KPSC Case No. 2017-00179 AG's First Set of Data Requests Dated: August 14, 2017 Item No. 84 Attachment 1 Page 1 of 87

American Electric Power

American Electric Power System Retirement Plan

Actuarial Valuation Report Employer Contributions for Plan Year Beginning January 1, 2015

Benefit Cost for Fiscal Year Beginning January 1, 2015 under US GAAP

April 2015



This report is confidential and intended solely for the information and benefit of the intended recipient thereof. It may not be distributed to a third party unless expressly allowed under the "Actuarial Certification" section herein.

KPSC Case No. 2017-00179 AG's First Set of Data Requests Dated: August 14, 2017 Item No. 84 Attachment 1 Page 2 of 87

Table of Contents

Purpose	es of valuation	1
Section	1: Summary of results	3
Sum	mary of valuation results	3
Minii	num required contribution and funding policy	4
Chai	nge in minimum funding requirement and funding shortfall (funding surplus)	5
Fund	ling ratios	6
Bene	ofit limitations	7
PBG	C reporting requirements	7
At-R	isk status for determining minimum required contributions	8
Pens	sion cost and funded position	8
Chai	nge in pension cost and funded position	9
Basi	s for valuation	10
Actuaria	I certification	11
Section	2: Actuarial exhibits	15
2.1	Summary of liabilities for minimum funding purposes	15
2.2	Change in plan assets during plan year	16
2.3	Development of actuarial value of assets	17
2.4	Calculation of minimum required contribution	18
2.5	Schedule of minimum funding amortization bases	19
2.6	Calculation of estimated maximum deductible contribution	20
2.7	ASC 960 (plan accounting) information	22
2.8	Pension obligations and funded position under U.S. GAAP (ASC 715)	24
2.9	Pension cost under U.S. GAAP (ASC 715)	25
2.10	Development of market-related value of assets under U.S. GAAP (ASC 715)	26
2.11	Summary of net prior service cost/(credit) balances	27
Section	3: Participant data	29
3.1	Summary of plan participants	29
3.2	Participant reconciliation	31
3.3	Age and service distribution of participating employees	32
Append	ix A: Statement of actuarial assumptions and methods	35
Appendix B1: Summary of plan provisions covered by the former East Retirement Plan47		

Appendix B2: Summary of plan provisions covered by the former West Retirement Plan	53
Appendix C: Adjusted Funding Target Attainment Percentage (AFTAP)	59
Appendix D: Results by business unit	63
Appendix E: Descriptions of Funded Status Measures	78

This page is intentionally blank



KPSC Case No. 2017-00179 AG's First Set of Data Requests Dated: August 14, 2017 Item No. 84 Attachment 1 Page 6 of 87

Purposes of valuation

American Electric Power (the Company) retained Towers Watson Delaware Inc. ("Towers Watson"), to perform an actuarial valuation of the American Electric Power System Retirement Plan for the purpose of determining the following:

- 1. The minimum required contribution in accordance with ERISA and the Internal Revenue Code (IRC) for the plan year beginning January 1, 2015.
- 2. The estimated maximum tax-deductible contribution for the tax year in which the 2015 plan year ends in accordance with ERISA as allowed by the IRC. The maximum tax-deductible contribution should be finalized in consultation with the Company's tax advisor.
- 3. Plan accounting information in accordance with FASB Accounting Standards Codification Topic 960 (ASC 960).
- 4. Determination of the Funding Target Attainment Percentage (FTAP) under IRC §430(d)(2), as reported in the Annual Funding Notice required under ERISA 101(f).
- 5. The value of benefit obligations as of January 1, 2015 and American Electric Power's pension cost for fiscal year ending December 31, 2015 in accordance with FASB Accounting Standards Codification Topic 715 (ASC 715-30).
- 6. As requested by American Electric Power, a "specific certification" of the Adjusted Funding Target Attainment Percentage (AFTAP) for the American Electric Power System Retirement Plan under IRC §436 for the plan year beginning January 1, 2015. Please see Appendix C for additional information. Note that the AFTAP certification included herein may be superseded by a subsequent AFTAP certification for the American Electric Power System Retirement Plan for the plan year beginning January 1, 2015.

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. This report does not determine the plan's liquidity shortfall requirements (if any) under IRC §430(j)(4). If applicable, we will determine such requirements separately as requested by the Company.
- 2. This report does not determine 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 the plan's benefit obligations, as all such measures differ in some way from plan termination obligations. For example, measures shown in this report may reflect smoothed assets or interest rates, rather than current values, in accordance with funding and accounting rules. In addition, funded status measures shown in this report do not reflect the current costs of settling the plan 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 cost method for the minimum required contribution is established under IRC §430 and may not in all circumstances produce adequate assets to pay benefits under all optional forms of payment available under the plan when benefit payments are due.
- 4. The comparison of the plan's funding target to its actuarial value of assets (the funding shortfall (surplus) shown in Section 1) is used in determining required contributions for the coming year, and a contribution made on the valuation date equal to the shortfall would be considered to "fully fund" the plan for benefits accrued as of the valuation date under the funding rules, and thus is useful for assessing the need for and amount of future contributions. However, the funding shortfall (surplus) cannot be relied upon to determine either the need for or the amount of future contributions. The funding shortfall (surplus) is based on the interest rates elected to be used for funding purposes, which may be smoothed rates not reflecting current market conditions and will in any event change over time. It is also based on the actuarial value of assets a smoothed value and would be different if based on market value of assets. In addition, asset gains and losses, demographic experience different from assumed, and future benefit accruals will all affect the need for and amount of future contributions.
- 5. There may be certain events that occurred since the valuation date that are not reflected in this valuation. See Subsequent Events (under the "Basis for valuation" portion of Section 1 below) for more information.
- 6. This valuation reflects our understanding of the relevant provisions of the Pension Protection Act of 2006 (PPA); the Worker, Retiree and Employer Recovery Act of 2008 (WRERA); the Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010 (PRA), the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Highway and Transportation Funding Act of 2014 (HATFA). The IRS has yet to issue final guidance with respect to certain 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 results shown in this report.



Section 1: Summary of results

Summary of valuation results

All monetary amounts shown in US Dollars			
Plan Year Beginning	01/01/2015	01/01/2014	
Funding			
Market value of assets with discounted receivable contributions	4,975,864,249	4,795,450,954	
Actuarial value of assets	5,126,953,429	4,722,776,047	
Funding balances	728,778,301	660,963,451	
Funding target	3,941,682,464	3,964,673,907	
Target normal cost	76,942,794	65,180,624	
Funding shortfall (surplus)	(456,492,664)	(97,138,689)	
Funding target attainment percentage (FTAP)	111.58%	102.45%	
Minimum required contribution			
Prior to application of funding balances	0	0	
Net of available funding balances	0	0	
Effective interest rate	6.15%	6.34%	
U.S. GAAP Accounting (ASC 715) as of Measurement Date	01/01/2015	01/01/2014	
Projected benefit obligation (PBO)	5,121,214,558	4,741,966,540	
Fair value of assets (without receivable contributions)	4,975,864,249	4,726,059,114	
Funded status	(145,350,309)	(15,907,426)	
Total Benefit Cost/(Income)	126,471,542	151,433,518	
Discount rate	4.00%	4.70%	
Participants as of Census Date	01/01/2015	01/01/2014	
Active employees	17,737	17,684	
Participants with deferred benefits	3,634	3,642	
Participants receiving benefits	15,722	16,041	
Total	37,093	37,367	
Plan Accounting (ASC 960)	01/01/2015	01/01/2014	
Present value of accumulated benefits	4,063,252,469	4,105,351,485	
Market value of assets with receivable contributions	4,975,864,249	4,797,523,114	
Plan accounting discount rate	6.00%	6.00%	



Minimum required contribution and funding policy

Plan Year Beginning	01/01/2015	01/01/2014
Minimum Required Contribution (MRC)		
Prior to application of funding balances	0	0
Net of available funding balances	0	0
Sponsor's Funding Policy Contribution	92,515,000	71,464,000

The minimum required contribution for the 2015 plan year must be partially satisfied in quarterly installments during the plan year, with a final payment due by September 15, 2016. These requirements may be satisfied through contributions and/or an election to apply the available funding balances. The minimum required contribution is determined assuming it is paid as of the valuation date for the plan year. Contributions made on a date other than the valuation date must be adjusted for interest at the plan's effective interest rate. The minimum funding schedule, before reflecting any funding balance elections or amounts already contributed for the 2015 plan year prior to the issuance of this report, is shown below:

All monetary amounts shown in US Dollars

Due Date	Amount
April 15, 2015	0
July 15, 2015	0
October 15, 2015	0
January 15, 2016	0
September 15, 2016	0

If a plan has a funding shortfall for the current plan year, quarterly contributions will be required for the following plan year.

Because the plan does not have a funding shortfall, no quarterly contributions will be required for the 2016 plan year based on this year's valuation results.



Change in minimum funding requirement and funding shortfall (funding surplus)

The minimum funding requirement is unchanged from \$0 for the 2014 plan year to \$0 for the 2015 plan year, and the funding shortfall (surplus) declined from \$(97,138,689) on January 1, 2014 to \$(456,492,664) on January 1, 2015, as set forth below:

All monetary amounts shown in US Dollars			
(\$ in millions)	Minimum Funding Requirement	Funding Shortfall (Surplus)	
Prior year	0	(97.1)	
Change due to:			
Expected based on prior valuation, contributions, and use of/creation of funding balances	0	(2.0)	
Sponsor election to reduce funding balances	0	0	
Unexpected noninvestment experience	49.3	66.8	
Unexpected investment experience	(49.3)	(389.9)	
Assumption changes	0	(34.3)	
Method changes	0	0	
Unpredictable contingent events	0	0	
Becoming at-risk	0	0	
Plan amendments	0	0	
Current year	0	(456.5)	

Significant reasons for these changes include the following:

- The plan's effective interest rate decreased 19 basis points compared to the prior year, which • increased the minimum funding requirement and caused the funding surplus to deteriorate.
- Investment experience was more favorable than expected which increased the funding • surplus.
- Demographic experience was less favorable than expected which caused the funding surplus to deteriorate.

Funding ratios

The Pension Protection Act of 2006 (PPA) defines several Funding Ratios. All of these ratios are based on a ratio of plan assets to plan liabilities, but the assets and liabilities are defined differently for different purposes. Depending on the purpose, the assets may be market value or, if different, a smoothed actuarial value of assets, and may be reduced by the prefunding balance or all funding balances. The liabilities may be based on the funding target, funding target disregarding at-risk assumptions, or the funding target calculated using at-risk assumptions (see the At-Risk status section below), and may or may not reflect the HATFA interest rate corridors.

Following are the key funding ratios and their implications for the 2015 or 2016 plan years. See Appendix D for details on how each ratio is calculated.

January 1, 2014 Funding ratios

	Ratio Test Implications	Threshold	Ratio Value
1	Funding balances can be used to satisfy the 2015 Minimum Required Contribution (MRC) if threshold met	80%	106.11%
2	Quarterly contribution exemption applies in 2015 if threshold met	100%	102.45%
3	Plan is not at-risk for 2015 if the threshold for either the Prong 1 or		
	Prong 2 test is met		
	- Prong 1 Test	80%	102.45%
	- Prong 2 Test	70%	N/A

January 1, 2015 Funding ratios

	Patio Tast Implications	Threehold	Detie Velve
	Ratio Test Implications	Threshold	Ratio Value
1	Funding balances can be used to satisfy the 2016 MRC if threshold	80%	115.64%
	met		
2	Quarterly contribution exemption applies in 2016 if threshold met	100%	111.58%
3	Plan is not at-risk for 2016 if the threshold for either the Prong 1 or		
	Prong 2 test is met		
	- Prong 1 Test	80%	111.58%
	- Prong 2 Test	70%	N/A
4	PBGC 4010 filing may be required in 2016 if threshold is not met by	80%	91.96%
	every plan in the controlled group		
5	Plan is exempt from creating a new Shortfall Amortization Base	100%	115.64%
	(SAB) for 2015 when prefunding balance is applied to the 2015 MRC		
	if threshold met		
6	Plan is exempt from creating a new SAB for 2015 when prefunding	100%	130.07%
	balance is not applied to the 2015 MRC if threshold met		
7	Previously established SABs are eliminated for 2015 if threshold met	100%	111.58%

Benefit limitations

The Adjusted Funding Target Attainment Percentage (AFTAP) for the plan year beginning January 1, 2015 is 130.07%. This AFTAP may be changed by subsequent events.

As requested by American Electric Power in your letter dated April 22, 2015, this report is intended to constitute a "specific certification" of the AFTAP, effective as of April 30, 2015, for the plan year beginning January 1, 2015 for the purpose of determining benefit restrictions under IRC §436 for the American Electric Power System Retirement Plan. This AFTAP certification is based on the data, methods, assumptions, plan provisions, annuity purchase information, and other information provided in this report. Please see the Appendices for additional information. Note that the AFTAP certification provided herein may be superseded by a subsequent AFTAP certification for the plan year beginning January 1, 2015. Please see Appendix C for a discussion of the implications of this certified AFTAP.

The AFTAP certification does not reflect the following events that have occurred since the valuation date. Under the PPA, a plan may become subject to various benefit limitations if its AFTAP falls below certain thresholds.

If the AFTAP is below 60%, plans are prohibited from paying lump sums or other accelerated forms of distribution. If the AFTAP is at least 60% but less than 80%, the amounts that can be paid are limited. In addition, lump sums to the 25 highest paid employees may be restricted if a plan's AFTAP is below 110%. These limitations do not apply to mandatory lump sum cash-outs of \$5,000 or less. In addition, plans that were completely frozen before September 2005 are exempt from the restrictions on lump sums and other accelerated forms of distribution.

If the AFTAP is below 60%, benefit accruals must cease, amendments to improve benefits cannot take effect, and plant shutdown benefits and other Unpredictable Contingent Event Benefits (UCEBs) cannot be paid without being fully paid for. In addition, if the AFTAP would be below 80% reflecting a proposed amendment, the plan amendment cannot take effect unless actions are taken to increase plan assets.

To avoid these benefit limitations, a plan sponsor may take a variety of steps, including reducing the funding balances, contributing additional amounts to the plan for the prior plan year, contributing special "designated IRC §436 contributions" for the current plan year, or providing security outside the plan. Not all of these approaches are available for all of the restrictions discussed above. For example, restrictions on accelerated distributions cannot be avoided by making designated IRC §436 contributions.

PBGC reporting requirements

Certain financial and actuarial information (i.e., a "4010 filing") must be provided to the PBGC if the PBGC Funding Target Attainment Percentage (PBGC FTAP) is less than 80% for any plan in the contributing sponsor's controlled group. However, this reporting requirement may be waived for controlled groups with no more than \$15 million in aggregate funding shortfall (PBGC 4010 FS). Note that the segment interest rate corridors of HATFA do not apply for purposes of determining the PBGC FTAP, but we believe they do apply (assuming segment rates are used for funding purposes) for the purpose of determining the PBGC 4010 FS (to be confirmed by plan counsel).



The 2015 FTAP is 91.96%. In addition, we understand that all other pension plans within the Company's controlled group also have PBGC FTAPs of at least 80%. As a result, no 4010 filing is expected to be required for 2015 as a result of the plans' funded status. However, a filing may also be required if there are outstanding funding waivers or missed contributions within the controlled group.

At-Risk status for determining minimum required contributions

As defined in the PPA, the plan is not in at-risk status for the 2015 plan year, because the plan's FTAP for the 2014 plan year was at least 80%, and/or the plan's FTAP measured using "at-risk assumptions" was at least 70%.

As defined in the PPA, the plan will not be in at-risk status for the 2016 plan year, because the plan's FTAP for the 2015 plan year is at least 80%, and/or the plan's FTAP measured using "at-risk assumptions" is at least 70%.

Pension cost and funded position

The cost of the pension plan is determined in accordance with ASC 715. The fiscal 2015 pension cost for the plan is \$126,471,542.

Under ASC 715, the funded position (fair value of plan assets less the projected benefit obligation, or "PBO") of each pension plan at the plan sponsor's fiscal year-end (measurement date) is required to be reported as an asset (for overfunded plans) or a liability (for underfunded plans). The PBO is the actuarial present value of benefits attributed to service rendered prior to the measurement date, taking into consideration expected future pay increases for pay-related plans. The plan's overfunded/(underfunded) PBO as of January 1, 2015 was \$(145,350,309), based on the fair value of plan assets of \$4,975,864,249 and the PBO of \$5,121,214,558.

Fiscal year-end financial reporting information and disclosures are prepared before detailed participant data and full valuation results are available. Therefore, the funded position at December 31, 2014 was derived from a roll forward of the January 1, 2014 valuation results, adjusted for the year-end discount rate, changes in other key assumptions and asset values, as well as significant changes in plan provisions and participant population. The fiscal year-end December 31, 2015 financial reporting information will be developed based on the results of the January 1, 2015 valuation, projected to the end of 2015 and similarly adjusted for the year-end discount rate and asset values, as well as significant changes in plan provisions and participant population.

Change in pension cost and funded position

The pension cost decreased from \$151,433,518 in fiscal 2014 to \$126,471,542 in fiscal 2015 and the funded position declined from \$(15,907,426) to \$(145,350,309), as set forth below:

All monetary amounts shown in US Dollars				
(\$	in millions)	Net Periodic Cost	Funded Position	
Pri	or year	151.4	(15.9)	
Ch	ange due to:			
►	Expected based on prior valuation and contributions during prior year	(28.9)	(16.2)	
►	Unexpected noninvestment experience	9.8	(9.2)	
►	Unexpected investment experience	(38.4)	300.2	
►	Assumption changes	32.6	(404.2)	
►	Plan amendments	0	0	
►	Settlements, curtailments, termination benefits	0	0	
►	Acquisitions	0	0	
►	Method change	0	0	
Cu	irrent year	126.5	(145.3)	

Significant reasons for these changes include the following:

- The return on the fair value of plan assets since the prior measurement date was greater than expected, which decreased the pension cost and improved the funded position.
- The discount rate declined 70 basis points compared to the prior year, which increased the pension cost and decreased the funded position.
- Demographic experience was less favorable than expected which increased the pension cost and decreased the funded position.
- An experience study was conducted in 2014, resulting in changes to the termination and retirement assumptions, which decreased the pension cost and improved the funded position.
- The mortality assumption was updated to be based on versions of RP-2014 with long-term mortality improvement rates of 0.75%.



Basis for valuation

Appendix A summarizes the assumptions and methods used in the valuation. Appendix B summarizes the principal provisions of the plan being valued. Unless otherwise described below under Subsequent Events, assumptions were selected based on information known as of the measurement date.

Changes in Assumptions

The discount rate decreased from 4.70% to 4.00%.

The mortality table used to value the benefit obligations was updated from the RP2000 with projections to 2021 for annuitants and to 2029 for nonannuitants to modified versions of RP-2014 with long-term mortality improvement rates of 0.75%.

The salary increase rate was updated to reflect experience through 2013.

Retirement rates were updated to reflect experience through 2013.

Termination rates were updated to reflect experience through 2013.

The mortality used to convert to 417(e) based forms of payment was updated for an additional year of mortality improvements.

Changes in Methods

None.

Changes in Benefits Valued

None.



Actuarial certification

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

Reliances

In preparing the results presented in this report, we have relied upon information regarding plan provisions, participants, assets and sponsor elections provided by American Electric Power and other persons or organizations designated by American Electric Power. 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. In addition, the results in this report are dependent on contributions reported for the prior plan year and maintenance of funding balance elections after the valuation date. We have relied on all the information provided as complete and accurate. 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 information regarding contributions or funding balance elections provided results that are not suitable for the purposes of this report and such inaccuracies, as corrected by American Electric Power, may produce materially different results that could require that a revised report be issued.

Assumptions and methods under ERISA and the Internal Revenue Code for funding purposes

The plan sponsor selected, as prescribed by regulation, key assumptions and funding methods (including asset valuation method and choice among prescribed interest rates) employed in the development of the contribution amounts and communicated them to us in the letter dated April 22, 2015. To the extent not prescribed by ERISA, the Internal Revenue Code and regulatory guidance from the Treasury and the IRS, or selected by the sponsor, the actuarial assumptions and methods employed in the development of the contribution amounts have been selected by Towers Watson, with the concurrence of the plan sponsor. It is beyond the scope of this actuarial valuation to analyze the reasonableness and appropriateness of prescribed methods and assumptions, or to analyze other sponsor elections from among the alternatives available for prescribed methods and assumptions.

Other than prescribed assumptions, ERISA and the Internal Revenue Code require the use of assumptions each of which is "reasonable (taking into account the experience of the plan and reasonable expectations), and which, in combination, offer the actuary's best estimate of anticipated experience under the plan." The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated or selected by Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable. Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions.

A summary of the assumptions and methods used is provided in Appendix A. Note that any subsequent changes in methods or assumptions for the 2015 plan year will change the results shown in this report and could result in plan qualification issues under IRC §436 if the application of benefit



restrictions is affected by the change.

Assumptions and methods under U.S. GAAP

As required by U.S. GAAP, the actuarial assumptions and methods employed in the development of the pension cost have been selected by the plan sponsor. Towers Watson has concurred with these assumptions and methods, except for the expected rate of return on plan assets selected as of January 1, 2015. Evaluation of the expected return assumption was outside the scope of Towers Watson's assignment and would have required substantial additional work that we were not engaged to perform. U.S. GAAP requires that each significant assumption "individually represent the best estimate of a particular future event."

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 in consultation with American Electric Power's tax advisors and auditors.

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 or contribution requirements 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) or additional contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. It is beyond the scope of this valuation to analyze the potential range of future pension contributions, but we can do so upon request.

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 American Electric Power and its auditors, and any organization that provides benefit administration services for the plan, in connection with our actuarial valuation of the pension 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. American Electric Power may distribute this actuarial valuation report to the appropriate authorities who have the legal right to require American Electric Power to provide them this report, in which case American Electric Power will use best efforts to notify Towers Watson in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without Towers Watson's prior written consent. Towers Watson accepts no responsibility for any consequences arising from any other party relying on this report or any advice relating to its contents.

Professional qualifications

The undersigned consulting actuaries 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 pension plans. Our objectivity is not impaired by any relationship between American Electric Power and our employer, Towers Watson Delaware Inc.

Joseph A. Perko, FSA, EA, MAAA Senior Consultant

romas P. Perlo

Thomas P. Perko, ASA, EA Consulting Actuary

Towers Watson Delaware Inc.

April 2015

V:\AMERICAN ELECTRIC POWER C - 109765\15\RET\PENVAL\12. REPORT AND PRESENTATION\2015 QUALIFIED REPORT.DOCX



This page is intentionally blank



Towers Watson Confidential

Section 2: Actuarial exhibits

2.1 Summary of liabilities for minimum funding purposes

All monetary amounts shown in US Dollars				
Plan Year Beginning 01/01/2015 01/01/2014				
A Funding Target (Disregarding At-risk Assumptions)				
1 Funding target	3,941,682,464	3,964,673,907		
2 Target normal cost ¹	76,942,794	65,180,624		
B Funding Target (At-risk Assumptions)				
1 Funding target	N/A	N/A		
2 Target normal cost	N/A	N/A		
C Funding Target				
1 Number of consecutive years at-risk	0	0		
2 Funding target				
a Active employees – non-vested benefits ²	14,798,412	28,942,493		
b Active employees – vested benefits ²	1,578,544,951	1,548,746,031		
c Participants with deferred benefits	184,154,401	186,738,398		
d Participants receiving benefits	2,164,184,700	2,200,246,985		
e Total funding target	3,941,682,464	3,964,673,907		
3 Target normal cost	76,942,794	65,180,624		

¹ Includes administrative expenses.

² See section 2.7 for definition of vested benefits.

2.2 Change in plan assets during plan year

Pla	ın Y <u>e</u>	ar Beginning	January 1, 2014
Α		conciliation of Market Value of Assets	
	1	Market value of assets at January 1, 2014 (including discounted contributions receivable)	4,795,450,954
	2	Discounted contributions receivable at January 1, 2014	69,391,840
	3	Market value of assets at January 1, 2014 (excluding contributions receivable)	4,726,059,114
	4	Employer contributions	
		a For prior plan year	71,464,000
		b For current plan year	0
		c IRC §436 contributions for current plan year	0
		d Total	71,464,000
	5	Employee contributions	0
	6	Benefit payments	(289,402,628)
	7	Administrative expenses paid by plan	(5,846,351)
	8	Transfers from/(to) other plans	0
	9	Investment return	
		a Interest and dividends	0
		b Investment expenses	0
		c Realized gains/(losses)	0
		d Change in unrealized appreciation	473,590,114
		e Total	473,590,114
	10	Market value of assets at January 1, 2015 (excluding contributions receivable)	4,975,864,249
		Discounted contributions receivable at January 1, 2015	0
	12	Market value of assets at January 1, 2015 (including discounted contributions receivable)	4,975,864,249
в		e of Return on Invested Assets , for crediting unused funding balances)	
	1	Weighted invested assets	4,615,159,259
	2	Rate of return	10.26%



2.3 Development of actuarial value of assets

AEP elected a smoothing method that uses seven monthly data points to calculate the AVA.

	All monetary amounts shown in US Dollars				
Pla	an Year Beginning				January 1, 2014
		Dev	elopment of AVA		
		_			Fair Value at
	<u>Month</u>	<u>Expenses</u>	Benefit Payments	Contributions	Beginning of Month
	July 2014	318,604	25,879,401	0	4,998,135,996
	August 2014	126,547	23,631,905	0	4,957,773,394
	September 2014	361,246	23,720,403	0	5,055,475,668
	October 2014	2,040,555	23,601,483	0	4,923,246,315
	November 2014	1,242,849	24,144,826	0	4,960,772,450
	December 2014	583,434	22,266,624	0	4,993,500,456
		AVA	A with receivables		
Α	Preliminary Actuarial Va	alue of Assets be	fore Corridor as of Jan	uary 1, 2015	
	1 Monthly asset values	adjusted for exper	nses and benefit paymer	nts rolled forward to	o January 1, 2015
	Month				Asset value
	a July 2014				5,292,259,622
	b August 2014				5,201,242,815
	c September 2014				5,250,938,780
	d October 2014				5,069,902,777
	e November 2014				5,057,697,910
	f December 2014				5,040,767,854
	g January 2015				4,975,864,249
	h Average of month	ly asset values			5,126,953,429
	2 Preliminary Actuarial	Value of Assets ar	nd before		
	application of corridor				5,126,953,429
в	Lower Bound of Corridor	(90% of A12 from	prior page)		4,478,277,825
С	Upper Bound of Corridor	(110% of A12 from	n prior page)		5,473,450,674
	Actuarial Value of Asse				
D	(A2 but not smaller than	n B nor larger tha	n C)		5,126,953,429



2.4 Calculation of minimum required contribution

All monetary amounts shown in US Dollars				
Reconciliation of Funding Balances as of January 1, 201	5			
	Funding Standard Carryover Balance	Prefunding Balance	Total	
A Determination of Funding Balances				
1 Funding balance as of January 1, 2014	145,450,308	515,513,143	660,963,451	
2 Amount used to offset prior year minimum required contribution ¹	0	0	0	
3 Adjustment for investment experience	14,923,202	52,891,648	67,814,850	
4 Amount of additional prefunding balance created by election	N/A	0	0	
5 Amount of funding balance reduction for current year by election or deemed election	0	0	0	
6 Funding balance as of January 1, 2015	160,373,510	568,404,791	728,778,301	

Pla	n Year Beginning	January 1, 2015
В	Calculation of Minimum Required Contribution	
	1 Target normal cost	76,942,794
	2 Funding surplus	(456,492,664)
	3 Net shortfall amortization installment (see section 2.5)	0
	4 Waiver amortization installment	0
	5 Minimum required contribution	0
	6 Funding balance available	728,778,301
	7 Remaining cash requirement (assuming sponsor elects full use of the available funding balances)	0

The minimum required contribution is determined as of the plan's valuation date. Any payment made on a date other than the valuation date must be adjusted for interest using the plan's effective interest rate of 6.15%.

Additional details regarding the calculation of the minimum required contribution may be obtained from the Form 5500 Schedule SB forms and attachments.

¹ Net of revoked excess application of funding balance, if any.

2.5 Schedule of minimum funding amortization bases

All monetary amounts shown in US Dollars					
Type of Base	Date Established	Remaining Amortization Period (Years)	Outstanding Balance	Amortization Payment	
Total			0	0	



2.6 Calculation of estimated maximum deductible contribution

	Air monetary amounts shown in US Dollars	
Ва	sed on Plan Year	2015
Α	Basic Maximum	
	1 Funding target	3,941,682,464
	2 Target normal cost	76,942,794
	3 Actuarial value of assets	5,126,953,429
	4 50% of funding target	1,970,841,232
	5 Additional funding target for future compensation or benefit increases	91,736,417
	6 Basic maximum deductible contribution	954,249,478
в	At-risk Maximum ¹	
	1 Funding target (at-risk assumptions)	N/A
	2 Target normal cost (at-risk assumptions)	N/A
	3 Actuarial value of assets	N/A
	4 At-risk maximum deductible contribution	N/A
С	Minimum Required Contribution	0
D	Estimated Maximum Deductible Contribution	954,249,478

All monetary amounts shown in US Dollars

The estimated maximum deductible contribution applies to the tax year in which the plan year ends, and is based on our understanding of IRC §404(a)(1). Regulatory guidance from the IRS/Treasury is pending. Allocations of costs to inventory have not been considered, and amounts deductible under state law may differ. Deductibility can be influenced by timing of contributions, differences between fiscal year and plan year, and differences (if any) between the years to which prior contributions were assigned for minimum funding purposes and the years in which they were deducted. Our results have not been adjusted for non-deducted contributions included in the valuation assets. We recommend the plan sponsor review with tax counsel the tax-deductibility of all contributions as Towers Watson does not provide legal or tax advice.

The calculation above reflects the interest rate corridors of HATFA (including their effect on at-risk status), which is not required in determining the maximum deductible contribution. Not reflecting such corridors would likely result in a higher maximum deductible amount, but would require substantial additional work that may not be of value to the Company. We can discuss not reflecting the corridors if the Company wishes to consider contributions in excess of the estimated maximum amount above.



¹ At-risk maximum applies only for plans not in at-risk status for purposes of determining maximum deductible contributions for the plan year.

In addition, the actuarial value of assets shown is the same as used for determining the minimum required contribution. Thus contributions receivable (if any) are discounted at HATFA rates reflecting the corridors, and the limit on the expected return on assets reflected in asset smoothing (if applicable) is the 3rd segment rate, reflecting the corridors as expressly allowed by IRS Notice 2012-61 when the 3rd segment rate reflecting the corridors is higher than the rate ignoring the corridors.

This limit has been determined without regard to the special rule of IRC §404(o)(2)(B) providing a potentially higher maximum deduction based on at-risk assumptions, which is available for plans that are not at risk.



