



American Electric Power

Non-UMWA Postretirement Health Care Plan

**Actuarial Valuation Report  
Benefit Cost for Fiscal Year Beginning  
January 1, 2022 under US GAAP**

**Employer Contributions for Plan Year Beginning  
January 1, 2022**

June 2022



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# Purposes of valuation

American Electric Power (AEP) engaged Willis Towers Watson US LLC (WTW) to value the Company's other postretirement benefit plan.

As requested by the Company, this report documents the results of an actuarial valuation of the American Electric Power Non-UMWA Postretirement Health Care Plan (the Plan) as of January 1, 2022.

The primary purpose of this valuation is to determine the Net Periodic Postretirement Benefit Cost/(Income) (Benefit Cost), in accordance with FASB Accounting Standards Codification Topic 715 (ASC 715) for the fiscal year ending December 31, 2022. It is anticipated that a separate report will be prepared for year-end financial reporting purposes.

This report also contains information regarding the following:

1. Plan reporting information in accordance with FASB Accounting Standards Codification Topic 965 (ASC 965).
2. Expected contributions under the plan sponsor's funding policy for the 2022 plan year.
3. The estimated maximum tax-deductible contribution for the tax year in which the 2022 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 the following:

1. There may be certain events that have occurred since the valuation date that are not reflected in the current valuation. See Subsequent events in the Basis for valuation section below for more information.
2. This report does not present liabilities on a plan termination basis, for which a separate extensive analysis would be required. No funded status measure included in this report is intended to assess, and none may be appropriate for assessing, the sufficiency of plan assets to cover the estimated cost of settling benefit obligations, as all such measures differ in some way from plan termination obligations. In addition, funded status measures shown in this report do not reflect the current costs of settling obligations by offering immediate lump sum payments to participants and/or purchasing annuity contracts for the remaining participants (e.g., insurer profit, insurer pricing of contingent benefits and/or provision for anti-selection in the choice of a lump sum vs. an annuity).
3. The comparisons of plan obligations as determined for accounting and financial reporting purposes to plan assets presented in this report cannot be relied upon to determine the need for

nor the amount of required future plan contributions. Nevertheless, such comparisons may be useful to assess the need for future contributions because they reflect current interest rates at the measurement date in determining benefit obligations. However, asset gains and losses, demographic experience different from assumed, changes in interest rates, future benefit accruals, if any, and other factors will all affect the need for and amount of future contributions. In addition, if a plan is not required by law to be funded, benefit payments may also be paid directly by the plan sponsor as they come due.

# Section 1: Summary of key results

## Benefit cost, plan assets & obligations

All monetary amounts shown in U.S. Dollars

Fiscal Year Beginning		01/01/2022	01/01/2021
<b>Benefit Cost/ (Income)</b>	Net periodic postretirement benefit cost/(income)	(146,018,568)	(123,016,960)
	Benefit cost/(income) due to special events	0	0
	Total benefit cost/(income)	(146,018,568)	(123,016,960)
Measurement Date		01/01/2022	01/01/2021
<b>Plan Assets</b>	Fair value of plan assets (FVA)	1,998,764,120	1,912,747,102
<b>Benefit Obligations</b>	Accumulated postretirement benefit obligation (APBO)	(951,074,203)	(1,135,283,070)
<b>Funded Status</b>	Funded status	1,047,689,917	777,464,032
<b>Accumulated Other Comprehensive (Income)/Loss (Pre-tax)</b>	Net prior service cost/(credit)	(162,047,375)	(227,459,191)
	Net loss/(gain)	(116,604,362)	95,299,494
	Total accumulated other comprehensive (income)/loss (pre-tax)	(278,651,737)	(132,159,697)
<b>Assumptions</b>	Discount rate	2.90%	2.55%
	Expected long-term rate of return on plan assets	5.50%	4.75%
	Rate of compensation increase	Rates vary by age from 3.0% to 11.5%	Rates vary by age from 3.0% to 11.5%
	Current health care cost trend rate	6.25%	6.50%
	Ultimate health care cost trend rate	4.50%	4.50%
	Year of ultimate trend rate	2029	2029
	<b>Participant Data</b>	Census date	01/01/2022
Plan reporting (ASC 965) for Plan Year Beginning		01/01/2022	01/01/2021
	Present value of accumulated benefits	951,219,414	1,135,471,583
	Market value of assets	1,998,764,120	1,912,747,102
	Plan reporting discount rate	2.90%	2.55%

Employer Contributions (net of Medicare subsidy)		Plan Year 2022 (est)	Plan Year 2021
<b>Cash Flow</b>	Funding policy contributions	0	0
	Maximum tax deductible contributions	135,000,000	122,845,597
	Actual contributions	652,451 <sup>1</sup>	716,884 <sup>2</sup>
	Expected benefit payments and expenses, net of participant contributions	75,881,163	80,265,462

<sup>1</sup> Includes \$676,143 expected to be paid directly for key retirees in 2022, offset by \$23,692 in Medicare Retiree Drug Subsidies.

<sup>2</sup> Includes \$992,285 paid directly for key retirees in 2021, offset by \$275,401 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.

## Comments on results

The actuarial gains/(losses) due to demographic experience, including any assumption changes, and investment return different from assumed during the prior year were \$130,518,573 and \$76,585,284 respectively.

### Change in net periodic cost and funded position

The postretirement welfare cost/(income) decreased from \$(123,016,960) in fiscal 2021 to \$(146,018,568) in fiscal 2022, as set forth below:

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

Postretirement Welfare Cost	
Prior year	(123.0)
Change due to:	
• Expected based on prior valuation and contributions during prior year	(2.2)
• Noninvestment experience different than assumed	(0.2)
• Investment experience greater or less than assumed	(3.7)
• Assumption changes	(16.2)
• Plan amendments	(0.7)
• Settlements, curtailments, certain termination benefits	0
• Acquisitions	0
• Method changes	0
• Changes in estimation techniques	0
Current year	(146.0)

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

	2022	2021
Medical (Overall Average)		
Under age 65 <sup>1</sup>		
• HSA Basic	11,105	10,423
• HSA Plus	12,218	11,465
• HRA	13,628	12,688
Age 65 and older (before Part D offsets)		
• Medicare Select	4,322	3,758
• Medicare Standard	3,277	2,698
• CSP	2,500	2,235
Medicare Part D offsets		
• Medicare Advantage (EGWP)	(1,706)	(1,186)
• CSP (RDS)	(276)	(264)

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.

- The discount rate increased 35 basis points since the prior year which increased the postretirement welfare cost.
- Actual asset returns during 2021 were greater than the assumed rate of 4.75% which decreased the postretirement welfare cost.
- The expected return on assets assumption was increased by 75 basis points to 5.50% which decreased 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.

### 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), and subsequent legislation (the SECURE Act of 2019) that eliminated the Cadillac tax, medical device tax

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

and health insurance issuer tax. 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 additional possible future changes to PPACA or HCERA.

### **Basis for valuation**

Appendix A summarizes the assumptions, methods and models used in the valuation. Appendix B summarizes our understanding of the principal provisions of the plan being valued. Both of these appendices include a summary of any changes since the prior valuation. Unless otherwise described below under Subsequent events, assumptions were selected based on information known as of the measurement date.

### **Subsequent events**

None.

### **Additional information**

None.

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# 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 on 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, 2022. The benefit obligations were measured as of January 1, 2022 and are based on participant data as of the census date, January 1, 2022.

### 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, 2021, which reflect the expected funded status of the plan 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.

## 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 WTW. 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 the Company. WTW has evaluated the assumptions used and believes that they do not significantly conflict with what would be reasonable. U.S. GAAP requires that each significant assumption “individually represent the best estimate of the plan’s future experience solely with respect to that assumption.”

