

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

IN THE MATTER OF THE APPLICATION OF THE
CONSOLIDATED EDISON COMPANY OF NEW YORK,
INC.

PROCEEDING ON MOTION OF THE COMMISSION
AS TO THE RATES, CHARGES, RULES AND
REGULATIONS FOR ELECTRIC SERVICE

CASE NO. 19-E-0065

PROCEEDING ON MOTION OF THE COMMISSION
AS TO THE RATES, CHARGES, RULES AND
REGULATIONS FOR GAS SERVICE

CASE NO. 19-G-0066

DIRECT TESTIMONY OF
THE WESTCHESTER PANEL
ON BEHALF OF THE INTERVENOR - THE COUNTY OF
WESTCHESTER

May 24, 2019

COUNTY OF WESTCHESTER PANEL

**DIRECT TESTIMONY OF
THE WESTCHESTER PANEL
ON BEHALF OF THE COUNTY OF WESTCHESTER**

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Q. WOULD THE MEMBERS OF THE WESTCHESTER PANEL PLEASE STATE YOUR NAMES AND ADDRESSES?

A. Whitfield A. Russell, Antoine A. Gamarra, and Geneva G. Looker are the members of the Westchester Panel. Our business address is Whitfield Russell Associates, 4232 King Street, Alexandria, VA 22302-1507.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS.

A. **Whitfield A. Russell:** I hold a Bachelor of Science degree in Electrical Engineering from the University of Maine at Orono, a Master of Science degree in Electrical Engineering from the University of Maryland, and a Juris Doctor degree from Georgetown University Law Center. I established my firm, Whitfield Russell Associates (“WRA”) in 1976. I have been accepted as an expert on bulk power systems and ratemaking in more than 150 proceedings before State and Federal courts, administrative agencies and other tribunals in more than 30 States and in three Canadian provinces. A substantial portion of my consulting work has been related to electric rates, transmission system planning, and contracts and tariffs related to bulk power supplies, transmission service and interconnections of loads and generators. My complete resumé and a description of cases on which I have worked are attached as Exhibit ___ (COW-1) to this testimony.

COUNTY OF WESTCHESTER PANEL

1 **Antoine A. Gamarra:** I have been a Partner at Whitfield Russell Associates since 1997.
2 I hold a Bachelor of Science degree in Mechanical Engineering from San Jose State
3 University. Prior to joining the firm, I was a Utility Engineer for the California Public
4 Utilities Commission, and testified as an expert witness and participated in numerous rate
5 cases. Since joining WRA, I have worked on general rate case issues, cost of service
6 studies, IOU/ISO/RTO transmission and ancillary tariff rate development/design, power
7 flow analysis, EWG applications, QF certification/recertification, standby/backup rate
8 design, stranded cost/exit fees, avoided cost filings, demand response analysis, market
9 price forecasting, portfolio valuation, power contract negotiations/analysis, power plant
10 economics/financing/justification/certification/permitting/market valuation/tax
11 assessment, interconnection/reliability studies, merger market power analysis, acquisition
12 studies, damage studies, load resource modeling, production cost modeling, cost-benefit
13 modeling, loss of load probability modeling, and transmission loss
14 methodologies/analysis. My résumé is included in Exhibit ____ (COW-1) to this
15 testimony.

16 **Geneva G. Looker:** I have worked at WRA for over twenty-five years and have
17 participated in numerous cases during that time, performing a variety of roles, including
18 data analysis, preparation and critiques of revenue requirement formulae and cost of
19 service studies, and review of contracts. Most recently, I have been responsible for
20 annual reviews of formula rate proceedings for municipal clients in the State of New
21 York, as well as for a Native American Tribe. I have also reviewed proposed formulae
22 rate templates of participants in the Southwest Power Pool's Upper Missouri Zone, as

COUNTY OF WESTCHESTER PANEL

1 well as the data in the annual updates to these transmission revenue requirement
2 calculations. In 2014, I testified on a panel with Mr. Russell, WRA’s principal, before
3 the Public Utilities Board of Manitoba concerning the Needs for and Alternatives to
4 Review of Manitoba Hydro’s Preferred Development Plan on behalf of the Manitoba
5 Métis Federation. I also recently testified in an arbitration in Connecticut, and have
6 submitted testimony and an affidavit at the Federal Energy Regulatory Commission. My
7 résumé is included in Exhibit___(COW-1).

8 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

9 A. The Westchester Panel (“Panel) is testifying on behalf of the County of Westchester,
10 New York (“Westchester County” or “COW”). Consolidated Edison Company of New
11 York, Inc. (“Con Edison” or “Company”) serves all of the electric customers located in
12 Westchester County except for a relatively small number of customers in the
13 north/northeastern portion of Westchester County, who are served by New York State
14 Electric & Gas Corporation. Municipalities in Westchester County receive power from
15 the Power Authority of the State of New York (“NYPA”) distributed over Con Ed’s
16 transmission and distribution system. Con Edison also provides gas distribution service to
17 customers in Westchester County.

18 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

19 A. The purpose of our testimony is to address the following issues:

- 20 • Property Tax Calculations
- 21 • Property Tax Reconciliations

COUNTY OF WESTCHESTER PANEL

- 1 • Net Plant Reconciliation Mechanism – Interference Modification
- 2 • Excess Deferred Federal Income Tax Amortization
- 3 • Major Storm Deductible
- 4 • Return on Equity/Financing Charges
- 5 • Electric Performance Measures
- 6 • Gas Performance Measures
- 7 • Earnings Adjustment Mechanisms
- 8 • Business Cost Optimization Sharing Proposal
- 9 • Research & Development Costs
- 10 • Westchester Gas Moratorium

11 As a result of our analysis, Westchester proposes adjustments to the Company’s proposed
12 rate increase as shown in the table below. Please note, however, Westchester also
13 proposes elimination of several proposed positive rate adjustments that are based on the
14 Company meeting certain performance standards, and will vary based upon Company
15 performance in these areas.

<u>COW 2020 Rate Reduction Estimates</u>		
	<u>Electric</u>	<u>Gas</u>
	<u>\$ millions</u>	<u>\$ millions</u>
1 Property Tax Calculation Methodology	\$ 25	\$ 7
2 Excess Deferred Fed Income Tax Amort.	\$ 20	\$ 3
3 Capital Structure	<u>\$ 25</u>	<u>\$ 8</u>
4 Total	\$ 70	\$ 18

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17 **Q. PLEASE PROVIDE A SHORT SUMMARY OF CON EDISON’S PROPOSED**
18 **RATE INCREASE.**

COUNTY OF WESTCHESTER PANEL

1 A. The Company is requesting a \$485 million increase in revenues for electric delivery and a
 2 gas delivery revenue increase of \$210 million. See Filing Letter at 2. Following are the
 3 major drivers of the Company's proposed increases (Accounting Panel Table 1).

Table 1 (\$millions)		
Driver	Electric	Gas
New infrastructure investment / Net plant additions	271	147
Higher ROE / Financing	175	56
Property and other taxes	168	63
Sales revenue change	124	(15)
Amortization of net deferred credits/costs	242	64
Operations and maintenance expenses	43	41
Depreciation changes	23	9
Other operating revenue	16	6
Income taxes and other items	(577)	(161)
Total	\$485	\$210

4 All amounts are revenue requirement levels and represent changes
 relative to RY3 of the Company's current rate plans

5 Con Ed's total rate base for Electric Operations is expected to average \$22.202 billion for
 6 Rate Year 1 ("RY1", the 12 months ending December 31, 2020), and its requested Total
 7 Sales Revenue is \$7,774 million not including \$212.9 million in Other Operating
 8 Revenues. See Exh. AP-E3, Schedule 2, page 2, shown below. For Gas Operations, the
 9 average rate base for RY1 is expected to be \$7.096 billion, and the proposed Sales
 10 Revenues to total \$2,446 million, not including \$33.8 million in Other Operating
 11 Revenues. See Exh. AP-G3, Schedule 2, page 2, also shown below. Both of these
 12 revenue requirements are based upon a requested rate of return of 7.29%. This rate of

COUNTY OF WESTCHESTER PANEL

1 return is based upon a requested return on equity of 9.75%. See Accounting Panel
 2 Testimony at 10.

3 Electric Operations

4 Consolidated Edison Company of New York, Inc
Revenue Requirement
Electric Operating Income, Rate Base & Rate of Return
For The Twelve Months Ended September 30, 2018 and December 31, 2020
 (\$000's)

		RY1						
	Ref	12 Months Ended September 30, 2018	Normalizing Adjustments	12 Months Ended September 30, 2018 as Adjusted	Rate Year Adjustments	Rate Year as Adjusted	Proposed Rate Increase	Rate Year as Adjusted for Proposed Rate Increase
<u>Operating Revenues</u>								
Sales & Deliveries to Public	Sch 3	\$ 7,288,418	\$ 641,408	\$ 7,909,814	\$ (621,237)	\$ 7,288,677	\$ 485,415	\$ 7,774,092
Sales for Resale	Sch 3	-	-	-	-	-	-	-
Sales Revenues		7,288,418	641,408	7,909,814	(621,237)	7,288,677	485,415	7,774,092
Other Operating Revenues	Sch 5	787,002	(634,264)	152,738	57,839	210,577	2,308	212,883
Total Operating Revenues		8,055,420	7,232	8,062,652	(563,398)	7,499,254	487,721	7,986,975
<u>Operating Expenses</u>								
Purchased Power	Sch 3	1,572,299	-	1,572,299	(258,712)	1,313,587	-	1,313,587
Purchased Power-Base Rate	Sch 3	-	-	-	-	-	-	-
Operations & Maintenance Expense	Sch 6	2,172,024	(437,930)	1,734,093	66,773	1,800,867	2,821	1,803,488
Depreciation	Sch 13	966,287	-	966,287	183,515	1,149,802	-	1,149,802
Regulatory Amortization	Sch 4	771	-	771	(20,273)	(19,502)	-	(19,502)
Taxes Other Than Income Taxes	Sch 14	1,684,303	88,913	1,753,216	155,222	1,908,437	14,676	1,923,113
Total Operating Expenses		6,395,683	(369,018)	6,026,666	128,525	6,153,191	17,297	6,170,488
Operating Income Before Income Taxes		1,659,737	376,249	2,035,980	(689,823)	1,346,083	470,424	1,816,487
<u>Income Taxes</u>								
New York State Income Taxes	Sch 15	71,748	-	71,748	(19,533)	52,215	30,578	82,792
Federal Income Taxes	Sch 16	222,420	-	222,420	(199,684)	22,736	92,368	115,104
Total Income Taxes		294,168	-	294,168	(219,217)	74,951	122,946	197,896
Operating Income		\$ 1,365,569	\$ 376,249	\$ 1,741,818	\$ (470,708)	\$ 1,271,112	\$ 347,479	\$ 1,618,591
Electric Rate Base	AP E-2	\$ 19,785,510	\$ -	\$ 19,785,510	\$ 2,437,237	\$ 22,202,747		\$ 22,202,747
Rate Of Return		<u>6.91%</u>						<u>7.28%</u>

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COUNTY OF WESTCHESTER PANEL

Gas Operations

Consolidated Edison Company of New York, Inc
Revenue Requirement
Gas Operating Income, Rate Base & Rate of Return
For The Twelve Months Ended September 30, 2018 and December 31, 2020,
(\$000s)

		RY1						
		12 Months Ended	Normalizing	12 Months Ended	Rate Year	Rate Year as	Proposed Rate	Rate Year as
Ref		September 30, 2018	Adjustments	September 30, 2018 as Adjusted	Adjustments	Adjusted	Increase	Adjusted for Proposed Rate Increase
Operating Revenues								
Sch 3	Sales & Deliveries to Public	\$ 1,831,067	\$ 28,868	\$ 1,859,935	\$ 378,138	\$ 2,238,073	\$ 210,131	\$ 2,448,204
Sch 3	Sales for Resale	-	-	-	-	-	-	-
	Sales Revenues	1,831,067	28,868	1,859,935	378,138	2,238,073	210,131	2,448,204
Sch 5	Other Operating Revenues	196,677	(28,868)	167,810	(134,794)	33,016	748	33,764
	Total Operating Revenues	2,027,745	-	2,027,745	243,344	2,271,089	210,879	2,481,968
Operating Expenses								
Sch 3	Purchased Gas	595,201	-	595,201	114,575	709,776	-	709,776
Sch 3	Purchased Gas-Base Rate	-	-	-	-	-	-	-
Sch 6	Operations & Maintenance Expense	439,656	(17,969)	421,687	23,341	445,028	967	445,995
Sch 13	Depreciation	199,009	-	199,009	87,157	286,167	-	286,167
Sch 4	Regulatory Amortization	147	-	147	(11,696)	(11,549)	-	(11,549)
Sch 14	Taxes Other Than Income Taxes	324,764	15,316	340,079	92,432	432,512	6,452	438,964
	Total Operating Expenses	1,558,777	(2,653)	1,556,124	305,810	1,861,934	7,419	1,869,353
	Operating Income Before Income Taxes	468,967	2,653	471,621	(62,466)	409,154	203,460	612,614
Income Taxes								
Sch 15	New York State Income Taxes	8,624	-	8,624	6,769	15,393	13,225	28,618
Sch 16	Federal Income Taxes	79,238	-	79,238	(52,640)	26,598	39,949	65,548
	Total Income Taxes	87,862	-	87,862	(45,870)	41,992	53,174	95,166
	Operating Income	\$ 381,105	\$ 2,653	\$ 383,759	\$ (16,596)	\$ 367,163	\$ 150,286	\$ 517,449
AP G-2	Gas Rate Base	\$ 7,096,200	\$ -	\$ 7,096,200	\$ -	\$ 7,096,200	\$ -	\$ 7,096,200
	Rate Of Return	5.37%				5.17%		7.29%

Property Taxes

Q. BASED UPON YOUR REVIEW, DO YOU AGREE WITH THE COMPANY'S PROPOSED PROPERTY TAX EXPENSES?

A. No. COW believes that the Company's proposed Electric Property Tax expense should be reduced by at least \$24 million and Gas Property Tax expense by \$6.9 million. These amounts are based on the Company's Property Tax update provided in response to

COUNTY OF WESTCHESTER PANEL

1 interrogatory DPS-26-615¹ dated April 5, 2019 and DPS-39-741 dated April 30, 2019,
2 and on the assumption of no change in plant additions, assessments and other estimations
3 underlying the updated property tax calculation. The April 10, 2019 preliminary update
4 is consistent with the April 5, 2019 property tax update.

5 **Q. WHAT AMOUNTS IS THE COMPANY'S PROPERTY TAX PANEL ("PTP")**
6 **FORECASTING FOR ELECTRIC AND GAS PROPERTY TAX EXPENSE FOR**
7 **THE RATE YEAR?**

8 A. The Company's forecast for electric property tax expense is \$1.628 billion for the Rate
9 Year (See Exh. AP-3, Schedule 8), as compared to \$1.442 billion (See Exh. AP-E3,
10 Schedule 8) incurred in the historic test year (2018), which is an increase of \$186 million.
11 The Company's electric property taxes are derived approximately 91% from New York
12 City ("NYC") property and 9% from non-NYC municipalities' properties (Westchester
13 and Others). See Exh. AP-E1, Schedule 9.

14 The Company's forecast for gas property tax is \$351.3 million for the Rate Year, as
15 compared to \$266.7 million in the historic test year (2018), which is an increase of \$84.6
16 million. See Exh. AP-G3, Schedule 8. The Company's gas property taxes are derived
17 approximately 79% from NYC and 21% from Westchester and Others. See Exh. AP-G1,
18 Schedule 9.

¹ All referenced data responses are included in Exhibit ____ (COW-2).

1 **Q. HOW DID THE COMPANY CALCULATE NYC PROPERTY TAX EXPENSE**
2 **FOR THE RATE YEAR?**

3 A. The Company estimated the NYC property tax expenses for the Rate Year by applying
4 estimated tax rates to its forecast of assessed values, which include projected changes to
5 electric and gas net plant, for its electric and gas Class 3 and Class 4 properties.

6 **Q. HOW DID THE COMPANY DETERMINE THE ASSESSED VALUES FOR ITS**
7 **NYC ELECTRIC AND GAS PROPERTIES?**

8 A. The Company started with the final property assessments for fiscal year 2018/2019. The
9 Rate Year property assessment is computed by adding the estimated effect of net change
10 in electric and gas plant, as forecast by the Company.

11 **Q. WHY DID THE COMPANY USE THE 2018/2019 PROPERTY ASSESSMENT AS**
12 **THE BASIS FOR THE ITS ESTIMATE?**

13 A. The Company claims that the 2018/2019 property assessment contains the latest available
14 actual data at the time of the Company's filing. On page 10 of the Company's PTP
15 Testimony, the Company states that "the Company intends to update property taxes as
16 part of its formal update at the update stage of this proceeding and will also provide
17 updated property tax information throughout these proceedings if new information
18 becomes available that is, in the Company's judgment, significant."

19 **Q. WHAT PROPERTY TAX RATES DID THE COMPANY USE AS THE BASIS**
20 **FOR ITS FORECASTED NYC PROPERTY TAX EXPENSE?**

COUNTY OF WESTCHESTER PANEL

1 A. The Company starts its Rate Year property tax forecast by using the current 2018/2019
2 NYC property tax rates.

3 **Q. HAVE ANY RECENT COMMISSION-APPROVED RATE ORDERS FOR THE**
4 **COMPANY USED A FIVE-YEAR AVERAGE CHANGE OF TAX RATES IN**
5 **FORECASTING RATE YEAR PROPERTY TAX EXPENSE?**

6 A. Yes. The prior rate cases used a five-year average change of tax rates to project the Rate
7 Year property tax expense. The Company is proposing to depart from that practice.

8 **Q. DID THE COMPANY CALCULATE A FIVE-YEAR AVERAGE CHANGE IN**
9 **PROPERTY TAX RATES?**

10 A. Yes. The Company calculated the actual five-year average which results in an average
11 tax rate increase of 0.32% for Class 3 properties and an average tax rate increase of
12 0.37% for Class 4 properties. See PTP Testimony at 11:12-16. Instead of using the five-
13 year average, the Company used a higher 1% escalation rate on property tax rates for
14 Class 3 and 4. *Id.* at 23:8-13.

15 **Q. DID THE COMPANY EXPLAIN WHY IT DID NOT USE ITS ACTUAL FIVE-**
16 **YEAR AVERAGE CHANGE IN PROPERTY TAX RATES?**

17 A. Not exactly. On page 11 of the testimony, the Company's PTP states, "Our forecast
18 reflects the approximate five-year average. As discussed below, we have concluded that
19 it is best to use this escalation percentage for all years forecasted." Later on page 23, the
20 Company states, "We selected tax rate changes that approximate the five-year average

COUNTY OF WESTCHESTER PANEL

1 percent changes. Our projected property taxes reflect escalations of the tax rates of 1%
2 for both Classes 3 and 4.”

3 Furthermore, starting on page 15, the Company states that “NYC property tax forecasts
4 are subject to much uncertainty and actual tax rate changes can be quite volatile” and the
5 fact that “[i]n New York State the main revenue source to balance local municipal
6 budgets are property taxes.” Also, “[i]n New York City, the classification system adds
7 complexity and uncertainty.”

8 **Q. DOES WESTCHESTER COUNTY AGREE WITH THE COMPANY’S**
9 **ESCALATION RATES USED IN DEVELOPING ITS RATE YEAR FORECAST?**

10 A. No. Westchester does not believe that the Company’s proposed NYC 1% escalation
11 property tax rate has been justified. Use of the 1% escalation represents a departure from
12 the long-established method of estimating property tax rates to be used in forecasting the
13 Company’s rate year level of NYC property tax expense. In prior cases, the Company has
14 employed the five-year average to develop the property tax escalation rate. The
15 uncertainty of the NYC taxing authority does not justify increasing the escalation rates
16 from 0.32% and 0.37% for Class 3 and 4, respectively, to 1% for both Class 3 and 4. The
17 Company has not shown that its proposed changes produce a result superior to that
18 produced by use of the five-year average method. Substituting a judgmental
19 determination is a break from past practice, and, furthermore, a departure from
20 recognized and verifiable averages and trends. Westchester believes that consistent use

1 of averages and trends produces a better estimate, both in the short term and in the long
2 run.

3 **Q. DOES WESTCHESTER RECOMMEND THE USE OF THE FIVE-YEAR**
4 **AVERAGE OF CHANGES IN TAX RATES IN FORECASTING RATE YEAR**
5 **NEW YORK CITY PROPERTY TAX EXPENSE?**

6 A. Yes. Using the five-year average over time is the fairest methodology for both the
7 Company and its customers. Moreover, changes in property tax expenses under a
8 consistent approach over time should even out short-term discrepancies.

9 **Q. HAS WESTCHESTER DETERMINED THE EFFECTS OF USING A FIVE-**
10 **YEAR AVERAGE OF CHANGES IN TAX RATES?**

11 A. Yes. The property tax expenses are computed by applying each class' tax rate to the
12 related forecasted assessment. As filed, the effects of applying the traditional five-year
13 average method to estimate the property tax rates for Class 3 (0.32%) and 4 (0.37%)
14 properties result in a decrease of \$15.1 million in property tax expense for electric service
15 and of \$3.0 million for gas service in the Rate Year.

16 **Q. HAS THE COMPANY UPDATED ITS PROPOSED PROPERTY TAXES?**

17 A. Yes. In response to interrogatory DPS-26-615 dated April 5, 2019, which is consistent
18 with the April 10, 2019 preliminary update, the Company reduced its originally filed
19 overall forecasted property taxes by \$41.6 million for electric and by \$26.1 million for
20 gas. In response to interrogatory DPS-39-741 dated April 30, 2019, the Company again
21 changed its overall forecasted property taxes which results in a reduction of \$7.0 million

COUNTY OF WESTCHESTER PANEL

1 for electric (to \$1,622 million) and a reduction of \$3.1 million for gas (to \$348 million)
 2 from its original filed forecasted property taxes.

3 **Q. DO YOU AGREE WITH THE COMPANY’S UPDATED PROPERTY TAXES?**

4 A. No. Again, the Company has decided not to use the actual five-year average which
 5 shows an average tax rate increase of 0.32% for Class 3 properties and an average tax
 6 rate increase of 0.37% for Class 4 properties. The Company uses a higher 1% escalation
 7 rate on property tax rates for Class 3 and 4.

8 **Q. COULD YOU SUMMARIZE YOUR ADJUSTMENT TO THE COMPANY’S NYC**
 9 **PROPOSED PROPERTY TAXES?**

10 A. Below is a table which summarizes Westchester’s adjustments. For 2020, the panel
 11 proposes to reduce the Company’s proposed NYC property tax expense by \$28.7 million
 12 and to reduce the NYC Gas Property Tax expense by \$6.6 million. This assumes no
 13 further changes in assessed values. For example, if the assessed values are reduced, as a
 14 result of a reduction in capital additions in the rate period, the property taxes should be
 15 further reduced.

New York City Property Tax (\$million)	Electric			Gas			
	2020	2021	2022	2020	2021	2022	
Company Filing with 1%	1,480	1,585	1,697	290	332	376	a
Panel with 0.32% & 0.37%	1,465	1,559	1,657	287	326	367	b
Reduction	15.1	26.8	40.0	3.0	5.6	8.8	c = a - b
Company Update with 1%	1,467	1,574	1,680	286	329	373	d
Panel Update with 0.32% & 0.37%	1,452	1,548	1,641	283	323	365	e
Reduction	15.0	26.6	39.6	2.9	5.6	8.8	f = d - e
Total Reduction to Company Proposed Property Taxes	28.7	37.6	56.3	6.6	8.3	11.5	g = a - e

16

1 **Q. HOW DID THE COMPANY CALCULATE ITS RATE YEAR PROPERTY TAX**
2 **EXPENSE FOR WESTCHESTER AND OTHERS?**

3 A. The Company used a 5% annual escalation on historic test year property taxes paid
4 (2018) adjusted for the tax savings from settlements to arrive at the 2019 property taxes.
5 Then the Company again escalated by 5% the 2019 property taxes adjusted by the
6 amount of tax savings from settlements to arrive at the Rate Year property taxes. See
7 PTP Testimony at 12, and Property Tax Workpapers “Westchester and Other 2019-2023
8 (Property Tax Forecast).xlsx.”

9 **Q. DID THE COMPANY CALCULATE A 5-YEAR AVERAGE FACTOR OF THE**
10 **CHANGE IN PAID PROPERTY TAXES?**

11 A. Yes. The Company calculated the 5-year average factor of the change in paid property
12 taxes of 3.80%. See Exh. PTP-1.

13 **Q. DOES WESTCHESTER COUNTY AGREE WITH THE COMPANY’S**
14 **FORECAST OF PROPERTY TAXES FOR WESTCHESTER AND OTHERS?**

15 A. No. We are of the opinion that the Company’s new method produces an unreasonable
16 estimate of property tax expense in the Rate Year.

17 **Q. WHY DID THE COMPANY USE 5% INSTEAD OF 3.80%?**

18 A. Starting on page 13 of the Testimony, the Company’s Property Tax Panel states:

19 Q. Is that because you expect taxes in each of the next several years to increase
20 by 5.00%?

COUNTY OF WESTCHESTER PANEL

1 A. Yes, we believe it is a reasonable basis for estimate. The five-year average in
2 Westchester & Other has been fairly stable and at this time we believe that a
3 5.00% escalation rate will be representative of the escalation rate applicable
4 during the Rate Year.

5 Q. Is there a difference in methodology between the escalation rate you used for
6 Westchester & Other and the escalation rate you used for New York City?

7 A. Yes. The five-year average for Westchester & Other is an average based on
8 actual taxes paid by the Company that we believe should be relied upon to set
9 the level of property taxes in this proceeding. In contrast, as noted above, for
10 New York City we used the current fiscal period tax rates.”

11 **Q. WHY ARE YOU RECOMMENDING A 3.80% ESCALATION RATE INSTEAD**
12 **OF THE COMPANY’S 5% ESCALATION?**

13 A. The Company has not justified the 5% escalation rate. The Company’s testimony states
14 that it should use the five-year average. We agree and recommend using the “actual”
15 3.80% five-year average. Our recommendation has the effect of reducing the Company’s
16 2020 property taxes forecast for Westchester & Other for electric from \$148 million to
17 \$145 million and for gas from \$62 million to \$60 million.

18 **Q. HAS THE COMPANY UPDATED ITS WESTCHESTER AND OTHER**
19 **PROPOSED PROPERTY TAXES?**

20 A. Yes. In response to interrogatory DPS-26-615 dated April 5, 2019, which is consistent
21 with the April 10, 2019 preliminary update, the Company stated:

22 “The new data affecting the Rate Year forecast for Westchester and Other
23 includes the estimated property taxes for Cricket Valley substation and
24 transmission lines that will be transferred to the Company during the Rate Year.
25 This increase in property taxes has been offset by a lower property tax escalation
26 percentage (*i.e.*, 5% to 4.5%). The impact of this data is reflected in an updated
27 Rate Year forecast set forth in the attached Excel spreadsheet: Westchester and

COUNTY OF WESTCHESTER PANEL

1 Other 2019-2023 (PT Forecast). All supporting workpapers and calculations are
2 attached.”

3 In response to interrogatory DPS-39-741 dated April 30, 2019, the Company updated its
4 overall forecasted property taxes but used the same forecasted property taxes for
5 Westchester and Other as it did in its response to interrogatory DPS-26-615 discussed
6 above.

7 **Q. DO YOU AGREE WITH THE COMPANY’S UPDATED PROPERTY TAXES?**

8 A. No. Again, the Company has decided not to use the 5-year average factor of the change
9 in paid property taxes which is 3.80%. Rather, the Company decided to reduce its factor
10 from 5.0% to 4.5%.

11 **Q. COULD YOU SUMMARIZE YOUR ADJUSTMENT TO THE COMPANY’S**
12 **WESTCHESTER AND OTHER PROPOSED PROPERTY TAXES?**

13 A. The table below summarizes the Westchester Panel’s adjustments. For 2020 based on the
14 Company’s April 30, 2019 update, the Panel proposes to increase the Company’s
15 proposed Westchester and Other Electric Property Taxes by \$4.7 million and reduce the
16 Gas Property Taxes by \$0.3 million. This assumes no further changes in 2018 property
17 taxes, assets or changes in property tax allocations factors for electric, gas or other.

COUNTY OF WESTCHESTER PANEL

Westchester & Other Property Tax (\$million)	Electric			Gas			
	2020	2021	2022	2020	2021	2022	
Company Filing with 5%	148	155	163	61.7	64.8	68.0	a
Panel with 3.8%	145	150	156	60.3	62.6	64.9	b
Reduction	3.4	5.3	7.4	1.4	2.2	3.1	c = a - b
Company Update with 4.5%	155	166	177	62.2	65.0	67.9	d
Panel Update with 3.8%	153	162	173	61.4	63.7	66.1	e
Reduction	2.0	3.2	4.6	0.8	1.3	1.8	f = d - e
Total Reduction to Company Proposed Property Taxes	-4.7	-7.0	-9.4	0.3	1.1	1.9	g = a - e

1

2 **Q. COULD YOU SUMMARIZE YOUR ADJUSTMENT TO THE COMPANY’S NYC**

3 **AND WESTCHESTER AND OTHER PROPOSED PROPERTY TAXES?**

4 A. Yes. Below is a table summarizing the Westchester Panel’s adjustment to the Company’s

5 proposed Property Taxes. For 2020 based on the Company April 30, 2019 update, the

6 Panel proposes to reduce the Company’s proposed total Electric Property Taxes by \$24.0

7 million and reduce the total Gas Property Taxes by \$6.9 million.

Total Property Taxes (\$million)	Electric			Gas			
	2020	2021	2022	2020	2021	2022	
Company Filing	1,628	1,741	1,860	351	396	444	a
Panel Filing Adjustment	1,610	1,709	1,813	347	389	432	b
Reduction	19	32.1	47.3	4.4	7.8	11.9	c = a - b
Company Update	1,622	1,740	1,858	348	394	441	d
Panel Update	1,604	1,710	1,813	344	387	431	e
Reduction	17.0	29.8	44.2	3.8	6.8	10.6	f = d - e
Total Reduction to Company Proposed Property Taxes	24.0	30.6	46.8	6.9	9.3	13.3	g = a - e

8

9 **Q. WHAT IS THE EFFECT OF THESE ADJUSTMENTS ON RATE BASE?**

10 A. As a result of the above property tax expense adjustments, the 2020 Prepaid Property Tax

11 item in the Working Capital should be reduced by about \$4.7 million for electric service

12 and reduced by \$1.3 million for gas service. These amounts are based on the Company’s

COUNTY OF WESTCHESTER PANEL

1 Property Tax update in response to interrogatory DPS-39-741, dated April 30, 2019 and
2 assumes no change in plant additions, assessments and other estimations underlying the
3 updated property tax calculations.

