

American Electric Power
Non-UMWA Postretirement Health Care Plan

Actuarial Valuation Report
Postretirement Welfare Cost for Fiscal Year Beginning
January 1, 2021 under U.S. GAAP

Employer Contributions for Plan Year Beginning
January 1, 2021

May 2021

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Purposes of valuation

American Electric Power (AEP) 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, 2021, and AEP's postretirement welfare cost for fiscal year ending December 31, 2021, 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 2021 plan year.
4. The estimated maximum tax-deductible contribution for the tax year in which the 2021 plan year ends as allowed by the Internal Revenue Code. The maximum tax-deductible contribution should be finalized in consultation with AEP'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		01/01/2021	01/01/2020
Benefit Cost/ (Income)	Net periodic postretirement benefit cost/(income)	(123,016,960)	(110,676,137)
Measurement Date		01/01/2021	01/01/2020
Plan Assets	Fair value of assets (FVA)	1,912,747,102	1,747,344,491
Benefit Obligations	Accumulated postretirement benefit obligation (APBO)	1,135,283,070	1,167,231,750
Funded Status	Funded status	777,464,032	580,112,741
Accumulated Other Comprehensive (Income)/Loss	Net prior service cost/(credit)	(227,459,191)	(285,461,153)
	Net loss/(gain)	95,299,494	239,597,249
	Total accumulated other comprehensive (income)/loss	(132,159,697)	(45,863,904)
Assumptions¹	Discount rate	2.55%	3.30%
	Expected long-term return on plan assets	4.75%	5.50%
	Rate of compensation/salary increase	Rates vary by age from 3.5% to 11.5%	Rates vary by age from 3.5% to 11.5%
	Current health care cost trend rate	6.50%	6.00%
	Ultimate health care cost trend rate	4.50%	4.50%
	Year of ultimate trend rate	2029	2026
Participant Data	Census date	01/01/2021	01/01/2020
Plan reporting (ASC 965) for Plan Year Beginning		01/01/2021	01/01/2020
	Present value of accumulated benefits	1,277,330,587	1,273,542,303
	Market value of assets	1,912,747,102	1,747,344,891
	Plan reporting discount rate	2.55%	3.30%

¹ Rates are expressed on an annual basis where applicable.

Employer Contributions (net of Medicare subsidy)		Plan Year 2021 (est)	Plan Year 2020
Cash Flow	Funding policy contributions	0	0
	Maximum tax deductible contributions	161,000,000	148,144,772
	Actual contributions	780,647 ¹	379,358 ²
	Expected benefit payments and expenses, net of participant contributions	79,881,461	87,615,846

¹ Includes \$810,601 expected to be paid directly for key retirees in 2021, offset by \$29,954 in Medicare Retiree Drug Subsidies.

² Includes \$686,180 paid directly for key retirees in 2020, offset by \$306,822 in Medicare Retiree Drug Subsidies.

Employer contributions

Employer contributions are the amounts paid by AEP 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.

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 various VEBAs. AEP 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 2021 postretirement welfare benefit cost/(income) for the plan is \$(123,016,960). 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 trend increases for health care benefits. The plan's overfunded (underfunded) APBO as of January 1, 2021 was \$777,464,032 based on the fair value of plan assets of \$1,912,747,102 and the APBO of \$1,135,283,070.

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, 2020 was derived from a roll forward of the January 1, 2020 valuation results, adjusted for the year-end discount rate, other updated valuation assumptions 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, 2021 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) decreased from \$(110,676,137) in fiscal 2020 to \$(123,016,960) in fiscal 2021, as set forth below:

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

Postretirement Welfare Cost	
Prior year	(110.7)
Change due to:	
■ Expected based on prior valuation and contributions during prior year	(2.0)
■ Unexpected noninvestment experience	(1.3)
■ Unexpected investment experience	(15.2)
■ Plan amendment	(1.8)
■ Assumption changes	8.0
Current year	(123.0)

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

	2021	2020
Medical (Overall Average)		
Under age 65 ¹		
■ HSA Basic	10,423	9,503
■ HSA Plus	11,465	10,464
■ HRA	12,688	11,406
Age 65 and older (before Part D offsets)		
■ Medicare Select ²	3,758	3,746
■ Medicare Standard ²	2,698	2,673
■ CSP	2,235	2,567
Medicare Part D offsets		
■ Medicare Advantage (EGWP)	(1,186)	(1,037)
■ CSP (RDS)	(264)	(303)

See Appendix A for additional details on per capita claims costs assumptions including assumed claims costs adjusted for age-related morbidity adjustments and assumed future utilization changes resulting from COVID-19.

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 reflect the removal of HIF in 2020 despite it not being eliminated until 2020 under legislation signed December 2019.

- The discount rate decreased 75 basis points since the prior year which increased the postretirement welfare cost.
- Actual asset returns during 2020 were greater than the assumed rate of 5.50% which decreased the postretirement welfare cost.
- The expected return on assets assumption was decreased by 75 basis points to 4.75% which increased the postretirement welfare cost.
- The initial health care cost trend rate assumption was updated to reflect a higher starting rate (6.50%) and longer period to reach the ultimate trend (8 years) which increased the postretirement welfare cost.
- The plan was amended to increase dependent and surviving spouse contributions for most spouses which decreased the 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

- Discount rate was changed from 3.30% to 2.55%.
- The expected return on assets assumption was decreased by 75 basis points to 4.75%.
- Per capita claims costs were updated to reflect 2019 retiree claims experience.
- The initial health care cost trend rate assumption was updated to reflect a higher starting rate (6.50%) and longer period to reach the ultimate trend (8 years) which increased the postretirement welfare cost.
- The mortality improvement projection was updated to the MP-2020 scale.

Changes in Methods

None.

Changes in Benefits Valued

The valuation reflects the amendment to increase dependent and surviving spouse contributions for most spouses which decreased the postretirement welfare benefit cost. This amendment was first recognized at December 31, 2020 year-end disclosure and first included in expense for FY2021. Note that this amendment is in addition to the increased cost sharing that took effect January 1, 2020.

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 AEP and other persons or organizations designated by AEP. 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 AEP, 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, 2021. The benefit obligations were measured as of January 1, 2021 and are based on participant data as of the census date, January 1, 2021.

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, 2020, 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 AEP in consultation with its tax advisors and independent accountants.

Effects of Health Care Legislation

This valuation reflects our understanding of the relevant provisions of the Patient Protection and Affordable Care Act (PPACA) and Health Care and Education Reconciliation Act (HCERA) as amended by subsequent legislation. The IRS has yet to issue final guidance with respect to many aspects of these laws. 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. The valuation does not anticipate the effects of any possible future changes to PPACA or HCERA.