The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated by WTW, 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, 2022 measurement date will change the results shown in this report.

Certain models (as described in ASOP No. 56) were used in preparing the information presented herein. Further information on these models can be found in Appendix A.

## 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 WTW in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without WTW's prior written consent. WTW 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.



Martin P. Franzinger, ASA, MAAA  
One Health & Benefits Actuary  
Pricing Specialist  
June 2022



Chad M. Greenwalt, FSA, EA  
Director, Retirement  
Valuation Actuary  
June 2022



Joseph A. Perko, FSA, EA  
Director, Retirement  
Valuation Actuary  
June 2022

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, preparing demographic data, performing the valuation, implementing the appropriate accounting or funding calculations, etc.).

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## Section 2: Accounting exhibits

### 2.1 Balance sheet asset/(liability)

All monetary amounts shown in U.S. Dollars

Measurement Date	01/01/2022	01/01/2021
<b>A Development of Balance Sheet Asset/(Liability)<sup>1</sup></b>		
1 Accumulated postretirement benefit obligation (APBO)	(951,074,203)	(1,135,283,070)
2 Fair value of plan assets (FVA) <sup>2</sup>	1,998,764,120	1,912,747,102
3 Net balance sheet asset/(liability)	1,047,689,917	777,464,032
<b>B Current and Noncurrent Classification<sup>3</sup></b>		
1 Noncurrent asset	1,047,689,917	777,464,032
2 Current liability	0	0
3 Noncurrent liability	0	0
4 Net balance sheet asset/(liability)	1,047,689,917	777,464,032
<b>C Accumulated Other Comprehensive (Income)/Loss</b>		
1 Net prior service cost/(credit)	(162,047,375)	(227,459,191)
2 Net loss/(gain)	(116,604,362)	95,299,494
3 Accumulated other comprehensive (income)/loss <sup>4</sup>	(278,651,737)	(132,159,697)
<b>D Assumptions and Dates</b>		
1 Discount rate	2.90%	2.55%
2 Rate of compensation increase	Rates vary by age from 3.0% to 11.5%	Rates vary by age from 3.0% to 11.5%
3 Current health care cost trend rate	6.25%	6.50%
4 Ultimate health care cost trend rate	4.50%	4.50%
5 Year of ultimate trend rate	2029	2029
6 Census date	01/01/2022	01/01/2021

<sup>1</sup> Whether any amounts in this table that differ from those disclosed at year-end must be disclosed in subsequent interim financial statements should be determined.

<sup>2</sup> Excludes receivable contributions.

<sup>3</sup> The current liability (for each underfunded plan) was measured as the discounted value of benefits expected to be paid over the next 12 months in excess of the fair value of the plan's assets at the measurement date.

<sup>4</sup> Amount shown is pre-tax and should be adjusted by plan sponsor for tax effects.

## 2.2 Summary of net balances

All monetary amounts shown in U.S. Dollars

### A Summary of Prior Service Cost/(Credit) Bases

Measurement Date Established	Original Amount	Net Amount at 01/01/2022	Remaining Amortization Period	Amortization Amount in 2022	Effect of Curtailments	Other Events
12/31/2010	(13,262,115)	(1,929,737)	1.19200	1,618,911	0	0
12/31/2011	(142,137,587)	(26,089,312)	1.57370	16,578,325	0	0
12/31/2012	(468,077,578)	(112,060,586)	2.20333	50,859,570	0	0
12/31/2019	(7,509,373)	(6,122,201)	8.82684	693,586	0	0
12/31/2020	(11,506,963)	(10,356,266)	9.00000	1,150,697	0	0
12/31/2021	(5,489,273)	(5,489,273)	10.24292	535,909	0	0
<b>Total</b>		<b>(162,047,375)</b>		<b>71,436,998</b>	<b>0</b>	<b>0</b>

All monetary amounts shown in U.S. Dollars

### B Summary of Net Loss/(Gain) (see Appendix A for a description of amortization method)

Net Amount at 01/01/2022 <sup>1</sup>	Amortization Amount in 2022	Effect of Curtailments	Effect of Settlements	Other Events
(116,604,362)	0	0	0	0

<sup>1</sup> Before any immediate recognition on the same date.

## 2.3 Summary and comparison of benefit cost and cash flows

All monetary amounts shown in U.S. Dollars

Fiscal Year Ending	12/31/2022	12/31/2021
<b>A Total Benefit Cost</b>		
1 Employer service cost	6,611,191	8,704,827
2 Interest cost	26,680,463	28,159,614
3 Expected return on plan assets	(107,873,224)	(88,980,312)
4 Subtotal	(74,581,570)	(52,115,871)
5 Net prior service cost/(credit) amortization	(71,436,998)	(70,901,089)
6 Net loss/(gain) amortization	0	0
7 Amortization Subtotal	(71,436,998)	(70,901,089)
8 Net periodic postretirement benefit cost/(income)	(146,018,568)	(123,016,960)
9 Curtailment (gain)/loss	0	0
10 Settlement (gain)/loss	0	0
11 Special/contractual termination benefits	0	0
12 Other adjustments	0	0
13 Total benefit cost	(146,018,568)	(123,016,960)
<b>B Assumptions</b> (See Appendix A for interim measurements, if any)		
1 Discount rate	2.90%	2.55%
2 Expected long-term rate of return on plan assets	5.50%	4.75%
3 Rate of compensation increase	Rates vary by age from 3.0% to 11.5%	Rates vary by age from 3.0% to 11.5%
4 Current health care cost trend rate	6.25%	6.50%
5 Ultimate health care cost trend rate	4.50%	4.50%
6 Year of ultimate trend rate	2029	2029
7 Census date	01/01/2022	01/01/2021
<b>C Fair Value of Assets at Beginning of Year</b>	1,998,764,120	1,912,747,102
<b>D Cash Flows Net of Medicare Part D Subsidy</b>		
	<b>Expected</b>	<b>Actual</b>
1 Employer contributions	676,143 <sup>1</sup>	992,285
2 Plan participants' contributions	(46,719,085)	41,706,773
3 Benefits paid from plan assets	122,600,248	122,247,636
4 Expected Medicare retiree drug subsidy on current year benefit payments	(23,692)	(275,401)
<b>E Amortization Period</b>		
1 For gain/loss amortization, if applicable	10.62912	10.77948

<sup>1</sup> Expected net claims for key employees to be paid directly by AEP in 2022.

## 2.4 Detailed results for postretirement welfare cost and funded position

All monetary amounts shown in U.S. Dollars

Detailed results		01/01/2022	01/01/2021
<b>A Service Cost</b>			
1	Medical	4,375,461	5,985,423
2	Life insurance	2,235,730	2,719,404
3	Dental	0	0
4	Total	6,611,191	8,704,827
<b>B Accumulated Postretirement Benefit Obligation [APBO]</b>			
1	Medical:		
a	Participants currently receiving benefits	381,335,512	479,744,158
b	Fully eligible active participants	34,169,456	50,834,591
c	Other participants	95,508,729	130,029,891
d	Total	511,013,697	660,608,640
2	Life insurance:		
a	Participants currently receiving benefits	352,094,308	369,988,268
b	Fully eligible active participants	26,161,186	30,577,712
c	Other participants	50,463,758	60,417,666
d	Total	428,719,252	460,983,646
3	Dental:		
a	Participants currently receiving benefits	11,123,968	13,524,076
b	Fully eligible active participants	217,286	166,708
c	Other participants	0	0
d	Total	11,341,254	13,690,784
4	All Benefits:		
a	Participants currently receiving benefits	744,553,788	863,256,502
b	Fully eligible active participants	60,547,928	81,579,011
c	Other participants	145,972,487	190,447,557
d	Total	951,074,203	1,135,283,070
<b>C Assets</b>			
1	Fair value [FV]	1,998,764,120	1,912,747,102
<b>D Funded Position</b>			
1	Overfunded (underfunded) APBO	1,047,689,917	777,464,032
2	APBO funded percentage	210.2%	168.5%
<b>E Amounts in Accumulated Other Comprehensive Income</b>			
1	Prior service cost (credit)	(162,047,375)	(227,459,191)
2	Net actuarial loss (gain)	(116,604,362)	95,299,494
3	Total	(278,651,737)	(132,159,697)