Reduction in Electric Prepaid	Electric			Gas		
Property Tax in Rate Base	2020	2021	2021	2020	2021	2021
(\$millions)	4.7	6.0	9.2	1.3	1.7	2.5

4
5 **Property Tax Reconciliation**

6 **Q. DOES THE COMPANY PROPOSE ANY OTHER ISSUES RELATED TO**
7 **PROPERTY TAXES?**

8 A. Yes. The Company proposes to use a full and symmetrical reconciliation of property
9 taxes. The Company claims that a reconciliation mechanism is needed because property
10 taxes are not subject to reasonable estimation which may result in significant windfall for
11 either customers or the Company, at the expense of the other.

12 **Q. DOES WESTCHESTER HAVE ANY COMMENTS ON THIS PROPOSAL?**

13 A. Yes. The Company’s proposed property taxes for electric and gas service are
14 approximately 20% of electric delivery revenues and 14% of gas delivery revenues.²
15 According to the Company, the volatility and unpredictability of property taxes justify
16 the use of a reconciliation mechanism. Reconciliation mechanisms are designed to
17 protect both customers and the Company against variations in estimated costs, as well as

² Electric property tax from Exh. AP-E3 Schedule 8 (\$1,628.4M) divided by Total Operating Revenues from Exh. AP-E3 Schedule 2 (\$7,987M); Gas property tax from Exh. AP-G3 Schedule 8 (\$351.3M) divided by Total Operating Revenues from Exh. AP-G3 Schedule 2 (\$2,482M).

1 to maintain stability and consistency in both earnings and rates. See PTP Testimony at
2 24:12-17. Costs are reconciled to target levels reflected in the revenue requirement, with
3 over-recoveries and under-recoveries to be deferred with interest or carrying charges, as
4 applicable, for future rate cases. See Accounting Panel (“AP”) Testimony at 63:3-5.

5 **Q. DOES THE WESTCHESTER SUPPORT A FULL SYMMETRICAL**
6 **RECONCILIATION?**

7 A. No. Westchester believes that full reconciliation is not proper for property taxes.
8 Property taxes are a large portion of expenses, and we believe it is important to give the
9 Company proper incentives to do its best to reduce property taxes. We acknowledge that
10 the Company does not determine the level of property taxes. However, we believe the
11 Company is in a position to put pressure on the taxing authorities for relief, as it has done
12 in the past. If the Company were to be provided full reconciliation, there would be no
13 incentive for the Company to mitigate property taxes since there would be no benefit or
14 risk associated with either outcome.

15 **Q. COULD YOU EXPLAIN THE CURRENT PROPERTY TAX RECONCILIATION**
16 **MECHANISM?**

17 A. As described in the Joint Proposal³ for the Company’s prior rate cases at 35:

18 If the level of actual electric or gas expense for property taxes, excluding the
19 effect of property tax refunds, varies in any Rate Year from the projected level
20 provided in rates for that service, which levels are set forth in Joint Proposal of

³ See the Joint Proposal for Case Nos. 16-E-0060, 16-G-0061, 15-E-0050 and 16-G-0196, dated September 19, 2016.

COUNTY OF WESTCHESTER PANEL

1 Appendices 8 and 9, ninety (90) percent of the variation will be deferred and
2 either recovered from or credited to customers, subject to the following cap: the
3 Company's ten (10) percent share of property tax expenses above or below the
4 level in rates is capped at an annual amount equal to ten (10) basis points on
5 common equity in Rate Year 1, seven and half (7.5) basis points on common
6 equity in Rate Year 2, and five (5) basis points on common equity in Rate Year 3.
7 The Company will defer on its books of account, for recovery from or credit to
8 customers, one hundred (100) percent of the variation above or below the level at
9 which the cap takes effect.

10 In other words, the current reconciliation calls to defer 90% of the variations between the
11 amounts reflected in rates and the actual property tax expenses for recovery from or
12 credit to customers. The 10% Company share will be capped up to an amount equal to
13 10/7.5/5 basis points for RY1, RY2 and RY3 on common equity, at which point, 100%
14 over/below the cap will be received from or credited to customers.

15 **Q. WHAT DOES WESTCHESTER PROPOSE WITH REGARD TO THE**
16 **RECONCILIATION MECHANISM?**

17 A. Westchester recommends continuation of the reconciliation mechanism in use in the
18 current electric and gas cases to account for the variations in property tax expenses, or a
19 90%/10% customers/shareholders with the Company's 10% share capped at 10 basis
20 points on common equity. This will provide an incremental incentive for the Company to
21 continue its efforts to challenge the taxing jurisdictions in order to minimize its property
22 tax obligations.

23 **Net Plant Reconciliation Mechanism – Interference Modification**

24 **Q. DOES THE COMPANY PROPOSE TO MODIFY THE NET PLANT**
25 **RECONCILIATION MECHANISM?**

COUNTY OF WESTCHESTER PANEL

1 A. Yes. On pages 120-121 of the AP Testimony, the Company “proposes that the current
2 electric and gas net plant reconciliation mechanisms continue, each with a modification
3 to reconcile fully all interference capital.” The Company claims that “these costs will be
4 significant” and “has included projected interference costs in these rate filings that are
5 considerably higher than in past cases.” “In order to avoid a situation where this impairs
6 the Company’s ability to manage its portfolio of capital projects effectively,” the
7 Company is proposing that “the Commission should permit the company to reconcile
8 fully its interference capital costs.”

9 **Q. DOES WESTCHESTER AGREE WITH THIS INTERFERENCE CAPITAL**
10 **MODIFICATION TO THE NET PLANT RECONCILIATION MECHANISM?**

11 A. No.

12 **Q. SHOULD THERE BE A LIMITED OPPORTUNITY FOR AN UPWARD**
13 **RECONCILIATION IF THE COMPANY EXCEEDS ITS NET PLANT TARGETS**
14 **AS A RESULT OF CIRCUMSTANCES OUTSIDE THE COMPANY’S**
15 **CONTROL, SUCH AS INTERFERENCE COSTS?**

16 A. We do not believe an upward interference capital reconciliation is necessary in a one-year
17 rate case. The Company proposes a Rate Year electric capital forecast of over \$1.9
18 billion and a gas capital forecast of over \$1 billion. See Exh. AP-E4 Schedule 3 and Exh.
19 AP-G4 Schedule 3. The Company should be capable of handling the risk of having to
20 spend more than forecasted in the Rate Year on any specific project, either by deferring
21 or eliminating other projects. If the Company cannot defer or eliminate other projects,

1 the Company could forego the return on the added investment for a few months, which is
2 relatively short-term, until rates are reset the next year. When the rates are reset the
3 following year, the Company would recover return of, and a return on, the overspent
4 investment for the remaining life of the project. This of course assumes those
5 investments are determined to be prudent, necessary, and used and useful.

6 **Excess Deferred Federal Income Tax (“EDFIT”) Related to the Tax Cut and Jobs Act**
7 **(“TCJA”)**

8 **Q. PLEASE EXPLAIN WHY THE COMPANY HAS EXCESS DEFERRED**
9 **FEDERAL INCOME TAX RELATED TO THE TCJA’S REDUCTION IN THE**
10 **FEDERAL INCOME TAX RATE FROM 35 PERCENT TO 21 PERCENT.**

11 A. Westchester agrees with the Income Tax Panel Testimony at 8:16-9:9 that states:

12 Deferred income taxes result from normalization accounting for book and tax
13 timing differences. The majority of deferred tax balances on the Company’s
14 balance sheet are associated with its investment in plant. The difference between
15 the federal income tax expense recorded for financial purposes and the actual
16 current tax payable in any one year is deferred federal income tax (“DFIT”), that
17 accumulates as a liability known as accumulated deferred Federal income tax
18 liability (“ADFIT”). The TCJA’s reduction of the corporate federal income tax
19 rate from 35 percent to 21 percent results in EDFIT. Specifically, EDFIT
20 represents the difference in the amounts the Company collected from its
21 customers at a 35 percent tax rate to pay future income taxes, and the Company’s
22 future tax liabilities at a 21 percent tax rate.

23 **Q. DID THE COMMISSION ADDRESS HOW EDFIT SHOULD BE REFUNDED TO**
24 **CUSTOMERS?**

25 A. Yes. In the Commission Order issued on August 9, 2018 (Case 17-M-0815), the
26 Commission directed how the Company should recognize the net benefits realized due to

COUNTY OF WESTCHESTER PANEL

1 the TCJA's reduction in Federal income tax rate. The Commission ordered, at pages 43-
2 44:

3 1) For Con Edison's Electric Business:

4 a) Continue to defer the net benefits realized (current payable taxes) in calendar year
5 2018,

6 b) Provide the net benefit realized in (current payable taxes) calendar 2019 by means
7 of a sur-credit to commence on January 1, 2019,

8 c) Continue to defer both the protected EDFIT balances and the unprotected EDFIT
9 balances,

10 d) Address in its next electric base rate case (i.e., this proceeding) how its EDFIT
11 balances and deferred net benefits realized in calendar year 2018 will be refunded
12 to its customers.

13 2) For Con Edison's Gas Business:

14 a) Provide customers with the net benefit realized (current payable taxes) in calendar
15 years 2018 and 2019 by means of a sur-credit to start on January 1, 2019,

16 b) Amortization of the protected and unprotected EDFIT balances over the life of the
17 plant assets in the January 1, 2019 sur-credit,

18 c) An alternative amortization period for the remaining unprotected EDFIT balances
19 may be determined in the next gas rate case (i.e., this proceeding).

1 **Q. COULD YOU EXPLAIN THE COMPANY’S PROPOSED FEDERAL TAX**
2 **REFORM TRANSITION PERIOD TAX CREDIT?**

3 A. The AP Testimony at 44:16-45:2 states that the Federal Tax Reform Transition period tax
4 credit:

5 [r]eflects the refund to electric customers and gas customers for tax savings
6 accrued between the effective date of the TCJA (*i.e.*, January 1, 2018) and the
7 time that accrued savings begin to be passed back to customers, in accordance
8 with the Commission’s order in Case 17-M-0815. For electric customers, the net
9 benefits realized in calendar year 2018 are to be passed back over three years
10 beginning January 2020. For gas customers, the net benefits realized in calendar
11 year 2018 are to be passed back over three years beginning January 2019.

12 For electric service, the Company is proposing to amortize \$320.3 million over 3 years or
13 \$106.8 million per year. See Exhibit AP-E3, Schedule 4, line 7. The Company’s
14 preliminary electric update proposes to amortize \$377.4 million over 3 years or \$125.8
15 million. See Preliminary Update Exhibit AP-E3, Schedule 4, line 7.

16 For gas service, the Company is proposing to amortize \$60.3 million over 2 years or
17 \$30.1 million per year. See Exhibit AP-G3, Schedule 4, line 7. The Company’s
18 preliminary gas update proposes to amortize \$63.1 million over 2 years or \$31.6 million.
19 See Preliminary Update Exhibit AP-G3, Schedule 4, line 7.

20 **Q. PLEASE EXPLAIN THE DIFFERENCE BETWEEN PROTECTED AND**
21 **UNPROTECTED PROPERTY EDFIT WHEN IT COMES TO EDFIT TAX**
22 **REFUNDS.**

23 A. The Income Tax Panel (“ITP”) states that “[p]rotected EDFIT balances are subject to the
24 normalization rules under the IRC and are required to be refunded to customers over the

COUNTY OF WESTCHESTER PANEL

1 remaining life of the plant assets.... Unprotected EDFIT balances may be refunded over a
2 shorter period.” See ITP Testimony at 11:18-12:7.

3 **Q. PLEASE EXPLAIN THE COMPANY’S PROPOSAL TO REFUND THE EDFIT**
4 **RELATED TO UNPROTECTED PROPERTY.**

5 A. The Company proposes to amortize both electric and gas unprotected property EDFIT
6 over 5 years starting on January 1, 2020 (RY1).

7 **Q. PLEASE EXPLAIN HOW THE EDFIT AMORTIZATION FITS INTO THE**
8 **COMPANY’S INCOME TAX CALCULATIONS?**

9 A. The Company is requesting an increase in electric revenues of \$1,062 million in RY1
10 from all non-income tax expenses, which is offset by income tax credits of \$576.8 million
11 for a net revenue requirement increase in \$485.4 million. See Exh. AP-E3, Schedule 1,
12 page 1. Below is a table from the Company’s response to Interrogatory NYECC-1-3,
13 showing the components which make up the \$576.8 million electric business income tax
14 credit.

15 Electric

Income taxes		
	Income Tax Rate Change	(273,500)
	Federal Tax Reform Transition Period	(110,200)
	Excess Deferred FIT - Property	(185,400)
	Excess Deferred FIT - Non-Property	(25,900)
	Flow Thru Items	12,000
	Flow Thru Tax Deduction - interest	(10,900)
	Amortization of Deferred ITC	1,700
	R&D Tax Credit	(4,400)
	Amortization of NYS tax rate change	19,800
	Income tax items	(576,800)

16

COUNTY OF WESTCHESTER PANEL

1 The Company also is requesting an increase in gas revenues of \$371.4 million in RY1
2 from all non-income tax expenses which is offset by income tax credits of \$161.3 million
3 for a net revenue requirement increase in \$210.1 million. See Exh. AP-G3, Schedule 1,
4 page 1. Below is the table from the Company’s response to Interrogatory NYECC-1-3,
5 showing the gas components which make up the \$161.3 million.

6 Gas

Income taxes	
Income Tax Rate Change	(85,300)
Federal Tax Reform Transition Period	(31,100)
Excess Deferred FIT - Property	(30,800)
Excess Deferred FIT - Non-Property	(5,300)
Flow Thru Items	(4,700)
Flow Thru Tax Deduction - interest	(7,500)
R&D Tax Credit	(900)
Amortization of NYS tax rate change	4,300
Income tax items	(161,300)

7

8 **Q. WHERE ARE THE UNPROTECTED EDFIT AMOUNTS FOUND IN THESE**
9 **TABLES?**

10 A. Westchester believes that the first year’s amortization of the unprotected EDFIT that the
11 Company is proposing to be amortized over five years is found in the line item “Excess
12 Deferred FIT-Property” which includes both protected and unprotected property. In
13 addition, the Company is proposing to amortize the “Excess Deferred FIT – Non-
14 Property” amounts over five years. In the tables above, which show just RY1 amounts, a
15 retention factor (gross-up) has been applied to the EDFIT amounts. In total, the amount
16 of EDFIT for unprotected property and non-property to be credited to customers amounts
17 to \$580.6 million (\$811.1 million using RY1 retention factor) for electric and \$79.8

COUNTY OF WESTCHESTER PANEL

1 million (\$111.6 million using RY1 retention factor) for gas, which amounts need to be
2 amortized over some period of time. See response and attachment to Interrogatory
3 COW-2-18. The question is what amortization period would be best for customers. The
4 concern is to return these credits to customers in a timely manner, without imposing a
5 rate shock at the end of the amortization (refund) period when the credits no longer
6 reduce Con Edison's revenue requirement.

7 **Q. WHAT FUTURE REVENUE REQUIREMENT IMPACT WOULD THE**
8 **COMPANY'S PROPOSED AMORTIZATION OF THE 2018 FEDERAL TAX**
9 **REFORM TRANSITION PERIOD AND EDFIT HAVE?**

10 A. The Company's proposal has the 2018 Federal Tax Reform Transition Period tax credit
11 expiring December 31, 2022 (Rate Year 3) and the unprotected EDFIT credit expiring on
12 December 31, 2024. This means that in 2023 the annual tax reform transition period
13 credit for electric service of \$106.8 million (preliminary update is \$125.8 million)
14 disappears and for 2025 the annual EDFIT tax credit of \$162.5 million (preliminary
15 update has no significant change) disappears. All else being equal, the expiration of the
16 tax credits would increase revenue requirements (and rates) in 2023 by \$125.8 million
17 and in 2025 by \$162.5 million.

18 **Q. COULD YOU EXPLAIN WHY THE COMPANY PROPOSES TO START**
19 **AMORTIZING THE UNPROTECTED EDFIT OVER 5 YEARS STARTING**
20 **JANUARY 1, 2020?**

21 A. The Income Tax Panel states at 10:12-22:

COUNTY OF WESTCHESTER PANEL

1 The Company proposes to refund the unprotected EDFIT balances to its electric
2 and gas customers over a five year amortization period, commencing at the
3 beginning of the Rate Year. The five-year straight-line amortization period is the
4 same time period over which the Company proposes to recover deferred costs in
5 this proceeding, *i.e.*, the Company proposes to use the period for debits and
6 credits. For the gas service, this is a change (as allowed by the August 2018
7 Order) to accelerate the amortization of the unprotected EDFIT balance to
8 customers.

9 **Q. DO YOU HAVE ANY COMMENTS RELATING TO THE COMPANY'S**
10 **REASONING FOR AMORTIZING THE EDFIT OVER 5 YEARS?**

11 A. Yes. Company Exh. AP-E3, Schedule 4, shows the Company's proposed amortization of
12 various Regulatory Assets and Liabilities between 3 to 10 years with most at 5 years.
13 Westchester does not believe that the Company has justified using 5 years for amortizing
14 unprotected EDFIT. This is particularly true as the TCJA took effect on January 1, 2018,
15 and thus customers will not receive the full benefit of the return of these funds until the
16 end of 2024, a full seven years after the TCJA was enacted. Most of Con Edison's other
17 deferred costs have been accumulated during the current rate period (2017 through 2019),
18 and the Company is proposing amortization periods of 3 to 10 years for these accounts.
19 In contrast, the EDFIT are funds contributed by customers before January 1, 2018 for
20 income taxes to be paid in the future. The accumulation of the ADIT (which created the
21 EDFIT upon the implementation of the TCJA) occurred over long periods of time.
22 Customers should receive the benefit of the TCJA on EDFIT in a shorter time frame than
23 the Company proposes.

COUNTY OF WESTCHESTER PANEL

1 **Q. WHAT IMPACT WILL A 3-YEAR AMORTIZATION OF UNPROTECTED**
 2 **EDFIT HAVE ON THE COMPANY’S PROPOSED REVENUE**
 3 **REQUIREMENTS?**

4 A. In response to interrogatory COW-2-18, dated April 5, 2019:

5 Question No.: 18

6 If EDFIT were amortized over 3 years rather than 5 years, what would be net
 7 reduction to the revenue requirement for RY1, RY2 and RY3? Please provide
 8 derivation and workpapers supporting this calculation.

9 Response

10 Please see Attachment COW-2-18 for the annual estimated revenue requirement
 11 reduction associated with lower FIT expenses if the unprotected EDFIT were
 12 amortized over three years rather than five years.

13 The table below summarizes the COW-2-18 attachment.

Summary of COW-2-18 dated 3/14/19	Electric (\$000)	Gas (\$000)	
Company Unprotected EDFIT	\$ (580,584)	\$ (79,766)	a
Company 5 year amortization of EDFIT	\$ (116,117)	\$ (15,953)	b = a / 5
Retention Factor	71.58%	71.46%	c
Company EDFIT Revenue Requirement	\$ (162,220)	\$ (22,325)	d = a / c
Change from 5 year to 3 year amortization			
Company Unprotected EDFIT	\$ (580,584)	\$ (79,766)	e
Company 3 year amortization of EDFIT	\$ (193,528)	\$ (26,589)	f = e / 3
Retention Factor	71.58%	71.46%	g
Company EDFIT Revenue Requirement	\$ (270,366)	\$ (37,208)	h = f / g
Reduction in Revenue Requirements =	\$ 108,146	\$ 14,883	k = d - h

14
 15 According to the Company, the annual estimated electric revenue requirement reduction
 16 if the unprotected EDFIT were amortized over three years rather than five years is
 17 \$108,328,000. In other words, the revenue reduction for EDFIT is increased from
 18 \$162,492,000 to \$270,820,000. Using the Company’s preliminary update (April 10,

COUNTY OF WESTCHESTER PANEL

1 2019) figures, the revenue requirement reduction would be about \$108,302,000 (a
2 difference of only \$26,000 or 0.024%).⁴

3 According to the Company, the annual estimated gas revenue requirement reduction
4 associated with lower FIT expenses if the unprotected EDFIT were amortized over three
5 years rather than five years is \$14,883,000. In other words, the revenue reduction for
6 EDFIT is increased from \$22,325,000 to \$37,208,000. Using the Company's preliminary
7 update (April 10, 2019) figures, the revenue requirement reduction would be about
8 \$14,872,000 (a difference of only \$11,000 or 0.076%).

9 **Q. WHAT RATE SHOCK MIGHT OCCUR IF THE EDFIT IS AMORTIZED OVER**
10 **3 YEARS?**

11 A. For electric service, the 2018 Federal Tax Reform Transition Period (\$125.8 million per
12 year) and the EDFIT (\$270.8 million per year) amounts would both disappear in 2023
13 amounting to a \$396.6 million loss in tax credits. All else being equal, the expiration of
14 the tax credits would increase revenue requirements (and rates) in 2023 by \$396.6 million
15 which would produce a significant rate increase.

16 For gas service, all else being equal, the expiration of the EDFIT would increase revenue
17 requirements (and rates) in 2023 by \$37.2 million.

⁴ Westchester notes that an increase in the amortization of EDFIT would cause a complementary, but smaller increase in rate base (because any EDFIT credited to ratepayers is no longer credited to rate base), although the Company did not include this factor in its response.

COUNTY OF WESTCHESTER PANEL

1 **Q. WHAT EDFIT AMORTIZATION PERIOD DO YOU RECOMMEND?**

2 A. We recommend that half of the EDFIT be amortized over 4 years and the other half over
3 5 years. The table below shows a new EDFIT amortization of \$101.4 million for 4 years
4 and \$81.1 million for 5 years.

5 When the electric EDFIT and the electric 2018 Federal Tax Reform Transition expires,
6 the next electric rate case (assuming 2023 as RY1 and all else being equal) would have a
7 revenue requirement deficit of \$125.8 million for RY1 (2023), \$101.4 million for RY2
8 (2024) and \$81.1 million for RY3 (2025), assuming the proposed amortization periods
9 shown below. This change mitigates the 2025 rate impact and at the same time reduces
10 the proposed 2020-22 revenue requirements by \$20.3 million per year. In contrast, under
11 the Company's proposal, the future rate case (assuming 2023 as RY1 and all else being
12 equal) would see a revenue deficit of \$125.8 million for RY1 (2023) and \$162.2 million
13 for RY3 (2025).

14 When the gas EDFIT expires, the next gas rate case (assuming 2023 as RY1 and all else
15 being equal) would have a revenue requirement deficit of \$14.0 million for RY2 (2024)
16 and \$11.2 million for RY3 (2025), based upon Westchester's recommended amortization
17 schedule. This change mitigates the 2025 rate impact and at the same time reduces the
18 proposed 2020-22 revenue requirements by \$2.8 million per year. Under the Company's
19 proposal, the future rate case (assuming 2023 as RY1 and all else being equal) would see
20 a revenue deficit of \$22.3 million for RY3 (2025).

COUNTY OF WESTCHESTER PANEL

	Electric	Gas	
	(\$000)	(\$000)	
Summary of COW-2-18 dated 3/14/19			
Company Unprotected EDFIT	\$ (580,584)	\$ (79,766)	a
Company 5 year amortization of EDFIT	\$ (116,117)	\$ (15,953)	b = a / 5
Retention Factor	71.58%	71.46%	c
Company EDFIT Revenue Requirement	\$ (162,220)	\$ (22,325)	d = a / c
Summary of COW-2-18 dated 3/14/19			
Company Unprotected EDFIT	\$ (580,584)	\$ (79,766)	e = a
Percent of EDFIT Amortized	50%	50%	f
Half of Company EDFIT	\$ (290,292)	\$ (39,883)	g = e x f
Years Amortized	4	4	h
Amortization of EDFIT	\$ (72,573)	\$ (9,971)	k = g / h
Retention Factor	71.58%	71.46%	m
EDFIT Revenue Requirement	\$ (101,387)	\$ (13,953)	n = k / m
Remaining Company EDFIT	\$ (290,292)	\$ (39,883)	o = e - g
Years Amortized	5	5	p
Amortization of EDFIT	\$ (58,058)	\$ (7,977)	q = o / p
Retention Factor	71.58%	71.46%	r = m
EDFIT Revenue Requirement	\$ (81,110)	\$ (11,162)	s = q / r
Total EDFIT Revenue Requirement	\$ (182,497)	\$ (25,115)	t = n + s
Reduction in Revenue Requirements =	\$ 20,277	\$ 2,791	u = d - t

1

2 **Major Storm Deductible**

3 **Q. THE COMPANY HAS MADE A REQUEST TO REMOVE THE 2%**
4 **DEDUCTIBLE FROM MAJOR STORM REPAIR COSTS. SEE THE ELECTRIC**
5 **INFRASTRUCTURE AND OPERATIONS PANEL (“EIOP”) TESTIMONY AT**
6 **220-224. HOW DO YOU RESPOND TO THE COMPANY’S POSITION?**

7 A. First, the Company testifies that it does not have analyses of incremental unreimbursed
8 costs “because it would require myriad assumptions that may or may not be applicable
9 depending upon the unique facts and circumstances associated with each major storm.”
10 EIOP Testimony at 224:4-7. The Company also testifies that there is no study underlying
11 the currently effective 2% deductible and that such a study is also impractical to perform.

1 *Id.* at 224:7-9. However, there is no doubt that removing the 2% deductible has the
2 potential to increase the recovery of now-unreimbursed costs. Accordingly, it is not
3 logical or persuasive for the Company to urge the Commission to change the *status quo*
4 *ante* because neither the *status quo ante* nor the change requested by the Company have
5 been or can be supported by a study. Westchester believes that a portion of the major
6 storm expense should not be charged to the major storm reserve because some portion of
7 the incremental storm expense will reduce the Company's future normal Operations and
8 Maintenance ("O&M") expenses.

9 **Return on Equity/Financing Charges**

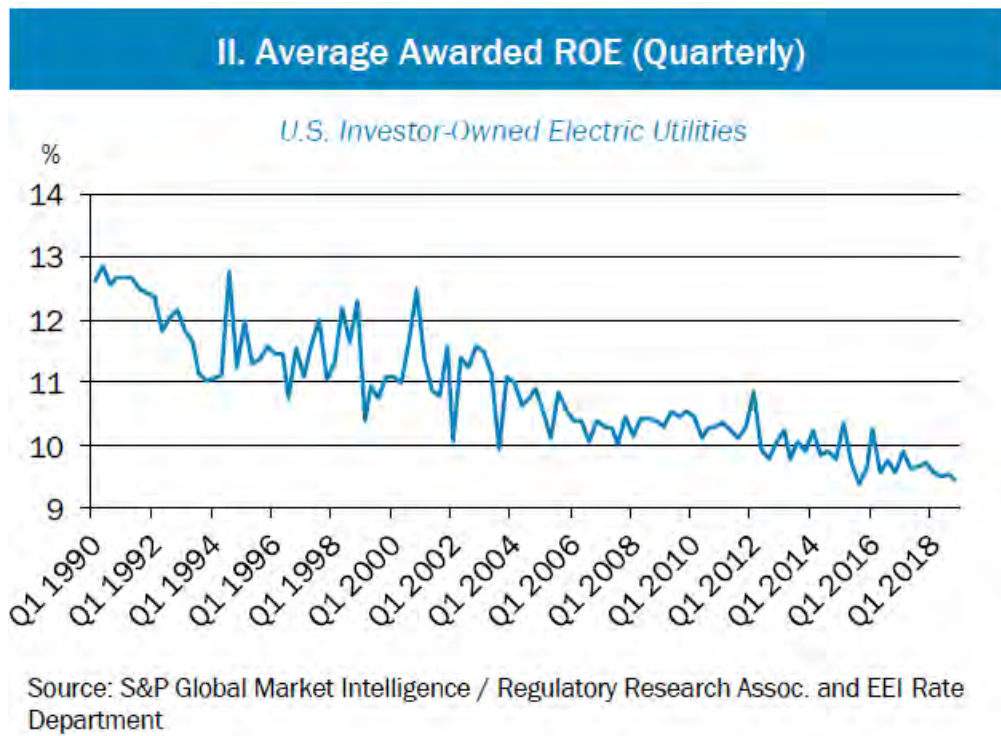
10 **Q. DO YOU HAVE A REACTION TO THE COMPANY'S DESIRE FOR A 9.75%**
11 **RATE OF RETURN ON EQUITY AS DESCRIBED IN AP TESTIMONY AT 9:22-**
12 **10:2?**

13 A. Yes. In today's financial markets, a 9.75% return on equity ("ROE") is on the high-end
14 of recently approved ROEs. We would note that the Commission approved a 9.0% ROE
15 in the last rate case for the Company, and Con Edison earned a 9.36% ROE in 2018,
16 above the approved 9.0% ROE, based upon its March 1, 2019, filing in Case No. 16-E-
17 0060. Also, the Company's analysis of rate of return including ROE was based on
18 studies completed before 2019. For example, one of the reports completed in January
19 2019 upon which the Company relied, according to the response to DPS-25-604, was the
20 Edison Electric Institute ("EEI") Rate Review Summary 2018 Q4 Regulatory & Financial
21 Update, which states at p. 1 that

COUNTY OF WESTCHESTER PANEL

1 The average awarded return on equity (ROE) for the quarter was 9.45%, the
2 second-lowest in our 30 years of data. The average requested ROE was 10.06%,
3 the third lowest in our dataset. Both ROE numbers remained at the low end of a
4 long-term declining interest trend resulting largely from declining interest rates
5 since the 1980s.⁵

6 EEI is an association of United States shareholder-owned electric companies. See
7 response to Interrogatory DPS-1-48. Furthermore the EEI report shows the following
8 graph at 1:



9

⁵http://www.eei.org/resourcesandmedia/industrydataanalysis/industryfinancialanalysis/QtrlyFinancialUpdates/Documents/QFU_Rate_Case/2018_Q4_Rate_Review.pdf at 1.

COUNTY OF WESTCHESTER PANEL

1 The Company, and the later studies and reports that the Company relied upon, based their
2 recommendations on the assumption that the Federal Reserve would continue to raise
3 interest rates. Company witness Yukari Saegusa states:

4 ...The Federal Funds rate is one of the most influential interest rates in the U.S.
5 economy, because it affects monetary and financial conditions, which in turn have
6 a bearing on key aspects of the broad economy including employment, growth
7 and inflation.

