American Electric Power

Non-UMWA Postretirement Health Care Plan

Actuarial Valuation Report
Postretirement Welfare Cost for Fiscal Year Beginning January 1, 2019 under U.S. GAAP

Employer Contributions for Plan Year Beginning January 1, 2019

May 2019

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Purposes of valuation

American Electric Power (“the Company”) retained Willis Towers Watson US LLC (“Willis Towers Watson”), to perform an actuarial valuation of its postretirement welfare programs for the purpose of determining the following:

1. The value of benefit obligations as of January 1, 2019, and the Company‘s postretirement welfare cost for fiscal year ending December 31, 2019, in accordance with FASB Accounting Standards Codification Topic 715 (ASC 715-60). It is anticipated that a separate report will be prepared for year-end financial reporting and disclosure purposes.

2. Plan reporting information in accordance with FASB Accounting Standards Codification Topic 965 (ASC 965).

3. Expected contributions under the plan sponsor’s funding policy for the 2019 plan year.

4. The estimated maximum tax-deductible contribution for the tax year in which the 2019 plan year ends as allowed by the Internal Revenue Code. The maximum tax-deductible contribution should be finalized in consultation with the Company’s tax advisor.

Limitations

This valuation has been conducted for the purposes described above and may not be suitable for any other purpose. In particular, please note that there may be certain events that have occurred since the valuation date that are not reflected in the current valuation.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices.

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Section 1: Summary of key results

Benefit cost, plan assets & obligations

All monetary amounts shown in U.S. Dollars

Fiscal Year Beginning		01/01/2019	01/01/2018
Benefit Cost/ (Income)	Net Periodic Postretirement Benefit Cost/(Income)	(82,976,383)	(104,871,882)
Measurement Date		**01/01/2019**	**01/01/2018**
Plan Assets	Fair Value of Assets (FVA)	1,510,044,948	1,708,647,946
Benefit Obligations	Accumulated Postretirement Benefit Obligation (APBO)	1,126,652,189	1,251,302,431
Funded Status	Funded Status	383,392,759	457,345,515
Accumulated Other Comprehensive (Income)/Loss	Net Prior Service Cost/(Credit)	(343,305,273)	(411,931,508)
	Net Loss/(Gain)	410,564,569	287,986,950
	Total Accumulated Other Comprehensive (Income)/Loss	67,259,296	(123,944,558)
Assumptions[1]	Discount Rate	4.30%	3.60%
	Expected Long-term Return on Plan Assets	6.25%	6.00%
	Rate of Compensation/Salary Increase	Rates vary by age from 3.5% to 12.0%	Rates vary by age from 3.5% to 12.0%
	Current Health Care Cost Trend Rate	6.25%	6.50%
	Ultimate Health Care Cost Trend Rate	5.00%	5.00%
	Year of Ultimate Trend Rate	2024	2024
Participant Data	Census Date	01/01/2019	01/01/2018

Plan reporting (ASC 965) for Plan Year Beginning	01/01/2019	01/01/2018
Present value of accumulated benefits	1,126,899,572	1,251,565,230
Market value of assets	1,510,044,948	1,708,647,946
Plan reporting discount rate	4.30%	3.60%

[1] Rates are expressed on an annual basis where applicable.

Employer Contributions (net of Medicare subsidy)		Plan Year 2019	Plan Year 2018
Cash Flow	Funding Policy contributions	0	0
	Maximum Tax Deductible contributions	133,790,554 (est)	118,748,508
	Actual contributions	986,140[1]	12,379,214[2]
	Expected benefit payments and expenses, net of participant contributions	85,110,453	88,345,027

[1] Includes $1,027,891 expected to be paid directly for key retirees in 2019, offset by $41,751 in Medicare Retiree Drug Subsidies.
[2] Includes $11,651,839 contributed to trust and $1,151,180 paid directly for key retirees in 2018, offset by $423,805 in Medicare Retiree Drug Subsidies.

Employer contributions

Employer contributions are the amounts paid by the Company to provide for postretirement benefits, net of participant contributions and Medicare Part D payments. Most participants receiving benefits are required to contribute toward the cost of the plan.

The Company's funding policy is to contribute an amount equal to the postretirement welfare cost plus retiree drug subsidy payments received (the sum of which can be no less than zero). The Company maximizes its contribution to the 401(h) account and contributes the remainder to the various VEBAs. The Company may deviate from this policy, as permitted by its terms, based on cash, tax or other considerations.

Postretirement welfare cost and funded position

The cost of the postretirement welfare plan is determined in accordance with generally accepted accounting principles in the U.S. ("U.S. GAAP"). The fiscal 2019 postretirement welfare benefit cost/(income) for the plan is $(82,976,383). Under U.S. GAAP, the funded position (fair value of plan assets less the projected benefit obligation, or "APBO") of each postretirement welfare plan at the plan sponsor's fiscal year-end (measurement date) is required to be reported as a liability. The APBO is the actuarial present value of benefits attributed to service rendered prior to the measurement date, taking into consideration expected future pay increases for pay-related plans. The plan's overfunded (underfunded) APBO as of January 1, 2019 was $383,392,759 based on the fair value of plan assets of $1,510,044,948 and the APBO of $1,126,652,189.

Fiscal year-end financial reporting information and disclosures are prepared before detailed participant data and full valuation results are available. Therefore, the postretirement benefit asset (liability) at December 31, 2018 was derived from a roll forward of the January 1, 2018 valuation results, adjusted for the year-end discount rate and asset values, as well as significant changes in plan provisions and participant population. The next fiscal year financial reporting information will be developed based on the results of the January 1, 2019 valuation, projected to the end of the year and similarly adjusted for the year-end discount rate and asset values, as well as significant changes in plan provisions and participant population.

Change in postretirement welfare cost

The postretirement welfare cost/(income) increased from $(104,871,882) in fiscal 2018 to $(82,976,383) in fiscal 2019, as set forth below:

All monetary amounts shown in millions of U.S. Dollars

Postretirement Welfare Cost	
Prior year	(104.9)
Change due to:	
■ Expected based on prior valuation and contributions during prior year	(0.9)
■ Unexpected noninvestment experience	0.5
■ Unexpected investment experience	34.0
■ Assumption changes	(11.7)
Current year	(83.0)

Significant reasons for these changes include the following:

- Per capita health care cost assumption was updated and decreased the postretirement welfare cost.

All monetary amounts shown in millions of U.S. Dollars

	2019	2018
Medical (Overall Average)		
Under age 65[1]		
■ HSA Basic	9,427	8,685
■ HSA Plus	10,394	9,575
■ HRA	11,400	10,581
Age 65 and older (before Part D offsets)		
■ Medicare Select/COB[2]	3,985	3,936
■ Medicare Standard/MOB[2]	2,868	2,790
■ CSP	2,301	2,149
Medicare Part D offsets		
■ Medicare Advantage/MOB/COB (EGWP)	(915)	(861)
■ CSP (RDS)	(273)	(244)

See Appendix A for additional details on per capita claims costs assumptions including assumed claims costs adjusted for age-related morbidity adjustments.

1 Pre-65 per capita claims costs shown above do not include the 5% adjustment for potential dependent children covered under the plan.

2 Medicare Advantage rates shown include estimated HIF which is suspended for 2019.

- The discount rate increased 70 basis points since the prior year which decreased the postretirement welfare cost.
- Actual asset returns during 2018 were lower than the assumed rate of 6.00% which increased the postretirement welfare cost.
- The expected return on assets assumption was increased by 25 basis points to 6.25% which decreased the postretirement welfare cost.
- The mortality improvement projection was updated to the MP-2018 scale, adjusted to reflect 75% of the long-term improvement rates. This did not significantly affect postretirement welfare benefit cost.

Basis for valuation

Appendix A summarizes the assumptions and methods used in the valuation. Appendix B summarizes our understanding of the principal provisions of the plan being valued.

Changes in Assumptions

- Per capita claims costs were updated to reflect 2017 retiree claims experience and 2019 premium rates.
- Discount rate was changed from 3.60% to 4.30%.
- The expected return on assets assumption was increased by 25 basis points to 6.25%
- The mortality improvement projection was updated to the MP-2018 scale, adjusted to reflect 75% of the long-term improvement rates.

Changes in Methods

None.

Changes in Benefits Valued

None.

Actuarial certification

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. However, please note the information discussed below regarding this valuation.

Reliances

In preparing the results presented in this report, we have relied upon information regarding plan provisions, participants, assets, and sponsor accounting policies and methods provided by the Company and other persons or organizations designated by the Company. See the Sources of Data and Other Information section of Appendix A for further details. We have relied on all the data and information provided as complete and accurate. We have reviewed this information for overall reasonableness and consistency, but have neither audited nor independently verified this information. Based on discussions with and concurrence by the plan sponsor, assumptions or estimates may have been made if data were not available. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations. The results presented in this report are directly dependent upon the accuracy and completeness of the underlying data and information. Any material inaccuracy in the data, assets, plan provisions or other information provided to us may have produced results that are not suitable for the purposes of this report and such inaccuracies, as corrected by the Company, may produce materially different results that could require that a revised report be issued.

Measurement of benefit obligations, plan assets and balance sheet adjustments

Census date/measurement date

The measurement date is January 1, 2019. The benefit obligations were measured as of January 1, 2019 and are based on participant data as of the census date, January 1, 2019.

Plan assets and balance sheet adjustments

Information about the fair value of plan assets and the general ledger account balances for the other postretirement benefit plan cost at December 31, 2018, which reflect the expected funded status of the plans before adjustment to reflect the funded status based on the year-end measurements, and differences between the expected Medicare Part D subsidies and amounts received during the year was reviewed for reasonableness and consistency, but no audit was performed.

Accumulated other comprehensive (income)/loss amounts shown in the report are shown prior to adjustment for tax effects. Any tax effects in AOCI should be determined by the Company in consultation with its tax advisors and independent accountants.

