUS). A new rule has been proposed to revise the definition of WOTUS, and the current rule defining this same term has been enjoined by the federal courts in some parts of the country. AMP staff are monitoring ongoing litigation and rulemaking activities.

## **Other Commitments**

#### Voith

On August 14, 2017, after the expiration of a tolling agreement and exhaustion of informal resolution efforts, AMP filed a complaint against Voith Hydro, Inc. (Voith) in federal court in Columbus, Ohio alleging breach of contract and breach of express warranty claims against Voith for each of the four

hydro projects. AMP's breach of contract claim states that Voith materially breached the contracts on the projects as follows:

- (a) delivering drawings and equipment late and out of sequence;
- (b) delivering defective, incomplete and uncoordinated drawings and defective installation instructions;
- (c) delivering defectively manufactured guide bearings and discharge rings;
- (d) defectively designing and/or manufacturing equipment and equipment components;
- (e) delivering equipment that was not completely and/or properly manufactured and required significant additional field work to install;
- (f) failing to deliver "Category C" parts necessary for Voith Equipment assembly;
- (g) failing to timely and completely address installation issues with the Voith Equipment, including but not limited to, failing to timely and completely address turbine alignment issues;
- (h) failing to provide check sheets consistent with the Contracts' specifications;
- (i) refusing to promptly and accurately address problems with the Voith Equipment; and
- (j) failing to maintain a consistent executive and project management team and site representatives who were informed and prepared to address ongoing issues; and causing substantial delay and damage to the Hydro Projects, all in material breach of the Contracts.

The Complaint alleges that Voith's material breaches caused extensive damages to AMP. The Complaint notes that the contracts entitled AMP to withhold payment from Voith, and AMP withheld approximately \$40 million in payments from Voith to offset the damages and costs incurred by AMP and its general contractors due to Voith's material breaches of the Contracts. The Complaint alleges that AMP's damages are at least \$40 million. The Complaint and Summons was served by a process server on August 16, 2017. After taking an agreed extension, Voith filed its Answer and Counterclaim on October 16, 2017. Voith's Answer denied AMP's claims, and Voith's Counterclaim for breach of contract and unjust enrichment made the following allegations against AMP:

- (a) that a series of material interferences, hindrances, delays and defective performance by AMP, MWH and other Installation Contractors adversely impacted Voith, absolve Voith from liability to AMP, and make AMP liable to Voith;
- (b) that AMP materially breached its contract with Voith by inappropriately modifying and increasing Voith's scope of work and refusing to pay Voith for the added scope and legitimate requests for additional payments;
- (c) that AMP has failed and refused to pay the balance of the contract price and other amounts owed to Voith under the contract; and
- (d) that Voith has been damaged in an amount in excess of \$40M, plus interest and attorney fees.

On December 1, 2017, AMP filed its Answer and denied liability to Voith. Additionally, AMP filed a motion to strike some of Voith's affirmative defenses, which was resolved by Voith amending its Answer to include additional details related to its affirmative defenses. On December 5, 2017, the Court held a preliminary pretrial conference. At this conference AMP and Voith discussed their differing views on certain discovery issues and the case schedule. For instance, Voith has asked the Court to extend the limit on the number of depositions a party can take from 10 to 80, while AMP was willing to extend the limit from 10 to 25. The Court deferred ruling at this time on these discovery issues and set a status conference for April 19, 2018 to allow time for the parties to begin exchanging written discovery and electronically stored information.

On January 30, 2018, the parties exchanged initial disclosures that listed potential witnesses and provided preliminary damage calculations. Voith listed over 100 potential witnesses, and Voith identified over \$65 Million in damages based upon claims for outstanding Change Requests and

Work Change Directives on the hydro projects. (Cannelton: \$19.5M; Smithland: \$20.5M; Willow Island: \$10.7M; Meldahl: \$14.6M). AMP listed over 70 potential witnesses, and AMP identified over \$90M in gross damages, without including any contractual limitations or caps on damages. (Cannelton: approx. \$32M; Smithland: approx. \$25M; Willow Island: approx. \$25M; Meldahl: approx. \$22M). Both sides are claiming pre-judgment and post-judgment interest and other damages and all damage calculations will be the subject of expert witness reports. AMP is currently working with its damages experts on these calculations; likewise, Voith has stated it is working with its damages experts on its calculations. It is therefore unlikely that the full measure of damages sought in this matter will be known until the close of expert discovery.

Also on January 30, 2018, the parties exchanged lists of custodians and search terms that will be used with respect to discovery and the collection and production of documents and electronically stored information. The parties met and conferred on these lists and terms to address their disputes, and a few remaining disputes were submitted to the Magistrate Judge for resolution and the Magistrate Judge denied each side's request at that time to expand the other side's search terms.

On January 14, 2019 the Court extended the case schedule in this matter by a few months at the request of Voith. The current case schedule establishes the following deadlines:

September 9, 2019	Affirmative Expert Reports
November 8, 2019	Defensive Expert Reports
December 6, 2019	Fact Discovery Completed
February 7, 2020	Rebuttal Expert Reports
April 30, 2020	<b>Expert Discovery Completed</b>
June 21, 2020	Dispositive Motion Deadline

The Magistrate Judge will be monitoring the discovery in this case closely, and the Scheduling Order established a standing conference the last Tuesday of every month during the discovery phase of the case.

Both sides have responded to initial written discovery on October 5, 2018 and produced ESI discovery in mid-December. Fact depositions have begun and are expected to continue through the fall of 2019.

On February 4, 2019, Voith informed AMP that Voith's prior ESI production on December 17, 2018 had a serious technical error in which a substantial amount of Voith's ESI was not produced. Voith has indicated it is remedying this error, which Voith stated could take several months.