8 Q. Has the Federal Reserve provided any guidance on the Federal Funds rate
9 beyond 2018?

10 A. Yes. The Federal Reserve publishes a forecast of the Federal Funds rate for
11 2019, 2020, 2021 and longer run. The projections are based on the individual
12 assessments of the Federal Reserve Board members and Federal Reserve Bank
13 presidents. In the latestest [sic] forecast (December 23 2018), the median of the
14 FOMC participants' assessments of appropriate monetary policy puts the Federal
15 Funds rate at 2.9%, 3.1% and 3.1% for 2019, 2020 and 2021, respectively. The
16 forecast implies a 52.5 bps increase in the Federal Funds rate in 2019 from year
17 end 2018 levels or approximately two 25 bps rate hikes. The Federal Reserve has
18 signaled a willingness to continue to raise the Federal Funds rate despite signs of
19 slowing global economic expansion, tightening of financial conditions and
20 increased financial market volatility.

21 See Yukari Saegusa Testimony, the Cost of Capital witness, at 5:10-23 and 6:1-9.

22 However, since January 2019, the Federal Reserve has changed its forecast to no rate
23 increases for 2019 and furthermore, the Federal Reserve has started to discuss rate cuts.

24 According the Wall Street Journal ("Fed Officials Contemplate Thresholds for Rate
25 Cuts," April 20, 2019), attached as Exhibit___(COW-3):

26 Federal Reserve officials are starting to talk about the conditions under which
27 they would cut interest rates, including a scenario where inflation drifts lower
28 even if the economic growth doesn't falter.

29 Such a scenario isn't seen as particularly likely, and a rate cut isn't imminent or
30 under consideration for their meeting April 30-May 1. But the thresholds for such
31 action have been a topic of conversations in recent interviews and public remarks.

COUNTY OF WESTCHESTER PANEL

1 We believe that a ROE of 9.75% under current economic conditions is too high.

2 **Q. WHAT IS THE IMPACT IF THE DEPARTMENT OF PUBLIC SERVICE**
 3 **(“DPS”) STAFF’S PROPOSED REDUCTIONS IN ROE AND TOTAL RATE OF**
 4 **RETURN ARE ACCEPTED?**

5 A. We defer to the Department of Public Service Staff on this issue, but would note that the
 6 increased ROE drives the ROE/Financing adjustment of \$175 million for Electric
 7 Operations and \$56 million for Gas Operations, as shown in the Accounting Panel Table
 8 1, provided above. In addition, the response to NYECC-1-4 states that the impact of the
 9 ROE cost drivers associated with ROE increases are \$118 million for Electric Operations,
 10 and \$38 million for Gas Operations. This is too high, and represents a large component
 11 (over 10%) of the increase in revenues sought by the Company.

12 **Q. WHAT IS THE COMPANY’S PROPOSED CAPITAL STRUCTURE?**

13 A. The Company proposes to increase the equity ratio from 48% to 50%. The Saegusa
 14 Testimony states at 10:19-21) that “[a] capital structure with a 50.00% equity ratio,
 15 1.11% customer deposits ratio and a 48.89% debt ratio should be used.” Below is Exh.
 16 AP-E5, Schedule 2, for RY1:

Consolidated Edison Company of New York, Inc
 Rate of Return Required for the Rate Year
 Average Capital Structure As of December 31, 2020

	<u>Average Balance</u>	<u>Calculated Ratio</u>	<u>Rate Making Ratio</u>	<u>Cost Rate</u>	<u>Weighted Cost</u>
Long term Debt	15,623,200,000	50.34%	48.89%	4.86%	2.38%
Customer Deposits	352,400,000	1.14%	1.11%	2.45%	0.03%
Common Equity	<u>15,060,900,000</u>	<u>48.53%</u>	<u>50.00%</u>	9.75%	<u>4.88%</u>
Total Capitalization	<u>\$ 31,036,500,000</u>	<u>100.01%</u>	<u>100.00%</u>		<u>7.29%</u>

17

1 **Q. WHAT DOES CON EDISON FORECAST AS ITS ACTUAL EQUITY RATIO**
2 **SHARES OVER THE THREE-YEAR PERIOD?**

3 A. As shown above, the Company expects a common equity ratio of 48.53% in 2020,
4 increasing to 48.63% in each of 2021 and 2022. See Exh. AP-E5, Schedules 2-4.

5 **Q. WHAT REASON DOES THE COMPANY GIVE TO JUSTIFY THE USE OF A**
6 **50% COMMON EQUITY SHARE?**

7 A. Company witness Saegusa states that use of a 50% common equity share will (i) bring
8 New York up to the national average, (ii) offset the cash flow impact of the TCJA, and
9 (iii) signal regulatory support for the Company's credit strength. See Saegusa Testimony
10 at pages 23-24.

11 **Q. DO YOU HAVE ANY COMMENTS ON THIS PROPOSAL?**

12 A. Yes. Westchester does not believe that use of this proxy equity share is reasonable. As
13 the Company's recommended return already results in over 10% of the total revenue
14 requirement increase, there is no need to reward the company for an equity share it does
15 not actually meet. According to the response to NYECC-1-4, the dollar impact
16 associated with the change in the proposed increase in the equity ratio from 48.00% to
17 50.00% for electric is \$34 million and for gas is \$11 million. Also, without any
18 mechanism (such as an Earnings Sharing Mechanism as discussed below) to determine
19 the actual ROE, the Company stands to significantly over-collect revenues associated
20 with the ROE because the Company's proposed ratemaking equity ratio may be
21 significantly higher than its actual equity ratio.

1 **Q. DO YOU RECOMMEND SOME SORT OF EARNINGS SHARING**
2 **MECHANISM ON THE ROE?**

3 A. Yes. The AP Testimony at 115:19-21) states, “[t]o the extent that the recommended
4 equity ratio of 50.00 percent is agreed upon, the Company would modify its debt and
5 equity issuances to work toward achieving that ratio.” The Company is not proposing an
6 Earnings Sharing Mechanism. Without an Earnings Sharing Mechanism such as the one
7 currently in place (Case 16-E-0060, Electric Rate Plan adopted by the Commission’s
8 January 25, 2017 Order), the Company stands to significantly over-collect the return on
9 equity. The current Earnings Sharing Mechanism does not start sharing excess equity
10 earnings with customers until the return on equity reaches 9.50% over the currently set
11 ROE of 9.00%. According to the Company’s March 1, 2019, filing in Case No. 16-E-
12 0060, the Company claims that the earned rate of return on electric common equity in
13 2018 was 9.36% which is under the earnings sharing threshold of 9.50%. The excess
14 equity earnings (9.36% - 9.00% = 0.36%) was \$33 million or \$45 million (\$33 million x
15 1.354 gross-up) revenue equivalent gross-up. This \$45 million is too generous, and we
16 recommend for this rate case an Earnings Sharing Mechanism with a sharing threshold of
17 0.20% above the approved ROE.

18 **Electric Reliability Performance Mechanisms**

19 **Q. IS THERE A NEED FOR THE RELIABILITY PERFORMANCE MECHANISMS**
20 **(“RPMs”)?**

COUNTY OF WESTCHESTER PANEL

1 A. Yes. The reliability performance mechanisms are needed to ensure reliable and safe
2 service. The Company's delivery service is a monopoly, and clearly defined
3 consequences for failing to provide safe and adequate service must remain in effect. The
4 RPMs provide earnings consequences to the Company, and its shareholders, for the
5 quality of service provided to customers. Presently, all of the major electric utilities in
6 New York State have RPMs that link earnings directly to a utility's performance on
7 specific measures of electric service reliability.

8 **Q. DOES THE COMPANY PROPOSE TO REPLACE ANY CURRENT**
9 **PERFORMANCE METRICS UNDER THE CURRENT RPMs?**

10 A. Yes. The Company's EIOP Testimony at 202:16-203:2 proposes to:

11 1) replace the Network Outages per 1,000 customers served (Network Outage
12 Metric) with System Average Interruption Frequency Duration ("SAIFI"), 2)
13 replace the Network Average Outage Duration ("AOD") metric with System
14 Average Interruption Duration Index ("SAIDI") metric; and 3) replace the non-
15 network Customer Average Interruption Duration Index ("CAIDI") with non-
16 network SAIDI, as modified by excluding heat waves, for network and non-
17 network systems, that are above the design criteria of the electrical system.

18 **Q. PLEASE EXPLAIN SAIFI, SAIDI AND CAIDI PERFORMANCE METRICS.**

19 A. These performance measures are:

20 SAIFI = Number of Customers interrupted / number of customers served

21 CAIDI = Customer interrupted hours / number of customers interrupted

22 SAIDI = Customer interrupted hours / number of customers served

1 SAIFI measures the average number of customer account interruptions annually. CAIDI
2 measures the average time that an affected customer is out of service. SAIDI measures
3 the average amount of time a customer is out of service during the year. See EIOP
4 Testimony at 203:3-17.

5 **Q. WHAT IS THE NETWORK OUTAGE PER 1,000 METRIC AND NETWORK**
6 **AVERAGE OUTAGE DURATION (“AOD”) METRIC?**

7 A. The Network Outage per 1,000 metric =
8 $(\text{Total number of network customer interruptions} / \text{network customers served}) \times 1,000$
9 $\text{AOD} = \text{Duration of Outage Jobs} / \text{Total number of Outage Jobs}.$

10 See EIOP Testimony at 204:20-23 and 207:10-14.

11 **Q. WHEN DID THE COMPANY START USING THE NETWORK OUTAGE**
12 **METRIC AND AOD?**

13 A. Both of these metrics were adopted in 2009, in Case 08-E-0539, as a substitute for SAIFI
14 and CAIDI while the Company gained experience with a new Outage Management
15 System (“OMS”). *Id.* at 205. The Commission approved this change because
16 determining a reasonable network SAIFI and network CAIDI was not feasible after the
17 Company implemented the new OMS.

18 **Q. WHAT DOES THE COMPANY PROPOSE THAT THE NETWORK SAIFI**
19 **THRESHOLD (WHICH WOULD REPLACE THE NETWORK OUTAGE PER**
20 **1,000 METRIC) SHOULD BE SET AT?**

COUNTY OF WESTCHESTER PANEL

1 A. In the EIOP Testimony at 206, the Company proposes to set the SAIFI threshold at 20.05
2 (or $20.05/1000 = 0.020$). In response to DPS-15-403, the Company corrected the SAIFI
3 threshold to 18.50 (or $18.50 /1000 = 0.0185$). The Company calculated this threshold
4 using ten years of historical performance data (without storms) and statistical analysis to
5 identify a threshold that is one standard deviation above average historical performance
6 for the ten year period. *Id.* at 205. The SAIFI without storms over the last 10 years
7 ranged from 12.08 to 21.03. *Id.* at 206.

8 **Q. WHAT DOES THE COMPANY PROPOSE THAT THE NETWORK SAIDI**
9 **THRESHOLD (WHICH WOULD REPLACE THE NETWORK AOD METRIC)**
10 **SHOULD BE SET AT?**

11 A. In the EIOP Testimony at 209, the Company proposes to set the SAIDI threshold at 8.09
12 minutes. In response to DPS-15-403, the Company corrected the SAIDI threshold to 7.50
13 in minutes. The Company calculated this threshold using ten years of historical
14 performance data (without storms) and statistical analysis to identify a threshold that is
15 one standard deviation above average historical performance for the ten year period. *Id.*
16 at 209:1-6. The SAIFI without storms over the last 10 years ranged from 3.63 to 8.69.
17 See EIOP Testimony table at 209.

18 **Q. WHAT DOES THE COMPANY PROPOSE THAT THE NON-NETWORK SAIDI**
19 **THRESHOLD (WHICH WOULD REPLACE THE NON-NETWORK CAIDI)**
20 **SHOULD BE SET AT?**

1 A. At 210:1-5 of the EIOP Testimony, the Company proposes to set the SAIDI threshold at
2 60.59 minutes. The Company’s proposed SAIDI is calculated by multiplying the
3 currently set Non-Network SAIFI (0.495) times the currently set Non-Network CAIDI
4 (122.4) in minutes.

5 **Q. COULD YOU SUMMARIZE YOUR RECOMMENDATIONS WITH REGARD**
6 **TO THE COMPANY’S PROPOSAL TO REPLACE THE NETWORK OUTAGE**
7 **METRIC AND THE AOD METRIC?**

8 A. We recommend the continuation of the Network Outage Metric and the AOD metric at
9 current thresholds, until after the Company has completely deployed and integrated the
10 AMI with the OMS system. Once the AMI is fully deployed and integrated with other
11 systems, AMI will not only increase the accuracy of determining actual outages and
12 outage durations but, also reduce outages and outage durations.

13 The Company expects to have AMI fully deployed by 2022. See Customer Energy
14 Solutions (“CES”) Testimony at 119:12-14. After the Company has already spent
15 billions of dollars on AMI and OMS, the Company is proposing to spend \$718 million on
16 AMI during the Rate Period 2020-2022 (\$573 million on capital and \$145 million on
17 O&M). See CES Testimony at 122:1-6. As the Company testified, deploying AMI and
18 integrating AMI with other systems, such as, OMS, the Company will be able:

- 19 1) “to reduce system damage and customer outages” (EIOP Testimony at 96),
20 2) “to increase storm restoration efficiency” (*Id.* Testimony at 97),
21 3) “help[] to prevent overloads and failures” (*Id.* at 139) ,

COUNTY OF WESTCHESTER PANEL

- 1 4) to incur “reductions in outage duration” (*Id.* at 139),
- 2 5) “to better understand and operate the distribution system more efficiently”
- 3 (CES Testimony at 120-121),
- 4 6) to benefit from “efficient outage management and restoration efforts” (*Id.* at
- 5 120-121) and
- 6 7) to “have more complete and more accurate information about when outages
- 7 begin and end, as well as which customers were affected.” (Response to DPS-
- 8 15-403, 6.a.).

9 Therefore, Westchester recommends that changes to the AOD and Network Outage
 10 metric be delayed until after Con Edison fully integrates AMI and its OMS in all areas.

11 **Q. DO YOU HAVE ANY COMMENTS ON HOW THE NETWORK SAIFI**
 12 **THRESHOLD AND THE NETWORK SAIDI THRESHOLD ARE**
 13 **CALCULATED?**

14 A. For both metrics, the Company calculated the threshold by taking the ten year average of
 15 historical performance data (without storms) and then added one standard deviation
 16 above average historical performance for the ten year period to come up with the
 17 threshold.

	SAIFI	SAIDI Minutes	
10-Year Average	0.0157	5.89	a
1 standard deviation	0.0028	1.61	b
10-Year Average + 1 Standard Deviation *	0.0185	7.50	c = a + b
% Increase over 10-Year Average	18%	27%	d = c/a -1
* Corrected in Interrogatory DPS-15-403			

COUNTY OF WESTCHESTER PANEL

1 We believe increasing the historical 10-year average by one standard deviation is much
2 too generous considering the one billion dollars the Company has put into its electric
3 system to make it more resilient and reliable. If the Company's system is becoming more
4 reliable and resilient as a consequence of the one billion dollars the Company has
5 invested in the name of reliability and resiliency, then even using only the historical 10-
6 year average is generous.

7 For example, the EIOP Testimony states at 93:16-18, “[f]ollowing Sandy, Con Edison
8 invested approximately \$1 billion between 2013 and 2016 in storm hardening and
9 resilience projects across its service territory.” These projects “...improved grid
10 reliability and reduced the risk of service interruptions during both blue sky days and
11 extreme weather events.” *Id.* at 15:13-15. The EIOP Testimony states at 95:6-96:2:

12 Q. Did the Company's post-Sandy storm hardening mitigate the Riley and
13 Quinn power outages?

14 A. Yes. The Company's storm hardening investments reduced the number of
15 customers that lost power, and the number of key municipal facilities that
16 lost power during the storms. For example, 31 of the 34 key municipal
17 facilities that the Company worked on after Sandy did not experience any
18 service interruptions during Riley or Quinn, and only one lost power, even
19 though the storms damaged feeders that serve 19 of the facilities.

20 The Company estimates that its storm hardening investments prevented
21 60,000 customer outages in Westchester County. The Company calculated
22 these estimates by using its outage management models to compare the
23 pre and post-storm hardening system configurations for circuits damaged
24 by the storms. The Company also notes that it estimates that its storm
25 hardening has prevented approximately 370,000 customer outages since
26 2016, including the Riley and Quinn outages.

COUNTY OF WESTCHESTER PANEL

1 As the Company has stated above, the storm hardening has prevented many customer
2 outages since 2016. The Company proposes to use a 10-year average which does not
3 fully reflect the storm hardening and resilient projects implemented over the last 5 years.
4 As discussed above, we recommend the continuation of the Network Outage Metric and
5 the AOD metric at current thresholds, until after the Company has completely deployed
6 and integrated the AMI with the OMS system.

7 **Q. DO YOU AGREE WITH THE COMPANY'S PROPOSAL TO HAVE HEAT**
8 **WAVES ABOVE DESIGN CRITERIA OF THE SYSTEM DESIGN TO BE**
9 **CLASSIFIED AS EXCLUDABLE EVENTS FOR RPM?**

10 A. No. The Company proposes an exclusion for non-network outages when the variable for
11 the day is equal to or exceeds 85°F. Similarly, the Company is asking for exclusion of
12 network outages when the variable is equal to or exceeds 86°F for the day. See EIOP
13 Testimony at 212:6-15.

14 According to the response to DPS-15-402 (1.d and 1.e), the number of days over the last
15 11 years (2008 through 2018) during which the Company's proposed heat wave
16 exclusion would have applied was 14 days for the temperature variable of 85°F and 9
17 days for the temperature variable of 86°F.

18 In addition, the response to DPS-15-402 (2.b, c and d) notes that the Company has not
19 seen an increase in the rolling average temperature variable:

20

21

COUNTY OF WESTCHESTER PANEL

1 Question:

2 2. Con Edison states on page 211 of the EIOP testimony: “The Company’s
3 Climate Change Study, currently being drafted, predicts more frequent heat waves
4 and extreme weather taking place in the future for which the Company will need
5 to account.”

6 a.

7 b. How frequently and for what duration per year does Con Edison’s overhead
8 and underground equipment would need to experience a temperature variable
9 above the current design criteria before Con Edison decides to change its design
10 criteria?

11 c. When will Con Edison change its design criteria for its equipment to a higher
12 temperature variable rating?

13 d. What will be the new temperature variable rating of its overhead and
14 underground equipment?

15 Response:

16 b) and c) and d)

17 The Company normalizes its load forecast to a Temperature Variable (“TV”) of
18 86 degrees and designs the system accordingly. The Company monitors system
19 performance based on experienced historical peak load and TV. The Company
20 monitors the rolling five year TV calculation for any changes to TV. In order for
21 the Company to initiate a study to consider a potential change to system design
22 criteria, the actual rolling five year TV calculation would need to reflect values to
23 warrant it. Currently, there has been no indication of any rise in TV.

24 **Q. WHAT IS THE CURRENT TREATMENT OF HEAT WAVES IN**
25 **DETERMINING RPMs?**

26 A. As noted in the Company’s response to DPS-15-402 part 6:

27 The impact of heat waves is not removed from the historical data. In Case 16-E-
28 0060, the Company’s Electric Service Reliability Performance Mechanism at
29 Appendix 14, page 4, Exclusions (b) states “Heat-related outages are not a major
30 storm. However, the Company may petition the Commission for an exemption for

1 an outage if the Company can prove that such outage, weather related or not, was
2 beyond the Company's control, taking into account all facts and circumstances."
3 The Company petitioned for an overhead heat related exclusion for July 22, 2011
4 when the TV was 88.7.

5 **Q. WHAT DOES WESTCHESTER RECOMMEND BASED UPON THIS**
6 **INFORMATION?**

7 A. We believe that the Company has not justified excluding heat waves outages from the
8 RPM because

9 (i) there was less than 1 day per year (0.82 days per year) over the last 11 years
10 that met the temperature variable of 86°F,

11 (ii) there were only 1.3 days per year over the last 11 years that met the
12 temperature variable of 85°F,

13 (iii) the rolling 5 year temperature variable has not risen, and

14 (iv) under current RPM exclusions, the Company has the ability to petition the
15 Commission for an exemption for an outage, if the Company can prove that
16 such an outage, whether heat-related or not, was beyond the Company's
17 control.

18 **Q. DO YOU AGREE WITH THE COMPANY'S PROPOSAL TO REVISE THE**
19 **REMOTE MONITORING SYSTEM ("RMS") REPORTING RPM AND**
20 **PENALTY FROM \$10 MILLION TO \$5 MILLION?**

21 A. No. The Company is proposing to revise the RPM so that it must achieve a 90 percent
22 reporting rate for the RMS in a minimum of 62 of its 65 networks on the last month of
23 the second quarter. See EIOP Testimony at 216. Currently, the Company is required to

1 achieve a 90 percent reporting rate for the RMS in each network during the last month of
2 each quarter. Also, The Company wants to reduce the penalty from \$10 million to \$5
3 million. The Company desires both to (1) relax the standard, and (2) reduce the penalty.
4 Allowing both of these changes would unnecessarily allow the Company to reduce its
5 standard of reliability for its remote monitoring system. As this metric also allows the
6 Company to seek exemptions, we recommend continuing the \$10 million penalty.

7 **Gas Performance Measures**

8 **Q. DO YOU HAVE ANY CONCERNS ABOUT THE COMPANY’S GAS**
9 **PERFORMANCE MEASURES?**

10 A. Yes. Con Edison is proposing several changes to its gas performance measures, as
11 described by the Gas Infrastructure, Operations and Supply Panel (“GIOSP”) at 119 *et*.
12 *seq.* The Company states in overview:

13 The Company proposes to continue most of the major elements associated with
14 current Gas Performance Measures. We propose modifications to some of the
15 2019 targets and negative revenue adjustments, as discussed in more detail below.
16 The Company is also proposing additional positive incentives to supplement
17 existing positive incentives to reward superior performance that we achieve in a
18 cost-effective manner. *Id.* at 120:1-8.

19 **Q. WHAT IS YOUR FIRST CONCERN?**

20 A. The Company proposes to eliminate the cumulative three-year target and associated
21 negative revenue adjustment (“NRA”) for the Gas Main Replacement Program Safety
22 Performance Measure. It proposes to maintain the 2019 main replacement target of 90
23 miles per year for RY1, however. *Id.* at 121. The reason that Con Edison gives for

COUNTY OF WESTCHESTER PANEL

1 eliminating the target and NRA is that “the current Gas Rate Plan has no cumulative
2 target for the post-2019 period. Accordingly, the three-year target has no applicability in
3 the context of the Company’s proposal for a one-year rate plan.” *Id.* at 121:18-22. This
4 reasoning seems specious. If the Commission accepts a three-year package or settlement
5 plan for 2020-2022, a three-year target for main replacements should also be set, similar
6 to that proposed in the Joint Proposal for Cases 16-E-0060, et. al., in Appendix 16, at 5-6,
7 which states in part:

8 The Company will remove from service 255 miles of 12-inch and under cast iron
9 and unprotected steel gas main during the three Rate Year period 2017 to 2019....

10 If the Company does not remove from service a total of 255 miles of leak prone
11 pipe over the three-year period 2017 through 2019, a negative revenue adjustment
12 equivalent to 24 basis points will be accrued on the Company's books for the
13 benefit of firm service customers; provided, however, if the Company incurs a
14 negative revenue adjustment in any Rate Year, the 24 basis point negative
15 revenue adjustment will be reduced by the negative revenue adjustment incurred
16 for that year(s).

17 As the Company proposes to retain the 2019 main replacement target of 90 miles per year
18 for RY1, at a minimum, it should also retain the three-year target of 255 miles as set forth
19 in the previous rate filing as well, to be calculated for the 2018-2020 period. The stated
20 rationale that it is only proposing a one-year rate plan is facile, since the Company clearly
21 desires a three-year rate plan going forward.

22 **Q. WHAT OTHER CHANGES TO THE GAS PERFORMANCE MEASURES ARE**
23 **OBJECTIONABLE?**

24 A. At pages 122-124 of the GIOSP Testimony, the Company proposes modifying the Leak
25 Management Performance Measure so that the Company would earn an extra basis point

COUNTY OF WESTCHESTER PANEL

1 positive incentive at each level it reaches in eliminating the highest volume Type 3 leaks,
2 increasing the range of positive incentives from 1-5 basis points, depending on the
3 cumulative number of eliminated Type 3 leaks, up to a range of 2-6 basis points. Of
4 course, any company would prefer to eliminate or reduce the number of negative revenue
5 adjustments and to increase the magnitude of positive revenue adjustments, but Con
6 Edison has provided no basis for making this adjustment, other than stating that
7 “[i]ncreasing the maximum positive incentive to six would provide additional inducement
8 to address the highest volume leaks.” *Id.* at 123:14-16. While awarding an additional
9 basis point (of \$497,000) across the entire range of leak eliminations is an “inducement,”
10 the Company provides no explanation of why it is necessary or reasonable. The
11 Company touts improved safety and reduced GHG emissions as side benefits associated
12 with gas main replacements, leak management, and higher numbers of 30-minute
13 emergency responses, but maintaining safety is a baseline responsibility that should not
14 be subject to positive incentives. The Company proposes to reward reductions in GHG
15 emissions through other earnings adjustment mechanisms.

16 For the Emergency Response Safety Performance Measure, Con Edison is proposing a
17 new positive revenue adjustment (“PRA”) of two basis points if the Company manages to
18 respond to emergencies in 30 minutes at least 86% of the time, with increasingly more
19 basis points at higher percentages. See GIOSP Testimony at 124-125. As noted above,
20 while a company reasonably wants to increase positive revenue adjustments, the
21 Company has not provided sufficient reasons for being granted such a request, other than
22 that “achieving superior performance benefits both customers and public safety.” *Id.* at

COUNTY OF WESTCHESTER PANEL

1 125:5-7. The Westchester Panel believes that the company already has sufficient
2 motivation to achieve superior performance—it should not need to be rewarded with
3 more revenue in order to respond more quickly to emergencies.

4 The PRAs for this performance measure, as proposed by the Company, would allow 2
5 basis points for a response rate under 30 minutes between 86-88%, 4 basis points from
6 88-90%, and 6 basis points if the response rate is 90% or greater. See GIOSP Testimony,
7 Table 3 at 125. Based upon information provided in response to DPS-1-170, 171, and
8 171-Supp, the Company would have earned 2 basis points in each of 2013-2017, and 6
9 basis points in 2018 under its proposed PRA. The fact that the Company is seeking a
10 new PRA that it already knows would have garnered between 2 and 6 basis points in
11 recent periods, coupled with the possibility of tripling the PRA if performance is
12 improved by slightly more than 2% (from 88% to any amount above 90%) makes this
13 proposal illogical, disproportionate and otherwise unreasonable. As is the case with
14 many earnings adjustment mechanisms, the Company is seeking a higher rate of return
15 for performance that it has already been capable of achieving without the proposed PRA,
16 and is seeking increments of return that are disproportionately large compared to the
17 incremental improvement in performance.

18 **Q. DOES WESTCHESTER OBJECT TO OTHER PROPOSED CHANGES TO THE**
19 **METRICS?**

20 A. The Company is proposing a number of changes to its Damage Prevention Safety
21 Performance Measures. First, it is requesting that it be allowed to change the

COUNTY OF WESTCHESTER PANEL

1 methodology for calculating the Total Damage Prevention Safety Performance Measure.
2 It notes that its “current method ... provides that the measure is derived by the total
3 number of damages incurred per every thousand one-call tickets (“OCTs”) received
4 excluding refreshes (aka relocates).” GIOSP Testimony at 127:6-9. The Company
5 requests that the method be changed “to include OCT refreshes greater than ten days old
6 in the Company’s calculation for Total Damages [that] will measure the Company on the
7 same basis as [is used by] other” New York State utilities. *Id.* at 128:12-15. Con Edison
8 claims that its metric based upon its proposed change resulted in a metric of 1.21 for
9 2017 and 1.17 for 2018. *Id.* at 129:7-9. Under the existing method, Con Edison’s metric
10 did not meet the desired targets for either 2017 or 2018, while under the new metric, it
11 would have met its proposed target in 2018. *Id.* at 129:1-10. In other words, the
12 Company wants to treat more tickets as one-call-tickets, thereby portraying a cosmetic
13 improvement in performance and moving the goal post closer. In addition, as described
14 below, it seeks up to 6 basis points of PRA if it reaches beyond the goal post.

15 Second, based upon those results, the Company proposes that it should receive a range of
16 positive and negative revenue adjustments starting from a 1.20 base, so that any rate
17 above 1.20 would get negative revenue adjustments (up to 6 basis points if at 1.40 or
18 above), and rates below 1.20 would get PRAs (up to 6 basis points if at 1.00 or below).
19 *Id.* at 130. The current Damage Prevention Safety Performance Measures only include
20 negative revenue adjustments. *Id.* at 131. As noted above, Westchester does not believe
21 that PRAs are necessary in order to incentivize Con Edison to operate a safe and reliable
22 gas system, especially disproportionately large increments of PRAs. This is particularly

1 true as the proposed calculation of the metric has not been used in New York City
2 previously, so changing the target and providing PRAs at the same time is over-reaching.

3 **Q. DOES THE COMPANY PROPOSE CHANGES TO ITS GAS REGULATIONS**
4 **PERFORMANCE MEASURES?**

5 A. Yes. Con Edison is also proposing various changes to its Gas Regulations Performance
6 Measure, including reducing the total potential negative revenue adjustments cap from
7 100 basis points to 75 basis points and increasing exclusions so that thresholds are higher.
8 See GIOSP Testimony at 133 *et. seq.*

9 For example, the Company would exclude the first 5 High Risk violations and first 15
10 Other Risk violations found in Field and Record Audits and reduce the overall negative
11 revenue adjustment (“NRA”) cap for such violations. *Id.* at 134:5 *et seq.* The Company
12 reasons that perfection should not be expected or be the standard for performance and
13 that the goal of no higher than 5 High Risk violations, and no more than 15 Other Risk
14 violations, would be more reasonable. See *Id.* at 135:4-12. In addition, as noted, the
15 Company wants to reduce the total NRA cap from 100 basis points to 75 basis points. *Id.*
16 at 135:13-19. The only reasoning provided is that the Company has achieved a consistent
17 downward trend in Records and Field Audit violations and that the Company will strive
18 to continue this decline. The Company undermines its case by stating that the proposed
19 reduction in the total cap on NRAs is “not entirely” consistent with the treatment
20 accorded to other local distribution companies who reduced NRAs and reallocated the
21 reductions to other performance measures. *Id.* at 135:20-136:6. The Company opposes

1 reallocation of its own NRA reductions to other performance measures unless the present
2 level of basis points set forth in other NRAs are shown to be inadequate (which it does
3 not believe is the case). The Company asserts that the reduction in total Negative
4 Revenue Adjustments “would have no adverse impact on the Company’s ongoing
5 commitment to safety.” *Id.* at 136:11-20.