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 U.S. GAAP

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 AEP. 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, 2021. 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, 2021 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 AEP 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. AEP may distribute this actuarial valuation report to the appropriate authorities who have the legal right to require AEP to provide them this report, in which case AEP 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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One Health & Benefits Actuary
Pricing Specialist



Chad M. Greenwalt, FSA, EA
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Valuation Actuary



Joseph A. Perko, FSA, EA, MAAA
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 2021

https://wtwonline.sharepoint.com/sites/tctclient_604598_2021RETANN/Documents/Non-UMWA Report 2021.docx

Section 2: Actuarial exhibits

2.1 Balance sheet asset/(liability)

All monetary amounts shown in U.S. Dollars

Measurement Date	01/01/2021	01/01/2020
A Development of Balance Sheet Asset/(Liability)¹		
1 Accumulated postretirement benefit obligation (APBO)	1,135,283,070	1,167,231,750
2 Fair value of assets (FVA)	1,912,747,102	1,747,344,491
3 Net balance sheet asset/(liability)	777,464,032	580,112,741
B Current and Noncurrent Allocation		
1 Noncurrent assets	777,464,032	580,112,741
2 Current liabilities	0	0
3 Noncurrent liabilities	0	0
4 Net balance sheet asset/(liability)	777,464,032	580,112,741
C Accumulated Other Comprehensive (Income)/Loss		
1 Net transition obligation/(asset)	0	0
2 Net prior service cost/(credit)	(227,459,191)	(285,461,153)
3 Net loss/(gain)	95,299,494	239,597,249
4 Accumulated other comprehensive (income)/loss ²	(132,159,697)	(45,863,904)
D Assumptions and Dates³		
1 Discount rate	2.55%	3.30%
2 Rate of compensation/salary increase	Rates vary by age from 3.5% to 11.5%	Rates vary by age from 3.5% to 11.5%
3 Current health care cost trend rate	6.50%	6.00%
4 Ultimate health care cost trend rate	4.50%	4.50%
5 Year of ultimate trend rate	2029	2026
6 Census date	January 1, 2021	January 1, 2020

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.

³ Rates are expressed on an annual basis where applicable.

2.2 Summary and comparison of postretirement benefit cost and cash flows

All monetary amounts shown in U.S. Dollars

Fiscal Year Ending	12/31/2021	12/31/2020
A Total Postretirement Benefit Cost		
1 Employer service cost	8,704,827	9,425,699
2 Interest cost	28,159,614	37,395,768
3 Expected return on assets	(88,980,312)	(93,726,760)
4 Subtotal	(52,115,871)	(46,905,293)
5 Net prior service cost/(credit) amortization	(70,901,089)	(69,726,760)
6 Net loss/(gain) amortization	0	5,955,981
7 Transition obligation/(asset) amortization	0	0
8 Amortization subtotal	(70,901,089)	(63,770,844)
9 Net periodic postretirement benefit cost/(income)	(123,016,960)	(110,676,137)
B Assumptions¹		
1 Discount rate	2.55%	3.30%
2 Long-term rate of return on assets	4.75%	5.50%
3 Rate of compensation/salary increase	Rates vary by age from 3.5% to 11.5%	Rates vary by age from 3.5% to 11.5%
4 Current health care cost trend rate	6.50%	6.00%
5 Ultimate health care cost trend rate	4.50%	4.50%
6 Year ultimate trend rate is expected	2029	2026
C Census Date	January 1, 2021	January 1, 2020
D Assets at Beginning of Year		
1 Fair market value	1,912,747,102	1,747,344,491
E Cash Flow		
	Expected	Actual
1 Employer contributions	810,601 ²	686,180
2 Plan participants' contributions	42,321,594	38,461,114
3 Benefits paid from plan assets	122,203,055	127,726,822
4 Expected Medicare retiree drug subsidy on current year benefit payments	(29,954)	(306,822)

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 AEP in 2021.

2.3 Detailed results for postretirement welfare cost and funded position

All monetary amounts shown in U.S. Dollars

Detailed results		01/01/2021	01/01/2020
A Service Cost			
1	Medical	5,985,423	6,921,858
2	Life insurance	2,719,404	2,503,841
3	Dental	0	0
4	Total	8,704,827	9,425,699
B Accumulated Postretirement Benefit Obligation [APBO]			
1	Medical:		
a	Participants currently receiving benefits	479,744,158	521,799,315
b	Fully eligible active participants	50,834,591	58,852,747
c	Other participants	130,029,891	151,443,341
d	Total	660,608,640	732,095,403
2	Life insurance:		
a	Participants currently receiving benefits	369,988,268	338,838,582
b	Fully eligible active participants	30,577,712	27,871,692
c	Other participants	60,417,666	55,695,808
d	Total	460,983,646	422,406,082
3	Dental:		
a	Participants currently receiving benefits	13,524,076	12,619,922
b	Fully eligible active participants	166,708	110,343
c	Other participants	0	0
d	Total	13,690,784	12,730,265
4	All Benefits:		
a	Participants currently receiving benefits	863,256,502	873,257,819
b	Fully eligible active participants	81,579,011	86,834,782
c	Other participants	190,447,557	207,139,149
d	Total	1,135,283,070	1,167,231,750
C Assets			
1	Fair value [FV]	1,912,747,102	1,747,344,491
D Funded Position			
1	Overfunded (underfunded) APBO	777,464,032	580,112,741
2	APBO funded percentage	168.5%	149.7%
E Amounts in Accumulated Other Comprehensive Income			
1	Prior service cost (credit)	(227,459,191)	(285,461,153)
2	Net actuarial loss (gain)	95,299,494	239,597,249
3	Total	(132,159,697)	(45,863,904)

2.4 ASC 965 (plan reporting) information

All monetary amounts shown in U.S. Dollars

Summary of Present Value of Benefits		01/01/2021	01/01/2020
A Medical (ignoring Retiree Drug Subsidy)			
1	Current retirees	479,932,671	521,897,042
2	Active participants fully eligible for benefits	50,834,591	59,002,899
3	Other active participants	130,029,891	151,463,452
4	Total	660,797,153	732,363,393
B Life Insurance			
1	Current retirees	369,988,268	338,838,582
2	Active participants fully eligible for benefits	30,577,712	27,871,692
3	Other active participants	60,417,666	55,695,808
4	Total	460,983,646	422,406,082
C Dental			
1	Current retirees	13,524,076	12,619,922
2	Active participants fully eligible for benefits	166,708	110,343
3	Other active participants	0	0
4	Total	13,690,784	12,730,265
D Total (ignoring Retiree Drug Subsidy)			
1	Current retirees	863,445,015	873,355,546
2	Active participants fully eligible for benefits	81,579,011	86,984,934
3	Other active participants	190,447,557	207,159,260
4	Total	1,135,471,583	1,167,499,740