## 2.5 ASC 965 (plan reporting) information

All monetary amounts shown in U.S. Dollars

Summary of Present Value of Benefits		01/01/2022	01/01/2021
<b>A Medical (ignoring Retiree Drug Subsidy)</b>			
1	Current retirees	381,480,723	479,932,671
2	Active participants fully eligible for benefits	34,169,456	50,834,591
3	Other active participants	95,508,729	130,029,891
4	Total	511,158,908	660,797,153
<b>B Life Insurance</b>			
1	Current retirees	352,094,308	369,988,268
2	Active participants fully eligible for benefits	26,161,186	30,577,712
3	Other active participants	50,463,758	60,417,666
4	Total	428,719,252	460,983,646
<b>C Dental</b>			
1	Current retirees	11,123,968	13,524,076
2	Active participants fully eligible for benefits	217,286	166,708
3	Other active participants	0	0
4	Total	11,341,254	13,690,784
<b>D Total (ignoring Retiree Drug Subsidy)</b>			
1	Current retirees	744,698,999	863,445,015
2	Active participants fully eligible for benefits	60,547,928	81,579,011
3	Other active participants	145,972,487	190,447,557
4	Total	951,219,414	1,135,471,583

### 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 2.55% 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 2021	Plan Year 2020	
<b>A Medical (ignoring Retiree Drug Subsidy)</b>			
1	Benefit obligation, beginning of year	660,797,153	732,363,393
2	Service cost	5,985,423	6,921,858
3	Interest cost	16,286,708	23,367,238
4	Participant contributions	33,651,920	30,418,762
5	Net actuarial (gain)/loss - experience	6,303,162	9,247,373
6	Net actuarial (gain)/loss - assumptions	(109,299,218)	(27,352,926)
7	Plan amendments	(5,419,256)	(11,343,363)
8	Gross benefits paid	(97,146,984)	(102,825,182)
9	Benefit obligation, end of year	511,158,908	660,797,153
<b>B Life Insurance</b>			
1	Benefit obligation, beginning of year	460,983,646	422,406,082
2	Service cost	2,719,404	2,503,841
3	Interest cost	11,572,976	13,700,981
4	Participant contributions	813,779	891,679
5	Net actuarial (gain)/loss - experience	(8,294,362)	(7,495,282)
6	Net actuarial (gain)/loss - assumptions	(22,263,203)	45,571,311
7	Plan amendments	0	0
8	Gross benefits paid	(16,812,988)	(16,594,966)
9	Benefit obligation, end of year	428,719,252	460,983,646
<b>C Dental</b>			
1	Benefit obligation, beginning of year	13,690,784	12,730,265
2	Service cost	0	0
3	Interest cost	334,498	401,185
4	Participant contributions	7,241,074	7,150,673
5	Net actuarial (gain)/loss - experience	(389,584)	1,169,546
6	Net actuarial (gain)/loss - assumptions	(1,177,837)	685,822
7	Plan amendments	(70,017)	(140,033)
8	Gross benefits paid	(8,287,664)	(8,306,674)
9	Benefit obligation, end of year	11,341,254	13,690,784
<b>D Total (ignoring Retiree Drug Subsidy)</b>			
1	Benefit obligation, beginning of year	1,135,471,583	1,167,499,740
2	Service cost	8,704,827	9,425,699
3	Interest cost	28,194,182	37,469,404
4	Participant contributions	41,706,773	38,461,114
5	Net actuarial (gain)/loss - experience	(2,380,784)	2,921,637
6	Net actuarial (gain)/loss - assumptions	(132,740,258)	18,904,207
7	Plan amendments	(5,489,273)	(11,483,396)
8	Gross benefits paid	(122,247,636)	(127,726,822)
9	Benefit obligation, end of year	951,219,414	1,135,471,583

## 2.6 Basic results for employer contributions - VEBA's

All monetary amounts shown in U.S. Dollars

All Postretirement VEBA's	Estimated December 31, 2022	Actual December 31, 2021
<b>A Qualified Asset Account Limits [QAAL]<sup>1</sup></b>	366,000,000	374,336,055
<b>B Assets</b>		
1 Market value	1,613,000,000	1,565,589,105
2 Unrecognized investment losses (gains)	0	0
3 Actuarial value [AV]	1,613,000,000	1,565,589,105
<b>C Funded Position</b>		
1 Unfunded account limits [QAAL – FV]	(1,247,000,000)	(1,191,253,050)
<b>D Employer Contributions</b>		
1 Maximum deductible available <sup>2</sup>	135,000,000	122,845,597
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

<sup>1</sup> Includes the present value of projected benefits for the union retiree medical VEBA.

<sup>2</sup> Includes amounts not contributed to trusts with capacity at year-end.

## 2.7 VEBA deduction limits

All monetary amounts shown in U.S. Dollars

Retiree Life Insurance		2021	2020
<b>A Qualified Asset Account Limit (QAAL)</b>			
1	December 31 actuarial accrued liability	235,107,850	257,866,623
2	Unrecognized liability	0	0
3	QAAL	235,107,850	257,866,623
<b>B Assets</b>			
1	Market value as of December 31	112,262,253	109,721,851
2	Unrecognized investment losses (gains)	0	0
3	Actuarial value [AV]	112,262,253	109,721,851
<b>C Funded position</b>			
1	Unfunded account limit [QAAL - AV]	122,845,597	148,144,772
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
	2021	0	0
	Total	0	0
<b>D Employer deductions for contributions to VEBAs</b>			
1	Maximum deduction available <sup>1</sup> [C.1 + Total of C.2]	122,845,597	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

<sup>1</sup> Includes amounts not contributed.

All monetary amounts shown in U.S. Dollars

Union Medical and Dental		2021	2020
<b>A Qualified Asset Account Limit (QAAL)</b>			
1	December 31 present value of projected benefits	103,201,464	135,492,398
2	Unrecognized liability	0	0
3	QAAL	103,201,464	135,492,398
<b>B Assets</b>			
1	Market value as of December 31	637,902,092	627,129,125
2	Unrecognized investment losses (gains)	0	0
3	Actuarial value [AV]	637,902,092	627,129,125
<b>C Funded position</b>			
1	Unfunded account limit [QAAL - AV]	(534,700,628)	(491,636,727)
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
	2021	0	0
	Total	0	0
<b>D Employer deductions for contributions to VEBAs</b>			
1	Maximum deduction available <sup>1</sup> [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

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<sup>1</sup> Includes amounts not contributed.

All monetary amounts shown in U.S. Dollars

Non-Union Retiree Medical and Dental		2021	2020
<b>A Qualified Asset Account Limit (QAAL)</b>			
1	December 31 actuarial accrued liability	36,026,741	42,770,819
2	Unrecognized liability	0	0
3	QAAL	36,026,741	42,770,819
<b>B Assets</b>			
1	Market value as of December 31	815,424,761	697,698,694
2	Unrecognized investment losses (gains)	0	0
3	Actuarial value [AV]	815,424,761	697,698,694
<b>C Funded position</b>			
1	Unfunded account limit [QAAL - AV]	(779,398,020)	(654,927,875)
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
	2021	0	0
	Total	295,983,694	295,983,694
<b>D Employer deductions for contributions to VEBAs</b>			
1	Maximum deduction available <sup>1</sup> [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

<sup>1</sup> Includes amounts not contributed.