Effects of Health Care Legislation

In March 2010, the Patient Protection and Affordable Care Act (PPACA) and Health Care and Education Reconciliation Act (HCERA) were enacted. The key aspects of the Acts affecting American Electric Power's benefit obligation and cost of providing retiree medical benefits are:

- Preventive care benefits covered at 100% beginning in 2011
- Mandatory coverage for adult children until age 26 beginning in 2011
- Loss of the tax free status of the Retiree Drug Subsidy (RDS) beginning in 2013
- Excise ("Cadillac Plan") tax on high-cost plans beginning in 2022
- Elimination of lifetime maximums beginning in 2011

All subsequent measurements for tax purposes reflect the current law.

This valuation reflects our understanding of the relevant provisions of PPACA and HCERA. The IRS and HHS have yet to issue final guidance with respect to many aspects of this law. It is possible that future guidance may conflict with our understanding of these laws based on currently available guidance and could therefore affect the results shown in this report.

Assumptions and methods under the Internal Revenue Code for contribution limit purposes

The actuarial assumptions and methods employed in the development of the contribution limits have been selected by the plan sponsor, with the concurrence of Willis Towers Watson. The Internal Revenue Code requires the use of reasonable assumptions (taking into account the experience of the plan and reasonable expectations) which, in combination, offer the actuary's best estimate of anticipated experience under the plan. We believe that the assumptions used in our valuation are reasonable and appropriate for the purposes for which they have been used.

Assumptions and methods under ASC 715-60

As required by U.S. GAAP, the actuarial assumptions and methods employed in the development of the other postretirement benefit cost and other financial reporting have been selected by the Company. Willis Towers Watson has concurred with these assumptions and methods, except for the expected rate of return on plan assets selected as of January 1, 2019. Evaluation of the expected return assumption was outside the scope of Willis Towers Watson's assignment and would have required substantial additional work that we were not engaged to perform. U.S. GAAP requires that each significant assumption "individually represent the best estimate of a particular future event."

The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated by Willis Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable. Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions.

A summary of the assumptions, methods and sources of data and other information used is provided in Appendix A. Note that any subsequent changes in methods or assumptions for the January 1, 2019 measurement date will change the results shown in this report.

Nature of actuarial calculations

The results shown in this report are estimates based on data that may be imperfect and on assumptions about future events that cannot be predicted with any certainty. The effects of certain plan provisions may be approximated, or determined to be insignificant and therefore not valued. Reasonable efforts were made in preparing this valuation to confirm that items that are significant in the context of the actuarial liabilities or costs are treated appropriately, and are not excluded or included inappropriately. Any rounding (or lack thereof) used for displaying numbers in this report is not intended to imply a degree of precision, which is not a characteristic of actuarial calculations.

If overall future plan experience produces higher benefit payments or lower investment returns than assumed, the relative level of plan costs reported in this valuation will likely increase in future valuations (and vice versa). Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for the measurements (such as the end of an amortization period), and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements.

See Basis for valuation in Section 1 above for a discussion of any material events that have occurred after the valuation date that are not reflected in this valuation.

Limitations on use

This report is provided subject to the terms set out herein and in our Master Consulting Services Agreement dated July 29, 2004 and any accompanying or referenced terms and conditions.

The information contained in this report was prepared for the internal use of the Company and its independent accountants in connection with our actuarial valuation of the other postretirement benefit plan as described in Purposes of Valuation above. It is not intended for and may not be used for other purposes, and we accept no responsibility or liability in this regard. The Company may distribute this actuarial valuation report to the appropriate authorities who have the legal right to require the Company to provide them this report, in which case the Company will use best efforts to notify Willis Towers Watson in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without Willis Towers Watson's prior written consent. Willis Towers Watson accepts no responsibility for any consequences arising from any other party relying on this report or any advice relating to its contents.

Professional Qualifications

The undersigned are members of the Society of Actuaries and meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" relating to other postretirement benefit plans. Our objectivity is not impaired by any relationship between the plan sponsor and our employer, Willis Towers Watson US LLC.

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Director, Retirement
Valuation Actuary

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Director, Retirement
Valuation Actuary

The Pricing Specialist is responsible for developing and/or determining the reasonableness of retiree welfare plan trend and participation assumptions as well as assumed per capita claims costs (including the aging/morbidity assumption, if applicable). The Valuation Actuary is responsible for other aspects of the valuation (e.g., developing and/or reviewing the reasonableness of other valuation assumptions and methods, ensuring that the valuation model reasonably reflects the substantive plan and actual plan operation, preparing demographic data, performing the valuation, implementing the correct accounting or funding calculations, etc.).

Willis Towers Watson US LLC

May 2019

http://natct.internal.towerswatson.com/clients/604598/AEP2019Valuations/Documents/Non-UMWA Report 2019.docx

Section 2: Actuarial exhibits

2.1 Balance sheet asset/(liability)

All monetary amounts shown in U.S. Dollars

Measurement Date			01/01/2019	01/01/2018
A	Development of Balance Sheet Asset/(Liability)[1]			
	1	Accumulated postretirement benefit obligation (APBO)	1,126,652,189	1,251,302,431
	2	Fair value of assets (FVA)	1,510,044,948	1,708,647,946
	3	Net balance sheet asset/(liability)	383,392,759	457,345,515
B	Current and Noncurrent Allocation			
	1	Noncurrent assets	383,392,759	457,345,515
	2	Current liabilities	0	0
	3	Noncurrent liabilities	0	0
	4	Net balance sheet asset/(liability)	383,392,759	457,345,515
C	Accumulated Other Comprehensive (Income)/Loss			
	1	Net transition obligation/(asset)	0	0
	2	Net prior service cost/(credit)	(343,305,273)	(411,931,508)
	3	Net loss/(gain)	410,564,569	287,986,950
	4	Accumulated other comprehensive (income)/loss[2]	67,259,296	(123,944,558)
D	Assumptions and Dates			
	1	Discount rate	4.30%	3.60%
	2	Rate of compensation/salary increase	Rates vary by age from 3.5% to 12.0%	Rates vary by age from 3.5% to 12.0%
	3	Current health care cost trend rate	6.25%	6.50%
	4	Ultimate health care cost trend rate	5.00%	5.00%
	5	Year of ultimate trend rate	2024	2024
	6	Census date	January 1, 2019	January 1, 2018

1 Whether the amounts in this table that differ from those disclosed at year-end must be disclosed in subsequent interim financial statements should be determined.
2 Amount shown is pre-tax and should be adjusted by plan sponsor for tax effects.

2.2 Summary and comparison of postretirement benefit cost and cash flows

All monetary amounts shown in U.S. Dollars

Fiscal Year Ending			12/31/2019	12/31/2018
A	**Total Postretirement Benefit Cost**			
	1	Employer service cost	8,879,155	10,633,477
	2	Interest cost	47,017,232	43,853,542
	3	Expected return on assets	(91,758,415)	(99,907,131)
	4	Subtotal	(35,862,028)	(45,420,112)
	5	Net prior service cost/(credit) amortization	(68,626,236)	(68,626,236)
	6	Net loss/(gain) amortization	21,511,881	9,174,466
	7	Transition obligation/(asset) amortization	0	0
	8	Amortization subtotal	(47,114,355)	(59,451,770)
	9	Net periodic postretirement benefit cost/(income)	(82,976,383)	(104,871,882)
B	**Assumptions**[1]			
	1	Discount rate	4.30%	3.60%
	2	Long-term rate of return on assets	6.25%	6.00%
	3	Rate of compensation/salary increase	Rates vary by age from 3.5% to 12.0%	Rates vary by age from 3.5% to 12.0%
	4	Current health care cost trend rate	6.25%	6.50%
	5	Ultimate health care cost trend rate	5.00%	5.00%
	6	Year ultimate trend rate is expected	2024	2024
C	**Census Date**		January 1, 2019	January 1, 2018
D	**Assets at Beginning of Year**			
	1	Fair market value	1,510,044,948	1,708,647,946
E	**Cash Flow**		**Expected**	**Actual**
	1	Employer contributions	1,027,891[2]	12,803,019[3]
	2	Plan participants' contributions	35,379,994	36,512,975
	3	Benefits paid from plan assets	120,532,198	129,502,976
	4	Expected Medicare retiree drug subsidy on current year benefit payments	(41,751)	(423,805)

[1] These assumptions were used to calculate the Net Postretirement Benefit Cost/ (Income) as of the beginning of the year. Rates are expressed on an annual basis where applicable. For assumptions used for interim measurement periods, if any, refer to Appendix A.

[2] Expected net claims for key employees to be paid directly by the Company in 2019.

[3] Includes $1,151,180 paid directly for key employees and $11,651,839 in employer contributions to trust.

2.3 Detailed results for postretirement welfare cost and funded position

All monetary amounts shown in U.S. Dollars

Detailed results			01/01/2019	01/01/2018
A	**Service Cost**			
	1	Medical	6,812,988	7,950,981
	2	Life insurance	2,066,167	2,682,496
	3	Dental	0	0
	4	Total	8,879,155	10,633,477
B	**Accumulated Postretirement Benefit Obligation [APBO]**			
	1	Medical:		
		a Participants currently receiving benefits	549,649,364	611,768,390
		b Fully eligible active participants	57,101,030	63,283,833
		c Other participants	147,139,121	169,017,768
		d Total	753,889,515	844,069,991
	2	Life insurance:		
		a Participants currently receiving benefits	292,634,491	310,400,515
		b Fully eligible active participants	23,286,051	26,108,505
		c Other participants	45,609,396	57,853,579
		d Total	361,529,938	394,362,599
	3	Dental:		
		a Participants currently receiving benefits	11,032,704	12,660,681
		b Fully eligible active participants	200,032	209,160
		c Other participants	0	0
		d Total	11,232,736	12,869,841
	4	All Benefits:		
		a Participants currently receiving benefits	853,316,559	934,829,586
		b Fully eligible active participants	80,587,113	89,601,498
		c Other participants	192,748,517	226,871,347
		d Total	1,126,652,189	1,251,302,431
C	**Assets**			
	1	Fair value [FV]	1,510,044,948	1,708,647,946
D	**Funded Position**			
	1	Overfunded (underfunded) APBO	383,392,759	457,345,515
	2	APBO funded percentage	134.0%	136.5%
E	**Amounts in Accumulated Other Comprehensive Income**			
	1	Prior service cost (credit)	(343,305,273)	(411,931,508)
	2	Net actuarial loss (gain)	410,564,569	287,986,950
	3	Total	67,259,296	(123,944,558)

