OCA Statement No. 2-S

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	**Docket No. R-2018-3000164**
	:	
PECO Energy Company	:	

SURREBUTTAL TESTIMONY OF

DR. DAVID S. HABR

ON BEHALF OF THE
OFFICE OF CONSUMER ADVOCATE

August 8, 2018

Q: Please state your name and business address.

A: David S. Habr, 213 Cornuta Way, Nipomo, CA.

Q: Are you the same David S. Habr who previously filed Direct Testimony in this proceeding?

A: Yes, I am.

Q: What is the purpose of your Surrebuttal Testimony?

A: I will respond to comments in Mr. Moul's Rebuttal Testimony related to my Direct Testimony.

Q: Are there any exhibits accompanying your Surrebuttal Testimony?

A: Yes. OCA Exhibit DSH – S1 is included with my testimony. This exhibit is a copy of the Moody's Credit Opinion for PECO Energy Company issued May 3, 2018.

Q: At page 4, lines 28 – 30, Mr. Moul states that "Moody's has indicated that the TCJA [Tax Cut and Jobs Act] has a negative impact on the credit ratings of utility holding companies and their regulated operating companies due to the reduction in cash flow and coverage ratios as the ratemaking process passes the benefits of reduced taxes through to ratepayers." Are you aware of any comments Moody's has expressed concerning the impact of the TCJA on PECO Energy Company?

A: Yes. Based on Moody's recent analysis, the TCJA does not appear to have a significant impact on PECO Energy Company's credit quality. On page 1 of OCA Exhibit DSH – S1, Moody's states that "Unlike many other utilities, PECO's expected decline in CFO pre-WC to debt *is more related to the moderation of profitability rather than tax reform*." (Emphasis added.) The TCJA is not raised at any other place in this Opinion.

Q: At page 13, line 3, Mr. Moul states that your exclusion of Avangrid is "based entirely on subjective assessments." Do you agree with that statement?

A: No. Mr. Moul is trying to avoid the fact that Iberdrola owns 81.5% of Avangrid's common stock and the fact that the implications of that ownership for minority owners had to be disclosed in Avangrid's 10-K. As the majority owner, Iberdrola controls all decisions about Avangrid's future.

None of the other companies in Mr. Moul's proxy group has a single stockholder who controls all the decisions concerning that company's future. Thus, Avangrid should not be included in the proxy group because the risk profile Avangrid's shareholders face is significantly different from the profile faced by shareholders of other companies in the proxy group.

Q: At page 24, lines 6 – 8, Mr. Moul states that he is "not asking the Commission to assume that investors consistently and repeatedly misjudge regulatory risk by pricing stocks and bonds different from book value." Did you make that assumption in your Direct Testimony?

A: No. The point that I was making in my Direct Testimony at pages 22 – 23 is two-fold. First, one implication of basic Discounted Cash Flow (DCF) theory is that market-to-book ratios will be greater than one when expected earned returns are greater than the cost of common equity. Second, in a regulatory environment, the divergence between the expected earned return and the cost of common equity can be narrowed by regulatory action which translates into regulatory risk that is reflected in a utility company's common stock price and hence the market based cost of common equity. Mr. Moul's leverage adjustment provides further, unwarranted, compensation for this divergence.

Q: Are knowledgeable investors aware that book value capital structures are used in establishing a utility company's overall rate of return?

A: Yes.

Q: At page 25, lines 11 –1 6, Mr. Moul states that "The non-constant DCF Model . . . is not widely used in regulatory proceedings . . . because it rests on a set flawed assumptions. Specifically, the non-constant DCF model requires assumptions in order to extrapolate cash flows too far into the future to support a reasonable and reliable result." Do you agree with his assessment of the non-constant DCF model?

A: No. First, it must be kept in mind that *all* DCF models involve cash flow forecasts. The dividend yield plus growth version of the model regularly used in regulation is based on forecasting dividends into the infinite future using a constant growth rate for the entire period. Thus, Mr. Moul is forecasting dividends into the infinite future when he uses the dividend yield plus growth version of the model.