## 2.8 Cumulative nondeductible contributions

All monetary amounts shown in U.S. Dollars

<b>Non-Union Retiree Medical and Dental VEBAs</b>			
	<b>Contributions Made by December 31, 2021, but Not Deducted as of December 31, 2020</b>	<b>Deductible in 2021</b>	<b>Remaining Nondeductible Contributions as of December 31, 2021</b>
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
2021	0	0	0
<b>Total</b>	<b>\$295,983,694</b>	<b>\$0</b>	<b>\$295,983,694</b>

<b>Retiree Life Insurance VEBAs</b>			
	<b>Contributions Made by December 31, 2021, but Not Deducted as of December 31, 2020</b>	<b>Deductible in 2021</b>	<b>Remaining Nondeductible Contributions as of December 31, 2021</b>
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
2021	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## 2.9 Development of maximum deductible contribution – 401(h)

All monetary amounts shown in U.S. Dollars

Plan Year Beginning		January 1, 2022		
<b>A Development of Maximum Deductible Contribution</b>				
1	Present value of projected benefits			317,267,887
2	Fair value of assets			433,175,014
3	Unfunded surplus [1 - 2]			(115,907,127)
4	Average present value of future service			8
5	Preliminary maximum deductible contribution			
a	10% of unfunded surplus [10% x A.3]			(11,590,713)
b	Aggregate normal cost [A.3 / A.4]			(13,674,735)
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			646,354
10	Maximum deductible contribution including expenses [A.8 + A.9]			646,354
<b>B Subordination Test</b>				
Year-by-year minimum of actual pension plan contribution and pension plan normal cost with interest				
	<b>Year</b>	<b>West Plan</b>	<b>East Plan</b>	<b>Combined Plan</b>
	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 <sup>1</sup>	N/A
	2004	18,614,338	56,614,811	N/A
	2005	16,222,550	55,872,817	N/A
	2006-2007	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
	2020-2021	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

<sup>1</sup> Includes only portion of normal cost and contributions after 401(h) account adoption for indicated year

## 2.10 Expected benefit disbursements, administrative expenses, and participant contributions

All monetary amounts shown in U.S. Dollars

	January 1, 2022	January 1, 2021
<b>A Medical and Dental without RDS</b>		
1 Gross disbursements	102,242,660	101,300,965
2 Participant contributions	(45,848,275)	(41,341,144)
3 Net disbursements	56,394,385	59,959,821
<b>B Life Insurance without RDS</b>		
1 Gross disbursements	20,381,280	20,932,044
2 Participant contributions	(870,810)	(980,450)
3 Net disbursements	19,510,470	19,951,594
<b>C Gross without RDS</b>		
1 Gross disbursements	122,623,940	122,233,009
2 Participant contributions	(46,719,085)	(42,321,594)
3 Net disbursements	75,904,855	79,911,415
<b>D RDS<sup>1</sup></b>		
1 Gross disbursements	(23,692)	(29,954)
2 Participant contributions	0	0
3 Net disbursements	(23,692)	(29,954)
<b>E Net with RDS</b>		
1 Gross disbursements	122,600,248	122,203,055
2 Participant contributions	(46,719,085)	(42,231,594)
3 Net disbursements	75,881,163	79,881,461

<sup>1</sup> 2020-2021 RDS payments expected to be received in 2022-2023.

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# Section 3: Participant data

## 3.1 Summary of participant data

All monetary amounts shown in U.S. Dollars

Census Date	01/01/2022	01/01/2021
<b>A Participating Employees</b>		
1 Number		
a Fully eligible	1,640	1,794
b Other	7,728	8,514
c Total participating employees	9,368	10,308
2 Average age	51.69	51.33
3 Average credited service	22.70	22.35
<b>B Retirees, Surviving Spouses and Surviving Dependents</b>		
1 Retirees		
a Number	14,844	14,818
b Average age	72.66	72.55
c Number of spouses	8,126	8,267
2 Surviving spouses and surviving dependents		
a Number	3,085	3,108
b Average age	80.65	80.71
3 Total retirees, surviving spouses and surviving dependents		
a Number <sup>1</sup>	17,929	17,926
b Average age	74.04	73.98
c Number of spouses	8,126	8,267
d Distribution at January 1, 2022		
<b>Age</b>	<b>Number</b>	
Under 55	79	
55-59	492	
60-64	2,294	
65-69	3,625	
70-74	3,893	
75-79	3,133	
80-84	2,036	
85 and over	2,377	

<sup>1</sup> Includes 287 disabled participants in 2022 and 325 disabled participants in 2021. 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	35-39	40 & Over	
Under 25	0	0	0	0	0	0	0	0	0	0
25-29	0	32	1	0	0	0	0	0	0	33
30-34	0	175	203	10	0	0	0	0	0	388
35-39	0	198	457	288	4	0	0	0	0	947
40-44	0	132	421	448	189	3	0	0	0	1,193
45-49	0	117	342	417	331	90	3	0	0	1,300
50-54	0	89	242	301	324	254	226	12	0	1,448
55-59	0	60	156	213	290	198	517	440	50	1,924
60-64	0	35	99	124	148	117	218	451	463	1,655
65-69	0	15	26	22	31	28	43	59	189	413
70 & over	0	6	9	5	4	1	6	3	33	67
Total	0	859	1,956	1,828	1,321	691	1,013	965	735	9,368
Average:	Age	51.69	Number of Participants:			Fully eligible	1,640	Males	7,611	
	Service	22.70			Other	7,728	Females	1,757		
Census data as of January 1, 2022										

# 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, 2022

### Economic Assumptions

	Postretirement Welfare Cost	Plan Reporting	Employer Contributions
Discount rate <sup>1</sup>	2.90%	2.90%	N/A
Rates of return on assets, pre-tax: <sup>1</sup>			
• 401(h) accounts	N/A	N/A	5.25%
• Life insurance	N/A	N/A	7.25%
• Union medical/dental	N/A	N/A	5.75%
• Non-union medical/dental	N/A	N/A	5.00%
• Aggregate	5.50%	N/A	N/A
• Annual rates of compensation increases	<b>Age</b>	<b>Rate</b>	
	< 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		5.05%
• Medical cost trend rate <sup>2</sup>	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 <sup>2</sup>	2021+	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.	

<sup>1</sup> Only discount rate and asset return assumptions vary between the reporting standards. All other assumptions are consistent throughout.

<sup>2</sup> 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 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 2% annually 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-2021.
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%

## 2022 Per Capita Claims Costs

### Medical

- Prior to age 65<sup>1</sup>

Age	HSA Basic	HSA Plus	HRA
< 29	3,979	4,377	4,882
30 – 34	4,868	5,355	5,973
35 – 39	5,147	5,663	6,316
40 – 44	5,630	6,194	6,908
45 – 49	6,496	7,147	7,972
50 – 54	7,976	8,775	9,788
55 – 59	9,578	10,537	11,753
60 – 64	11,852	13,039	14,544
Average	11,105	12,218	13,628

- Age 65 and after<sup>2</sup>

Age	Medicare Select	Medicare Standard	CSP
65 – 69	3,997	3,085	2,140
70 – 74	4,375	3,356	2,370
75 – 79	4,578	3,471	2,550
80 – 84	4,584	3,443	2,628
85 – 89	4,351	3,221	2,623
90 – 94	3,830	2,790	2,457
≥ 95	3,180	2,253	2,299
Average	4,322	3,277	2,500

- Medicare Part D - RDS

Age	Medicare Advantage	CSP
65 – 69	N/A	(290)
70 – 74	N/A	(316)
75 – 79	N/A	(326)
80 – 84	N/A	(323)
85 – 89	N/A	(301)
90 – 94	N/A	(260)
≥ 95	N/A	(209)
Average	N/A	(276)

<sup>1</sup> 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 and Rx claims costs to cover COVID-related utilization spikes.