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 3.30% 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 2020	Plan Year 2019
A Medical (ignoring Retiree Drug Subsidy)			
1	Benefit obligation, beginning of year	732,363,393	809,832,020
2	Service cost	6,921,858	6,920,082
3	Interest cost	23,367,238	33,713,879
4	Participant contributions	30,418,762	27,587,945
5	Net actuarial (gain)/loss - experience	9,247,373	(4,529,602)
6	Net actuarial (gain)/loss - assumptions	(27,352,926)	(44,388,894)
7	Plan amendments	(11,343,363)	(10,826,415)
8	Gross benefits paid	(102,825,182)	(85,945,622)
9	Benefit obligation, end of year	660,797,153	732,363,393
B Life Insurance			
1	Benefit obligation, beginning of year	422,406,082	361,529,938
2	Service cost	2,503,841	2,066,167
3	Interest cost	13,700,981	15,247,720
4	Participant contributions	891,679	939,095
5	Net actuarial (gain)/loss - experience	(7,495,282)	2,109,136
6	Net actuarial (gain)/loss - assumptions	45,571,311	56,396,227
7	Plan amendments	0	45,297
8	Gross benefits paid	(16,594,966)	(15,927,498)
9	Benefit obligation, end of year	460,983,646	422,406,082
C Dental			
1	Benefit obligation, beginning of year	12,730,265	11,232,736
2	Service cost	0	0
3	Interest cost	401,185	460,852
4	Participant contributions	7,150,673	7,031,694
5	Net actuarial (gain)/loss - experience	1,169,546	1,630,051
6	Net actuarial (gain)/loss - assumptions	685,822	661,551
7	Plan amendments	(140,033)	(99,260)
8	Gross benefits paid	(8,306,674)	(8,187,359)
9	Benefit obligation, end of year	13,690,784	12,730,265
D Total (ignoring Retiree Drug Subsidy)			
1	Benefit obligation, beginning of year	1,167,499,740	1,182,594,694
2	Service cost	9,425,699	8,986,249
3	Interest cost	37,469,404	49,422,451
4	Participant contributions	38,461,114	35,558,734
5	Net actuarial (gain)/loss - experience	2,921,637	(790,415)
6	Net actuarial (gain)/loss - assumptions	18,904,207	12,668,884
7	Plan amendments	(11,483,396)	(10,880,378)
8	Gross benefits paid	(127,726,822)	(110,060,479)
9	Benefit obligation, end of year	1,135,471,583	1,167,499,740

2.5 Basic results for employer contributions - VEBA's

All monetary amounts shown in U.S. Dollars

All Postretirement VEBA's	Estimated December 31, 2021	Actual December 31, 2020
A Qualified Asset Account Limits [QAAL]¹	427,000,000	436,129,840
B Assets		
1 Market value	1,464,000,000	1,434,549,669
2 Unrecognized investment losses (gains)	0	0
3 Actuarial value [AV]	1,464,000,000	1,434,549,669
C Funded Position		
1 Unfunded account limits [QAAL – FV]	(1,037,000,000)	(998,419,829)
D Employer Contributions		
1 Maximum deductible available ²	161,000,000	148,144,772
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
a Life insurance VEBA	0	0
b Union medical and dental VEBA's	0	0
c Non-union medical and dental VEBA's	0	0

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	2020	2019
A Qualified Asset Account Limit (QAAL)		
1 December 31 actuarial accrued liability	257,866,623	231,485,487
2 Unrecognized liability	0	0
3 QAAL	257,866,623	231,485,487
B Assets		
1 Market value as of December 31	109,721,851	110,678,800
2 Unrecognized investment losses (gains)	0	0
3 Actuarial value [AV]	109,721,851	110,678,800
C Funded position		
1 Unfunded account limit [QAAL - AV]	148,144,772	120,806,687
2 Contributions received in trust, but not yet deducted		
Through 2012	0	0
2013	0	0
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	0	0
2019	0	0
2020	0	0
Total	0	0
D Employer deductions for contributions to VEBAs		
1 Maximum deduction available ¹ [C.1 + Total of C.2]	148,144,772	120,806,687
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		2020	2019
A Qualified Asset Account Limit (QAAL)			
1	December 31 present value of projected benefits	135,492,398	151,119,490
2	Unrecognized liability	0	0
3	QAAL	135,492,398	151,119,490
B Assets			
1	Market value as of December 31	627,129,125	535,465,709
2	Unrecognized investment losses (gains)	0	0
3	Actuarial value [AV]	627,129,125	535,465,709
C Funded position			
1	Unfunded account limit [QAAL - AV]	(491,636,727)	(384,346,219)
2	Contributions received in trust, but not yet deducted		
	Through 2012	0	0
	2013	0	0
	2014	0	0
	2015	0	0
	2016	0	0
	2017	0	0
	2018	0	0
	2019	0	0
	2020	0	0
	Total	0	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	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

Non-Union Retiree Medical and Dental		2020	2019
A Qualified Asset Account Limit (QAAL)			
1	December 31 actuarial accrued liability	42,770,819	45,234,031
2	Unrecognized liability	0	0
3	QAAL	42,770,819	45,234,031
B Assets			
1	Market value as of December 31	697,698,694	645,593,248
2	Unrecognized investment losses (gains)	0	0
3	Actuarial value [AV]	697,698,694	645,593,248
C Funded position			
1	Unfunded account limit [QAAL - AV]	(654,927,875)	(600,359,217)
2	Contributions received in trust, but not yet deducted		
	Through 2012	285,901,694	285,901,694
	2013	0	0
	2014	0	0
	2015	0	0
	2016	0	0
	2017	0	0
	2018	10,082,000	10,082,000
	2019	0	0
	2020	0	0
	Total	295,983,694	295,983,694
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	0	0
4	Total additions [2.c + 3]	0	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, 2020, but Not Deducted as of December 31, 2019	Deductible in 2020	Remaining Nondeductible Contributions as of December 31, 2020
Through 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
2019	0	0	0
2020	0	0	0
Total	\$295,983,694	\$0	\$295,983,694

Retiree Life Insurance VEBAs

	Contributions Made by December 31, 2020, but Not Deducted as of December 31, 2019	Deductible in 2020	Remaining Nondeductible Contributions as of December 31, 2020
Through 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
2019	0	0	0
2020	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, 2021**

A Development of Maximum Deductible Contribution

1	Present value of projected benefits	424,309,473
2	Fair value of assets	478,197,433
3	Unfunded surplus [1 - 2]	(53,887,960)
4	Average present value of future service	8
5	Preliminary maximum deductible contribution	
a	10% of unfunded surplus [10% x A.3]	(5,388,796)
b	Aggregate normal cost [A.3 / A.4]	(6,849,022)
c	Greater of A.5.a, A.5.b and 0	0
6	Preliminary maximum 2020 contribution [1.05 x A.5.c]	0
7	Subordination test (development shown below)	145,371,303
8	Maximum deductible contribution ignoring expenses [lesser of A.6 and A.7]	0
9	Total trust expenses paid from 401(h) account during 2020	552,755
10	Maximum deductible contribution including expenses [A.8 + A.9]	552,755

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
	2019	N/A	N/A	99,347,283
	2020	N/A	N/A	0
	Cumulative pension contributions not for past service	149,356,355	151,652,682	1,014,445,203
		x 1/3	x 1/3	x 1/3
		49,785,452	50,550,894	338,148,401
	Cumulative 401(h) contributions before plan year 2021	49,785,452	50,550,894	192,777,098
	Subordination limit	0	0	145,371,303

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, 2021	January 1, 2020
A Medical and Dental without RDS		
1 Gross disbursements	101,300,965	106,746,989
2 Participant contributions	(41,341,144)	(38,706,663)
3 Net disbursements	59,959,821	68,040,326
B Life Insurance without RDS		
1 Gross disbursements	20,932,044	20,758,017
2 Participant contributions	(980,450)	(1,141,421)
3 Net disbursements	19,951,594	19,616,596
C Gross without RDS		
1 Gross disbursements	122,233,009	127,505,006
2 Participant contributions	(42,321,594)	(39,848,084)
3 Net disbursements	79,911,415	87,656,922
D RDS¹		
1 Gross disbursements	(29,954)	(41,076)
2 Participant contributions	0	0
3 Net disbursements	(29,954)	(41,076)
E Net with RDS		
1 Gross disbursements	122,203,055	127,463,930
2 Participant contributions	(42,231,594)	(39,848,084)
3 Net disbursements	79,881,461	87,615,846

¹ 2019-2020 RDS payments expected to be received in 2021-2022.