The two-stage model I used also forecast dividends into the infinite future but uses two different growth rates. To be conservative, I use analysts' 5-year earnings for the first 20 years. For the remainder of the time, I used forecasted GDP growth. Contrary to Mr. Moul's assertion at pages 25 – 26, lines 23 – 1, the two-stage method I use, like the single-stage constant growth model, does not require forecasting a terminal stock price. What the two-stage model does is put a brake on analysts' earnings forecast that are unsustainably high in the long-run.

Q: Are the "objective measures" for using a multi-stage DCF discussed by Mr. Moul on pages 26 -27, lines 6 – 2 relevant to your reasons for using a two-stage DCF?

A: No, they are not. First, the payout ratios he mentions at lines 10 – 11 have nothing to do with the magnitude of analysts' earnings forecasts. Second, my reason for using a two-stage DCF is not related to the growth stage of the utility industry; I used the two-stage model to "tame" the impact of unsustainable analysts' forecasts. Third, Mr. Moul's 5.75% growth rate is not an average of the analysts' forecasts shown on Schedule 9 of PECO Energy Exhibit PRM-1as he claims at line 20. The average of all the earnings growth rates shown on Schedule 9 is 5.20%. Rather, Mr. Moul's 5.75% growth rate is a point in his 4.24% to 6.06% range of averages shown on Schedule 9. Like an average, Mr. Moul's 5.75% growth rate conceals unsustainable analyst's forecasts shown on Schedule 9 such as *Value Line*'s 12.0% earnings forecast for FirstEnergy. Rather than hide unsustainable growth, my methodology deals with it.

Q: On page 31 of his Rebuttal Testimony, beginning at line 10, Mr. Moul discusses the FERC moving to the 75th percentile of the range of DCF results. Do you have any comments concerning this portion of Mr. Moul's testimony?

A: Yes, I have two comments. First, the 75th percentile and the mid-point between the median and the upper bound of the DCF range are not the same thing as Mr. Moul asserts at line 12. The mid-point is simply the average of the median and the upper bound. The 75th percentile is the number which 75% of the observations lie below and 25% lie above. For example, the 75th percentile of all my DCF estimates is 9.67%, well below the 10.26% mid-point Mr. Moul calculates on lines 13 – 14 of page 31.

Second, FERC's use of the mid-point between the median and the upper bound of the DCF range in Opinion No. 531 was found to be unsupported and remanded by the D.C. Circuit on April 14, 2017. At this time there is no accepted FERC adjustment for anomalous market conditions.

Q: At page 37, line 7, Mr. Moul claims that your CAPM analysis is invalid because you calculated the betas you use. Do you agree with Mr. Moul's assessment?

A: No. Mr. Moul would have us believe that analysts working for large institutional investors rely only on *Value Line* betas when making their investment decisions. These analysts, who are dealing with billions of dollars, would do this in spite of the facts that: (1) we don't know the exact time period covered by these betas and

(2) the reported betas are rounded which introduces error in the CAPM calculation.

Q: How are *Value Line* betas rounded?

A: They are rounded to the closest "zero" or "five." For example, a 0.6249 beta would be rounded to .0.60 while a 0.6251 beta would be rounded to 0.65. Applying this 0.05 difference in betas to the 8.16% risk premium Mr. Moul used in his CAPM yields a 40.8 basis point difference[1] in the cost of equity estimate when in fact there is less than two tenths[2] of a basis point difference in the cost of equity when the unrounded betas are used. A forty basis point error translates into a lot of money for institutional investors and utility customers alike.

Q: At page 38, lines 5 – 6, of his Rebuttal Testimony, Mr. Moul claims your CAPM results are "far too low." Do you agree with this statement?

A: No. Although Mr. Moul does not define what he means by "too low" at this point in his Rebuttal Testimony, at page 17, lines 9 – 11, he indicates that "the spread between the cost of debt and cost of equity should be 6.50% in this market environment." Apparently Mr. Moul believes that any common equity cost estimate that falls below a debt yield plus 6.50% is "too low."

Q: What is the basis for Mr. Moul's 6.50% spread?

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[1] 40.8 = (0.05 x 8.16) x 100.