2.7 ASC 960 (plan accounting) information

All monetary	v amounts	shown i	n US	Dollars
An monetar	y amounts	3110 1111	1100	Donais

Pla	an Year Beginning	January 1, 2015
Α	Present Value of Accumulated Benefits	
	1 Vested accumulated benefits	
	a Active employees	1,617,304,612
	b Participants with deferred benefits	189,876,563
	c Participants receiving benefits	2,237,279,003
	d Total vested accumulated benefits	4,044,460,178
	2 Non-vested accumulated benefits	18,792,291
	3 Total accumulated benefits	4,063,252,469
	4 Market value of assets ¹	4,975,864,249
В	Reconciliation of Present Value of Accumulated Benefits 1 Present value of accumulated benefits as of	
	December 31, 2013	4,105,351,485
	2 Changes during the year due to:	
	a Benefits accumulated	62,892,181
	b Actuarial (gains)/losses	(30,770,352)
	c Decrease in the discount period	237,765,475
	d Actual benefits paid	(289,402,628)
	e Assumption changes	(22,583,692)
	f Plan amendments	0
	g Net increase/(decrease)	(42,099,016)
	3 Present value of accumulated benefits as of December 31, 2014	4,063,252,469

Actuarial Assumptions and Methods

The present value of accumulated benefits was developed using the actuarial assumptions described in Appendix A, except a discount rate of 6.00% was used. For the prior valuation, a discount rate of 6.00% was used. The same plan provisions shown in Appendix B were used to determine the present value of accumulated benefits.

Plan Provisions

Plan provisions reflected in these calculations are described in Appendix B.

¹ Assets include accrued contributions for the 2014 plan year of \$0 not yet deposited at January 1, 2015.

Accumulated and Vested Benefits

Accumulated benefits include benefits earned under the plan's benefit formula based on service rendered and compensation earned before the measurement date.

Benefits included in vested benefit are the same as described above for accrued benefits, except the following benefits are excluded:

- Disability benefits in excess of the value of standard termination benefits (retirement benefits for those eligible) for participants who are not disabled on the measurement date
- Early retirement benefits and supplements in excess of standard termination benefits for participants who have not yet satisfied the eligibility requirements for those benefits.
- Death benefits in excess of the plan's QPSA
- All benefits for participants who are not yet vested in their accrued benefits or eligible for other benefits



2.8 Pension obligations and funded position under U.S. GAAP (ASC 715)

All monetary amounts shown in US Dollars

Mo		All monetary amounts shown i		01/01/2014
		rement Date	01/01/2015	01/01/2014
Α	Ob	ligations		
	1	Accumulated Benefit Obligation (ABO)		
		a. Active participants	2,093,049,746	1,909,758,003
		b. Participants with deferred benefits	234,062,526	224,179,748
		c. Participants receiving benefits	2,634,437,247	2,489,329,403
		d. Total	4,961,549,519	4,623,245,673
	2	Future salary increases	159,665,039	118,720,867
	3	Projected benefit obligation (PBO)	5,121,214,558	4,741,966,540
в	As	sets		
	1	Fair value [FV] ¹	4,975,864,249	4,726,059,114
	2	Investment losses/(gains) not yet in market-related value	(280,508,021)	(218,503,581)
	3	Market-related value	4,695,356,228	4,507,555,533
С	Fu	nded Position		
	1	Overfunded/(underfunded) PBO	(145,350,309)	(15,907,426)
	2	PBO funded percentage	97.2%	99.7%
D		nounts in Accumulated Other Comprehensive come		
	1	Prior service cost/(credit)	5,395,057	7,900,618
	2	Net actuarial loss/(gain)	1,541,686,894	1,489,707,968
	3	Total	1,547,081,951	1,497,608,586
Е	Ke	y Assumptions		
	1	Discount rate	4.00%	4.70%
	2	Rate of compensation increase	Rates vary by age from 3.5% to 12.0%	Rates vary by age from 3.5% to 11.5%
F	Ce	nsus Date	01/01/2015	01/01/2014

The results above may differ from the amounts reported in American Electric Power's December 31, 2014 financial statements because year-end financial reporting is prepared before the corresponding valuation results are available.

.

¹ Excludes receivable contributions.

2.9 Pension cost under U.S. GAAP (ASC 715)

All monetary amounts shown in US Dollars

Fis	scal `	Year Ending	12/31/2015	12/31/2014
Α	Pe	nsion Cost		
	1	Service cost	92,514,545	71,463,632
	2	Interest cost	202,041,675	217,701,098
	3	Expected return on assets	(274,742,098)	(261,710,475)
	4	Net prior service cost/(credit) amortization	2,218,916	2,505,561
	5	Net loss/(gain) amortization	104,438,504	121,473,702
	6	Net periodic pension cost/(income)	126,471,542	151,433,518
	7	Curtailments	0	0
	8	Settlements	0	0
	9	Special/contractual termination benefits	0	0
	10	Total pension cost	126,471,542	151,433,518
в	Ke	y Assumptions ¹		
	1	Discount rate	4.00%	4.70%
	2	Rate of return on assets	6.00%	6.00%
	3	Rate of compensation increase	Rates vary by age from 3.5% to 12.0%	Rates vary by age from 3.5% to 11.5%
С	Ce	nsus Date	01/01/2015	01/01/2014

¹ These assumptions were used to calculate Net Periodic Pension Cost/(Income) as of the beginning of the year. For other assumptions used, as well as assumptions used for interim remeasurements, if any, refer to Appendix A.



2.10 Development of market-related value of assets under U.S. GAAP (ASC 715)

	All mo	netary amounts shown in U	S Dollars	
Fiscal N	/ear Ending			12/31/2015
Market	-Related Value of Assets as of Ja	nuary 1, 2015		
1	Fair value of assets as of January	1, 2015		4,975,864,249
2	Deferred investment (gains)/losse	s for prior periods		
Fise	cal Year	(Gain)/Loss	Percent Deferred	Deferred Amount
а	2015	(190,546,751)	80%	(152,437,401)
b	2014	(50,899,071)	60%	(30,539,443)
с	2013	(249,128,700)	40%	(99,651,480)
d	2012	10,601,513	20%	2,120,303
e	Total			(280,508,021)
3	Market-Related Value of Assets			4,695,356,228



Towers Watson Confidential

2.11 Summary of net prior service cost/(credit) balances

Base Number	Net Amount at Prior Financial Year End	Remaining Amortization Period	Amortization Amount	Effect of Curtailments	Other Events
1	17,665	0.16695	17,665	0	0
2	447,206	1.93302	231,351	0	0
3	2,653,043	3.01100	881,116	0	0
4	23,281	0.71015	23,281	0	0
5	14,445	1.49318	9,674	0	0
6	2,239,417	2.12100	1,055,829	0	0
Total	5,395,057		2,218,916	0	0

All monetary amounts shown in US Dollars

Summary of Net Loss/(Gain)¹

Net Amount at 01/01/2015	Amortization Amount in 2015	Effect of Curtailments	Effect of Settlements	Other Events
1,541,686,894	104,438,504	0	0	0



KPSC Case No. 2017-00179

¹ See Appendix A for description of amortization method.

This page is intentionally blank



Towers Watson Confidential

Section 3: Participant data

3.1 Summary of plan participants

All monetary amounts shown in US Dollars

Ce	nsus Date	January 1, 2015	January 1, 2014					
Α								
	1 Number	17,737	17,684					
	2 Expected plan compensation for year beginning on the valuation date (limited by IRC §401(a)(17))	1,664,610,452	1,556,194,791					
	3 Average plan compensation	93,850	88,000					
	4 Average age	47.8	47.5					
	5 Average credited service	18.3	18.0					
	6 Average future working life (years)	12.544	10.159					
в	Participants with Deferred Benefits							
	1 Number (non-cash balance)	1,663	1,864					
	2 Total annual pension (non-cash balance)	9,296,296	10,334,827					
	3 Average annual pension (non-cash balance)	5,590	5,544					
	4 Number of cash balance	1,971	1,778					
	5 Total cash balance	141,908,731	136,112,085					
	6 Average cash balance	71,998	76,553					
	7 Average age	53.4	53.5					
	8 Distribution at January 1, 2015							
	NON-CASH							
	BALANCE Age	Number	Annual pension					
	BALANCE Age Under 40	1	423					
	BALANCE Age Under 40 40-44	1 8	423 3,799					
	BALANCE Age Under 40 40-44 45-49 45-49	1 8 128	423 3,799 4,151					
	BALANCE Age Under 40 40-44 45-49 50-54	1 8 128 429	423 3,799 4,151 5,352					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 55-59	1 8 128 429 642	423 3,799 4,151 5,352 5,811					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64	1 8 128 429 642 430	423 3,799 4,151 5,352 5,811 6,063					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over 65	1 8 128 429 642 430 25	423 3,799 4,151 5,352 5,811 6,063 4,023					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64	1 8 128 429 642 430	423 3,799 4,151 5,352 5,811 6,063					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over 65	1 8 128 429 642 430 25	423 3,799 4,151 5,352 5,811 6,063 4,023					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over Total	1 8 128 429 642 430 25 1,663	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over Total CASH BALANCE Age	1 8 128 429 642 430 25 1,663 Number	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590 Annual pension					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over Total CASH BALANCE Age Under 40 Under 40	1 8 128 429 642 430 25 1,663 Number 410	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590 Annual pension 13,530					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over Total CASH BALANCE Age Under 40 40-44	1 8 128 429 642 430 25 1,663 Number 410 188	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590 Annual pension 13,530 29,174					
	BALANCE Age Under 40 40-44 45-49 50-54 50-54 55-59 60-64 65 and over Total Total CASH BALANCE Age Under 40 40-44 45-49 50-54	1 8 128 429 642 430 25 1,663 Number 410 188 246	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590 Annual pension 13,530 29,174 41,220					
	BALANCE Age Under 40 40-44 45-49 50-54 50-54 55-59 60-64 65 and over Total Total CASH BALANCE Age Under 40 40-44 45-49 50-54	1 8 128 429 642 430 25 1,663 Number 410 188 246 341	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590 Annual pension 13,530 29,174 41,220 63,993					
	BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over Total CASH BALANCE Age Under 40 40-44 45-49 50-54 55-59 60-64 65 and over Total CASH BALANCE Age Under 40 40-44 45-49 50-54 50-54 55-59	1 8 128 429 642 430 25 1,663 Number 410 188 246 341 396	423 3,799 4,151 5,352 5,811 6,063 4,023 5,590 Annual pension 13,530 29,174 41,220 63,993 109,839					



KPSC Case No. 2017-00179 AG's First Set of Data Requests American Electric Power System Retirement മെറ്റ് Item No. 84 Attachment 1 Page 36 of 87

С	Participants Receiving Benefits		
-	1 Number	15,722	16,041
	2 Total annual pension	235,331,778	238,294,213
	3 Average annual pension	14,712	14,855
	4 Average age	74.4	74.1
	5 Distribution at January 1, 2015		
	Age	Number	Annual Pension
	Under 55	86	6,490
	55-59	468	13,852
	60-64	1,770	18,166
	65-69	3,320	16,981
	70-74	2,725	12,629
	75-79	2,419	13,817
	80-84	2,209	14,986
	85 and over	2,725	12,779
	Total	15,722	14,712



Towers Watson Confidential

3.2 Participant reconciliation

	Active	Deferred Inactive	Currently Receiving Benefits	Total
1 Included in January 1, 2014 valuation	17,684	3,642	16,041	37,367
2 Change due to:				
a New hire and rehire	934	(12)	(1)	921
b Non-vested termination	(68)	0	0	(68)
c Vested termination	(329)	329	0	0
d Retirement	(110)	(144)	254	0
e Disability	14	0	14	0
f Death without beneficiary	(36)	(93)	(274)	(403)
g Death with beneficiary	(1)	(3)	(207)	(211)
h New beneficiary	0	0	211	211
i Cashout	(292)	(144)	0	(436)
j Miscellaneous ¹	(31)	60	(317)	(288)
k Net change	53	(8)	(319)	(274)
3 Included in January 1, 2015 valuation	17,737	3,583	15,722	37,093



¹ Includes adjustments for prior omissions and data corrections.

3.3 Age and service distribution of participating employees

Number distributed by attained age and attained years of credited service

		Years Of Credited Service													
Attained Age		Under 1			1 to 4			5 to 9			10 to 14			15 to 19	
		Ave	rage		Ave	rage		Ave	rage		Ave	rage		Aver	age
	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.
<25				258	64,178	3,353	14								
25 to 29				578	70,924	5,199	471	81,171	15,198	12					
30 to 34				454	74,545	6,161	943	85,130	19,941	239	90,807	32,456	6		
35 to 39				322	74,224	6,763	820	85,697	23,769	453	96,620	41,830	159	91,969	53,710
40 to 44				232	78,603	8,660	668	87,768	28,562	435	97,490	49,948	331	99,062	67,919
45 to 49				183	80,816	9,405	515	87,540	33,010	312	100,941	61,368	296	100,152	81,124
50 to 54				119	79,446	11,253	396	87,982	36,911	262	98,849	68,457	307	96,380	89,748
55 to 59				90	84,863	12,292	271	90,544	43,949	200	96,585	78,696	189	100,172	108,222
60 to 64				50	79,507	12,108	163	85,708	44,585	87	98,310	89,235	95	99,540	119,463
65 to 69				16			40	97,721	59,454	30	105,376	108,090	15		
>70				1			1			9			2		



Towers Watson Confidential

							Years C	of Credited	Service						
Attained		20 to 24			25 to 29			30 to 34			35 to 39			40 & up	
Age		Aver	rage		Ave	rage		Ave	rage		Ave	rage		Ave	rage
	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.	No.	Comp.	Cash Bal.
<25															
25 to 29															
30 to 34															
35 to 39	5														
40 to 44	134	100,867	91,439	4											
45 to 49	465	107,910	113,437	348	106,134	134,109	21	87,151	130,695						
50 to 54	398	94,108	120,792	866	105,658	160,936	892	101,132	186,759	150	99,438	209,161	1		
55 to 59	299	95,940	144,137	562	96,445	176,664	984	108,173	229,333	1,031	102,170	243,699	39	92,825	265,717
60 to 64	136	88,590	148,010	219	95,623	198,612	326	105,086	257,726	414	105,642	290,507	231	102,572	315,925
65 to 69	15			34	89,466	202,226	34	108,774	289,599	29	95,525	302,924	45	116,024	441,265
>70	3			3			1			1			3		



This page is intentionally blank



Towers Watson Confidential

Appendix A: Statement of actuarial assumptions and methods

1. Assumptions and methods for contribution purposes

Actuarial Assumptions and Methods — Contributions

Economic Assumptions		
Interest rate basis:		
Applicable month (published)		October 2014
Yield curve basis		Segment rates
Funding interest rates:	Reflectin Corridor	
First segment rate	4.72	% 1.55%
Second segment rate	6.119	% 4.06%
Third segment rate	6.819	% 5.15%
Effective interest rate	6.159	% 4.19%
Annual rates of increase		
Compensation:		
 Representative rates Weighted average 	Age < 26 26 - 30 31 - 35 36 - 40 41 - 45 46 - 50 > 50	Rate 12.00% 8.50% 7.00% 6.00% 5.00% 4.00% 3.50%
 Weighted average 		4.75%
Cash balance crediting rate		4.00%
 Lump sum/annuity conversion rate 	Octobe	r 2014 segment rates
 Future Social Security wage bases 		4.00%
 Statutory limits on compensation 		N/A
• Expected rate of return on assets for prior year	6.00% but not	greater than the third segment rate



Demographic Assumptio	ns			
Inclusion Date	The valuation date coir employee becomes a p	ncident with or next follow participant.	ing the date on which the	
New or rehired employees	It was assumed there w	vill be no new or rehired e	employees.	
Mortality				
 Healthy 				
	Separate rates for non-annuitants (based on RP-2000 "Employees" tab without collar or amount adjustments, projected to 2030 using Scale A4 annuitants (based on RP-2000 "Healthy Annuitants" table without collar amount adjustments, projected to 2022 using Scale AA.			
Disabled	Post-1994 current liabi	lity disabled		
 Lump sum/annuity conversion 	Applicable 417(e) IRS	Mortality Table		
Termination	Rates varying by age a	ind service:		
	Pe	rcentage leaving during the		
	Attained Age	Less than five years of service	Five or more years of service	
	< 25	8.00%	7.30%	
	25 – 29	8.00%	5.00%	
	30 - 34	8.00%	4.20%	
	35 – 39	8.00%	3.40%	
	40 – 44	8.00%	2.50%	
	45 – 49	8.00%	1.90%	
	40 40 50 +	8.00%	1.70%	
	indicated by the followi	age becoming disabled du	ring the year	
		Male	Female	
	Age 20	0.060%	0.090%	
	30	0.060%	0.090%	
	40	0.074%	0.090%	
	40 50	0.178%	0.267%	
	60	0.690%	1.035%	
Retirement		average retirement age 64		
	Percentage reti	ring during the year		
	Age	Rate		
	55 – 57	1.00%		
	58 – 60	6.00%		
	61 – 63	16.00%		
	64 – 69	13.00%		
	70 +	100.00%		
TOWERS WATSON	$\overline{\mathbf{v}}$		Towers Watson Confidential	

Benefit commencement date:

- Preretirement death The later of the death of the active participant or the date the participant benefit would have attained age 55.
- Deferred vested benefit The later of age 55 or termination of employment.
- Disability benefit Upon disablement.
- Retirement benefit Upon termination of employment.
- Form of payment 40% lump sum; 60% annuity for retirement eligible East grandfathered participants and 75% lump sum; 25% annuity for all other participants. Married participants are assumed to elect the 50% joint and survivor annuity and unmarried participants are assumed to elect the single life
 - Percent married 80% of male participants; 70% of female participants.
 - Spouse ages Wives are assumed to be three years younger than husbands.
 - Valuation pay 2015 base salary pay (Grandfathered) not estimated due to freeze of final average pay accruals at December 31, 2010.
 - 2015 expanded pay (Cash Balance) sum of the following updated one year according to the salary increase assumption:

annuity. No other optional form of payment election is assumed.

- (i) 2015 base salary
 - (ii) a 15% increase for overtime eligible employees and a target bonus percent increase for incentive-eligible employees
- At-risk assumptions If at-risk calculations are required, all participants eligible to elect benefits during the current and subsequent ten plan years are assumed to commence benefits at the earliest possible date under the plan, but not before the end of the current plan year, except in accordance with the regular valuation assumptions. In addition, all participants (not just those eligible to begin benefits within the next 11 years) are assumed to elect the most valuable form of benefit under the plan, which is usually a joint and survivor form of payment.
- Timing of benefit
paymentsAnnuity payments are payable monthly at the beginning of the month and lump
sum payments are payable on date of decrement.

Methods	
Valuation date	First day of plan year.
Funding target	Present value of accrued benefits.
Target normal cost	Present value of benefits expected to accrue during plan year plus plan-related expenses expected to be paid from the trust (based on actual trust expenses paid in previous year, adjusted by the difference between the prior and expected current year PBGC premiums).



Actuarial value of assets	Average of the fair market value of assets on the valuation date and the six immediately preceding months, adjusted for contributions, benefit/expense payments and expected investment returns. The average asset value must be within 10% of fair value, including contributing receivable. The method of computing the actuarial value of assets complies with rules governing the calculation of such values under PPA.
	These rules produce smoothed values that reflect the underlying market value of plan assets but fluctuate less than the market value. As a result, the actuarial value of assets will be lower than the market value in some years and greater in other years. However, over the long term under PPA's smoothing rules, the method has a bias to produce an actuarial value of assets that is below the market value of assets.
Benefits Not Valued	All benefits were valued except:
	 Any liabilities that may be reinstated in the event of reemployment The alternate benefit formula for members who did not elect to withdraw their employee contributions Any liabilities relating to members" unwithdrawn employee contributions Liabilities related to special benefits as a result of termination due to downsizing and restructuring

Data Sources

Towers Watson used participant and asset data as of January 1, 2015, supplied by Mercer, the third party administrator for AEP. 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 was adjusted to reflect any significant events that occurred between the date the data was collected and the measurement date. To the extent that data were not provided, estimates were made based on prior year information.

The Company also provided the amounts recognized in accumulated other comprehensive income as of the end of the December 31, 2014 fiscal year and amounts recognized in other comprehensive income in the December 31, 2014 fiscal year.



2. Assumptions and methods for pension cost purposes

Ac	tuarial Assumptions and Methods —	- Pension Cost	
Ec	onomic Assumptions		
Dis	count rate		4.00%
Re	turn on assets*		6.00%
Anı	nual rates of increase		
•	Compensation:		
	 Representative rates 	Age < 26 26 - 30 31 - 35 36 - 40 41 - 45 46 - 50 > 50	Rate 12.00% 8.50% 7.00% 6.00% 5.00% 4.00% 3.50%
	 Weighted average 		4.80%
•	Cash balance crediting rate Lump sum/annuity conversion rate Future Social Security wage bases Statutory limits on compensation		4.00% 5.00% 4.00% 3.00%

The return on assets shown above is net of investment expenses and administrative expenses assumed to be paid from the trust.

* Also used as discount rate for plan accounting (ASC 960) purposes.



Demographic Assumptions

Inclusion Date	The valuation date coincident with or next following the date on which the employee becomes a participant.
New or rehired employees	It was assumed there will be no new or rehired employees.
Mortality	Based on modified versions of RP-2014 with long-term improvement rates of 0.75%.

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

Mortality improvements are projected forward on a generational basis. Improvement rates grade linearly from the MP-2014 rate in 2007 to the ultimate rate in 2015:

Age	Ultimate Improvement rate per year	Age	Ultimate improvement rate per year
85 and younger	0.750%	91	0.300%
86	0.675%	92	0.225%
87	0.600%	93	0.150%
88	0.525%	94	0.075%
89	0.450%	95 and older	0.000%
90	0.375%		

Lump sum/annuity conversion

Applicable 417(e) IRS Mortality Table

Termination

Rates varying by age and service

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

Disability

Rates apply to employees not eligible to retire and vary by age and sex a indicated by the following sample values:

Percentage becoming disabled during the year						
Age	Male	Female				
20	0.060%	0.090%				
30	0.060%	0.090%				
40	0.074%	0.110%				
50	0.178%	0.267%				
60	0.690%	1.035%				



Retirement

Rates varying by age; average retirement age 64:

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

Benefit commencement date:

•	Preretirement death	The later of the death of the active participant or the date the participant
	benefit	would have attained age 55.

- Deferred vested The later of age 55 or termination of employment. benefit
- Disability benefit Upon disablement.
- Retirement benefit Upon termination of employment.
- Form of payment 40% lump sum; 60% annuity for retirement eligible East grandfathered participants and 75% lump sum; 25% annuity for all other participants. Married participants are assumed to elect the 50% joint and survivor annuity and unmarried participants are assumed to elect the single life annuity. No other optional form of payment election is assumed.
- Percent married 80% of male participants; 70% of female participants.
- Spouse ages Wives are assumed to be three years younger than husbands.
- Valuation pay 2015 base salary pay (Grandfathered) not estimated due to freeze of final average pay accruals at December 31, 2010.

2015 expanded pay (Cash Balance) – sum of the following updated one year according to the salary increase assumption:

	 (i) 2015 base salary (ii) a 15% increase for overtime eligible employees and a target bonus percent increase for incentive-eligible employees
Administrative expenses	Discount rate is net of expenses paid by the trust.
Timing of benefit payments	Annuity payments are payable monthly at the beginning of the month and lump sum payments are payable on date of decrement.



Methods	
Service cost and projected benefit obligation	Projected unit credit
Market-related value of assets	The market value on the valuation date less the following percentages of prior years' investment gains and losses:
	 80% of the prior year
	 60% of the second prior year
	 40% of the third prior year
	 20% of the fourth prior year
	The investment gain or loss is calculated each year by:
	 Rolling forward the prior year's fair value of assets with actual contributions, benefit payments and expected return on investments using the long-term yield assumption
	 Comparing the actual fair value of assets to the expected value calculated above.
Benefits not valued	All benefits were valued except:
	 Any liabilities that may be reinstated in the event of reemployment
	 The alternate benefit formula for members who did not elect to withdraw their employee contributions
	 Any liabilities relating to members' unwithdrawn employee contributions
	 Liabilities related to special benefits as a result of termination due to restructuring or downsizing

Data Sources

Towers Watson used participant and asset data as of January 1, 2015, supplied by Mercer, the third party administrator for AEP. 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 was adjusted to reflect any significant events that occurred between the date the data was collected and the measurement date. To the extent that data were not provided, estimates were made based on prior year information.

The Company also provided the amounts recognized in accumulated other comprehensive income as of the end of the December 31, 2014 fiscal year and amounts recognized in other comprehensive income in the December 31, 2014 fiscal year.

TOWERS WATSON

Accum	ntiona Dationala	anificant Economi	a Aggumptiona fa	r Contributiono
ASSUIN	onions ranionale -	ignificant Economi	CASSUMDTIONS TO	or Contributions

Discount rate	The basis chosen was selected by the plan sponsor from among choices prescribed by law, all of which are based on observed market data over certain periods of time.
Cash Balance Interest crediting rate	The plan credits interest to cash balance accounts using the 30-year Treasury rate for the September of the preceding year with a minimum rate of 4.00%. The assumption is based on the plan sponsor's long-term expectations of yields on U.S. Treasuries. We believe that the selected assumption does not significantly conflict with what would be reasonable based on market conditions at the measurement date.
Lump sum conversion rate	As required by IRC 430, lump sum benefits are valued using "annuity substitution", so that the interest rates assumed are effectively the same as described above for the discount rate. The adjustment results in a fixed assumption of 5.00%, because the plan's fixed minimum conversion rate is expected to always produce the larger lump sum, even when the variability of IRC 417(e) assumptions is considered.
Rates of increase in:	
Compensation	Rates of increase in compensation were based on an experience study conducted in 2014, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.
 National average wages (NAW) (e.g., Social Security wage bases) 	The assumed NAW is based on assumed CPI as shown below, plus assumed increases in real wages (the portion of GDP increases that becomes part of wages). Such assumed future increases in real wages are based on a combination of

 Increases in statutory limits (CPI)
 The assumed CPI is based on a combination of historical average CPI, current conditions and an assumed progression from recently experienced CPI to the long-term expected level. The final assumption represents a composite of current rates and long term expected rates.

be lower (higher) than historical averages.

historical averages and an expectation that the future rates will

Assumptions Rationale - Significant Economic Assumptions for 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.
Expected 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.



Cash balance interest crediting rate	The plan credits interest to cash balance accounts using the 30-year Treasury rate for the September of the preceding year with a minimum rate of 4.00%. The assumption is based on the plan sponsor's long-term expectations of yields on U.S. Treasuries. We believe that the selected assumption does not significantly conflict with what would be reasonable based on market conditions at the measurement date.
Conversion rate for lump sums and annuities	The plan uses IRC 417(e)(3) as its basis to convert between lump sums and annuities. Because the $417(e)(3)$ interest rates are based on corporate bond yields, the assumption is based on the plan sponsor's long-term expectations of yields on high-quality corporate bonds. We believe that the selected assumption does not significantly conflict with what would be reasonable based on market conditions at the measurement date.
Rate of increase in compensation	Rates of increase in compensation were based on an experience study conducted in 2014, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.

Assumptions Rationale - Significant Demographic Assumptions

Mortality	Assumptions were selected by the plan sponsor and, as required by U.S. GAAP, represent a best estimate of future experience.
Termination	Termination rates are based on an experience study conducted in 2014, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.
	Assumed termination rates differ by service because of observed differences in termination rates between employees who have attained at least five years of service and those with less than five years of service.
Retirement	Retirement rates are based on an experience study conducted in 2014, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.
Form of payment	Rates at which retirees elect lump sums versus annuities are based on an experience study conducted in 2014, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.



Source of Prescribed Methods	
Funding methods	The methods used for funding purposes as described in Appendix A, including the method of determining plan assets, are "prescribed methods set by law", as defined in the actuarial standards of practice (ASOPs). These methods are required by IRC §430, or were selected by the plan sponsor from a range of methods permitted by IRC §430.
Accounting methods	The methods used for accounting purposes as described in Appendix A, including the method of determining the market- related value of plan assets, are "prescribed methods set by another party", as defined in the actuarial standards of practice (ASOPs). As required by U.S. GAAP, these methods were selected by the plan sponsor.
Changes in Assumptions and M	ethods
Change in assumptions since prior valuation	The interest rates used to calculate the funding target, target normal cost and to convert 417(e) based forms of payments were updated from the segment rates as of October 2013 to the segment rates as of October 2014.
	The required mortality table used to value the funding target and target normal cost was updated to include one additional year of projected mortality improvements.
	Assumed plan-related expenses of \$5,846,166 were added to the target normal cost.
	The discount rate decreased from 4.70% to 4.00%.
	The mortality table used to value the benefit obligations was updated from the RP2000 with projections to 2021 for annuitants and to 2029 for nonannuitants to modified versions of RP-2014 with long-term improvement rates of 0.75%.
	The salary increase rate was updated to reflect experience through 2013.
	Retirement and termination rates were updated to reflect experience through 2013.
	The mortality used to convert to 417(e) based forms of payment was updated for an additional year of mortality improvements.

Change in methods since prior None. valuation



This page is intentionally blank



Towers Watson Confidential

Appendix B1: Summary of plan provisions covered by the former East Retirement Plan

Plan Provisions			
Effective Date	May 1, 1955. Restated effective January 1, 2012.		
Recent Amendments	Executed as of April 3, 2012.		
Covered Employees	Employees become Members of the Plan on the first day of the month following completion of one year of service.		
Participation Date	Date of becoming a covered employee.		
	Definitions		
Grandfathered employee	If, on December 31, 2000, either:		
	 Participating in AEP System Retirement Plan, or 		
	 In one-year waiting period for AEP System Retirement Plan participation. 		
Vesting service	A period of time from employment date to termination date and, in general, includes periods of severance that are not in the excess of 12 months.		
Accredited service	Elapsed time from date of hire (from benefit service start date).		
Cash balance pay	Pay received during the year, including base pay, overtime, shift differential/Sunday premium pay and incentive pay, subject to IRS limits.		
Covered compensation amount	The average of the Social Security taxable wage based during the 35-year period including the year in which the participant retires, dies, becomes disabled or otherwise terminates employment. This monthly average is calculated to the next lower or equal whole dollar amount and is then rounded to nearest \$50.		
Final average pay	Average of the highest 36-consecutive months of base pay out of the last 120 months of employment, subject to IRS limits.		
Normal retirement date (NRD)	The first day of the calendar month whose first day is nearest the later of the member's 65 th birthday or the completion of five years of Vesting Service.		