Section 3: Data exhibits

3.1 Plan participant data

All monetary amounts shown in U.S. Dollars

Census Date	01/01/2021	01/01/2020
A Participating Employees		
1 Number		
a Fully eligible	1,794	1,891
b Other	8,514	9,469
c Total participating employees	10,308	11,360
2 Average age (years)	51.33	51.06
3 Average credited service (years)	22.35	21.95
4 Average future working life (years)		
a to full retirement age	10.779	10.890
b to full eligibility age	10.243	10.246
B Retirees and Surviving Spouses		
1 Retirees and Surviving Spouses		
a Number under 65	3,044	3,060
b Number 65 and older	14,882	14,638
c Total ¹	17,926	17,698
d Average age (years)	73.98	73.85
e Age Distribution at January 1, 2021		
Age	Number	
Under 55	84	
55-59	555	
60-64	2,405	
65-69	3,511	
70-74	3,977	
75-79	2,926	
80-84	2,006	
85 and over	2,462	
C Dependents		
1 Number	8,267	8,302
2 Average Age	69.71	69.55
3 Age Distribution at January 1, 2021		
Age	Number	
Under 55	193	
55-59	636	
60-64	1,675	
65-69	1,860	
70-74	1,908	
75-79	1,091	
80-84	569	
85 and over	335	

¹ Includes 325 disabled participants in 2021 and 325 disabled participants in 2020. 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								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	
Under 25	0	0	0	0	0	0	0	0	0
25-29	0	67	1	0	0	0	0	0	68
30-34	0	291	248	4	0	0	0	0	543
35-39	0	255	604	214	4	0	0	0	1,077
40-44	0	187	516	408	146	5	0	0	1,262
45-49	0	149	418	384	309	87	2	0	1,349
50-54	0	105	314	267	283	303	282	25	1,579
55-59	0	67	210	199	257	226	585	636	2,180
60-64	0	47	111	108	141	132	276	985	1,800
65-69	0	19	29	21	23	29	42	224	387
70 & over	0	6	13	8	2	3	3	28	63
Total	0	1,193	2,464	1,613	1,165	785	1,190	1,898	10,308
Average: Age	51.33	Number of Participants:			Fully eligible	1,794	Males	8,397	
Service	22.35				Other	8,514	Females	1,911	

Census data as of January 1, 2021

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, 2021

Economic Assumptions

	Postretirement Welfare Cost	Plan Reporting	Employer Contributions
Discount rate ¹	2.55%	2.55%	N/A
Rates of return on assets, pre-tax: ¹			
■ 401(h) accounts	N/A	N/A	4.25%
■ Life insurance	N/A	N/A	6.50%
■ Union medical/dental	N/A	N/A	4.75%
■ Non-union medical/dental	N/A	N/A	4.50%
■ Aggregate	4.75%	N/A	N/A
	Age	Rate	
■ Annual rates of compensation increases	< 25	11.50%	
	25 – 29	8.50%	
	30 – 34	7.00%	
	35 – 39	6.00%	
	40 – 44	5.00%	
	45 – 49	4.50%	
	50 – 54	4.00%	
	55 – 59	3.75%	
	60 – 64	3.50%	
	65 – 69	3.25%	
	70+	3.00%	
■ Weighted average		4.85%	
■ Medical cost trend rate ²	2021	6.50%	
	2022	6.25%	
	2023	6.00%	
	2024	5.75%	
	2025	5.50%	
	2026	5.25%	
	2027	5.00%	
	2028	4.75%	
	2029+	4.50%	
Dental cost trend rate ²	2020+	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.	
	<i>Current Retirees</i>	<i>Future Retirees</i>
Participation	Based on valuation census data.	80% in 2021-2022 with the rate decreasing by 2% annually to an ultimate rate of 60% in 2032.
Persistency	Capped retirees will drop coverage at a rate of 0.85% annually for 2021, 2% for 2022, 3% for 2023, 4% for 2024 and beyond; Non-capped retirees will drop coverage at a rate of 0.85% 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 Pri-2012 headcount weighted mortality table without collar adjustments. Mortality improvements are projected forward on a generational basis using Scale MP-2020.
Disabled mortality (through age 65)	Rates vary by age and sex. Representative rates:

Age	Males	Females
30	1.05%	0.54%
40	1.52	1.00
50	2.23	1.51
60	2.62	1.96

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.

Representative rates:

Percentage leaving during the year	
Attained vested service	Rate
< 3	7.00%
3 – 4	6.00%
5 – 9	5.00%
10 – 14	4.00%
15 – 19	2.50%
20 +	1.50%

Retirement

Rates vary by age.

Representative rates:

Percentage retiring during the year	
Age	Rate
55 – 58	4.00%
59	6.00%
60	7.50%
61	9.00%
62 – 64	16.00%
65 – 67	25.00%
68 – 69	20.00%
70+	100.00%

2021 Per Capita Claims Costs

Medical

- Prior to age 65¹

Age	HSA Basic	HSA Plus	HRA
< 29	3,750	4,125	4,565
30 – 34	4,588	5,047	5,585
35 – 39	4,852	5,337	5,906
40 – 44	5,306	5,837	6,460
45 – 49	6,123	6,735	7,454
50 – 54	7,518	8,270	9,153
55 – 59	9,028	9,930	10,990
60 – 64	11,172	12,288	13,600
Average	10,423	11,465	12,688

- Age 65 and after²

Age	Medicare Select	Medicare Standard	CSP
65 – 69	3,453	2,536	1,906
70 – 74	3,788	2,764	2,110
75 – 79	3,981	2,871	2,271
80 – 84	4,001	2,857	2,340
85 – 89	3,818	2,686	2,335
90 – 94	3,379	2,340	2,188
≥ 95	2,833	1,908	2,047
Average	3,758	2,698	2,235

- 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	(264)

- 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	(579)	(542)
70 – 74	(629)	(589)
75 – 79	(650)	(608)
80 – 84	(643)	(602)
85 – 89	(600)	(561)
90 – 94	(518)	(485)
≥ 95	(417)	(390)
Average	(613)	(573)

Dental

414

¹ Pre-65 per capita claims costs do not include the 5% adjustment for potential dependent children covered under the plan. But they do include a temporary (through 2022 only) 2% load on medical (but not Rx) claims costs to cover COVID-related utilization spikes.

² Post-65 per capita claims costs shown for Medicare Advantage plans (all except CSP) do not include a \$3 pmpm cap on annual rate increases for 2022 and 2023 or a \$7.5 million one-time credit to 2023 rates promised by Aetna, which have been valued.

Administrative expenses Included in claims costs shown above.