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

• 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	(929)	(682)
	70 – 74	(1,010)	(741)
	75 – 79	(1,042)	(765)
	80 – 84	(1,032)	(757)
	85 – 89	(963)	(707)
	90 – 94	(832)	(611)
	≥ 95	(668)	(491)
	Average	(984)	(722)

Dental 411

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, 2022

Measurement date January 1, 2022

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)	<p>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.</p> <p>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.</p>
ASC 965 (formerly SOP 92-6)	
<ul style="list-style-type: none"> <li>• Present value of benefits</li> </ul>	<p>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.</p>
<ul style="list-style-type: none"> <li>• Funding policy</li> </ul>	<p>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.</p>
<ul style="list-style-type: none"> <li>• Benefits Not Valued</li> </ul>	<p>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. WTW 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.</p>
<ul style="list-style-type: none"> <li>• Change in Assumptions and Methods Since Prior Valuation</li> </ul>	<ul style="list-style-type: none"> <li>• Per capita claims costs were updated to reflect 2020 retiree claims experience</li> <li>• Discount rate was changed from 2.55% to 2.90%</li> <li>• The expected return on assets assumption was increased by 75 basis points to 5.50%</li> <li>• The mortality improvement projection was updated to the MP-2021 scale</li> </ul>

### 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, 2022. AEP also provided the accrued postretirement benefit costs and assets information as of December 31, 2021. Health plan vendors furnished the claims cost data. AEP supplied 2020 prescription drug rebates and ESI provided estimated 2022 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. We believe the discount rate chosen does not significantly conflict with what would be reasonable.
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. We believe the interest rates chosen does not significantly conflict with what would be reasonable.
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. Therefore, we believe the expected return on plan assets chosen does not significantly conflict with what would be reasonable.
Rates of increase in:	
<ul style="list-style-type: none"> <li>• Plan administrative expenses</li> </ul>	Administrative expenses are included in per capita claims costs and thus the medical plan trend rate is applied to these expenses. We believe this assumption does not significantly conflict with what would be reasonable.
<ul style="list-style-type: none"> <li>• Claims cost trend rates</li> </ul>	<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. We believe this assumption does not significantly conflict with what would be reasonable.</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. We believe this assumption does not significantly conflict with what would be reasonable.

## 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 2020 and paid through March 2021. AEP reported prescription drug rebates they received for 2020. 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 2022. 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 WTW morbidity curves for both medical and prescription drugs to develop the quinquennial claims cost models.

In addition, AEP has decided to load the medical and Rx claims portion of rates to cover potential utilization spikes for 2022 as a response to widespread shutdowns and abatement of basic medical services during parts of 2020 and 2021 in response to the COVID-19 pandemic. We believe this assumption does not significantly conflict with what would be reasonable.

- Post-65 retiree medical rates

2022 monthly claim rates were calculated separately for the Medicare Advantage options and CSP Medicare-eligible plans by dividing 2020 incurred claims (Rx only, except for CSP) paid through March 2021 by covered lives and trending forward two years to 2022. Prescription drug claim rates were then multiplied by pricing change factors representing the effect of any pricing and other program changes for 2021 and 2022. The 2% temporary utilization spike for 2022 described for pre-65 benefits was applied to CSP as well.

Next, 2022 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 WTW morbidity curves for medical and prescription drugs to develop quinquennial age-banded claims cost models. We believe this assumption does not significantly conflict with what would be reasonable.

- Dental rates

Aetna supplied data on dental claims incurred in 2020 and paid through March 2021. Claims experience for retirees was analyzed to derive the 2020 dental claim rates. The single coverage rate was trended to 2022 and administrative costs were added to derive the per capita claims cost assumption. We believe this assumption does not significantly conflict with what would be reasonable.

## Medicare Part D offsets

- RDS

We calibrated our modelling tool to reflect the 2022 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 2018.

After the plan-specific benefit provisions have been calibrated to current costs, the Modeler trends costs forward to 2022 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 2022 minus the greater of \$400.44 per year (the national average Part D premium) and 25.5% of the gross value of Part D to the projected 2022 value of AEP coverage minus the average projected 2022 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 2022, using the continuance table calibrated to AEP's CSP plan costs. This produced a 2022 per person employer subsidy of \$276 for CSP, which was then converted to rates that varied by participant age band using WTW's prescription drug morbidity factors. We believe this assumption does not significantly conflict with what would be reasonable.

- 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 2022 Part D plans. These amounts were converted to rates varying by quinquennial age band using WTW's standard prescription drug morbidity factors. We believe this assumption does not significantly conflict with what would be reasonable.

**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. We believe this assumption does not significantly conflict with what would be reasonable.
Disabled Mortality	Assumptions were selected by the plan sponsor and as required by U.S. GAAP, represent a best estimate of future experience. We believe this assumption does not significantly conflict with what would be reasonable.
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. We believe this assumption does not significantly conflict with what would be reasonable.
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. We believe this assumption does not significantly conflict with what would be reasonable.



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. We believe this assumption does not significantly conflict with what would be reasonable.
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. We believe this assumption does not significantly conflict with what would be reasonable.
Participation	
<ul style="list-style-type: none"> <li>• Participants/Spouses</li> </ul>	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. We believe this assumption does not significantly conflict with what would be reasonable.
<ul style="list-style-type: none"> <li>• Covered dependents</li> </ul>	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. We believe this assumption does not significantly conflict with what would be reasonable.
<ul style="list-style-type: none"> <li>• Covered Spouse age</li> </ul>	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. We believe this assumption does not significantly conflict with what would be reasonable.

### 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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### Model Descriptions and Disclosure in Accordance with ASOP No. 56

Quantify	<p>Quantify is the WTW centrally developed, tested and maintained Global actuarial valuation system. It is used to perform valuations of clients' benefit plans.</p> <p>Quantify provides the ability to process data, calculate benefits and value benefit liabilities, develop results using applicable standards, and generate client reports.</p> <p>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.</p> <p>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.</p>
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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.

**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 models used for this analysis are designed specifically for these purposes, and we know of no material limitations that would prevent the models 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 models 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.

### 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 models used for this analysis are 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 models from being suitable for these intended purposes.

We are not aware of any material inconsistencies among assumptions used in this work. The models 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 models 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 individuals signing or delivering this report have relied on other WTW employees and actuaries who develop, test and maintain each of the proprietary models used for this analysis and have also performed a limited review of assumptions and results to ensure that the models have been set up appropriately and coded correctly. We have not relied on any external experts to develop, review, or validate the models 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 5% 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 25% 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

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.

### 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.

#### 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% (45% 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, 2021 year-end disclosure and first included in expense for FY2022.