[2] 0.16 = (0.0002 x 8.16) x 100.

A: Mr. Moul's 6.50% spread is based on the risk premium method he used in his Direct Testimony and has no relationship to the spread between the cost of common equity for a utility company and the yield on utility bonds.

Q: Please explain.

A: The basic risk premium range Mr. Moul used to develop the 6.50% spread described above is found on PECO Energy Exhibit PRM-1, Schedule 12, page 1. From that schedule, it is clear that Mr. Moul's 6.50% spread is based on the difference between realized returns on large common stocks and long-term corporate bonds and not realized returns on utility common stocks and utility. Hence, it is completely incorrect to use this spread to make a judgment about the spread between utility bond rates and the recommended cost of equity. The proper method to use to add a risk premium to a utility bond yield to arrive at a cost of common equity is demonstrated in OCA Exhibits DSH-13 through DSH-15.

Q: How much of a spread over bond yields does your recommended 8.50% rate of return provide?

A: PECO Energy Company is rated A2 by Moody's. Moody's average A-rated bond yield was 3.98% during the six month study period used for my DCF analysis.[3] Thus, my recommended rate of return provides a 452 basis point spread over that bond yield or a return that is over two times the return prospective bond holders would receive.

[3] See OCA Exhibit DSH-13. Commonwealth Edison is also rated A3 by Moody's.

Q: Does this conclude your Surrebuttal Testimony?

A: Yes.

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EXHIBITS OF

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OCA EXHIBIT DSH-S1

August 8, 2018

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
3 May 2018

Update

Rate this Research

RATINGS

PECO Energy Company

Domicile	Philadelphia, Pennsylvania, United States
Long Term Rating	A2
Type	LT Issuer Rating
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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EMEA	44-20-7772-5454

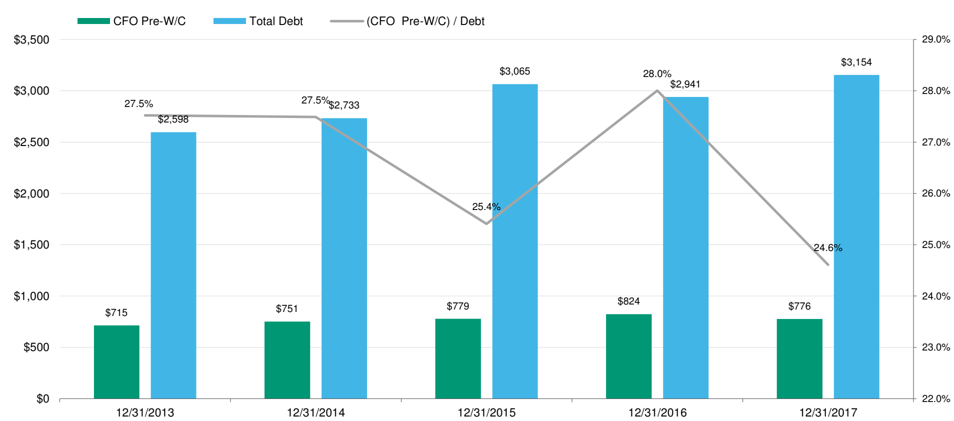
PECO Energy Company

Update to credit analysis

Summary

PECO Energy Company's (PECO) credit strengths include the relatively stable and predictable nature of its regulated electric transmission and distribution (T&D) utility cash flows; the credit supportive regulatory treatment the company has received from the Pennsylvania Public Utilities Commission (PAPUC) and the Federal Energy Regulatory Commission (FERC). These positive factors are balanced against a sizeable capital expenditure program which may pressure the ratio of cash flow from operations pre-working capital (CFO pre-WC) to debt over the next few years to around 20%. Unlike many other utilities, PECO's expected decline in CFO pre-WC to debt is more related to the moderation of profitability rather than tax reform.