Additional Assumptions

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, 2021
Measurement date	January 1, 2021
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 2019 retiree claims experience and its 2021 Medicare Advantage renewal
 - The health care cost trend assumption was updated to start at 6.50% in 2021 reducing to an ultimate rate of 4.50% in 2029. The prior assumption was an initial rate of 6.00% in 2020 reducing to an ultimate rate of 4.50% in 2026.
 - Discount rate was changed from 3.30% to 2.55%
 - The expected return on assets assumption was decreased by 75 basis points to 4.75%
 - The mortality improvement projection was updated to the MP-2020 scale

Sources of Data and Other Information

American Electric Power (AEP), through BusinessSolver, its third party administrator, furnished active and inactive participant data as of January 1, 2021. AEP also provided the accrued postretirement benefit costs and assets information as of December 31, 2020. Health plan vendors furnished the claims cost data. AEP supplied 2019 prescription drug rebates and ESI provided estimated 2021 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:	
<ul style="list-style-type: none"> ■ Plan administrative expenses 	Administrative expenses are included in per capita claims costs and thus the medical plan trend rate is applied to these expenses.
<ul style="list-style-type: none"> ■ Claims cost trend rates 	<p>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.</p> <p>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.</p> <p>For the medical VEBA funding limit of the non-bargained group, no future increases in medical or dental costs have been assumed, in accordance with U.S. tax law.</p>
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 and ESI supplied data on retiree medical and prescription drug claims incurred in 2019 and paid through March 2020. AEP reported prescription drug rebates they received for 2019. 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 2021. 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.

In addition, AEP has decided to load the medical claims portion of rates (but not the Rx portion) to cover potential utilization spikes for 2021-22 as a response to widespread shutdowns and abatement of basic medical services during parts of 2021 in response to the COVID-19 pandemic.

- Post-65 retiree medical rates

2021 monthly claim rates were calculated separately for the Medicare Advantage options and CSP Medicare-eligible plans by dividing 2019 incurred claims (Rx only, except for CSP) paid through March 2020 by covered lives and trending forward two years to 2021. Prescription drug claim rates were then multiplied by pricing change factors representing the effect of any pricing and other program changes for 2020 and 2021. The 2% temporary medical utilization spikes for 2021-22 described for pre-65 benefits was applied to CSP as well.

Next, 2021 premium rates for new Medicare Advantage (MA) plans were added. Projections reflect \$3 per member per month caps on annual MA premium rate increases. Aetna has also promised AEP a one-time \$7.5 million credit effective for 2023 premiums in response to loss ratios Aetna enjoyed for 2018-20 on the coverage. It was estimated \$5 million of this credit would be retained by AEP, with the balance used to reduce retiree contributions in 2023.

Finally, administrative expense rates were added to Rx and CSP claims cost rates. 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 2019 and paid through March 2020. Combined claims experience for retirees was analyzed to derive the 2019 dental claim rates. The single coverage rate was trended to 2021 and administrative costs were added to derive the per capita claims cost assumption.

Medicare Part D offsets

- RDS

We calibrated our modelling tool to reflect the 2021 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 2021 at 7.00% 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 2021 minus the greater of \$396.72 per year (the national average Part D premium) and 25.5% of the gross value of Part D to the projected 2021 value of AEP coverage minus the average projected 2020 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 2021, using the continuance table calibrated to AEP’s CSP plan costs. This produced a 2021 per person employer subsidy of \$264 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 Scripts for direct subsidy payments, coverage gap discounts and reinsurance payments. These projections incorporated national average bid results for 2021 Part D plans. 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.
Persistency	Persistency 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 persistency 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 availability 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.

Model Descriptions and Disclosure in Accordance with ASOP No. 56

Quantify

Quantify is the Willis Towers Watson centrally developed, tested and maintained Global actuarial valuation system. It is used to perform valuations of clients' benefit plans.

Quantify provides the ability to process data, calculate benefits and value benefit liabilities, develop results using applicable standards, and generate client reports.

Quantify parameters provide significant flexibility to model populations and plan designs. Various demographic, economic and benefit related assumptions exist for users to model multiple demographic and economic situations.

Plan liabilities are calculated based on standard actuarial techniques, developing actuarially reasonable results using the population and parameters entered. The calculation and presentation of liabilities in Quantify relies on the assumptions used and the reasonability of the assumptions selected.

Quantify incorporates standard liability methodologies that are intended to reasonably reflect a variety of economic or demographic conditions. The model itself does not evaluate any assumptions entered for reasonableness, consistency or probability of occurrence.

Quantify is designed specifically for these purposes, and we know of no material limitations that would prevent the system from being suitable for these intended purposes. The actuaries signing this report have relied on the actuaries who develop, test and maintain this system, and have also performed a limited review of results to ensure that system parameters have been set appropriately and plan provisions coded correctly.

BOND:Link

U.S. BOND:Link is a methodology to assist with the selection of discount rates used in liability and cost measurements related to employee benefit plans. Discount rates are derived by identifying a theoretical settlement portfolio of high-quality corporate bonds sufficient to provide for a plan's projected benefit payments. The single interest rate is then determined that results in a discounted value of the plan's benefit payments that equals the market value of the selected bond portfolio.

Updated BOND:Link models are developed monthly as of the last day of the month. The construction of a BOND:Link model relies on bond data collected as of the measurement date. Parameters provide the user the ability to control aspects of the model. The model output allows the user to see the effects of those parameters.

Information regarding quoted bond prices, yields and other bond related data is from Bloomberg Finance L.P.

Published Demographic Tables

Certain demographic tables described above are standard published tables or are based on standard published tables from models developed by organizations with the requisite expertise

AgeDist

AgeDist is a spreadsheet tool that applies relative cost factors by age to average per capita costs (pre and post 65) and census weights to produce age-graded plan costs for pre- and post-65 populations. The average per capita costs and census weights are provided as inputs to the tool which is then combined with a morbidity curve to produce a set of weighted average age-related costs that equal the average. The age-graded costs are used in the actuarial valuation.

The morbidity curve was developed from a broad set of claims data aggregated by age and blended and does not reflect a client's specific morbidity. The model does not evaluate the average per capita costs or census weights for reasonableness or consistency.

The model(s) used for this analysis is designed specifically for these purposes, and we know of no material limitations that would prevent the model(s) from being suitable for these intended purposes.

We are not aware of any material inconsistencies among assumptions used in this work. The model itself does not evaluate any assumptions entered for reasonableness, consistency or probability of occurrence. The calculation and presentation of results relies on the assumptions used and the reasonability of the assumptions selected. The output of the model(s) used in this analysis are considered reasonable based on the aggregation of assumptions used. However, a different set of results could also be considered reasonable based on a range of possible values used for each assumption.

**Pricing & Underwriting Tool
(PUT)**

The Pricing and Underwriting Tool (PUT) develops projected premium equivalent rates, employee contributions, and COBRA rates for self-insured employer health plans (medical, prescription drugs, dental, and vision). The tool develops rates by plan or in aggregate leveraging historic claims, enrollment, plan design and administrative fee data for an employer. The model allows flexibility to incorporate plan design changes, seasonality, and multiple methods of estimating incurred claims amounts from paid claims data.

The model(s) used for this analysis is designed specifically to support pricing and underwriting analysis for our clients' medical, prescription drug and dental plans and we know of no material limitations that would prevent the model(s) from being suitable for these intended purposes.