6 **Q. WHAT IS YOUR REACTION TO THIS PROPOSAL?**

7 A. It is difficult to reconcile (i) the Company’s position that a reduction in NRAs would
8 have no adverse effect on its commitment to safety with (ii) its position that it should be
9 rewarded with more (and more easily earned) PRAs, while simultaneously being held to
10 laxer standards, in order to incentivize better performance. If removal of a negative
11 revenue adjustment would have no adverse effect, then, logically, the addition of a
12 positive revenue adjustment can be expected to have no effect either.

13 **Q. PLEASE COMMENT ON OTHER PROPOSED MODIFICATIONS.**

14 A. The next proposed modification is “elimination of the NRA for a work procedure
15 violation.” *Id.* at 137 *et seq.* The testimony is not a model of clarity, but one gathers that
16 the nub of the Company’s problem is that violation of a Company Work Procedure is a
17 considered a High Risk violation (under 16 NYCRR Section 255.603) and that can lead
18 to an NRA.⁶

⁶ 255.603 General Provisions (Emphasis added):

COUNTY OF WESTCHESTER PANEL

1 The Company says there are two situations in which the violation is applied. First, the
2 Company objects that the same action or inaction that triggers a violation of an Other
3 Risk regulation as well as a violation of the Company's work procedures (i.e. a High Risk
4 violation under 255.603), is characterized as a High Risk violation on the first occurrence
5 and as an Other Risk violation on subsequent occurrences. The Company contends that if
6 the substance of a Company action (or inaction) is an Other Risk violation, that action
7 should not also be treated as a High Risk violation simply because the action gives rise to
8 a violation of Company Work Procedures.

9 Westchester disagrees. It appears that if an action gives rise to a work procedure
10 violation and also an Other Risk violation, it is treated as a High Risk violation on the
11 first occurrence and is treated as an Other Risk violation on subsequent violations. If
12 anything, this treatment gets more lenient after the first occurrence, contrary to the usual
13 treatment of repeat offenders.

(a) No person may operate a segment of pipeline unless it is operated in accordance with this Part.

(b) **Each operator shall prepare and file a detailed written operating and maintenance plan for complying with all the provisions of this Part before operations of a pipeline system commence;** it must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. Appropriate parts of the plan must be kept at locations where operations and maintenance procedures are conducted. **Revisions to these written procedures shall be submitted at least 30 days prior to the effective date.** Minor revisions that do not affect the intent of the procedure may be implemented immediately and submitted on a quarterly basis.

(c) Each operator shall establish and maintain the maps of its transmission lines and distribution mains and maps or records of its service lines as necessary to administer its operating and maintenance plan.

(d) **Each operator shall satisfactorily conform with the program submitted.**

(e) The commission may require an operator to amend its operating and maintenance plan as necessary to provide a reasonable level of safety.

16 CRR-NY 255.603

Current through February 28, 2019

COUNTY OF WESTCHESTER PANEL

1 **Earnings Adjustment Mechanisms**

2 **Q. WHAT ARE EARNINGS ADJUSTMENT MECHANISMS (“EAMs”)?**

3 A. EAMs are mechanisms that “encourage and incentivize the Company to exceed energy
4 targets in a cost-effective way for customers” as described in the Electric Policy Panel
5 Testimony at 26:5-7. The mechanisms allow the Company to recover additional revenue
6 as calculated as a percentage of return on rate base.

7 **Q. HOW DOES THE COMPANY RECOVER INCENTIVES RELATED TO EAMs?**

8 A. For electric customers, the Company currently collects any earned EAMs by means of the
9 Monthly Adjustment Factor, and collects EAMs through the Monthly Rate Adjustment
10 for gas customers within 24 months of their being earned. See AP Testimony at 140:6-8.
11 According to the response to COW-3-56, all “EAMs earned are collected over a 12
12 month period.”

13 **Q. WHAT IS THE POSSIBLE TOTAL AMOUNT OF ALL EAMs THAT THE
14 COMPANY HAS PROPOSED IN ITS RATE FILING?**

15 A. The Company made an original proposal for EAMs that was provided in Exhibit CES-9,
16 as well as page 141 of the CES Testimony:

17 Exhibit _____ (CES-9) Summary of EAM Basis Points

18 Electric EAMs

		2020	2021	2022
Electric Energy Efficiency (E3 EAM)	Min	7.0	7.0	7.0
	Mid	21.0	21.0	21.0
	Max	35.0	35.0	35.0
	Min	5.0	5.0	5.0
	Mid	15.0	15.0	15.0

COUNTY OF WESTCHESTER PANEL

Electric Peak Reduction	Max	25.0	25.0	25.0
DER Utilization (DER EAM)	Baseline	4.0	4.0	4.0
	Mid	12.0	12.0	12.0
	Max	20.0	20.0	20.0
Electric Greenhouse Gas Emissions Reduction	Baseline	4.0	4.0	4.0
	Mid	12.0	12.0	12.0
	Max	20.0	20.0	20.0
TOTALS	Min	20.0	20.0	20.0
	Mid	60.0	60.0	60.0
	Max	100.0	100.0	100.0

1 Gas EAMs

		2020	2021	2022
Natural Gas Energy Efficiency (GE2 EAM)	Min	7.0	7.0	7.0
	Mid	21.0	21.0	21.0
	Max	35.0	35.0	35.0
Natural Gas Peak Reduction (GPR EAM)	Min	4.0	4.0	4.0
	Mid	12.0	12.0	12.0
	Max	20.0	20.0	20.0
Natural Gas Greenhouse Gas Emissions Reduction (GGHG EAM)	Baseline	3.0	3.0	3.0
	Mid	9.0	9.0	9.0
	Max	15.0	15.0	15.0
TOTALS	Min	14.0	14.0	14.0
	Mid	42.0	42.0	42.0
	Max	70.0	70.0	70.0

2

3 However, the Company appears to have replaced this proposal as described in the
4 response to DPS-18-457:

5 The Company revised its EAM proposal on April 1, 2019 and submitted it in the
6 Con Edison Chapter of the *NY Utilities Report Regarding Energy Efficiency*
7 *Budgets and Targets, Collaboration, Heat Pump Technology and Low- and*
8 *Moderate-Income Customers and Requests for Approval* in Case 18-M-0084
9 (starting at p. 67)

10 On page 74 of this filing (“EE Filing”), also provided in response to DPS-31-655
11 Attachment 9, the Company provided revised tables of the possible basis points that
12 could be earned by the Company, as follows:

13

COUNTY OF WESTCHESTER PANEL

Table 12 - Cross Commodity EAM Basis Points

		2020	2021	2022
Annual MMBtu EAM	Min	7	7	7
	Mid	21	21	21
	Max	35	35	35
Greenhouse Gas Emissions Reductions EAM	Min	5	5	5
	Mid	15	15	15
	Max	25	25	25
Totals	Min	12	12	12
	Mid	36	36	36
	Max	60	60	60

Table 13 - Electric-Only EAM Basis Points

		2020	2021	2022
MWh:MW Ratio EAM	Min	2	2	2
	Mid	6	6	6
	Max	10	10	10
System Efficiency EAM	Min	N/A	N/A	1
	Mid	N/A	N/A	3
	Max	N/A	N/A	5
DER Utilization	Min	3	3	3
	Mid	9	9	9
	Max	15	15	15
Totals	Min	5	5	6
	Mid	15	15	18
	Max	25	25	30

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Q. WHAT DOES ONE BASIS POINT EQUAL?

8

A. For electric, one basis point of return equals approximately \$1.55 million, according to

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the response to COW 2-13, while one basis point for gas equals approximately \$497,000

COUNTY OF WESTCHESTER PANEL

1 for the first rate year. A cross commodity (combined) EAM would earn \$2.0474 million
2 per basis point. See the response to DPS-31-656.

3 **Q. HOW MUCH EXTRA REVENUE CAN CON EDISON EARN IF IT MEETS ALL**
4 **OF THE MAXIMUM EAM TARGETS?**

5 A. According to these numbers, the Company could presumably earn up to an additional
6 \$122.8 million in cross commodity EAM revenues (60 x \$2,0474,000), and \$38.75
7 million in electric-only EAM revenues (25 x \$1,550,000) for a RY1 total of \$161.6
8 million, with increases for each year thereafter, based upon meeting the maximum
9 targets. This does not include the Share The Savings EAM. This number matches the
10 Company's own calculation of the amounts it could earn, as noted in response to CITY-
11 14-295, in which the Company states that it could earn up to \$161.6 million in RY1,
12 rising to \$191.7 million in RY3. The originally proposed EAMs would have provided
13 \$155 million for electric and \$34.76 million for gas in additional earnings. See response
14 to UIU-1-31.

15 **Q. HOW MUCH HAS THE COMPANY EARNED WITH THE EAMS GRANTED IN**
16 **THE LAST RATE CASE?**

17 A. According to the response to NYECC-2-8, the following amounts were earned, or
18 projected to be earned in 2019, as follows:

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20
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COUNTY OF WESTCHESTER PANEL

	<u>2017 Actuals</u>	<u>2018 Actuals</u>	<u>2019 Forecast</u>
Electric EAM			
Energy efficiency and system peak reduction programs	12,680,000	16,670,000	11,100,000
Energy Efficiency - Outcome Based		8,335,000	
AMI		210,000	210,000
Electric Positive Incentives			
Residential Service terminations/uncollectibles (split 84%/16%)	5,040,000	5,040,000	5,040,000
Total Achieved	17,720,000	30,255,000	16,350,000
	<u>2017 Actuals</u>	<u>2018 Actuals</u>	<u>2019 Forecast</u>
Gas EAM			
AMI		40,000	40,000
Gas Positive Incentives			
Residential Service terminations/uncollectibles (split 84%/16%)	960,000	960,000	960,000
Leak backlog reductions	2,000,000	1,824,000	2,030,000
Leak prone pipe replacement	4,000,000	3,647,000	4,060,000
Total Achieved	6,960,000	6,471,000	7,090,000

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These total amounts range from \$24.7 million in 2017, up to \$36.7 million in 2018, and a forecast of \$23.4 million in 2019.

3

4

Q. WHAT IS THE COMPANY PLANNING TO SPEND ON ENERGY EFFICIENCY PROGRAMS DURING THE THREE FORECAST RATE YEARS?

5

6

A. The CES Testimony at 14, Table 1, shows total capital expenditures on energy efficiency and demand management (“EEDM”), electrical vehicle (“EV”) initiatives and energy storage that amount to approximately \$910 million in the three forecast rate years. As part of this total:

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The Company is proposing to spend \$215.9 million, \$257.8 million, and \$300.3 million in the next three years (2020-2022) on its electric and gas EE and beneficial electrification portfolio of programs, not including any additionally authorized funds for gas EE approved as part of the NPS portfolio in the Smart Solutions proceeding.

1 See Exh. CES-1, p. 7. Note that these amounts do not include costs for AMI or the
2 Company's proposed Customer Service Systems or Distributed System Platform
3 expenditures. The amounts proposed in Con Edison's chapter in the Energy Efficiency
4 Filing in Case 18-M-0084 are lower, at Table 10, page 85.

5 **Q. DO YOU HAVE ANY COMMENTS ON THE COMPANY'S PROPOSED**
6 **INVESTMENTS IN ENERGY EFFICIENCY, ELECTRIC VEHICLES ("EV"),**
7 **ELECTRIC STORAGE AND DISTRIBUTED ENERGY RESOURCES?**

8 A. Yes. The County of Westchester is encouraged by the Company's proposed investments
9 in energy efficiency, electric vehicles, electric storage, and, in order to enable the further
10 integration of DER onto its system, investment in its Distributed System Platform
11 ("DSP"). However, Westchester needs to be assured that investments in these areas will
12 occur in the County of Westchester as well as in New York City. For example, the
13 Company is proposing an EV make-ready program at a cost of \$10 million per rate year.
14 See CES Testimony at 61:3-7. Westchester understands that this is a nascent program
15 and specific sites for projects have not been selected. Westchester also supports the
16 Company's efforts to expand the EV market, but believes that these efforts, and the funds
17 provided by ratepayers, should be expended in Westchester in a proportional and fair
18 manner. For many other programs, the Company states that it does not delineate the
19 investments in its service territory between the County of Westchester and New York
20 City. See the response to COW-3-72. However, Westchester maintains that the
21 Company should ensure that the program funds, e.g., the \$774 million of energy
22 efficiency investments and the \$91 million of energy storage investments, shown in Table

1 1 of the CES Testimony at 14, should be distributed consistently and proportionately
2 throughout its service territory. Further, the investments should be monitored carefully
3 by this Commission to ensure that the costs to be recovered by ratepayers are prudently
4 incurred.

5 **Q. WHAT IS WESTCHESTER’S OPINION CONCERNING THESE EAMs?**

6 A. It is Westchester’s position that the totality of the prospective bonus points that could be
7 awarded under these various incentives is excessive. The Company is already being
8 provided with revenues sufficient to earn the company a return on equity of 9.36% which
9 is above the approved 9.00% return on equity, as described in the Company’s filings with
10 this Commission. See Case 16-E-0060, March 1, 2019, ConEd Earnings report for 2018.
11 In this proceeding, Con Edison is requesting even more—a return of 9.75%, as described
12 and protested above. Ratepayers are being required to fund each of the programs
13 underlying the success that would lead to payouts under the various EAMs, which
14 funding covers the costs to plan, develop, initiate, promote, manage, and strive to achieve
15 the targets set out in the Company’s testimony. After funding all of the expenses,
16 ratepayers then are requested to reward the company for doing the very tasks the
17 customers paid for the Company to perform. This is not reasonable.

18 **Q. ARE THERE ANY PARTICULAR EAMs YOU WISH TO DISCUSS?**

19 A. Yes. In particular, the Company’s new, proposed Share The Savings EAM seems unjust
20 and unreasonable. It would be one thing to share the savings if the costs were shared as
21 well, but this is not the case. Furthermore, in response to CITY-14-273, the Company

COUNTY OF WESTCHESTER PANEL

1 stated that “the Company did not develop a BCA [Benefit Cost Analysis] on the proposed
2 Share The Savings EAM as this [sic] there are no explicit targets associated with the
3 EAM; rather it is a structure to drive achievement of savings at lower program cost,
4 thereby reducing customer costs.” Targets are needed in order to provide an objective
5 basis for awarding EAM revenue and to ensure that there is a causal nexus between
6 actions of the Company and the amounts of EAM revenues disbursed.

7 Two other EAMs, the Distributed Energy Resource (“DER”) Utilization EAM and the
8 Electric Green House Gas (“GHG”) Emissions EAMS, appear to reward the Company
9 for results not related to Company activities. These two EAMs are not a result of the
10 Company funding programs specifically to encourage the desired activities or outcomes.

11 For example, the response to CITY-14-285 states: “At a fundamental level, the
12 greenhouse gas (“GHG”) Emissions Reduction EAM is a measure of activities in the
13 Company territory that result in the beneficial outcome of a reduction of emissions,
14 regardless of whether the activities were directly incented by Con Edison’s programs.”

15 In addition, the Company described these two EAMs in response to MTA-2-7:

16 **Subject:** EAM Activities

17 Please describe the activities that the Company plans to undertake in
18 order to earn the DER Utilization EAM and Electric GHG Emissions
19 Reduction EAM (*see* Customer Energy Solutions Panel Testimony at
20 pages 139 *et seq.*).

21 **Response**

22 The two EAMs described in question 7 are not driven by Con Edison’s
23 portfolio of programs, *i.e.*, the EAMs depend on the Company
24 facilitating territory-wide beneficial outcomes through broad efforts with

1 no direct funding available to meet EAM targets. The Company plans to
2 continue its efforts to support and facilitate customer adoption of new
3 technologies that are aligned with the state policy objectives of increased
4 DER penetration and lower GHG emissions, the focus of the two EAMs
5 respectively, through activities such as marketing, outreach, and
6 education on new technologies. For example, Con Edison is partnering
7 with NY-BEST and NYSERDA to host “Con Edison Energy Storage
8 Day” on Monday, May 6, 2019 at the Con Edison Learning Center in
9 Long Island City featuring experts from the energy storage industry,
10 Con Edison, New York City, NYSERDA and the NYS Department of
11 Public Service to provide information on the opportunities for deploying
12 energy storage in Con Edison’s territory. In addition, the Company also
13 plans further improvements to its Interconnection Online Application
14 Portal and the interconnection process more generally.

15 **Q. WHAT IS CONCERNING ABOUT THIS ANSWER?**

16 A. The Company’s answer appears to allow it to earn an incentive on energy efficiency
17 efforts promoted and carried out by others. For example, if a group of environmental
18 activists begin a successful campaign to encourage the people of New York to reduce
19 their individual GHG emissions, there is no reason why Con Edison customers should be
20 paying the Company for efficiencies achieved by customers themselves. Such EAMs
21 could actually discourage people from reducing GHG emissions if they realized that by
22 doing so Con Edison would be able to charge them more.

23 **Business Cost Optimization Sharing Proposal**

24 **Q. WHAT IS THE COMPANY’S BUSINESS COST OPTIMIZATION PROPOSAL?**

25 A. According to the Electric Policy Panel (“EPP”) Testimony at 47:5-13:

26 [T]he Company has recently implemented a Business Cost Optimization (“BCO”)
27 initiative designed to manage operating costs across the enterprise. This
28 Company-wide program has three main objectives: (1) to identify ways to
29 improve or re-engineer our work that results in reduced operation and

1 maintenance (“O&M”) costs; (2) to develop a plan for and implement cost
2 savings initiatives; and (3) to build a long-term and sustainable process for
3 achieving ongoing cost savings.

4 The EPP continues by noting that previously, cost-savings initiatives were handled by
5 individual departments. For the BCO initiative, however, the Company hired a
6 consultant specializing in cost reduction programs, to help develop “a structured and
7 comprehensive approach to identifying and implementing cost reduction opportunities on
8 a Company-wide basis that considers the operating and capital expenditures at both Con
9 Edison and Orange & Rockland Utilities, Inc. (“O&R”).” (*Id.* at 48).

10 **Q. HOW HAS THE COMPANY TREATED THE EXPECTED COST SAVINGS**
11 **FROM THE BCO INITIATIVE IN ITS REVENUE REQUIREMENT**
12 **FORECAST?**

13 A. In a change from prior cost-savings proposals, Con Edison proposes “to give customers
14 the benefit of 70 percent of these projected savings up front, and that the Company retain,
15 for the term of this agreement, actual savings (which may be more or less than the
16 projected savings), as an incentive to achieve the full projected amount, which will
17 benefit customers in subsequent years.” See EPP Testimony at 52:7-13.

18 **Q. HOW DOES THE COMPANY PROPOSE TO SHARE THE BENEFITS OF BCO**
19 **SAVINGS?**

20 A. In essence, Con Edison has estimated the amount of savings it expects to achieve under
21 its various BCO initiatives over the 2020-2022 time period. Of this projected amount, the
22 Accounting Panel explains that it first is providing ratepayers with a 1% labor

COUNTY OF WESTCHESTER PANEL

1 productivity savings adjustment similar to prior rate filings, with the remainder of the
2 projected savings split 70/30 between ratepayers and shareholders. See AP Testimony at
3 23:14-17. The Company is crediting the combination of the 1% labor productivity
4 savings adjustment and ratepayers' 70% share of the remainder to the Company's
5 revenue requirement, as shown in Exh. AP-E3 and AP-G3, Schedule 6. In essence, these
6 credited amounts are subsumed within the targeted revenue requirements. If the
7 Company manages to reduce costs beyond the amounts provided as credits to customers,
8 it will retain those additional actual savings. While the exact method of calculating
9 actual savings is not clear, Westchester presumes that if Con Edison's total O&M costs
10 fall below the estimates provided in Exh. AP-E3 and AP-G3, Schedule 6, the Company
11 would still be allowed to recover the full amount of forecast costs, even if actual costs are
12 lower than expected, because of achieved savings.

13 **Q. PLEASE COMMENT ON THE DESIGN OF THE BCO COST/BENEFIT**
14 **SHARING.**

15 **A.** Although the Company characterizes the BCO cost/benefit design as a no-risk customer
16 benefit, customers must forgo approximately 30% of estimated savings and all rights to
17 actual savings. Moreover, the design of the sharing of BCO costs and benefits provides
18 the Company with incentives (i) to low-ball its up-front projection of future savings (in
19 order to minimize the 70% customer share) and (ii) to pump up the "actual savings" that
20 will flow 100% to shareholders. Having designed the BCO cost-sharing, the Company is
21 in the best position to minimize its risks and to maximize actual savings.

COUNTY OF WESTCHESTER PANEL

1 At the very least, there ought to be a true-up of actual savings with projected savings,
2 with at least 70% of any over/under differential between actual and projected savings
3 being credited/debited to ratepayers. However, the Company proposes no after-the fact
4 true-up. See AP Testimony at 25:1.

5 **Q. WHY IS THE COMPANY PROPOSING TO RETAIN WHAT MAY BE NEARLY**
6 **30% OR MORE OF ALL PROJECTED SAVINGS?**

7 A. The Company states that, with the BCO initiative moving cost reduction initiatives to a
8 utility-wide, centralized office, a shared savings incentive is justified because “it provides
9 the Company with the incentive to continually refresh the pipeline of potential initiatives”
10 and “it addresses some of the business risk associated with not achieving the aggressive
11 level of savings reflected in the rate filing.” *Id.* at 23:6-10.

12 **Q. WHY DOES CON EDISON PROPOSE THE 70/30 SHARING SPLIT?**

13 A. The Company states that the Commission authorized the same 70/30% sharing
14 percentage for the implementation of non-wires solutions (“NWS”), and it claims that the
15 reasons supporting the BCO sharing formula are similar to the reasons given by the
16 Commission in the NWS order. See AP Testimony at 24:1-5. The Company quotes the
17 Commission’s NWS order giving the reasons for this split, including “encourage
18 enterprise-wide attention at the utility,” “spur strategic, portfolio-level approaches
19 beyond narrow programs,” and “be commensurate with the level of financial risk borne
20 by utility shareholders.” *Id.* at 24:8-12.

1 **Q. DO YOU AGREE WITH THIS PROPOSED SHARING PERCENTAGE**
2 **APPROACH?**

3 A. No, for the reasons described below.

4 **Q. THE COMPANY CLAIMS THAT IT DOES NOT SEE ANY RELEVANT OR**
5 **MATERIAL DIFFERENCES WITH REGARD TO NWS AND THE COMPANY'S**
6 **BCO INITIATIVE. DO YOU AGREE?**

7 A. No. The response to NYECC-2-13 states:

8 Referencing page 24, line 1 through page 25, line 6, does the Company see any
9 differences at all between the Commission authorized sharing percentage for non-
10 wire solutions and the Company's proposed implementation of the BCO initiative
11 here regarding O&M costs to achieve that would require different treatment here
12 from the non-wire solutions situation?

13 Response

14 No, the Company does not see any relevant or material differences.

15 However, one major difference is that the NWS incentives are for savings resulting from
16 investments of projects to be constructed at a cost – at times by third party developers or
17 customers – lower than the cost of traditional utility investments with the up-front
18 knowledge that part of the project savings would go to the Company. In contrast, the
19 BCO incentives are being proposed after the investments in Information Technology
20 (“IT”), software, Advanced Metering Infrastructure (“AMI”), and other enabling assets
21 have been made or are being approved. Such approval of investment normally includes
22 cost-benefit-analyses indicating that the projects will benefit the ratepayers in some
23 fashion. When the Company requests a 70/30% share of savings after-the-fact for
24 efficiencies gained from these investments, ratepayers are not receiving the full benefits

COUNTY OF WESTCHESTER PANEL

1 that were the basis for approval of these investments. This is not the bargain agreed to by
2 this Commission and the Company during prior rate settlement negotiations.

3 With NWS, the Company foregoes traditional high-cost, capital intensive, long-lead time
4 utility investments in “wires” in order to implement other alternative “non-wires” third-
5 party solutions such as distributed generation, battery storage, demand response, and the
6 like, to resolve constraints on its system. Unlike the situation with NWS, the BCO
7 initiative involves the Company’s supposedly more aggressive use of existing and
8 planned resources, already paid for by rate payers, in ways that will reduce costs.

9 Westchester County does not understand why the Company’s shareholders should be
10 rewarded for the Company’s work to reduce costs—based upon the expected \$1 billion
11 increase in revenue requirement (before income tax credits), Con Edison should be doing
12 all it can to reduce costs without needing an “incentive.” Again, ratepayers who are
13 paying for the assets necessary to implement the BCO initiatives should reap the full
14 benefits of BCO savings.

15 In addition, while the Company claims that “customers are assured of the 70% share of
16 BCO savings and the risk of not achieving the aggressive targets falls solely on the
17 Company” (see AP Testimony at 25:3-4), there appear to be enough other areas where no
18 reconciliation of costs occur that allow the Company to reduce costs so that shareholders
19 could still retain these savings by making cost-saving measures in other areas of
20 operations. The Company is proposing to retain \$13 million in RY1 in projected BCO
21 savings, which is approximately 0.58% of the Company’s proposed O&M of \$2,250
22 million. If savings are not being achieved as anticipated, the Company could reduce

1 costs in other areas of O&M and thereby keep the \$13 million in savings, or even more, if
2 total savings exceeded the total net BCO savings in RY1 of \$62 million. See AP
3 Testimony, table at 24, and Exh. AP-E3 and AP-G3, Schedule 6.

4 **Q. HOW ARE RATEPAYERS PAYING FOR THE COSTS NECESSARY TO**
5 **IMPLEMENT THE BCO INITIATIVES?**

6 A. The Commission has, in past rate cases, approved the cost recovery of billions of dollars
7 in annual capital expenditures for system upgrades and replacements designed to make
8 Con Edison's system more reliable, safer, more efficient, cleaner and customer friendly.
9 These investments, which will allow the Company to achieve BCO savings, include at least
10 in part AMI, the Outage Management System ("OMS"), and programs identified by the
11 Customer Operations Panel Testimony at 46:

Customer Operations Capital Program	BCO Cost Savings Initiative(s) Supported
Digital Customer Experience (DCX)	Self-Service Optimization
Journey Mapping	Self-Service Optimization
Data & Analytics	Self-Service Optimization
Virtual Assistants	Workforce Management
Back Office Automation and Agent Tools	Self-Service Optimization
	Back Office Automation
	Workforce Management

12 **Q. HOW HAS THE COMPANY DIFFERENTIATED BCO FROM PRIOR EFFORTS**
13 **TO REDUCE COSTS?**

14 A. According to the Company's response to NYECC-1-5, the Company, prior to the BCO,
15 "did seek ways to improve, process, functions and tasks to reduce costs while upholding
16 core strategic imperatives of safety, operational excellence and customer experience."

COUNTY OF WESTCHESTER PANEL

1 The Company states that it “voluntarily took a fresh approach” and “now has a broader
2 and deeper capability to take advantage of new digital technologies.” However,
3 ratepayers already are paying for these “new digital technologies” through capital
4 investment (in rate base) on which the Company is collecting millions of dollars in
5 return. When the Company justified these investments, the cost-benefit analysis did not
6 take into account that in the future the Company would attempt to claw back a major
7 portion of the ratepayer savings that the cost-benefit-analysis forecasted for these
8 investments.

9 Furthermore, the Company claims that in the past it was “upholding... operational
10 excellence” and that the “BCO Program is an aggressive program that furthers those
11 same goals in a new enhanced way.” In essence, the Company wants to be paid more
12 revenue on the capital investment that promised to create savings and to do the same
13 thing it has done in the past but just be more “aggressive.” In the past, the Company
14 claims to have upheld operational excellence so why should ratepayers pay for the
15 Company to uphold more “aggressive” “operational excellence?” The Company’s job is
16 to operate the system safely, reliably, efficiently and prudently, in the most cost effective
17 way. The Company should not be allowed to claw back ratepayer savings that were used
18 to justify, and establish the cost-benefits of, previously approved programs.

19 **Q. DOES THE COMPANY PLAN TO CONTINUE THE SHAREHOLDER**
20 **INCENTIVES FOR THE BCO AFTER THE RATE PERIOD?**

1 A. According to the Company’s response to NYECC-2-14, “[t]he Company does not intend
2 to seek continued shareholder incentives after expiration of the rate plan for any BCO
3 savings achieved during that period, but reserves the right to request shareholder
4 incentives for newly identified BCO savings in future rate proceedings.” This response is
5 inconsistent with the original testimony of the Accounting Panel at 25:7-9 which states
6 that “after the end of the rate period covered by this proceeding,” “100% of the achieved
7 annual BCO savings [will] accrue to customers.” See AP Testimony at 25:7-9.

8 The Company’s position, as revised, appears to mean that Con Edison could request the
9 retention of savings for shareholders on “newly identified BCO savings in future rate
10 proceedings.” As in its original BCO approach, the Company would seek sharing of
11 savings from “newly identified BCO savings in future rate proceedings” even though
12 ratepayers will have paid the costs of the programs from which the savings will be
13 derived

14 **Research & Development (“R&D”) Costs**

15 **Q. WHAT R&D COSTS ARE INCLUDED IN THE COMPANY’S REVENUE**
16 **REQUIREMENT?**

17 A. As part of the Company’s Operations & Maintenance (“O&M”) expenses, Con Edison
18 includes the costs associated with the historical period of non-labor R&D expenses,
19 escalated by the general escalation factor to determine the forecast period expenses. See
20 AP Testimony at 101:18-21. For electric, the amount for RY1 is \$8.2 million, while gas
21 equals \$4.8 million. See Exh. AP-E3 and AP-G3, Schedule 6, line 66. For gas

COUNTY OF WESTCHESTER PANEL

1 customers, there is an R&D surcharge imposed on several rate classes, as part of the
2 Monthly Rate Adjustment, which is part of the rate for gas service under Service Class
3 (“SC”) Nos. 1, 2, 3 and 13, applicable Riders and equivalent firm transportation service
4 under SC 9. See Leaf 155 of PSC No. 9, Section VII.B.2(iii). The revenues received
5 from this surcharge, as well as deferrals relating to gas R&D true-ups, offset the
6 Company’s revenue requirement as part of Other Operating Revenues. See Exh. AP-G3,
7 Schedule 4, line 22 and AP Testimony at 68:16-22. There are also deferred R&D
8 expenses for gas only, as described in the AP Testimony at 54, shown on Exh. AP-G3,
9 Schedule 4, line 31, which are expected to total \$576,000 as of 12/31/2019, and be
10 amortized over five years. In this testimony, the Company proposes to eliminate the
11 downward reconciliation of Gas R&D funding. See AP Testimony at 138:12-15 and the
12 Shared Services Panel (“SSP”) Testimony at 56:20-23.

13 **Q. WHY DOES THE COMPANY WISH TO ELIMINATE DOWNWARD**
14 **RECONCILIATION?**

15 A. The Company states:

16 The Company does not believe that there is a reasonable basis for subjecting this
17 individual element of Company expense to reconciliation and certainly not to
18 downward-only reconciliation. A downward reconciliation of these programs has
19 long lasting implications on our ability to pursue technological advancements by
20 reducing funding for future efforts due to short term decline in expenditures.