Exhibit 1
Historical Trend of CFO pre-WC to Debt



Source: Moody's Investors Service

Credit strengths

» Low risk T&E business

» Supportive regulatory environment

Credit challenges

» Elevated capital expenditures program

» Financial metrics could decline

Rating outlook

The stable outlook for PECO reflects our expectation that the regulatory environment in Pennsylvania will remain constructive for regulated transmission and distribution utilities and that the FERC will continue to provide above average and timely returns on investments. The rating also considers the potential that cash flows and credit metrics could become weakly positioned for the credit profile while executing on the large capital expenditure program.

Factors that could lead to an upgrade

» The rating of PECO could be upgraded if the regulatory environment materially improves and the company's CFO pre-WC to debt ratio is sustained near 30% on a consistent basis.

Factors that could lead to a downgrade

» A downgrade could be considered if there is significant deterioration in the credit supportiveness of the regulatory environments. Additionally, PECO's rating could be downgraded if its financial metrics deteriorate and remain weak for the rating, such that CFO preWC to debt declined to the high-teens for an extended period.

Key indicators

Exhibit 2

US Millions	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17
CFO pre-WC + Interest / Interest	6.7x	7.4x	7.4x	7.4x	7.1x
CFO pre-WC / Debt	27.5%	27.5%	25.4%	28.0%	24.6%
CFO pre-WC – Dividends / Debt	14.6%	15.6%	16.2%	18.4%	15.3%
Debt / Capitalization	31.7%	32.1%	33.5%	31.2%	36.8%

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. Source: Moody's Financial Metrics™
Source: Moody's Financial Metrics™

Profile

PECO Energy Company is a regulated electric and gas transmission and distribution utility. PECO provides electric transmission and distribution (T&D) service to about 1.6 million electric customers and more than 0.5 million natural gas distribution customers in the greater Philadelphia region. PECO derives slightly more than 80% of its revenue from its electric operations.

Pennsylvania Public Utility Commission (PAPUC) regulates PECO's electric and gas distribution business while the Federal Energy Regulatory Commission regulates PECO's transmission business.

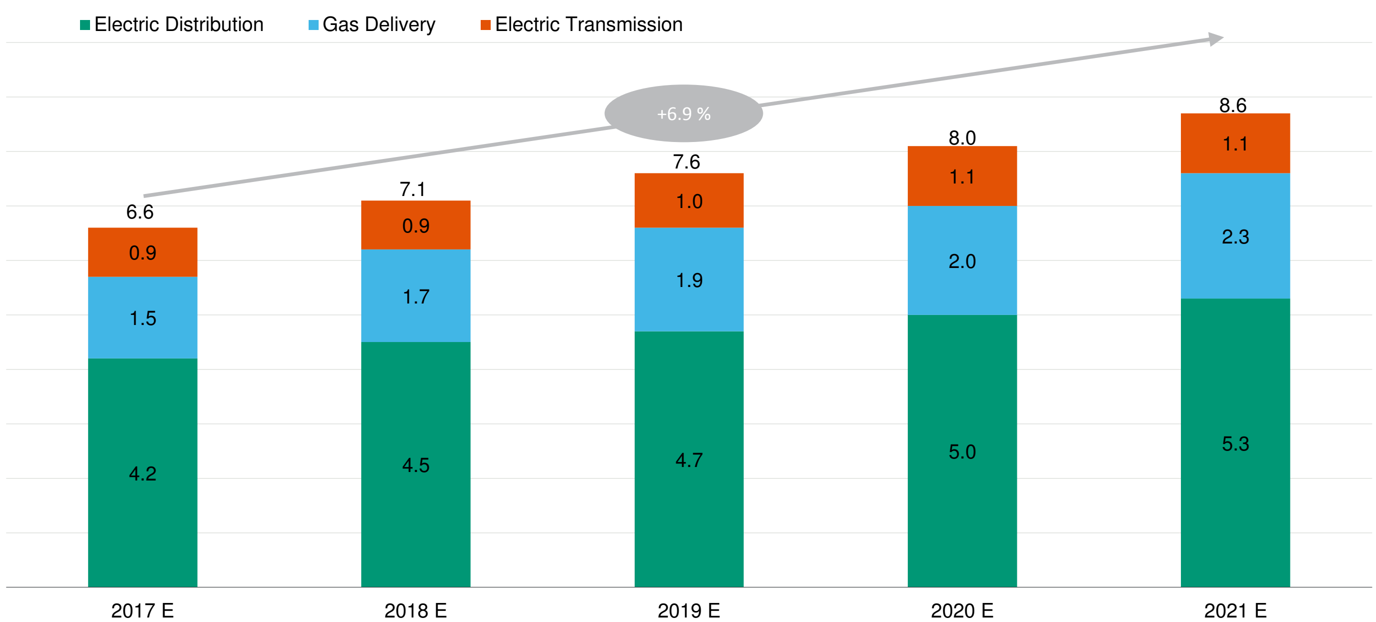
PECO is a wholly-owned subsidiary of Exelon Corporation (Exelon, Baa2 stable). It is the second largest regulated utility subsidiary within the Exelon family, contributing 11% of 2017 consolidated net income.