Detailed results			01/01/2019	01/01/2018
F	**Effect of Change in Health Care Cost Trend Rate**			
	1	One-percentage-point increase:		
	a	Sum of service cost and interest cost	704,218	717,319
	b	APBO	23,933,611	31,493,641
	2	One-percentage-point decrease:		
	a	Sum of service cost and interest cost	(592,985)	(618,471)
	b	APBO	(21,889,758)	(28,945,831)

2.4 ASC 965 (plan reporting) information

All monetary amounts shown in U.S. Dollars

Summary of Present Value of Benefits		01/01/2019	01/01/2018
A	**Medical (ignoring Retiree Drug Subsidy)**		
1	Current retirees	549,896,747	612,031,189
2	Active participants fully eligible for benefits	57,101,030	63,283,833
3	Other active participants	147,139,121	169,017,768
4	Total	754,136,898	844,332,790
B	**Life Insurance**		
1	Current retirees	292,634,491	310,400,515
2	Active participants fully eligible for benefits	23,286,051	26,108,505
3	Other active participants	45,609,396	57,853,579
4	Total	361,529,938	394,362,599
C	**Dental**		
1	Current retirees	11,032,704	12,660,681
2	Active participants fully eligible for benefits	200,032	209,160
3	Other active participants	0	0
4	Total	11,232,736	12,869,841
D	**Total (ignoring Retiree Drug Subsidy)**		
1	Current retirees	853,563,942	935,092,385
2	Active participants fully eligible for benefits	80,587,113	89,601,498
3	Other active participants	192,748,517	226,871,347
4	Total	1,126,899,572	1,251,565,230

Actuarial assumptions and methods

The key actuarial assumptions used for plan reporting calculations are the same as those used to determine the postretirement welfare cost and are shown in the Actuarial Assumptions and Methods section, except that the Retiree Drug Subsidy (RDS) associated with Medicare Part D is not reflected. For the prior valuation, a discount rate of 3.60% was used. The same plan provisions shown in Appendix B were used to determine the present value of accumulated benefits.

Reconciliation of Present Value of Benefits		Plan Year 2018	Plan Year 2017
A	**Medical (ignoring Retiree Drug Subsidy)**		
1	Benefit obligation, beginning of year	844,332,790	1,023,149,526
2	Service cost	7,950,981	7,997,425
3	Interest cost	29,438,598	40,829,565
4	Participant contributions	29,473,895	32,801,208
5	Actuarial (gain)/loss	(49,446,889)	(156,319,513)
6	Plan amendments	0	0
7	Gross benefits paid	(107,612,477)	(104,125,421)
8	Benefit obligation, end of year	754,136,898	844,332,790
B	**Life Insurance**		
1	Benefit obligation, beginning of year	394,362,599	369,326,815
2	Service cost	2,682,496	2,571,060
3	Interest cost	13,980,016	14,991,995
4	Participant contributions	1,130,820	1,122,184
5	Actuarial (gain)/loss	(35,685,195)	20,078,280
6	Plan amendments	0	0
7	Gross benefits paid	(14,940,798)	(13,727,735)
8	Benefit obligation, end of year	361,529,938	394,362,599
C	**Dental**		
1	Benefit obligation, beginning of year	12,869,841	15,019,735
2	Service cost	0	0
3	Interest cost	443,660	593,453
4	Participant contributions	5,908,260	5,609,188
5	Actuarial (gain)/loss	(1,039,324)	(1,641,716)
6	Plan amendments	0	0
7	Gross benefits paid	(6,949,701)	(6,710,819)
8	Benefit obligation, end of year	11,232,736	12,869,841
D	**Total (ignoring Retiree Drug Subsidy)**		
1	Benefit obligation, beginning of year	1,251,565,230	1,407,496,076
2	Service cost	10,633,477	10,568,485
3	Interest cost	43,862,274	56,415,013
4	Participant contributions	36,512,975	39,532,580
5	Actuarial (gain)/loss	(86,171,408)	(137,882,949)
6	Plan amendments	0	0
7	Gross benefits paid	(129,502,976)	(124,563,975)
8	Benefit obligation, end of year	1,126,899,572	1,251,565,230

2.5 Basic results for employer contributions - VEBAs

All monetary amounts shown in U.S. Dollars

All Postretirement VEBAs				Estimated December 31, 2019	Actual December 31, 2018
A	**Qualified Asset Account Limits [QAAL][1]**			412,000,000	417,657,622
B	**Assets**				
	1	Market value		1,124,000,000	1,098,139,129
	2	Unrecognized investment losses (gains)		0	0
	3	Actuarial value [AV]		1,124,000,000	1,098,139,129
C	**Funded Position**				
	1	Unfunded account limits [QAAL – FV]		(712,000,000)	(680,481,507)
D	**Employer Contributions**				
	1	Maximum deductible available[2]		124,000,000	112,183,040
	2	Qualified additions			
		a	Prior years' carryover	0	0
		b	Current year additions	0	1,569,839
		c	Total deductions available [a + b]	0	1,569,839
	3	Other non-deductible current year additions		0	10,082,000
	4	Total additions [2.c + 3]		0	11,651,839
		a	Life insurance VEBA	0	0
		b	Union medical and dental VEBAs	0	1,569,839
		c	Non-union medical and dental VEBAs	0	10,082,000

[1] Includes the present value of projected benefits for the union retiree medical VEBA.
[2] Includes amounts not contributed to trusts with capacity at year-end.

2.6 VEBA deduction limits

All monetary amounts shown in U.S. Dollars

Retiree Life Insurance			2018	2017
A	**Qualified Asset Account Limit (QAAL)**			
	1	December 31 actuarial accrued liability	213,155,460	205,470,636
	2	Unrecognized liability	0	0
	3	QAAL	213,155,460	205,470,636
B	**Assets**			
	1	Market value as of December 31	100,972,420	123,551,545
	2	Unrecognized investment losses (gains)	0	0
	3	Actuarial value [AV]	100,972,420	123,551,545
C	**Funded position**			
	1	Unfunded account limit [QAAL - AV]	112,183,040	81,919,091
	2	Contributions received in trust, but not yet deducted		
		Through 2011	0	0
		2012	0	0
		2013	0	0
		2014	0	0
		2015	0	0
		2016	0	0
		2017	0	0
		2018	0	0
		Total	0	0
D	**Employer deductions for contributions to VEBAs**			
	1	Maximum deduction available[1] [C.1 + Total of C.2]	112,183,040	81,919,091
	2	Qualified additions		
		a Prior years' carryover	0	0
		b Current year additions	0	0
		c Total deductions available [a + b]	0	0
	3	Other non-deductible current year additions	0	0
	4	Total additions [2.c + 3]	0	0

[1] Includes amounts not contributed.

All monetary amounts shown in U.S. Dollars

Union Medical and Dental			2018	2017
A	**Qualified Asset Account Limit (QAAL)**			
	1	December 31 present value of projected benefits	155,557,172	165,029,869
	2	Unrecognized liability	0	0
	3	QAAL	155,557,172	165,029,869
B	**Assets**			
	1	Market value as of December 31	452,818,363	503,539,811
	2	Unrecognized investment losses (gains)	0	0
	3	Actuarial value [AV]	452,818,363	503,539,811
C	**Funded position**			
	1	Unfunded account limit [QAAL - AV]	(297,261,191)	(338,509,942)
	2	Contributions received in trust, but not yet deducted		
		Through 2011	0	0
		2012	0	0
		2013	0	0
		2014	0	0
		2015	0	0
		2016	0	0
		2017	0	0
		2018	1,569,839	0
		Total	1,569,839	0
D	**Employer deductions for contributions to VEBAs**			
	1	Maximum deduction available[1] [greater of C.1+C.2 and 0]	0	0
	2	Qualified additions		
		a Prior years' carryover	0	0
		b Current year additions	1,569,839	0
		c Total deductions available [a + b]	1,569,839	0
	3	Other non-deductible current year additions	0	0
	4	Total additions [2.c + 3]	1,569,839	0

[1] Includes amounts not contributed.

All monetary amounts shown in U.S. Dollars

Non-Union Retiree Medical and Dental			2018	2017
A	**Qualified Asset Account Limit (QAAL)**			
	1	December 31 actuarial accrued liability	48,944,990	74,123,094
	2	Unrecognized liability	0	0
	3	QAAL	48,944,990	74,123,094
B	**Assets**			
	1	Market value as of December 31	544,348,347	609,024,241
	2	Unrecognized investment losses (gains)	0	0
	3	Actuarial value [AV]	544,348,347	609,024,241
C	**Funded position**			
	1	Unfunded account limit [QAAL - AV]	(495,403,357)	(534,901,147)
	2	Contributions received in trust, but not yet deducted		
		Through 2011	217,609,204	217,609,204
		2012	68,292,490	68,292,490
		2013	0	0
		2014	0	0
		2015	0	0
		2016	0	0
		2017	0	0
		2018	10,082,000	0
		Total	295,983,694	285,901,694
D	**Employer deductions for contributions to VEBAs**			
	1	Maximum deduction available[1] [greater of C.1+C.2 and 0]	0	0
	2	Qualified additions		
		a Prior years' carryover	0	0
		b Current year additions	0	0
		c Total deductions available [a + b]	0	0
	3	Other non-deductible current year additions	10,082,000	0
	4	Total additions [2.c + 3]	10,082,000	0

[1] Includes amounts not contributed.