We are not aware of any material inconsistencies among assumptions used in this work. The model(s) itself does not evaluate any assumptions entered for reasonableness, consistency or probability of occurrence. The calculations and presentation of results relies on the assumptions used and the reasonability of the assumptions selected. The output of the model(s) used in this analysis is considered reasonable based on the aggregation of assumptions used. However, a different set of results could also be considered reasonable based on a range of possible values used for each assumption.

The individual(s) signing or delivering this report have relied on other Willis Towers Watson employees and actuaries who develop, test and maintain each of the proprietary model(s) used for this analysis and have also performed a limited review of assumptions and results to ensure that the model(s) have been set up appropriately and coded correctly. We have not relied on any external experts to develop, review, or validate the model(s) used in this analysis.

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	\$1,500	\$2,000	\$2,800
■ Two Person	\$2,250	\$3,000	\$5,400
■ Family	\$3,000	\$4,000	\$8,100
AEP Account Seed			
■ Single	\$1,000	\$500	\$0
■ Two Person	\$1,500	\$750	\$0
■ Family	\$2,000	\$1,000	\$0
Coinsurance	85%	85%	90%
Out-of-Pocket Maximum			
■ Individual	\$4,000	\$4,000	\$4,000
■ Two Person	\$6,000	\$6,000	\$8,000
■ Family	\$8,000	\$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.

Retiree contributions

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

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

Spousal coverage requires contribution rates 4% higher than the retiree rates shown in the table above. These percentages do not apply to surviving spouses who pay 50% for pre-65 coverage and 24% for post-65 coverage.

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

Eligibility	Employees hired after January 1, 2011 are not eligible for a life insurance benefit.
Grandfathered participants	Participants over age 50 with ten years of service as of December 31, 2000.
Death benefit amount	Participants who had not turned 50 with 10 years of service as of December 31, 2010 are eligible for a non-contributory \$30,000 death benefit.
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. In 2001, employees who had turned 50 with 10 years of service had the option to elect a non-contributory benefit at 50% of pay.

Life Insurance Benefit Reduction Table for Grandfathered East Participants

<i>Years of Coverage</i>	<i>Age 66</i>	<i>Age 67</i>	<i>Age 68</i>	<i>Age 69</i>	<i>Age 70 or Over</i>
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.
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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.
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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.
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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% (44% for spouses) of the active employee plan cost.

Changes in Benefits Valued Since Prior Year

The valuation reflects an amendment to increase dependent and post-65 surviving spouse contributions which decreased the postretirement welfare benefit cost. This amendment was first recognized at December 31, 2020 year-end disclosure and first included in expense for FY2021.

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 2021 VALUATION**

Location	Nonretired Participants		Retired Participants					Total
	Active	Total	Retiree	Dependent Spouse	Surviving Spouse	Disabled		
140 Appalachian Power Co. - Distribution	689	689	1,037	625	310	40	2,012	
215 Appalachian Power Co. - Generation	499	499	983	611	213	23	1,830	
150 Appalachian Power Co. - Transmission	0	0	134	95	14	2	245	
Appalachian Power Co. - FERC	1,188	1,188	2,154	1,331	537	65	4,087	
225 Cedar Coal Co	0	0	2	1	6	0	9	
Appalachian Power Co. - SEC	1,188	1,188	2,156	1,332	543	65	4,096	
211 AEP Texas Central Company - Distribution	666	666	783	446	262	24	1,515	
147 AEP Texas Central Company - Generation	0	0	0	0	0	0	0	
169 AEP Texas Central Company - Transmission	97	97	78	43	28	1	150	
AEP Texas Central Co.	763	763	861	489	290	25	1,665	
119 AEP Texas North Company - Distribution	171	171	243	132	57	4	436	
166 AEP Texas North Company - Generation	0	0	75	36	34	0	145	
192 AEP Texas North Company - Transmission	46	46	26	13	10	0	49	
AEP Texas North Co.	217	217	344	181	101	4	630	
AEP Texas	980	980	1,205	670	391	29	2,295	
170 Indiana Michigan Power Co. - Distribution	347	347	594	293	193	7	1,087	
132 Indiana Michigan Power Co. - Generation	146	146	351	229	74	3	657	
190 Indiana Michigan Power Co. - Nuclear	723	723	534	330	88	7	959	
120 Indiana Michigan Power Co. - Transmission	77	77	128	81	22	2	233	
280 Ind Mich River Transp Lakin	115	115	143	65	32	15	255	
Indiana Michigan Power Co. - SEC	1,408	1,408	1,750	998	409	34	3,191	
110 Kentucky Power Co. - Distribution	163	163	193	102	43	11	349	
117 Kentucky Power Co. - Generation	18	18	185	126	51	13	375	
180 Kentucky Power Co. - Transmission	0	0	15	9	1	0	25	
600 Kentucky Power Co. - Kammer Actives	0	0	0	0	0	0	0	
701 Kentucky Power Co. - Mitchell Actives	147	147	0	0	0	0	0	
702 Kentucky Power Co. - Mitchell Inactives	0	0	137	87	0	0	224	
Kentucky Power Co.	328	328	530	324	95	24	973	
250 Ohio Power Co. - Distribution	1,002	1,002	1,515	831	441	30	2,817	
160 Ohio Power Co. - Transmission	1	1	175	109	61	2	347	
Ohio Power Co.	1,003	1,003	1,690	940	502	32	3,164	
167 Public Service Co. of Oklahoma - Distribution	428	428	499	277	151	8	935	
198 Public Service Co. of Oklahoma - Generation	185	185	260	154	47	5	466	
114 Public Service Co. of Oklahoma - Transmission	53	53	59	40	13	1	113	
Public Service Co. of Oklahoma	666	666	818	471	211	14	1,514	
159 Southwestern Electric Power Co. - Distribution	367	367	334	184	76	11	605	
168 Southwestern Electric Power Co. - Generation	422	422	316	201	84	14	615	
161 Southwestern Electric Power Co. - Texas - Distribution	141	141	170	102	43	10	325	
111 Southwestern Electric Power Co. - Texas - Transmission	0	0	0	0	0	0	0	
194 Southwestern Electric Power Co. - Transmission	61	61	52	29	16	0	97	
Southwestern Electric Power Co.	991	991	872	516	219	35	1,642	
230 Kingsport Power Co. - Distribution	37	37	48	29	12	1	90	
260 Kingsport Power Co. - Transmission	0	0	8	3	2	0	13	
Kingsport Power Co.	37	37	56	32	14	1	103	
210 Wheeling Power Co. - Distribution	29	29	64	36	17	2	119	
200 Wheeling Power Co. - Transmission	0	0	2	0	3	0	5	
Wheeling Power Co.	29	29	66	36	20	2	124	
103 American Electric Power Service Corporation	3,534	3,534	3,612	1,972	362	64	6,010	
293 Elmwood	0	0	36	1	0	0	37	
292 AEP River Operations LLC	0	0	153	44	3	0	200	
American Electric Power Service Corporation	3,534	3,534	3,801	2,017	365	64	6,247	
270 Cook Coal Terminal	10	10	13	6	1	0	20	
AEP Generating Company	10	10	13	6	1	0	20	
104 Cardinal Operating Company	0	0	299	162	49	0	510	
181 Ohio Power Co. - Generation	9	9	1,135	692	284	6	2,117	
AEP Generation Resources - FERC	9	9	1,434	854	333	6	2,627	
290 Conesville Coal Preparation Company	0	0	12	9	1	0	22	
AEP Generation Resources - SEC	9	9	1,446	863	334	6	2,649	
175 AEP Energy Partners	87	87	8	3	0	1	12	
171 CSW Energy, Inc.	1	1	6	1	2	0	9	
419 Onsite Partners	4	4	0	0	0	0	0	
AEP Energy Supply	101	101	1,460	867	336	7	2,670	
143 AEP Pro Serv, Inc.	0	0	1	1	0	0	2	
AEP Pro Serv, Inc.	0	0	1	1	0	0	2	
245 Dolet Hills	33	33	75	57	2	18	152	
Dolet Hills	33	33	75	57	2	18	152	
Total	10,308	10,308	14,493	8,267	3,108	325	26,193	