	KPSC Case No. AG's First Set of Da	
48	American Electric Power System Retire	just 14, 2017
		Item No. 84 Attachment 1
		age 54 of 87
Cash balance account	Recordkeeping account to which annual Interest Credits and annual	
	Company Credits are credited. The cash balance account is updated at the end of each plan year and is equal to:	
	Cash Balance Account as of the	
	end of the prior plan year +	
	Interest Credits	
	+ Company Credits	
Cash balance benefit		
	Cash Balance Account converted to a monthly annuity	
Opening balance	For those participating in or eligible for the AEP System Retirement Plan on December 31, 2000, opening balance is calculated as follows:	
	 Present value of monthly normal retirement benefit determined as of December 31, 2000, and payable at age 65 (or current age if older) 	
	 Present value determined based on 5.78% interest and IRS regulated mortality (GAM83 Unisex) data for lump sums (postretirement only) 	
	Plus	
	1 105	
	 Credit for early retirement subsidy for monthly payments beginning at age 62 (or current age if older) 	
	Plus	
	 Transition credit based on age, service and pay received in 2000 (see "Company Credits" for credit percentages) 	
	 Age and service based on completed whole years as of December 31, 2000. 	
	For employees hired on or after January 1, 2001, opening balance is \$0.	
Interest credits	lits Interest credits are applied to beginning of year account balance on December 31 each year.	
	Dependion the evenesis 20 years Teresum, Dand acts for Nevershar of the	
	Based on the average 30-year Treasury Bond rate for November of the previous year.	
	Minimum of 4%.	
Company credits	Applied to account balance on December 31 or termination date if earlier.	
	Amount is a percentage of eligible pay received during the year, based on age plus years of Vesting Service (age and service in completed whole years as of December 31).	
	Age Plus Annual	
	Years of Service Company Credit	
	Less than 30 3.0% 30 – 39 3.5%	
	30-39 $3.5%40-49$ $4.5%$	
	50 – 59 5.5%	
	60 – 69 7.0%	
TOWERS WATSON	70+ 8.5%	

KPSC Case No. 2017-00179

Towers Watson Confidential

TOWERS WATSON

Monthly Grandfathered Benefit	Sum of (1), (2) and (3):
	(1) 1.10% of Final Average Pay x Accredited Service up to 35 years
	(2) 0.50% of Final Average Pay Less Covered Compensation x Accredited Service up to 35 years
	(3) 1.33% of Final Average Pay x Accredited Service between 35 and 45 years
	Accruals for the grandfathered benefit ceased on December 31, 2010.
Long-term disability and paid leaves	Participants do not receive company credits while on long-term disability. Vesting service continues.
Unpaid leave	No compensation for annual Company Credit. Vesting service continues.
	Eligibility for Benefits
Normal retirement	All members at or after their Normal Retirement Date.
Early retirement	Any time after attainment of age 55 and completion of five years of vesting. Applicable only to grandfathered benefits.
Postponed retirement	Retirement after Normal Retirement Date.
Vested termination	All members who terminate employment after completion of three years of Vesting Service, or upon death.
Disability	All members who are unable to work at own occupation solely because of sickness or injury for the first 24 months of disability. After 24 months of disability, the participant is eligible if unable to work at any gainful occupation for which the participant may be able, or may reasonably become qualified by education, training or experience, to perform.
Surviving spouse	The surviving spouse of a Grandfathered Member who retired or is eligible to retire on Normal or Early Retirement and who was married to that spouse for the year preceding commencement and whose grandfathered benefit exceeds his or her Cash Balance Benefit.
Preretirement death	Beneficiary of deceased member.
Ben	efits Paid Upon the Following Events
Normal retirement	For Grandfathered Employees, the better of the monthly grandfathered benefit or the Cash Balance Benefit determined as of Normal Retirement Date. For all other employees, the Cash Balance Benefit determined as of Normal Retirement Date.
Early retirement	For Grandfathered Employees, the better of:
	(1) The monthly grandfathered retirement benefit reduced by 3% per year for each year commencement precedes age 62, and
	(2) The Cash Balance Benefit determined as of the Early Retirement Date.
	For all other employees, the Cash Balance Benefit determined as of the Early Retirement Date.

TOWERS WATSON

Deferred vested retirement	The accrued Normal Retirement Benefit (better of Cash Balance and Grandfathered Benefits, if eligible), payable at Normal Retirement Date or actuarially reduced and payable at any age.				
Disability	The greater of (1) or (2):				
	(1) Accrued Grandfathered Retirement Benefit reduced as in the Early Retirement Benefit. If retirement occurs prior to age 55, the benefit is further reduced actuarially from age 55. The Disability Retirement Benefit will reflect Accredited Service that accrued (at most recent rate of base earnings) to a member while receiving benefits under the Company's LTD plan.				
	(2) The Cash Balance Benefit with continued Company Credits while disabled.				
	Benefit (1) applies for Grandfathered Employees only.				
Preretirement	Better of (1) or (2):				
death	(1) The grandfathered monthly benefit as if the employee commenced a 60% qualified joint and survivor benefit at his earliest retirement date				
	(2) Annuity equivalent of Cash Balance account or the cash balance account.				
	Benefit (1) applies for a Grandfathered Employee whose beneficiary is his or her spouse.				
Surviving spouse benefits	A benefit payable for life equal to 30% of the single life annuity payable to the grandfathered member. The spouse's benefit is actuarially reduced for each year by which the spouse is more than ten years younger than the member. Payable to Grandfathered Employees only.				
	Other Plan Provisions				
Forme of nourmont					
Forms of payment					
 Grandfathered employees 	The following are available for Grandfathered Employees for both the Grandfathered Benefit and the Cash Balance Benefit:				
	 Full lump sum payment. 				
	 Combination of partial lump sum (25%, 50% or 75% of full lump sum) with remainder paid as a monthly benefit (see below). 				
	Monthly payment:				
	— Single life annuity.				
	 Optional joint annuities (spouse or other beneficiary). 				
	 Available in 40%, 50%, 60%, 75%, 100%. 				
	 Can elect pop-up and/or level income options. 				
TOWERS WATSON	 Automatic company-paid 30% surviving spouse annuity included in Grandfathered Benefit annuity if terminate on or after age 55 and married at least one year. Cash Balance Benefit is actuarially reduced for this feature. 				



Towers Watson Confidential

A one-time option to elect a lump sum of the accrued benefit for terminated vested participants whose benefit was determined in no way by reference to either the AEP or CSW cash balance formulas was offered during the period from May 1, 2012 through June 30, 2012. Participants eligible for the window were also permitted to elect any of the other optional forms of payment generally applicable to such a participant under the normal terms of the plan document. Any participant who elected to commence benefits under this window, regardless of lump sum or annuity election, had a benefit commencement date of August 1, 2012.

 Employees hired on or after January 1, 2001 The following are available for those hired on or after January 1, 2001:

- Full lump sum payment.
- Combination of partial lump sum (25%, 50% or 75% of full lump sum) with remainder paid as a monthly benefit (see below).
- Monthly payment:
 - Single life annuity.
 - Joint annuities (spouse or other beneficiary).

7.50% interest and the 1974 George B. Buck Mortality Table.

– Available in 50%, 75%, 100%.

Form of payment conversion for non-417(e) covered conversions

- Cash balance 7.50% interest and the applicable 417(e) Mortality Table.
- Grandfathered benefit

Pension Increases

None.

Plan Participants' Contributions Prior to January 1, 1978, employee contributions were required as a condition of Membership. In May and June of 1981, Members were permitted an election to withdraw those contributions. Those who did not elect to withdraw have retirement benefits based on a formula that differs from the formulas previously described in this section. However, the number of nonelecting Members is so small that special plan provisions for that group have not been included in this summary.

52		e No. 2017-00179 of Data Requests IAugust 14, 2017 Item No. 84 Attachment 1 Page 58 of 87
Maximum on benefits and pay	All benefits and pay for any calendar year may not exceed the maximum limitations for that year as defined in the Internal Revenue Code. The plan provides for increasing the dollar limits automatically as such changes become effective. Increases in the dollar limits are assumed for determining pension cost but not for determining contributions.	
Benefits not valued	A small portion of the population made employee contributions to the plan. Because the amount of these contributions is not material to the plan, they are not part of the valuation.	
	Participants who were employees of Columbus Southern Power (CSP) at the time AEP acquired that company have a frozen benefit under the CSP benefit formula at December 31, 1986. Benefits for these participants are the greater of an all-service AEP benefit and a two-part benefit consisting of the frozen CSP benefit plus an AEP benefit accrued from January 1, 1987. Because this applies to a small portion of the population and the CSP frozen benefit is not often the greater benefit for these participants, this benefit is not valued.	
Plan status	Ongoing.	
	Future Plan Changes	

Towers Watson is not aware of any future plan changes that are required to be reflected.

Changes in Benefits Valued Since Prior Year

None.

TOWERS WATSON

Appendix B2: Summary of plan provisions covered by the former West Retirement Plan

Plan Provisions						
Effective Date	January 1940. Restated effective January 1, 1997.					
Recent Amendments	Executed as of April 3, 2012.					
Covered Employees	All full-time employees of a Participating Company employed by CSW before January 1, 2001, and not covered by a union (that has not bargained for coverage) or another pension plan provided by AEP. Part-time employees of the Company had to work more than 1,000 hours in the first anniversary year or subsequent calendar years.					
Participation Date	Date of becoming a covered employee					
	Definitions					
Grandfathered employee	Employees who were at least age 50 with ten years of vesting service of July 1, 1997.					
Vesting service	All service from date of hire in completed years.					
Credited service	The aggregate of:					
	For the period prior to January 1, 1976:					
	(1) The number of full years in the last continuous period that employee was a participant after June 30, 1970, plus					
	(2) Credited service under any prior plan if service extended to July 1, 1970.					
	For the period beginning on or after January 1, 1976, the number of full years of service.					
Cash balance pay	Pay received during the year, including base pay, overtime, shift differential/Sunday premium pay and incentive pay, subject to IRS limits					
Final average pay	Highest average annual earnings (base pay only) during any 36 consecutive months in the 120 months before retirement. Any changes in earnings within the last three months before retirement will not be taken into account.					
Normal retirement date (NRD)	The first day of the calendar month on or following the member's 65 th birthday.					



54	KPSC Case No AG's First Set of D American Electric Power System Retirement 中ated: Au	ata Requests
Cash balance account	Recordkeeping account to which annual interest credits and annual company credits are credited. The cash balance account is updated at the end of each plan year and is equal to:	
	Cash Balance Account as of the end of the prior plan year	
	Interest Credits	
	Company Credits	
Cash balance benefit	Cash Balance Account converted to a monthly annuity	
Interest credits	Interest credits are applied to beginning of year account balance on December 31 each year.	
	Based on the average 30-year Treasury Bond rate for November of the previous year.	
	Minimum of 4%.	
Company credits	Applied to account balance on December 31 or termination date if earlier.	
	Amount is a percentage of eligible pay received during the year, based on age plus years of Vesting Service (age and service in completed whole years as of December 31).	
	Age PlusAnnualYears of ServiceCompany CreditLess than 30 3.0% $30 - 39$ 3.5% $40 - 49$ 4.5% $50 - 59$ 5.5% $60 - 69$ 7.0% $70+$ 8.5%	
Monthly Grandfathered Benefit	Greater of (1) or (2) below with automatic cost of living adjustments upon retirement:	
	(1) Basic benefit — An annual amount equal to:	
	The aggregate of a participant's (a) earned benefit (if any) under any prior plan or acquired Company pension plan under which no election was made to receive a paid-up annuity; and (b) participant contributions without interest for the period commencing on or after July 1, 1970. For the period after September 1, 1980, participants will be deemed to have made contributions at the rate of 2% annually of the participant's annual rate of earnings as of January 1.	
	(2) Minimum benefit:	
	1-2/3% of final average annual earnings less 50% of participant's annual primary Social Security benefit times years of credited service up to 30 years.	



Minimum benefits	The benefit payable will never be less than the frozen accrued benefit as of July 1, 1997, under the prior plan.
Primary Social Security benefit	The annual amount payable under the Social Security Act as amended in effect at the employee's date of retirement. The date as of which the amount is to be determined is:
	(1) In the case of an employee (including deferred vested employees) retiring on or after normal retirement date, normal retirement date.
	(2) In the case of an employee retiring prior to normal retirement date, the later of employee's 62 nd birthday or actual retirement date.
	Early retirees and deferred vested employees are assumed to have no earnings after termination in determining the amount of this benefit.
Long-term disability and paid leaves	Participants do not receive company credits while on long-term disability. For the grandfathered formula, the final average pay will be determined as of the date on which the participant became disabled. Vesting service continues.
Unpaid leave	No compensation for annual compensation credit. Vesting service continues.
	Eligibility for Benefits
Normal retirement	Eligibility for Benefits All members at or after their Normal Retirement Date
Normal retirement Early retirement	
	All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of
Early retirement	All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting
Early retirement Postponed retirement	All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting Retirement after NRD. The participant's cash balance account is 100% vested when any one
Early retirement Postponed retirement	All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting Retirement after NRD. The participant's cash balance account is 100% vested when any one of the following applies:
Early retirement Postponed retirement	 All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting Retirement after NRD. The participant's cash balance account is 100% vested when any one of the following applies: (1) Three years of vesting service
Early retirement Postponed retirement	 All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting Retirement after NRD. The participant's cash balance account is 100% vested when any one of the following applies: (1) Three years of vesting service (2) Attainment of age 55 while an employee
Early retirement Postponed retirement	 All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting Retirement after NRD. The participant's cash balance account is 100% vested when any one of the following applies: (1) Three years of vesting service (2) Attainment of age 55 while an employee (3) Death prior to termination
Early retirement Postponed retirement Vested	 All members at or after their Normal Retirement Date Any time after attainment of age 55 and completion of five years of vesting Retirement after NRD. The participant's cash balance account is 100% vested when any one of the following applies: Three years of vesting service Attainment of age 55 while an employee Death prior to termination Upon disability. All participants who become permanently and totally disabled. Permanent and total disability is determined by reference to the LTD



			Pa				
Ber	nefits	Paid Upon the Following Eve	ents				
Normal retirement	gran assu with and t	Grandfathered employees must elect either the cash balance or the grandfathered formula. For purposes of this valuation, the employee is assumed to elect the formula with the higher present value. Employees with a prior plan frozen benefit get the better of the cash balance benefit and the prior plan frozen benefit. For all other employees, the Cash Balance Benefit is determined as of Normal Retirement Date.					
Early retirement	Grea	Greater of (1) if applicable or (2):					
	(1)	payable subject to reduction a	enefit and the prior plan frozen are according to the following nce prior to the normal retirement				
		Age at Retirement 64 63 62 61 60 59 58 57 56 55	Percent of Benefit Payable 100% 100% 95% 90% 84% 78% 72% 66% 60%				
	(2)	The Cash Balance Benefit det Retirement Date.	ermined as of the Early				
Deferred vested retirement	Grea	ter of (1) if applicable or (2):					
	(1)	Grandfathered accrued benefit p reduced 5% per year from age 6 7.5% per year compounded from	65, 6% per year from age 60 and				
	(2)	Vested cash balance account.					
Disability retirement	proje	greatest of grandfathered accrued acted service and frozen pay defe fit if eligible and cash balance acc	rred to age 65, prior plan frozen				
Preretirement death		beneficiary is the spouse and the dathered/protected plan participation of the dathered because the spouse of the					
	(1)	For an active participant who die before retirement, a monthly ber accrued to the date of death with is payable immediately as a life a	nefit equal to 50% of the benefit nout reduction for early retirement				
	(2)	For an active participant who die years of vesting service but befor benefit equal to 50% of the bene reduced as for early retirement i	ore age 55, a deferred monthly efit accrued to the date of death				



qualifying spouse. Benefit commencement is deferred to when the deceased participant would have attained age 55.

For a deferred vested participant who dies before benefits (3) commence, a monthly benefit equal to 50% of the deferred vested benefit reduced for early commencement (as for deferred vesteds) is payable as a life annuity to a qualifying spouse. If death occurs before age 55, the benefit to the spouse is deferred to when the deceased participant would have attained age 55.

The spouse's benefit is actuarially reduced for each year by which the spouse is more than five years younger than the participant.

For all employees, the minimum benefit is the cash balance account immediate annuity, which is also payable if the beneficiary is not the participant's spouse.

Other Plan Provisions

The following are available for those participants who did not work an hour of service on or after January 1, 2003:

- Full lump sum payment.
- Monthly payment:
 - Single life annuity.
 - 50% joint annuity (spouse or other beneficiary).

A one-time option to elect a lump sum of the accrued benefit for terminated vested participants whose benefit was determined in no way by reference to either the AEP or CSW cash balance formulas was offered during the period from May 1, 2012 through June 30, 2012. Participants eligible for the window were also permitted to elect any of the other optional forms of payment generally applicable to such a participant under the normal terms of the plan document. Any participant who elected to commence benefits under this window, regardless of lump sum or annuity election, had a benefit commencement date of August 1, 2012.

The following are available for those participants who work an hour of service on or after January 1, 2003:

- Full lump sum payment.
- Combination of partial lump sum (25%, 50% or 75% of full lump sum) with remainder paid as a monthly benefit (see below).
- Monthly payment:
 - Single life annuity.
 - Joint annuities (spouse or other beneficiary).
 - Available in 50%, 75%, 100%.

TOWERS WATSON

Form of payment

Form of payment conversion for non-417(e) covered conversions	
Cash balance	7.50% interest and the applicable 417(e) Mortality Table
 Grandfathered benefit 	Factors as specified in Tables I, II, III and IV of Exhibit A to the American Electric Power System Retirement Plan document. 7.50% interest and the 1951 Group Annuity male mortality table to the extent not covered by Tables I, II, III and IV.
Pension Increases	None.
Member Contributions	None.
Maximum on benefits and pay	All benefits and pay for any calendar year may not exceed the maximum limitations for that year as defined in the Internal Revenue Code. The plan provides for increasing the dollar limits automatically as such changes become effective. Increases in the dollar limits are assumed for determining pension cost but not for determining contributions.
Plan status	Continuing accruals. All new entrants to plan are covered under former East plan provision.
	Future Plan Changes

Towers Watson is not aware of any future plan changes that are required to be reflected.

Changes in Benefits Valued Since Prior Year

None.



Appendix C: Adjusted Funding Target Attainment Percentage (AFTAP)

American Electric Power retained Towers Watson Delaware Inc. ("Towers Watson") to perform a valuation of its pension plan for the purpose of measuring the plan's AFTAP for the plan year beginning January 1, 2015 in accordance with ERISA and the Internal Revenue Code. This valuation has been conducted in accordance with generally accepted actuarial principles and practices.

The enrolled actuary making this certification is a member of the Society of Actuaries and other professional actuarial organizations and meets their "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States."

We hereby certify that the plan's AFTAP for the plan year beginning January 1, 2015 is 130.07%. This percentage is based on the assumptions, participant data, and plan provisions we relied upon to prepare these results shown in this report, reflects the valuation limitations discussed in this report and is also based on the following additional information:

Annuity Purchases

American Electric Power's representation that there were no annuity purchases made on behalf of non-highly compensated employees by the plan in the plan years beginning in 2013 and 2014.

Funding Balances

Our understanding is that American Electric Power has not elected to reduce the plan's funding balance as of the first day of the 2015 plan year.

Our understanding is that the plan is not subject to a deemed election to reduce the funding balances in 2015.

Our understanding is that American Electric Power has not elected to apply any of the plan's funding balances to the 2015 minimum required contribution.

Our understanding is that American Electric Power has not elected to increase the prefunding balance as of the first day of the 2015 plan year.

Contributions

Our understanding is that American Electric Power has not made any employer contributions after December 31, 2014 and before April 30, 2015 for the 2014 plan year.



Subsequent Events

There were no plan amendments that took effect in the current plan year that were taken into account for the current plan year's AFTAP certification.

There were no UCEBs that took effect in the current plan year that were taken into account for the current plan year's AFTAP certification.

There were no previously suspended accruals restored during the current plan year that were taken into account for the current plan year's AFTAP certification.

Elections

Our understanding of sponsor elections required under the Pension Protection Act of 2006 (PPA), with respect to interest rates, Actuarial Value of Assets and other methods and/or assumptions, as confirmed in the Sponsor's letter dated April 22, 2015.

In making this certification, we relied on asset, contribution, funding balance election, and annuity purchase information provided by the Company, including dates and amounts of contributions made to the plan through the date of this certification, dates and amounts of funding balance elections by the Company through the date of this certification, and amounts of annuity purchases in the past two years, as shown above. We have reviewed this information for overall reasonableness and consistency but, consistent with the scope of our engagement, have neither audited nor independently verified this information. We do not certify to the accuracy or completeness of asset, contribution, funding balance election and annuity purchase information, and this certification relies on and is contingent on the accuracy and completeness of this information.



The development of the AFTAP is shown below:

All monetary amounts shown in US Dollars	
Plan Year Beginning	01/01/2015
Actuarial value of assets as of January 1, 2015 ¹	5,126,953,429
Funding standard carryover balance at January 1, 2015 ²	160,373,510
Prefunding balance at January 1, 2015 ²	568,404,791
Funding target (disregarding at-risk assumptions)	3,941,682,464
AVA/funding target (disregarding at-risk assumptions)	130.07%
Assets for AFTAP calculation ³	5,126,953,429
Annuity purchases for NHCEs during 2013 and 2014	0
Reflection of Post-Valuation Date Events not Previously Reflected	
Increase in funding target (disregarding at-risk assumptions) for 2015 amendments/UCEBs/restored accruals ⁴	0
IRC §436 contributions made to enable plan amendments/UCEBs/restored accruals to take effect ⁵	0
Adjusted funding target, disregarding at-risk assumptions, (includes NHCE annuity purchases and amendments)	0
Adjusted assets (includes NHCE annuity purchases and IRC §436 contributions)	0
Specific AFTAP	
Adjusted Funding Target Attainment Percentage (AFTAP)	130.07%

All monotony amounts shown in LIS Dollars

⁵ Discounted to January 1, 2015 using the 2015 plan year effective interest rate



¹ Reflects discounted contributions made for the 2014 plan year only if paid on or before the certification date. Includes security posted by the beginning of the plan year in the form of a bond or cash held in escrow.

² Reflects elections made to-date (other than elections to apply the funding balances to 2015 MRC).

³ AVA if AVA/Funding Target (disregarding at-risk assumptions) >=100%; otherwise (AVA-funding balances).

⁴ If amendments/UCEBs/restored accruals (i) went into effect before this specific certification, (ii) were not reflected in the funding valuation and (iii) require AFTAP recertification, or if AFTAP recertification is not required but the plan sponsor decides to reflect the amendment/UCEBs/restored accruals in the specific AFTAP certification.

Immediate Implications of AFTAP Certification

We believe that the certified AFTAP of 130.07% for the 2015 plan year has the following implications for benefit limitations described in IRC §436. American Electric Power should review these conclusions with ERISA counsel:

Benefit accruals called for under the plan without regard to IRC §436 must continue.

Accelerated distributions called for under the plan without regard to IRC §436 must continue in full.

Amendments that increase benefits must be evaluated at the time they would take effect to determine if they are permissible.

Plant shutdown and other unpredictable UCEBs must be evaluated at the time they would take effect to determine if they are permissible.

Implications of 2015 AFTAP for Presumptions in Next Plan Year

Because the AFTAP for the 2015 plan year is at least 90%, the presumed AFTAP for 2016 will remain equal to the 2015 certified AFTAP, and changes in benefit restrictions will not occur, before the 2016 AFTAP is certified, provided that the 2016 AFTAP is certified before the first day of the tenth month of the plan year.

Note, however, that adoption of plan amendments and/or payment of UCEBs may change this result.



Appendix D: Results by business unit

Unless otherwise indicated, the data, assumptions, methods, data and plan provisions upon which the figures in this Appendix D rely are consistent with those indicated throughout the rest of the report.

Summary of key assumptions for Appendix D of 2015 AEP Retirement Plan valuation report:

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Discount Rate	4.00%	4.25%	4.50%	4.75%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
PPA effective interest rate	6.15%	6.02%	5.83%	5.33%	4.88%	4.46%	4.06%	3.96%	3.89%	3.82%	3.77%
Expected return on assets	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Cash balance crediting rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Lump sum conversion rate	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%

Mortality table	RP-2014, factored to 2006, no collar adjustment
Mortality projection scale	Rates grade linearly by year from MP-2014 in 2007 to 0.75% in 2015. Rates grade linearly by age to zero at age 95 from age 85.
Retirement rates	Age-graded rates based on AEP experience during 2009-2013, average retirement age of 64.
Termination rates	Age and service based rates based on AEP experience during 2009-2013.
Salary increases	Age-graded rates based on AEP experience during 2011-2013, with average annual increase of 4.8%.
Valuation and data	January 1, 2015



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN SUMMARY OF PLAN PARTICIPANTS FOR THE 2015 VALUATION

Location	Vested Actives	Non-Vested Actives	Total Actives	Retirees Receiving Benefits	Beneficiaries	Deferred Vesteds	Total Inactives	Total Participants
140 Appalachian Power Co - Distribution	987	54	1,041	1,091	384	165	1,640	2,681
215 Appalachian Power Co - Generation	875	5	880	757	226	77	1,040	1,940
150 Appalachian Power Co - Transmission	12	0	12	115	16	14	145	157
Appalachian Power Co FERC	1,874	59	1,933	1,963	626	256	2,845	4,778
225 Cedar Coal Co Appalachian Power Co SEC	0 1,874	0 59	0 1,933	87 2,050	33 659	13 269	133 2,978	133 4,911
Appalacitan Power Co SEC	1,074	59	1,955	2,030	059	209	2,970	4,911
211 AEP Texas Central Company - Distribution	811	81	892	845	249	319	1,413	2,305
147 AEP Texas Central Company - Generation	0	0	0	0	43	0	43	43
169 AEP Texas Central Company - Transmission AEP Texas Central Co.	92 903	20 101	112 1,004	68 913	31 323	35 354	134 1,590	246
AEP Texas Central Co.	903	101	1,004	913	323	304	1,590	2,594
170 Indiana Michigan Power Co - Distribution	542	19	561	615	252	94	961	1,522
132 Indiana Michigan Power Co - Generation	360	10	370	279	85	83	447	817
190 Indiana Michigan Power Co - Nuclear	1,031	98	1,129	363	59	287	709	1,838
120 Indiana Michigan Power Co - Transmission 280 Ind Mich River Transp Lakin	117 229	12 26	129 255	103 115	14 38	10 56	127 209	256 464
Indiana Michigan Power Co FERC	2,279	165	2,444	1,475	448	530	2,453	4,897
202 Price River Coal	0	0	0	0	0	0	0	0
Indiana Michigan Power Co SEC	2,279	165	2,444	1,475	448	530	2,453	4,897
110 Kentucky Power Co - Distribution	238	11	249	184	60	29	273	522
117 Kentucky Power Co - Generation	84	0	84	96	22	12	130	214
180 Kentucky Power Co - Transmission 600 Kentucky Power Co Kammer Actives	1 39	1 0	2 39	10 0	1 0	4	15 2	17 41
701 Kentucky Power Co Mitchell Actives	232	0	232	0	0	0	0	232
702 Kentucky Power Co Mitchell Inactives	0	0	0	100	14	9	123	123
Kentucky Power Co.	594	12	606	390	97	56	543	1,149
250 Ohio Davies Call Distribution	1 404	00	4 400	4 600	404	007	0.050	2 022
250 Ohio Power Co - Distribution 160 Ohio Power Co - Transmission	1,401 12	82 2	1,483 14	1,622 197	491 58	237 17	2,350 272	3,833 286
Ohio Power Co	1,413	84	1,497	1,819	549	254	2,622	4,119
167 Public Service Co of Oklahoma - Distribution	585	51	636	420	178	132	730	1,366
198 Public Service Co of Oklahoma - Generation 114 Public Service Co of Oklahoma - Transmission	337 74	28 17	365 91	166 46	64 19	56 15	286 80	651 171
Public Service Co. of Oklahoma	996	96	1,092	632	261	203	1,096	2,188
			.,				.,	_,
159 Southwestern Electric Power Co - Distribution	477	22	499	170	88	54	312	811
168 Southwestern Electric Power Co - Generation 161 Southwestern Electric Power Co - Texas - Distribution	550 218	53	603 234	171	86 36	45 37	302 167	905 401
111 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	218	16 0	234	94 0	30	0	3	401
194 Southwestern Electric Power Co - Transmission	70	16	86	31	13	11	55	141
Southwestern Electric Power Co.	1,315	107	1,422	466	226	147	839	2,261
119 AEP Texas North Company - Distribution	235	15	250	161	75	78	314	564
166 AEP Texas North Company - Generation	0	0	0	92	45	30	167	167
192 AEP Texas North Company - Transmission AEP Texas North Co.	45 280	12 27	57 307	23 276	11 131	4 112	38 519	95 826
ALF TEXAS NOTITI CO.	200	21	507	2/0	151	112	515	020
230 Kingsport Power Co - Distribution	47	3	50	45	16	3	64	114
260 Kingsport Power Co - Transmission	1	0	1	9	1	1	11	12
Kingsport Power Co.	48	3	51	54	17	4	75	126
210 Wheeling Power Co - Distribution	44	2	46	54	26	5	85	131
200 Wheeling Power Co - Transmission	0	0	0	3	7	0	10	10
Wheeling Power Co.	44	2	46	57	33	5	95	141
103 American Electric Power Service Corporation	4,779	531	5,310	2,512	455	1,271	4,238	9,548
American Electric Power Service Corp	4,779	531	5,310	2,512	455	1,271	4,238	9,548
143 AEP Pro Serv, Inc. 189 Central Coal Company	0	0	0	1 0	0	2 0	3 0	3 0
171 CSW Energy, Inc.	0	0	0	3	1	29	33	33
Miscellaneous	0	0	0	4	1	31	36	36
270 Cook Cool Torminal	40	•	20	40	2		47	
270 Cook Coal Terminal AEP Generating Company	12 12	8 8	20 20	13 13	3 3	1 1	17 17	37 37
104 Cardinal Operating Company	291 630	1	292 630	183	49	16	248	540
181 Ohio Power Co - Generation AEP Generation Resources - FERC	921	U 1	922	1,215 1,398	382 431	206 222	1,803 2,051	2,433 2,973
290 Conesville Coal Preparation Company	0	0	0	12	1	2	15	15
AEP Generation Resources - SEC	921	1	922	1,410	432	224	2,066	2,988
175 AEP Energy Partners	79	3	82	0	0	0	0	82
AEP Energy Supply	1,000	4	1,004	1,410	432	224	2,066	3,070
293 Elmwood	70	5	75	6	0	15	21	96
292 AEP River Operations LLC	831	95	926	10	0	158	168	1,094
AEP River Operations	901	100	1,001	16	0	173	189	1,190
Total	16,438	1,299	17,737	12,087	3,635	3,634	19,356	37,093

AMERICAN ELECTRIC POWER - QUALIFIED RETIREMENT PLAN FUNDED STATUS OF PRESENT VALUE OF ACCUMULATED PLAN BENEFITS (ASC 960) AS OF JANUARY 1, 2015