2.7 Cumulative nondeductible contributions

All monetary amounts shown in U.S. Dollars

Non-Union Retiree Medical and Dental VEBAs

	Contributions Made by December 31, 2018, but Not Deducted as of December 31, 2017	Deductible in 2018	Remaining Nondeductible Contributions as of December 31, 2018
Through 2007	$0	$0	$0
2008	0	0	0
2009	105,440,603	0	105,440,603
2010	73,467,453	0	73,467,453
2011	38,701,148	0	38,701,148
2012	68,292,490	0	68,292,490
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	0	0	0
2018	10,082,000	0	10,082,000
Total	$295,983,694	$0	$295,983,694

Retiree Life Insurance VEBAs

	Contributions Made by December 31, 2018, but Not Deducted as of December 31, 2017	Deductible in 2018	Remaining Nondeductible Contributions as of December 31, 2018
Through 2007	$0	$0	$0
2008	0	0	0
2009	0	0	0
2010	0	0	0
2011	0	0	0
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	0	0	0
2018	0	0	0
Total	$0	$0	$0

2.8 Development of maximum deductible contribution – 401(h)

All monetary amounts shown in U.S. Dollars

Plan Year Beginning			January 1, 2019
A	**Development of Maximum Deductible Contribution**		
	1	Present value of projected benefits	480,540,761
	2	Fair value of assets	411,905,818
	3	Unfunded surplus [1 - 2]	68,634,943
	4	Average present value of future service	8
	5	Preliminary maximum deductible contribution	
		a 10% of unfunded surplus [10% x A.3]	6,863,494
		b Aggregate normal cost [A.3 / A.4]	8,243,190
		c Greater of A.5.a, A.5.b and 0	8,243,190
	6	Preliminary maximum 2018 contribution [1.0625 x A.5.c]	8,758,390
	7	Subordination test (development shown below)	112,255,542
	8	Maximum deductible contribution ignoring expenses [lesser of A.6 and A.7]	8,758,390
	9	Total trust expenses paid from 401(h) account during 2018	544,482
	10	Maximum deductible contribution including expenses [A.8 + A.9]	9,302,872

B Subordination Test

Year-by-year minimum of actual pension plan contribution and pension plan normal cost with interest

	Year	West Plan	East Plan	Combined Plan
	1992	9,766,169	N/A	N/A
	1993	22,392,743	N/A	N/A
	1994	21,208,326	N/A	N/A
	1995	21,683,436	N/A	N/A
	1996	20,271,648	N/A	N/A
	1997 - 2002	0	N/A	N/A
	2003	19,197,145	39,165,054 [1]	N/A
	2004	18,614,338	56,614,811	N/A
	2005	16,222,550	55,872,817	N/A
	2006	0	0	N/A
	2007	0	0	N/A
	2008	0	0	0
	2009	N/A	N/A	100,540,448
	2010	N/A	N/A	125,586,018
	2011	N/A	N/A	62,751,522
	2012	N/A	N/A	0
	2013	N/A	N/A	65,249,050
	2014	N/A	N/A	0
	2015	N/A	N/A	81,674,776
	2016	N/A	N/A	84,696,307
	2017	N/A	N/A	93,590,761
	2018	N/A	N/A	0
Cumulative pension contributions not for past service		149,356,355	151,652,682	915,097,920
		x 1/3	x 1/3	x 1/3
		49,785,452	50,550,894	305,032,640
Cumulative 401(h) contributions before plan year 2019		49,785,452	50,550,894	192,777,098
Subordination limit		0	0	112,255,542

[1] Includes only portion of normal cost and contributions after 401(h) account adoption for indicated year

2.9 Expected benefit disbursements, administrative expenses, and participant contributions

All monetary amounts shown in U.S. Dollars

			January 1, 2019	January 1, 2018
A	**Medical and Dental**			
	1	Gross disbursements	101,184,040	105,164,950
	2	Participant contributions	(34,219,174)	(34,357,139)
	3	Net disbursements	66,964,866	70,807,811
B	**Life Insurance**			
	1	Gross disbursements	19,348,158	18,826,762
	2	Participant contributions	(1,160,820)	(1,248,710)
	3	Net disbursements	18,187,338	17,578,052
C	**Gross without RDS**			
	1	Gross disbursements	120,532,198	123,991,712
	2	Participant contributions	(35,379,994)	(35,605,849)
	3	Net disbursements	85,152,204	88,385,863
D	**RDS**[1]			
	1	Gross disbursements	(41,751)	(40,836)
	2	Participant contributions	0	0
	3	Net disbursements	(41,751)	(40,836)
E	**Net with RDS**			
	1	Gross disbursements	120,490,447	123,950,876
	2	Participant contributions	(35,379,994)	(35,605,849)
	3	Net disbursements	85,110,453	88,345,027

[1] 2018-2019 RDS payments expected to be received in 2020-2021.

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Section 3: Data exhibits

3.1 Plan participant data

All monetary amounts shown in U.S. Dollars

Census Date	01/01/2019	01/01/2018
A Participating Employees		
1 Number		
a Fully eligible	1,979	1,959
b Other	10,460	11,582
c Total participating employees	12,439	13,541
2 Average age (years)	50.70	50.07
3 Average credited service (years)	21.51	20.83
4 Average future working life (years)		
a to full retirement age	12.070	12.766
b to full eligibility age	10.976	11.584
B Retirees and Surviving Spouses		
1 Retirees and Surviving Spouses		
a Number under 65	3,143	3,183
b Number 65 and older	14,377	14,146
c Total[1]	17,520	17,329
d Average age (years)	73.79	73.65
e. Age Distribution at January 1, 2019		

Age	Number
Under 55	113
55-59	659
60-64	2,371
65-69	3,425
70-74	3,835
75-79	2,654
80-84	1,959
85 and over	2,504

	01/01/2019	01/01/2018
C Dependents		
1 Number	8,195	8,207
2 Average Age	69.46	69.26
3 Age Distribution at January 1, 2019		

Age	Number
Under 55	238
55-59	664
60-64	1,621
65-69	1,942
70-74	1,779
75-79	1,017
80-84	622
85 and over	312

[1] Includes 327 disabled participants in 2019 and 356 disabled participants in 2018. These participants were not included in the calculation of the other data statistics in this section.

3.2 Age and service distribution of participating employees

All monetary amounts shown in U.S. Dollars

Attained Age	Attained Years of Credited Service and Number								
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
Under 25	0	7	0	0	0	0	0	0	7
25-29	0	220	15	0	0	0	0	0	235
30-34	0	425	376	7	0	0	0	0	808
35-39	0	375	748	188	5	0	0	0	1,316
40-44	0	274	645	349	120	2	0	0	1,390
45-49	0	222	507	349	279	141	6	0	1,504
50-54	0	155	355	289	259	473	378	27	1.936
55-59	0	118	275	212	243	345	785	793	2,771
60-64	0	74	136	120	114	195	343	1,033	2,015
65-69	0	24	36	35	16	32	45	208	396
70 & over	0	6	10	12	1	5	6	21	61
Total	0	1,900	3,103	1,561	1,037	1,193	1,563	2,082	12,439

Average:	Age	50.70	Number of Participants:	Fully eligible	1,979	Males	10,169
	Service	21.51		Other	10,460	Females	2,270

Census data as of January 1, 2019

Appendix A: Statement of actuarial assumptions, methods and data sources

Actuarial Assumptions and Methods — Postretirement Welfare Cost and Funding/Tax Deductions Based on Plan Year beginning January 1, 2019

Economic Assumptions

	Postretirement Welfare Cost	Plan Reporting	Employer Contributions
Discount rate[1]	4.30%	4.30%	N/A
Rates of return on assets, pre-tax: [1]			
■ 401(h) accounts	N/A	N/A	6.25%
■ Life insurance	N/A	N/A	8.00%
■ Union medical/dental	N/A	N/A	6.50%
■ Non-union medical/dental	N/A	N/A	5.50%
■ Aggregate	6.25%	N/A	N/A

Annual rates of compensation increase

■ Representative rates

Age	Rate
< 26	12.00%
26 – 30	8.50
31 – 35	7.00
36 – 40	6.00
41 – 45	5.00
46 – 50	4.00
> 50	3.50

■ Weighted average: 4.85%

■ Medical cost trend rate[2]

2019	6.25%
2020	6.00%
2021	5.75%
2022	5.50%
2023	5.25%
2024+	5.00%

Dental cost trend rate[2]: 2019+ 3.00%

Medicare covered charges trend rate: Same as medical cost trend

Retiree contribution trend rate: Same as medical cost trend. For capped retirees, future retiree contributions are developed based on expected gross costs compared to the applicable cap.

[1] Only discount rate and asset return assumptions vary between the reporting standards. All other assumptions are consistent throughout.

[2] 0% trend assumed for non-union VEBA account limit.

Participation Assumptions

Inclusion Date	The valuation date coincident with or next following the date on which the employee is hired.	
New or rehired employees	It was assumed there will be no new or rehired employees.	
	Current Retirees	*Future Retirees*
Participation	Based on valuation census data.	85% in 2019 with the rate decreasing by 5% annually to an ultimate rate of 75% in 2021.
Persistency	Non-capped retirees will drop coverage at a rate of 2% annually and Capped retirees will drop coverage at a rate of 4% annually.	Same as current retirees
Percentage of retiree with spousal coverage	Based on valuation census data.	72.6% for males, 52.6% for females.
Spouse age	Based on valuation census data.	Wife three years younger than husband.

Demographic Assumptions

Mortality

Base mortality rates are derived from the RP-2014 mortality table with improvements factored to 2006 and no collar adjustments.

Mortality improvements are projected forward on a generational basis using an adjusted version of Scale MP-2018. The adjustment reflects 75% of the long-term improvement rates.

Disabled mortality (through age 65)

Rates vary by age and sex.

Representative rates:

Age	Males	Females
30	2.60%	2.60%
40	2.60	2.60
50	3.10	3.10
60	6.20	6.20

Disability

Rates apply to employees not eligible to retire and vary by age and sex.

Representative rates:

Percentage becoming disabled during the year		
Age	Males	Females
20	0.060%	0.090%
30	0.060	0.090
40	0.074	0.110
50	0.178	0.270
60	0.690	1.035

Termination (not due to disability or retirement)

Rates apply to employees not eligible to retire and vary by age and service.

Representative rates:

Percentage leaving during the year		
Attained Age	Less than five years of service	Five or more years of service
< 25	8.00%	7.30%
25 – 29	8.00%	5.00%
30 – 34	8.00%	4.20%
35 – 39	8.00%	3.40%
40 – 44	8.00%	2.50%
45 – 49	8.00%	1.90%
50 +	8.00%	1.70%

Retirement

Rates vary by age.