AMERICAN ELECTRIC POWER
NON-UMWA POSTRETIREMENT WELFARE PLAN
2021 NET PERIODIC POSTRETIREMENT BENEFIT COST

Location	Accumulated Postretirement Benefit Obligation	Expected Net Benefit Payments	Fair Value of Assets	Service Cost	*Other Cost					Net Periodic Postretirement Benefit Cost
					Interest Cost	Expected Return on Assets	Amortizations		Total "Other" Cost	
							PSC	(G)/L		
140 Appalachian Power Co. - Distribution	\$88,279,838	\$6,362,393	\$148,735,596	\$557,406	\$2,184,740	(\$6,919,127)	(\$5,242,393)	\$0	(\$9,976,780)	(\$9,419,374)
215 Appalachian Power Co. - Generation	75,099,863	5,681,834	126,529,717	467,584	1,854,983	(5,886,117)	(4,293,644)	0	(8,324,778)	(7,857,194)
150 Appalachian Power Co. - Transmission	8,276,368	503,036	13,944,187	0	204,674	(648,679)	(794,557)	0	(1,238,562)	(1,238,562)
Appalachian Power Co. - FERC	\$171,656,069	\$12,547,263	\$289,209,500	\$1,024,990	\$4,244,397	(\$13,453,923)	(\$10,330,594)	\$0	(\$19,540,120)	(\$18,515,130)
225 Cedar Coal Co	187,897	19,662	316,573	0	4,542	(14,727)	(8,575)	0	(18,760)	(18,760)
Appalachian Power Co. - SEC	\$171,843,966	\$12,566,925	\$289,526,073	\$1,024,990	\$4,248,939	(\$13,468,650)	(\$10,339,169)	\$0	(\$19,558,880)	(\$18,533,890)
211 AEP Texas Central Company - Distribution	\$63,760,782	\$4,076,082	\$107,425,412	\$491,577	\$1,586,792	(\$4,997,392)	(\$3,984,865)	\$0	(\$7,395,465)	(\$6,903,888)
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	6,579,397	389,301	11,085,097	70,051	164,629	(515,675)	(402,383)	0	(753,429)	(683,378)
AEP Texas Central Co.	\$70,340,179	\$4,465,383	\$118,510,509	\$561,628	\$1,751,421	(\$5,513,067)	(\$4,402,585)	\$0	(\$8,164,231)	(\$7,602,603)
119 AEP Texas North Company - Distribution	18,931,858	1,221,714	31,896,764	125,906	470,494	(1,483,826)	(1,307,215)	0	(2,320,547)	(2,194,641)
166 AEP Texas North Company - Generation	3,449,458	301,491	5,811,714	0	84,141	(270,359)	(72,225)	0	(258,443)	(258,443)
192 AEP Texas North Company - Transmission	2,601,222	126,052	4,382,590	31,638	65,541	(203,877)	(238,842)	0	(377,178)	(345,540)
AEP Texas North Co.	\$24,982,538	\$1,649,257	\$42,091,068	\$157,544	\$620,176	(\$1,958,026)	(\$1,618,282)	\$0	(\$2,956,168)	(\$2,788,624)
AEP Texas	\$95,322,717	\$6,114,640	\$160,601,577	\$719,172	\$2,371,597	(\$7,471,129)	(\$6,020,867)	\$0	(\$11,120,399)	(\$10,401,227)
170 Indiana Michigan Power Co. - Distribution	\$41,737,594	\$3,107,071	\$70,320,314	\$298,430	\$1,032,553	(\$3,271,276)	(\$2,672,360)	\$0	(\$4,911,083)	(\$4,612,653)
132 Indiana Michigan Power Co. - Generation	27,516,866	2,310,207	46,360,954	94,905	674,830	(2,156,695)	(1,899,653)	0	(3,381,518)	(3,286,613)
190 Indiana Michigan Power Co. - Nuclear	52,211,000	3,243,780	87,966,113	716,887	1,308,563	(4,092,152)	(3,654,735)	0	(6,438,324)	(5,721,437)
120 Indiana Michigan Power Co. - Transmission	9,339,960	580,345	15,736,147	69,678	232,593	(732,040)	(614,127)	0	(1,113,574)	(1,043,896)
280 Ind Mich River Transp Lakin	10,708,005	742,910	18,041,056	101,516	266,230	(839,263)	(826,756)	0	(1,399,789)	(1,298,273)
Indiana Michigan Power Co. - SEC	\$141,513,425	\$9,984,313	\$238,424,584	\$1,281,416	\$3,514,769	(\$11,091,426)	(\$9,667,631)	\$0	(\$17,244,288)	(\$15,962,872)
110 Kentucky Power Co. - Distribution	\$17,438,002	\$1,162,831	\$29,379,887	\$113,503	\$432,831	(\$1,366,742)	(\$1,237,732)	\$0	(\$2,171,643)	(\$2,058,140)
117 Kentucky Power Co. - Generation	14,027,919	1,365,083	23,634,512	16,923	340,848	(1,099,469)	(633,554)	0	(1,392,175)	(1,375,252)
180 Kentucky Power Co. - Transmission	808,098	42,368	1,361,499	0	20,070	(63,336)	(199,408)	0	(242,674)	(242,674)
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	3,977,158	28,709	6,700,794	152,089	104,932	(311,719)	(170,397)	0	(377,184)	(225,095)
702 Kentucky Power Co. - Mitchell Inactives	8,137,595	798,119	13,710,379	0	197,397	(637,802)	(214,917)	0	(655,322)	(655,322)
Kentucky Power Co.	\$44,388,772	\$3,397,110	\$74,787,071	\$282,515	\$1,096,078	(\$3,479,068)	(\$2,498,538)	\$0	(\$4,881,528)	(\$4,599,013)
250 Ohio Power Co. - Distribution	\$113,474,222	\$8,345,449	\$191,183,587	\$815,257	\$2,808,647	(\$8,893,792)	(\$6,075,069)	\$0	(\$12,160,214)	(\$11,344,957)
160 Ohio Power Co. - Transmission	11,096,325	784,626	18,695,305	1,377	273,050	(869,699)	(1,050,717)	0	(1,647,366)	(1,645,989)
Ohio Power Co.	\$124,570,547	\$9,130,075	\$209,878,892	\$816,634	\$3,081,697	(\$9,763,491)	(\$7,125,786)	\$0	(\$13,807,580)	(\$12,990,946)
167 Public Service Co. of Oklahoma - Distribution	\$38,398,496	\$2,571,270	\$64,694,536	\$367,994	\$955,968	(\$3,009,567)	(\$2,541,892)	\$0	(\$4,595,491)	(\$4,227,497)