Detailed credit considerations

Supportive Regulatory Framework

PECO operates a low-risk transmission and distribution business, which is fully regulated by the PAPUC and the FERC. From a credit perspective, we consider the regulation provided by both the PAPUC and FERC to be above average relative to other state commissions in the United States. We view FERC regulation to be generally more stable and supportive than state regulation but PECO's transmission business is relatively small compared to other T&D utilities, with FERC-regulated rate base comprising about 15% of the total.

Exhibit 3
Forecasted Rate Base ($ in billions)



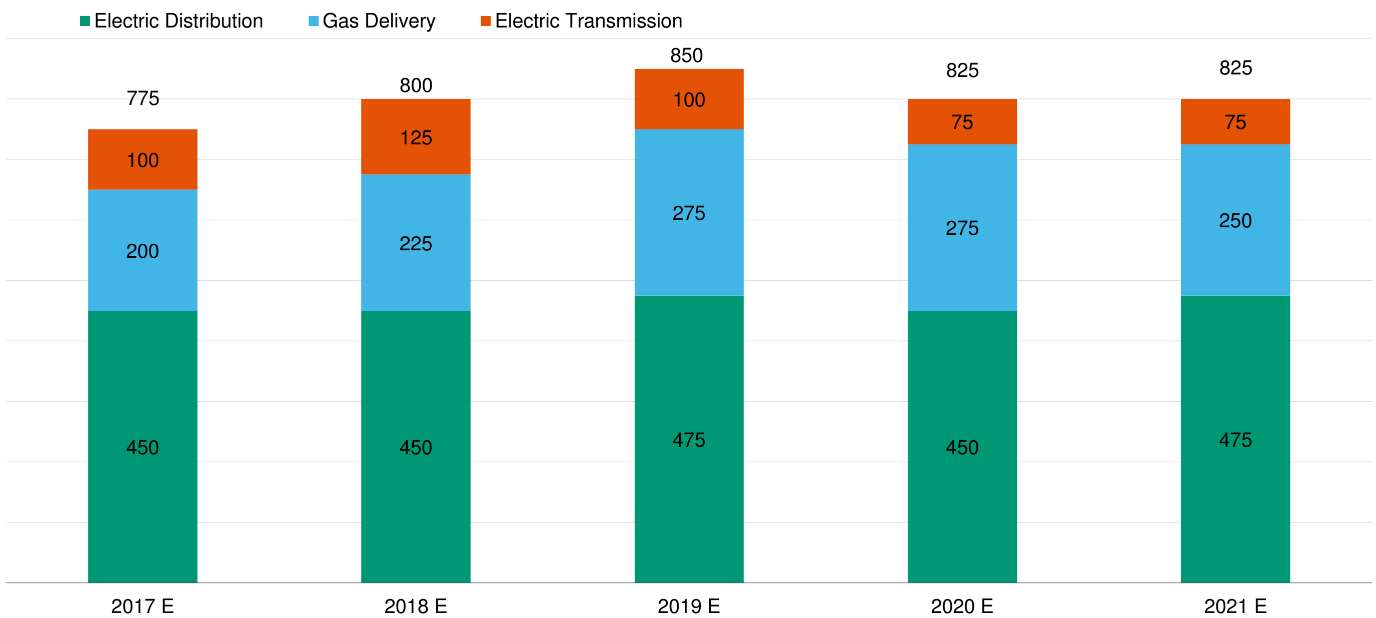
Source: Exelon's 4th Quarter Earnings Conference Call Presentation

PECO has access to a strong suit of cost recovery mechanisms. The most credit supportive feature is the use of fully projected future test year in rate proceedings. This allows the ability to forecast cost and earn a return on investments in a timely manner and significantly reduces regulatory lag.