	5	B (14)	B		
	Present Value of Vested	Present Value of Non-Vested	Present Value of Accumulated	Market Value	Percent
Location	Benefits	Benefits	Plan Benefits	of Assets	Funded
140 Appalachian Power Co - Distribution	\$280,549,819	\$1,394,683	\$281,944,502	\$327,135,782	116.0%
215 Appalachian Power Co - Generation	234,060,411	762,702	234,823,113	277,925,329	118.4%
150 Appalachian Power Co - Transmission	26,887,824	15,751	26,903,575	23,630,521	87.8%
Appalachian Power Co FERC	\$541,498,054	\$2,173,136	\$543,671,190	\$628,691,632	115.6%
225 Cedar Coal Co	2,842,887	0 62 472 426	2,842,887	4,864,306	171.1% 115.9%
Appalachian Power Co SEC	\$544,340,941	\$2,173,136	\$546,514,077	\$633,555,938	115.9%
211 AEP Texas Central Company - Distribution	\$239,963,783	\$452,911	\$240,416,694	\$289,366,185	120.4%
147 AEP Texas Central Company - Generation	3,117,420	0	3,117,420	11,532,571	369.9%
169 AEP Texas Central Company - Transmission	23,316,369	81,627	23,397,996	27,218,069	116.3%
AEP Texas Central Co.	\$266,397,572	\$534,538	\$266,932,110	\$328,116,825	122.9%
	A400 000 005	A 170 070	A440 470 450	0 400 450 400	100 10/
170 Indiana Michigan Power Co - Distribution	\$139,996,285	\$476,873 341,054	\$140,473,158 95,758,760	\$169,153,433 112,043,619	120.4% 117.0%
132 Indiana Michigan Power Co - Generation 190 Indiana Michigan Power Co - Nuclear	95,417,706 183,669,516	1,036,498	184,706,014	235,641,253	117.0%
120 Indiana Michigan Power Co - Transmission	32,303,536	157,256	32,460,792	35,439,887	109.2%
280 Ind Mich River Transp Lakin	26,675,779	173,834	26,849,613	35,671,734	132.9%
Indiana Michigan Power Co FERC	\$478,062,822	\$2,185,515	\$480,248,337	\$587,949,926	122.4%
202 Price River Coal	0	¢1,100,010 0	0	0	0.0%
Indiana Michigan Power Co SEC	\$478,062,822	\$2,185,515	\$480,248,337	\$587,949,926	122.4%
110 Kentucky Power Co - Distribution	\$62,289,600	\$250,036	\$62,539,636	\$70,643,463	113.0%
117 Kentucky Power Co - Distribution	29,663,301	\$250,036 184,628	29,847,929	32,880,122	110.2%
180 Kentucky Power Co - Transmission	2,902,059	2,058	2,904,117	1,945,303	67.0%
600 Kentucky Power Co Kammer Actives	4,874,380	25.293	4,899,673	6,508,386	132.8%
701 Kentucky Power Co Mitchell Actives	23,226,220	359,339	23,585,559	36,197,184	153.5%
702 Kentucky Power Co Mitchell Inactives	23,109,055	000,000	23,109,055	32,603,677	141.1%
Kentucky Power Co.	\$146,064,615	\$821,354	\$146,885,969	\$180,778,135	123.1%
	¢110,001,010	ţ0 <u>1</u> ,00	<i>Q</i>	\$100,110,100	1201170
250 Ohio Power Co - Distribution	\$374,220,821	\$1,106,110	\$375,326,931	\$453,537,019	120.8%
160 Ohio Power Co - Transmission	42,186,128	23,359	42,209,487	44,747,511	106.0%
Ohio Power Co	\$416,406,949	\$1,129,469	\$417,536,418	\$498,284,530	119.3%
	A405 400 007	* ***	A405 770 400	A 407 A 45 700	100.00/
167 Public Service Co of Oklahoma - Distribution 198 Public Service Co of Oklahoma - Generation	\$135,439,927	\$330,242	\$135,770,169	\$167,345,769	123.3%
114 Public Service Co of Oklahoma - Generation	68,050,396	193,217	68,243,613 16,209,422	85,745,444 21,176,326	125.6% 130.6%
Public Service Co. of Oklahoma	16,144,903 \$219,635,226	64,519 \$587,978	\$220,223,204	\$274,267,539	130.6% 124.5%
Tublic Service Co. of Oktationia	<i>\$213,033,220</i>	4507,570	ΨZZ0,ZZ3,Z0 4	<i>\$214,201,333</i>	124.378
159 Southwestern Electric Power Co - Distribution	\$82,148,778	\$187,994	\$82,336,772	\$105,787,932	128.5%
168 Southwestern Electric Power Co - Generation	93,612,611	482,904	94,095,515	114,975,910	122.2%
161 Southwestern Electric Power Co - Texas - Distributio	43,869,049	129,516	43,998,565	52,563,146	119.5%
111 Southwestern Electric Power Co - Texas - Transmis:	131,089	0	131,089	66,826	51.0%
194 Southwestern Electric Power Co - Transmission	11,719,656	49,199	11,768,855	16,970,011	144.2%
Southwestern Electric Power Co.	\$231,481,183	\$849,613	\$232,330,796	\$290,363,825	125.0%
119 AEP Texas North Company - Distribution	¢E0 757 160	\$116,847	\$58,874,009	\$68,586,436	116.5%
166 AEP Texas North Company - Distribution	\$58,757,162	\$110,047 0	\$58,874,009 17,934,771	26,057,603	145.3%
192 AEP Texas North Company - Transmission	17,934,771 8,445,068	29,406	8,474,474	10,888,381	128.5%
AEP Texas North Co.	\$85,137,001	\$146,253	\$85,283,254	\$105,532,420	120.0%
ALI TEXUS HOLH OC.	400,101,001	ψ1 4 0,200	<i>400,200,204</i>	\$100,002,420	120.170
230 Kingsport Power Co - Distribution	\$11,423,385	\$16,462	\$11,439,847	\$13,569,529	118.6%
260 Kingsport Power Co - Transmission	2,079,046	0	2,079,046	1,843,311	88.7%
Kingsport Power Co.	\$13,502,431	\$16,462	\$13,518,893	\$15,412,840	114.0%
210 Wheeling Power Co - Distribution	\$13,873,545	\$30,497	\$13,904,042	\$16,306,431	117.3%
200 Wheeling Power Co - Transmission	602,657	0	602.657	913,068	151.5%
Wheeling Power Co.	\$14,476,202	\$30,497	\$14,506,699	\$17,219,499	118.7%
-					
103 American Electric Power Service Corporation	\$1,256,355,717	\$8,719,533	\$1,265,075,250	\$1,484,234,295	117.3%
American Electric Power Service Corp	\$1,256,355,717	\$8,719,533	\$1,265,075,250	\$1,484,234,295	117.3%
	¢020 E77	\$0	¢030 577	£1 070 019	111 00/
143 AEP Pro Serv, Inc. 189 Central Coal Company	\$932,577 0	\$U 0	\$932,577 0	\$1,070,218 0	114.8% 0.0%
171 CSW Energy, Inc.	2,291,538	0	2,291,538	2,592,450	113.1%
Miscellaneous	\$3,224,115	\$0	\$3,224,115	\$3,662,668	113.6%
moonanooao	<i>v</i> , <u></u> ,	¢.	•••,== -,++•	\$0,002,000	110.070
270 Cook Coal Terminal	\$3,009,130	\$42,086	\$3,051,216	\$4,200,874	137.7%
AEP Generating Company	\$3,009,130	\$42,086	\$3,051,216	\$4,200,874	137.7%
104 Cardinal Operating Company	\$66,508,761	\$325,611	\$66,834,372	\$92,978,316	139.1%
181 Ohio Power Co - Generation	258,161,987	547,055	258,709,042	386,137,157	149.3%
AEP Generation Resources - FERC	\$324,670,748	\$872,666	\$325,543,414	\$479,115,473	147.2%
290 Conesville Coal Preparation Company	2,864,566	0	2,864,566	4,606,187	160.8%
AEP Generation Resources - SEC	\$327,535,314	\$872,666	\$328,407,980	\$483,721,660	147.3%
175 AEP Energy Partners	5,704,623	184,066	5,888,689	7,630,683	129.6%
AEP Energy Supply	\$333,239,937	\$1,056,732	\$334,296,669	\$491,352,343	147.0%
293 Elmwood	\$2,453,521	\$36,170	\$2,489,691	\$5,358,268	215.2%
293 AEP River Operations LLC	30,672,816	462,955	31,135,771	\$5,556,266 55,574,324	178.5%
AEP River Operations	\$33,126,337	\$499,125	\$33,625,462	\$60,932,592	181.2%
•		, ==			
Total	\$4,044,460,178	\$18,792,291	\$4,063,252,469	\$4,975,864,249	122.5%



AMERICAN ELECTRIC POWER - QUALIFIED RETIREMENT PLAN SUMMARY OF ASC 715-30 VALUATION RESULTS AS OF JANUARY 1, 2015

C	۰.	1	۰.
r	1	r	r

				Accumulated	Projected	January 1, 2015
	Valuation	Mark et-Related	Fair Value	Benefit	Benefit	Pre-Tax
Location	Earnings	Value of Assets	of Assets	Obligation	Obligation	AOCI
•	-	-	-	-	-	*
140 Appalachian Power Co - Distribution	\$91,109,597	\$308,693,918	\$327,135,782	\$345,247,203	\$351,058,538	\$120,461,634
215 Appalachian Power Co - Generation	79,027,572	262,257,642	277,925,329	288,157,162	293,728,982	82,086,617
150 Appalachian Power Co - Transmission	835,513	22,298,380	23,630,521	32,165,265	32,189,260	17,011,327
Appalachian Power Co FERC	\$170,972,682	\$593,249,940	\$628,691,632	\$665,569,630	\$676,976,780	\$219,559,578
225 Cedar Coal Co Appalachian Power Co SEC	0 \$170,972,682	4,590,087 \$597,840,027	4,864,306 \$633,555,938	3,310,443 \$668,880,073	3,310,443 \$680,287,223	2,178,043 \$221,737,621
211 AEP Texas Central Company - Distribution	\$77,212,922	\$273,053,534	\$289,366,185	\$286,859,647	\$295,386,551	\$129,316,725
147 AEP Texas Central Company - Generation	0	10,882,437	11,532,571	3,552,535	3,552,535	(7,980,036)
169 AEP Texas Central Company - Transmission	10,081,186	25,683,685	27,218,069	27,929,188	29,012,907	17,316,416
AEP Texas Central Co.	\$87,294,108	\$309,619,656	\$328,116,825	\$318,341,370	\$327,951,993	\$138,653,105
170 Indiana Michigan Power Co - Distribution	\$49,542,278	\$159,617,623	\$169,153,433	\$171,030,450	\$175,731,246	\$55,387,206
132 Indiana Michigan Power Co - Generation	34,439,225	105,727,302	112,043,619	118,516,746	120,069,093	29,595,385
190 Indiana Michigan Power Co - Nuclear	119,762,707	222,357,277	235,641,253	233,096,597	243,326,723	35,914,953
120 Indiana Michigan Power Co - Transmission	11,667,887	33,442,008	35,439,887	39,852,175	40,926,437	12,846,390
280 Ind Mich River Transp Lakin	18,323,643	33,660,785	35,671,734	33,284,172	35,499,886	5,499,636
Indiana Michigan Power Co FERC	\$233,735,740	\$554,804,995	\$587,949,926	\$595,780,140	\$615,553,385	\$139,243,570
202 Price River Coal	0	0	0	0	0	389,803
Indiana Michigan Power Co SEC	\$233,735,740	\$554,804,995	\$587,949,926	\$595,780,140	\$615,553,385	\$139,633,373
110 Kentucky Power Co - Distribution	\$21,800,767	\$66,661,028	\$70,643,464	\$77,187,409	\$78,395,526	\$21,941,488
117 Kentucky Power Co - Generation	7,605,673	31,026,547	32,880,122	36,873,856	37,126,896	10,308,642
180 Kentucky Power Co - Transmission	124,911	1,835,639	1,945,303	3,519,720	3,522,228	2,524,079
600 Kentucky Power Co Kammer Actives	3,304,763	6,141,484	6,508,386	6,275,468	6,374,749	3,295,769
701 Kentucky Power Co Mitchell Actives	21,085,049	34,156,614	36,197,184	30,879,105	32,422,959	10,715,310
702 Kentucky Power Co Mitchell Inactives	\$0	\$30,765,686	\$32,603,677	\$27,728,122	\$27,728,122	\$8,419,444
Kentucky Power Co.	\$53,921,163	\$170,586,998	\$180,778,136	\$182,463,680	\$185,570,480	\$57,204,732
250 Ohio Power Co - Distribution	\$123,891,573	\$427,969,446	\$453,537,019	\$455,160,852	\$468,396,274	\$188,698,267
160 Ohio Power Co - Transmission	1,083,960	42,224,927	44,747,511	49,813,017	49,861,262	30,672,090
Ohio Power Co	\$124,975,533	\$470,194,373	\$498,284,530	\$504,973,869	\$518,257,536	\$219,370,357
167 Public Service Co of Oklahoma - Distribution	\$55,599,050	\$157,911,864	\$167,345,769	\$161,986,921	\$168,734,498	\$63,957,427
198 Public Service Co of Oklahoma - Generation	33,991,177	80,911,654	85,745,445	81,435,084	84,762,890	24,250,732
114 Public Service Co of Oklahoma - Transmission	8,546,932	19,982,538	21,176,326	19,407,684	20,400,941	6,035,451
Public Service Co. of Oklahoma	\$98,137,159	\$258,806,056	\$274,267,540	\$262,829,689	\$273,898,329	\$94,243,610
159 Southwestern Electric Power Co - Distribution	\$43,670,385	\$99,824,272	\$105,787,932	\$98,957,973	\$104,781,215	\$38,459,403
168 Southwestern Electric Power Co - Generation	55,570,341	108,494,289	114,975,910	112,995,302	117,748,236	35,449,003
161 Southwestern Electric Power Co - Texas - Distribution	20,138,799	49,599,965	52,563,146	52,775,507	54,899,310	22,243,621
111 Southwestern Electric Power Co - Texas - Transmission	0	63,059	66,827	143,141	143,141	922,534
194 Southwestern Electric Power Co - Transmission	7,967,530	16,013,348	16,970,011	14,303,483	15,313,380	3,910,906
Southwestern Electric Power Co.	\$127,347,055	\$273,994,933	\$290,363,826	\$279,175,406	\$292,885,282	\$100,985,467
119 AEP Texas North Company - Distribution	\$21,989,394	\$64,719,963	\$68,586,436	\$69,699,433	\$71,420,300	\$32,039,212
166 AEP Texas North Company - Generation	0	24,588,639	26,057,603	20,903,260	20,903,260	14,767,750
192 AEP Texas North Company - Transmission	5,138,752	10,274,562	10,888,380	10,130,344	10,693,513	3,735,379
AEP Texas North Co.	\$27,128,146	\$99,583,164	\$105,532,419	\$100,733,037	\$103,017,073	\$50,542,341
230 Kingsport Power Co - Distribution	\$4,125,434	\$12,804,564	\$13,569,529	\$14,066,684	\$14,386,225	\$4,940,838
260 Kingsport Power Co - Transmission	75,435	1,739,397	1,843,312	2,462,074	2,465,526	1,420,398
Kingsport Power Co.	\$4,200,869	\$14,543,961	\$15,412,841	\$16,528,758	\$16,851,751	\$6,361,236
210 Wheeling Power Co - Distribution	\$3,872,037	\$15,387,177	\$16,306,432	\$16,943,022	\$17,194,680	\$7,343,703
200 Wheeling Power Co - Transmission	0	861,595	913,068	668,137	668,137	605,457
Wheeling Power Co.	\$3,872,037	\$16,248,772	\$17,219,500	\$17,611,159	\$17,862,817	\$7,949,160
103 American Electric Power Service Corporation	\$556,940,062	\$1,400,562,474	\$1,484,234,291	\$1,556,057,361	\$1,612,604,154	\$413,219,241
American Electric Power Service Corp	\$556,940,062	\$1,400,562,474	\$1,484,234,291	\$1,556,057,361	\$1,612,604,154	\$413,219,241
143 AEP Pro Serv, Inc.	\$0	\$1,009,886	\$1,070,218	\$1,174,069	\$1,174,069	\$34,077
189 Central Coal Company	0	0	0	0	0	3,979
171 CSW Energy, Inc.	Ő	2,446,304	2,592,450	2,834,687	2,834,687	1,105,095
Miscellaneous	\$0	\$3,456,190	\$3,662,668	\$4,008,756	\$4,008,756	\$1,143,151
270 Cook Coal Terminal	\$1,756,288	\$3,964,055	\$4,200,874	\$3,778,943	\$3,884,252	\$318,035
AEP Generating Company	\$1,756,288	\$3,964,055	\$4,200,874	\$3,778,943	\$3,884,252	\$318,035
						(#0.075.000)
104 Cardinal Operating Company 181 Ohio Power Co - Generation	\$25,463,797 57,387,209	\$87,736,782 364,369,166	\$92,978,316 386,137,157	\$82,175,849 313,278,376	\$84,002,924 317,812,462	(\$8,975,392) 106,978,314
AEP Generation Resources - FERC	\$7,387,209 \$82,851,006	\$452,105,948	\$479,115,473	\$395,454,225	\$401,812,462 \$401,815,386	\$98,002,922
290 Conesville Coal Preparation Company	\$62,651,006 0	4,346,519	4,606,187	3,439,301	3,439,301	323,208
AEP Generation Resources - SEC	\$82,851,006	\$456,452,467	\$483,721,660	\$398,893,526	\$405,254,687	\$98,326,130
175 AEP Energy Partners	11,332,028	7,200,513	7,630,683	8,303,093	10,132,110	4,760,953
AEP Energy Supply	\$94,183,034	\$463,652,980	\$491,352,343	\$407,196,619	\$415,386,797	\$103,087,083
202 Elmuood	¢4 466 045	¢E 056 000	¢5 350 360	60 444 E44	\$2 460 004	(\$2.042.044)
293 Elmwood	\$4,166,015	\$5,056,202	\$5,358,268	\$3,114,514	\$3,469,024	(\$2,042,044)
292 AEP River Operations LLC AEP River Operations	75,980,561 \$80,146,576	52,441,392 \$57,497,594	55,574,324 \$60,932,592	40,076,145 \$43,190,659	49,725,706 \$53,194,730	(5,324,514) (\$7,366,558)
	,	,	,,	,,	, ,	(, ,,-56)
Total	\$1,664,610,452	\$4,695,356,228	\$4,975,864,249	\$4,961,549,519	\$5,121,214,558	\$1,547,081,954



American Electric Power System Retirement Plan

KPSC Case No. 2017-00179 AG's First Set of Data Requests Dated: August 14, 2017 67 Item No. 84 Attachment 1 Page 73 of 87

	ASC 715-30										
	Cost	2016	2017	2018	2019 Esti	mated Net Period 2020	dic Pension Cost 2021	2022	2023	2024	2025
Location											
140 Appalachian Power Co - Distribution	\$7,568,004	\$5,854,639	\$4,103,354	\$2,686,528	\$1,722,586	\$1,494,798	\$1,264,881	\$1,019,916	\$783,040	\$520,568	\$225,573
215 Appalachian Power Co - Generation 150 Appalachian Power Co - Transmission	6,325,720 617,077	4,884,056 472,499	3,402,032 (3,211)	2,212,353 (118,100)	1,378,254 (199,406)	1,186,440 (208,363)	988,320 (226,590)	772,015 (229,934)	564,855 (248,627)	337,140 (258,569)	101,137 (276,226)
Appalachian Power Co FERC	14,510,801	11,211,194	7,502,175	4,780,781	2,901,434	2,472,875	2,026,611	1,561,997	1,099,268	599,139	50,484
225 Cedar Coal Co	(74,436)	(91,678)	(109,027)	(120,228)	(128,855)	(129, 125)	(129,480)	(130,220)	(131,174)	(132,304)	(133,963)
Appalachian Power Co SEC	14,436,365	11,119,516	7,393,148	4,660,553	2,772,579	2,343,750	1,897,131	1,431,777	968,094	466,835	(83,479)
211 AEP Texas Central Company - Distribution	6,960,285	5,484,267	3,732,683	2,540,420	1,691,024	1,459,452	1,231,679	1,033,665	803,558	566,888	327,710
147 AEP Texas Central Company - Generation 169 AEP Texas Central Company - Transmission	(429,997) 916,247	(453,687) 763 548	(477,946) 587 947	(491,785) 474 069	(502,298) 383,207	(501,092) 357,179	(499,824) 336,349	(499,016) 308,469	(498,920) 279,426	(499,445) 257,367	(501,201) 229,240
AEP Texas Central Co.	7,446,535	5,794,128	3,842,684	2,522,704	1,571,933	1,315,539	1,068,204	843,118	584,064	324,810	55,749
170 Indiana Michigan Power Co - Distribution	3,804,529	2,937,730	2,045,843	1,329,359	830,054	718,226	603,569	479,764	337,611	213,873	63.847
132 Indiana Michigan Power Co - Generation	2,884,902	2,296,844	1,687,452	1,190,754	838,980	760,622	673,317	577,851	480,533	390,240	291,601
190 Indiana Michigan Power Co - Nuclear	8,633,327	7,417,291	6,099,375	4,971,069	4,204,351	3,939,483	3,673,020	3,387,241	3,146,936	2,897,411	2,582,737
120 Indiana Michigan Power Co - Transmission 280 Ind Mich River Transp Lakin	1,100,660 1,074,810	900,541 908,258	623,097 716,939	458,333 553,112	340,351 442,135	314,911 399,891	282,596 375.314	253,871 340,885	218,398 307,176	187,906 269,105	156,756 230,550
Indiana Michigan Power Co FERC	17,498,228	14,460,664	11,172,706	8,502,627	6,655,871	6,133,133	5,607,816	5,039,612	4,490,654	3,958,535	3,325,491
202 Price River Coal Indiana Michigan Power Co SEC	5 17.498.233	0 14,460,664	0 11,172,706	0 8,502,627	0 6.655.871	0 6,133,133	0 5.607.816	0 5,039,612	0 4.490.654	0 3.958.535	0 3,325,491
Indiana Michigan Power Co SEC	,		11,172,706		-,,-				, ,	-,,	
110 Kentucky Power Co - Distribution 117 Kentucky Power Co - Generation	1,906,268 769,217	1,532,295 588,941	1,091,305 368,650	770,436 221,920	543,466 118,964	495,222 100 420	437,187 73,175	383,659 55,085	325,763 23.610	266,277 1 398	197,183 (24,163)
117 Kentucky Power Co - Generation 180 Kentucky Power Co - Transmission	769,217 107,590	588,941 91,888	368,650 3,810	(10,472)	(19,383)	(20,409)	(21,522)	(25,955)	(24,404)	(26,134)	(24, 163) (28, 208)
600 Kentucky Power Co Kammer Actives	197,279	171,306	137,214	107,544	85,873	79,563	71,747	66,321	51,752	51,542	45,010
701 Kentucky Power Co Mitchell Actives 702 Kentucky Power Co Mitchell Inactives	1,039,584 (161,426)	924,994 (298,899)	746,057 (436,372)	586,491 (531,850)	480,420 (602,628)	439,915 (607,503)	401,649 (621,599)	362,669 (620,814)	322,021 (630,389)	269,734 (642,056)	238,834 (658,890)
Kentucky Power Co.	3,858,512	3,010,525	1,910,664	1,144,069	606,712	487,208	340,637	220,965	68,353	(79,239)	(230,234)
250 Ohio Power Co - Distribution	9.609.740	7.286.907	4,923,023	3.038.866	1.726.767	1,414,264	1.130.687	795.074	479.273	139.739	(252.403)
160 Ohio Power Co - Transmission	525,197	288,565	4,933	(174,555)	(306,049)	(314,502)	(325,556)	(343,526)	(365,761)	(384,472)	(411,598)
Ohio Power Co.	10,134,937	7,575,472	4,927,956	2,864,311	1,420,718	1,099,762	805,131	451,548	113,512	(244,733)	(664,001)
167 Public Service Co of Oklahoma - Distribution	4,582,633	3,723,788	2,717,402	1,989,003	1,497,348	1,365,665	1,193,270	1,073,375	923,122	766,869	623,554
198 Public Service Co of Oklahoma - Generation	2,679,438	2,308,692	1,787,534	1,409,835	1,133,579	1,037,455	969,070	885,880	798,405	718,863	623,876
114 Public Service Co of Oklahoma - Transmission Public Service Co. of Oklahoma	612,406 7,874,477	531,065 6,563,545	402,337 4,907,273	319,127 3,717,965	258,146 2,889,073	234,706 2,637,826	219,206 2,381,546	193,964 2,153,219	179,777 1,901,304	156,783 1,642,515	134,716 1,382,146
159 Southwestern Electric Power Co - Distribution 168 Southwestern Electric Power Co - Generation	3,400,616 4,530,389	2,924,827 3,929,626	2,273,245 3,182,704	1,772,518 2,637,377	1,463,946 2,249,543	1,355,895 2,126,067	1,254,313 1,962,544	1,136,849 1,846,171	1,046,428 1,716,134	929,681 1,587,982	823,205 1,463,769
161 Southwestern Electric Power Co - Texas - Distribution	1,778,441	1,501,134	1,155,100	918,270	753,168	696,503	653,721	592,607	546,372	494,707	445,637
111 Southwestern Electric Power Co - Texas - Transmission	4,505	3,897	(354)	(776)	(1,098)	(1,094)	(1,096)	(1,113)	(1,141)	(1,179)	(1,234)
194 Southwestern Electric Power Co - Transmission Southwestern Electric Power Co.	486,065 10,200,016	432,321 8,791,805	333,315 6,944,010	260,276 5,587,665	212,488 4,678,047	190,244 4,367,615	174,914 4,044,396	157,019 3,731,533	142,502 3,450,295	124,008 3,135,199	111,282 2,842,659
119 AEP Texas North Company - Distribution 166 AEP Texas North Company - Generation	2,047,923 (209,431)	1,717,489 (318,994)	1,281,572 (421,349)	974,402 (490,526)	747,669 (544,555)	693,798 (548,065)	639,308 (551,467)	575,459 (558,875)	501,949 (563,253)	446,030 (577,080)	368,153 (581,864)
192 AEP Texas North Company - Transmission	389,249	343,461	276,082	225,726	191,929	174,972	167,766	156,348	140,510	127,412	117,474
AEP Texas North Co.	2,227,741	1,741,956	1,136,305	709,602	395,043	320,705	255,607	172,932	79,206	(3,638)	(96,237)
230 Kingsport Power Co - Distribution	343,830	272,588	200,018	141,072	99,691	90,945	81,051	69,547	55,838	46,350	32,892
260 Kingsport Power Co - Transmission	43,784	32,411	(2,092)	(10,056)	(16,215)	(16,817)	(18,045)	(18,273)	(19,222)	(20,289)	(21,604)
Kingsport Power Co.	387,614	304,999	197,926	131,016	83,476	74,128	63,006	51,274	36,616	26,061	11,288
210 Wheeling Power Co - Distribution	360,565	275,854	189,527	119,310	71,657	61,058	45,625	38,448	26,020	13,465	(2,276)
200 Wheeling Power Co - Transmission Wheeling Power Co.	(11,793) 348.772	(15,192) 260,662	(18,571) 170,956	(20,741) 98,569	(22,407) 49.250	(22,400) 38,658	(22,396) 23.229	(22,455) 15.993	(22,565) 3,455	(22,725) (9.260)	(22,989) (25,265)
-	,				.,		., .	.,		(1)	
103 American Electric Power Service Corporation American Electric Power Service Corp	44,256,631 44,256,631	36,356,646 36,356,646	27,862,721 27.862.721	21,154,408 21,154,408	16,499,291 16.499.291	15,182,808 15,182,808	13,901,463 13,901,463	12,639,145 12,639,145	11,279,010 11,279,010	9,839,273 9,839,273	8,431,670 8.431.670
				, . ,	.,, .						., . ,
143 AEP Pro Serv, Inc. 189 Central Coal Company	10,347 0	4,782 0	(668) 0	(4,139) 0	(7,063)	(7,387)	(7,727)	(8,411)	(9,142)	(9,693) 0	(10,559) 0
171 CSW Energy, Inc.	26,492	13,141	(5,128)	(9,913)	(17,004)	(18,860)	(18,648)	(19,731)	(22,161)	(26,816)	(28,561)
Miscellaneous	36,839	17,923	(5,796)	(14,052)	(24,067)	(26,247)	(26,375)	(28,142)	(31,303)	(36,509)	(39,120)
270 Cook Coal Terminal	108,629	93,900	72,849	54,834	43,031	39,465	36,016	31,861	28,557	24,510	18,882
AEP Generating Company	108,629	93,900	72,849	54,834	43,031	39,465	36,016	31,861	28,557	24,510	18,882
104 Cardinal Operating Company	1,250,530	896,089	457,444	110,860	(130,044)	(190,522)	(245,797)	(311,209)	(370,954)	(441,828)	(512,518)
181 Ohio Power Co - Generation AEP Generation Resources - FERC	721,842 1.972.372	(737,866) 158,223	(2,388,408) (1.930.964)	(3,636,042) (3,525,182)	(4,507,880) (4.637,924)	(4,657,016) (4.847,538)	(4,811,131) (5.056.928)	(4,980,245) (5,291,454)	(5,165,560) (5,536,514)	(5,359,001) (5.800.829)	(5,608,999) (6.121.517)
AEP Generation Resources - FERC 290 Conesville Coal Preparation Company	1,972,372 (52,158)	158,223 (69,269)	(1,930,964) (86,330)	(3,525,182) (98,384)	(4,637,924) (107,338)	(4,847,538) (107,711)	(5,056,928) (107,589)	(5,291,454) (108,001)	(5,536,514) (109,200)	(5,800,829) (110,652)	(6,121,517) (112,605)
AEP Generation Resources - SEC	1,920,214	88,954	(2,017,294)	(3,623,566)	(4,745,262)	(4,955,249)	(5,164,517)	(5,399,455)	(5,645,714)	(5,911,481)	(6,234,122)
175 AEP Energy Partners AEP Energy Supply	831,515 2,751,729	777,622 866,576	661,182 (1,356,112)	609,363 (3,014,203)	572,973 (4,172,289)	552,307 (4,402,942)	533,289 (4,631,228)	514,807 (4,884,648)	496,420 (5,149,294)	476,149 (5,435,332)	457,861 (5,776,261)
293 Elmwood	194,095	187,427	161,260	134,465 3.950.502	118,816	109,217 3.596.128	103,022	95,613	88,417 3.219.337	80,338	75,525 2.977.679
292 AEP River Operations LLC AEP River Operations	4,710,417 4,904,512	4,673,231 4,860,658	4,321,701 4,482,961	3,950,502 4,084,967	3,738,405 3,857,221	3,596,128 3,705,345	3,442,073 3,545,095	3,340,531 3,436,144	3,219,337 3,307,754	3,098,340 3,178,678	2,977,679 3,053,204
			, . ,	,,		.,,		., ,		., .,	
Total	\$126,471,542	\$101,818,975	\$73,660,251	\$52,205,035	\$37,325,889	\$33,316,753	\$29,311,674	\$25,306,331	\$21,130,277	\$16,787,705	\$12,206,492

AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN 2015 NET PERIODIC PENSION COST