### 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 2022 VALUATION**

Location	Nonretired Participants		Retired Participants				
	Active	Total	Retiree	Dependent Spouse	Surviving Spouse	Disabled	Total
140 Appalachian Power Co. - Distribution	631	631	1,033	616	296	34	1,979
215 Appalachian Power Co. - Generation	441	441	972	584	215	26	1,797
150 Appalachian Power Co. - Transmission	3	3	122	84	20	2	228
<b>Appalachian Power Co. - FERC</b>	<b>1,075</b>	<b>1,075</b>	<b>2,127</b>	<b>1,284</b>	<b>531</b>	<b>62</b>	<b>4,004</b>
225 Cedar Coal Co	0	0	1	0	6	0	7
<b>Appalachian Power Co. - SEC</b>	<b>1,075</b>	<b>1,075</b>	<b>2,128</b>	<b>1,284</b>	<b>537</b>	<b>62</b>	<b>4,011</b>
211 AEP Texas Central Company - Distribution	615	615	800	437	253	21	1,511
147 AEP Texas Central Company - Generation	0	0	0	0	0	0	0
169 AEP Texas Central Company - Transmission	90	90	74	39	30	1	144
<b>AEP Texas Central Co.</b>	<b>705</b>	<b>705</b>	<b>874</b>	<b>476</b>	<b>283</b>	<b>22</b>	<b>1,655</b>
119 AEP Texas North Company - Distribution	146	146	243	125	60	6	434
166 AEP Texas North Company - Generation	0	0	70	31	30	0	131
192 AEP Texas North Company - Transmission	44	44	27	13	10	1	51
<b>AEP Texas North Co.</b>	<b>190</b>	<b>190</b>	<b>340</b>	<b>169</b>	<b>100</b>	<b>7</b>	<b>616</b>
<b>AEP Texas</b>	<b>895</b>	<b>895</b>	<b>1,214</b>	<b>645</b>	<b>383</b>	<b>29</b>	<b>2,271</b>
170 Indiana Michigan Power Co. - Distribution	310	310	591	296	182	8	1,077
132 Indiana Michigan Power Co. - Generation	106	106	378	248	68	2	696
190 Indiana Michigan Power Co. - Nuclear	646	646	586	358	90	5	1,039
120 Indiana Michigan Power Co. - Transmission	70	70	132	80	24	2	238
280 Ind Mich River Transp Lakin	94	94	140	63	36	13	252
<b>Indiana Michigan Power Co. - SEC</b>	<b>1,226</b>	<b>1,226</b>	<b>1,827</b>	<b>1,045</b>	<b>400</b>	<b>30</b>	<b>3,302</b>
110 Kentucky Power Co. - Distribution	134	134	212	108	38	11	369
117 Kentucky Power Co. - Generation	15	15	203	134	47	14	398
180 Kentucky Power Co. - Transmission	0	0	13	8	3	0	24
600 Kentucky Power Co. - Kammer Actives	0	0	0	0	0	0	0
701 Kentucky Power Co. - Mitchell Actives	121	121	0	0	0	0	0
702 Kentucky Power Co. - Mitchell Inactives	0	0	133	83	0	0	216
<b>Kentucky Power Co.</b>	<b>270</b>	<b>270</b>	<b>561</b>	<b>333</b>	<b>88</b>	<b>25</b>	<b>1,007</b>
250 Ohio Power Co. - Distribution	899	899	1,499	810	426	26	2,761
160 Ohio Power Co. - Transmission	9	9	165	98	64	2	329
<b>Ohio Power Co.</b>	<b>908</b>	<b>908</b>	<b>1,664</b>	<b>908</b>	<b>490</b>	<b>28</b>	<b>3,090</b>
167 Public Service Co. of Oklahoma - Distribution	394	394	488	275	143	8	914
198 Public Service Co. of Oklahoma - Generation	158	158	264	151	53	6	474
114 Public Service Co. of Oklahoma - Transmission	44	44	61	42	11	1	115
<b>Public Service Co. of Oklahoma</b>	<b>596</b>	<b>596</b>	<b>813</b>	<b>468</b>	<b>207</b>	<b>15</b>	<b>1,503</b>
159 Southwestern Electric Power Co. - Distribution	340	340	342	184	74	8	608
168 Southwestern Electric Power Co. - Generation	366	366	336	205	81	15	637
161 Southwestern Electric Power Co. - Texas - Distribution	136	136	169	103	45	11	328
111 Southwestern Electric Power Co. - Texas - Transmission	0	0	0	0	0	0	0
194 Southwestern Electric Power Co. - Transmission	60	60	50	27	19	2	98
<b>Southwestern Electric Power Co.</b>	<b>902</b>	<b>902</b>	<b>897</b>	<b>519</b>	<b>219</b>	<b>36</b>	<b>1,671</b>
230 Kingsport Power Co. - Distribution	35	35	48	27	11	1	87
260 Kingsport Power Co. - Transmission	0	0	8	2	2	0	12
<b>Kingsport Power Co.</b>	<b>35</b>	<b>35</b>	<b>56</b>	<b>29</b>	<b>13</b>	<b>1</b>	<b>99</b>
210 Wheeling Power Co. - Distribution	24	24	66	41	15	2	124
200 Wheeling Power Co. - Transmission	0	0	1	0	3	0	4
<b>Wheeling Power Co.</b>	<b>24</b>	<b>24</b>	<b>67</b>	<b>41</b>	<b>18</b>	<b>2</b>	<b>128</b>
103 American Electric Power Service Corporation	3,325	3,325	3,664	1,949	377	55	6,045
293 Elmwood	0	0	36	1	0	0	37
292 AEP River Operations LLC	0	0	150	43	4	0	197
<b>American Electric Power Service Corporation</b>	<b>3,325</b>	<b>3,325</b>	<b>3,850</b>	<b>1,993</b>	<b>381</b>	<b>55</b>	<b>6,279</b>
270 Cook Coal Terminal	7	7	12	7	1	0	20
<b>AEP Generating Company</b>	<b>7</b>	<b>7</b>	<b>12</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>20</b>
104 Cardinal Operating Company	0	0	287	160	50	0	497
181 Ohio Power Co. - Generation	2	2	1,079	643	293	3	2,018
<b>AEP Generation Resources - FERC</b>	<b>2</b>	<b>2</b>	<b>1,366</b>	<b>803</b>	<b>343</b>	<b>3</b>	<b>2,515</b>
290 Conesville Coal Preparation Company	0	0	11	8	1	0	20
<b>AEP Generation Resources - SEC</b>	<b>2</b>	<b>2</b>	<b>1,377</b>	<b>811</b>	<b>344</b>	<b>3</b>	<b>2,535</b>
175 AEP Energy Partners	55	55	8	3	0	1	12
171 CSW Energy, Inc.	1	1	6	1	2	0	9
419 Onsite Partners	3	3	0	0	0	0	0
<b>AEP Energy Supply</b>	<b>61</b>	<b>61</b>	<b>1,391</b>	<b>815</b>	<b>346</b>	<b>4</b>	<b>2,556</b>
143 AEP Pro Serv, Inc.	0	0	1	1	0	0	2
<b>AEP Pro Serv, Inc.</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>
245 Dolet Hills	44	44	76	38	2	0	116
<b>Dolet Hills</b>	<b>44</b>	<b>44</b>	<b>76</b>	<b>38</b>	<b>2</b>	<b>0</b>	<b>116</b>
<b>Total</b>	<b>9,368</b>	<b>9,368</b>	<b>14,557</b>	<b>8,126</b>	<b>3,085</b>	<b>287</b>	<b>26,055</b>