198 Public Service Co. of Oklahoma - Generation	21,647,559	1,697,181	36,472,230	169,676	534,837	(1,696,675)	(1,533,407)	0	(2,695,245)	(2,525,569)
114 Public Service Co. of Oklahoma - Transmission	4,662,789	339,639	7,855,958	40,211	115,623	(365,456)	(321,257)	0	(571,900)	(530,879)
Public Service Co. of Oklahoma	\$64,708,844	\$4,608,090	\$109,022,724	\$577,881	\$1,606,428	(\$5,071,698)	(\$4,396,556)	\$0	(\$7,861,826)	(\$7,283,945)
159 Southwestern Electric Power Co. - Distribution	\$29,298,141	\$1,820,835	\$49,362,081	\$294,769	\$731,550	(\$2,296,306)	(\$1,841,550)	\$0	(\$3,406,306)	(\$3,111,537)
168 Southwestern Electric Power Co. - Generation	30,004,856	1,882,199	50,552,768	317,223	749,366	(2,351,697)	(2,188,825)	0	(3,791,156)	(3,473,933)
161 Southwestern Electric Power Co. - Texas - Distribution	13,787,877	955,436	23,230,085	113,965	342,392	(1,080,655)	(966,317)	0	(1,704,580)	(1,590,615)
111 Southwestern Electric Power Co. - Texas - Transmission	0	0	0	0	0	0	0	0	0	0
194 Southwestern Electric Power Co. - Transmission	4,287,156	263,408	7,223,084	46,567	107,173	(336,015)	(287,778)	0	(516,620)	(470,053)
Southwestern Electric Power Co.	\$77,378,030	\$4,921,878	\$130,368,018	\$772,524	\$1,930,481	(\$6,064,673)	(\$5,284,470)	\$0	(\$9,418,662)	(\$8,646,138)
230 Kingsport Power Co. - Distribution	\$3,794,404	\$268,344	\$6,392,886	\$37,395	\$94,311	(\$297,395)	(\$183,257)	\$0	(\$386,341)	(\$348,946)
260 Kingsport Power Co. - Transmission	396,348	29,921	667,775	0	9,728	(31,065)	(41,027)	0	(62,364)	(62,364)
Kingsport Power Co.	\$4,190,752	\$298,265	\$7,060,661	\$37,395	\$104,039	(\$328,460)	(\$224,284)	\$0	(\$448,705)	(\$411,310)
210 Wheeling Power Co. - Distribution	\$4,574,276	\$359,763	\$7,706,830	\$26,634	\$112,765	(\$358,519)	(\$266,272)	\$0	(\$512,026)	(\$485,392)
200 Wheeling Power Co. - Transmission	87,155	15,027	146,840	0	2,032	(6,831)	(2,790)	0	(7,589)	(7,589)
Wheeling Power Co.	\$4,661,431	\$374,790	\$7,853,670	\$26,634	\$114,797	(\$365,350)	(\$269,062)	\$0	(\$519,615)	(\$492,981)
103 American Electric Power Service Corporation	\$300,584,440	\$18,771,272	\$506,430,535	\$3,040,177	\$7,504,602	(\$23,558,967)	(\$17,732,182)	\$0	(\$33,786,547)	(\$30,746,370)
293 Elmwood	721,734	24,249	1,215,992	0	18,097	(56,568)	(276,228)	0	(314,699)	(314,699)
292 AEP River Operations LLC	5,387,904	396,748	9,077,646	0	132,365	(422,289)	(1,252,571)	0	(1,542,495)	(1,542,495)
American Electric Power Service Corporation	\$306,694,078	\$19,192,269	\$516,724,173	\$3,040,177	\$7,655,064	(\$24,037,824)	(\$19,260,981)	\$0	(\$35,643,741)	(\$32,603,564)
270 Cook Coal Terminal	\$769,375	\$50,627	\$1,296,258	\$6,482	\$19,143	(\$60,301)	(\$68,842)	\$0	(\$110,000)	(\$103,518)
AEP Generating Company	\$769,375	\$50,627	\$1,296,258	\$6,482	\$19,143	(\$60,301)	(\$68,842)	\$0	(\$110,000)	(\$103,518)
104 Cardinal Operating Company	\$16,507,306	\$1,506,500	\$27,811,832	\$0	\$401,849	(\$1,293,796)	(\$1,144,707)	\$0	(\$2,036,654)	(\$2,036,654)
181 Ohio Power Co. - Generation	73,680,497	6,950,071	124,138,341	9,413	1,791,037	(5,774,871)	(4,484,067)	0	(8,467,901)	(8,458,488)
AEP Generation Resources - FERC	\$90,187,803	\$8,456,571	\$151,950,173	\$9,413	\$2,192,886	(\$7,068,667)	(\$5,628,774)	\$0	(\$10,504,555)	(\$10,495,142)
290 Conesville Coal Preparation Company	859,147	92,888	1,447,508	0	20,731	(67,338)	(53,218)	0	(99,825)	(99,825)
AEP Generation Resources - SEC	\$91,046,950	\$8,549,459	\$153,397,681	\$9,413	\$2,213,617	(\$7,136,005)	(\$5,681,992)	\$0	(\$10,604,380)	(\$10,594,967)
171 CSW Energy, Inc.	219,149	9,274	369,227	614	5,486	(17,176)	(15,600)	0	(27,290)	(26,676)
175 AEP Energy Partners	1,618,678	52,244	2,727,180	68,945	42,372	(126,867)	(34,217)	0	(118,712)	(49,767)
419 Onsite Partners	32,996	0	55,592	2,297	900	(2,586)	(61)	0	(1,747)	550
AEP Energy Supply	\$92,917,773	\$8,610,977	\$156,549,680	\$81,269	\$2,262,375	(\$7,282,634)	(\$5,731,870)	\$0	(\$10,752,129)	(\$10,670,860)
143 AEP Pro Serv, Inc.	\$97,777	\$3,103	\$164,737	\$0	\$2,454	(\$7,664)	(\$1,300)	\$0	(\$6,510)	(\$6,510)
AEP Pro Serv, Inc.	\$97,777	\$3,103	\$164,737	\$0	\$2,454	(\$7,664)	(\$1,300)	\$0	(\$6,510)	(\$6,510)
245 Dolet Hills	\$6,225,583	\$628,397	\$10,488,984	\$37,738	\$151,753	(\$487,944)	(\$11,733)	\$0	(\$347,924)	(\$310,186)
Dolet Hills	\$6,225,583	\$628,397	\$10,488,984	\$37,738	\$151,753	(\$487,944)	(\$11,733)	\$0	(\$347,924)	(\$310,186)
Total	\$1,135,283,070	\$79,881,459	\$1,912,747,102	\$8,704,827	\$28,159,614	(\$88,980,312)	(\$70,901,089)	\$0	(\$131,721,787)	(\$123,016,960)