Page 74 of 87

Location	Projected	Market-Related			Expected	Amortization of Prior		Net Periodic
	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
140 Appalachian Power Co - Distribution	\$351,058,538	\$308,693,918	\$4,611,599	\$13,773,696	(\$18,062,786)	\$86,250	\$7,159,245	\$7,568,004
215 Appalachian Power Co - Generation	293,728,982	262,257,642	4,047,879	11,551,503	(15,345,633)	81,866	5,990,105	6,325,720
150 Appalachian Power Co - Transmission	32,189,260	22,298,380	14,833	1,238,425	(1,304,758)	12,132	656,445	617,077
Appalachian Power Co FERC	\$676,976,780	\$593,249,940	\$8,674,311	\$26,563,624	(\$34,713,177)	\$180,248	\$13,805,795	\$14,510,801
225 Cedar Coal Co Appalachian Power Co SEC	3,310,443 \$680,287,223	4,590,087 \$597,840,027	0 \$8,674,311	126,592 \$26,690,216	(268,582) (\$34,981,759)	43 \$180,291	67,511 \$13,873,306	(74,436) \$14,436,365
211 AEP Texas Central Company - Distribution	\$295,386,551	\$273,053,534	\$5,063,971	\$11,612,168	(\$15,977,340)	\$237,577	\$6,023,909	\$6,960,285
147 AEP Texas Central Company - Generation	3,552,535	10,882,437	0	134,325	(636,770)	0	72,448	(429,997)
169 AEP Texas Central Company - Transmission	29,012,907	25,683,685	653,116	1,147,355	(1,502,844)	26,951	591,669	916,247
AEP Texas Central Co.	\$327,951,993	\$309,619,656	\$5,717,087	\$12,893,848	(\$18,116,954)	\$264,528	\$6,688,026	\$7,446,535
170 Indiana Michigan Power Co - Distribution	\$175,731,246	\$159,617,623	\$2,617,479	\$6,898,267	(\$9,339,798)	\$44,840	\$3,583,741	\$3,804,529
132 Indiana Michigan Power Co - Generation	120,069,093	105,727,302	1,850,850	4,742,378	(6,186,483)	29,551	2,448,606	2,884,902
190 Indiana Michigan Power Co - Nuclear 120 Indiana Michigan Power Co - Transmission	243,326,723 40,926,437	222,357,277 33,442,008	6,840,960 599,615	9,759,184 1,613,470	(13,010,920) (1,956,812)	81,866 9,762	4,962,237 834,625	8,633,327 1,100,660
280 Ind Mich River Transp Lakin	35,499,886	33,660,785	891,974	1,412,488	(1,969,613)	16,001	723,960	1,074,810
Indiana Michigan Power Co FERC	\$615,553,385	\$554,804,995	\$12,800,878	\$24,425,787	(\$32,463,626)	\$182,020	\$12,553,169	\$17,498,228
202 Price River Coal	0	0	0	0	0	5	0	5
Indiana Michigan Power Co SEC	\$615,553,385	\$554,804,995	\$12,800,878	\$24,425,787	(\$32,463,626)	\$182,025	\$12,553,169	\$17,498,233
110 Kentucky Power Co - Distribution	\$78,395,526	\$66,661,028	\$1,103,729	\$3,081,834	(\$3,900,575)	\$22,536	\$1,598,744	\$1,906,268
117 Kentucky Power Co - Generation	37,126,896	31,026,547	356,343	1,459,125	(1,815,474)	12,083	757,140	769,217
180 Kentucky Power Co - Transmission 600 Kentucky Power Co Kammer Actives	3,522,228 6,374,749	1,835,639 6,141,484	3,429 166,554	136,040 258,502	(107,410) (359,360)	3,701 1,581	71,830 130.002	107,590 197,279
701 Kentucky Power Co Mitchell Actives	32,422,959	34,156,614	1,047,202	1,322,846	(1,998,626)	6,951	661,211	1,039,584
702 Kentucky Power Co Mitchell Inactives	27,728,122	30,765,686	1,047,202	1,067,525	(1,800,210)	5,791	565,468	(161,426)
Kentucky Power Co.	\$185,570,480	\$170,586,998	\$2,677,257	\$7,325,872	(\$9,981,655)	\$52,643	\$3,784,395	\$3,858,512
250 Ohio Power Co - Distribution	\$468,396,274	\$427,969,446	\$6,626,053	\$18,356,417	(\$25,042,024)	\$117,145	\$9,552,149	\$9,609,740
160 Ohio Power Co - Transmission Ohio Power Co.	49,861,262 \$518,257,536	42,224,927 \$470,194,373	40,631 \$6,666,684	1,915,417 \$20,271,834	(2,470,732) (\$27,512,756)	23,045 \$140,190	1,016,836 \$10,568,985	525,197 \$10,134,937
167 Public Service Co of Oklahoma - Distribution 198 Public Service Co of Oklahoma - Generation	\$168,734,498 84,762,890	\$157,911,864 80,911,654	\$3,573,897 2,246,793	\$6,654,999 3,357,739	(\$9,239,988)	\$152,670 80,740	\$3,441,055 1,728,596	\$4,582,633 2,679,438
114 Public Service Co of Oklahoma - Generation	20,400,941	19,982,538	2,240,793	811,978	(4,734,430) (1,169,250)	19,403	416,043	2,679,438
Public Service Co. of Oklahoma	\$273,898,329	\$258,806,056	\$6,354,922	\$10,824,716	(\$15,143,668)	\$252,813	\$5,585,694	\$7,874,477
159 Southwestern Electric Power Co - Distribution	\$104,781,215	\$99,824,272	\$2,827,725	\$4,164,661	(\$5,841,075)	\$112,469	\$2,136,836	\$3,400,616
168 Southwestern Electric Power Co - Generation	117,748,236	108,494,289	3,656,185	4,702,814	(6,348,389)	118,503	2,401,276	4,530,389
161 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	54,899,310	49,599,965	1,326,421	2,176,401	(2,902,271)	58,311	1,119,579	1,778,441
194 Southwestern Electric Power Co - Transmission	143,141 15,313,380	63,059 16,013,348	0 479,082	5,265 612,371	(3,690) (936,998)	11 19,320	2,919 312,290	4,505 486,065
Southwestern Electric Power Co.	\$292,885,282	\$273,994,933	\$8,289,413	\$11,661,512	(\$16,032,423)	\$308,614	\$5,972,900	\$10,200,016
119 AEP Texas North Company - Distribution	\$71,420,300	\$64,719,963	\$1,510,820	\$2,789,967	(\$3,786,997)	\$77,637	\$1,456,496	\$2,047,923
166 AEP Texas North Company - Generation	20,903,260	24,588,639	0	801,586	(1,438,769)	1,465	426,287	(209,431)
192 AEP Texas North Company - Transmission AEP Texas North Co.	10,693,513 \$103,017,073	10,274,562 \$99,583,164	332,910 \$1,843,730	428,651 \$4,020,204	(601,201) (\$5,826,967)	10,813 \$89,915	218,076 \$2,100,859	389,249 \$2,227,741
230 Kingsport Power Co - Distribution	\$14,386,225	\$12,804,564	\$229,588	\$566,863	(\$749,241)	\$3,237	\$293,383	\$343,830
260 Kingsport Power Co - Transmission Kingsport Power Co.	2,465,526 \$16,851,751	1,739,397 \$14,543,961	318 \$229,906	94,473 \$661,336	(101,778) (\$851,019)	491 \$3,728	50,280 \$343,663	43,784 \$387,614
210 Wheeling Power Co - Distribution	\$17,194,680	\$15,387,177	\$230,249	\$674,119	(\$900,359)	\$5,900	\$350,656	\$360,565
200 Wheeling Power Co - Transmission	668,137	861,595	0	24,987	(50,415)	9	13,626	(11,793)
Wheeling Power Co.	\$17,862,817	\$16,248,772	\$230,249	\$699,106	(\$950,774)	\$5,909	\$364,282	\$348,772
103 American Electric Power Service Corporation American Electric Power Service Corp	\$1,612,604,154 \$1,612,604,154	\$1,400,562,474 \$1,400,562,474	\$29,025,144 \$29,025,144	\$63,704,556 \$63,704,556	(\$81,951,927) (\$81,951,927)	\$592,525 \$592,525	\$32,886,333 \$32,886,333	\$44,256,631 \$44,256,631
143 AEP Pro Serv, Inc.	\$1,174,069	\$1,009,886	\$0	\$45,456	(\$59,092)	\$40	\$23,943	\$10,347
189 Central Coal Company	0	0	0	0	0	0	0	0
171 CSW Energy, Inc. Miscellaneous	2,834,687 \$4,008,756	2,446,304 \$3,456,190	0 \$0	111,082 \$156,538	(143,142) (\$202,234)	743 \$783	57,809 \$81,752	26,492 \$36,839
270 Cook Coal Terminal	\$3,884,252	\$3,964,055	\$105,227	\$155,253	(\$231,951)	\$887	\$79,213	\$108,629
	\$3,884,252	\$3,964,055	\$105,227	\$155,253	(\$231,951)	\$887	\$79,213	\$108,629
AEP Generating Company	\$84,002,924	\$87,736,782	\$1,338,781	\$3,315,303	(\$5,133,793)	\$17,142	\$1,713,097	\$1,250,530
104 Cardinal Operating Company		364,369,166	3,078,444	12,402,953	(21,320,544)	79,742	6,481,247	721,842
104 Cardinal Operating Company 181 Ohio Power Co - Generation	317,812,462							
104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC	\$401,815,386	\$452,105,948	\$4,417,225	\$15,718,256	(\$26,454,337)	\$96,884	\$8,194,344	\$1,972,372
104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC 290 Conesville Coal Preparation Company	\$401,815,386 3,439,301	\$452,105,948 4,346,519	0	131,404	(254,330)	629	70,139	(52,158)
104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC 290 Conesville Coal Preparation Company AEP Generation Resources - SEC	\$401,815,386 3,439,301 \$405,254,687	\$452,105,948 4,346,519 \$456,452,467	0 \$4,417,225	131,404 \$15,849,660	(254,330) (\$26,708,667)	629 \$97,513	70,139 \$8,264,483	(52,158) \$1,920,214
104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC 290 Conesville Coal Preparation Company	\$401,815,386 3,439,301	\$452,105,948 4,346,519	0	131,404	(254,330)	629	70,139	(52,158)
104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC 290 Conesville Coal Preparation Company AEP Generation Resources - SEC 175 AEP Energy Partners	\$401,815,386 3,439,301 \$405,254,687 10,132,110 \$415,386,797	\$452,105,948 4,346,519 \$456,452,467 7,200,513 \$463,652,980	0 \$4,417,225 618,215 \$5,035,440	131,404 \$15,849,660 425,681 \$16,275,341	(254,330) (\$26,708,667) (421,328) (\$27,129,995)	629 \$97,513 2,320 \$99,833	70,139 \$8,264,483 206,627 \$8,471,110	(52,158) \$1,920,214 831,515 \$2,751,729
 104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC 290 Conesville Coal Preparation Company AEP Generation Resources - SEC 175 AEP Energy Partners AEP Energy Supply 	\$401,815,386 3,439,301 \$405,254,687 10,132,110	\$452,105,948 4,346,519 \$456,452,467 7,200,513	0 \$4,417,225 618,215	131,404 \$15,849,660 425,681	(254,330) (\$26,708,667) (421,328)	629 \$97,513 2,320	70,139 \$8,264,483 206,627	(52,158) \$1,920,214 831,515
 104 Cardinal Operating Company 181 Ohio Power Co - Generation AEP Generation Resources - FERC 290 Conesville Coal Preparation Company AEP Generation Resources - SEC 175 AEP Energy Partners AEP Energy Supply 293 Elmwood 	\$401,815,386 3,439,301 \$405,254,687 10,132,110 \$415,386,797 \$3,469,024	\$452,105,948 4,346,519 \$456,452,467 7,200,513 \$463,652,980 \$5,056,202	0 \$4,417,225 618,215 \$5,035,440 \$266,283	131,404 \$15,849,660 425,681 \$16,275,341 \$146,222	(254,330) (\$26,708,667) (421,328) (\$27,129,995) (\$295,856)	629 \$97,513 2,320 \$99,833 \$6,701	70,139 \$8,264,483 206,627 \$8,471,110 \$70,745	(52,158) \$1,920,214 831,515 \$2,751,729 \$194,095



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2016 NET PERIODIC PENSION COST

						Amortization of		Net
	Projected	Mark et-Related			Expected	Prior		Periodic
Location	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
140 Appelophian Bower Co. Distribution	\$339,311,930	\$317,760,689	\$4,839,504	\$14,160,025	(\$18,640,620)	\$84,048	\$5,411,682	\$5,854,639
140 Appalachian Power Co - Distribution 215 Appalachian Power Co - Generation	283,900,652	270,105,153	4,247,925	11,873,111	(\$15,845,020)	80,120	4,527,929	4,884,056
150 Appalachian Power Co - Transmission	31,112,190	22,597,708	15,566	1,274,488	(1,325,637)	11,874	496,208	472,499
Appalachian Power Co FERC	\$654,324,772	\$610,463,550	\$9,102,995	\$27,307,624	(\$35,811,286)	\$176,042	\$10,435,819	\$11,211,194
225 Cedar Coal Co Appalachian Power Co SEC	3,199,674	4,648,358	0 \$9,102,995	129,974	(272,684)	0 \$176,042	51,032 \$10,486,851	(91,678)
	\$657,524,446	\$615,111,908		\$27,437,598	(\$36,083,970)			\$11,119,516
211 AEP Texas Central Company - Distribution 147 AEP Texas Central Company - Generation	\$285,502,758 3,433,665	\$282,172,405 11,020,591	\$5,314,232 0	\$11,938,761 138,045	(\$16,552,924) (646,495)	\$230,717 0	\$4,553,481 54,763	\$5,484,267 (453,687)
169 AEP Texas Central Company - Generation 169 AEP Texas Central Company - Transmission	28,042,119	26,738,871	685,393	1,173,198	(1,568,568)	26,282	54,765 447,243	(453,667) 763,548
AEP Texas Central Co.	\$316,978,542	\$319,931,867	\$5,999,625	\$13,250,004	(\$18,767,987)	\$256,999	\$5,055,487	\$5,794,128
170 Indiana Michigan Power Co - Distribution	\$169,851,184	\$164,565,284	\$2,746,834	\$7,092,334	(\$9,653,802)	\$43,409	\$2,708,955	\$2,937,730
132 Indiana Michigan Power Co - Generation	116,051,516	109,135,549	1,942,319	4,876,902	(6,402,158)	28,877	1,850,904	2,296,844
190 Indiana Michigan Power Co - Nuclear	235,184,880	232,816,387	7,179,039 629,248	10,064,700	(13,657,579)	80,170	3,750,961 630,894	7,417,291
120 Indiana Michigan Power Co - Transmission 280 Ind Mich River Transp Lakin	39,557,016 34,312,041	34,535,485 34,919,492	936,055	1,656,822 1,457,922	(2,025,936) (2,048,463)	9,513 15,502	547,242	900,541 908,258
Indiana Michigan Power Co FERC	\$594,956,637	\$575,972,197	\$13,433,495	\$25,148,680	(\$33,787,938)	\$177,471	\$9,488,956	\$14,460,664
202 Price River Coal	0	0	0	0	0	0	0	0
Indiana Michigan Power Co SEC	\$594,956,637	\$575,972,197	\$13,433,495	\$25,148,680	(\$33,787,938)	\$177,471	\$9,488,956	\$14,460,664
110 Kentucky Power Co - Distribution	\$75,772,369	\$68,739,078	\$1,158,275	\$3,175,785	(\$4,032,403)	\$22,145	\$1,208,493	\$1,532,295
117 Kentucky Power Co - Generation 180 Kentucky Power Co - Transmission	35,884,610 3,404,372	31,817,966 1,862,765	373,953 3,598	1,497,333 139,629	(1,866,520) (109,274)	11,852 3,639	572,323 54,296	588,941 91,888
600 Kentucky Power Co Kammer Actives	6,161,446	6,277,743	174,785	264,985	(368,268)	1,535	98,269	171,306
701 Kentucky Power Co Mitchell Actives	31,338,069	34,758,425	1,098,955	1,358,492	(2,039,014)	6,750	499,811	924,994
702 Kentucky Power Co Mitchell Inactives	26,800,324	31,156,262	0	1,095,743	(1,827,703)	5,623	427,438	(298,899)
Kentucky Power Co.	\$179,361,190	\$174,612,239	\$2,809,566	\$7,531,967	(\$10,243,182)	\$51,544	\$2,860,630	\$3,010,525
250 Ohio Power Co - Distribution	\$452,723,482	\$440,798,982	\$6,953,512	\$18,858,157	(\$25,858,347)	\$113,103	\$7,220,482	\$7,286,907
160 Ohio Power Co - Transmission	48,192,877	42,805,893	42,639	1,966,019	(2,511,098)	22,377	768,628	288,565
Ohio Power Co.	\$500,916,359	\$483,604,875	\$6,996,151	\$20,824,176	(\$28,369,445)	\$135,480	\$7,989,110	\$7,575,472
167 Public Service Co of Oklahoma - Distribution	\$163,088,551	\$163,906,237	\$3,750,519	\$6,839,132	(\$9,615,141)	\$148,180	\$2,601,098	\$3,723,788
198 Public Service Co of Oklahoma - Generation 114 Public Service Co of Oklahoma - Transmission	81,926,678	83,507,947 20,322,224	2,357,829	3,463,818	(4,898,781)	79,178 18,956	1,306,648	2,308,692 531,065
Public Service Co. of Oklahoma	19,718,315 \$264,733,544	\$267,736,408	560,634 \$6,668,982	829,139 \$11,132,089	(1,192,151) (\$15,706,073)	\$246,314	314,487 \$4,222,233	\$6,563,545
159 Southwestern Electric Power Co - Distribution	\$101,275,179	\$103,285,630	\$2,967,471	\$4,290,914	(\$6,058,988)	\$110,193	\$1,615,237	\$2,924,827
168 Southwestern Electric Power Co - Generation	113,808,317	113,953,035	3,836,873	4,846,119	(6,684,764)	116,270	1,815,128	3,929,626
161 Southwestern Electric Power Co - Texas - Distribution	53,062,349	51,709,879	1,391,973	2,239,034	(3,033,428)	57,264	846,291	1,501,134
111 Southwestern Electric Power Co - Texas - Transmission	138,351	63,860	0	5,436	(3,746)	0	2,207	3,897
194 Southwestern Electric Power Co - Transmission Southwestern Electric Power Co.	14,800,986 \$283,085,182	16,294,045 \$285,306,449	502,758 \$8,699,075	630,366 \$12,011,869	(955,849) (\$16,736,775)	18,985 \$302,712	236,061 \$4,514,924	432,321 \$8,791,805
119 AEP Texas North Company - Distribution	69,030,538	67,228,238	1,585,485	2,898,618	(3,943,773)	76,192	1,100,967	1,717,489
166 AEP Texas North Company - Generation	20,203,826	24,900,795	0	818,757	(1,460,742)	760	322,231	(318,994)
192 AEP Texas North Company - Transmission	10,335,702	10,590,386	349,362	439,894	(621,258)	10,619	164,844	343,461
AEP Texas North Co.	\$99,570,066	\$102,719,419	\$1,934,847	\$4,157,269	(\$6,025,773)	\$87,571	\$1,588,042	\$1,741,956
230 Kingsport Power Co - Distribution	\$13,904,854	\$13,223,223	\$240,934	\$582,447	(\$775,707)	\$3,146	\$221,768	\$272,588
260 Kingsport Power Co - Transmission Kingsport Power Co.	2,383,028 \$16,287,882	1,761,480 \$14,984,703	334 \$241,268	96,932 \$679,379	(103,333) (\$879,040)	471 \$3,617	38,007 \$259,775	32,411 \$304,999
210 Wheeling Power Co - Distribution	\$16,619,337	\$15,839,579	\$241,628	\$692.592	(\$929,188)	\$5,760	\$265,062	\$275,854
200 Wheeling Power Co - Transmission	645,781	872,533	0	25,693	(51,185)	0	10,300	(15,192)
Wheeling Power Co.	\$17,265,118	\$16,712,112	\$241,628	\$718,285	(\$980,373)	\$5,760	\$275,362	\$260,662
103 American Electric Power Service Corporation American Electric Power Service Corp	\$1,558,645,546 \$1,558,645,546	\$1,450,737,890 \$1,450,737,890	\$30,459,562 \$30,459,562	\$65,569,655 \$65,569,655	(\$85,103,837) (\$85,103,837)	\$572,446 \$572,446	\$24,858,820 \$24,858,820	\$36,356,646 \$36,356,646
143 AEP Pro Serv, Inc.	\$1,134,784	\$1,022,707	\$0	\$46,638	(\$59,994)	\$39	\$18,099	\$4,782
189 Central Coal Company 171 CSW Energy, Inc.	0 2,739,837	0 2,477,361	0	0 114,056	0 (145,328)	0 715	0 43,698	0 13,141
Miscellaneous	\$3,874,621	\$3,500,068	\$ 0	\$160,694	(\$205,322)	\$ 754	\$61,797	\$17,923
270 Cook Coal Terminal AEP Generating Company	\$3,754,283 \$3,754,283	\$4,031,580 \$4,031,580	\$110,427 \$110,427	\$159,227 \$159,227	(\$236,502) (\$236,502)	\$871 \$871	\$59,877 \$59,877	\$93,900 \$93,900
104 Cardinal Operating Company	\$81,192,141	\$89,065,626	\$1,404,943	\$3,404,287	(\$5,224,808)	\$16,734	\$1,294,933	\$896,089
181 Ohio Power Co - Generation	307,178,286	369,488,944	3,230,580	12,730,061	(21,675,126)	77,436	4,899,183	(737,866)
AEP Generation Resources - FERC	\$388,370,427	\$458,554,570	\$4,635,523	\$16,134,348	(\$26,899,934)	\$94,170	\$6,194,116	\$158,223
290 Conesville Coal Preparation Company AEP Generation Resources - SEC	3,324,220 \$391,694,647	4,401,699 \$462,956,269	0 \$4,635,523	135,313 \$16,269,661	(258,214)	614 \$94 784	53,018 \$6 247 134	(69,269) \$88,954
175 AEP Energy Partners	9,793,084	\$462,956,269 7,981,872	\$4,635,523 648,767	438,668	(\$27,158,148) (468,236)	\$94,784 2,233	\$6,247,134 156,190	\$66,954 777,622
AEP Energy Supply	\$401,487,731	\$470,938,141	\$5,284,290	\$16,708,329	(\$27,626,384)	\$97,017	\$6,403,324	\$866,576
293 Elmwood	\$3,352,949	\$5,163,394	\$279,443	\$150,893	(\$302,897)	\$6,512	\$53,476	\$187,427
292 AEP River Operations LLC	48,061,857	53,845,828	4,825,247	2,203,712	(3,158,728)	36,462	766,538	4,673,231
AEP River Operations	\$51,414,806	\$59,009,222	\$5,104,690	\$2,354,605	(\$3,461,625)	\$42,974	\$820,014	\$4,860,658
Total	\$4,949,855,953	\$4,844,909,078	\$97,086,601	\$207,843,826	(\$284,214,226)	\$2,157,572	\$78,945,202	\$101,818,975



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2017 NET PERIODIC PENSION COST

						Amortization of		Net
	Projected	Mark et-Related			Expected	Prior		Periodic
Location	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Retum on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
	-							
140 Appalachian Power Co - Distribution 215 Appalachian Power Co - Generation	\$329,481,283 275,675,397	\$326,964,095 278,035,259	\$4,971,164 4,363,491	\$14,554,716 12,196,272	(\$19,177,608) (16,307,757)	\$78,793 74,093	\$3,676,289 3,075,933	\$4,103,354 3,402,032
150 Appalachian Power Co - Transmission	30,210,798	28,618,115	15,990	1,310,848	(1,678,554)	11,419	337,086	(3,211)
Appalachian Power Co FERC	\$635,367,478	\$633,617,469	\$9,350,645	\$28,061,836	(\$37,163,919)	\$164,305	\$7,089,308	\$7,502,175
225 Cedar Coal Co	3,106,972	4,726,460	0	133,530	(277,224)	0	34,667	(109,027)
Appalachian Power Co SEC	\$638,474,450	\$638,343,929	\$9,350,645	\$28,195,366	(\$37,441,143)	\$164,305	\$7,123,975	\$7,393,148
211 AEP Texas Central Company - Distribution	\$277,231,086	\$291,157,580	\$5,458,808	\$12,225,685	(\$17,077,428)	\$32,327	\$3,093,291	\$3,732,683
147 AEP Texas Central Company - Generation	3,334,184	11,205,759	0	142,110	(657,258)	0	37,202	(477,946)
169 AEP Texas Central Company - Transmission	27,229,674	27,735,201	704,039	1,202,966	(1,626,768)	3,887	303,823	587,947
AEP Texas Central Co.	\$307,794,944	\$330,098,540	\$6,162,847	\$13,570,761	(\$19,361,454)	\$36,214	\$3,434,316	\$3,842,684
170 Indiana Michigan Power Co - Distribution	\$164,930,204	\$169,524,084	\$2,821,563	\$7,290,092	(\$9,943,191)	\$37,120	\$1,840,259	\$2,045,843
132 Indiana Michigan Power Co - Generation	112,689,237	112,520,332	1,995,160	5,007,884	(6,599,718)	26,761	1,257,365	1,687,452
190 Indiana Michigan Power Co - Nuclear	228,371,033	242,460,842	7,374,348	10,330,485	(14,221,191)	67,613	2,548,120	6,099,375
120 Indiana Michigan Power Co - Transmission	38,410,958	36,872,787	646,367	1,702,280	(2,162,720)	8,588	428,582	623,097
280 Ind Mich River Transp Lakin Indiana Michigan Power Co FERC	33,317,942 \$577,719,374	36,253,709 \$597,631,754	961,521 \$13,798,959	1,499,223 \$25,829,964	(2,126,409) (\$35,053,229)	10,849 \$150,931	371,755 \$6,446,081	716,939 \$11,172,706
202 Price River Coal	¢377,713,374 0	4097,001,704 0	\$13,730,333 0	\$ 23,023,30 4	(\$55,055,225)	¢150,551 0	\$0,440,001 0	0
Indiana Michigan Power Co SEC	\$577,719,374	\$597,631,754	\$13,798,959	\$25,829,964	(\$35,053,229)	\$150,931	\$6,446,081	\$11,172,706
110 Kentucky Power Co - Distribution	\$73,577,069	\$71,657,507	\$1,189,787	\$3,262,212	(\$4,202,968)	\$21,315	\$820,959	\$1,091,305
117 Kentucky Power Co - Generation	34,844,950	33,292,233	384,127	1,537,520	(1,952,708)	10,918	388,793	368,650
180 Kentucky Power Co - Transmission	3,305,740	3,132,539	3,696	143,737	(183,735)	3,227	36,885	3,810
600 Kentucky Power Co Kammer Actives	5,982,935	6,522,976	179,540	272,131	(382,596)	1,383	66,756	137,214
701 Kentucky Power Co Mitchell Actives 702 Kentucky Power Co Mitchell Inactives	30,430,133 26,023,857	36,219,576 31,679,751	1,128,852 0	1,395,996 1,126,322	(2,124,407) (1,858,130)	6,082 5,067	339,534 290,369	746,057 (436,372)
Kentucky Power Co.	\$174,164,684	\$182,504,582	\$2,886,002	\$7,737,918	(\$10,704,544)	\$47,992	\$1,943,296	\$1,910,664
-								
250 Ohio Power Co - Distribution	\$439,607,041	\$453,757,760	\$7,142,685	\$19,392,810	(\$26,614,508)	\$96,985	\$4,905,051	\$4,923,023
160 Ohio Power Co - Transmission	46,796,618	44,344,334	43,799	2,020,614	(2,600,953)	19,325	522,148	4,933
Ohio Power Co.	\$486,403,659	\$498,102,094	\$7,186,484	\$21,413,424	(\$29,215,461)	\$116,310	\$5,427,199	\$4,927,956
167 Public Service Co of Oklahoma - Distribution	\$158,363,500	\$169,654,790	\$3,852,553	\$7,025,681	(\$9,950,857)	\$23,036	\$1,766,989	\$2,717,402
198 Public Service Co of Oklahoma - Generation	79,553,074	86,794,050	2,421,975	3,556,835	(5,090,780)	11,866	887,638	1,787,534
114 Public Service Co of Oklahoma - Transmission	19,147,030	21,111,443 \$277,560,283	575,886	848,462	(1,238,261)	2,611	213,639	402,337
Public Service Co. of Oklahoma	\$257,063,604	\$277,500,283	\$6,850,414	\$11,430,978	(\$16,279,898)	\$37,513	\$2,868,266	\$4,907,273
159 Southwestern Electric Power Co - Distribution	\$98,341,004	\$107,390,417	\$3,048,202	\$4,410,318	(\$6,298,830)	\$16,285	\$1,097,270	\$2,273,245
168 Southwestern Electric Power Co - Generation	110,511,028	118,931,229	3,941,257	4,968,158	(6,975,740)	15,968	1,233,061	3,182,704
161 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	51,525,011	53,690,305	1,429,842 0	2,290,983	(3,149,127)	8,496 0	574,906	1,155,100
194 Southwestern Electric Power Co - Texas - Transmission	134,343 14,372,167	127,455 16,969,610	516,436	5,623 648,913	(7,476) (995,328)	2,932	1,499 160,362	(354) 333,315
Southwestern Electric Power Co.	\$274,883,553	\$297,109,016	\$8,935,737	\$12,323,995	(\$17,426,501)	\$43,681	\$3,067,098	\$6,944,010
		~~ ~~~ ~~~			(1.000.000)			
119 AEP Texas North Company - Distribution 166 AEP Texas North Company - Generation	67,030,564 19,618,475	69,623,869 25,319,180	1,628,618 0	2,978,248 844,720	(4,083,688) (1,485,060)	10,480 92	747,914 218,899	1,281,572 (421,349)
192 AEP Texas North Company - Transmission	10,036,253	11,046,915	358,867	451,561	(1,403,000) (647,941)	1,612	111,983	276,082
AEP Texas North Co.	\$96,685,292	\$105,989,964	\$1,987,485	\$4,274,529	(\$6,216,689)	\$12,184	\$1,078,796	\$1,136,305
230 Kingsport Power Co - Distribution	\$13,501,998	\$13,637,561	\$247,489	\$598,837	(\$799,891)	\$2,930	\$150,653	\$200,018
260 Kingsport Power Co - Transmission	2,313,986	2,191,029	343	99,869	(128,512)	389	25,819	(2,092)
Kingsport Power Co.	\$15,815,984	\$15,828,590	\$247,832	\$698,706	(\$928,403)	\$3,319	\$176,472	\$197,926
210 Wheeling Power Co - Distribution	\$16.137.837	\$16,298,797	\$248,201	\$712,396	(\$955,982)	\$4,849	\$180,063	\$189,527
200 Wheeling Power Co - Transmission	627,071	887,194	\$240,201 0	26,469	(52,037)	\$4,849 0	6,997	(18,571)
Wheeling Power Co.	\$16,764,908	\$17,185,991	\$248,201	\$738,865	(\$1,008,019)	\$4,849	\$187,060	\$170,956
400 American Electric Davis Occiles Occastion	64 540 407 000		\$31,288,229	A07.057.407	(007.047.050)	0077 440	\$16.887.208	607 000 704
103 American Electric Power Service Corporation American Electric Power Service Corp	\$1,513,487,998 \$1,513,487,998	\$1,499,436,043 \$1,499,436,043	\$31,288,229 \$31,288,229	\$67,357,127 \$67,357,127	(\$87,947,259) (\$87,947,259)	\$277,416 \$277,416	\$16,887,208 \$16,887,208	\$27,862,721 \$27,862,721
143 AEP Pro Serv, Inc.	\$1,101,907	\$1,043,568	\$0	\$48,207	(\$61,209)	¢00	\$12,295	(\$668)
143 AEP Pro Serv, Inc. 189 Central Coal Company	\$1,101,907	\$1,043,568 0	\$U 0	\$48,207 0	(\$61,209)	\$39 0	\$12,295	(\$668)
171 CSW Energy, Inc.	2,660,458	2,518,985	0	112,614	(147,747)	320	29,685	(5,128)
Miscellaneous	\$3,762,365	\$3,562,553	\$0	\$160,821	(\$208,956)	\$359	\$41,980	(\$5,796)
270 Cook Coal Terminal	\$3,645,513	\$4,187,585	\$113,432	\$163,503	(\$245,617)	\$855	\$40,676	\$72,849
AEP Generating Company	\$3,645,513	\$4,187,585	\$113,432	\$163,503	(\$245,617)	\$855	\$40,676	\$72,849
104 Cardinal Operating Company 181 Ohio Power Co - Generation	\$78,839,818	\$91,683,819 378 277 043	\$1,443,165	\$3,496,304	(\$5,377,582)	\$15,877 69,776	\$879,680 3 328 135	\$457,444 (2,388,408)
AEP Generation Resources - FERC	298,278,624 \$377,118,442	378,277,043 \$469,960,862	3,318,470 \$4,761,635	13,082,506 \$16,578,810	(22,187,295) (\$27,564,877)	\$85,653	3,328,135 \$4,207,815	(2,388,408) (\$1,930,964)
290 Conesville Coal Preparation Company	3,227,910	4,475,657	94,701,035 0	139,553	(262,513)	614	36,016	(\$6,330)
AEP Generation Resources - SEC	\$380,346,352	\$474,436,519	\$4,761,635	\$16,718,363	(\$27,827,390)	\$86,267	\$4,243,831	(\$2,017,294)
175 AEP Energy Partners	9,509,356	9,521,796	666,417	446,149	(558,487)	999	106,104	661,182
AEP Energy Supply	\$389,855,708	\$483,958,315	\$5,428,052	\$17,164,512	(\$28,385,877)	\$87,266	\$4,349,935	(\$1,356,112)
293 Elmwood	\$3,255,806	\$5,473,572	\$287,045	\$155,004	(\$321,044)	\$3,927	\$36,328	\$161,260
292 AEP River Operations LLC	46,669,394	58,603,890	4,956,520	2,260,028	(3,437,327)	21,752	520,728	4,321,701
AEP River Operations	\$49,925,200	\$64,077,462	\$5,243,565	\$2,415,032	(\$3,758,371)	\$25,679	\$557,056	\$4,482,961
Total	\$4 006 447 000	\$E 01E E70 701	\$00 707 00 f	\$040 ATE EC4	(\$204 494 494)	\$1 000 0TO	\$E2 COD 44 4	\$72 600 054
Total	\$4,806,447,236	\$5,015,576,701	\$99,727,884	\$213,475,501	(\$294,181,421)	\$1,008,873	\$53,629,414	\$73,660,251