21 See SSP Testimony at 57:2-10. Furthermore, the Company claims that it only agreed to
22 the downward reconciliation in the last rate case as part of the settlement process.

1 **Q. DO YOU AGREE WITH THE ELIMINATION OF THE DOWNWARD**
2 **RECONCILIATION FOR R&D EXPENSES?**

3 A. No. As the R&D forecast is just that, a forecast, customers should not have to pay for the
4 full forecast if the Company does not spend the dollars on R&D. And, as the amounts at
5 issue are not large, this should not be an issue for the Company, except for the time
6 needed to calculate the reconciliation amounts.

7 **Westchester County Gas Moratorium**

8 **Q. WHAT IS THE COMPANY'S OBLIGATION TO PROVIDE GAS SERVICE?**

9 A. Pursuant to New York Consolidated Laws, Public Service Law - PSL § 65. (Safe and
10 adequate service; just and reasonable charges; unjust discrimination; unreasonable
11 preference; protection of privacy):

12 Every gas corporation, every electric corporation and every municipality shall
13 furnish and provide such service, instrumentalities and facilities as shall be safe
14 and adequate and in all respects just and reasonable.

15 By imposing an indefinite moratorium solely on connections of new firm gas customers
16 in Westchester County, the Company has fallen short of the requirement that it "shall
17 furnish and provide such service, instrumentalities and facilities as shall be safe and
18 adequate and in all respects just and reasonable."

19 Service can hardly be called "adequate and in all respects just and reasonable" when
20 economic development of the County is suppressed while development in other nearby
21 jurisdictions served by the Company is enhanced. That is, customers in all other
22 jurisdictions served by the Company can connect new firm gas loads, but the existing and

COUNTY OF WESTCHESTER PANEL

1 potential developers doing business in Westchester are stymied when seeking new gas
2 connections for new housing or businesses, or when existing commercial customers in
3 Westchester are constrained in expanding to new locations requiring a new gas
4 connection within the County. The moratorium constrains their expansion and/or drives
5 them to another city or county.

6 In addition, PSL § 65 requires:

7 No gas corporation, electric corporation or municipality shall make or grant any
8 undue or unreasonable preference or advantage to any person, corporation or
9 locality, or to any particular description of service in any respect whatsoever, or
10 subject any particular person, corporation or locality or any particular description
11 of service to any undue or unreasonable prejudice or disadvantage in any respect
12 whatsoever.

13 Firm gas customers in Westchester pay the same prevailing full firm rates that are
14 charged to all other customers of the Company, but customers in Westchester are denied
15 the right to obtain new connections for firm gas loads. Vis-à-vis customers in other
16 jurisdictions (and the other jurisdictions themselves), Westchester itself and potential new
17 firm gas customers in Westchester are uniquely disadvantaged and subjected to undue
18 discrimination in violation of the Company's obligation not to:

19 . . . make or grant any undue or unreasonable preference or advantage to any
20 person, corporation or locality, or to any particular description of service in any
21 respect whatsoever, or subject any particular person, corporation or locality or any
22 particular description of service to any undue or unreasonable prejudice or
23 disadvantage in any respect whatsoever. *Id.*

24 **Q. WHY DO YOU SAY THAT WESTCHESTER HAS BEEN DISCRIMINATED**
25 **AGAINST WHEN OTHER PORTIONS OF THE COMPANY'S SERVICE AREA**
26 **ARE ALSO THREATENED WITH MORATORIUMS?**

COUNTY OF WESTCHESTER PANEL

1 A. There are several features that distinguish Westchester’s situation from those in other
2 portions of the service area:

3 1. The other jurisdictions have not actually been subjected to a moratorium, only the
4 threat of a moratorium. The response to City 4-61 states that there are no plans to
5 expand the boundaries of the moratorium at this time. But if necessary, it could
6 expand to the Bronx, to the first and third wards of Queens, and all of Manhattan
7 except for lower Manhattan. The Company states that it is closely monitoring the
8 supply situation. The response to COW-2-39 states that the boundaries of the
9 Westchester Moratorium reflect the municipalities served by the Tennessee Gas
10 Pipeline (“Tennessee GPL”) on a peak day. The answer to COW-2-40 indicates
11 about 20% of the Company’s gas peak demand has occurred in Westchester in the last
12 5 years. Finally, the response to Pace-9-72 states that it will lift the Westchester
13 Moratorium as soon as compression facilities are upgraded as part of the proposed
14 Tennessee GPL deal announced April 24, 2019, in the Rockland/Westchester Journal
15 News, estimated to begin in 2023.⁷

16 2. It appears that the pipeline solutions for other jurisdictions served by the Company
17 are being planned more robustly, with backup plans and more diligence. The
18 Westchester Moratorium is no doubt a catalyst for the more robust planning in other

⁷ See <https://www.lohud.com/story/news/local/westchester/2019/04/24/con-edison-natural-gas-moratorium-may-end-2023/3563638002/>

COUNTY OF WESTCHESTER PANEL

1 jurisdictions. That is, in the case of other jurisdictions, backup pipeline plans have
2 been devised and are being pursued in case the primary gas pipeline plan is
3 inadequate. See the May 14, 2019, email from Con Edison's Enver Acevedo on two
4 White Papers describing the two alternatives for resolving the prospective gas
5 moratoriums for Queens and parts of the Bronx and Manhattan.

6 3. The Company intends to supplement plans for upgraded interstate pipeline solutions
7 with major internal Company-owned pipeline construction, the Queens Transmission
8 Upgrade project, which is apparently needed whether the proposed Northeast Supply
9 Enhancement ("NESE") project is approved or not. *Id.*

10 4. The NYC pipeline solutions are expected to be in service by December 2021, far
11 short of Westchester's 9-year lead-time that started in 2014 and led to the 2023
12 planned in-service date of the Tennessee GPL solution announced in April, 2019.

13 5. The Company has not suggested that it will abandon its plans to upgrade pipeline
14 solutions in other jurisdictions as it did in Westchester. In addition, if it must
15 abandon the preferred plan, Company has a contingency plan in place for these other
16 jurisdictions. See response to COW-2-41(f) as cited below.

17 **Q. HAVE YOU FOUND ANY EVIDENCE SUGGESTING THAT THE COMPANY**
18 **WAS IMPRUDENT AND/OR LACKED DILIGENCE IN PLANNING GAS**
19 **SUPPLIES AND INFRASTRUCTURE IN THE PERIOD LEADING UP TO THE**
20 **TEMPORARY MORATORIUM IN WESTCHESTER COUNTY?**

COUNTY OF WESTCHESTER PANEL

1 A. Yes. The Company testified that “there are gas supply constraints in this part of our
2 service territory that limit our ability to meet customer demand on the coldest winter
3 days.” Gas Policy Panel Testimony at 40:16-19. The end of the “temporary
4 moratorium” is unclear, as the response to COW-2-39(b) states “that date is unknown at
5 this time. The moratorium will be lifted when the supply-demand imbalance is corrected
6 through efficiency measures, alternate technology solutions or additional supply.”

7 In discovery, Westchester sought through data requests to determine (i) the origins of the
8 moratorium and (ii) why the Company did not identify, and develop a solution to, the gas
9 supply constraints on service to new firm loads in Westchester. One data response raises
10 questions about the Company’s prudence and diligence in identifying and developing a
11 solution to Westchester’s gas supply constraints. See response to COW-2-41(f):

12 f. What prevented the Company’s planning procedure from identifying, and
13 developing a solution to, the gas supply constraints at an earlier date?
14

15 f. Nothing in the Company’s planning process prevented it from identifying
16 and developing a potential solution to the gas supply constraints. As early as
17 2014, the Company had identified the need for new firm pipeline capacity to the
18 moratorium area and began working with interstate pipeline developers on
19 potential solutions. By early 2016, the Company had identified appropriate
20 solutions and was actively negotiating precedent agreements with the pipeline
21 developers. Unfortunately, at the same time, other pipeline projects began
22 encountering difficulties receiving required permits. As a result, the Company
23 and the developers determined that in the current environment the identified
24 projects were no longer viable. The Company continues to seek interstate pipeline
25 solutions that will both meet customer demand and meet federal, state and local
26 requirements. In addition, the Company filed its Smart Solutions program in
27 September 2017, to seek alternatives to pipelines. Unfortunately, the initial
28 benefits of the Smart Solutions program did not supply sufficient volume to avoid
29 the temporary moratorium.

30 Q. **WHAT DO YOU FIND NOTEWORTHY ABOUT THIS RESPONSE?**

COUNTY OF WESTCHESTER PANEL

1 A. It is noteworthy that the Company:

2 1. Concedes that “[n]othing in the Company’s planning process prevented it from
3 identifying and developing a potential solution to the gas supply constraints.”

4 However, a viable pipeline solution was not finally identified until April 2019, after
5 the moratorium commenced, and is not expected to enter service until 2023,
6 according to the Rockland/Westchester Journal News article concerning the
7 Tennessee GPL deal described above, as other solutions were insufficiently robust
8 to prevent institution of the moratorium.

9 2. Identified the need for new firm pipeline capacity for serving Westchester loads as
10 early as 2014.

11 3. Took two years (until early 2016) to identify appropriate solutions and begin
12 working with pipeline developers (“actively negotiating precedent agreements”) on
13 appropriate solutions.

14 4. Abandoned what were initially thought to be the appropriate solutions (i.e., “the
15 Company and the developers determined that in the current environment the
16 identified projects were no longer viable”) because “other pipeline projects began
17 encountering difficulties receiving required permits.”

18 5. Only after the Company and developers dropped pursuit of potential solutions did
19 the Company file its Smart Solutions program in September 2017, to seek
20 alternatives to pipelines. At the same time, apparently, the Company moved

COUNTY OF WESTCHESTER PANEL

1 forward with negotiations with the Tennessee GPL to increase gas capacity without
2 new pipeline construction in New York.

3 **Q. PLEASE ELABORATE.**

4 A. The Company is both a gas distribution company and an affiliate of several interstate gas
5 pipelines (as well as an electric utility). In view of its long history and experience in
6 developing needed infrastructure, the timeline of its actions (and inactions) after realizing
7 in 2014 that it faced gas supply constraints includes puzzling hiatuses that raise
8 substantial issues. For example, it took the Company two years to develop potential
9 pipeline solutions after identifying the need for more firm gas pipeline capacity in 2014.
10 The response to EDF-1-4 states that the Company first announced the potential for gas
11 supply constraints on September 19, 2016 when the Joint Proposal became public in Case
12 16-G-0061, after, presumably, the Company and developers determined potential projects
13 were no longer viable. The Joint Proposal set up a demand reduction collaborative to
14 examine impact of delays in upstream interstate pipeline construction on growing
15 demand. It is not clear why the Company did not develop a contingency plan in case it
16 encountered insuperable barriers to completing its preferred potential pipeline solutions
17 (e.g., new interstate pipelines or internal ConEd gas pipelines, as it is now proposing
18 when faced with the threat of moratoriums in Queens, Brooklyn and Manhattan, or gas
19 storage on the Westchester side of the constraints, etc.).

20 If the Company had announced publicly that moratoriums were close to being imposed,
21 the Company and developers might have focused on alternative solutions, such as the

COUNTY OF WESTCHESTER PANEL

1 upgrade to the Tennessee GPL's compression facilities. Con Edison could have
2 completed and filed the precedent agreements with developers and sought expedited
3 hearings and/or legislative relief and/or mounted public relations campaigns focusing
4 attention on the situation. The Company has given no indication that the regulatory
5 climate has changed, yet somehow it determined that pipeline upgrades were once again
6 viable and restarted negotiations that resulted in the deal announced April 2019, in the
7 Rockland/Westchester Journal News that promises to end the "temporary moratorium" by
8 2023. Without more information, other than that the compression upgrades are to be
9 done outside of New York, it is unclear whether the new Tennessee deal is different from
10 the deals that were abandoned sometime in 2016 because they were considered not
11 viable.

12 **Q. HOW WOULD YOU RECOMMEND THAT THIS COMMISSION ADDRESS**
13 **THE ISSUES RELATING TO THE WESTCHESTER GAS MORATORIUM IN**
14 **THIS RATE CASE PROCEEDING?**

15 A. Until the moratorium is ended in Westchester, the Commission should not allow the
16 Company to earn any gas-related positive revenue adjustments in any gas performance
17 measures or positive basis points in any earnings adjustment mechanisms.

18 For the gas performance measures, Westchester proposes that the following PRAs be
19 eliminated until the Westchester gas moratorium is lifted:

- 20 • Gas Main Replacement of leak-prone pipe in excess of targets,

COUNTY OF WESTCHESTER PANEL

- 1 • Retention of the cumulative three-year target and associated NRA for the Gas
2 Main Replacement Program Safety Performance Measure.
- 3 • Leak Management Performance Measure positive incentives, including the
4 proposed increase in basis points as described above,
- 5 • The proposed positive basis points for exceeding the Safety Performance Measure
6 related to Emergency Response Safety Performance Measures,
- 7 • Any proposed PRAs for the Damage Prevention Safety Performance Measures as
8 discussed in the GIOSP Testimony at 129-133,
- 9 • Retention of current NRAs for Gas Regulations Performance Measures, and
- 10 • Positive basis points for meeting AMI-enabled natural gas detector installation
11 targets.

12 Con Edison originally proposed several EAMs for gas, the Gas Energy Efficiency EAM
13 and the Gas Peak Reduction EAM, as well as the Natural Gas GHG Emissions Reduction
14 EAM. See CES Testimony at 139:13-140:9. These EAMs appear to have been replaced
15 in the EE Filing by the cross-commodity Annual MMBtu EAM, GHG Emissions
16 Reductions EAM, and the Shared Savings EAM (which is addressed earlier in this
17 testimony). These Annual MMBtu EAM will measure “savings from conversions from
18 delivered fuels such as fuel oil and heat pumps,” while the GHG Emissions Reductions
19 EAM will measure incremental GHG emission reductions “resulting from increased
20 adoption of technologies or other mechanisms that ...reduce the use of natural gas.” See
21 EE Filing at XX. Westchester believes it would be inconsistent to reward the company

COUNTY OF WESTCHESTER PANEL

1 for encouraging one set of customers to reduce incremental gas usage, while another
2 group of customers is limited involuntarily to no more incremental gas usage, and may be
3 forced to switch to other sources of energy through no desire of the customer to respond
4 to the Company's EE initiatives or activities as a result of the gas moratorium.

5 In summary, according to the GIOSP Testimony at 146:13-14, Con Edison is requesting a
6 maximum annual level of 33 basis points in positive incentive basis points. Westchester
7 believes the Company should be denied any positive revenue adjustments based upon its
8 poor planning for Westchester County, and based on indications that gas moratoriums
9 could reach other areas of Con Edison's service territory in the near future. In addition,
10 any EAM that is focused on reducing gas avoidance or reduction should not be granted to
11 the Company, as Westchester customers are being required, involuntarily, to suspend
12 additional gas usage because of the gas moratorium. Performance measures will be
13 affected in equal measure by persuading some customers to reduce consumption and by
14 cutting off Westchester customers through negligent planning. The Company should not
15 be rewarded for its negligence with regard to the County of Westchester.

16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 **A. Yes.**

WHITFIELD RUSSELL ASSOCIATES

Whitfield Russell Associates is a public utility consulting firm providing analyses in all areas of electric utility regulation. The members of the firm have training and experience in engineering, finance, accounting, economics, law, and computer science. The firm provides expertise in electric utility system planning and operations, computer modeling, project evaluation, economic studies, contract negotiations, energy and demand forecasts, and rate determinations and design.

Whitfield Russell Associates was formed in 1976. Currently, the firm has seven staff members and is located at 4232 King Street Alexandria, VA 22302. The firm's e-mail address is "wrussell@wrassoc.com", and the telephone number is (703) 894-2200.

Whitfield Russell Associates' professionals have appeared as regulatory and litigation expert witnesses in electric utility planning, operations, contracts and rates before State and federal courts and agencies in more than 30 States, the District of Columbia, and three Canadian Provinces.

Clients of the firm have included electric utilities owned by investors, municipalities, cooperatives, States and State subdivisions; large industrial generators and energy consumers; State agencies and commissions; federal agencies and other subdivisions of the United States government; independent power producers, Canadian First Nations, provinces and agencies; and Native American governments and agencies.

Industrial enterprises for which Whitfield Russell Associates has worked include The Dow Chemical Company, its partially-owned subsidiary, Destec Energy, Exxon, Newmont Gold Company, Barrick Goldstrike Mines, MidAtlantic Cogen Inc., the Westlake Group, Gallatin Steel, Cyprus Minerals, FMC Corporation, Big Three Industries, Occidental Petroleum, Coastal Power Production, Ethyl Corporation, Zeigler Coal, Triton Coal (Shell Oil), O'Brien Energy, AES, Foster Wheeler, Wheelabrator-Frye, Phibro (oil refinery) and British Petroleum. Other clients include the Cities of Chicago, Indianapolis, Gillette (WY), Madison (NJ), North

California Power Agency, Massachusetts Municipal Wholesale Electric Company, North Carolina Eastern Municipal Power Agency, the Northern California Power Agency, the States of Colorado, South Dakota, Minnesota, South Carolina, Pennsylvania, and Hawaii, and the District of Columbia.

Additionally, Whitfield Russell Associates is nationally recognized as a leader in electric utility regulatory issues, electric utility competition, transmission access, and the unbundling of traditional electric utility services. Mr. Russell has lectured on such issues many times including at the Regulatory Studies Program sponsored by the National Association of Regulatory Utility Commissioners at Michigan State University, at the Wisconsin Public Service Commission, at various seminars of the American Public Power Association and of California's TURN and at the Annual Conference of the Electricity Consumers Resource Council. Whitfield Russell Associates has participated in the development of a national transmission access proposal submitted to the Federal Energy Regulatory Commission on behalf of the Transmission Access Policy Study Group (TAPS), and its partners have testified before the Subcommittee on Energy and Power of the House Committee on Energy and Commerce and before the Pennsylvania House Committee on Conservation regarding electric transmission issues.

KEY PERSONNEL

WHITFIELD A. RUSSELL

Whitfield A. Russell is an electrical engineer, attorney and President of Whitfield A. Russell and Associates, P.C., a corporate Partner of Whitfield Russell Associates. He holds a Bachelor of Science degree in Electrical Engineering from the University of Maine at Orono, a Master of Science in Electrical Engineering from the University of Maryland, and a Juris Doctor degree from Georgetown University Law Center.

Mr. Russell is experienced in electric utility system planning (transmission and generation), ratemaking and bulk power contracts. Mr. Russell has been qualified as an expert witness in 27 states (as well as in the Provinces of Alberta, Manitoba and Ontario and the District of Columbia) and has been accepted as an expert in more than 150 proceedings before state and federal Courts, arbitration panels, public service commissions, the Federal Energy Regulatory Commission and other administrative agencies. Mr. Russell's clients have included public power utilities, state and federal power marketing agencies, investor owned utilities, large industrial generators and consumers, independent power producers, Native American governments, Canadian First Nations and State regulatory bodies and their staffs.

Mr. Russell founded Whitfield Russell Associates in 1976. From 1972 to 1976, Mr. Russell served as Engineer and subsequently as Chief Engineer, at the Division of Corporate Regulation of the Securities and Exchange Commission. The Division administered the Public Utility Holding Company Act of 1935.

From 1971 to 1972, Mr. Russell was on the staff of the Federal Power Commission. He served as a consultant to staff attorneys in proceedings, and as an expert witness in an administrative proceeding before the Atomic Energy Commission.

From 1969 to 1971, Mr. Russell served as an Associate Engineer in the System Planning Division of the Potomac Electric Power Company. At PEPCO, he conducted system studies of load flows and stability. He was also a member of numerous study groups concerned with planning and operation of the Pennsylvania-New Jersey-Maryland Interconnection.

OTHER

Mr. Russell testified before the Subcommittee on Energy and Power of the House Committee on Energy and Commerce. His testimony favored a transmission bill which was subsequently enacted as Title VII of the Energy Policy Act of 1992.

Mr. Russell was an arbitrator in a dispute between Big Rivers Electric Cooperative and the Municipal Energy Agency of Mississippi.

Lectures given at the Regulatory Studies Program sponsored by the National Association of Regulatory Utility Commissioners at Michigan State University. Topics include revenue requirements, system planning and power pooling.

Lecture given at the Wisconsin Public Service Commission Seminar on "Regulating Diversified Electric Utilities: Accounting and Financial Issues."

Lecture given at the Annual Conference of the Electricity Consumers Resource Council on the Pacific Northwest-Pacific Southwest Intertie.

Participated in the development of a national transmission access proposal submitted to the Federal Energy Regulatory Commission on behalf of the Transmission Access Policy Study Group.

For a number of years, Mr. Russell controlled two companies owning small hydro plants in Maine that are PURPA qualifying facilities.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

PROCEEDINGS IN WHICH MR. RUSSELL HAS PROVIDED EVIDENCE

1. Anaheim v. Kleppe, U.S. District Court, Arizona (Civil No. 74-542 PHX-WEC), concerning the availability of transmission capacity in the Pacific Southwest.
2. In re: Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 7004, concerning the need for proposed 500 kV transmission lines in the Washington, D.C. area.
3. In re: Baltimore Gas and Electric Company, and Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 6984, involving the same transmission lines mentioned in the preceding case.
4. Perry v. The City of Monroe, Louisiana (State of Louisiana, Parish of Ouachita, Fourth District Court; Nos. 111145, 111146, 111147 filed August 16, 1977) regarding the necessity of Monroe's disposing of its municipal utility system.
5. In re: Potomac Electric Power Company, before the District of Columbia Public Service Commission, in Case No. 685, concerning the system planning of the Potomac Electric Power Company and the PJM Pool.
6. In re: Generic Hearings on Rate Structure, before the Colorado Public Utilities Commission, Case No. 5693, regarding the engineering aspects of marginal cost pricing and power pooling in Colorado.
7. In re: Pacific Gas and Electric Company, FERC Docket No. ER76-532, regarding the proper level of rates to be charged by PG&E to the Central Valley Project for transmission service.
8. In re: Pacific Power and Light Company, FERC Docket No. E-7796, regarding the Seven Party Agreement and related matters.
9. In re: Pacific Gas and Electric Company, FERC Docket No. E-7777 (II), concerning the provisions of numerous bulk power arrangements governing electric utilities in California.
10. In re: Potomac Edison Company, before the Maryland Public Service Commission, Case No. 7055, concerning the need for a 230 kV transmission line in Montgomery County, Maryland.
11. In re: Delmarva Power and Light Company, before the Maryland Public Service Commission, Case Nos. 7239F, 7239G, 7239H, 7239I, 7239J, 7239K, 7239L, 7239M and 7239N concerning fuel rate adjustments.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

12. In re: Baltimore Gas and Electric Company, before the Maryland Public Service Commission, Case Nos. 7238G, 7238H, 7238I, 7238J, 7238L and combined dockets 7238P, Q, R and S, concerning fuel rates.
13. In re: Potomac Electric Power Company, before the Maryland Public Service Commission, Case Nos. 7240A, 7240B, 7240C, 7240D, 7240E, 7240F and 7240G, concerning fuel rate adjustments.
14. In re: Florida Power & Light Company, FERC Docket No. E-9574, concerning system planning for the City of Vero Beach, Florida. FP&L withdrew its application to acquire the Vero Beach system.
15. In re: Oklahoma Gas and Electric Company, FERC Docket No. ER77-465, concerning rates for energy banking and transmission services rendered to the Western Farmers Electric Cooperative.
16. In re: Idaho Power Company, before the Idaho Public Utility Commission, Case No. U-1006-158, concerning the value of interruptible industrial loads and Idaho Power Companies entitlement to Federal secondary energy.
17. In re: Potomac Electric Power Company, before the District of Columbia Public Service Commission, Case No. 737, concerning the Company's construction program.
18. In re: Virginia Electric and Power Company, before the Virginia State Corporation Commission, Case No. PUE 800006, concerning construction of transmission lines in the Charlottesville, Virginia area.
19. In re: Pacific Gas and Electric Company, FERC Project Nos. 2735 and 1988, concerning the Helms Project, a pumped storage generating unit.
20. Southeastern Power Administration v. Kentucky Utilities Company, FERC Docket No. EL 80-7, concerning SEPA's attempt to obtain a FERC wheeling order under the Public Utility Regulatory Policies Act of 1978.
21. In re: Sierra Pacific Power Company, before the Public Service Commission of Nevada, Docket No. 81-105, concerning construction and transmission planning.
22. In re: Virginia Electric and Power Company, before the North Carolina Utilities Commission, Docket No. E-22, Sub 257, concerning production cost simulation and normalized fuel adjustment clause formula.
23. In re: the Investigation of the Capital Expansion For Electric Generation, before the New

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- Mexico Public Service Commission, Case No. 1577, concerning construction programs of the Public Service Company of New Mexico and El Paso Electric Company.
24. In re: Potomac Edison Company, before the Maryland Public Service Commission, Case Nos. 7241A, 7241B, 7241C and 7241D, concerning fuel rate adjustments and productivity of generating units.
 25. In re: Potomac Edison Company, before the Maryland Public Service Commission, Case No. 7528, concerning the method of calculating Potomac Edison's fuel rate.
 26. In re: Delmarva Power & Light Company, before the Maryland Public Service Commission, Docket No. 7570, concerning transmission loss allocation methodology.
 27. In re: Nebraska Public Power District, before the South Dakota Public Utilities Commission, Docket No. F-3371, concerning proposed construction and operation of the 500 kV MANDAN Transmission Facility.
 28. In re: Sierra Pacific Power Company, before the Public Service Commission of Nevada, Docket No. 81-660, concerning construction and transmission planning.
 29. In re: Kentucky Utilities Company, FERC Docket Nos. ER-81-341-000 and ER81-267-000, concerning construction planning and the market for short term power.
 30. In re: Kentucky Power Company et al., before the Kentucky Public Service Commission, Case No. 8566, concerning cogeneration and avoided costs.
 31. In re: Appalachian Power Company, before the West Virginia Public Service Commission, Case No. 82-162-42T, concerning the wholesale market and short-term power sales.
 32. In re: Central Maine Power Company, before the Maine Public Utility Commission, Docket No. 82-137, concerning the application of Central Maine Power Company to reorganize in the form of a holding company.
 33. In re: Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 4712, concerning rates to be paid to cogenerators and small power producers.
 34. In re: Dow Chemical Company, before the Public Utility Commission of Texas, Docket Nos. 4802, 5050 and 5062, concerning rates for interruptible service.
 35. In re: Nevada Power Company, before the Nevada Public Service Commission, Docket No. 83-707, concerning the Reid Gardner No. 4 Participation Agreement.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

36. Dow Chemical Company vs. Houston Lighting & Power Company, before the District Court of Brazoria County, Texas, 149th Judicial District, No. 79-F-2620, regarding the custom and usage of contract terms in the electric utility industry. Live direct testimony in a jury trial. No transcript available.
37. In re: The Montana Power Company and the Confederated Salish and Kootenai Tribes of the Flathead Reservation, Project Nos. 5-004 and 2776-000, concerning the Tribes' intention and ability to sell its output to one or more entities in the Western states, if obtaining the license to the Kerr Project.
38. In re: the Dow Chemical Company vs. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-16038, concerning cogeneration and small power production.
39. In re: Petition of the Dow Chemical Company, before the Public Utility Commission of Texas, Docket No. 5651, for an order compelling Houston Lighting & Power Company to comply with the Commission Order concerning cogeneration and small power production.
40. In re: Oklahoma Gas and Electric Company, before the Oklahoma Corporation Commission, Cause No. 29017, concerning priority for recognition of capacity costs to Qualifying Facilities.
41. In re: Kansas City Power & Light Company of Kansas City, Missouri, before the Missouri Public Service Commission, Case Nos. ER-85-128 and EO-85-185, regarding rate design and allocation of production-related costs for the Company's Wolf Creek Generating Station on behalf of the United States Department of Energy.
42. In re: Kansas City Power and Light Company, before the State Corporation Commission of the state of Kansas, Docket Nos. 142,099-U and 120,924-U, concerning operating problems caused by excess capacity, mitigation measures and regulatory requirements, on behalf of Johnson County Joint Intervenors.
43. In re: Duke Power Company, before the North Carolina Utilities Commission, Docket No. E-7, Sub 391, concerning the Company's use of an Extended Cold Shutdown program to mitigate its excess capacity situation resulting from the Catawba Units, on behalf of the Department of Justice for the State of North Carolina.
44. Sierra Pacific Power Company, before the Public Service Commission of the State of Nevada, Docket No. 85-430, on behalf of the State of Nevada Attorney General's Office of Advocate for Customers of Public Utilities, concerning the effects upon retail rates of placing Valmy Unit No. 2 in service.
45. United States of America Department of Energy, before the Bonneville Power

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- Administration, on behalf of the City of Vernon, California, concerning the 1985 Proposed Firm Displacement Power Rate.
46. In re: City of Anaheim, et al., v. Southern California Edison, Docket No. 78-0810, on behalf of five partial requirements wholesale customers of Southern California Edison Company, making claims under Federal antitrust laws for access to the Pacific Northwest-Pacific Southwest Intertie.
 47. In the Matter of the Application of Sierra Pacific Power Company for Approval of its 1986-2006 Electric Resource Plan, Docket No. 86-701, on behalf of the State of Nevada Attorney General's Office of Advocate for Customers of Public Utilities, concerning efforts of Sierra Pacific Power Company to develop a new interconnection (the SMUD Tie) with the Sacramento Municipal Utility District.
 48. The Federal Executive Agencies, Complainant v. Public Service Company of Colorado, before the Public Utilities Commission of the State of Colorado, Case No. 6551, on behalf of the Federal Executive Agencies concerning the feasibility of wheeling federal preference power to the Government's facilities at Rocky Flats, the Lowry Air Force Base, the Rocky Flats Technical Center and the Denver Federal Center.
 49. Commonwealth Edison Company, before the State of Illinois, Illinois Commerce Commission, Docket Nos. 87-0043, 87-0044 and 87-0057 Consolidated, on behalf of Intervenor, Citizen's Utility Board of Illinois, concerning Edison's proposal to form a generating subsidiary.
 50. Nevada Power Company, before the Nevada Public Service Commission, Docket No. 87-750, concerning a 345 kV transmission line proposed to connect Nevada Power Company to Utah Power and Light Company.
 51. Utah Power & Light Company, PacifiCorp, PC/UP&L Merging Corporation, FERC Docket No. EC88-2-000, establishing conditions for the proposed merger; also challenging PP&L's/UP&L's assertion that the claimed coordination benefits would not be attainable through power pooling or by contract.
 52. Rosemount Cogeneration Joint Venture, Biosyn Chemical Corporation and Oxbow Power Corporation vs. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E-002/GG-88-491, on behalf of Petitioners, Rosemount Cogeneration Joint Venture, Biosyn Chemical Corporation and Oxbow Power Corporation, concerning a contract between Northern States Power and Biosyn Chemical Corporation covering the 50 MW output of a yet-to-be-constructed power plant based on the forecast costs of Sherburne County Unit #3 ("Sherco Unit 3").
 53. In re: Potomac Electric Power Company, before the District of Columbia Public Service