Representative rates:

Percentage retiring during the year	
Age	Rate
55 – 57	1.00%
58 – 60	6.00%
61 – 63	16.00%
64 – 69	13.00%
70 +	100.00%

2019 Per Capita Claims Costs

Medical

- Prior to age 65[1]

Age	HSA Basic	HSA Plus	HRA
< 29	3,392	3,740	4,102
30 – 34	4,150	4,575	5,018
35 – 39	4,388	4,838	5,307
40 – 44	4,799	5,292	5,804
45 – 49	5,538	6,106	6,697
50 – 54	6,800	7,497	8,223
55 – 59	8,165	9,002	9,874
60 – 64	10,104	11,140	12,219
Average	9,427	10,394	11,400

- Age 65 and after[2]

Age	Medicare Select	Medicare Standard	CSP
65 – 69	3,574	2,689	1,942
70 – 74	3,955	2,953	2,150
75 – 79	4,224	3,110	2,314
80 – 84	4,299	3,131	2,384
85 – 89	4,180	2,995	2,380
90 – 94	3,773	2,659	2,229
≥ 95	3,266	2,239	2,086
Average	3,985	2,868	2,301

- Medicare Part D - RDS

Age	Medicare Advantage	CSP
65 – 69	N/A	(274)
70 – 74	N/A	(298)
75 – 79	N/A	(307)
80 – 84	N/A	(304)
85 – 89	N/A	(284)
90 – 94	N/A	(245)
≥ 95	N/A	(197)
Average	N/A	(273)

- Medicare Part D - Employer Group Waiver Plan (EGWP) for Medicare Advantage plans

Age	CMS Direct Payments & Catastrophic Reinsurance	Manufacturer's Coverage Gap Discount
65 – 69	(445)	(422)
70 – 74	(484)	(458)
75 – 79	(500)	(473)
80 – 84	(495)	(468)
85 – 89	(462)	(437)
90 – 94	(399)	(378)
≥ 95	(320)	(303)
Average	(470)	(445)

Dental 363

1 Pre-65 per capita claims costs do not include the 5% adjustment for potential dependent children covered under the plan.
2 Medicare Select and Medicare Standard claims costs include estimated amount of Health Insurance Fee (HIF) suspended for 2019 (assumed to be 105% of 2018 HIF)

Administrative expenses	Included in claims costs shown above.

Additional Assumptions

Excise tax	To determine impact of the excise tax in 2022 and beyond on the non-UMWA postretirement plan, we projected future gross plan costs using the valuation trend assumption and compared these on a year-by-year basis to the excise tax thresholds beginning in 2019 and projected to future years using chained CPI (3.0%). The expected cost of each non-UMWA benefit combination, which were blended pre-65/post-65 based on headcounts, exceeded these thresholds at various points in time, but no earlier than 2040.
Timing of benefit payments	Benefit payments are assumed to be made uniformly throughout the year and on average at mid-year.

Methods

Census date	January 1, 2019
Measurement date	January 1, 2019
Service cost and APBO	Costs are determined using the Projected Unit Credit Cost Method. The annual service cost is equal to the present value of the portion of the projected benefit attributable to service during the upcoming year, and the Accumulated Postretirement Benefit Obligation (APBO) is equal to the present value of the portion of the projected benefit attributable to service before the valuation date. Service from hire date through the expected full eligibility date is counted in allocating costs.
Market-related value of assets	The fair value of assets on the measurement date.

Amortization of unamortized amounts:

Prior service cost (credit)	Increase in APBO resulting from a plan amendment is amortized on a straight-line basis over the average expected remaining service of active participants expected to benefit under the plan. Amortization of net prior service cost/(credit) resulting from a plan change is included as a component of Net Periodic Postretirement Benefit Cost/(Income) in the year first recognized and every year thereafter until such time as it is fully amortized. The annual amortization payment is determined in the first year as the increase in APBO due to the plan change divided by the average remaining service period to full eligibility for participating employees expected to receive benefits under the Plan. Reductions in APBO first reduce any unrecognized prior service cost; any remaining amount is amortized on a straight-line basis as described above.
Net loss (gain)	Amortization of the net gain or loss resulting from experience different from that assumed and from changes in assumptions (excluding asset gains and losses not yet reflected in market-related value) is included as a component of Net Periodic Postretirement Benefit Cost/(Income) for a year. Net loss (gain) in excess of 10% of the greater of APBO or the market-related value of assets is amortized on a straight-line basis

over the average expected remaining service of active participants expected to benefit under the plan.

ASC 965 (formerly SOP 92-6)

- Present value of benefits — Present value of benefits is equal to the present value of the portion of the projected benefit attributable to service before the valuation date. Service from hire date through the expected full eligibility date is counted in allocating costs.
- Funding policy — AEP's funding policy is to contribute an amount equal to the postretirement welfare cost plus retiree drug subsidy payments received (the sum of which can be no less than zero). AEP maximizes its contribution to the 401(h) account and contributes the remainder to the VEBAs.
- Benefits Not Valued — All benefits described in the Plan Provisions section of this report were valued. Life insurance benefits in excess of $50,000 and health care benefits for key employees were not included in determining the maximum deductible contribution. Willis Towers Watson has reviewed the plan provisions with AEP and based on that review is not aware of any significant benefits required to be valued that were not included.
- Change in Assumptions and Methods Since Prior Valuation
  - Per capita claims costs were updated to reflect 2017 retiree claims experience.
  - The discount rate for APBO was changed from 3.60% to 4.30%.
  - The expected return on assets assumption was increased by 25 basis points to 6.25%
  - The mortality improvement projection was updated to the MP-2018 scale, adjusted to reflect 75% of the long-term improvement rates.

Sources of Data and Other Information

American Electric Power (AEP), through Mercer, its third party administrator, furnished active and inactive participant data as of January 1, 2019. AEP also provided the accrued postretirement benefit costs and assets information as of December 31, 2018. Health plan vendors furnished the claims cost data. AEP supplied 2017 prescription drug rebates and 2019 estimated EGWP payments. Data were reviewed for reasonableness and consistency, but no audit was performed. Based on discussions with the plan sponsor, assumptions or estimates were made when data were not available, and the data were adjusted to reflect any significant events that occurred between the date the data were collected and the measurement date. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

Assumptions Rationale - Significant Economic Assumptions – Funding and Accounting

Discount rate	As required by U.S. GAAP, the discount rate was chosen by the plan sponsor based on market information on the measurement date.
Interest rate (funding)	The interest rate is the expected rate of return on plan assets, and represents an estimate of future experience for trust asset returns, reflecting the plan's current asset allocation, and current and expected future market conditions.

Expected long-term return on plan assets	We understand that the expected return on assets assumption reflects the plan sponsor's estimate of future experience for trust asset returns, reflecting the plan's current asset allocation and any expected changes during the current plan year, current market conditions and the plan sponsor's expectations for future market conditions.
Rates of increase in:	
■ Inflation	Assumptions were selected by the plan sponsor and represent a best estimate of future experience, based on a combination of market conditions at the measurement date and future expectations consistent with other economic assumptions used. Differences between expectations of chained and unchained CPI were deemed immaterial.
■ Plan administrative expenses	Administrative expenses are included in per capita claims costs and thus the medical plan trend rate is applied to these expenses.
■ Claims cost trend rates	Assumed increases were chosen by the plan sponsor and, as required by U.S. GAAP, they represent an estimate of future experience, informed by an analysis of recent plan experience, leading to select and ultimate assumed trend rates and reflecting the expected near-term effect of recently enacted plan changes. In setting near term trend rates, other pertinent statistics were considered, including surveys on general medical cost increases. In setting the ultimate trend rate, considerations included assumed GDP growth consistent with the assumed future economic conditions inherent in other economic assumptions chosen by the client at the measurement date. After examining historical variability in trend rates, we believe that the selected assumptions do not significantly conflict with what would be reasonable based on a combination of market conditions at the measurement date and future expectations consistent with other economic assumptions used, other than the discount rate. For the medical VEBA funding limit of the non-bargained group, no future increases in medical costs have been assumed, in accordance with U.S. tax law.
Participant contribution trend rates	In accordance with the substantive plan communicated to participants, participant contributions for non-capped participants are intended to remain a fixed percentage of total plan costs, and thus the trend rates, and the description of the derivation of the trend rates, are the same as for claims costs as shown above.
Basis for Per Capita Claims Cost Assumptions	
■ Pre-65 retiree medical rates	Anthem, ESI and Magellan supplied data on retiree medical claims incurred in 2017 and paid through March 2018. AEP reported prescription drug rebates they received for 2017. Claim experience rates were calculated for medical plans by normalizing claims experience for benefit differences and combining, then dividing combined incurred claims, net of prescription rebates by covered lives and trending forward two years to 2019. Adjustments for minor plan design and network efficiency changes were also made. Finally, administrative expense rates were added to claims cost

rates. Claims cost models were developed by age-grading these claims rates over standard Willis Towers Watson morbidity curves for both medical and prescription drugs to develop the quinquennial claims cost models.

- Post-65 retiree medical rates

2019 monthly claim rates were calculated separately for MOB, COB and CSP Medicare-eligible plans by dividing 2017 incurred claims (Rx only, except for CSP) paid through March 2018 by covered lives and trending forward two years to 2019. Prescription drug claim rates were then multiplied by pricing change factors representing the effect of any pricing and other program changes for 2018 and 2019. Next, 2019 premium rates for new Medicare Advantage plans were added. Finally, administrative expense rates were added to claims cost rates, along with an estimated cost of the suspended 2019 Health Insurance Fee (HIF) of 105% of the 2018 HIF. The suspended HIF was included to provide a basis for projecting post-2019 claims costs using the trend assumption. (Aggregate amounts attributable to the suspended HIF for 2019 were manually subtracted from valuation results.) Claims cost models were developed separately for medical and prescription drug by age-grading these rates over standard Willis Towers Watson morbidity curves for medical and prescription drugs to develop quinquennial age-banded claims cost models.