Item No. 84 Attachment 1 Page 76 of 87

AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2018 NET PERIODIC PENSION COST

	Projected	Mark et-Related			Expected	Amortization of Prior		Net Periodic
Location	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Penolic Pension Cost
140 Appalachian Power Co - Distribution	\$319,855,733	\$333,160,802	\$5,023,897	\$14,888,755	(\$19,545,355)	\$865	\$2,318,366	\$2,686,528
215 Appalachian Power Co - Generation	267,621,746	283,423,920	4,409,778	12,489,463	(16,627,469)	815	1,939,766	2,212,353
150 Appalachian Power Co - Transmission Appalachian Power Co FERC	29,328,212 \$616,805,691	28,792,668 \$645,377,390	16,159 \$9,449,834	1,342,202 \$28,720,420	(1,689,163) (\$37,861,987)	126 \$1,806	212,576 \$4,470,708	(118,100) \$4,780,781
225 Cedar Coal Co	3,016,204	4,752,970	\$3,443,034 0	136,750	(278,840)	\$1,000 0	21,862	(120,228)
Appalachian Power Co SEC	\$619,821,895	\$650,130,360	\$9,449,834	\$28,857,170	(\$38,140,827)	\$1,806	\$4,492,570	\$4,660,553
211 AEP Texas Central Company - Distribution	\$269,131,987	\$297,581,759	\$5,516,713	\$12,530,988	(\$17,458,059)	\$66	\$1,950,712	\$2,540,420
147 AEP Texas Central Company - Generation 169 AEP Texas Central Company - Transmission	3,236,778 26,434,180	11,268,609 28,508,635	0 711,508	145,843 1,243,452	(661,089) (1,672,500)	0 10	23,461 191,599	(491,785) 474,069
AEP Texas Central Co.	\$298,802,945	\$337,359,003	\$6,228,221	\$13,920,283	(\$19,791,648)	\$76	\$2,165,772	\$2,522,704
170 Indiana Michigan Power Co - Distribution	\$160,111,892	\$172,951,659	\$2,851,494	\$7,463,396	(\$10,146,456)	\$408	\$1,160,517	\$1,329,359
132 Indiana Michigan Power Co - Generation	109,397,105	114,902,363	2,016,325	5,122,118	(6,740,911)	294	792,928	1,190,754
190 Indiana Michigan Power Co - Nuclear 120 Indiana Michigan Power Co - Transmission	221,699,344 37,288,811	250,292,621 37,646,566	7,452,574 653,223	10,594,612 1,743,331	(14,683,774) (2,208,590)	744 94	1,606,913 270,275	4,971,069 458,333
280 Ind Mich River Transp Lakin	32,344,583	37,301,357	971,721	1,535,170	(2,188,337)	119	234,439	553,112
Indiana Michigan Power Co FERC	\$560,841,735	\$613,094,566	\$13,945,337	\$26,458,627	(\$35,968,068)	\$1,659	\$4,065,072	\$8,502,627
202 Price River Coal	0	0	0	0 \$26 459 627	(\$25.069.069)	0	0	0
Indiana Michigan Power Co SEC	\$560,841,735	\$613,094,566	\$13,945,337	\$26,458,627	(\$35,968,068)	\$1,659	\$4,065,072	\$8,502,627
110 Kentucky Power Co - Distribution 117 Kentucky Power Co - Generation	\$71,427,570 33,826,981	\$73,103,832 33,815,982	\$1,202,407 388,202	\$3,338,816	(\$4,288,741)	\$235 120	\$517,719 245,183	\$770,436 221,920
180 Kentucky Power Co - Transmission	3,209,165	3,153,619	3,736	1,572,278 147,507	(1,983,863) (185,012)	36	245, 185 23,261	(10,472)
600 Kentucky Power Co Kammer Actives	5,808,148	6,717,541	181,445	278,080	(394,094)	15	42,098	107,544
701 Kentucky Power Co Mitchell Actives	29,541,139	37,413,603	1,140,827	1,426,401	(2,194,923)	67	214,119	586,491
702 Kentucky Power Co Mitchell Inactives	25,263,589	31,857,433	0	1,153,941	(1,868,962)	56	183,115	(531,850)
Kentucky Power Co.	\$169,076,592	\$186,062,010	\$2,916,617	\$7,917,023	(\$10,915,595)	\$529	\$1,225,495	\$1,144,069
250 Ohio Power Co - Distribution	\$426,764,250	\$462,571,900	\$7,218,453	\$19,863,532	(\$27,137,442)	\$1,066	\$3,093,257	\$3,038,866
160 Ohio Power Co - Transmission Ohio Power Co.	45,429,490 \$472,193,740	44,631,665 \$507,203,565	44,264 \$7,262,717	2,070,068 \$21,933,600	(2,618,380) (\$29,755,822)	213 \$1,279	329,280 \$3,422,537	(174,555) \$2,864,311
							<i>40,422,001</i>	\$2,004,311
167 Public Service Co of Oklahoma - Distribution	\$153,737,029	\$173,987,969	\$3,893,420	\$7,188,448	(\$10,207,253)	\$77	\$1,114,311	\$1,989,003
198 Public Service Co of Oklahoma - Generation 114 Public Service Co of Oklahoma - Transmission	77,228,990 18,587,664	89,406,552 21,735,385	2,447,667 581,995	3,647,532 877,538	(5,245,163) (1,275,137)	31 5	559,768 134,726	1,409,835 319,127
Public Service Co. of Oklahoma	\$249,553,683	\$285,129,906	\$6,923,082	\$11,713,518	(\$16,727,553)	\$113	\$1,808,805	\$3,717,965
159 Southwestern Electric Power Co - Distribution	\$95,468,045	\$110,667,856	\$3,080,537	\$4,492,456	(\$6,492,488)	\$45	\$691,968	\$1,772,518
168 Southwestern Electric Power Co - Generation	107,282,531	123,057,150	3,983,065	5,096,003	(7,219,324)	32	777,601	2,637,377
161 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	50,019,746 130,418	55,246,496 128,169	1,445,009 0	2,351,803 5,798	(3,241,115)	22 0	362,551 945	918,270 (776)
194 Southwestern Electric Power Co - Texas - Transmission	13,952,295	17,517,662	521,914	664,923	(7,519) (1,027,699)	9	945 101,129	260,276
Southwestern Electric Power Co.	\$266,853,035	\$306,617,333	\$9,030,525	\$12,610,983	(\$17,988,145)	\$108	\$1,934,194	\$5,587,665
119 AEP Texas North Company - Distribution	65,072,317	71,444,082	1,645,894	3,048,205	(4,191,369)	17	471,655	974,402
166 AEP Texas North Company - Generation	19,045,336	25,461,187	0	865,147	(1,493,717)	0	138,044	(490,526)
192 AEP Texas North Company - Transmission	9,743,051	11,423,955	362,674	462,632	(670,203)	4	70,619	225,726
AEP Texas North Co.	\$93,860,704	\$108,329,224	\$2,008,568	\$4,375,984	(\$6,355,289)	\$21	\$680,318	\$709,602
230 Kingsport Power Co - Distribution	\$13,107,548	\$13,930,833	\$250,114	\$613,192	(\$817,272)	\$32	\$95,006	\$141,072
260 Kingsport Power Co - Transmission Kingsport Power Co.	2,246,385 \$15,353,933	2,203,318 \$16,134,151	346 \$250,460	102,573 \$715,765	(129,261) (\$946,533)	4 \$36	16,282 \$111,288	(10,056) \$131,016
210 Wheeling Power Co - Distribution	\$15,666,382	\$16,607,872	\$250,834	\$729,196	(\$974,325)	\$53	\$113,552	\$119,310
200 Wheeling Power Co - Transmission	608,752	892,170	¢200,004 0	27,187	(52,340)	¢00 0	4,412	(20,741)
Wheeling Power Co.	\$16,275,134	\$17,500,042	\$250,834	\$756,383	(\$1,026,665)	\$53	\$117,964	\$98,569
103 American Electric Power Service Corporation	\$1,469,272,576	\$1,535,305,838	\$31,620,126	\$68,952,906	(\$90,070,910)	\$2,759	\$10,649,526	\$21,154,408
American Electric Power Service Corp	\$1,469,272,576	\$1,535,305,838	\$31,620,126	\$68,952,906	(\$90,070,910)	\$2,759	\$10,649,526	\$21,154,408
143 AEP Pro Serv, Inc.	\$1,069,715	\$1,049,421	\$0	\$49,674	(\$61,566)	\$0	\$7,753	(\$4,139)
189 Central Coal Company 171 CSW Energy, Inc.	0 2,582,734	0 2,533,114	0	0 119,973	0 (148,609)	0	0 18,720	0 (9,913)
Miscellaneous	\$3,652,449	\$3,582,535	\$0	\$169,647	(\$210,175)	\$3	\$26,473	(\$14,052)
270 Cook Coal Terminal	\$3,539,012	\$4,310,247	\$114,635	\$167,406	(\$252,867)	\$9	\$25,651	\$54,834
AEP Generating Company	\$3,539,012	\$4,310,247	\$114,635	\$167,406	(\$252,867)	\$9	\$25,651	\$54,834
104 Cardinal Operating Company	\$76,536,571	\$93,464,514	\$1,458,474	\$3,580,691	(\$5,483,229)	\$175	\$554,749	\$110,860
181 Ohio Power Co - Generation	289,564,637	383,310,771	3,353,671	13,398,181	(22,487,474)	768	2,098,812	(3,636,042)
AEP Generation Resources - FERC 290 Conesville Coal Preparation Company	\$366,101,208 3,133,609	\$476,775,285 4,500,759	\$4,812,145 0	\$16,978,872 142,939	(\$27,970,703) (264,043)	\$943 7	\$2,653,561 22,713	(\$3,525,182) (98,384)
AEP Generation Resources - SEC	\$369,234,817	\$481,276,044	\$4,812,145	\$17,121,811	(\$28,234,746)	\$950	\$2,676,274	(\$3,623,566)
175 AEP Energy Partners	9,231,547	10,159,725	673,486	464,990	(596,035)	10	66,912	609,363
AEP Energy Supply	\$378,466,364	\$491,435,769	\$5,485,631	\$17,586,801	(\$28,830,781)	\$960	\$2,743,186	(\$3,014,203)
293 Elmwood	\$3,160,690	\$5,756,161	\$290,090	\$159,116	(\$337,693)	\$43	\$22,909	\$134,465
292 AEP River Operations LLC	45,305,983	63,283,159	5,009,098	2,325,377	(3,712,597)	239	328,385	3,950,502
AEP River Operations	\$48,466,673	\$69,039,320	\$5,299,188	\$2,484,493	(\$4,050,290)	\$282	\$351,294	\$4,084,967
Total	\$4,666,030,470	\$5,131,233,869	\$100,785,775	\$218,620,589	(\$301,031,168)	\$9,693	\$33,820,145	\$52,205,035

AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2019 NET PERIODIC PENSION COST

						Amortization of		Net
	Projected	Mark et-Related			Expected	Prior		Periodic
Location	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
140 Appalachian Power Co - Distribution	\$310,800,390	\$338,789,728	\$5,173,813	\$15,233,719	(\$19,871,456)	\$0 0	\$1,186,510	\$1,722,586
215 Appalachian Power Co - Generation 150 Appalachian Power Co - Transmission	260,045,185 28,497,910	288,326,793 28,927,723	4,541,368 16,641	12,755,729 1,371,893	(16,911,591) (1,696,734)	0	992,748 108,794	1,378,254 (199,406)
Appalachian Power Co FERC	\$599,343,485	\$656,044,244	\$9,731,822	\$29,361,341	(\$38,479,781)	\$0	\$2,288,052	\$2,901,434
225 Cedar Coal Co	2,930,813	4,773,048	0	139,916	(279,960)	0	11,189	(128,855)
Appalachian Power Co SEC	\$602,274,298	\$660,817,292	\$9,731,822	\$29,501,257	(\$38,759,741)	\$0	\$2,299,241	\$2,772,579
211 AEP Texas Central Company - Distribution	\$261,512,670	\$303,473,979	\$5,681,335	\$12,811,376	(\$17,800,037)	\$0	\$998,350	\$1,691,024
147 AEP Texas Central Company - Generation	3,145,143	11,316,213	40,001,000	149,439	(663,744)	0	12,007	(502,298)
169 AEP Texas Central Company - Transmission	25,685,809	29,227,227	732,739	1,266,711	(1,714,301)	0	98,058	383,207
AEP Texas Central Co.	\$290,343,622	\$344,017,419	\$6,414,074	\$14,227,526	(\$20,178,082)	\$0	\$1,108,415	\$1,571,933
170 Indiana Michigan Power Co - Distribution	\$155,579,010	\$176,078,275	\$2,936,584	\$7,627,270	(\$10,327,738)	\$0	\$593,938	\$830,054
132 Indiana Michigan Power Co - Generation	106,299,995	117,081,566	2,076,493	5,224,008	(6,867,331)	0	405,810	838,980
190 Indiana Michigan Power Co - Nuclear	215,422,878	257,611,764	7,674,962	10,817,015	(15,110,024)	0	822,398	4,204,351
120 Indiana Michigan Power Co - Transmission	36,233,138	38,354,264	672,716	1,778,952	(2,249,640)	0	138,323	340,351
280 Ind Mich River Transp Lakin	31,428,885	38,275,217	1,000,717	1,566,439	(2,245,004)	0	119,983	442,135
Indiana Michigan Power Co FERC	\$544,963,906	\$627,401,086	\$14,361,472	\$27,013,684	(\$36,799,737)	\$0	\$2,080,452	\$6,655,871
202 Price River Coal Indiana Michigan Power Co SEC	0 \$544,963,906	0 \$627,401,086	0 \$14,361,472	0 \$27,013,684	0 (\$36,799,737)	0 \$0	0 \$2,080,452	0 \$6,655,871
Indiana Michigan Power Co SEC	\$344,903,900	\$027,401,000	\$14,301,472	\$27,013,064	(\$30,799,737)	\$0	\$2,000,452	\$0,055,671
110 Kentucky Power Co - Distribution	\$69,405,405	\$74,422,729	\$1,238,288	\$3,405,425	(\$4,365,209)	\$0	\$264,962	\$543,466
117 Kentucky Power Co - Generation	32,869,315	34,285,180	399,786	1,604,667	(2,010,971)	0	125,482	118,964
180 Kentucky Power Co - Transmission	3,118,311	3,170,297	3,847	150,817	(185,951)	0	11,904	(19,383)
600 Kentucky Power Co Kammer Actives	5,643,715 28,704,809	6,898,604 38,530,555	186,859	282,101	(404,632)	0	21,545	85,873
701 Kentucky Power Co Mitchell Actives 702 Kentucky Power Co Mitchell Inactives	28,704,809 24,548,359	38,530,555 31,992,012	1,174,870 0	1,455,948 1,180,123	(2,259,981) (1,876,467)	0	109,583 93,716	480,420 (602,628)
Kentucky Power Co.	\$164,289,914	\$189,299,377	\$3,003,650	\$8,079,081	(\$11,103,211)	\$0	\$627,192	\$606,712
	¢104,203,314	¥100,200,011	\$5,005,000	\$0,075,001	(#11,100,211)	<i>Q</i> U	<i>QUE1</i> ,132	\$000,712
250 Ohio Power Co - Distribution	\$414,682,251	\$470,591,490	\$7,433,855	\$20,312,012	(\$27,602,189)	\$0	\$1,583,089	\$1,726,767
160 Ohio Power Co - Transmission	44,143,349	44,857,121	45,584	2,110,907	(2,631,061)	0	168,521	(306,049)
Ohio Power Co.	\$458,825,600	\$515,448,611	\$7,479,439	\$22,422,919	(\$30,233,250)	\$0	\$1,751,610	\$1,420,718
167 Public Service Co of Oklahoma - Distribution	\$149,384,625	\$177,994,809	\$4,009,601	\$7,357,608	(\$10,440,151)	\$0	\$570,290	\$1,497,348
198 Public Service Co of Oklahoma - Generation	75,042,583	91,841,309	2,520,706	3,713,274	(5,386,883)	0	286,482	1,133,579
114 Public Service Co of Oklahoma - Transmission	18,061,434	22,316,303	599,362	898,779	(1,308,946)	0	68,951	258,146
Public Service Co. of Oklahoma	\$242,488,642	\$292,152,421	\$7,129,669	\$11,969,661	(\$17,135,980)	\$0	\$925,723	\$2,889,073
159 Southwestern Electric Power Co - Distribution	\$92,765,277	\$113,723,474	\$3,172,461	\$4,607,710	(\$6,670,365)	\$0	\$354,140	\$1,463,946
168 Southwestern Electric Power Co - Generation	104,245,286	126,923,502	4,101,921	5,194,258	(7,444,602)	0	397,966	2,249,543
161 Southwestern Electric Power Co - Texas - Distribution	48,603,651	56,693,818	1,488,129	2,404,823	(3,325,333)	0	185,549	753,168
111 Southwestern Electric Power Co - Texas - Transmission	126,726	128,711	0	5,967	(7,549)	0	484	(1,098)
194 Southwestern Electric Power Co - Transmission Southwestern Electric Power Co.	13,557,296 \$259,298,236	18,030,426 \$315,499,931	537,488 \$9,299,999	680,805 \$12,893,563	(1,057,561) (\$18,505,410)	0 \$0	51,756 \$989,895	212,488 \$4,678,047
Souriwestern Liectric Power Co.	\$233,230,230	<i>4313,433,331</i>	<i>43,233,333</i>	\$12,033,303	(\$10,505,410)	φu	4303,035	\$ 4 ,070,047
119 AEP Texas North Company - Distribution	63,230,073	73,128,455	1,695,009	3,100,567	(4,289,294)	0	241,387	747,669
166 AEP Texas North Company - Generation	18,506,149	25,568,746	0	884,512	(1,499,716)	0	70,649	(544,555)
192 AEP Texas North Company - Transmission	9,467,219	11,776,747	373,496	473,047	(690,756)	0	36,142	191,929
AEP Texas North Co.	\$91,203,441	\$110,473,948	\$2,068,505	\$4,458,126	(\$6,479,766)	\$0	\$348,178	\$395,043
230 Kingsport Power Co - Distribution	\$12,736,464	\$14,200,255	\$257,578	\$626,395	(\$832,905)	\$0	\$48,623	\$99,691
260 Kingsport Power Co - Transmission	2,182,788	2,212,626	357	104,875	(129,780)	0	8,333	(16,215)
Kingsport Power Co.	\$14,919,252	\$16,412,881	\$257,935	\$731,270	(\$962,685)	\$0	\$56,956	\$83,476
210 Wheeling Power Co - Distribution	\$15,222,855	\$16,888,603	\$258,319	\$745,811	(\$990,588)	\$0	\$58,115	\$71,657
200 Wheeling Power Co - Transmission	591,518	895,939	0	27,886	(52,551)	0	2,258	(22,407)
Wheeling Power Co.	\$15,814,373	\$17,784,542	\$258,319	\$773,697	(\$1,043,139)	\$0	\$60,373	\$49,250
103 American Electric Power Service Corporation	\$1,427,676,432	\$1,568,360,277	\$32,563,685	\$70,476,303	(\$91,990,991)	\$0	\$5,450,296	\$16,499,291
American Electric Power Service Corp	\$1,427,676,432	\$1,568,360,277	\$32,563,685	\$70,476,303	(\$91,990,991)	\$0	\$5,450,296	\$16,499,291
143 AEP Pro Serv. Inc.	\$1,039,431	\$1,053,854	\$0	\$50.782	(\$61,813)	\$0	\$3,968	(\$7,063)
189 Central Coal Company	¢1,000,401 0	¢1,000,004 0	0	000,702	(001,010)	0	¢0,000 0	(\$7,000)
171 CSW Energy, Inc.	2,509,615	2,543,814	0	122,620	(149,205)	ő	9,581	(17,004)
Miscellaneous	\$3,549,046	\$3,597,668	\$0	\$173,402	(\$211,018)	\$0	\$13,549	(\$24,067)
270 Cook Cool Terminal	¢2 400 000	64 404 000	6440.050	6474 000	(\$250 544)	\$0	040 400	640.004
270 Cook Coal Terminal AEP Generating Company	\$3,438,820 \$3,438,820	\$4,424,933 \$4,424,933	\$118,056 \$118,056	\$171,388 \$171,388	(\$259,541) (\$259,541)	\$0 \$0	\$13,128 \$13,128	\$43,031 \$43,031
ALF Generating company	\$3,430,020	φ 4 ,424,555	\$110,000	\$171, 300	(\$253,541)	φu	φ13,120	φ 4 3,031
104 Cardinal Operating Company	\$74,369,767	\$95,085,030	\$1,501,996	\$3,661,187	(\$5,577,141)	\$0	\$283,914	(\$130,044)
181 Ohio Power Co - Generation	281,366,857	387,748,016	3,453,746	13,707,297	(22,743,068)	0	1,074,145	(4,507,880)
AEP Generation Resources - FERC	\$355,736,624	\$482,833,046	\$4,955,742	\$17,368,484	(\$28,320,209)	\$0	\$1,358,059	(\$4,637,924)
290 Conesville Coal Preparation Company	3,044,894	4,519,772	0	146,142	(265,104)	0	11,624	(107,338)
AEP Generation Resources - SEC	\$358,781,518	\$487,352,818	\$4,955,742	\$17,514,626	(\$28,585,313)	\$0	\$1,369,683	(\$4,745,262)
175 AEP Energy Partners	8,970,195	10,768,924	693,583	476,788	(631,643) (\$29,216,956)	0	34,245	572,973
AEP Energy Supply	\$367,751,713	\$498,121,742	\$5,649,325	\$17,991,414	(929,210,900)	\$0	\$1,403,928	(\$4,172,289)
293 Elmwood	\$3,071,209	\$6,024,607	\$298,746	\$161,714	(\$353,369)	\$0	\$11,725	\$118,816
292 AEP River Operations LLC	44,023,338	67,759,425	5,158,572	2,386,148	(3,974,378)	0	168,063	3,738,405
AEP River Operations	\$47,094,547	\$73,784,032	\$5,457,318	\$2,547,862	(\$4,327,747)	\$0	\$179,788	\$3,857,221
Total	\$4,533,931,842	\$5,237,596,160	\$103,793,268	\$223,431,153	(\$307,207,254)	\$0	\$17,308,724	\$37,325,889



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2020 NET PERIODIC PENSION COST

	Projected	Mark et-Related	. .	1	Expected	Amortization of Prior	Automation of the state	Net Periodic
ation	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
40 Appalachian Power Co - Distribution	\$309,773,232	\$341,773,691	\$5,285,057	\$15,179,919	(\$20,042,698)	\$0	\$1,072,520	\$1,494,79
15 Appalachian Power Co - Generation	259,185,766	290,977,075	4,639,014	12,713,876	(17,063,822)	0	897,372	1,186,44
50 Appalachian Power Co - Transmission	28,403,728	28,843,077	16,999	1,367,746	(1,691,450)	0	98,342	(208,36
Appalachian Power Co FERC	\$597,362,726	\$661,593,843	\$9,941,070	\$29,261,541	(\$38,797,970)	\$0	\$2,068,234	\$2,472,8
25 Cedar Coal Co Appalachian Power Co SEC	2,921,127 \$600,283,853	4,756,844 \$666,350,687	0 \$9,941,070	139,717 \$29,401,258	(278,956) (\$39,076,926)	0 \$0	10,114 \$2,078,348	(129,12 \$2,343,7
11 AEP Texas Central Company - Distribution	\$260,648,401	\$306,983,115	\$5,803,491	\$12,755,992	(\$18,002,468)	\$0	\$902,437	\$1,459,4
47 AEP Texas Central Company - Generation	3,134,748	11,277,794	0	149,421	(661,366)	0	10,853	(501,0
69 AEP Texas Central Company - Transmission	25,600,921	29,713,579	748,494	1,262,547	(1,742,499)	0	88,637	357,1
AEP Texas Central Co.	\$289,384,070	\$347,974,488	\$6,551,985	\$14,167,960	(\$20,406,333)	\$0	\$1,001,927	\$1,315,5
70 Indiana Michigan Power Co - Distribution	\$155,064,840	\$177,826,792	\$2,999,724	\$7,609,954	(\$10,428,329)	\$0 0	\$536,877	\$718,22 760,62
32 Indiana Michigan Power Co - Generation 90 Indiana Michigan Power Co - Nuclear	105,948,686 214,710,931	118,343,480 262,869,787	2,121,140 7.839.984	5,212,697 10,771,633	(6,940,039) (15,415,522)	0	366,824 743,388	3,939,4
20 Indiana Michigan Power Co - Transmission	36,113,392	38,761,762	687,180	1,775,809	(2,273,113)	0	125,035	314,9
30 Ind Mich River Transp Lakin	31,325,017	38,944,658	1,022,234	1,553,040	(2,283,839)	ů 0	108,456	399,8
Indiana Michigan Power Co FERC	\$543,162,866	\$636,746,479	\$14,670,262	\$26,923,133	(\$37,340,842)	\$0	\$1,880,580	\$6,133,1
02 Price River Coal	0	0	0	0	0	0	0	
Indiana Michigan Power Co SEC	\$543,162,866	\$636,746,479	\$14,670,262	\$26,923,133	(\$37,340,842)	\$0	\$1,880,580	\$6,133,13
10 Kentucky Power Co - Distribution	\$69,176,028	\$75,159,325	\$1,264,913	\$3,398,385	(\$4,407,582)	\$0	\$239,506	\$495,22
17 Kentucky Power Co - Generation	32,760,686	34,487,899	408,382	1,601,091	(2,022,480)	0	113,427	100,42
30 Kentucky Power Co - Transmission 30 Kentucky Power Co Kammer Actives	3,108,005 5,625,063	3,162,725 7,024,370	3,930 190,877	150,372 281,141	(185,472) (411,931)	0	10,761 19,476	(20,4 79,5
01 Kentucky Power Co Mitchell Actives	28,609,943	39,338,743	1,200,131	1,447,678	(2,306,949)	0	99,055	439,9
02 Kentucky Power Co Mitchell Inactives	24,467,230	31,883,400	0	1,177,529	(1,869,744)	Ő	84,712	(607,5
Kentucky Power Co.	\$163,746,955	\$191,056,462	\$3,068,233	\$8,056,196	(\$11,204,158)	\$0	\$566,937	\$487,2
50 Ohio Power Co - Distribution	\$413,311,775	\$474,934,184	\$7,593,693	\$20,241,225	(\$27,851,653)	\$0	\$1,430,999	\$1,414,2
60 Ohio Power Co - Transmission Ohio Power Co.	43,997,461 \$457,309,236	44,741,531 \$519,675,715	46,565 \$7,640,258	2,110,388 \$22,351,613	(2,623,786) (\$30,475,439)	0 \$0	152,331 \$1,583,330	(314,50 \$1,099,70
67 Public Service Co of Oklahoma - Distribution 98 Public Service Co of Oklahoma - Generation	\$148,890,926 74,794,576	\$180,594,444 93,543,928	\$4,095,813 2.574,905	\$7,344,984 3,689,305	(\$10,590,633) (5,485,714)	\$0 0	\$515,501 258,959	\$1,365,6 1.037.4
4 Public Service Co of Oklahoma - Generation	18,001,743	22,719,213	612,249	892,457	(1,332,327)	0	62,327	234,7
Public Service Co. of Oklahoma	\$241,687,245	\$296,857,585	\$7,282,967	\$11,926,746	(\$17,408,674)	\$0	\$836,787	\$2,637,8
59 Southwestern Electric Power Co - Distribution	\$92,458,699	\$115,871,963	\$3,240,674	\$4,590,205	(\$6,795,101)	\$0	\$320,117	\$1,355,8
8 Southwestern Electric Power Co - Generation	103,900,768	129,769,919	4,190,118	5,186,337	(7,610,121)	0	359,733	2,126,0
61 Southwestern Electric Power Co - Texas - Distribution	48,443,022	57,690,050	1,520,126	2,391,782	(3,383,128)	0	167,723	696,5
11 Southwestern Electric Power Co - Texas - Transmission 94 Southwestern Electric Power Co - Transmission	126,307 13,512,491	128,274 18,398,424	0 549,045	5,991 673,357	(7,522) (1,078,942)	0	437 46,784	(1,0) 190,2
Southwestern Electric Power Co.	\$258,441,287	\$321,858,630	\$9,499,963	\$12,847,672	(\$18,874,814)	\$0	\$894,794	\$4,367,6
19 AEP Texas North Company - Distribution	63,021,105	74,234,832	1,731,454	3,097,515	(4,353,367)	0	218,196	693,7
66 AEP Texas North Company - Generation	18,444,988	25,481,941	0	882,415	(1,494,342)	0	63,862	(548,0
92 AEP Texas North Company - Transmission	9,435,931	12,035,139	381,527	466,554	(705,779)	0	32,670	174,9
AEP Texas North Co.	\$90,902,024	\$111,751,912	\$2,112,981	\$4,446,484	(\$6,553,488)	\$0	\$314,728	\$320,7
30 Kingsport Power Co - Distribution 50 Kingsport Power Co - Transmission	\$12,694,371 2,175,574	\$14,357,875 2,205,114	\$263,116 364	\$625,870 104,602	(\$841,992) (129,315)	\$0 0	\$43,951 7,532	\$90,9 (16,8
Kingsport Power Co.	\$14,869,945	\$16,562,989	\$263,480	\$730,472	(\$971,307)	\$0	\$51,483	\$74,12
10 Wheeling Power Co - Distribution	\$15,172,546	\$17,037,894	\$263,874	\$743,808	(\$999,156)	\$0	\$52,532	\$61,0
00 Wheeling Power Co - Transmission Wheeling Power Co.	589,563 \$15,762,109	892,897 \$17,930,791	0 \$263,874	27,921 \$771,729	(52,362) (\$1,051,518)	0 \$0	2,041 \$54,573	(22,40 \$38,6
-				\$70,179,588				
03 American Electric Power Service Corporation American Electric Power Service Corp	\$1,422,958,130 \$1,422,958,130	\$1,589,055,838 \$1,589,055,838	\$33,263,849 \$33,263,849	\$70,179,588 \$70,179,588	(\$93,187,298) (\$93,187,298)	\$0 \$0	\$4,926,673 \$4,926,673	\$15,182,8 \$15,182,8
43 AEP Pro Serv, Inc.	\$1,035,996	\$1,050,276	\$0	\$50,618	(\$61,592)	\$0	\$3,587	(\$7,3
89 Central Coal Company	0	0	0	0	0	0	0	
71 CSW Energy, Inc. Miscellaneous	2,501,321 \$3,537,317	2,535,178 \$3,585,454	0 \$0	121,151 \$171,769	(148,671) (\$210,263)	0 \$0	8,660 \$12,247	(18,8 (\$26,2
70 Cook Coal Terminal	\$3,427,455	\$4,504,050	\$120,594	\$171,136	(\$264,132)	\$0	\$11,867	\$39,4
AEP Generating Company	\$3,427,455 \$3,427,455	\$4,504,050 \$4,504,050	\$120,594 \$120,594	\$171,136 \$171,136	(\$264,132) (\$264,132)	\$0 \$0	\$11,867 \$11,867	\$39,4 \$39,4
04 Cardinal Operating Company	\$74,123,984	\$95,962,094	\$1,534,291	\$3,646,072	(\$5,627,523)	\$0	\$256,638	(\$190,5
81 Ohio Power Co - Generation AEP Generation Resources - FERC	280,436,973 \$354,560,957	389,191,175 \$485,153,269	3,528,006 \$5,062,297	13,667,438 \$17,313,510	(22,823,410) (\$28,450,933)	0 \$0	970,950 \$1,227,588	(4,657,0
90 Conesville Coal Preparation Company	\$354,560,957 3,034,831	\$485,153,269 4,504,428	\$ 5,062,29 7 0	\$17,313,510 145,936	(\$28,450,933) (264,154)	\$U 0	\$1,227,588 10,507	(\$4,847,5 (107,7
AEP Generation Resources - SEC	\$357,595,788	\$489,657,697	\$5,062,297	\$17,459,446	(\$28,715,087)	\$0	\$1,238,095	(\$4,955,2
75 AEP Energy Partners	8,940,550	11,286,828	708,496	474,752	(661,896)	0	30,955	552,3
AEP Energy Supply	\$366,536,338	\$500,944,525	\$5,770,793	\$17,934,198	(\$29,376,983)	\$0	\$1,269,050	(\$4,402,9
33 Elmwood	\$3,061,059	\$6,242,693	\$305,170	\$159,540	(\$366,091)	\$0	\$10,598	\$109,2
92 AEP River Operations LLC	43,877,846	71,651,562	5,269,488	2,376,599	(4,201,876)	0	151,917	3,596,1
AEP River Operations	\$46,938,905	\$77,894,255	\$5,574,658	\$2,536,139	(\$4,567,967)	\$0	\$162,515	\$3,705,34