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- Commission, Case No. 869, on behalf of the District of Columbia Office of the People's Counsel, concerning the prudence of off-system purchases.
54. In re: Wisconsin Public Power Inc. System, Advance Plan 5, before the Public Service Commission of the state of Wisconsin, on behalf of the Wisconsin Public Power System, Inc., concerning transmission planning in the state of Wisconsin.
 55. In re: Nevada Power Company, before the Public Service Commission of Nevada, Docket No. 88-701, on behalf of the Attorney General's Office of Advocate for Customers of Public Utilities, concerning NPC's 1988 Resource Plan.
 56. In re: Commonwealth Edison Company, before the Illinois Commerce Commission, Docket Nos. 87-0427, 87-0169, 88-0189 and 88-0219, on behalf of the Citizens Utility Board, concerning rejection of an unfair, Staff-proposed rate order.
 57. In re: Dow Chemical Company vs. Houston Lighting & Power Company, before the Texas Public Utilities Commission, Docket No. 8425, 8431, on behalf of The Dow Chemical Company, concerning application of Houston Lighting & Power Company for authority to change rates; Fuel Reconciliation, Revenue Requirements and Rate Design.
 58. Dow Chemical Company vs. Houston Lighting & Power Company, before the Texas Public Utilities Commission, Docket No. 8555, on behalf of The Dow Chemical Company, concerning rate discrimination, cost to serve and class load characteristics.
 59. In re: Sierra Pacific Power Company, before the Public Service Commission of Nevada, Docket No. 89-676, on behalf of the Attorney General's Office of Advocate for Customers of Public Utilities, concerning Sierra's system planning.
 60. In re: Northern California Power Agency vs. Pacific Gas and Electric Company, before the Federal Energy Regulatory Commission, Docket No. EL89-4-000, on behalf of the Northern California Power Agency ("NCPA"), concerning the Interconnection Agreement between Pacific Gas & Electric Company and NCPA.
 61. In re: M-S-R Public Power Agency vs. Tucson Electric Power Company, before the United States District Court of Arizona, No. CIV-86-521-TUC-ACM, on behalf of M-S-R, concerning TEP's breach of contract.
 62. In re: Southern California Edison Company and San Diego Gas & Electric Company, before the Federal Energy Regulatory Commission, Docket No. EC89-5-000, on behalf of the City of Vernon, California concerning expected effects of the proposed merger on competition, system operation and transmission access.
 63. In re: Farmers Electrical Cooperative Corporation and City Water & Light Plant of the

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- City of Jonesboro, Arkansas, v. Arkansas Power & Light Company, No. LR-C-86-118. Presented deposition testimony on AP&L's liability and assisted in settlement negotiations of treble damage claims for transmission line foreclosure made by plaintiffs, City Water and Light Department of Jonesboro, Arkansas and the Farmers Electric Cooperative.
64. In re: Southern California Edison Company and San Diego Gas & Electric Company, before the California Public Utilities Commission, Docket No. 88-12-035, on behalf of the City of Vernon, California concerning expected effects of the proposed merger on competition, system operation and transmission access.
65. In re: Northeast Utilities Service Company and Public Service Company of New Hampshire, before the Federal Energy Regulatory Commission, Docket Nos. EC90-10-000, ER90-143-000, ER90-144-000, ER90-145-000 and EL90-9-000, on behalf of Massachusetts Municipal Wholesale Electric Company, concerning the effect of a proposed merger on competition and transmission access.
66. Report to the Public Utilities Board of Manitoba concerning 1990 Manitoba Hydro Capital Projects Review: Generation and Transmission Requirements. Whitfield Russell Associates was appointed to report to The Public Utilities Board on matters regarding the economic consequences to the domestic customers of the Manitoba Hydro capital program.
67. In re: Northeast Utilities Service Company, before the Federal Energy Regulatory Commission, Docket Nos. ER90-373-000, et al., on behalf of the Massachusetts Municipal Wholesale Electric Company, evaluating the Preferred Transmission Service Agreement between MMWEC and Northeast Utilities Service Company, for the transmission of MMWEC's power purchase from the New York Power Authority.
68. In re: New Hampshire Electric Cooperative Rate Plan Proposal, before the New Hampshire Public Utilities Commission, Docket No. DR90-078, on behalf of the New Hampshire Electric Cooperative, concerning contract valuation.
69. Tampa Electric Company v. Zeigler Coal Company. This was an arbitration held in August 1991, concerning provisions of a coal contract in which Mr. Russell offered testimony for Zeigler to the effect that Tampa Electric was not suffering a hardship by measures commonly used in the electric utility industry.
70. In re: The Long Range Forecast of Ohio Power Company, before the Ohio Public Utilities Commission, Docket No. 90-660-EL-FOR (Phase II). Mr. Russell presented and defended testimony on behalf of Ormet Aluminum Corporation concerning Ormet's right to allowances to emit sulfur dioxide from the Kammer Power Plant of Ohio Power Company under the Clean Air Act Amendments of 1990 and the propriety of Ohio Power's Compliance Plan.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

71. In re: Application of Tex-La Electric Cooperative to Increase Rates. Mr. Russell presented testimony in 1991, demonstrating that Tex-La was prudent in selling its entitlement in a nuclear plant and in settling its 1988 claims against Texas Utilities concerning Texas Utilities' fraud and imprudence in the construction of the Comanche Peak Nuclear Plant.
72. In re: Southern California Edison Company, before the Federal Energy Regulatory Commission, Docket No. ER88-83, on behalf of the City of Vernon, California concerning expected effects of Edison's administration of its transmission network on competition, system operation and transmission access.
73. In the Matter of the Application of the Public Service Company of New Mexico for Approval to Construct, Own, Operate and Maintain the Ojo Line Extension and for Related Approvals before the New Mexico Public Service Commission, Case No. 2382, on behalf of the United States Department of Energy, concerning transmission line construction programs of the Public Service Company of New Mexico.
74. In re: Wisconsin Public Power Inc. System et al., Advance Plan 6, before the Public Service Commission of the state of Wisconsin, Docket No. 05-EP-6, concerning Eastern Wisconsin Utility Joint Transmission System and Interface Study.
75. In re: MidAtlantic Energy v. Monongahela Power Company and the Potomac Edison Company, before the Public Service Commission of West Virginia, Case No. 89-783-E-C, on behalf of MidAtlantic Energy, concerning need for capacity and the appropriate avoided cost.
76. In re: Northeast Utilities Service Company, before the Federal Energy Regulatory Commission, Docket No. EL91-36-000, on behalf of the Massachusetts Municipal Wholesale Electric Company evaluating the tie-line adjustment charge borne by MMWEC that arose under a Transmission Service Agreement between New England Power Company and Northeast Utilities.
77. In re: Application of Houston Lighting & Power Company for a Certificate of Convenience and Necessity for the DuPont Project, before the Public Utility Commission of Texas, Docket No. 11000, on behalf of Destec Energy, Inc.
78. In re: Investigation on the Commission's Own Motion into Barriers to Contracts Between Electric Utilities and Nonutility Cogenerators and Certain Related Policy Issues, before the Public Service Commission of the state of Wisconsin, Docket No. 05-EI-112, on behalf of JOINT PARTIES: DESTEC Energy, Inc., EnerTran Technology Company, LS Power Corporation, The AES Corporation, LG&E Development Corporation, National Independent Energy Producers, and Citizens' Utility Board, concerning appropriate QF contract provision.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

79. In re: Application of Cap Rock Electric Cooperative, Inc. for a Certificate of Convenience and Necessity, before the Public Utility Commission of Texas, Docket No. 11248, on behalf of Cap Rock Electric Cooperative, Inc., concerning its proposed transmission system improvements.
80. In re: Application of Texas Utilities for Authority to Change Rates, before the Public Utility Commission of Texas, Docket No. 11735, on behalf of Cap Rock Electric Cooperative, Inc., concerning standby rates, wholesale rate contracts and terms and conditions of the Power Sales Agreement.
81. In re: Determination of Houston Lighting & Power Company's Standard Avoided Cost Calculation for the Purchase of Firm Energy and Capacity from Qualifying Facilities Pursuant to P.U.C. Subst. R. 23.66(H)(3), before the Public Utility Commission of Texas, Docket No. 10832, on behalf of Destec Energy, Inc.
82. In re: Complaint of Phibro Refining, Inc. v. HL&P, Docket No. 11989, before the Public Utility Commission of Texas, on behalf of Phibro Energy, USA, Inc., concerning electric service contracts and terms and conditions of HL&P's industrial rate schedule.
83. In re: Application of Texas Utilities Electric Company for Authority to Implement Economic Development Service, General Service Competitive Pricing, Wholesale Power Competitive Pricing, and Environmental Technology Service, Docket No. 13100, before the Public Utility Commission of Texas, on behalf of Rayburn Country Electric Cooperative, Inc., concerning TU Electric's so-called "competitive rates."
84. In re: Complaint of Kenneth D. Williams v. HL&P, Docket No. 12065, on behalf of Destec before the Public Utility Commission of Texas.
85. In re: Rebuttal testimony in a Complaint of Tex-La v. TUEC, Docket No. 12362, on behalf of Rayburn County Electric Coop. before the Public Utilities Commission of Texas.
86. In re: Application for Authorization and Approval of Merger Between Wisconsin Electric Power Company, Northern States Power Company (Minnesota), Northern States Power Company (Wisconsin), and Cenergy, Inc., in Docket No. EC-95-16-000, before the Federal Energy Regulatory Commission (on behalf of Certain Intervenors, including Madison Gas & Electric Company, Wisconsin Public Service Corporation, Minnesota Power & Light Company, Otter Tail Power Company and the Lincoln Electric System), in Docket Nos. 6630-UM-100 and 4220-UM-101, before the Wisconsin Public Service Commission and Docket No. 6-2500-10601-2 before the Minnesota Office of Administrative Hearings for the Minnesota Public Utilities Commission (both on behalf of Madison Gas & Electric, Wisconsin Industrial Energy Group, Wisconsin Federation of Cooperatives and the Citizen's Utility Board), concerning the effect upon transmission access of the merger of NSP and WEPCO into Primergy.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

87. In re: Merger of The Washington Water Power Company and Sierra Pacific Power Company, Docket Nos. EC94-23-000 and ER95-808-000, before the Federal Energy Regulatory Commission, on behalf of Truckee Donner Public Utility District, concerning ancillary services and single system transmission rates.
88. In re: Alberta Electric Utilities 1996 Tariff Application before the Alberta Energy And Utilities Board, on behalf of the Industrial Power Consumers Association of Alberta concerning calculation of charges for ancillary services.
89. In re: Surrebuttal Testimony in Docket Nos. EC95-16-000, ER95-1357-000 and ER95-1358-000, on behalf of Madison Gas & Electric Company, Citizens Utility Board and Wisconsin Electric Cooperative Association.
90. In re: City Public Service Board of San Antonio Filing in Compliance with Subst. Rule 23.67, Docket No. 15613, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
91. In re: City of Austin Filing in Compliance with Subst. Rule 23.67, Docket No. 15645, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
92. In re: Central Power and Light and West Texas Utilities Filing in Compliance with Subst. Rule 23.67, Docket No. 15643, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
93. In re: Texas Utilities Electric Company, Filing in Compliance with Subst. Rule 23.67, Docket No. 15638, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

94. In re: Docket No. 15840, Regional Transmission Proceeding to Establish Postage Stamp Rate and Statewide Load Flow Pursuant to P.U.C. Subst. Rule. 23.67 on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
95. In re: Application of Wisconsin Energy Corporation, Wisconsin Electric Power Company, Northern States Power Company, and Northern States Power Company-Wisconsin for Approval of a Series of Transactions by Which Northern States Power Company-Wisconsin is merged into Wisconsin Electric Power Company, Northern States Power Company becomes a Subsidiary of Wisconsin Energy Corporation, and Wisconsin Energy Corporation is Renamed Primergy Corporation: Direct Testimony, Rebuttal Testimony and Surrebuttal Testimony on behalf of The Wisconsin Industrial Energy Group (“WIEG”), The Citizens’ Utility Board (“CUB”), The Wisconsin Federation of Cooperatives (“WFC”) and Madison Gas and Electric (“MG&E”) in Docket Nos. 6630-UM-100 and 4220-UM-101 before the Public Service Commission of Wisconsin. The purpose of the direct testimony was to address Certain Intervenors’ Transmission System Control Agreement and ISO Bylaws; October 8, 1996. The purpose of the rebuttal testimony was to address Applicants’ Unilateral Settlement Offer which was submitted to FERC in their FERC merger proceeding; October 24, 1996. The purpose of the surrebuttal testimony was to address two sets of Rebuttal testimony of Jose Delgado and the Rebuttal Testimonies of Malcolm Bertsch of the Applicants and Don Carlson of Minnesota Power and Light; November 5, 1996.
- 95a. In re: In the Matter of Northern States Power Company’s Petition for Approval to Merge with Wisconsin Energy Corporation; OAH Docket No. 6-2500-10601-2: Direct Testimony and Exhibits and Rebuttal Testimony and Exhibits on behalf of Madison Gas and Electric (“MG&E”), The Wisconsin Federation of Cooperatives (“WFC”), and The Citizens’ Utility Board (“CUB”) in Docket No. E,G-002 and PA-95-500 before the Minnesota Office of Administrative Hearings for the Minnesota Public Utilities Commission. The purpose of the direct testimony is to remedy a Wisconsin Energy Corporation merger, in order to prevent anti-competitive effects with an Independent System Operation which actually operates the transmission system and which is truly independent of the proposed Primergy; October 21, 1996. The purpose of the rebuttal testimony is to address the direct testimony of Dr. Eilon Amit of Minnesota Department of Public Service and Dan Carlson of Minnesota Power and Light; November 8, 1996.
- 95b. In re: Joint Application of WPL Holdings, Inc. and Wisconsin Power & Light Company for all Requisite Approvals in Connection with a Series of Related Transactions by which Interstate Power Company Becomes a Subsidiary of WPL Holdings, Inc., IES Industries, Inc. is Merged into WPL Holdings, Inc. and is Renamed Interstate Power Corporation and for Certain Related Transactions and Matters: Direct Testimony and two Surrebuttal Testimonies on behalf of Badger Cooperative

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- Group (“BCG”), The Citizens’ Utility Board (“CUB”), Madison Gas and Electric (“MG&E”), The Wisconsin Federation of Cooperatives (“WFC”), Wisconsin Industrial Energy Group (“WIEG”) and Municipal Wholesale Power Group (“MWPG”) in Docket No. 6680-UM-100 before the Public Service Commission of Wisconsin. The purpose of the direct testimony was to discuss the characteristics of an appropriate ISO and present the ISO recommended by Certain Intervenors; May 7, 1997. The purpose of surrebuttal testimony #1 was to answer the rebuttal testimony of WP&L’s witness Rodney Frame, Arnold Kehrli and Scott Wallace; May 30, 1997. The purpose of surrebuttal testimony #2 was to address the rebuttal testimony of WP&L’s witness Arnold Kehrli; May 30, 1997.
96. In re: Houston Lighting & Power Company Filing in Compliance with Subst. Rule 23.67, Docket No. 15639, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas; September 30, 1996.
97. In re: IES Utilities, Inc., Interstate Power Company, Wisconsin Power & Light Company, South Beloit Water, Gas & Electric Company, Heartland Energy Services, and Industrial Energy Applications, Inc., Docket Nos. EC96-13-000, ER96-1236-000, and ER96-2560-000, before the Federal Energy Regulatory Commission, on behalf of Wisconsin Intervenors (“WI”). Mr. Russell simultaneously filed 2 sets of testimony; the first, sponsored by the intervenors listed above as well as by Wisconsin Public Service Corporation (“Pub Service”), and Dairyland Power Cooperative. (“Dairyland”) analyzed engineering and operating problems created by the merger of WP&L, IPW and IES. The second set of testimony discusses how the IEC Independent System Operator (“ISO”) fails in general to meet the rigorous and comprehensive ISO standards promulgated by the Wisconsin Public Service Commission (WPSC). Both sets of testimony (Engineering and ISO) were filed before the Federal Energy Commission; March 27, 1997.
98. In re: Joint Application of WPL Holdings, Inc. and Wisconsin Power & Light Company for all Requisite Approvals in Connection with a Series of Related Transactions by which Interstate Power Company Becomes a Subsidiary of WPL Holdings, Inc., IES Industries, Inc. is Merged into WPL Holdings, Inc. and is Renamed Interstate Power Corporation and for Certain Related Transactions and Matters, in Docket No. 6680-UM-100, before the Public Service Commission of Wisconsin; May 7, 1997.
99. In re: City of College Station, FERC Docket No. TX 96-2-000, concerning transmission rates; November 7, 1997.
100. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, in Docket No. R-00973981 on behalf of Mid-Atlantic Power Supply Association, before the Pennsylvania Public Utility Commission; November 7, 1997.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

101. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, in Docket No. R-00974104 on behalf of Mid-Atlantic Power Supply Association, before the Pennsylvania Public Utility Commission; November 7, 1997.
102. In re: New England Power Company, FERC Docket No. OA96-74-000, concerning proposed formula rates for Tariffs No. 9 and 4, on behalf of the Massachusetts Municipals; December 12, 1997.
103. In re: Sierra Pacific Power Company before the Federal Energy Regulatory Commission in Docket Nos. ER97-3593-000, ER97-3779-000, ER97-4462-000 on behalf of Truckee Donner Public Utility District, addressing lack of comparable access to transmission systems; February 23, 1998.
104. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, on behalf of Newmont Gold Company and Barrick Goldstrike Mines, in Docket Nos. 97-11018 and 97-11028, before the Public Service Commission of Nevada; February 1, 1998.
105. In re: Southern California Edison Company before the Federal Energy Regulatory Commission in Docket No. ER97-2355-000 on behalf of Department of Water Resources of the State of California, regarding lower pricing for off-peak transmission services; April 1998.
106. In re: Response to Procedural Order Number Three Load Pockets, on behalf of Newmont Gold Company and Barrick Goldstrike Mines, Docket Number 97-8001, before the Public Utilities Commission of Nevada; May 15, 1998.
107. In re: Supplemental Testimony in an Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, on behalf of Newmont Gold Company and Barrick Goldstrike Mines, Docket Numbers 97-11018 and 97-11028, before the Public Utilities Commission of Nevada, May 22, 1998.
108. In re: Southern California Edison Company, on behalf of The Department of Water Resources of The State of California, Docket No. ER97-2355, before FERC in reference to Transmission Revenue Balancing Account Adjustment ("TRBAA"); November 16, 1998.
109. In re: Ormet Primary Aluminum Corporation, on behalf of Ormet Primary Aluminum Corporation, Arbitration Number 55-199-0051-94, before the American Arbitration Association, concerning the relationship between AEP and other power systems within NERC and ECAR; July 14 1998.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

110. In re: Rebuttal Testimony in response to Mr., Walter R. Kelley and Mr. Thomas Kennedy, on behalf of Ormet Primary Aluminum Corporation, Arbitration Number 55-199-0051-94, before the American Arbitration Association; September 2, 1998.
111. In re: Application No. RE95081 – TransAlta Utilities Corp., on behalf of Albchem Industries Ltd., CXY Chemicals and Dow Chemicals Canada Ltd., before the Alberta Energy & Utilities Board addressing ACD's interest in providing interruptible service; October 1998.
112. In re: Tri-State Generation and Transmission Assoc., Inc., in Arbitration No. 77 Y 181 0023097 before the American Arbitration Association; September 14, 1998.
113. In re: Joint Application for Approval of Merger, Docket No. 98-7023 on behalf of The Staff of the Public Utilities Commission, before the Public Utilities Commission of Nevada; November 9, 1998.
114. In re: Independent System Administrator, Docket No. 97-8001 on behalf of The Staff of the Public Utilities Commission, before the Public Utilities Commission of Nevada; December 11, 1998.
115. In re: Petition for Order Concerning Delineation of Transmission and Local Distribution Facilities, Docket No. 98-0894 on behalf of The City of Chicago, before the Illinois Commission in reference to re-functionalization; April 2, 1999.
116. In re: Consolidated Edison Company, Docket No. EL99-58-000 on behalf of The Village of Freeport, New York, before FERC in reference to remedies for the breach of contract to provide firm service on a non-discriminatory basis; July 22, 1999, August 3, 1999, August 18, 1999 and September 9, 1999.
117. In re: Wisconsin Public Power, Inc. Docket No. 05-EI-119 on behalf of Wisconsin Transmission Customer Group (WTCTG"), before the Public Service Commission of Wisconsin to address the concerns of municipally-owned utilities within Wisconsin; March 6, 2000.
118. In re: Joint Application of Utilicorp United Inc. & St. Joseph Light & Power Co., Docket No. EM-2000-292 on behalf of Springfield (MO) City Utilities before the PSC of the State of Missouri to address why the merger between the two is detrimental to the public interest; May 1, 2000.
119. In re: Utilicorp United Inc, and Empire District Electric Co. Docket No. EM-2000-369 on behalf of Springfield (MO) City Utilities before the Public Service Commission of the State of Missouri to explain why the merger between the two is detrimental to the public interest;

**Proceedings In Which
Whitfield A. Russell
Has Testified**

June 19, 2000.

120. In re: Arrowhead - Westin Transmission Line Project, Docket No. 05-CE-113 on behalf of the Wisconsin Public Service Corporation (“WPSC”), before the Public Service Commission of the State of Wisconsin to provide support for the transmission project as proposed by WPSC and Minnesota Power; November 22, 2000.
121. In re: Kansas Municipal Energy Agency ("KMEA"), Docket No. ER00-2644-000 on behalf of the Kansas Municipal Energy Agency (“Kansas Municipal”), before the Federal Energy Regulatory Commission ("FERC") to review, assess and comment on the actions taken by the Southwest Power Pool in connection with two transmission service requests made by the Kansas Municipal Energy Agency aggregating 39 MW of contract demand; December 8, 2000.
122. In re: Arrowhead - Weston 345 kV Transmission Line, Rebuttal testimony in Docket No. 05-CE-113 on behalf of the Wisconsin Public Service Corporation (“WPSC”), before the Public Service Commission of the State of Wisconsin to address matters set forth in the direct testimony of Dr. Richard A. Rosen on behalf of Save Our Unique Lands ("SOUL"), Mr. David Schoengold on behalf of Wisconsin's Environmental Decade, and Mr. George R. Edgar on behalf of the Citizens' Utility Board ("CUB"); December 18, 2000.
123. In re: Ethyl Corporation verses Gulf States Utilities Company, Civil Docket No. M, live direct testimony in a dispute over direct assignment of substation facilities; April 2001.
124. In re: Joint Application of Entergy Louisiana, Inc. and Entergy Gulf States, Inc., Docket No. U-25533 on behalf of Occidental Chemical Corporation (“OxyChem”), before the Louisiana Public Service Commission for authorization to participate in contracts for the purchase of capacity and electric power for the Summer of 2001; May 3, 2001.
125. In re: Petitioners' Joint Proposal for Merger & Rate Plan, testimony in Case No. 01-M-0075 on behalf of Alliance for Municipal Power before the New York State Public Service Commission. The purpose of this testimony is explain (1) the inappropriateness of Rule 52 in the post merger competitive energy markets; (2) to have stranded transmission cost and distribution costs expunged; and (3) to show how merged Companies exacerbates the incentive to abuse Rule 52 against newly formed municipal utilities; November 5, 2001.
126. In re: Northeast Utilities Service Company Transmission Line Project, direct testimony in Docket No, 217 before the Connecticut Siting Council of the State of Connecticut on behalf of the Attorney General, State of Connecticut for the purpose of (1) Whether there is a need for the 345 f transmission line from Plum-tree to Norwalk; (2) whether the proposed transmission system design is the best option based on current transmission design and (3) whether any approval of the project by the Siting Council should be conditioned upon CL&P and NU's agreement; March 12, 2002.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

127. In re: Alliance Companies, et al., Affidavit in Docket Nos. RM01-12-000, RT01-87-000 and RT01-88-000, before the Federal Energy Regulatory Commission on behalf of the Ormet Primary Aluminum Corporation, for the purpose of providing relevant engineering fundamentals related to the proper design of methodology for quantifying transmission losses and for allocating such losses to the customers of regional transmission organizations; March 12, 2002.# #
128. In re Cannon Power Corporation., Affidavit in Docket No. ER02-2189-000, before the Federal Energy Regulatory Commission on behalf of Whitewater Hill Wind Partners, LLC developing a 66 MW wind power project to be interconnected to Southern California Edison Company; July 29, 2002.
129. In re Cannon Power Corporation., Affidavit in Docket No. ER02-1764, before the Federal Energy Regulatory Commission on behalf of Cabazon Wind Partners, LLC developing a 66 MW wind power project to be interconnected to Southern California Edison Company; August 2, 2002.
130. In re: Response to Pacificorp's Motion: Affidavit in Response to Pacificorp's Daubert Motion Regarding Richard Slaughter and Supplemental Expert Report on behalf of Snake River Valley Electric Association; September 10, 2002.
131. In re: Pacific Gas & Electric Company : Direct Testimony in Docket No. ER01-2998, before the Federal Energy Regulatory Commission on behalf of Northern California Power Agency to explain what level of firmness is required of transmission service under the Stanislaus Commitments; December 20, 2002.
132. In re: American Electric Power Corp.: Affidavit in Docket No. ER03-242, before the Federal Energy Regulatory Commission on behalf of Ormet Primary Aluminum Corp. to respond to AEP's proposed electric transmission rates to be included in the OATT of the PJM Interconnection; December 24, 2002.
133. In re: Application of the CT Light & Power Company: Supplemental Direct Testimony in Docket No. 217, before the State of CT Siting Council on behalf of The Attorney General, State of CT as a follow-up to the direct testimony filed on March 12, 2002 and to address various studies and reports that had been filed since that original testimony; January 14, 2003.
134. In re: Pacific Gas & Electric: Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. ER01-2998 on behalf of Northern California Power Agency ("NCPA") to respond to testimony from witnesses Judi K. Mosley, Kevin J. Dasso, Dr. Roy Shanker and Linda Patterson; April 1, 2003.

**Proceedings In Which
Whitfield A. Russell
Has Testified**

135. In re: Order Instituting Investigation into implementation of Assembly Bill 970 regarding the identification of electric transmission and distribution constraints, actions to resolve those constraints, and related matters affecting the reliability of electric supply: Direct testimony before the Public Utilities Commission of California on behalf of Oak Creek Energy Systems. The purpose of the testimony was to provide comments on and recommendations with respect to the Tehachapi Transmission Conceptual Facility Study (“Tehachapi CFS” or “TCFS”), performed by Southern California Edison (“SCE” or “Edison”); April 22, 2003.
136. In re: Order Instituting Investigation into implementation of Assembly Bill 970 regarding the identification of electric transmission and distribution constraints, actions to resolve those constraints, and related matters affecting the reliability of electric supply: Rebuttal testimony before the Public Utilities Commission of California on behalf of Oak Creek Energy Systems. The purpose of the testimony was to rebut the testimony of Mr. Jorge Chacon and Mr. Melvin Stark on behalf of Southern California Edison Company, taking into account the testimony of Mr. Robert Sparks filed on behalf of the California Independent System Operator (“CA ISO” or “ISO”); May 13, 2003.
137. In re: California Independent System Operator Corporation: Direct testimony before the Federal Energy Regulatory Commission in Docket No. ER00-2019 on behalf of State Water Contractors and the Metropolitan Water District of Southern California. The purpose of the testimony was to provide a critical analysis of ISO’s proposed Transmission Access Charge; June 2, 2003.
138. In re: Ameren Services Company, et al.: Affidavit in Docket No. EL03-212-000, before the Federal Energy Regulatory Commission on behalf of Ormet Primary Aluminum Corp. to respond to AEP’s Submission in Response to the Commission’s Section 206 Investigation; September 2, 2003.
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139. In re: Pacific Gas and Electric Company: Direct Testimony in Phase I before the Federal Energy Regulatory Commission in Docket Nos. ER00-565-000, ER00-565-003, and ER00-565-007 on behalf of the Northern California Power Agency. The purpose of the testimony was to explain the nature of the costs for which Pacific Gas and Electric Company seeks recovery through its Scheduling Coordinator Service Tariff; September 15, 2003.
140. In re: California Independent System Operator Corporation: Surrebuttal Testimony before the Federal Energy Regulatory Commission in Docket Nos. ER00-2019-006, ER01-819-002, and ER03-608-000 on behalf of State Water Contractors and the Metropolitan Water District of Southern California. The purpose of the testimony was to respond to the Prepared Rebuttal Testimony of Mr. Johannes P. Pfeifenberger on behalf of the ISO; October 20, 2003.
141. In re: Midwest Independent Transmission System Operator, Inc. and Public Utilities

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- With Grandfathered Agreements in the Midwest ISO Region: Prepared Testimony before the Federal Energy Regulatory Commission in Docket Nos. ER04-691-000 and EL04-104-000 on behalf of Marshfield Electric & Water District. The purpose of the testimony was to review Marshfield Electric & Water District's transmission arrangements in order to respond to the Commission's May 26, 2004 Order in this proceeding; June 25, 2004.
142. In re: Pacific Gas and Electric Company: Direct Testimony in Phase II before the Federal Energy Regulatory Commission in Docket Nos. ER00-565-000 and ER00-565-003 on behalf of the Northern California Power Agency ("NCPA"). The testimony addressed the propriety of PG&E's passing through ISO Charge Type costs as Scheduling Coordinator Service charges to NCPA under the terms of the NCPA-PG&E Interconnection Agreement; September 13, 2004.
143. In re: Southern California Edison Company: Prepared Direct Testimony before the Federal Energy Regulatory Commission in Docket No. ER02-2189-003 on behalf of Whitewater Wind Hill Partners. The purpose of the testimony was to provide support for Whitewater's request that the Commission revise the Interconnection Facilities Agreement ("IFA") between Whitewater and Southern California Edison Company ("SCE or Edison"); September 14, 2004.
144. In re: Cabazon Wind Partners, LLC Complainant vs. Southern California Edison Company Respondent: Affidavit in Docket No. EL04-137 before the Federal Energy Regulatory Commission on behalf of Cabazon Wind Partners, LLC ("Cabazon"). This Affidavit provides support for Cabazon's request that Southern California Edison Company ("SCE") grant Cabazon reimbursement, in the form of a transmission credit or otherwise, for the cost of certain upgrades Cabazon has borne to interconnect its generation to SCE; September 27, 2004.
145. In re: Southern California Edison Company: Cross Answering Testimony before the Federal Energy Regulatory Commission in Docket No. ER02-2189-003 on behalf of Whitewater Hill Wind Partners. The purpose of the testimony was to respond to testimony filed on October 28, 2004, in this proceeding by Commission Staff witnesses, Ms. Tania Martinez Navedo and Mr. Edward W. Mills with respect to the designation of disputed upgrades contained in the IFA between Whitewater and Southern California Edison Company; November 22, 2004.
146. In re: Pacific Gas and Electric Company: Direct and Answering Testimony before the Federal Energy Regulatory Commission in Docket No. ER01-1639-006 on behalf of Northern California Power Agency. The purpose of this testimony was to explain 1) PG&E's failure to justify the pass-through of Reliability Service charges to the Western Area Power Administration and PG&E's additional failure to "unbundle the rates in its ETCs and provide a full cost of service analysis supporting the unbundled rates," 2)

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- PG&E's attempt to pass-through Scheduling Coordinator Service Charges to Western, and 3) the inappropriateness of PG&E's imposition of interest charges; November 23, 2004.
147. In re: Petition for a Declaratory Order or Advisory Opinion as to the Applicability of the Commission's Decision in Docket No. 03-10003, Plant Project in Orange County, California: Affidavit in Docket No. 04-10023, before the Public Utilities Commission of Nevada on behalf of Ridgewood Renewable Power, LLC ("Ridgewood") with respect to a landfill methane gas powered electric generating project located at the Olinda/ Alpha landfill in Orange County, California; December 30, 2004.
 148. In re: Southern California Edison Company and Cabazon Wind Partners, LLC: Prepared Direct Testimony before the Federal Energy Regulatory Commission in Docket No. EL04-137, on behalf of Cabazon Wind Partners, LLC. The purpose of this testimony was to provide support for Cabazon's request that Southern California Edison ("SCE") grant Cabazon reimbursement, in the form of transmission credit or otherwise, for the cost of certain upgrades Cabazon had borne to interconnect generation to SCE; February 4, 2005.
 149. In re: Pacific Gas and Electric Company: Phase II Answering Testimony to PG&E's Supplemental Testimony; Cross Answering Testimony; and Errata of Whitfield A. Russell before the Federal Energy Regulatory Commission in Docket No. ER00-565-000, et al and ER04-1233-000, on behalf of Northern California Power Agency. The purpose of this testimony was to respond to PG&E's contention that the SCS Tariff is a formula rate, to respond to aspects of the Prepared Direct and Answering Testimony of Ms. Linda M. Patterson on behalf of the Federal Energy Regulatory Commission Staff.
 150. In re: Southern California Edison Company: Affidavit before the Federal Energy Regulatory Commission in Docket No. EL05-80-000, on behalf of the California Wind Energy Association ("CalWEA"). The purpose of this affidavit was to explain how and why the proposed Antelope-Tehachapi 230 kV line would be integrated into the regional transmission grid and thereby constitute a network upgrade facility; April 14, 2005.
 151. In re: American Electric Power Service Corporation: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER05-751-000, on behalf of Ormet Primary Aluminum Corporation. The purpose of this affidavit was to respond to American Electric Power Corporation's (AEP's) request (a) to increase its annual Network Integration Transmission Service (NTS) revenue requirements to \$486 million per year and (b) to increase the NTS rates; April 29, 2005.
 152. In re: Southern California Edison Company and Cabazon Wind Partners, LLC: Prepared Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. EL04-137, on behalf of Cabazon Wind Partners, LLC. The purpose of this testimony

**Proceedings In Which
Whitfield A. Russell
Has Testified**

was to respond to direct testimony filed on March 14, 2005 and cross answering testimony filed by Southern California Edison and Commission Staff witness, Ms. Emily White; May 20, 2005.