- Dental rates

Aetna supplied data on dental claims incurred in 2017 and paid through March 2018. Combined claims experience for all active and retired employees was analyzed to derive the 2017 dental claim rates. The single coverage rate was trended to 2019 and administrative costs were added to derive the per capita claims cost assumptions.

Medicare Part D offsets

- RDS

We calibrated our modelling tool to reflect the 2019 cost of the current prescription drug plans for AEP's CSP retirees. The tool employs a continuance table of annual retiree drug utilization levels, developed from analyzing the experience of many large companies, reflecting 1.8 million Medicare-eligible members' experience from 2016.

After the plan-specific benefit provisions have been calibrated to current costs, the Modeler trends costs forward to 2019 at 7% per year. Actuarial equivalence was determined using the following two-prong approach outlined in the regulations for Medicare Part D:

- *Gross Value Test* – The Modeler calculates the value of standard Medicare Part D coverage and compares it to AEP's plan costs. AEP's plans passed this test by being richer than the projected value of standard Medicare part D coverage for these groups.
- *Net Value Test* – The net value prong of the test compares the value of Standard Part D coverage in 2019 minus the greater of $398.28 per year (the national average Part D premium) and 25.5% of the gross value of Part D to the projected 2019 value of AEP coverage minus the average projected 2019 retiree contribution rate. For this purpose, retiree contributions were assumed to apply pro rata between the value of medical benefits and prescription drug benefits.

The tool calculates the average expected value of the employer subsidy in 2019, using the continuance table calibrated to AEP's CSP plan costs. This produced a 2019 per person employer subsidy of $273 for CSP, which was then converted to rates that varied by participant age band using Willis Towers Watson's prescription drug morbidity factors.

- EGWP — Estimated plan cost offsets associated with the EGWP arrangement were provided by Express Scrips for direct payments, coverage gap discounts and reinsurance payments. These projections reflected legislative changes that closed the coverage gap for brand drugs in 2019, including the increase in coverage gap discount percentage to 70%. These amounts were converted to rates varying by quinquennial age band using Willis Towers Watson's standard prescription drug morbidity factors.

Assumptions Rationale - Significant Demographic Assumptions

Healthy Mortality	Assumptions were selected by the plan sponsor and, as required by U.S. GAAP, represent a best estimate of future experience.
Disabled Mortality	Assumptions were selected by the plan sponsor and, as required by U.S. GAAP, represent a best estimate of future experience.
Termination	Termination rates are based on a recent demographic study and plan sponsor expectations for the future with periodic monitoring of observed gains and losses caused by termination patterns different than assumed.
Disability	Disability rates are based on plan sponsor expectations for the future with periodic monitoring of observed gains and losses caused by disability patterns different than assumed.
Retirement	Retirement rates are based on a recent demographic study and plan sponsor expectations for the future with periodic monitoring of observed gains and losses caused by retirement patterns different than assumed.
Participation	
▪ Participants/Spouses	The assumed coverage rates for participants and spouses reflect historical experience as well as anticipated future reductions in rates due to expected rates of increase in participant contributions and availably of coverage through public exchanges.
▪ Covered dependents	The assumed dependent coverage is based on the dependent coverage observed among recent retirees and general population statistics on the marital status of individuals of retirement age.
▪ Covered Spouse age	The assumed age difference for spouses is based on the age difference observed among recent retirees and general population statistics of the age difference for married individuals of retirement age.

Source of Prescribed Methods

Funding methods	The methods used for determining maximum deductible contributions to the 401(h) account and VEBA are chosen from acceptable methods prescribed by law.

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Appendix B: Summary of principal other postretirement benefit plan provisions

Health Care Benefits	
Eligibility	Participants are eligible upon retirement after age 55 with ten years of service or upon attaining age 55 with ten years of service after becoming permanently disabled. If involuntary termination, then eligible after age 50 with ten years of service. Employees hired on or after January 1, 2014 are not eligible to participate in the plan.
Surviving spouse	After the death of a retiree or active employee eligible to retire, surviving spouses are eligible until death or remarriage. Surviving children are also eligible, subject to the limiting age provision outlined above.
Dependent	Eligible dependents are spouse, unmarried children under age 19 (age 25 if a full-time student) and unmarried disabled children of any age.
Benefits – Post-65	The AEP Post-65 Medical Plan provides broad medical coverage through two Medicare Advantage plans with $2,000 annual out-of-pocket maximums. Key differences between the two options offered to retirees are:

	Medicare Select	Medicare Standard
Deductible	$0	$200
Coinsurance	5%	20%
In-patient copay	$250 per stay	$200 per day (1-5)

Prescription drug benefits are provided under a separate design with the following copayments:

	Generic	Brand Name Formulary	Brand Name Nonformulary
30-day retail	$10 copay	20% $20 minimum $100 maximum	35% $35 minimum $200 maximum
90-day retail	$20 copay	20% $50 minimum $200 maximum	35% $90 minimum $300 maximum

Prescription drug benefits are also subject to a $50 deductible and a $1,000 out-of-pocket maximum per person.

Deductibles and out-of-pocket maximums are assumed to increase over time at approximately the same rate as benefit costs.

Benefits – Pre-65

Pre-65 retirees can elect coverage under the following plan options:

	HRA	HSA Plus	HSA Basic
Embedded Individual Amounts	None	Out-of-Pocket Maximum only	Deductible & Out-of-Pocket Maximum
Deductible ■ Individual ■ Two Person ■ Family	 $1,500 $2,250 $3,000	 $2,000 $3,000 $4,000	 $2,700 $5,400 $8,100
AEP Account Seed ■ Single ■ Two Person ■ Family	 $1,000 $1,500 $2,000	 $500 $750 $1,000	 $0 $0 $0
Coinsurance	85%	85%	90%
Out-of-Pocket Maximum ■ Individual ■ Two Person ■ Family	 $4,000 $6,000 $8,000	 $4,000 $6,000 $8,000	 $4,000 $8,000 $12,000

Deductibles, account seeds and out-of-pocket maximums are assumed to increase over time at approximately the same rate as benefit costs.

Postretirement contributions

Participant contributions are determined as a percentage of plan costs and vary by points (age at retirement plus service) as follows:

Points	*Retiree Cost*
65-69	46%
70-74	42
75-79	36
80-84	32
85-89	26
90-94	22
95+	20
Grandfathered	20

For participants retiring on or after January 1, 2013, AEP's subsidy is capped at $11,500 and $3,800 times employer cost sharing percentage for pre-65 and post-65 participants, respectively.

For East participants who retired prior to January 1, 1989, and West participants who retired prior to January 1, 1993, no contributions are required.

For East participants who retired on or after January 1, 1989, and West participants who retired on or after January 1, 1993, the 20% "Grandfathered" contributions are in effect if they retired by December 31, 2000, or attained age 50 and had ten or more years of service with the company on that date. The percentages described above are applied to plan costs that differ from the per capita claims costs assumed in the valuation as follows:

The Medicare status of dependents is not used to determine whether "pre-65" or "post-65" rates apply. The pre-65 plan rates used to calculate participant contributions are a blend of pre-65 retiree costs and active employee costs for those participants retired prior to January 1, 2013, only.

For purposes of determining retiree contribution rates, AEP excludes the value of the government's monthly direct payment amount and its catastrophic reinsurance payments from offsetting the plan cost to which the contribution percentages are applied.

Disabled employee contributions

Disabled employees are offered coverage for the same rates as active employees while an employee remains disabled and is receiving LTD benefits.

If an employee retires while disabled and became disabled before January 1, 2001, a waiver of premium provision continues for life as long as the retirement commenced on or before September 1, 2013. If an employee retires while disabled and became disabled after January 1, 2001, the employee will be subject to the same contribution schedule as normal retirees, based on age and service points earned prior to LTD commencement.

Those participants retiring after January 1, 2013, pay a percentage of true pre-65 retiree costs.

Life Insurance Benefits

Grandfathered participants

Participants over age 50 with ten years of service as of December 31, 2000.

Grandfathered benefits

Grandfathered participants have the option of keeping current coverage. Active employee coverage for grandfathered East participants is one times final base pay at no cost with the option to buy up to two times base pay. The entire amount of coverage (basic plus supplemental) in force prior to retirement can be carried into retirement subject to reduction beginning at age 66. Current coverage for grandfathered West participants is one and one-half times final base pay prior to age 60, one times final base pay from age 60 to 64 and one-half times final base pay after age 65.

Life Insurance Benefit Reduction Table for Grandfathered East Participants

Years of Coverage	*Age 66*	*Age 67*	*Age 68*	*Age 69*	*Age 70 or Over*
10 – 11	65%	55%	45%	35%	25%
11 – 12	70	60	50	40	30
12 – 13	75	65	55	45	35
13 – 14	80	70	60	50	40
14 – 15	85	75	65	55	45
15 or more	90	80	70	60	50

Grandfathered contributions

Grandfathered East retirees must contribute $0.60/$1,000 of coverage (basic + supplemental) per month. West retirees are not required to contribute to the cost of coverage.

Nongrandfathered benefits

$30,000 for those hired before January 1, 2011. No benefit for those hired on or after January 1, 2011.

Dental Benefits

Eligibility	Participants, including retirees and surviving dependents, are eligible upon retirement after age 55 with ten years of service. There is a one-time election and if coverage terminates there is no opportunity to reenroll. Employees hired on or after January 1, 2014 are not eligible to participate in the plan.
Benefits	The AEP Dental Plan provides dental coverage with a deductible of $50 single/$150 family, 100% coinsurance for preventive care, 80% coinsurance for basic restorative care, 50% coinsurance for major restorative care and 50% coinsurance for orthodontia (for children under age 19). The plan has an annual maximum benefit of $1,750 per person. Most retirees pay the full cost of dental coverage if they enroll. CSW employees who retire before January 1, 1993, contribute nothing to enroll for dental coverage. Former CSW employees retiring after January 1, 1993, who were either retired or had attained age 50 with ten years of service as of January 1, 2001, pay 40%.

Changes in Benefits Valued Since Prior Year

None.