**AMERICAN ELECTRIC POWER  
NON-UMWA POSTRETIREMENT WELFARE PLAN  
2022 NET PERIODIC POSTRETIREMENT BENEFIT COST**

Location	Accumulated Postretirement Benefit Obligation	Expected Net Benefit Payments	Fair Value of Assets	Service Cost	Interest Cost	Expected Return on Assets	"Other Cost"		Total "Other" Cost	Net Periodic Postretirement Benefit Cost
							Amortizations			
							PSC	(G)/L		
140 Appalachian Power Co. - Distribution	\$73,807,137	\$6,080,709	\$155,112,037	\$412,508	\$2,064,830	(\$8,371,391)	(\$5,284,505)	\$0	(\$11,591,066)	(\$11,178,558)
215 Appalachian Power Co. - Generation	62,432,649	5,261,649	131,207,574	357,058	1,745,153	(7,081,268)	(4,330,784)	0	(9,666,899)	(9,309,841)
150 Appalachian Power Co. - Transmission	6,723,735	455,293	14,130,507	1,376	188,474	(762,623)	(798,701)	0	(1,372,850)	(1,371,474)
<b>Appalachian Power Co. - FERC</b>	<b>\$142,963,521</b>	<b>\$11,797,651</b>	<b>\$300,450,118</b>	<b>\$770,942</b>	<b>\$3,998,457</b>	<b>(\$16,215,282)</b>	<b>(\$10,413,990)</b>	<b>\$0</b>	<b>(\$22,630,815)</b>	<b>(\$21,859,873)</b>
225 Cedar Coal Co.	100,360	14,311	210,915	0	2,704	(11,383)	(8,673)	0	(17,352)	(17,352)
<b>Appalachian Power Co. - SEC</b>	<b>\$143,063,881</b>	<b>\$11,811,962</b>	<b>\$300,661,033</b>	<b>\$770,942</b>	<b>\$4,001,161</b>	<b>(\$16,226,665)</b>	<b>(\$10,422,663)</b>	<b>\$0</b>	<b>(\$22,648,167)</b>	<b>(\$21,877,225)</b>
211 AEP Texas Central Company - Distribution	\$53,991,703	\$4,103,954	\$113,468,201	\$370,885	\$1,517,433	(\$6,123,875)	(\$4,015,092)	\$0	(\$8,621,534)	(\$8,250,649)
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	5,389,017	344,292	11,325,482	55,852	152,945	(611,236)	(405,400)	0	(863,691)	(807,839)
<b>AEP Texas Central Co.</b>	<b>\$59,380,720</b>	<b>\$4,448,246</b>	<b>\$124,793,683</b>	<b>\$426,737</b>	<b>\$1,670,378</b>	<b>(\$6,735,111)</b>	<b>(\$4,435,829)</b>	<b>\$0</b>	<b>(\$9,500,562)</b>	<b>(\$9,073,825)</b>
119 AEP Texas North Company - Distribution	15,591,458	1,200,073	32,766,788	83,205	437,289	(1,768,422)	(1,316,023)	0	(2,647,156)	(2,563,951)
166 AEP Texas North Company - Generation	2,893,102	276,012	6,080,102	0	79,926	(328,143)	(73,534)	0	(321,751)	(321,751)
192 AEP Texas North Company - Transmission	2,175,483	122,481	4,571,964	24,874	62,047	(246,749)	(240,123)	0	(424,825)	(399,951)
<b>AEP Texas North Co.</b>	<b>\$20,660,043</b>	<b>\$1,598,566</b>	<b>\$43,418,854</b>	<b>\$108,079</b>	<b>\$579,262</b>	<b>(\$2,343,314)</b>	<b>(\$1,629,680)</b>	<b>\$0</b>	<b>(\$3,393,732)</b>	<b>(\$3,285,653)</b>
<b>AEP Texas</b>	<b>\$80,040,763</b>	<b>\$6,046,812</b>	<b>\$168,212,537</b>	<b>\$534,816</b>	<b>\$2,249,640</b>	<b>(\$9,078,425)</b>	<b>(\$6,065,509)</b>	<b>\$0</b>	<b>(\$12,894,294)</b>	<b>(\$12,359,478)</b>
170 Indiana Michigan Power Co. - Distribution	\$35,069,352	\$2,967,424	\$73,701,255	\$218,752	\$980,635	(\$3,977,654)	(\$2,692,593)	\$0	(\$5,689,612)	(\$5,470,860)
132 Indiana Michigan Power Co. - Generation	23,719,771	2,535,007	49,849,136	60,438	653,131	(2,690,356)	(1,913,841)	0	(3,951,066)	(3,890,628)
190 Indiana Michigan Power Co. - Nuclear	45,097,987	3,407,535	94,777,293	529,472	1,274,140	(5,115,127)	(3,681,719)	0	(7,522,706)	(6,993,234)
120 Indiana Michigan Power Co. - Transmission	8,095,739	608,752	17,013,891	54,624	227,597	(918,239)	(619,283)	0	(1,309,925)	(1,255,301)
280 Ind Mich River Transp Lakin	8,616,342	644,665	18,107,983	75,156	242,773	(977,287)	(831,204)	0	(1,565,718)	(1,490,562)
<b>Indiana Michigan Power Co. - SEC</b>	<b>\$120,599,191</b>	<b>\$10,163,383</b>	<b>\$253,449,558</b>	<b>\$938,442</b>	<b>\$3,378,276</b>	<b>(\$13,678,663)</b>	<b>(\$9,738,640)</b>	<b>\$0</b>	<b>(\$20,039,027)</b>	<b>(\$19,100,585)</b>
110 Kentucky Power Co. - Distribution	\$14,681,825	\$1,160,191	\$30,855,116	\$84,620	\$411,524	(\$1,665,249)	(\$1,245,395)	\$0	(\$2,499,120)	(\$2,414,500)
117 Kentucky Power Co. - Generation	12,661,736	1,411,209	26,609,726	10,915	347,191	(1,436,126)	(640,494)	0	(1,729,429)	(1,718,514)
180 Kentucky Power Co. - Transmission	636,769	39,497	1,338,225	0	17,898	(72,224)	(199,818)	0	(254,144)	(254,144)
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	2,700,223	23,940	5,674,751	114,248	81,275	(306,266)	(172,543)	0	(397,534)	(283,286)
702 Kentucky Power Co. - Mitchell Inactives	6,704,333	725,316	14,089,732	0	183,984	(760,422)	(218,838)	0	(795,276)	(795,276)
<b>Kentucky Power Co.</b>	<b>\$37,384,886</b>	<b>\$3,360,153</b>	<b>\$78,567,550</b>	<b>\$209,783</b>	<b>\$1,041,872</b>	<b>(\$4,240,287)</b>	<b>(\$2,519,618)</b>	<b>\$0</b>	<b>(\$5,718,033)</b>	<b>(\$5,508,250)</b>
250 Ohio Power Co. - Distribution	\$94,744,497	\$8,056,634	\$199,113,698	\$621,556	\$2,649,629	(\$10,746,159)	(\$6,128,220)	\$0	(\$14,224,750)	(\$13,603,194)
160 Ohio Power Co. - Transmission	9,494,243	740,077	19,952,967	8,367	264,921	(1,076,861)	(1,056,551)	0	(1,868,491)	(1,860,124)
<b>Ohio Power Co.</b>	<b>\$104,238,740</b>	<b>\$8,796,711</b>	<b>\$219,066,665</b>	<b>\$629,923</b>	<b>\$2,914,550</b>	<b>(\$11,823,020)</b>	<b>(\$7,184,771)</b>	<b>\$0</b>	<b>(\$16,093,241)</b>	<b>(\$15,463,318)</b>
167 Public Service Co. of Oklahoma - Distribution	\$31,815,207	\$2,374,896	\$66,862,390	\$278,203	\$896,519	(\$3,608,561)	(\$2,559,921)	\$0	(\$5,271,963)	(\$4,993,760)
198 Public Service Co. of Oklahoma - Generation	17,853,514	1,678,052	37,520,693	126,807	497,271	(2,024,990)	(1,543,677)	0	(3,071,396)	(2,944,589)