In addition to the use of a forward test year, PECO has access to a capital tracker implemented through a distribution system improvement charge (DSIC). The DSIC is designed to cover repairs, improvement, and replacement of utilities' aging electric and natural gas distribution systems. The DSIC allows the PAPUC to approve the automatic adjustment to rates for investments made by utilities between rate cases up to 5% of distribution rates. Currently, the DSIC authorizes electric utilities 9.55% return on equity (ROE), which is reviewed quarterly by the PAPUC.

Exhibit 4

Capital Expenditures in 2017 and Forecasted Capital Expenditure Plan ($ in millions)



Source: Exelon's 4th Quarter Earnings Conference Call Presentation

Ability to Recover Costs and Earn Returns are Healthy

PECO's realized ROE as calculated as net income over book equity since the 2015 rate case have been at a healthy level of around 12%, which suggests that the implied authorized ROE was credit supportive.

Historically, PECO has received reasonable and timely decisions in its rate cases. In the last general rate case, which concluded in December 2015, the company used a forward test year and reached a settlement with interveners in about 5 months. Completing the rate case in a fairly expedient manner reduces regulatory lag and suggests a positive relationship with interveners and regulators.

In the 2015 rate case, PECO requested a 15.6% revenue increase and received about 67% of the request ($127 million versus $190 million) in the settlement. The approved settlement is however silent with respect to other traditional rate case issues, such as authorized ROE and equity layer.

Credit metrics remain adequate for the rating category

PECO's most recent credit metrics are adequate for the current rating category. We calculate the ratio of CFO pre-WC to debt to be 28% and 24.6% for year-end 2016 and 2017, respectively. Because of the use of flow-through accounting for tax expense in Pennsylvania, tax reform will not have a significant negative effect on PECO's financial ratios. Nevertheless, we still expect PECO's CFO pre-WC to debt to decline somewhat going forward, assuming lower profitability as measured by return on equity.

PECO has two trust preferred instruments contained in its PECO Trust III and PECO Trust IV entities. PECO Trust III has $81 million of subordinated debt outstanding in which we have granted an equity credit of 25%. PECO Trust IV has $103 million of subordinated debt outstanding and this debt was accorded with 50% equity treatment. Outside of the trust preferred, all of PECO's long-term debt are first mortgage bonds.

Elevated but manageable capital program

PECO's capital spending has been rising and will continue to rise in the next few years primarily due to electric reliability investments and an acceleration of the gas pipeline replacement program. The pipeline program, which was originally scheduled to last 88 years will now be completed in 20 years. Capital expenditures for 2017 were about $732 million and will reach approximately $794 million in 2018. Going forward, PECO has planned capital expenditures of about $3.3 billion from 2018-2021, with about 64% attributed to electric distribution, 25% to gas delivery, and 12% to electric transmission. We anticipate PECO's capital expenditures will be largely internally funded.

Liquidity analysis

PECO demonstrates adequate liquidity. For year-end 2017, PECO's cash flow from operations stood around $755 million, with dividends of $288 million and capital investments of $732 million, leaving $265 million of negative free cash flow. At year-end 2017, PECO had $271 million of cash on hand.

PECO's primary source of liquidity is a $600 million senior unsecured revolving credit facility expiring in May 2022. At the end of 2017, there was $1 million in letters of credit and no outstanding commercial paper borrowings, leaving $599 million of availability.

While the credit agreement does not contain any rating triggers that would affect borrowing access to the commitment and does not require any material adverse change (MAC) representation for borrowings, there is a requirement to maintain a ratio of net cash flow from operations to net interest expense at 2.00 times. At year-end 2017, PECO's net cash flow coverage of net interest expense was 6.83 times.