AMP will vigorously pursue its claims and defend against Voith's Counterclaim. All costs associated with these claims are project costs recoverable from the project participants under their power sales agreement with AMP.

## Elliott Land & Cattle Co., LLC

On August 2, 2016, Plaintiffs Elliott Land & Cattle Co., LLC, William Woodburn, and Janet Woodburn filed a complaint in Pleasants County Circuit Court, West Virginia against AMP alleging claims for breach of contract and fraudulent inducement related to Excavated Materials Placement Agreements ("Agreements") that AMP entered into with the Plaintiffs in connection with Willow Island. In the complaint, Plaintiffs alleged that AMP breached the Agreements by failing to stockpile the Willow Island cofferdam cell fill material on Plaintiffs' property after the cofferdams were deconstructed. Alternatively, Plaintiffs' alleged that AMP fraudulently induced Plaintiffs into signing the Agreements by telling Plaintiffs they could have the cofferdam cell fill materials.

AMP denied the allegations and defended itself on the basis that the Agreements did not require AMP to stockpile the cofferdam cell fill material on the Plaintiffs' properties.

After discovery concluded, AMP (on December 8, 2017) and Plaintiffs (on January 8, 2018) filed motions for summary judgment seeking to have their respective interpretations of the Agreement adopted by the Court. On June 22nd, the Court entered Plaintiffs' proposed order, granting Plaintiffs' motion for summary judgment on liability on the breach of contract claim and setting the case for a jury trial on Plaintiffs' fraudulent inducement claim and a determination of damages on Plaintiffs' breach of contract claim.

After receiving this decision on Plaintiffs' motion for summary judgment, AMP negotiated an agreement with Plaintiffs' counsel in which Plaintiffs agreed to dismiss their fraudulent inducement claim against AMP (which would have exposed AMP to the potential for punitive damages and an award of Plaintiffs' attorneys' fees) and the parties would proceed to a bench trial before the Court on damages for breach of contract only. The agreement permits AMP to appeal the Court's determinations of both liability for breach of contract and damages for breach of contract. The agreement permits the revival of Plaintiffs' fraudulent inducement claim only in the event the Court's determination of liability for breach of contract is reversed.

On June 25, 2018, the damages trial occurred. At trial and in its post-trial filings, AMP argued that Plaintiffs failed to satisfy their burden of proving damages and were entitled to only nominal damages. In the alternative, AMP argued the proper measure of damages under the applicable Ohio law was Plaintiffs' lost profit on the sale of the cofferdam fill material. Based on the evidence presented at trial, AMP argued that the maximum profit that Plaintiffs could have achieved was approximately \$600,000.

At the conclusion of trial, the Court asked each side to present proposed findings of fact and conclusions of law. On August 14, 2018, the Court signed the entry proposed by the Plaintiffs and entered judgment against AMP for \$3,751,918.29 (which included pre-judgment interest) plus post-judgment interest.

Following AMP's appeal of the decision to the West Virginia Supreme Court of Appeals, the parties held a February 26, 2019 settlement meeting among principals. A settlement has been finalized and the case has now been dismissed. The settlement amount and all costs associated with this matter are project costs recoverable from the project participants under their power sales agreement with AMP.

#### Other

AMP is also a party to various legal actions and complaints arising in the ordinary course of business. AMP does not believe that the ultimate resolution of such matters will have a material adverse effect on AMP's financial position or results of operations.

## 13. Power Purchase Commitments

AMP's general practice is to enter into long-term power purchase contracts only when such contracts are supported by corresponding sales contracts to its members. All such contracts are considered normal pursuant to the FASB's standard on derivative instruments. All such purchases are "covered" by corresponding power sales arrangements either with individual members or one of AMP's power pools.

Energy purchase commitments at December 31, 2018 are as follows:

2019	\$ 199,044,071
2020	166,350,649
2021	133,297,344
2022	144,441,238
2023	93,016,345
2024-2030	204,355,404
	\$ 940,505,051

AMP has certain power supply agreements that include provisions that would require collateral upon a decrease in AMP's credit rating below investment grade, or power prices below certain thresholds.

AMP has also entered into long-term natural gas purchase contracts to provide fuel for AFEC. Natural gas purchase commitments at December 31, 2018 are as follows:

2019	\$ 42,698,110
2020	40,496,920
2021	40,501,980
2022	30,501,480
2023	22,905,480
2024-2027	31,140,000
	\$ 208,243,970

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## 14. Subsequent Events

In January 2019, AMP issued \$55.2M in tax-exempt Solar Electricity Prepayment Project Revenue Bonds, Series 2019A. The Solar Series 2019A Bonds were issued by AMP for the purpose of (i) refinancing the prepayment for a specified supply of electricity from thirteen (13) solar photovoltaic generating facilities with a rated capacity of approximately 36.825 megawatts located in the States of Delaware, Michigan, Ohio and Virginia pursuant to the terms of a Power Purchase Agreement, between DG AMP Solar, LLC and AMP, dated March 29, 2016, (ii) funding a deposit to the Parity Common Reserve Fund, and (iii) paying costs of issuance of the Series 2019A Bonds. In February 2019, AMP issued \$168.5M in tax-exempt Prairie State Energy Campus (PSEC) Project Revenue Bonds, Refunding Series 2019A.

The PSEC Series 2019A Bonds were issued by AMP to (i) refund the Outstanding Prairie State Energy Campus Project Revenue Bonds, Series 2015B (Subseries 2015B-1) and Series 2015C issued under the Master Trust Indenture; (ii) fund a deposit to the Parity Common Reserve Fund and (iii) pay the costs of issuance of the Series 2019A Bonds.

The Company has evaluated subsequent events through April 18, 2019 as this was the date the consolidated financial statements were available to be issued.