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2021 NET PERIODIC PENSION COST

						Amortization of		Net
	Projected	Mark et-Related			Expected	Prior		Periodic
Location	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
	-							
140 Appalachian Power Co - Distribution 215 Appalachian Power Co - Generation	\$308,350,893 257,995,702	\$344,716,573 293,588,798	\$5,398,693 4,738,759	\$15,099,276 12,644,546	(\$20,201,679) (17,205,400)	\$0 0	\$968,591 810,415	\$1,264,881 988,320
150 Appalachian Power Co - Transmission	28,273,311	293,588,798	4,738,759	1,352,949	(17,205,400) (1,685,716)	0	88,812	(226,590)
Appalachian Power Co FERC	\$594,619,906	\$667,070,015	\$10,154,817	\$29,096,771	(\$39,092,795)	\$0	\$1,867,818	\$2,026,611
225 Cedar Coal Co	2,907,715	4,741,776	0	139,272	(277,886)	0	9,134	(129,480)
Appalachian Power Co SEC	\$597,527,621	\$671,811,791	\$10,154,817	\$29,236,043	(\$39,370,681)	\$0	\$1,876,952	\$1,897,131
211 AEP Texas Central Company - Distribution	\$259,451,622	\$310,431,673	\$5,928,274	\$12,680,872	(\$18, 192, 456)	\$0	\$814,989	\$1,231,679
147 AEP Texas Central Company - Distribution	3,120,355	11,242,071	ψ0,020,274 0	149,201	(\$10,132,430) (658,827)	40 0	9,802	(499,824)
169 AEP Texas Central Company - Transmission	25,483,373	30,189,855	764,588	1,260,951	(1,769,238)	0	80,048	336,349
AEP Texas Central Co.	\$288,055,350	\$351,863,599	\$6,692,862	\$14,091,024	(\$20,620,521)	\$0	\$904,839	\$1,068,204
170 Indiana Michigan Power Co - Distribution	\$154,352,853	\$179,548,139	\$3,064,222	\$7,576,686	(\$10,522,192)	\$0	\$484,853	\$603,569
132 Indiana Michigan Power Co - Generation	105,462,218	119,583,980	2,166,747	5,183,360	(7,008,068)	0	331,278	673,317
190 Indiana Michigan Power Co - Nuclear	213,725,076	268,008,792	8,008,554	10,699,429	(15,706,316)	0	671,353	3,673,020
120 Indiana Michigan Power Co - Transmission	35,947,576	39,162,225	701,955	1,762,776	(2,295,053)	0	112,918	282,596
280 Ind Mich River Transp Lakin	31,181,186	39,600,079	1,044,213	1,553,868	(2,320,713)	0	97,946	375,314
Indiana Michigan Power Co FERC 202 Price River Coal	\$540,668,909 0	\$645,903,215 0	\$14,985,691 0	\$26,776,119 0	(\$37,852,342)	\$0 0	\$1,698,348 0	\$5,607,816 0
Indiana Michigan Power Co SEC	\$540,668,909	\$645,903,215	\$14,985,691	\$26,776,119	(\$37,852,342)	\$0	\$1,698,348	\$5,607,816
110 Kentucky Power Co - Distribution	\$68,858,403	\$75,884,841	\$1,292,110	\$3,375,914	(\$4,447,135)	\$0	\$216,298	\$437,187
117 Kentucky Power Co - Generation	32,610,264	34,689,712	417,163	1,586,524	(2,032,947)	0	102,435	73,175
180 Kentucky Power Co - Transmission	3,093,735	3,155,749	4,014	149,685	(184,939)	0	9,718	(21,522)
600 Kentucky Power Co Kammer Actives	5,599,235	7,147,381	194,981	278,041	(418,863)	0	17,588	71,747
701 Kentucky Power Co Mitchell Actives 702 Kentucky Power Co Mitchell Inactives	28,478,579	40,128,289	1,225,935	1,437,925	(2,351,668)	0	89,457	401,649
Kentucky Power Co.	24,354,887 \$162,995,103	31,782,407 \$192,788,379	0 \$3,134,203	1,164,465 \$7,992,554	(1,862,568) (\$11,298,120)	\$ 0	76,504 \$512,000	(621,599) \$340,637
Rendery Fower 66.	<i><i>Q</i>102,000,100</i>	¥132,100,013	<i>40,104,200</i>	¢1,552,554	(\$11,230,120)	ψŪ	<i>4012,000</i>	\$545,007
250 Ohio Power Co - Distribution	\$411,414,035	\$479,214,372	\$7,756,968	\$20, 165, 138	(\$28,083,752)	\$0	\$1,292,333	\$1,130,687
160 Ohio Power Co - Transmission	43,795,444	44,635,554	47,566	2,105,118	(2,615,810)	0	137,570	(325,556)
Ohio Power Co.	\$455,209,479	\$523,849,926	\$7,804,534	\$22,270,256	(\$30,699,562)	\$0	\$1,429,903	\$805,131
167 Public Service Co of Oklahoma - Distribution	\$148,207,286	\$183,142,083	\$4,183,879	\$7,276,653	(\$10,732,810)	\$0	\$465,548	\$1,193,270
198 Public Service Co of Oklahoma - Generation	74,451,153	95,209,022	2,630,269	3,684,539	(5,579,604)	0	233,866	969,070
114 Public Service Co of Oklahoma - Transmission	17,919,087	23,113,452	625,413	892,041	(1,354,535)	0	56,287	219,206
Public Service Co. of Oklahoma	\$240,577,526	\$301,464,557	\$7,439,561	\$11,853,233	(\$17,666,949)	\$0	\$755,701	\$2,381,546
159 Southwestern Electric Power Co - Distribution	\$92,034,170	\$117,973,603	\$3,310,352	\$4,568,557	(\$6,913,694)	\$0	\$289,098	\$1,254,313
168 Southwestern Electric Power Co - Generation	103,423,703	132,550,799	4,280,211	5,125,431	(7,767,972)	0	324,874	1,962,544
161 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	48,220,594	58,665,597 127,868	1,552,810 0	2,387,464 6,003	(3,438,023)	0	151,470 395	653,721
194 Southwestern Electric Power Co - Transmission	125,727 13,450,447	18,758,436	560,850	671,127	(7,494) (1,099,314)	0	42,251	(1,096) 174,914
Southwestern Electric Power Co.	\$257,254,641	\$328,076,303	\$9,704,223	\$12,758,582	(\$19,226,497)	\$0	\$808,088	\$4,044,396
119 AEP Texas North Company - Distribution	62,731,741	75,318,443	1,768,682	3,087,515	(4,413,942)	0	197,053	639,308
166 AEP Texas North Company - Generation	18,360,297	25,401,225	0	879,467	(1,488,607)	0	57,673	(551,467)
192 AEP Texas North Company - Transmission	9,392,605	12,287,538	389,730	468,628	(720,096)	0	29,504	167,766
AEP Texas North Co.	\$90,484,643	\$113,007,206	\$2,158,412	\$4,435,610	(\$6,622,645)	\$0	\$284,230	\$255,607
230 Kingsport Power Co - Distribution	\$12,636,084	\$14,513,175	\$268,773	\$623,112	(\$850,526)	\$0	\$39,692	\$81,051
260 Kingsport Power Co - Transmission	2,165,585	2,198,129	372	103,599	(128,819)	0	6,803	(18,045)
Kingsport Power Co.	\$14,801,669	\$16,711,304	\$269,145	\$726,711	(\$979,345)	\$0	\$46,495	\$63,006
210 Wheeling Power Co - Distribution	\$15,102,880	\$17,184,705	\$269,547	\$735,725	(\$1,007,088)	\$0	\$47,441	\$45,625
200 Wheeling Power Co - Transmission	586,856	890,069	0	27,922	(52,161)	0	1,843	(22,396)
Wheeling Power Co.	\$15,689,736	\$18,074,774	\$269,547	\$763,647	(\$1,059,249)	\$0	\$49,284	\$23,229
103 American Electric Power Service Corporation	\$1,416,424,547	\$1,609,360,139	\$33,979,067	\$69,787,639	(\$94,314,512)	\$0	\$4,449,270	\$13,901,463
American Electric Power Service Corp	\$1,416,424,547	\$1,609,360,139	\$33,979,067	\$69,787,639	(\$94,314,512)	\$0	\$4,449,270	\$13,901,463
143 AEP Pro Serv, Inc.	\$1,031,239	\$1,046,950	\$0	\$50,389	(\$61,355)	\$0	\$3,239	(\$7,727)
189 Central Coal Company 171 CSW Energy, Inc.	0 2,489,836	0 2,527,148	0	0 121,631	0 (148,100)	0	0 7,821	0 (18,648)
Miscellaneous	\$3,521,075	\$3,574,098	\$0	\$172,020	(\$209,455)	\$0	\$11,060	(\$26,375)
					(0000 544)			
270 Cook Coal Terminal AEP Generating Company	\$3,411,718 \$3,411,718	\$4,581,807 \$4,581,807	\$123,187 \$123,187	\$170,623 \$170,623	(\$268,511) (\$268,511)	\$0 \$0	\$10,717 \$10,717	\$36,016 \$36,016
104 Cordinal Operating Company	\$73.783.640	¢06 007 050	\$1 FOT 000	\$2 600 FC4	(\$5,674,427)	\$0	6004 700	(\$345 707)
104 Cardinal Operating Company 181 Ohio Power Co - Generation	279,149,333	\$96,827,059 390,646,091	\$1,567,280 3,603,863	\$3,629,581 13,601,463	(\$5,674,427) (22,893,320)	\$U 0	\$231,769 876,863	(\$245,797) (4,811,131)
AEP Generation Resources - FERC	\$352,932,973	\$487,473,150	\$5,171,143	\$17,231,044	(\$28,567,747)	\$0	\$1,108,632	(\$5,056,928)
290 Conesville Coal Preparation Company	3,020,896	4,490,160	0	146,062	(263,140)	0	9,489	(107,589)
AEP Generation Resources - SEC	\$355,953,869	\$491,963,310	\$5,171,143	\$17,377,106	(\$28,830,887)	\$0	\$1,118,121	(\$5,164,517)
175 AEP Energy Partners	8,899,499	11,791,051	723,730	472,604	(691,000)	0	27,955	533,289
AEP Energy Supply	\$364,853,368	\$503,754,361	\$5,894,873	\$17,849,710	(\$29,521,887)	\$0	\$1,146,076	(\$4,631,228)
293 Elmwood	\$3,047,004	\$6,455,640	\$311,731	\$160,045	(\$378,325)	\$0	\$9,571	\$103,022
292 AEP River Operations LLC	43,676,379	75,438,665	5,382,789	2,343,076	(4,420,988)	0	137,196	3,442,073
AEP River Operations	\$46,723,383	\$81,894,305	\$5,694,520	\$2,503,121	(\$4,799,313)	\$0	\$146,767	\$3,545,095
Total	\$4,498,198,768	\$5,366,715,764	\$108,304,642	\$221,386,892	(\$314,509,589)	\$0	\$14,129,730	\$29,311,674
	φ 1 ,130,130,100	<i>40,000,110,10</i> 4	÷100,004,042	422 1,000,002	(2017,000,008)	φU	ψ1 4 ,123,130	ψ 2 0,011,074



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2022 NET PERIODIC PENSION COST

	Projected	Mark et-Related			Expected	Amortization of Prior		Net Periodic
ocation	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
140 Appalachian Power Co - Distribution	\$306,152,140	\$347,271,084	\$5,514,772	\$14,987,681	(\$20,359,468)	\$0	\$876,931	\$1,019,91
215 Appalachian Power Co - Generation	256,156,016	295,866,747	4,840,648	12,543,428	(17,345,785)	0	733,724	772,01
150 Appalachian Power Co - Transmission	28,071,702	28,662,634	17,738	1,352,325	(1,680,405)	0	80,408	(229,93
Appalachian Power Co FERC 225 Cedar Coal Co	\$590,379,858 2,886,981	\$671,800,465 4,722,926	\$10,373,158 0	\$28,883,434 138,402	(\$39,385,658) (276,891)	\$0 0	\$1,691,063 8,269	\$1,561,99 (130,22
Appalachian Power Co SEC	\$593,266,839	\$676,523,391	\$10,373,158	\$29,021,836	(\$39,662,549)	\$0	\$1,699,332	\$1,431,77
211 AEP Texas Central Company - Distribution	\$257,601,554	\$313,507,925	\$6,055,740	\$12,620,096	(\$18,380,035)	\$0	\$737,864	\$1,033,66
147 AEP Texas Central Company - Generation	3,098,105	11,197,380	0	148,579	(656,469)	0	8,874	(499,01
169 AEP Texas Central Company - Transmission AEP Texas Central Co.	25,301,659 \$286,001,318	30,625,870 \$355,331,175	781,028 \$6,836,768	1,250,471 \$14,019,146	(1,795,503) (\$20,832,007)	0 \$0	72,473 \$819,211	308,46 \$843,11
170 Indiana Michigan Power Co - Distribution	\$153,252,211	\$181,062,125	\$3,130,107	\$7,525,819	(\$10,615,132)	\$0	\$438,970	\$479,76
132 Indiana Michigan Power Co - Generation	104,710,200	120,683,770	2,213,335	5,139,917	(7,075,329)	0	299,928	577,85
190 Indiana Michigan Power Co - Nuclear	212,201,069	272,765,718	8,180,749	10,590,112	(15,991,441)	0	607,821	3,387,24
120 Indiana Michigan Power Co - Transmission 280 Ind Mich River Transp Lakin	35,691,245 30,958,843	39,516,841 40,201,934	717,048 1,066,665	1,751,345 1,542,462	(2,316,755) (2,356,919)	0	102,233 88,677	253,87 340,88
Indiana Michigan Power Co FERC	\$536,813,568	\$654,230,388	\$15,307,904	\$26,549,655	(\$38,355,576)	\$0	\$1,537,629	\$5,039,61
202 Price River Coal	0	0	0	0	0	0	0	
Indiana Michigan Power Co SEC	\$536,813,568	\$654,230,388	\$15,307,904	\$26,549,655	(\$38,355,576)	\$0	\$1,537,629	\$5,039,61
110 Kentucky Power Co - Distribution 117 Kentucky Power Co - Generation	\$68,367,395 32,377,730	\$76,522,473 34,855,229	\$1,319,892 426,132	\$3,354,222 1,579,669	(\$4,486,284)	\$0 0	\$195,829 92,742	\$383,65 55,08
180 Kentucky Power Co - Transmission	3.071.674	3,146,108	420,132	145,593	(2,043,458) (184,447)	0	8,798	(25,95
600 Kentucky Power Co Kammer Actives	5,559,309	7,260,516	199,173	276,886	(425,662)	0	15,924	66,32
701 Kentucky Power Co Mitchell Actives	28,275,507	40,860,157	1,252,295	1,424,892	(2,395,509)	0	80,991	362,66
702 Kentucky Power Co Mitchell Inactives	24,181,220	31,656,061	0	1,165,822	(1,855,900)	0	69,264	(620,81
Kentucky Power Co.	\$161,832,835	\$194,300,544	\$3,201,593	\$7,947,084	(\$11,391,260)	\$0	\$463,548	\$220,96
250 Ohio Power Co - Distribution	\$408,480,370	\$482,948,756	\$7,923,753	\$20,015,130	(\$28,313,845)	\$0	\$1,170,036	\$795,07
160 Ohio Power Co - Transmission Ohio Power Co.	43,483,153 \$451,963,523	44,492,954 \$527,441,710	48,589 \$7,972,342	2,091,822 \$22,106,952	(2,608,489) (\$30,922,334)	0 \$0	124,552 \$1,294,588	(343,52 \$451,5 4
167 Public Service Co of Oklahoma - Distribution	\$147,150,467	\$185,455,504	\$4,273,838	\$7,250,748	(\$10,872,703)	\$0	\$421,492	\$1,073,3
198 Public Service Co of Oklahoma - Generation	73,920,265	96,742,524	2,686,823	3,659,049	(5,671,726)	0	211,734	885,8
114 Public Service Co of Oklahoma - Transmission	17,791,312	23,475,974	638,860	880,469	(1,376,326)	0	50,961	193,96
Public Service Co. of Oklahoma	\$238,862,044	\$305,674,002	\$7,599,521	\$11,790,266	(\$17,920,755)	\$0	\$684,187	\$2,153,21
159 Southwestern Electric Power Co - Distribution	\$91,377,903	\$119,911,665	\$3,381,530	\$4,523,643	(\$7,030,063)	\$0	\$261,739	\$1,136,84
168 Southwestern Electric Power Co - Generation 161 Southwestern Electric Power Co - Texas - Distribution	102,686,221 47,876,748	135,135,749 59,561,138	4,372,242 1,586,198	5,102,404 2,361,165	(7,922,606)	0	294,131 137,136	1,846,17 592,60
111 Southwestern Electric Power Co - Texas - Transmission	124,830	127,359	1,560,198	2,301,105	(3,491,892) (7,467)	0	358	(1,1
194 Southwestern Electric Power Co - Transmission	13,354,536	19,091,814	572,909	665,154	(1,119,296)	0	38,252	157,0
Southwestern Electric Power Co.	\$255,420,238	\$333,827,725	\$9,912,879	\$12,658,362	(\$19,571,324)	\$0	\$731,616	\$3,731,53
119 AEP Texas North Company - Distribution	62,284,420	76,304,575	1,806,711	3,063,853	(4,473,510)	0	178,405	575,4
166 AEP Texas North Company - Generation 192 AEP Texas North Company - Transmission	18,229,375 9,325,629	25,300,246 12,521,787	0 398,110	872,187 465,641	(1,483,278) (734,115)	0	52,216 26,712	(558,8 156,3
AEP Texas North Co.	\$89,839,424	\$114,126,608	\$2,204,821	\$4,401,681	(\$6,690,903)	\$0	\$257,333	\$172,93
230 Kingsport Power Co - Distribution	\$12,545,980	\$14,650,744	\$274,552	\$617,988	(\$858,929)	\$0	\$35,936	\$69,54
260 Kingsport Power Co - Transmission Kingsport Power Co.	2,150,143 \$14,696,123	2,189,391 \$16,840,135	380 \$274,932	103,545 \$721,533	(128,357) (\$987,286)	0 \$0	6,159 \$42,095	(18,27 \$51,2 7
210 Wheeling Power Co - Distribution	\$14,995,186	\$17,312,380	\$275,343	\$735,126	(\$1,014,973)	\$0	\$42,952	\$38,44
200 Wheeling Power Co - Transmission Wheeling Power Co.	582,671 \$15,577,857	886,530 \$18,198,910	0 \$275,343	27,851 \$762,977	(51,975) (\$1,066,948)	0 \$0	1,669 \$44,621	(22,45 \$15,99
-								
103 American Electric Power Service Corporation American Electric Power Service Corp	\$1,406,324,468 \$1,406,324,468	\$1,627,668,423 \$1,627,668,423	\$34,709,663 \$34,709,663	\$69,326,598 \$69,326,598	(\$95,425,346) (\$95,425,346)	\$0 \$0	\$4,028,227 \$4,028,227	\$12,639,14 \$12,639,14
143 AEP Pro Serv, Inc.	\$1,023,885	\$1,042,788	\$0	\$49,792	(\$61,136)	\$0	\$2,933	(\$8,4
189 Central Coal Company	0	0	0	0	0	0	0	
171 CSW Energy, Inc. Miscellaneous	2,472,082 \$3,495,967	2,517,102 \$3,559,890	0 \$0	120,758 \$170,550	(147,570) (\$208,706)	0 \$0	7,081 \$10,014	(19,73 (\$28,1 4
270 Cook Coal Terminal	\$3,387,390	\$4,652,877	\$125,836	\$169,106	(\$272,784)	\$0	\$9,703	\$31,86
AEP Generating Company	\$3,387,390	\$4,652,877	\$125,836	\$169,106	(\$272,784)	\$0	\$9,703	\$31,86
104 Cardinal Operating Company 181 Ohio Power Co - Generation	\$73,257,512 277,158,807	\$97,581,782 391,713,593	\$1,600,979 3,681,351	\$3,598,905 13,509,521	(\$5,720,929) (22,965,000)	\$0 0	\$209,836 793,883	(\$311,20 (4,980,24
AEP Generation Resources - FERC	\$350,416,319	\$489,295,375	\$5,282,330	\$17,108,426	(\$28,685,929)	\$ 0	\$1,003,719	(4,960,24 (\$5,291,4
290 Conesville Coal Preparation Company	2,999,355	4,472,310	0	145,606	(262,198)	0	8,591	(108,00
AEP Generation Resources - SEC	\$353,415,674	\$493,767,685	\$5,282,330	\$17,254,032	(\$28,948,127)	\$0	\$1,012,310	(\$5,399,4
175 AEP Energy Partners	8,836,040	12,270,447	739,291	469,586	(719,380)	0	25,310	514,8
AEP Energy Supply	\$362,251,714	\$506,038,132	\$6,021,621	\$17,723,618	(\$29,667,507)	\$0	\$1,037,620	(\$4,884,6
293 Elmwood	\$3,025,277	\$6,656,454	\$318,434	\$158,762	(\$390,248)	\$0	\$8,665	\$95,6
292 AEP River Operations LLC	43,364,937	79,052,037	5,498,526	2,352,377	(4,634,585)	0	124,213	3,340,53
AEP River Operations	\$46,390,214	\$85,708,491	\$5,816,960	\$2,511,139	(\$5,024,833)	\$0	\$132,878	\$3,436,14



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2023 NET PERIODIC PENSION COST

						Amortization of		Net
	Projected	Mark et-Related	0	1	Expected	Prior	A	Periodic
Location	Benefit Obligation	Value of Assets	Service Cost	Interest Cost	Return on Assets	Service Cost	Amortization of Gain/Loss	Pension Cost
440 Assistantian Deven On Distribution	0000 057 405	0050 477 750	# 5 000 0.17		(000 504 500)		6700.074	A700.040
140 Appalachian Power Co - Distribution 215 Appalachian Power Co - Generation	\$303,957,105 254,319,441	\$350,177,752 298,442,224	\$5,633,347 4,944,729	\$14,894,282 12,459,929	(\$20,534,563) (17,500,771)	\$0 0	\$789,974 660,968	\$783,040 564,855
150 Appalachian Power Co - Transmission	27,870,435	28,598,223	18,119	1,337,831	(1,677,011)	0	72,434	(248,627)
Appalachian Power Co FERC	\$586,146,981	\$677,218,199	\$10,596,195	\$28,692,042	(\$39,712,345)	\$0	\$1,523,376	\$1,099,268
225 Cedar Coal Co	2,866,282	4,710,251	0	137,588	(276,211)	0	7,449	(131,174)
Appalachian Power Co SEC	\$589,013,263	\$681,928,450	\$10,596,195	\$28,829,630	(\$39,988,556)	\$0	\$1,530,825	\$968,094
211 AEP Texas Central Company - Distribution	\$255,754,614	\$316,881,906	\$6,185,947	\$12,534,994	(\$18,582,081)	\$0	\$664,698	\$803,558
147 AEP Texas Central Company - Generation	3,075,892	11,167,330	0	147,943	(654,857)	0	7,994	(498,920)
169 AEP Texas Central Company - Transmission	25,120,252	31,087,191	797,821	1,239,283	(1,822,965)	0	65,287	279,426
AEP Texas Central Co.	\$283,950,758	\$359,136,427	\$6,983,768	\$13,922,220	(\$21,059,903)	\$0	\$737,979	\$584,064
170 Indiana Michigan Power Co - Distribution	\$152,153,430	\$182,755,121	\$3,197,409	\$7,461,593	(\$10,716,833)	\$0	\$395,442	\$337,611
132 Indiana Michigan Power Co - Generation	103,959,453	121,900,767	2,260,925	5,097,731	(7,148,310)	0	270,187	480,533
190 Indiana Michigan Power Co - Nuclear 120 Indiana Michigan Power Co - Transmission	210,679,640	277,728,748 39,909,819	8,356,646	10,528,866 1,734,165	(16,286,125)	0	547,549	3,146,936
280 Ind Mich River Transp Lakin	35,435,347 30,736,876	40,836,334	732,466 1,089,600	1,532,351	(2,340,328) (2,394,659)	0	92,095 79,884	218,398 307,176
Indiana Michigan Power Co FERC	\$532,964,746	\$663,130,789	\$15,637,046	\$26,354,706	(\$38,886,255)	\$0	\$1,385,157	\$4,490,654
202 Price River Coal	0	0	0	0	0	0	0	0
Indiana Michigan Power Co SEC	\$532,964,746	\$663,130,789	\$15,637,046	\$26,354,706	(\$38,886,255)	\$0	\$1,385,157	\$4,490,654
110 Kentucky Power Co - Distribution	\$67,877,218	\$77,235,936	\$1,348,272	\$3,330,226	(\$4,529,146)	\$0	\$176,411	\$325,763
117 Kentucky Power Co - Generation	32,145,590	35,058,466	435,295	1,560,612	(2,055,842)	0	83,545	23,610
180 Kentucky Power Co - Transmission	3,049,651	3,140,445	4,189	147,638	(184,157)	0	7,926	(24,404)
600 Kentucky Power Co Kammer Actives	5,519,450	7,379,341	203,456	266,678	(432,727)	0	14,345	51,752
701 Kentucky Power Co Mitchell Actives	28,072,779	41,622,064	1,279,221	1,410,574	(2,440,734)	0	72,960	322,021
702 Kentucky Power Co Mitchell Inactives Kentucky Power Co.	24,007,847 \$160,672,535	31,571,106 \$196,007,358	0 \$3,270,433	1,158,557 \$7,874,285	(1,851,342) (\$11,493,948)	0 \$0	62,396 \$417,583	(630,389) \$68,353
Relidicky Power Co.	\$100,072,355	\$130,007,330	\$5,270,455	\$7,074,203	(\$11,433,340)	40	<i>\</i>	400,555
250 Ohio Power Co - Distribution	\$405,551,667	\$487,168,408	\$8,094,124	\$19,898,884	(\$28,567,750)	\$0	\$1,054,015	\$479,273
160 Ohio Power Co - Transmission	43,171,389	44,407,606	49,633	2,076,485	(2,604,080)	0	112,201	(365,761)
Ohio Power Co.	\$448,723,056	\$531,576,014	\$8,143,757	\$21,975,369	(\$31,171,830)	\$0	\$1,166,216	\$113,512
167 Public Service Co of Oklahoma - Distribution	\$146,095,434	\$187,933,209	\$4,365,731	\$7,198,172	(\$11,020,478)	\$0	\$379,697	\$923,122
198 Public Service Co of Oklahoma - Generation	73,390,275	98,353,214	2,744,593	3,630,545	(5,767,472)	0	190,739	798,405
114 Public Service Co of Oklahoma - Transmission Public Service Co. of Oklahoma	17,663,752 \$237,149,461	23,857,789 \$310,144,212	652,597 \$7,762,921	880,302 \$11,709,019	(1,399,030) (\$18,186,980)	0 \$0	45,908 \$616,344	179,777 \$1,901,304
	<i>4201,110,101</i>	¢0.0,1.1,2.12		<i>••••••••••••••••••••••••••••••••••••</i>	(\$10,100,000)		\$010,011	\$1,001,001
159 Southwestern Electric Power Co - Distribution	\$90,722,746	\$121,943,914	\$3,454,237	\$4,507,246	(\$7,150,840)	\$0	\$235,785	\$1,046,428
168 Southwestern Electric Power Co - Generation	101,949,986	137,816,607	4,466,251	5,066,539	(8,081,621)	0	264,965	1,716,134
161 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	47,533,483 123,935	60,505,691	1,620,303	2,350,609 5,985	(3,548,078)	0	123,538 322	546,372
194 Southwestern Electric Power Co - Transmission	13,258,788	127,017 19,439,523	0 585,228	662,756	(7,448) (1,139,941)	0	34,459	(1,141) 142,502
Southwestern Electric Power Co.	\$253,588,938	\$339,832,752	\$10,126,019	\$12,593,135	(\$19,927,928)	\$0	\$659,069	\$3,450,295
119 AEP Texas North Company - Distribution	61,837,857	77,357,796	1,845,558	3,031,968	(4,536,292)	0	160,715	501,949
166 AEP Texas North Company - Generation	18,098,675	25,232,349	1,043,330	869,344	(1,479,635)	0	47,038	(563,253)
192 AEP Texas North Company - Transmission	9,258,767	12,765,498	406,670	458,351	(748,574)	0	24,063	140,510
AEP Texas North Co.	\$89,195,299	\$115,355,643	\$2,252,228	\$4,359,663	(\$6,764,501)	\$0	\$231,816	\$79,206
230 Kingsport Power Co - Distribution	\$12,456,029	\$14,802,559	\$280,456	\$611,037	(\$868,028)	\$0	\$32,373	\$55,838
260 Kingsport Power Co - Transmission	2,134,727	2,183,515	388	102,884	(128,042)	0	5,548	(19,222)
Kingsport Power Co.	\$14,590,756	\$16,986,074	\$280,844	\$713,921	(\$996,070)	\$0	\$37,921	\$36,616
210 Wheeling Power Co - Distribution	\$14,887,674	\$17,457,746	\$281,263	\$729,793	(\$1,023,729)	\$0	\$38,693	\$26,020
200 Wheeling Power Co - Transmission	578,493	884,151	0	27,779	(51,847)	0	1,503	(22,565)
Wheeling Power Co.	\$15,466,167	\$18,341,897	\$281,263	\$757,572	(\$1,075,576)	\$0	\$40,196	\$3,455
103 American Electric Power Service Corporation	\$1,396,241,468	\$1,647,462,126	\$35,455,968	\$68,802,093	(\$96,607,836)	\$0	\$3,628,785	\$11,279,010
American Electric Power Service Corp	\$1,396,241,468	\$1,647,462,126	\$35,455,968	\$68,802,093	(\$96,607,836)	\$0	\$3,628,785	\$11,279,010
143 AEP Pro Serv. Inc.	\$1,016,544	\$1,039,989	\$0	\$49.201	(\$60,985)	\$0	\$2.642	(\$9,142)
189 Central Coal Company	\$1,010,044	\$1,038,809 0	40 0	0	(\$00,303)	40 0	φ <u>2</u> ,042	(\$3,142)
171 CSW Energy, Inc.	2,454,358	2,510,347	0	118,668	(147,208)	0	6,379	(22,161)
Miscellaneous	\$3,470,902	\$3,550,336	\$0	\$167,869	(\$208,193)	\$0	\$9,021	(\$31,303)
270 Cook Coal Terminal	\$3,363,103	\$4,727,963	\$128,541	\$168,525	(\$277,250)	\$0	\$8,741	\$28,557
AEP Generating Company	\$3,363,103	\$4,727,963	\$128,541	\$168,525	(\$277,250)	\$0	\$8,741	\$28,557
		., ,		,	(, , , , ,		,	
104 Cardinal Operating Company	\$72,732,274	\$98,434,032	\$1,635,402	\$3,576,826	(\$5,772,211)	\$0	\$189,029	(\$370,954)
181 Ohio Power Co - Generation	275,171,646	393,224,925	3,760,505	13,417,639	(23,058,866)	0	715,162	(5,165,560)
AEP Generation Resources - FERC 290 Conesville Coal Preparation Company	\$347,903,920 2,977,851	\$491,658,957 4,460,308	\$5,395,907 0	\$16,994,465 144,615	(\$28,831,077) (261,554)	\$0 0	\$904,191 7,739	(\$5,536,514) (109,200)
AEP Generation Resources - SEC	\$350,881,771	\$496,119,265	\$5,395,907	\$17,139,080	(\$29,092,631)	\$ 0	\$911,930	(\$5,645,714)
175 AEP Energy Partners	8,772,687	12,751,836	755,187	466,206	(747,773)	40 0	22,800	496,420
AEP Energy Supply	\$359,654,458	\$508,871,101	\$6,151,094	\$17,605,286	(\$29,840,404)	\$0	\$934,730	(\$5,149,294)
293 Elmwood	\$3,003,586	\$6,860,304	\$325,281	\$157,621	(\$402,291)	\$0	\$7,806	\$88,417
293 Elfiwood 292 AEP River Operations LLC	43,054,021	\$0,860,304 82,667,396	5,616,752	2,338,338	(4,847,649)	\$U 0	\$7,806 111,896	3,219,337
AEP River Operations	\$46,057,607	\$89,527,700	\$5,942,033	\$2,495,959	(\$5,249,940)	\$0	\$119,702	\$3,307,754
Total	\$4,434,102,517	\$5,486,578,842	\$113,012,110	\$218 220 252	(\$321,735,170)	\$0	\$11,524,085	\$21,130,277
, viai	φ 4 ,434,102,317	<i>40,400,070,042</i>	φ113,012,110	¥210,329,232	(4521,133,110)	φU	φ11,J24,000	φ21,130,277