114 Public Service Co. of Oklahoma - Transmission	4,075,051	334,184	8,564,070	32,453	114,307	(462,203)	(323,551)	0	(671,447)	(638,994)
<b>Public Service Co. of Oklahoma</b>	<b>\$53,743,772</b>	<b>\$4,387,132</b>	<b>\$112,947,153</b>	<b>\$437,463</b>	<b>\$1,508,097</b>	<b>(\$6,095,754)</b>	<b>(\$4,427,149)</b>	<b>\$0</b>	<b>(\$9,014,806)</b>	<b>(\$8,577,343)</b>
159 Southwestern Electric Power Co. - Distribution	\$24,734,295	\$1,779,589	\$51,981,245	\$226,767	\$698,251	(\$2,805,426)	(\$1,854,802)	\$0	(\$3,961,977)	(\$3,735,210)
168 Southwestern Electric Power Co. - Generation	24,783,659	1,901,478	52,084,988	223,701	697,839	(2,811,025)	(2,203,774)	0	(4,316,960)	(4,093,259)
161 Southwestern Electric Power Co. - Texas - Distribution	11,586,471	895,517	24,349,964	93,516	325,827	(1,314,167)	(972,876)	0	(1,961,216)	(1,867,700)
111 Southwestern Electric Power Co. - Texas - Transmission	0	0	0	0	0	0	0	0	0	0
194 Southwestern Electric Power Co. - Transmission	3,687,940	269,683	7,750,523	37,489	104,155	(418,295)	(289,902)	0	(604,042)	(566,553)
<b>Southwestern Electric Power Co.</b>	<b>\$64,792,365</b>	<b>\$4,846,267</b>	<b>\$136,166,720</b>	<b>\$581,473</b>	<b>\$1,826,072</b>	<b>(\$7,348,913)</b>	<b>(\$5,321,354)</b>	<b>\$0</b>	<b>(\$10,844,195)</b>	<b>(\$10,262,722)</b>
230 Kingsport Power Co. - Distribution	\$3,188,911	\$249,670	\$6,701,770	\$30,789	\$89,777	(\$361,694)	(\$185,056)	\$0	(\$456,973)	(\$426,184)
260 Kingsport Power Co. - Transmission	340,425	29,067	715,432	0	9,454	(38,612)	(41,216)	0	(70,374)	(70,374)
<b>Kingsport Power Co.</b>	<b>\$3,529,336</b>	<b>\$278,737</b>	<b>\$7,417,202</b>	<b>\$30,789</b>	<b>\$99,231</b>	<b>(\$400,306)</b>	<b>(\$226,272)</b>	<b>\$0</b>	<b>(\$527,347)</b>	<b>(\$496,558)</b>
210 Wheeling Power Co. - Distribution	\$4,050,307	\$409,994	\$8,512,068	\$16,092	\$112,023	(\$459,396)	(\$268,325)	\$0	(\$615,698)	(\$599,606)
200 Wheeling Power Co. - Transmission	46,339	7,529	97,385	0	1,235	(5,256)	(2,840)	0	(6,861)	(6,861)
<b>Wheeling Power Co.</b>	<b>\$4,096,646</b>	<b>\$417,523</b>	<b>\$8,609,453</b>	<b>\$16,092</b>	<b>\$113,258</b>	<b>(\$464,652)</b>	<b>(\$271,165)</b>	<b>\$0</b>	<b>(\$622,559)</b>	<b>(\$606,467)</b>
103 American Electric Power Service Corporation	\$253,484,923	\$17,271,515	\$532,720,338	\$2,370,829	\$7,171,171	(\$28,750,895)	(\$17,864,846)	\$0	(\$39,444,570)	(\$37,073,741)
293 Elmwood	664,839	24,449	1,397,216	0	18,928	(75,408)	(276,261)	0	(332,741)	(332,741)
292 AEP River Operations LLC	4,450,960	329,075	9,354,075	0	124,340	(504,839)	(1,254,668)	0	(1,635,167)	(1,635,167)
<b>American Electric Power Service Corporation</b>	<b>\$258,600,722</b>	<b>\$17,625,039</b>	<b>\$543,471,629</b>	<b>\$2,370,829</b>	<b>\$7,314,439</b>	<b>(\$29,331,142)</b>	<b>(\$19,395,775)</b>	<b>\$0</b>	<b>(\$41,412,478)</b>	<b>(\$39,041,649)</b>
270 Cook Coal Terminal	\$697,247	\$58,270	\$1,465,324	\$4,169	\$19,502	(\$79,083)	(\$69,159)	\$0	(\$128,740)	(\$124,571)
<b>AEP Generating Company</b>	<b>\$697,247</b>	<b>\$58,270</b>	<b>\$1,465,324</b>	<b>\$4,169</b>	<b>\$19,502</b>	<b>(\$79,083)</b>	<b>(\$69,159)</b>	<b>\$0</b>	<b>(\$128,740)</b>	<b>(\$124,571)</b>
104 Cardinal Operating Company	\$14,158,064	\$1,478,964	\$29,754,387	\$0	\$389,292	(\$1,605,843)	(\$1,153,324)	\$0	(\$2,369,875)	(\$2,369,875)
181 Ohio Power Co. - Generation	59,506,589	6,011,592	125,058,207	1,500	1,639,189	(6,749,387)	(4,520,949)	0	(9,631,147)	(9,629,647)
<b>AEP Generation Resources - FERC</b>	<b>\$73,664,653</b>	<b>\$7,490,556</b>	<b>\$154,812,594</b>	<b>\$1,500</b>	<b>\$2,028,481</b>	<b>(\$8,355,230)</b>	<b>(\$5,674,273)</b>	<b>\$0</b>	<b>(\$12,001,022)</b>	<b>(\$11,999,522)</b>
290 Conesville Coal Preparation Company	686,861	72,109	1,443,497	0	18,881	(77,905)	(53,717)	0	(112,741)	(112,741)
<b>AEP Generation Resources - SEC</b>	<b>\$74,351,514</b>	<b>\$7,562,665</b>	<b>\$156,256,091</b>	<b>\$1,500</b>	<b>\$2,047,362</b>	<b>(\$8,433,135)</b>	<b>(\$5,727,990)</b>	<b>\$0</b>	<b>(\$12,113,763)</b>	<b>(\$12,112,263)</b>
171 CSW Energy, Inc.	199,914	9,345	420,136	557	5,679	(22,675)	(15,649)	0	(32,645)	(32,088)
175 AEP Energy Partners	1,183,122	51,091	2,486,432	38,311	34,686	(134,193)	(34,874)	0	(134,381)	(96,070)
419 Onsite Partners	29,672	0	62,358	1,832	914	(3,365)	(77)	0	(2,528)	(696)
<b>AEP Energy Supply</b>	<b>\$75,764,222</b>	<b>\$7,623,101</b>	<b>\$159,225,017</b>	<b>\$42,200</b>	<b>\$2,088,641</b>	<b>(\$8,593,368)</b>	<b>(\$5,778,590)</b>	<b>\$0</b>	<b>(\$12,283,317)</b>	<b>(\$12,241,117)</b>
143 AEP Pro Serv, Inc.	\$86,412	\$3,093	\$181,602	\$0	\$2,461	(\$9,801)	(\$1,356)	\$0	(\$8,696)	(\$8,696)
<b>AEP Pro Serv, Inc.</b>	<b>\$86,412</b>	<b>\$3,093</b>	<b>\$181,602</b>	<b>\$0</b>	<b>\$2,461</b>	<b>(\$9,801)</b>	<b>(\$1,356)</b>	<b>\$0</b>	<b>(\$8,696)</b>	<b>(\$8,696)</b>
245 Dolet Hills	\$4,436,020	\$462,980	\$9,322,677	\$44,270	\$123,263	(\$503,145)	(\$14,977)	\$0	(\$394,859)	(\$350,589)
<b>Dolet Hills</b>	<b>\$4,436,020</b>	<b>\$462,980</b>	<b>\$9,322,677</b>	<b>\$44,270</b>	<b>\$123,263</b>	<b>(\$503,145)</b>	<b>(\$14,977)</b>	<b>\$0</b>	<b>(\$394,859)</b>	<b>(\$350,589)</b>
<b>Total</b>	<b>\$951,074,203</b>	<b>\$75,881,163</b>	<b>\$1,998,764,120</b>	<b>\$6,611,191</b>	<b>\$26,680,463</b>	<b>(\$107,873,224)</b>	<b>(\$71,436,998)</b>	<b>\$0</b>	<b>(\$152,629,759)</b>	<b>(\$146,018,568)</b>