Overview of Benefits Provided by Funding Vehicles

Funding vehicle	**Provides for**
Non-union postretirement medical/dental VEBAs	9.5% of retiree medical benefits and 100% of dental benefits to non-union retirees.
Union postretirement medical/dental VEBAs	100% of medical/dental benefits to union retirees.
Postretirement life insurance VEBA	Life insurance benefits for all retirees.
401(h) account	90.5% of retiree medical benefits for non-union retirees.

Appendix C: Results by business unit

AMERICAN ELECTRIC POWER
NON-UMWA POSTRETIREMENT WELFARE PLAN
SUMMARY OF PLAN PARTICIPANTS FOR THE 2019 VALUATION

	Nonretired Participants	Retired Participants				
Location	Active	Retiree	Dependent Spouse	Surviving Spouse	Disabled	Total
140 Appalachian Power Co. - Distribution	814	1,042	649	341	50	2,082
215 Appalachian Power Co. - Generation	595	976	644	221	28	1,869
150 Appalachian Power Co. - Transmission	0	135	104	14	5	258
Appalachian Power Co. - FERC	**1,409**	**2,153**	**1,397**	**576**	**83**	**4,209**
225 Cedar Coal Co	0	4	2	11	0	17
Appalachian Power Co. - SEC	**1,409**	**2,157**	**1,399**	**587**	**83**	**4,226**
211 AEP Texas Central Company - Distribution	752	807	468	273	21	1,569
147 AEP Texas Central Company - Generation	0	0	0	0	0	0
169 AEP Texas Central Company - Transmission	112	75	40	30	0	145
AEP Texas Central Co.	**864**	**882**	**508**	**303**	**21**	**1,714**
119 AEP Texas North Company - Distribution	197	238	131	59	6	434
166 AEP Texas North Company - Generation	0	91	45	32	0	168
192 AEP Texas North Company - Transmission	55	33	16	10	0	59
AEP Texas North Co.	**252**	**362**	**192**	**101**	**6**	**661**
AEP Texas	**1,116**	**1,244**	**700**	**404**	**27**	**2,375**
170 Indiana Michigan Power Co. - Distribution	425	596	306	222	4	1,128
132 Indiana Michigan Power Co. - Generation	180	344	228	78	4	654
190 Indiana Michigan Power Co. - Nuclear	845	484	289	84	5	862
120 Indiana Michigan Power Co. - Transmission	85	129	83	20	2	234
280 Ind Mich River Transp Lakin	164	121	50	34	15	220
Indiana Michigan Power Co. - SEC	**1,699**	**1,674**	**956**	**438**	**30**	**3,098**
110 Kentucky Power Co. - Distribution	189	188	103	42	12	345
117 Kentucky Power Co. - Generation	32	143	97	33	13	286
180 Kentucky Power Co. - Transmission	0	16	10	0	0	26
600 Kentucky Power Co. - Kammer Actives	0	0	0	0	0	0
701 Kentucky Power Co. - Mitchell Actives	189	0	0	0	0	0
702 Kentucky Power Co. - Mitchell Inactives	0	150	105	19	0	274
Kentucky Power Co.	**410**	**497**	**315**	**94**	**25**	**931**
250 Ohio Power Co. - Distribution	1,187	1,550	885	460	34	2,929
160 Ohio Power Co. - Transmission	1	191	128	62	2	383
Ohio Power Co.	**1,188**	**1,741**	**1,013**	**522**	**36**	**3,312**
167 Public Service Co. of Oklahoma - Distribution	499	509	303	159	9	980
198 Public Service Co. of Oklahoma - Generation	290	208	125	55	4	392
114 Public Service Co. of Oklahoma - Transmission	65	57	38	17	0	112
Public Service Co. of Oklahoma	**854**	**774**	**466**	**231**	**13**	**1,484**
159 Southwestern Electric Power Co. - Distribution	421	324	185	82	8	599
168 Southwestern Electric Power Co. - Generation	495	285	174	85	9	553
161 Southwestern Electric Power Co. - Texas - Distribution	164	174	110	41	8	333
111 Southwestern Electric Power Co. - Texas - Transmission	0	0	0	0	0	0
194 Southwestern Electric Power Co. - Transmission	63	52	36	14	0	102
Southwestern Electric Power Co.	**1,143**	**835**	**505**	**222**	**25**	**1,587**
230 Kingsport Power Co. - Distribution	44	45	23	13	1	82
260 Kingsport Power Co. - Transmission	0	9	4	1	0	14
Kingsport Power Co.	**44**	**54**	**27**	**14**	**1**	**96**
210 Wheeling Power Co. - Distribution	40	62	33	22	0	117
200 Wheeling Power Co. - Transmission	0	2	0	6	0	8
Wheeling Power Co.	**40**	**64**	**33**	**28**	**0**	**125**
103 American Electric Power Service Corporation	4,128	3,214	1,802	329	58	5,403
293 Elmwood	0	36	1	3	0	40
292 AEP River Operations LLC	0	160	44	3	0	207
American Electric Power Service Corporation	**4,128**	**3,410**	**1,847**	**335**	**58**	**5,650**
270 Cook Coal Terminal	13	13	6	1	0	20
AEP Generating Company	**13**	**13**	**6**	**1**	**0**	**20**
104 Cardinal Operating Company	0	309	157	52	3	521
181 Ohio Power Co. - Generation	153	1,156	735	286	9	2,186
AEP Generation Resources - FERC	**153**	**1,465**	**892**	**338**	**12**	**2,707**
290 Conesville Coal Preparation Company	0	12	10	1	0	23
AEP Generation Resources - SEC	**153**	**1,477**	**902**	**339**	**12**	**2,730**
175 AEP Energy Partners	59	5	3	0	0	8
171 CSW Energy, Inc.	0	8	2	0	0	10
419 Onsite Partners	5	0	0	0	0	0
AEP Energy Supply	**217**	**1,490**	**907**	**339**	**12**	**2,748**
143 AEP Pro Serv, Inc.	0	1	1	0	0	2
AEP Pro Serv, Inc.	**0**	**1**	**1**	**0**	**0**	**2**
245 Dolet Hills	178	22	20	2	17	61
Dolet Hills	**178**	**22**	**20**	**2**	**17**	**61**
Total	**12,439**	**13,976**	**8,195**	**3,217**	**327**	**25,715**