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2024 NET PERIODIC PENSION COST

						American of		blat
	Projected	Mark et-Related			Expected	Amortization of Prior		Net Periodic
	Benefit	Value	Service	Interest	Return		Amortization of	Pension
Location	Obligation	of Assets	Cost	Cost	on Assets	Cost	Gain/Loss	Cost
140 Appalachian Power Co - Distribution	\$301,627,144	\$353,319,891	\$5,754,472	\$14,781,037	(\$20,723,253)	\$0	\$708,312	\$520,568
215 Appalachian Power Co - Generation	252,369,974	301,216,590	5,051,047	12,360,691	(17,667,240)	0	592,642	337,140
150 Appalachian Power Co - Transmission Appalachian Power Co FERC	27,656,797 \$581,653,915	28,559,410 \$683,095,891	18,509 \$10,824,028	1,333,069 \$28,474,797	(1,675,094) (\$40,065,587)	0 \$0	64,947 \$1,365,901	(258,569) \$599,139
225 Cedar Coal Co	2,844,311	4,701,880	0	136,796	(275,779)	0	6,679	(132,304)
Appalachian Power Co SEC	\$584,498,226	\$687,797,771	\$10,824,028	\$28,611,593	(\$40,341,366)	\$0	\$1,372,580	\$466,835
211 AEP Texas Central Company - Distribution	\$253,794,146	\$320,452,857	\$6,318,953	\$12,447,453	(\$18,795,504)	\$0	\$595,986	\$566,888
147 AEP Texas Central Company - Generation	3,052,314	11,147,484	0	147,220	(653,833)	0	7,168	(499,445)
169 AEP Texas Central Company - Transmission	24,927,695	31,565,053	814,975	1,235,237	(1,851,383)	0	58,538	257,367
AEP Texas Central Co.	\$281,774,155	\$363,165,394	\$7,133,928	\$13,829,910	(\$21,300,720)	\$0	\$661,692	\$324,810
170 Indiana Michigan Power Co - Distribution	\$150,987,109	\$184,566,777	\$3,266,157	\$7,418,537	(\$10,825,385)	\$0	\$354,564	\$213,873
132 Indiana Michigan Power Co - Generation	103,162,560	123,194,718	2,309,538	5,064,178	(7,225,733)	0	242,257	390,240
190 Indiana Michigan Power Co - Nuclear	209,064,691	282,819,815	8,536,326	10,458,352	(16,588,215)	0	490,948	2,897,411
120 Indiana Michigan Power Co - Transmission 280 Ind Mich River Transp Lakin	35,163,720 30,501,265	40,328,633 41,491,699	748,215 1,113,028	1,722,509 1,518,061	(2,365,393) (2,433,610)	0	82,575 71,626	187,906 269,105
Indiana Michigan Power Co FERC	\$528,879,345	\$672,401,642	\$15,973,264	\$26,181,637	(\$39,438,336)	\$0	\$1,241,970	\$3,958,535
202 Price River Coal	0	0	0	0	0	0	0	0
Indiana Michigan Power Co SEC	\$528,879,345	\$672,401,642	\$15,973,264	\$26,181,637	(\$39,438,336)	\$0	\$1,241,970	\$3,958,535
110 Kentucky Power Co - Distribution	\$67,356,910	\$77,999,423	\$1,377,261	\$3,305,737	(\$4,574,896)	\$0	\$158,175	\$266,277
117 Kentucky Power Co - Generation	31,899,180	35,287,070	444,654	1,551,526	(2,069,691)	0	74,909	1,398
180 Kentucky Power Co - Transmission	3,026,274	3,137,533	4,279	146,506	(184,026)	0	7,107	(26,134)
600 Kentucky Power Co Kammer Actives 701 Kentucky Power Co Mitchell Actives	5,477,141 27,857,589	7,502,340 42,402,804	207,830 1,306,726	270,884 1,384,639	(440,034) (2,487,049)	0	12,862 65,418	51,542 269,734
702 Kentucky Power Co Mitchell Inactives	23,823,817	31,515,000	1,500,720	1,150,446	(1,848,448)	0	55,946	(642,056)
Kentucky Power Co.	\$159,440,911	\$197,844,170	\$3,340,750	\$7,809,738	(\$11,604,144)	\$0	\$374,417	(\$79,239)
250 Ohio Power Co - Distribution	\$402,442,940	\$491,711,792	\$8,268,159	\$19,766,866	(\$28,840,345)	\$0	\$945.059	\$139,739
160 Ohio Power Co - Transmission	42,840,462	44,362,049	50,700	2,066,191	(2,601,965)	0	100,602	(384,472)
Ohio Power Co.	\$445,283,402	\$536,073,841	\$8,318,859	\$21,833,057	(\$31,442,310)	\$0	\$1,045,661	(\$244,733)
167 Public Service Co of Oklahoma - Distribution	\$144,975,550	\$190,516,977	\$4,459,600	\$7,141,204	(\$11,174,382)	\$0	\$340,447	\$766,869
198 Public Service Co of Oklahoma - Generation	72,827,707	100,012,614	2,803,606	3,610,269	(5,866,034)	0	171,022	718,863
114 Public Service Co of Oklahoma - Transmission	17,528,352	24,251,752	666,628	871,430	(1,422,437)	0	41,162	156,783
Public Service Co. of Oklahoma	\$235,331,609	\$314,781,343	\$7,929,834	\$11,622,903	(\$18,462,853)	\$0	\$552,631	\$1,642,515
159 Southwestern Electric Power Co - Distribution	\$90,027,318	\$124,035,784	\$3,528,508	\$4,464,825	(\$7,275,064)	\$0	\$211,412	\$929,681
168 Southwestern Electric Power Co - Generation	101,168,496	140,556,163	4,562,282	5,032,159	(8,244,033)	0	237,574	1,587,982
161 Southwestern Electric Power Co - Texas - Distribution 111 Southwestern Electric Power Co - Texas - Transmission	47,169,119 122,985	61,481,062 126,792	1,655,142 0	2,334,843 5,969	(3,606,045) (7,437)	0	110,767 289	494,707 (1,179)
194 Southwestern Electric Power Co - Transmission	13,157,153	19,795,967	597,811	656,392	(1,161,092)	0	30,897	124,008
Southwestern Electric Power Co.	\$251,645,071	\$345,995,768	\$10,343,743	\$12,494,188	(\$20,293,671)	\$0	\$590,939	\$3,135,199
119 AEP Texas North Company - Distribution	61,363,843	78,453,342	1,885,240	3,018,209	(4,601,520)	0	144,101	446,030
166 AEP Texas North Company - Generation	17,959,941	25,187,507	0	858,066	(1,477,321)	0	42,175	(577,080)
192 AEP Texas North Company - Transmission	9,187,794	13,014,371	415,414	453,753	(763,331)	0	21,576	127,412
AEP Texas North Co.	\$88,511,578	\$116,655,220	\$2,300,654	\$4,330,028	(\$6,842,172)	\$0	\$207,852	(\$3,638)
230 Kingsport Power Co - Distribution	\$12,360,548	\$14,963,741	\$286,486	\$608,505	(\$877,667)	\$0	\$29,026	\$46,350
260 Kingsport Power Co - Transmission	2,118,363	2,179,635	397	102,181	(127,842) (\$1,005,509)	0 \$0	4,975	(20,289)
Kingsport Power Co.	\$14,478,911	\$17,143,376	\$286,883	\$710,686	(\$1,005,509)	\$0	\$34,001	\$26,061
210 Wheeling Power Co - Distribution	\$14,773,554	\$17,614,877	\$287,311	\$724,625	(\$1,033,164)	\$0	\$34,693	\$13,465
200 Wheeling Power Co - Transmission Wheeling Power Co.	574,059 \$15,347,613	882,580 \$18,497,457	0 \$287,311	27,693 \$752,318	(51,766) (\$1,084,930)	0 \$0	1,348 \$36,041	(22,725) (\$9,260)
	•••••	••••		. ,	(**,***,***)	**	***,***	(**,=**)
103 American Electric Power Service Corporation American Electric Power Service Corp	\$1,385,538,682 \$1,385,538,682	\$1,668,229,682 \$1,668,229,682	\$36,218,320 \$36,218,320	\$68,213,873 \$68,213,873	(\$97,846,588) (\$97,846,588)	\$0 \$0	\$3,253,668 \$3,253,668	\$9,839,273 \$9.839.273
						• •		
143 AEP Pro Serv, Inc.	\$1,008,752	\$1,038,141	\$0	\$48,828	(\$60,890) 0	\$0	\$2,369	(\$9,693)
189 Central Coal Company 171 CSW Energy, Inc.	0 2.435.544	0 2,505,885	0	0 114,443	(146,978)	0	0 5,719	(26,816)
Miscellaneous	\$3,444,296	\$3,544,026	\$0	\$163,271	(\$207,868)	\$0	\$8,088	(\$36,509)
270 Cools Cool Terminel	e0 007 000	\$4,805,632	6424 205	¢167.000	(\$204.064)	\$0	¢7.007	\$24,510
270 Cook Coal Terminal AEP Generating Company	\$3,337,323 \$3,337,323	\$4,805,632 \$4,805,632	\$131,305 \$131,305	\$167,232 \$167,232	(\$281,864) (\$281,864)	\$0 \$0	\$7,837 \$7,837	\$24,510 \$24,510
· ··································	+-,,	+ .,,		+,	(+=+ ,+++ ,)		+-,	+= 1,=
104 Cardinal Operating Company	\$72,174,750	\$99,352,007	\$1,670,565	\$3,545,407	(\$5,827,288)	\$0	\$169,488	(\$441,828)
181 Ohio Power Co - Generation AEP Generation Resources - FERC	273,062,338 \$345,237,088	395,038,857 \$494,390,864	3,841,361	13,328,597 \$16,874,004	(23,170,193) (\$28,997,481)	0 \$0	641,234 \$810,722	(5,359,001) (\$5,800,829)
290 Conesville Coal Preparation Company	\$345,237,088 2,955,024	\$494,390,864 4,452,381	\$5,511,926 0	\$16,874,004 143,554	(\$28,997,481) (261,145)	\$U 0	\$810,722 6,939	(\$5,800,829) (110,652)
AEP Generation Resources - SEC	\$348,192,112	\$498,843,245	\$5,511,926	\$17,017,558	(\$29,258,626)	\$0	\$817,661	(\$5,911,481)
175 AEP Energy Partners	8,705,441	13,233,593	771,425	460,470	(776, 189)	0	20,443	476,149
AEP Energy Supply	\$356,897,553	\$512,076,838	\$6,283,351	\$17,478,028	(\$30,034,815)	\$0	\$838,104	(\$5,435,332)
293 Elmwood	\$2,980,563	\$7,065,626	\$332,275	\$155,484	(\$414,420)	\$0	\$6,999	\$80,338
292 AEP River Operations LLC	42,723,993	86,274,264	5,737,520	2,320,731	(5,060,240)	0	100,329	3,098,340
AEP River Operations	\$45,704,556	\$93,339,890	\$6,069,795	\$2,476,215	(\$5,474,660)	\$0	\$107,328	\$3,178,678
Total	\$4,400,113,231	\$5,552,352,050	\$115,442,025	\$216,674,677	(\$325,661,806)	\$0	\$10,332,809	\$16,787,705



AMERICAN ELECTRIC POWER QUALIFIED RETIREMENT PLAN ESTIMATED 2025 NET PERIODIC PENSION COST

ESTIMATED 2023 NET PERIODIC PENSION COST								
						Amortization of		Net
	Projected Benefit	Mark et-Related Value	Service	Interest	Expected Return	Prior Service	Amortization of	Periodic Pension
Location	Obligation	of Assets	Cost	Cost	on Assets	Cost	Gain/Loss	Cost
	-							
140 Appalachian Power Co - Distribution 215 Appalachian Power Co - Generation	\$299,137,962	\$356,689,373	\$5,878,201 5,159,652	\$14,661,253	(\$20,945,422)	\$0 0	\$631,541	\$225,573
150 Appalachian Power Co - Transmission	250,287,287 27,428,559	304,182,283 28,544,829	5,159,652	12,275,192 1,323,162	(17,862,114) (1,676,202)	0	528,407 57,907	101,137 (276,226)
Appalachian Power Co FERC	\$576,853,808	\$689,416,485	\$11,056,760	\$28,259,607	(\$40,483,738)	\$0	\$1,217,855	\$50,484
225 Cedar Coal Co	2,820,838	4,697,472	0	135,926	(275,844)	0	5,955	(133,963)
Appalachian Power Co SEC	\$579,674,646	\$694,113,957	\$11,056,760	\$28,395,533	(\$40,759,582)	\$0	\$1,223,810	(\$83,479)
211 AEP Texas Central Company - Distribution	\$251,699,707	\$324,215,917	\$6,454,819	\$12,380,026	(\$19,038,524)	\$0	\$531,389	\$327,710
147 AEP Texas Central Company - Generation	3,027,125	11,137,031	0	146,394	(653,986)	0	6,391	(501,201)
169 AEP Texas Central Company - Transmission	24,721,979	32,059,369	832,498	1,227,131	(1,882,582)	0	52,193	229,240
AEP Texas Central Co.	\$279,448,811	\$367,412,317	\$7,287,317	\$13,753,551	(\$21,575,092)	\$0	\$589,973	\$55,749
170 Indiana Michigan Power Co - Distribution	\$149,741,087	\$186,493,862	\$3,336,384	\$7,362,574	(\$10,951,245)	\$0	\$316,134	\$63,847
132 Indiana Michigan Power Co - Generation	102,311,210	124,564,265	2,359,196	5,031,036	(7,314,631)	0	216,000	291,601
190 Indiana Michigan Power Co - Nuclear 120 Indiana Michigan Power Co - Transmission	207,339,382 34,873,531	288,044,160 40,771,714	8,719,868 764,303	10,339,589 1,713,014	(16,914,455) (2,394,186)	0	437,735 73,625	2,582,737 156,756
280 Ind Mich River Transp Lakin	30,249,552	42,168,680	1,136,960	1,505,945	(2,476,218)	0	63,863	230,550
Indiana Michigan Power Co FERC	\$524,514,762	\$682,042,681	\$16,316,711	\$25,952,158	(\$40,050,735)	\$0	\$1,107,357	\$3,325,491
202 Price River Coal	0	0	0	0	0	0	0	0
Indiana Michigan Power Co SEC	\$524,514,762	\$682,042,681	\$16,316,711	\$25,952,158	(\$40,050,735)	\$0	\$1,107,357	\$3,325,491
110 Kentucky Power Co - Distribution	\$66,801,047	\$78,811,674	\$1,406,874	\$3,277,237	(\$4,627,959)	\$0	\$141,031	\$197,183
117 Kentucky Power Co - Generation	31,635,932	35,539,694	454,215	1,541,785	(2,086,953)	0	66,790	(24, 163)
180 Kentucky Power Co - Transmission	3,001,300	3,137,159	4,371	145,304	(184,219)	0	6,336	(28,208)
600 Kentucky Power Co Kammer Actives 701 Kentucky Power Co Mitchell Actives	5,431,941 27,627,694	7,628,852 43,203,490	212,299 1,334,822	269,222 1.382.668	(447,979) (2,536,984)	0	11,468 58,328	45,010 238,834
702 Kentucky Power Co Mitchell Inactives	23,627,210	31,485,449	1,554,022	1,140,108	(1,848,880)	0	49,882	(658,890)
Kentucky Power Co.	\$158,125,124	\$199,806,318	\$3,412,581	\$7,756,324	(\$11,732,974)	\$0	\$333,835	(\$230,234)
250 Ohio Power Co - Distribution	\$399,121,775	\$496,567,550	\$8.445.936	\$19,618,346	(\$29,159,312)	\$0	\$842,627	(\$252,403)
160 Ohio Power Co - Distribution	42,486,921	\$496,567,550 44,353,196	\$8,445,936 51,791	2,051,410	(\$29,159,312) (2,604,497)	\$U 0	\$642,627 89,698	(\$252,403) (411,598)
Ohio Power Co.	\$441,608,696	\$540,920,746	\$8,497,727	\$21,669,756	(\$31,763,809)	\$0	\$932,325	(\$664,001)
167 Public Service Co of Oklahoma - Distribution	\$143,779,138	\$193,206,377	\$4,555,488	\$7,109,934	(\$11,345,415)	\$0	\$303.547	\$623,554
198 Public Service Co of Oklahoma - Generation	72,226,696	101,721,715	2,863,887	3,580,780	(5,973,276)	40 0	152,485	623,876
114 Public Service Co of Oklahoma - Transmission	17,383,699	24,657,902	680,962	865,008	(1,447,955)	0	36,701	134,716
Public Service Co. of Oklahoma	\$233,389,533	\$319,585,994	\$8,100,337	\$11,555,722	(\$18,766,646)	\$0	\$492,733	\$1,382,146
159 Southwestern Electric Power Co - Distribution	\$89,284,366	\$126,188,487	\$3,604,376	\$4,440,340	(\$7,410,008)	\$0	\$188,497	\$823,205
168 Southwestern Electric Power Co - Generation	100,333,602	143,357,899	4,660,377	5,009,793	(8,418,226)	0	211,825	1,463,769
161 Southwestern Electric Power Co - Texas - Distribution	46,779,855	62,487,934	1,690,730	2,325,545	(3,669,400)	0	98,762	445,637
111 Southwestern Electric Power Co - Texas - Transmission 194 Southwestern Electric Power Co - Transmission	121,970 13,048,574	126,673 20,161,994	0 610,665	5,946 657,016	(7,438) (1,183,947)	0	258 27,548	(1,234) 111,282
Southwestern Electric Power Co.	\$249,568,367	\$352,322,987	\$10,566,148	\$12,438,640	(\$20,689,019)	\$0	\$526,890	\$2,842,659
119 AEP Texas North Company - Distribution 166 AEP Texas North Company - Generation	60,857,437 17,811,727	79,591,971 25,163,889	1,925,775 0	2,987,675 858,199	(4,673,779) (1,477,667)	0	128,482 37,604	368,153 (581,864)
192 AEP Texas North Company - Generation 192 AEP Texas North Company - Transmission	9,111,972	13,269,261	424,346	453,085	(779,194)	0	19,237	(381,804)
AEP Texas North Co.	\$87,781,136	\$118,025,121	\$2,350,121	\$4,298,959	(\$6,930,640)	\$0	\$185,323	(\$96,237)
230 Kingsport Power Co - Distribution	\$12,258,542	\$15,133,979	\$292,646	\$603,060	(\$888,694)	\$0	\$25,880	\$32,892
260 Kingsport Power Co - Transmission	2,100,881	2,177,591	\$292,040 405	101,428	(\$666,694) (127,872)	\$0 0	4,435	(21,604)
Kingsport Power Co.	\$14,359,423	\$17,311,570	\$293,051	\$704,488	(\$1,016,566)	\$0	\$30,315	\$11,288
210 Wheeling Device Co. Distribution	\$44 CE4 COE	\$17,783,271	£202 400	¢747.500	(\$4.044.005)	* 0	£20.022	(60.070)
210 Wheeling Power Co - Distribution 200 Wheeling Power Co - Transmission	\$14,651,635 569,322	881,752	\$293,488 0	\$717,568 27,587	(\$1,044,265) (51,778)	\$0 0	\$30,933 1,202	(\$2,276) (22,989)
Wheeling Power Co.	\$15,220,957	\$18,665,023	\$293,488	\$745,155	(\$1,096,043)	\$0	\$32,135	(\$25,265)
			eoo 007 000	A07 770 770	(000 007 400)			60 404 000
103 American Electric Power Service Corporation American Electric Power Service Corp	\$1,374,104,508 \$1,374,104,508	\$1,689,956,302 \$1,689,956,302	\$36,997,063 \$36,997,063	\$67,770,779 \$67,770,779	(\$99,237,182) (\$99,237,182)	\$0 \$0	\$2,901,009 \$2,901,009	\$8,431,669 \$8,431,669
					,			
143 AEP Pro Serv, Inc. 189 Central Coal Company	\$1,000,427 0	\$1,037,168 0	\$0 0	\$48,233 0	(\$60,904)	\$0 0	\$2,112 0	(\$10,559) 0
171 CSW Energy, Inc.	2,415,445	2,503,536	0	113,352	(147,012)	0	5,099	(28,561)
Miscellaneous	\$3,415,872	\$3,540,704	\$0	\$161,585	(\$207,916)	\$0	\$7,211	(\$39,120)
070 Out Out Tractal	AD 000 700	A4 005 077	* ****	6 404.0 7 0	(0000 007)		* **	6 40,000
270 Cook Coal Terminal AEP Generating Company	\$3,309,782 \$3,309,782	\$4,885,877 \$4,885,877	\$134,128 \$134,128	\$164,673 \$164,673	(\$286,907) (\$286,907)	\$0 \$0	\$6,988 \$6,988	\$18,882 \$18,882
ALF Generating Company	\$3,303,702	\$4,005,077	\$134,120	\$104,075	(\$200,307)	φu	\$0,500	\$10,002
104 Cardinal Operating Company	\$71,579,127	\$100,332,998	\$1,706,485	\$3,521,608	(\$5,891,729)	\$0	\$151,118	(\$512,518)
181 Ohio Power Co - Generation	270,808,888	397,138,408	3,923,956	13,215,973	(23,320,660)	0	571,732	(5,608,999)
AEP Generation Resources - FERC 290 Conesville Coal Preparation Company	\$342,388,015 2,930,638	\$497,471,406 4,448,206	\$5,630,441	\$16,737,581 142,414	(\$29,212,389) (261,206)	\$0 0	\$722,850 6,187	(\$6,121,517) (112,605)
AEP Generation Resources - SEC	\$345,318,653	\$501,919,612	\$5,630,441	\$16,879,995	(\$29,473,595)	\$ 0	\$729,037	(\$6,234,122)
175 AEP Energy Partners	8,633,599	13,717,489	788,011	457,138	(805,515)	0	18,227	457,861
AEP Energy Supply	\$353,952,252	\$515,637,101	\$6,418,452	\$17,337,133	(\$30,279,110)	\$0	\$747,264	(\$5,776,261)
293 Elmwood	\$2,955,965	\$7,272,804	\$339,419	\$156,937	(\$427,072)	\$0	\$6,241	\$75,525
292 AEP River Operations LLC	42,371,413	89,883,236	5,860,884	2,305,440	(5,278,100)	40 0	89,455	2,977,679
AEP River Operations	\$45,327,378	\$97,156,040	\$6,200,303	\$2,462,377	(\$5,705,172)	\$0	\$95,696	\$3,053,204
Total	\$4,363,801,247	\$5,621,382,738	\$117,924,187	\$215 166 822	(\$330,097,393)	\$0	\$9,212,864	\$12,206,491
. 500	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>40,021,002,10</i> 0	<i>w</i> 117, 324 ,107	¥£10,100,033	(2000,001,000)	\$ 0	ψ 5,212,00 4	ψ12,200,431

78



Appendix E: Descriptions of Funded Status Measures

Calculations for Funding Ratios Chart in Section 1: Summary of Results

Prior Year Ratios

	Purpose of Ratio	Asset Measure	Obligation Measure
1	Test ability to apply funding balances to current year MRC	AVA – PFB	FTO
2	Quarterly contribution exemption test for current vear	AVA – FSCB – PFB	FT
3	At-risk Prong 1 Test for current year	AVA – FSCB – PFB	FTO
4	At-risk Prong 2 Test for current year	AVA – FSCB – PFB	FTAR, but without loads

Current Year Ratios

	Purpose of Ratio	Asset Measure	Obligation Measure
1 2	Test ability to apply funding balances to next year's MRC Quarterly contribution exemption test for next year	Same as for analo	gous Prior Year Ratio
3 4	At-risk Prong 1 Test for next year At-risk Prong 2 Test for next year		
5	PBGC 4010 filing gateway test (PBGC FTAP) (to determine whether a filing is required next year for the current plan year)	AVA – FSCB – PFB	FTO pre-HATFA
6	 If PFB applied to current year MRC If PFB not applied to current year MRC 	AVA – PFB AVA	FT FT
7	Eliminate SABs in current year	AVA – FSCB – PFB	FT

Benefit Restriction Ratios

Purpose of Ratio for Plan Year	Assets	Obligations	Year Ratio is Determined
Adjusted Funding Target Attainment Percentage (AFTAP) – Application of Benefit Restrictions under IRC 436	[AVA if AVA/FTO >= 100%; AVA – FSCB – PFB otherwise] + annuity purchases for NHCEs in previous 2 years	FTO + annuity purchases for NHCEs in previous 2 years	Current



Definitions of terms

Term	Short for	Definition
FTAP	Funding target attainment percentage	(AVA – FSCB – PFB) / FTO
PBGC FTAP	FTAP for exemption from ERISA 4010	(AVA – FSCB – PFB) / (FTO pre- HATFA)
FSCB	Funding standard carryover balance	Accumulated contributions in excess of those required in pre-PPA plan years, less amounts applied to MRC or forfeited
PFB	Prefunding balance	Accumulated contributions in excess of those required since PPA applied to the plan, to the extent the plan sponsor elected to create PFB, less amounts subsequently applied to MRC or forfeited
Funding balance	FSCB + PFB	
FTO	Ongoing funding target	Funding target as described in IRC 430, ignoring at-risk assumptions; equals FT for a plan that is not at-risk.
FTO pre-HATFA	FTO calculated ignoring HATFA corridors	Same as FTO if the full yield curve is used, or segment rates fall within the HATFA corridors
FTAR	At-risk funding target	Funding target reflecting at-risk assumptions and any applicable loads, as described in IRC 430(i), with no phase-in
FT	Funding target	 Funding target used to calculate MRC. Equals: FTO if the plan is not at-risk. FTAR if the plan has been at risk for at least 5 consecutive plan years. Otherwise, FTO + 20% * (# of consecutive years at-risk) * (the excess, if any, of FTAR over FTO).
FS	Funding shortfall (surplus)	FT – (AVA – funding balances)
PBGC 4010 FS	Funding shortfall for determining whether a controlled group is exempt from an ERISA 4010 filing	FT - AVA See PBGC reporting requirements section of the report for more information.
SAB	Shortfall amortization base	An SAB is established each year equal to the FS less the present value of the SAIs related to SABs established in earlier years. A plan may be exempt from establishing an SAB for a plan year in accordance with the test in the Funding Ratios chart in section 1.



Towers Watson Confidential

KPSC Case No. 2017-00179 AG's First Set of Data Requests Dgted: August 14, 2017 Item No. 84 Attachment 1 Page 87 of 87

Term	Short for	Definition
TNC	Target normal cost	Present value of benefits expected to accrue, and expenses expected to be paid from plan assets, for the year. Reflects at-risk assumptions if the plan is at-risk (phased-in if plan has been at-risk for fewer than 5 consecutive years as described above)
SAI	Shortfall amortization installment	Amortization for an SAB established in a particular year. SAIs are eliminated if FS is less than or equal to \$0.
MRC	Minimum required contribution	TNC plus SAIs as of the valuation date (assumes no funding waivers and plan is not fully funded). See section 2.4 for more details on this calculation.
AVA	Actuarial value of assets	"Plan assets" under PPA, including discounted receivables and reflecting any smoothing. See section 2.3 for more details.