153. In re: In the Matter of the Arbitrations between PG&E Energy Trading-Power, LP Claimant, Counter-Respondent and Southaven Power, LLC, and Caledonia Generating, LLC, Respondents, Counter-Claimants: Expert Report and litigation before the American Arbitration Association in AAA Nos. 16-198-00206-03 & 16-198-00207-03, on behalf of Williams & Connolly LLP (counsel of Southaven Power, LLC) and Bingham McCutchen LLP (counsel for Caledonia Generating, LLC). The purpose of this expert report was to provide my opinion on certain elements of the matters in dispute between PG&E Energy Trading-Power, L.P., on the one hand, and each of Southaven and Caledonia, on the other hand. These disputes arose in connection with two similar tolling agreements, each titled “Dependable Capacity and Conversion Services Agreement;” September 8, 2005.
154. In re: Midwest Independent Transmission System Operator, Inc: Pre-Filed Answering Testimony before the Federal Energy Regulatory Commission in Docket No. ER05-6-001, et al, on behalf of Ormet Primary Aluminum Corporation. This testimony addressed the proposed SECA rate design as it related to Ormet; October 24, 2005.
155. In re: Berkshire Power Company, LLC: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER05-1179-001, on behalf of Massachusetts Municipal Wholesale Electric Company, Chicopee Municipal Lighting Plant, and South Hadley Electric Light Department. This affidavit addressed the engineering analysis performed by ISO New England in support of its determination of the system reliability for the Springfield, Massachusetts area in Western Massachusetts; November 7, 2005.
156. In re: Consolidated Edison Energy Massachusetts, Inc.: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER05-903-002, on behalf of Massachusetts Municipal Wholesale Electric Company, Chicopee Municipal Lighting Plant, and South Hadley Electric Light Department. This affidavit addressed the engineering analysis performed by ISO New England in support of its determination of system reliability for the Springfield, Massachusetts area in Western Massachusetts and need for two generating units in that area: (1) the 245 MW Berkshire facility operated by Berkshire Power Company; and (2) the 107 MW West Springfield Unit 3 operated by Consolidated Edison Energy Massachusetts, Inc.; November 10, 2005.
157. In re: Pittsfield Generating Company, LP: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER06-262-000, on behalf of Massachusetts Municipal Wholesale Electric Company, Chicopee Municipal Lighting Plant, and South Hadley Electric Light Department. This affidavit reviewed the engineering analysis performed by ISO New England in support of its evaluation of the system reliability for

**Proceedings In Which
Whitfield A. Russell
Has Testified**

the Pittsfield, Massachusetts area of Western Massachusetts and need for the 160 MW facility operated by Pittsfield Generating Company, L.P.; December 21, 2005.

158. In re: Mystic Development LLC: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER06-427-000, on behalf of Massachusetts Municipal Wholesale Electric Company, Wellesley Municipal Light Plant, Reading Municipal Light Department and Concord Municipal Light Plant. This affidavit (a) responded to portions of the testimony offered by Mystic witnesses; and (b) reviewed the December 7, 2004, engineering analysis "Need for Mystic Units 7, 8 and 9 for System Reliability," performed by ISO New England ("ISO"); January 19, 2006.
159. In re: In the Matter of the Application of Ohio Power Company for Approval of a Special Contract Arrangement with Ormet Primary Aluminum Corporation, In the Matter of the Joint Petition of Ohio Power Company and South Central Power Company for Reallocation of Territory, In the Matter of: Ormet Primary Aluminum Corporation and Ormet Primary Mill Products Corporation v. South Central Power Company and Ohio Power Company: Pre-Filed Testimony before the Public Utilities Commission of Ohio in Docket Nos. 96-999-EL-AEC, 96-1000-EL-PEB and 05-1057-EL-CSS, on behalf of Ormet Primary Aluminum Corporation. This testimony analyzed: (a) the effect upon the other ratepayers of South Central and Buckeye of requiring South Central to serve Ormet and (b) the effect upon other ratepayers and stockholders of Ohio Power Company ("OPCO") of requiring OPCO to serve Ormet's full requirements under OPCO's retail GS-4 rate schedule; September 8, 2006.
160. In re: Mystic Development, LLC: Direct Testimony before the Federal Energy Regulatory Commission in Docket No. ER06-427-000, on behalf of Massachusetts Municipal Wholesale Electric Company, Reading Municipal Light Department Wellesley Municipal Light Plant and Concord Municipal Light Plant. This testimony assessed whether a cost-of-service ("COS"), Reliability Must-Run ("RMR") Agreement was needed in order to keep Mystic Development LLC's ("Mystic's") Units 8 and 9 available to provide reliability service and a just and reasonable COS rate to be imposed on customers under the RMR agreement. November 9, 2006.
161. In re: Hydroelectric Production Rates and Rate Modification Plan-2007 and 2008 Rate Years: Direct Testimony and Supporting Exhibits before the New York Power Authority, on behalf of the New York Association of Public Power. This testimony addressed the understatement of capacity at the Niagara and St. Lawrence Projects of the New York Power Authority ("NYPA") and how that understatement of capacity improperly reduces the amount of capacity made available to preference customers of the Niagara Project and improperly increases the rates applicable to capacity sold to those customers; April 9, 2007.
162. In re: ISO New England Inc: Affidavit before the Federal Energy Regulatory

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- Commission in Docket No. ER08-190-000, on behalf of Massachusetts Municipal Wholesale Electric Company (“MMWEC”). This testimony reviewed the engineering analysis performed by ISO New England Inc. in support of its determination that MMWEC’s Phase II Stony Brook Unit is not qualified to participate in the first Forward Capacity Market auction, then scheduled to be held in February 2008; November 21, 2007.
163. In re: Columbus Southern Power Company and Ohio Power Company: Affidavit before the Public Utilities Commission of Ohio in Case Nos. 07-1132-EL-UNC, 07-1191-EL-UNC, 07-1278-EL-UNC, and 07-1156-EL-UNC, on behalf of Ormet Primary Aluminum Company. This affidavit addressed the Application of Columbus Southern Power Company and Ohio Power Company for approval of an additional generation service rate increase pursuant to their post-market development period rate stabilization plans and to update each company’s transmission cost recovery rider; February 28, 2008.
164. In re: Niagara Mohawk Power Corporation: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER08-552-000, on behalf of the New York Association of Public Power and several of its members which include Green Island Power Authority, Jamestown Board of Public Utilities, City of Salamanca Board of Public Utilities, City of Sherrill Power & Light and Oneida-Madison Electric Cooperative, Inc. This affidavit reviewed the filing by NMPC for Amendments to its Wholesale Transmission Service Charge for Point-to-Point Transmission service and Network Integration Transmission Service; March 17, 2008.
165. In re: Braintree Electric Light Department, Hingham Municipal Lighting Plant, Hull Municipal Lighting Plant, Mansfield Municipal Electric Department, Middleborough Gas and Electric Department and Taunton Municipal Light Plant v. ISO New England Inc.: Direct Testimony and Exhibits before the Federal Energy Regulatory Commission in Docket No. EL08-48, on behalf of the individually municipally-owned power systems serving the Massachusetts communities of Hull, Mansfield, Middleborough, Taunton, Braintree and Hingham. This testimony provided technical support for the MPS complaint; March 28, 2008.
166. In re: Entergy Nuclear Operations Inc. and Entergy Nuclear Palisades, Inc. (Palisades Nuclear Plant), Entergy Nuclear Operations Inc. and Entergy Nuclear Fitzpatrick, Inc. (James A. Fitzpatrick Nuclear Power Plant), Entergy Nuclear Operations Inc. and Entergy Nuclear Generation Company (Pilgrim Nuclear Power Station), Entergy Nuclear Operations Inc. and Entergy Nuclear Vermont Yankee, Inc. (Vermont Yankee Nuclear Power Station), Entergy Nuclear Operations Inc.; Entergy Nuclear Indian Point 2, LLC; and Energy Nuclear Indian Point 3, LLC (Indian Point Nuclear Generating Unites Nos. 1, 2, and 3), and Entergy Nuclear Operations Inc. and Entergy Nuclear Palisades, LLC. (Big Rock Point): Affidavit before the Nuclear Regulatory Commission in Docket Nos. 50-255-LT and 72-7-LT, 50-333-LT and 72-12-LT, 50-293-LT, 50-271-LT, 50-003-LT, 50-

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- 247-LT and 50-286-LT and 50-155-LT and 72-43-LT, on behalf of the Locals 369 and 590, Utility Workers Union of America, AFL-CIO. This affidavit provided support for the April 15, 2008, Reply of Locals 369 and 590, Utility Workers Union of America, AFL-CIO opposing a restructuring of Entergy's nuclear operating companies; April 15, 2008.
167. In re: ISO New England, Inc.: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER08-633-000, on behalf of The Connecticut Department of Public Utility Control. The purpose of this affidavit was to review the reliability analyses performed by the ISONE on the need to retain NRG's Norwalk Harbor Units 1 and 2 as listed Capacity Resources in the Forward Capacity Market for the 2010/2011 Capacity Year; April 17, 2008.
168. In re: In the Matter of the Ontario Energy Board Act, 1998, S.O. 1998, C.15 (Sched. B); In the Matter of an Application by Hydro One Networks Inc. pursuant to section 92 of the Act, for an Order or Orders granting leave to construct a transmission reinforcement project between the Bruce Power Facility and Milton switching Station, all in the Province of Ontario: Affidavit and Exhibits before the Ontario Energy Board in Docket No. EB-2007-0050, on behalf of the Saugeen Ojibway Nations. The purpose of this affidavit was to review the analyses performed by the Ontario Power Authority, Hydro One and the Independent Electric System Operator of Ontario in support of the application to construct a proposed Bruce-to-Milton double circuit 500 kV transmission line project; April 18, 2008.
169. In re: Braintree Electric Light Department, Hingham Municipal Lighting Plant, Hull Municipal Lighting Plant, Mansfield Municipal Electric Department, Middleborough Gas and Electric Department and Taunton Municipal Light Plant v. ISO New England Inc.: Second Affidavit before the Federal Energy Regulatory Commission in Docket No. EL08-48-000, on behalf of the individual municipally owned power systems serving the Massachusetts communities of Hull, Mansfield, Middleborough, Taunton, Braintree and Hingham.
170. In re: In the Matter of sections 25.30 and 25.31 of the Electricity Act and In the Matter of an Application by Ontario Power Authority for review and approval of its integrated power system plan and approval of its proposed procurement process. Affidavit and Exhibits before the Ontario Energy Board in Docket No. EB-2007-0707, on behalf of the Saugeen Ojibway Nations. The purpose of this affidavit was to review the Integrated Power System Plan ("IPSP") prepared by the Ontario Power Authority, and discuss that Plan as it relates to the concerns of the Saugeen Objiway Nations; Filed August 1, 2008.
171. In re: Ashburnham Municipal Light Plant, Boylston Municipal Light Department, Chester Municipal Electric Light Department, Groton Electric Light, Holden Municipal

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- Light Department, Holyoke Gas & Electric Department, Paxton Municipal Light Department, Princeton Municipal Light Department, Shrewsbury Electric Light and Cable, Sterling Municipal Light Department, Templeton Municipal Light, West Boylston Municipal Light Plant, Westfield Gas & Electric, Chicopee Municipal Lighting Plant, Hudson Light & Power Department, South Hadley Electric Light Department and the Massachusetts Municipal Wholesale Electric Company, Complainants, v. Berkshire Power Company, LLC, and ISO New England Inc., Respondents. Affidavit and Exhibits before the Federal Energy Regulatory Commission in Docket No. EL08-, on behalf of Ashburnham Municipal Light Plant, et al. The purpose of this affidavit is to present the results of an analysis I conducted concerning whether Berkshire Power Company, LLC (“Berkshire”), the operator of the Massachusetts-based Berkshire Plant, is earning sufficient revenues in the market to cover its “facility costs.” The Berkshire Unit is currently operated pursuant to a Reliability Must Run (“RMR”) Agreement between Berkshire and ISO New England Inc.
172. In re: Missouri River Energy Services and Midwest Independent Transmission System Operator, Inc. and Missouri River Energy Services and Western Minnesota Municipal Power Agency. Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. ER08-370-008 and EL08-22-006, on behalf of Missouri River Energy Services and the Western Minnesota Municipal Power Agency. The main purpose of my testimony is to respond to portions of Mr. Alan Heintz’s Prefiled Answering Testimony, Cross Answering Testimony and Corrections to Testimony on behalf of Otter Tail Power Company (“OTP”) and of Mr. Lotfy N. Sidrak’s Prepared Answering Testimony on behalf of the Commission Staff; Filed October 9, 2009.
173. In re: Southwest Power Pool, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. ER10-1069-000 on behalf of Nebraska Public Power District, Omaha Public Power District, City Utilities of Springfield, Missouri, Lincoln Electric System and The Empire District Electric Company. The purpose of this affidavit is respond to Southwest Power Pool, Inc.’s “Submission of Tariff Revisions to Modify Transmission Cost Allocation Methodology,” and, in particular, the Prepared Direct Testimony of Mr. Leslie E. Dillahunty; Filed May 17, 2010.
174. In re: Southwest Power Pool, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. ER10-1269-000 on behalf of Nebraska Public Power District. The purpose of this affidavit is to respond to SPP’s Integrated Transmission Plan filing in Docket No. ER10-1269 on May 17, 2010 and the prepared testimony of Mr. Bruce Rew, which summarizes and purports to provide a justification for SPP’s modified transmission planning process, the Integrated Transmission Plan (“ITP”); Filed June 7, 2010.
175. In re: In the Matter of the Application of Rocky Mountain Power for Alternative Cost Recovery for Major Plant Additions of the Populus to Ben Lomond Transmission Line

**Proceedings In Which
Whitfield A. Russell
Has Testified**

- and the Dunlap 1 Wind Project. Testimony before the Public Service Commission of Utah in Docket No. 10-035-89 on behalf of The Utah Industrial Energy Consumers. The purpose of this testimony is to explain why the present method of allocating costs of PacifiCorp's transmission system should be changed to a method that tracks cost causation and is aligned with PacifiCorp's transmission planning; Filed October 26, 2010.
176. In re: The Connecticut Light and Power Company, The Connecticut Transmission Municipal Electric Energy Cooperative. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-31 on behalf of the Connecticut Transmission Municipal Electric Energy Cooperative. The purpose of this affidavit is to explain how CTMEEC intends to account for, and recover the transmission revenue requirement associated with, the 345 k V and 115 k V PTF assets that it is acquiring from CL&P; Filed December 15, 2010.
177. In re: Connecticut Transmission Municipal Electric Energy Cooperative. Affidavit before the Federal Energy Regulatory Commission in Docket No. ER11- on behalf of the Connecticut Transmission Municipal Electric Energy Cooperative. The purpose of this affidavit is to file Connecticut Transmission Municipal Electric Energy Cooperative proposed localized costs, revenue requirements and Schedule 21; Filed April 29, 2011.
178. In re: MidAmerican Energy Company. Answering testimony before the Federal Energy Regulatory Commission in Docket No. ER09-823-001. The purpose of my testimony is to answer and respond to the testimony filed in this proceeding by MidAmerican Energy Company ("MEC") witness Dehn A. Stevens and by Federal Energy Regulatory Commission Staff witnesses Antonio Maceo and Edward R. Gross; Filed May 2, 2011.
179. In re: Duke Energy Corporation and Progress Energy, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-60-000, ER11-3306-000 and ER11-3307-000. The purpose of this affidavit it to report on my analyses of several elements of the proposed merger of Duke Energy Corp. and Progress Energy, Inc.; Filed June 3, 2011.
180. In re: New York Power Authority's 2011 Hydroelectric Rate Modification Plan. Affidavit before the Power Authority of the State of New York in I.D. No. PAS-33-11-00001-P on behalf of New York Power Authority. The purpose of this affidavit is to discuss the appropriate rates for bulk power service that the New York Power Authority will render in the 2011-2014 rate years to municipal and cooperative preference customers from NYPA's Niagara and St. Lawrence Projects; Filed October 24, 2011.
181. In re: Duke Energy Corporation and Progress Energy, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-60-004 on behalf of the Cities of New Bern and Rocky Mount, North Carolina. The purpose of this affidavit is to examine

**Proceedings In Which
Whitfield A. Russell
Has Testified**

the extent to which the four power sales agreements that the Duke Energy Corp. and Progress Energy, Inc. present as “interim mitigation” involve relinquishment of operational control over the electric resources that are Represented as being involved in those transactions. Second, to evaluate whether certain of the transmission upgrades that the Applicants propose as “permanent mitigation” are actually foreseeable and reasonably certain changes in the transmission topography of the areas affected by the proposed merger, and therefore not eligible to be considered as mitigation of merger-induced increases in market concentration; Filed April 25, 2012.

182. In re: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to § 4928.143, Ohio Rev. Code, In the Form of an Electric Security Plan. Answering Testimony before The Public Utilities Commission of Ohio in Case No. 11-346-EL-SSO, et. al. on behalf of Ormet Primary Aluminum Corporation. The purpose of this testimony is to address the Modified Electric Security Plan (“ESP II”) filed on March 30, 2012, by Columbus Southern Power Company and Ohio Power Company (together called AEP and AEP Ohio); Filed May 4, 2012.
183. In re: Needs for an Alternatives to (NFAT) Review of Manitoba Hydro’s Preferred Development Plan (PDP). Report on behalf of the Manitoba Metis Federation before the Public Utilities Board of Manitoba. The report addressed the limitations associated with Manitoba Hydro hydrocentric future plans; Filed February 12, 2014.
184. In re: BCWF v. Duke Energy Indiana, Inc., No. 1:13-CV-1984-SEB-TAB (S.D. IND.). Expert Report on behalf of Benton County Wind Farm, LLC before the United States District Court Southern District of Indiana Indianapolis Division. The report addressed whether congestion constitute a reliability threat to the transmission system and if Duke obtained Transmission Services for the BCWF Plant, would BCWF receive dispatch down signals based on Duke’s price offer; Filed October 31, 2014.
185. In re: BCWF v. Duke Energy Indiana, Inc., No. 1:13-CV-1984-SEB-TAB (S.D. IND.). Expert Rebuttal Report on behalf of Benton County Wind Farm, LLC before the United States District Court Southern District of Indiana Indianapolis Division. The report rebuts portions of the October 31, 2014, Statement of Opinions submitted by Mr. Judah L. Rose on behalf of Duke Energy Indiana, Inc.; Filed November 26, 2014.
186. In re: BCWF v. Duke Energy Indiana, Inc., No. 1:13-CV-1984-SEB-TAB (S.D. IND.). Damages Expert Report on behalf of Benton County Wind Farm, LLC before the United States District Court Southern District of Indiana Indianapolis Division. This report sets forth Whitfield Russell’s opinions regarding the amount of revenue lost by BCWF as a result of Duke’s practice of: (i) offering BCWF energy into the Midcontinent Independent System Operator markets at \$0 per megawatt hour, and (ii) refusing to purchase Transmission Services for BCWF (as defined by the PPA), while (iii) refusing

**Proceedings In Which
Whitfield A. Russell
Has Testified**

to pay liquidated damages under the PPA; Filed December 5, 2014.

187. In re: THE INTERNATIONAL ASSOCIATION OF MACHINISTS AND AEROSPACE WORKERS, AFL-CIO, LOCAL LODGE NO. 1821, on behalf of its individual members employed at the Bucksport Paper Mill; et al v. VERSO PAPER CORP., a Delaware Corporation; et al. Affidavit on behalf of The International Association of Machinists and Aerospace Workers, AFL-CIO, Local Lodge No. 1821, on behalf of its individual members employed at the Bucksport Paper Mill; et al before the United States Court for the District of Maine. This affidavit explained some basic facts about the nature of the power generation facilities at Verso's Bucksport mill; the interest that several of those clients have expressed in investigating an acquisition of the power generation facilities at Verso's Bucksport Mill and actions that I have taken on their behalf to investigate the feasibility of such an acquisition; the synergistic manner in which cogeneration and bio-mass work at a paper mill; why an independent co-generator would want, if possible, to have an ongoing paper making operation as a customer for the steam and power it produces; the economies that can be realized as a result of integrating the operation of cogeneration with a paper mill and the positive impact that such integrated operation can be expected to have on the sales price of both the cogeneration and the paper mill; how my IPP clients learned about the availability of the Bucksport cogeneration facilities; and the inquiries of Verso that my IPP clients initiated and how Verso ignored those inquiries (and approximately when these experiences occurred); Filed January 8, 2015.
188. In re: The Matter of the Application of the Consolidated Edison Company of New York, Inc. Direct testimony on behalf of the County of Westchester, New York before the State of New York Public Service Commission. The purpose of this testimony is to address the following issues: Hudson Avenue Facility costs, Advanced Metering Infrastructure costs, Depreciation, Transfer of Gas Operations' fixed charges to Electric Operations, Incentives, and Other miscellaneous items; Filed May 25, 2016.

ANTOINE A. GAMARRA

Antoine A. Gamarra has been a Partner at Whitfield Russell Associates since 1997. He holds a Bachelor of Science degree in Mechanical Engineering from San Jose State University.

Mr. Gamarra is experienced in power flow analysis, general rate case issues, cost of service studies, IOU/ISO/RTO transmission and ancillary tariff rate development / design, EWG applications, QF certification/recertification, standby / backup rate design, stranded cost / exit fees, avoided cost filings, demand response analysis, market price forecasting, portfolio valuation, numerous RFPs (between 5 MW to 542 MW), power contract negotiations / analysis, power plant economics / financing / justification / certification / permitting / market valuation / tax assessment, interconnection / reliability studies, merger market power analysis, acquisition studies, damage studies, load resource modeling, production cost modeling, cost-benefit modeling, loss of load probability modeling, transmission loss methodologies / analysis and transmission load flow analysis / modeling (PTI-PSS/E).

Prior to joining the firm, Mr. Gamarra was a Utility Engineer for the California Public Utilities Commission (CPUC). He testified as an expert witness and participated in numerous rate cases. When Mr. Gamarra was at the CPUC, he developed the Working Cash practice used by the CPUC for small water utilities. While at the CPUC, Mr. Gamarra attended numerous seminars such as: Mergers and Acquisitions in the Utility Industry; Rate of Return and the Cost of Capital; Spot Gas and the Electric Generation Market; U.S. Natural Gas Industry; Marginal Pricing in the Utility Industry; and the Utility Ratemaking seminar co-sponsored by the National Association of Regulatory Utility Commissioners (NARUC).

Prior to joining the firm, Mr. Gamarra was also a Patent Examiner on electro-mechanical switching for the U.S. Patent Office and a Mechanical Engineer redesigning electric trolley cars for the San Jose Trolley Corporation.

Mr. Gamarra testified on rate base issues: including plant, depreciation reserve and expense, working cash, construction work in progress, contributions in aid of construction, and customer advances for the Proceeding Number 2-13 below:

1. In re: Citizens Utilities Company of California, California Public Utilities Commission, Docket No. 89-03-27, concerning general office expenses and methods of cost allocation to Citizen-owned utilities from offices in Stamford, Connecticut; Redding, California; and Sacramento, California.
2. In re: Citizens Utilities Company of California, Felton District, California Public Utilities Commission, Docket No. 89-03-28. Main Issue: New Source of Supply to meet demand.
3. In re: Citizens Utilities Company of California, Sacramento District, California Public Utilities Commission, Docket No. 89-03-29. Main Issue: Growth estimates and required capacity.
4. In re: Citizens Utilities Company of California, Guernville District, California Public Utilities Commission, Docket No. 89-03-30. Main Issue: Quality of service and reliability.
5. In re: Citizens Utilities Company of California, Francis Land and Water Company, California Public Utilities Commission, Docket No. 89-03-31. Main Issue: Disallowance of plant not used and useful.
6. In re: Citizens Utilities Company of California, Montara District, California Public Utilities Commission, Docket No. 89-02-011, Order Instituting an Investigation. Main Issue: Depreciation and retirement treatment of plant.
7. In re: California Water Service Company, Los Altos-Suburban District, California Public Utilities Commission, Docket No. 88-04-070. Main Issue: New source of supply and back-up capacity.
8. In re: California Water Service Company, Dixon District, California Public Utilities Commission, Docket No. 88-04-071. Main Issue: System reliability.
9. In re: California Water Service Company, Hermosa-Redondo District, California Public Utilities Commission, Docket No. 88-04-072. Main Issue: Growth and system capacity.
10. In re: California Water Service Company, King City District, California Public Utilities Commission, Docket No. 88-04-073. Main Issue: Demand requirements and back-up capacity.
11. In re: California Water Service Company, Marysville District, California Public Utilities Commission, Docket No. 88-04-074. Main Issue: Working capital.

12. In re: California Water Service Company, South San Francisco District, California Public Utilities Commission, Docket No. 88-04-075. Main Issue: New source of supply.
13. In re: California Water Service Company, Willows District, California Public Utilities Commission, Docket No. 88-04-076. Main Issue: Back-up capacity.

Mr. Gamarra testified on all rate cases issues: including Revenue Requirement, Operation and Maintenance Expenses, Administrative and General Expenses, Depreciation Expenses and Reserve, Taxes, Rate Base, and Rate Design for Proceeding Number 14-17 below:

14. In re: Gibbs Ranch Water Company, California Public Utilities Commission, Docket No. 89-08-038. Main Issue: "Arms length negotiation" for construction contracts and services.
15. In re: Graeagle Water Company, California Public Utilities Commission, Docket No. 87-11-001. Main Issue: Excess capacity.
16. In re: Sorsoli Water Company, California Public Utilities Commission, Docket No. 87-02-041. Main Issue: "Rate Shock" and system reliability.
17. In re: Garrapata Water Company, California Public Utilities Commission, Docket No. 87-01-021. Main Issue: System reliability, "Rate Shock" and rate design.

Mr. Gamarra has been involved with numerous other proceedings involving the testimony/affidavit of his partner Whitfield A. Russell and prior partner Peter Lanzalotta, since 1992. He has also performed numerous studies, proposals, and RFP solicitations on behalf of various clients. Following are just some of the cases in which he has been involved.