AMERICAN ELECTRIC POWER
NON-UMWA POSTRETIREMENT WELFARE PLAN
2019 NET PERIODIC POSTRETIREMENT BENEFIT COST

					"Other Cost					
Location	*Accumulated Postretirement Benefit Obligation*	*Expected Net Benefit Payments*	*Fair Value of Assets*	*Service Cost*	*Interest Cost*	*Expected Return on Assets*	*Amortizations PSC*	*Amortizations (G)/L*	*Total "Other" Cost*	*Net Periodic Postretirement Benefit Cost*
140 Appalachian Power Co. - Distribution	$92,018,084	$7,233,097	$123,331,268	$555,014	$3,826,768	($7,494,268)	($5,097,397)	$1,756,959	($7,007,938)	($6,452,924)
215 Appalachian Power Co. - Generation	78,917,205	6,742,182	105,772,241	427,472	3,268,390	(6,427,288)	(4,162,884)	1,506,816	(5,814,966)	(5,387,494)
150 Appalachian Power Co. - Transmission	8,846,848	626,204	11,857,376	0	367,093	(720,518)	(781,538)	168,918	(966,045)	(966,045)
Appalachian Power Co. - FERC	**$179,782,137**	**$14,601,483**	**$240,960,885**	**$982,486**	**$7,462,251**	**($14,642,074)**	**($10,041,819)**	**$3,432,693**	**($13,788,949)**	**($12,806,463)**
225 Cedar Coal Co	358,755	45,836	480,837	0	14,451	(29,218)	(8,202)	6,850	(16,119)	(16,119)
Appalachian Power Co. - SEC	**$180,140,892**	**$14,647,319**	**$241,441,722**	**$982,486**	**$7,476,702**	**($14,671,292)**	**($10,050,021)**	**$3,439,543**	**($13,805,068)**	**($12,822,582)**
211 AEP Texas Central Company - Distribution	$63,902,152	$4,501,045	$85,647,658	$497,518	$2,673,432	($5,204,410)	($3,881,048)	$1,220,124	($5,191,902)	($4,694,384)
147 AEP Texas Central Company - Generation	0	0	0	0	0	0	(15,337)	0	(15,337)	(15,337)
169 AEP Texas Central Company - Transmission	6,468,128	415,181	8,669,192	76,940	272,605	(526,787)	(391,921)	123,500	(522,603)	(445,663)
AEP Texas Central Co.	**$70,370,280**	**$4,916,226**	**$94,316,850**	**$574,458**	**$2,946,037**	**($5,731,197)**	**($4,288,306)**	**$1,343,624**	**($5,729,842)**	**($5,155,384)**
119 AEP Texas North Company - Distribution	18,576,126	1,296,763	24,897,467	141,638	777,277	(1,512,903)	(1,276,048)	354,686	(1,656,988)	(1,515,350)
166 AEP Texas North Company - Generation	4,304,430	391,753	5,769,201	0	176,756	(350,568)	(67,677)	82,187	(159,302)	(159,302)
192 AEP Texas North Company - Transmission	2,954,909	192,134	3,960,446	34,629	124,463	(240,658)	(233,844)	56,420	(293,619)	(258,990)
AEP Texas North Co.	**$25,835,465**	**$1,880,650**	**$34,627,114**	**$176,267**	**$1,078,496**	**($2,104,129)**	**($1,577,569)**	**$493,293**	**($2,109,909)**	**($1,933,642)**
AEP Texas	**$96,205,745**	**$6,796,876**	**$128,943,964**	**$750,725**	**$4,024,533**	**($7,835,326)**	**($5,865,875)**	**$1,836,917**	**($7,839,751)**	**($7,089,026)**
170 Indiana Michigan Power Co. - Distribution	$43,995,207	$3,659,734	$58,966,503	$322,277	$1,827,796	($3,583,120)	($2,601,438)	$840,028	($3,516,734)	($3,194,457)
132 Indiana Michigan Power Co. - Generation	28,319,738	2,527,150	37,956,769	128,176	1,169,498	(2,306,456)	(1,850,054)	540,727	(2,446,285)	(2,318,109)
190 Indiana Michigan Power Co. - Nuclear	47,319,132	3,055,242	63,421,539	730,357	2,001,132	(3,853,832)	(3,561,730)	903,494	(4,510,936)	(3,780,579)
120 Indiana Michigan Power Co. - Transmission	9,420,985	685,767	12,626,888	65,346	393,323	(767,277)	(596,815)	179,881	(790,888)	(725,542)
280 Ind Mich River Transp Lakin	10,232,817	683,576	13,714,981	117,771	430,533	(833,396)	(811,278)	195,382	(1,018,759)	(900,988)
Indiana Michigan Power Co. - SEC	**$139,287,879**	**$10,611,469**	**$186,686,680**	**$1,363,927**	**$5,822,282**	**($11,344,081)**	**($9,421,315)**	**$2,659,512**	**($12,283,602)**	**($10,919,675)**
110 Kentucky Power Co. - Distribution	$17,552,237	$1,281,382	$23,525,154	$101,369	$731,845	($1,429,514)	($1,210,578)	$335,136	($1,573,111)	($1,471,742)
117 Kentucky Power Co. - Generation	11,531,025	1,101,330	15,454,961	20,347	473,280	(939,126)	(611,828)	220,169	(857,505)	(837,158)
180 Kentucky Power Co. - Transmission	843,202	54,951	1,130,138	0	35,089	(68,673)	(198,150)	16,100	(215,634)	(215,634)
600 Kentucky Power Co. - Kammer Actives	0	0	0	0	0	0	(42,530)	0	(42,530)	(42,530)
701 Kentucky Power Co. - Mitchell Actives	4,591,091	37,093	6,153,411	139,651	202,633	(373,914)	(160,767)	87,661	(244,387)	(104,736)
702 Kentucky Power Co. - Mitchell Inactives	10,172,594	1,139,527	13,634,265	0	413,180	(828,491)	(200,743)	194,232	(421,822)	(421,822)
Kentucky Power Co.	**$44,690,149**	**$3,614,283**	**$59,897,929**	**$261,367**	**$1,856,027**	**($3,639,718)**	**($2,424,596)**	**$853,298**	**($3,354,989)**	**($3,093,622)**
250 Ohio Power Co. - Distribution	$119,026,146	$9,600,385	$159,530,006	$787,641	$4,947,757	($9,693,897)	($5,890,962)	$2,272,641	($8,364,461)	($7,576,820)
160 Ohio Power Co. - Transmission	12,874,407	1,073,517	17,255,488	1,000	530,805	(1,048,536)	(1,031,548)	245,819	(1,303,460)	(1,302,460)
Ohio Power Co.	**$131,900,553**	**$10,673,902**	**$176,785,494**	**$788,641**	**$5,478,562**	**($10,742,433)**	**($6,922,510)**	**$2,518,460**	**($9,667,921)**	**($8,879,280)**
167 Public Service Co. of Oklahoma - Distribution	$39,261,443	$2,925,904	$52,621,869	$355,527	$1,641,285	($3,197,586)	($2,477,659)	$749,643	($3,284,317)	($2,928,790)
198 Public Service Co. of Oklahoma - Generation	19,052,881	1,245,612	25,536,458	226,303	802,506	(1,551,732)	(1,498,642)	363,789	(1,884,079)	(1,657,776)
114 Public Service Co. of Oklahoma - Transmission	4,674,255	352,112	6,264,875	41,033	195,267	(380,687)	(313,349)	89,248	(409,521)	(368,488)
Public Service Co. of Oklahoma	**$62,988,579**	**$4,523,628**	**$84,423,202**	**$622,863**	**$2,639,058**	**($5,130,005)**	**($4,289,650)**	**$1,202,680**	**($5,577,917)**	**($4,955,054)**
159 Southwestern Electric Power Co. - Distribution	$28,062,845	$1,843,944	$37,612,457	$275,534	$1,179,323	($2,285,534)	($1,794,965)	$535,822	($2,365,354)	($2,089,820)
168 Southwestern Electric Power Co. - Generation	27,720,960	1,712,095	37,154,231	342,014	1,170,285	(2,257,690)	(2,137,691)	529,294	(2,695,802)	(2,353,788)
161 Southwestern Electric Power Co. - Texas - Distribution	13,970,455	1,092,301	18,724,514	110,988	582,265	(1,137,802)	(942,674)	266,747	(1,231,464)	(1,120,476)
111 Southwestern Electric Power Co. - Texas - Transmission	0	0	0	0	0	0	0	0	0	0
194 Southwestern Electric Power Co. - Transmission	4,151,233	312,373	5,563,872	39,577	173,559	(338,091)	(280,205)	79,262	(365,475)	(325,898)
Southwestern Electric Power Co.	**$73,905,493**	**$4,960,713**	**$99,055,074**	**$768,113**	**$3,105,432**	**($6,019,117)**	**($5,155,535)**	**$1,411,125**	**($6,658,095)**	**($5,889,982)**
230 Kingsport Power Co. - Distribution	$3,397,228	$219,115	$4,553,284	$34,383	$142,898	($276,682)	($177,403)	$64,865	($246,322)	($211,939)
260 Kingsport Power Co. - Transmission	447,304	38,754	599,519	0	18,410	(36,430)	(40,419)	8,541	(49,898)	(49,898)
Kingsport Power Co.	**$3,844,532**	**$257,869**	**$5,152,803**	**$34,383**	**$161,308**	**($313,112)**	**($217,822)**	**$73,406**	**($296,220)**	**($261,837)**
210 Wheeling Power Co. - Distribution	$4,638,569	$362,006	$6,217,045	$31,931	$193,130	($377,781)	($259,071)	$88,567	($355,155)	($323,224)
200 Wheeling Power Co. - Transmission	142,883	23,516	191,505	0	5,644	(11,637)	(2,613)	2,728	(5,878)	(5,878)
Wheeling Power Co.	**$4,781,452**	**$385,522**	**$6,408,550**	**$31,931**	**$198,774**	**($389,418)**	**($261,684)**	**$91,295**	**($361,033)**	**($329,102)**
103 American Electric Power Service Corporation	$276,543,155	$18,095,158	$370,649,078	$2,922,777	$11,632,082	($22,522,623)	($17,282,221)	$5,280,213	($22,892,549)	($19,969,772)
293 Elmwood	670,862	37,105	899,152	0	28,058	(54,637)	(276,067)	12,809	(289,837)	(289,837)
292 AEP River Operations LLC	5,165,590	469,831	6,923,408	0	212,125	(420,703)	(1,245,634)	98,630	(1,355,582)	(1,355,582)
American Electric Power Service Corporation	**$282,379,607**	**$18,602,094**	**$378,471,638**	**$2,922,777**	**$11,872,265**	**($22,997,963)**	**($18,803,922)**	**$5,391,652**	**($24,537,968)**	**($21,615,191)**
270 Cook Coal Terminal	$743,377	$64,731	$996,344	$7,151	$30,896	($60,543)	($67,747)	$14,194	($83,200)	($76,049)
AEP Generating Company	**$743,377**	**$64,731**	**$996,344**	**$7,151**	**$30,896**	**($60,543)**	**($67,747)**	**$14,194**	**($83,200)**	**($76,049)**
104 Cardinal Operating Company	$16,977,488	$1,685,706	$22,754,822	$0	$694,171	($1,382,705)	($1,116,823)	$324,162	($1,481,195)	($1,481,195)
181 Ohio Power Co. - Generation	81,643,762	7,956,896	109,426,628	114,648	3,346,339	(6,649,348)	(4,359,566)	1,558,876	(6,103,699)	(5,989,051)
AEP Generation Resources - FERC	**$98,621,250**	**$9,642,602**	**$132,181,450**	**$114,648**	**$4,040,510**	**($8,032,053)**	**($5,476,389)**	**$1,883,038**	**($7,584,894)**	**($7,470,246)**
290 Conesville Coal Preparation Company	965,474	100,251	1,294,019	0	39,383	(78,632)	(51,555)	18,434	(72,370)	(72,370)
AEP Generation Resources - SEC	**$99,586,724**	**$9,742,853**	**$133,475,469**	**$114,648**	**$4,079,893**	**($8,110,685)**	**($5,527,944)**	**$1,901,472**	**($7,657,264)**	**($7,542,616)**
175 AEP Energy Partners	1,043,738	44,497	1,398,916	39,457	45,631	(85,006)	(31,686)	19,929	(51,132)	(11,675)
171 CSW Energy, Inc.	287,902	15,939	385,873	0	12,041	(23,448)	(15,366)	5,497	(21,276)	(21,276)
419 Onsite Partners	23,309	0	31,241	1,860	1,082	(1,898)	0	445	(371)	1,489
AEP Energy Supply	**$100,941,673**	**$9,803,289**	**$135,291,499**	**$155,965**	**$4,138,647**	**($8,221,037)**	**($5,574,996)**	**$1,927,343**	**($7,730,043)**	**($7,574,078)**
143 AEP Pro Serv, Inc.	$96,525	$11,154	$129,372	$0	$3,913	($7,861)	($1,133)	$1,843	($3,238)	($3,238)
AEP Pro Serv, Inc.	**$96,525**	**$11,154**	**$129,372**	**$0**	**$3,913**	**($7,861)**	**($1,133)**	**$1,843**	**($3,238)**	**($3,238)**
245 Dolet Hills	$4,745,733	$157,604	$6,360,677	$188,826	$208,833	($386,509)	$430,570	$90,613	$343,507	$532,333
Dolet Hills	**$4,745,733**	**$157,604**	**$6,360,677**	**$188,826**	**$208,833**	**($386,509)**	**$430,570**	**$90,613**	**$343,507**	**$532,333**
Total	**$1,126,652,189**	**$85,110,453**	**$1,510,044,948**	**$8,879,155**	**$47,017,232**	**($91,758,415)**	**($68,626,236)**	**$21,511,881**	**($91,855,538)**	**($82,976,383)**