PECO's upcoming major debt maturities include a $300 million First Mortgage Bond issuance due September of 2021 and another $350 million First Mortgage Bond issuance due September 2022.

Rating methodology and scorecard factors

Exhibit 5

Rating Factors				
PECO Energy Company				
Regulated Electric and Gas Utilities Industry Grid [1][2]	**Current FY 12/31/2017**		**Moody's 12-18 Month Forward View As of Date Published [3]**	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	A	A	A	A
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	Baa	Baa	Baa	Baa
b) Sufficiency of Rates and Returns	Baa	Baa	Baa	Baa
Factor 3 : Diversification (10%)				
a) Market Position	Baa	Baa	Baa	Baa
b) Generation and Fuel Diversity	N/A	N/A	N/A	N/A
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	7.3x	Aa	6x - 7x	Aa
b) CFO pre-WC / Debt (3 Year Avg)	26.0%	A	20% - 25%	A
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	16.6%	Baa	13% - 16%	Baa
d) Debt / Capitalization (3 Year Avg)	33.8%	Aa	33% - 35%	Aa
Rating:				
Grid-Indicated Rating Before Notching Adjustment		A3		A3
HoldCo Structural Subordination Notching	0	0	0	0
a) Indicated Rating from Grid		A3		A3
b) Actual Rating Assigned		A2		A2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2017; Source: Moody's Financial Metrics™
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Financial Metrics™

Appendix

Exhibit 6

Peer Comparison Table

	PECO Energy Company A2 Stable			PPL Corporation Baa2 Stable			Consolidated Edison Company of New York, Inc. A2 Negative			Public Service Electric and Gas Company A2 Stable		
(in US millions)	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-15	FYE Dec-16	FYE Dec-17
Revenue	3,032	2,994	2,870	7,669	7,517	7,447	10,328	10,165	10,468	6,636	6,221	6,234
CFO Pre-W/C	779	824	776	3,193	3,246	2,955	3,210	3,050	2,892	1,883	1,719	1,802
Total Debt	3,065	2,941	3,154	21,343	20,235	22,036	14,991	14,294	15,114	7,263	8,217	8,979
(CFO Pre-W/C + Interest) / Interest Ex	7.4x	7.4x	7.1x	4.4x	4.5x	4.2x	5.6x	5.5x	5.2x	6.4x	5.7x	5.7x
(CFO Pre-W/C) / Debt	25.4%	28.0%	24.6%	15.0%	16.0%	13.4%	21.4%	21.3%	19.1%	25.9%	20.9%	20.1%
(CFO Pre-W/C - Dividends) / Debt	16.2%	18.4%	15.3%	10.2%	10.9%	8.5%	15.6%	16.1%	13.9%	25.9%	20.9%	20.1%
Debt / Book Capitalization	33.5%	31.2%	36.8%	60.9%	58.8%	61.9%	42.8%	40.3%	46.2%	36.4%	36.2%	40.7%

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months. RUR* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade.
Source: Moody's Financial Metrics™

Ratings

Exhibit 7

Category	Moody's Rating
PECO ENERGY COMPANY	
Outlook	Stable
Issuer Rating	A2
First Mortgage Bonds	Aa3
Senior Secured Shelf	(P)Aa3
Sr Unsec Bank Credit Facility	A2
Pref. Stock	Baa1
Commercial Paper	P-1
PARENT: EXELON CORPORATION	
Outlook	Stable
Issuer Rating	Baa2
Sr Unsec Bank Credit Facility	Baa2
Senior Unsecured	Baa2
Jr Subordinate	Baa3
Commercial Paper	P-2
PECO ENERGY CAPITAL TRUST IV	
Outlook	Stable
BACKED Pref. Stock	A3
PECO ENERGY CAPITAL TRUST III	
Outlook	Stable
BACKED Pref. Stock	A3

Source: Moody's Investors Service

REPORT NUMBER 1111519

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

MOODY'S
INVESTORS SERVICE

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VERIFICATION

I, David S. Habr, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement No. 2S, are true and correct and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Signature: David S. Habr

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DATED: August 8, 2018
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