18. In re: Maui Electric Company, Limited, Office of Consumer Advocate, Docket No. 7000. Developed exhibits and workpapers for plant and depreciation analyses for rate cases for the islands of Maui, Molokai and Lanai in the state of Hawaii.
19. In re: North Carolina Eastern Municipal Power Agency vs. Carolina Power & Light. Developed historical and future load resource models for various scenarios in this damage lawsuit. Modeled historical and future purchased capacity billings by calculating levelized depreciation, earnings, income taxes and amortization of Investment Tax Credits. Also involved in debt service calculations.
20. Participated in a study correlating the avoided cost to gas prices for future electric generation, on behalf of MidAtlantic Cogen, Inc.
21. In re: Houston Lighting & Power Company's Standard Avoided Cost Calculation, Docket No. 10832, before the Public Utility Commission of Texas. Converted Houston

- Light & Power Company's McModel, Cost/Benefit model, from a mainframe UNIX C program to PC C++ version and ran various scenarios for intervenors using McModel.
22. In re: Application of Texas Utilities for Authority to Change Rates, before the Public Utility Commission of Texas, Docket No. 11735, on behalf of Cap Rock Electric Cooperative, Inc. Developed Standby Rates, Standby Tariffs and Testimony.
 23. In re: Application of Houston Lighting & Power Company for a Certificate of Convenience and Necessity for the DuPont Project, before the Public Utility Commission of Texas, Docket No. 11000, on behalf of Destec Energy, Inc. Modeled Steam Agreement contract and ran various scenarios using the McModel Cost/Benefit model.
 24. In re: Application of Cap Rock Electric Cooperative, Inc. for a Certificate of Convenience and Necessity, before the Public Utility Commission of Texas, Docket No. 11248, on behalf of Cap Rock Electric Cooperative, Inc., concerning proposed transmission system improvements.
 25. In re: Commonwealth Edison Company, Proposed General Increase in Electric Rates, before the Illinois Commerce Commission, Docket No. 94-0065, on behalf of the City of Chicago, conducted a Loss of Load Probability Analysis for reserve margin determination.
 26. Developed a "short-cut" production model to estimate future Pennsylvania-New Jersey-Maryland (PJM) running rates on behalf of Solar Turbines, Inc.
 27. Conducted Production Cost simulations for two utilities.
 28. Evaluated and translated documents regarding the SUPER Electric System Planning Model developed by the Latin American Organization of Energy for BHP Petroleum.
 29. In re: Application of Texas Utilities Electric Company for Authority to Implement Economic Development Service, General Service Competitive Pricing, Wholesale Power Competitive Pricing, and Environmental Technology Service, Docket No. 13100, before the Public Utility Commission of Texas, on behalf of Rayburn Country Electric Cooperative, Inc., concerning TU Electric's "competitive rates."
 30. In re: Complaint of Kenneth D. Williams v. HL&P, Docket No. 12065, on behalf of Destec before the Public Utility Commission of Texas.
 31. In re: Rebuttal testimony in a Complaint of Tex-La v. TUEC, Docket No. 12362, on behalf of Rayburn County Electric Coop. before the Public Utilities Commission of Texas.
 32. In re: Application for Authorization and Approval of Merger Between Wisconsin Electric Power Company, Northern States Power Company (Minnesota), Northern States Power Company (Wisconsin), and Cenergy, Inc., in Docket No. EC-95-16-000, before

- the Federal Energy Regulatory Commission (on behalf of Certain Intervenors), in Docket Nos. 6630-UM-100 and 4220-UM-101, before the Wisconsin Public Service Commission and Docket No. 6-2500-10601-2 before the Minnesota Office of Administrative Hearings for the Minnesota Public Utilities Commission, concerning the effect upon transmission access of the merger of NSP and WEPCO into Primergy.
33. In re: Alberta Electric Utilities 1996 Tariff Application before the Alberta Energy And Utilities Board, on behalf of the Industrial Power Consumers Association of Alberta concerning calculation of charges for ancillary services.
 34. In re: Central Power and Light and West Texas Utilities Filing in Compliance with Subst. Rule 23.67, Docket No. 15643, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
 35. In re: Texas Utilities Electric Company, Filing in Compliance with Subst. Rule 23.67, Docket No. 15638, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
 36. In re: Docket No. 15840, Regional Transmission Proceeding to Establish Postage Stamp Rate and Statewide Load Flow Pursuant to P.U.C. Subst. Rule. 23.67 on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas.
 37. In re: Rebuttal Testimony on behalf of MG&E, WIEG, WFC, CUB in Docket Nos. 6630-UM-100 and 4220-UM-101 before the Public Services Commission of Wisconsin; regarding merger, November 5, 1996.
 38. In re: Houston Lighting & Power Company Filing in Compliance with Subst. Rule 23.67, Docket No. 15639, before the Public Utility Commission of Texas, on behalf of Certain Power Marketers and Independent Power Producers, Destec Power Services and Enron Power Marketing, concerning Ancillary Services under the state-wide rate in Texas; September 30, 1996.
 39. In re: IES Utilities, Inc., Interstate Power Company, Wisconsin Power & Light Company, South Beloit Water, Gas & Electric Company, Heartland Energy Services, and Industrial Energy Applications, Inc., Docket Nos. EC96-13-000, ER96-1236-000, and ER96-2560-000, before the Federal Energy Regulatory Commission, on behalf of Wisconsin Intervenors ("WI"). The WI included municipal utilities and groups, industrial customers, rural electric cooperatives, and investor-owned utilities within the state of Wisconsin. Two sets of testimony; the first, analyzed engineering and operating problems created by the merger of WP&L, IPW and IES. The second set of testimony discussed how the IEC Independent System Operator ("ISO") failed in general to meet

the rigorous and comprehensive ISO standards promulgated by the Wisconsin Public Service Commission (WPSC). Both sets of testimony (Engineering and ISO) were filed before the Federal Energy Commission; March 27, 1997.

40. In re: Joint Application of WPL Holdings, Inc. and Wisconsin Power & Light Company for all Requisite Approvals in Connection with a Series of Related Transactions by which Interstate Power Company Becomes a Subsidiary of WPL Holdings, Inc., IES Industries, Inc. is Merged into WPL Holdings, Inc. and is Renamed Interstate Power Corporation and for Certain Related Transactions and Matters, in Docket No. 6680-UM-100, before the Public Service Commission of Wisconsin; May 7, 1997.
41. In re: City of College Station, FERC Docket No. TX 96-2-000, concerning transmission rates; November 7, 1997.
42. In re: Application for Approval of Restructuring Plan Under Section 2806 of the Public Utility Code, in Docket No. R-00973981 / R-00974104 on behalf of Mid-Atlantic Power Supply Association, before the Pennsylvania Public Utility Commission; November 7, 1997.
43. In re: Ormet Primary Aluminum Corporation, on behalf of Ormet Primary Aluminum Corporation, Arbitration Number 55-199-0051-94, before the American Arbitration Association, concerning the relationship between AEP and other power systems within NERC and ECAR; July 14, 1998
44. In re: Rebuttal Testimony in response to Mr., Walter R. Kelley and Mr. Thomas Kennedy, on behalf of Ormet Primary Aluminum Corporation, Arbitration Number 55-199-0051-94, before the American Arbitration Association; September 2, 1998.
45. In re: Application No. RE95081 – TransAlta Utilities Corp., on behalf of Albchem Industries Ltd., CXY Chemicals and Dow Chemicals Canada Ltd., before the Alberta Energy & Utilities Board addressing ACD's interest in providing interruptible service; October 1998.
46. In re: Tri-State Generation and Transmission Assoc., Inc., in Arbitration No. 77 Y 181 0023097 before the American Arbitration Association; September 14, 1998.
47. In re: Petition for Order Concerning Delineation of Transmission and Local Distribution Facilities, Docket No. 98-0894 on behalf of The City of Chicago, before the Illinois Commission in reference to re-functionalization; April 2, 1999.
48. In re: Kansas Municipal Energy Agency ("KMEA"), Docket No. ER00-2644-000, before the Federal Energy Regulatory Commission ("FERC") to review, assess and comment on the actions taken by the Southwest Power Pool in connection with two transmission service requests made by the Kansas Municipal Energy Agency aggregating 39 MW of contract demand; December 8, 2000.

49. In re: Occidental Chemical Corporation, testimony in Docket No. U-25533, before the Louisiana Public Service Commission on behalf of "OxyChem" for the purpose of (1) to demonstrate the problems with the Louisiana Public Service Commission Staff's proposal that each of ELI and EGS change their interruptible rate schedules from a reliability-based curtailment methodology and (2) to recommend that the Commission defer consideration of Staff's proposal; May 3, 2001.
50. In re: Alliance Companies, et al., Affidavit in Docket Nos. RM01-12-000, RT01-87-000 and RT01-88-000, before the Federal Energy Regulatory Commission on behalf of the Ormet Primary Aluminum Corporation, for the purpose of providing relevant engineering fundamentals related to the proper design of methodology for quantifying transmission losses and for allocating such losses to the customers of regional transmission organizations; March 12, 2002.
51. In re: Response to PacifiCorp Motion: Affidavit in Response to PacifiCorp's Daubert Motion Regarding Richard Slaughter and Supplemental Expert Report on behalf of Snake River Valley Electric Association; Prepared Damage Study. September 10, 2002.
52. In re: American Electric Power Corp.: Affidavit in Docket No. ER03-242, before the Federal Energy Regulatory Commission on behalf of Ormet Primary Aluminum Corp. to respond to AEP's proposed electric transmission rates to be included in the OATT of the PJM Interconnection; December 24, 2002.
53. In re: Ormet Primary Aluminum Corporation v Entergy-Koch Trading LP, on behalf of Ormet Primary Aluminum Corporation. Damage Study for breach of contract. February 20, 2003.
54. In re: Ameren Services Company, et al.: Affidavit in Docket No. EL03-212-000, before the Federal Energy Regulatory Commission on behalf of Ormet Primary Aluminum Corp. to respond to AEP's Submission in Response to the Commission's Section 206 Investigation; Beginning of Seams Elimination Charges/Costs Adjustments/Assignments (SECA) rate design involvement; September 2, 2003.
55. In re: Pacific Gas and Electric Company SCS Tariff: Direct Testimony in Phase I before the Federal Energy Regulatory Commission in Docket Nos. ER00-565-000, ER00-565-003, and ER00-565-007 on behalf of the Northern California Power Agency. The purpose of the testimony is to explain the nature of the costs for which Pacific Gas and Electric Company seeks recovery through its Scheduling Coordinator Service Tariff; September 13, 2004.
56. In re: Pacific Gas and Electric Company SCS Tariff: Direct Testimony in Phase II before the Federal Energy Regulatory Commission in Docket Nos. ER00-565-000 and ER00-565-003 on behalf of the Northern California Power Agency ("NCPA"). The purpose of the testimony is to discuss PG&E's propriety in passing through ISO Charge Type costs as Scheduling Coordinator Service charges to NCPA under the terms of the NCPA-PG&E Interconnection Agreement; September 13, 2004.

57. In re: Cabazon Wind Partners, LLC Complainant vs. Southern California Edison Company Respondent: Affidavit in Docket No. EL04-137 before the Federal Energy Regulatory Commission on behalf of Cabazon Wind Partners, LLC (“Cabazon”). This Affidavit provides support for Cabazon's request that Southern California Edison Company (“SCE”) grant Cabazon reimbursement, in the form of a transmission credit or otherwise, for the cost of certain upgrades Cabazon has borne to interconnect its generation to SCE; September 27, 2004.
58. In re: Southern California Edison IFA Agreement: Cross Answering Testimony before the Federal Energy Regulatory Commission in Docket No. ER02-2189-003 on behalf of Whitewater Hill Wind Partners. The purpose of the testimony is to respond to testimony filed on October 28, 2004, in this proceeding by Commission Staff witnesses, Ms. Tania Martinez Navedo and Mr. Edward W. Mills. The issue in this case involves the designation of disputed upgrades contained in the IFA between Whitewater and Southern California Edison Company; September 14, 2004
59. In re: Petition for a Declaratory Order or Advisory Opinion as to the Applicability of the Commission’s Decision in Docket No. 03-10003: Affidavit in Docket No. 04-10023, before the Public Utilities Commission of Nevada on behalf of Ridgewood Renewable Power, LLC (“Ridgewood”) with respect to a landfill methane gas powered electric generating project located at the Olinda/ Alpha landfill in Orange County, California; December 30, 2004.
60. In re: Southern California Edison, California Wind Energy Association and the Proposed Antelope-Tehachapi 230 kV Line: Affidavit before the Federal Energy Regulatory Commission in Docket No. EL05-80-000, on behalf of the California Wind Energy Association (“CalWEA”). The purpose of this affidavit is to explain how and why the proposed Antelope-Tehachapi 230 kV line will be integrated into the regional transmission grid and thereby constitute a network upgrade facility; April 14, 2005.
61. In re: American Electric Power Corporation and the Network Integration Transmission Service: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER05-751-000, on behalf of Ormet Primary Aluminum Corporation. The purpose of this affidavit is to respond to American Electric Power Corporation’s (AEP’s) request (a) to increase its annual Network Integration Transmission Service (NTS) revenue requirements to \$486 million per year and (b) to increase the NTS rates; April 29, 2005.
62. In re: Cabazon Wind Partners, LLC Request for Reimbursement of Interconnection Costs from Southern California Edison: Prepared Direct Testimony before the Federal Energy Regulatory Commission in Docket No. EL04-137, on behalf of Cabazon Wind Partners, LLC. The purpose of this testimony is to provide support for Cabazon’s request that Southern California Edison (“SCE”) grant Cabazon reimbursement, in the form of transmission credit or otherwise, for the cost of certain upgrades Cabazon has borne to interconnect generation to SCE; May 20, 2005.

63. In re: The Matter of the Arbitrations between PG&E Energy Trading-Power, LP Claimant, Counter-Respondent and Southaven Power, LLC, and Caledonia Generating, LLC, Respondents, Counter-Claimants, in Docket Nos. 16-198-00206-03 & 16-198-00207-03, helped prepare and edit an Expert Report concerning the disputes between the parties involving tolling agreements, interconnection rights, and transmission service requests for service and availability; September 8, 2005.
64. In re: Ormet Primary Aluminum Corporation and the SECA Rate Design: Pre-Filed Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. ER05-6-001, et al, on behalf of Ormet Primary Aluminum Corporation. The purpose of this testimony is to analyze the proposed Seams Elimination Charges/Costs Adjustments/Assignments (SECA) rate design and recommend a SECA Rate Design; October 24, 2005.
65. In re: Berkshire Power Company, LLC, participated in review of a cost-of-service filing by a generator, concerning the eligibility of the generator for a reliability must run agreement with the ISO-New England, in Docket No. ER05-1179-001 before the Federal Energy Regulatory Commission; November 7, 2005.
66. In re: In the Matter of the Application of Ohio Power Company for Approval of a Special Contract Arrangement with Ormet Primary Aluminum Corporation, In the Matter of the Joint Petition of Ohio Power Company and South Central Power Company for Reallocation of Territory, In the Matter of: Ormet Primary Aluminum Corporation and Ormet Primary Mill Products Corporation v. South Central Power Company and Ohio Power Company: Pre-Filed Testimony before the Public Utilities Commission of Ohio in Docket Nos. 96-999-EL-AEC, 96-1000-EL-PEB and 05-1057-EL-CSS, on behalf of Ormet Primary Aluminum Corporation. The purpose of this testimony is to analyze: (a) the effect upon the ratepayers of South Central and Buckeye of requiring South Central to serve Ormet and (b) the effect upon the ratepayers and stockholders of Ohio Power Company ("OPCO") of requiring OPCO to serve Ormet's full requirements under OPCo's retail GS-4 rate schedule; September 8, 2006.
67. In re: Delmarva Power & Light Company ("Delmarva"), Conectiv Energy ("CE"), Conectiv Energy Services ("CESI") et al. ("Plaintiffs"), on the one hand, and Defendant Motiva Enterprises LLC ("Motiva"); Damage Study for claims between parties. Motiva sells power from it own 66 MW generation plant to Delmarva; June 17, 2007.
68. In re: Cabot Corporation, Plaintiff v. Private Power, LLC, Private Power et al., Defendants, and Counterclaims; Damage Study for claims between parties. Cabot was the host to a cogeneration plant developed by Private Power; December 20, 2007.
69. In re: Columbus Southern Power Company and Ohio Power Company: Prepare affidavit before the Public Utilities Commission of Ohio in Case Nos. 07-1132-EL-UNC, 07-1191-EL-UNC, 07-1278-EL-UNC, and 07-1156-EL-UNC, on behalf of Ormet Primary Aluminum Company. The purpose of this affidavit is in the matter of the Application of Columbus Southern Power Company and Ohio Power Company for approval of an

additional generation service rate increase pursuant to their post-market development period rate stabilization plans and to update each company's transmission cost recovery rider; February 28, 2008.

70. In re: In the Matter of the Ontario Energy Board Act, 1998, S.O. 1998, C.15 (Sched. B); In the Matter of an Application by Hydro One Networks Inc. pursuant to section 92 of the Act, for an Order or Orders granting leave to construct a transmission reinforcement project between the Bruce Power Facility and Milton Switching Station, all in the Province of Ontario: Affidavit and Exhibits before the Ontario Energy Board in Docket No. EB-2007-0050, on behalf of the Saugeen Ojibway Nations. The purpose of this affidavit is to review the analyses performed by the Ontario Power Authority, Hydro One and the Independent Electric System Operator of Ontario in support of the application to construct a proposed Bruce-to-Milton double circuit 500 kV transmission line project; April 18, 2008.
71. In re: In the Matter of sections 25.30 and 25.31 of the Electricity Act and In the Matter of an Application by Ontario Power Authority for review and approval of its integrated power system plan and approval of its proposed procurement process. Affidavit and Exhibits before the Ontario Energy Board in Docket No. EB-2007-0707, on behalf of the Saugeen Ojibway Nations. The purpose of this affidavit is to review the Integrated Power System Plan ("IPSP") prepared by the Ontario Power Authority, and discuss that Plan as it relates to the concerns of the Saugeen Ojibway Nations; Filed August 1, 2008.
72. In re: Ashburnham Municipal Light Plant, Boylston Municipal Light Department, Chester Municipal Electric Light Department, Groton Electric Light, Holden Municipal Light Department, Holyoke Gas & Electric Department, Paxton Municipal Light Department, Princeton Municipal Light Department, Shrewsbury Electric Light and Cable, Sterling Municipal Light Department, Templeton Municipal Light, West Boylston Municipal Light Plant, Westfield Gas & Electric, Chicopee Municipal Lighting Plant, Hudson Light & Power Department, South Hadley Electric Light Department and the Massachusetts Municipal Wholesale Electric Company, Complainants, v. Berkshire Power Company, LLC, and ISO New England Inc., Respondents. Confidential affidavit and exhibits before the Federal Energy Regulatory Commission in Docket No. EL09-3, on behalf of Ashburnham Municipal Light Plant, et al., concerning whether Berkshire Power Company, LLC, is earning sufficient revenues in the market to cover its facility costs; Filed October 8, 2008.
73. "Preliminary Feasibility Study of Municipalizing the Electric Distribution System for the Village of Lakewood, the Town of Busti and part of the Town of Ellicott" prepared by Whitfield Russell Associates, December 2008.
74. In re: Application of Trans-Allegheny Interstate Line Company for (I) Certificate of Public Convenience...For...High Voltage Electric Transmission Lines.... Docket No. A-110172, on behalf of all parties (the Collaborative). "Technical Report for the Collaborative produced by Whitfield Russell Associates" which provides details of the analytical work regarding criteria violations and solutions to solve the criteria violations.

Load flow studies, generation studies and load forecasts were done; July 15, 2009.

75. In re: Missouri River Energy Services and Midwest Independent Transmission System Operator, Inc. and Missouri River Energy Services and Western Minnesota Municipal Power Agency. Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. ER08-370-008 and EL08-22-006, on behalf of Missouri River Energy Services and the Western Minnesota Municipal Power Agency. Regarding MISO Attachment O Rate Formulae; Filed October 9, 2009.
76. In re: In the Matter of the Application of Rocky Mountain Power for Alternative Cost Recovery for Major Plant Additions of the Populus to Ben Lomond Transmission Line and the Dunlap 1 Wind Project. Testimony before the Public Service Commission of Utah in Docket No. 10-035-89 on behalf of The Utah Industrial Energy Consumers. The purpose of this testimony is to explain why the present method of allocating costs of PacifiCorp's transmission system should be changed to a method that tracks cost causation and is aligned with PacifiCorp's transmission planning; Filed October 26, 2010.
77. In re: Duke Energy Corporation and Progress Energy, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-60-000, ER11-3306-000 and ER11-3307-000. The affidavit reported on several elements of the proposed merger of Duke Energy Corp. and Progress Energy, Inc.; Filed June 3, 2011. A second affidavit examined the extent to which Duke Energy Corp. and Progress Energy, Inc. proposed interim and permanent mitigation measures satisfy market power concerns; Filed April 25, 2012.
78. In re: New York Power Authority's 2011 Hydroelectric Rate Modification Plan. Affidavit before the Power Authority of the State of New York in I.D. No. PAS-33-11-00001-P on behalf of the New York Association of Public Power. The affidavit discussed the appropriate rates for bulk power service that the New York Power Authority will render in the 2011-2014 rate years to municipal and cooperative preference customers from NYPA's Niagara and St. Lawrence Projects; Filed October 24, 2011.
79. In re: Duke Energy Corporation and Progress Energy, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-60-004 on behalf of the Cities of New Bern and Rocky Mount, North Carolina. The purpose of this affidavit is to examine the extent to which the four power sales agreements that the Duke Energy Corp. and Progress Energy, Inc. present as "interim mitigation" involve relinquishment of operational control over the electric resources that are Represented as being involved in those transactions. Second, to evaluate whether certain of the transmission upgrades that the Applicants propose as "permanent mitigation" are actually foreseeable and reasonably certain changes in the transmission topography of the areas affected by the proposed merger, and therefore not eligible to be considered as mitigation of merger-induced increases in market concentration; Filed April 25, 2012.
80. In re: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §

- 4928.143, Ohio Rev. Code, In the Form of an Electric Security Plan. Answering Testimony before the Public Utilities Commission of Ohio in Case No. 11-346-EL-SSO, et. al. on behalf of Ormet Primary Aluminum Corporation. The purpose of this testimony is to address the Modified Electric Security Plan (“ESP II”) filed on March 30, 2012, by Columbus Southern Power Company and Ohio Power Company (together called AEP and AEP Ohio); Filed May 4, 2012.
81. In re: Needs for an Alternatives to (NFAT) Review of Manitoba Hydro’s Preferred Development Plan (PDP). Report on behalf of the Manitoba Metis Federation before the Public Utilities Board of Manitoba. The report addressed the limitations associated with Manitoba Hydro hydrocentric future plans; Filed February 12, 2014.
82. In re: BCWF v. Duke Energy Indiana, Inc., No. 1:13-CV-1984-SEB-TAB (S.D. IND.). Expert Report on behalf of Benton County Wind Farm, LLC before the United States District Court Southern District of Indiana Indianapolis Division. The report addressed whether congestion constitutes a reliability threat to the transmission system and if Duke obtained Transmission Services for the BCWF Plant, would BCWF receive dispatch down signals based on Duke’s price offer; Filed October 31, 2014. A second report rebuts portions of the October 31, 2014, Statement of Opinions submitted by Mr. Judah L. Rose on behalf of Duke Energy Indiana, Inc.; Filed November 26, 2014. A third report sets for opinions regarding the amount of revenue lost by the BCWF Plant as a result of Duke Energy Indiana’s actions; Filed December 5, 2014
83. In re: The Matter of the Application of the Consolidated Edison Company of New York, Inc. Direct testimony on behalf of the County of Westchester, New York before the State of New York Public Service Commission. The testimony addressed the following issues: Hudson Avenue Facility costs, Advanced Metering Infrastructure costs, Depreciation, Transfer of Gas Operations’ fixed charges to Electric Operations, Incentives, and other miscellaneous items; Filed May 25, 2016.

GENEVA GRAHAM LOOKER

Geneva Graham Looker is a Senior Associate at Whitfield Russell Associates. She holds a Bachelor of Arts degree from Hope College, and a Master of Business Administration from George Washington University. Mrs. Looker has worked for the firm as an Associate, a Senior Associate and an Associated Consultant for more than 25 years.

Mrs. Looker has participated in many cases of WRA in a variety of functions. Her work has included preparation and critiques of numerous cost of service studies. She has led the firm's settlement negotiations at FERC and at the Bonneville Power Administration on behalf of Native American Tribes. She has managed the preparation of testimony and the firm's litigation support of lead attorneys in dozens of major proceedings before State and Federal courts, agencies and arbitration panels. Her work has included excess capacity determinations, replacement power cost calculations, research on refusals to transmit third party energy, development of generating unit performance standards and a cost/benefit analysis of a street lighting system purchase. She has also analyzed data and prepared spreadsheets and exhibits detailing the damages caused by breach of contract between utilities. Mrs. Looker has attended numerous seminars on Utility Regulation and Rate Design, presented by Public Utilities Reports, Inc., and Scott Hempling, Esq.

Mrs. Looker has been responsible for annual reviews of formula rate proceedings for municipal clients in the State of New York, as well as for a Native American organization, as well as utilities in the Southwest Power Pool. She has testified on a panel with Mr. Russell before the Public Utilities Board of Manitoba concerning the Needs for and Alternatives to (NFAT) Review of Manitoba Hydro's Preferred Development Plan (PDP) on behalf of the Manitoba Métis Federation. She has also testified in arbitration between two municipal organizations, and in a transmission tariff proceeding involving Pacific Gas & Electric Company.

In addition to her work with WRA, Mrs. Looker previously worked at the American Public Power Association, Martin Capital Management, and the International Monetary Fund.

Mrs. Looker's Testimony as an Expert Witness

1. In re: Arbitration at JAMS, Ref. # 1400015484, May 22, 2017.
2. In re: Pacific Gas & Electric Company (PG&E) Transmission Owner Tariff Rate Filing, FERC Docket No. ER16-2320, July 5, 2017, filed testimony concerning the reasonableness of PG&E's transmission capital additions and operations and maintenance forecast.

Mrs. Looker testified with Whitfield A. Russell in the following proceeding:

In re: Needs for an Alternatives to (NFAT) Review of Manitoba Hydro's Preferred Development Plan (PDP). Participated in preparation of a report on behalf of the Manitoba Metis Federation before the Public Utilities Board of Manitoba. The report addressed the limitations associated with Manitoba Hydro hydrocentric future plans; filed February 12, 2014, testified May 13, 2014.

Mrs. Looker has and continues to review and analyze formula rate templates, annual updates to such templates, as well as other annually-occurring payments as follows:

1. National Grid's Niagara Mohawk Power Corporation Annual Update to the Formula Transmission Service Charge under the NYISO Open Access Transmission Tariff - Docket No. ER08-552-000, on behalf of the New York Association of Public Power (from Settlement discussions of the rate in 2008 to the present).
2. New York Power Authority's Hydroelectric Power Production Rates on behalf of the New York Association of Public Power (2009 to the present).
3. Bonneville Power Authority's Annual 181-D Payment on behalf of the Confederated Tribes of the Colville Reservation, including negotiations relating to a Memorandum of Understanding (2007 to the present).
4. Pacific Gas & Electric Company's Transmission Owner Tariff Filings at the Federal Energy Regulatory Commission on behalf of the California Public Utilities Commission (2014 to the present).
5. Southwest Power Pool's Upper Missouri Zone Open Access Transmission Tariff filings for Basin Electric Power Company, Heartland Consumers Power District, East River Electric Power Cooperative, Corn Belt Power Cooperative, Central

Power Electric Cooperative, Northwest Iowa Power Cooperative, NorthWestern Utilities, and the Western Area Power Administration, as well as updates thereto, on behalf of Missouri River Energy Services (2015 to the present).

Mrs. Looker has been involved with numerous other proceedings involving the testimony/affidavit of Whitfield A. Russell, principal of Whitfield Russell Associates, since 1987. Following are the majority of the cases in which she has been involved.

1. In re: Wisconsin Public Power Inc. System, Advance Plan 5, before the Public Service Commission of the state of Wisconsin, on behalf of the Wisconsin Public Power System, Inc., concerning transmission planning in the state of Wisconsin.
2. In re: Dow Chemical Company vs. Houston Lighting & Power Company, before the Texas Public Utilities Commission, Docket No. 8425, 8431, on behalf of The Dow Chemical Company, concerning application of Houston Lighting & Power Company for authority to change rates; Fuel Reconciliation, Revenue Requirements and Rate Design.
3. In re: M-S-R Public Power Agency vs. Tucson Electric Power Company, before the United States District Court of Arizona, No. CIV-86-521-TUC-ACM, on behalf of M-S-R, concerning TEP's breach of contract.
4. In re: Southern California Edison Company and San Diego Gas & Electric Company, before the Federal Energy Regulatory Commission, Docket No. EC89-5-000, on behalf of the City of Vernon, California concerning expected effects of the proposed merger on competition, system operation and transmission access.
5. In re: Southern California Edison Company and San Diego Gas & Electric Company, before the California Public Utilities Commission, Docket No. 88-12-035, on behalf of the City of Vernon, California concerning expected effects of the proposed merger on competition, system operation and transmission access.
6. In re: Northeast Utilities Service Company and Public Service Company of New Hampshire, before the Federal Energy Regulatory Commission, Docket Nos. EC90-10-000, ER90-143-000, ER90-144-000, ER90-145-000 and EL90-9-000, on behalf of Massachusetts Municipal Wholesale Electric Company, concerning the effect of a proposed merger on competition and transmission access.
7. Report to the Public Utilities Board of Manitoba concerning 1990 Manitoba Hydro Capital Projects Review: Generation and Transmission Requirements. Whitfield Russell Associates was appointed to report to The Public Utilities Board on matters regarding the economic consequences to the domestic customers of the Manitoba Hydro capital program.
8. In re: Northeast Utilities Service Company, before the Federal Energy Regulatory Commission, Docket Nos. ER90-373-000, et al., on behalf of the Massachusetts Municipal Wholesale Electric Company, evaluating the Preferred Transmission

Service Agreement between MMWEC and Northeast Utilities Service Company, for the transmission of MMWEC's power purchase from the New York Power Authority.

9. In re: Southern California Edison Company, before the Federal Energy Regulatory Commission, Docket No. ER88-83, on behalf of the City of Vernon, California concerning expected effects of Edison's administration of its transmission network on competition, system operation and transmission access.
10. In re: Wisconsin Public Power Inc. System et al., Advance Plan 6, before the Public Service Commission of the state of Wisconsin, Docket No. 05-EP-6, concerning Eastern Wisconsin Utility Joint Transmission System and Interface Study.
11. In re: MidAtlantic Energy v. Monongahela Power Company and the Potomac Edison Company, before the Public Service Commission of West Virginia, Case No. 89-783-E-C, on behalf of MidAtlantic Energy, concerning need for capacity and the appropriate avoided cost.
12. In re: Application for Authorization and Approval of Merger Between Wisconsin Electric Power Company, Northern States Power Company (Minnesota), Northern States Power Company (Wisconsin), and Cenergy, Inc., in Docket No. EC-95-16-000, before the Federal Energy Regulatory Commission (on behalf of Certain Intervenors, including Madison Gas & Electric Company, Wisconsin Public Service Corporation, Minnesota Power & Light Company, Otter Tail Power Company and the Lincoln Electric System), in Docket Nos. 6630-UM-100 and 4220-UM-101, before the Wisconsin Public Service Commission and Docket No. 6-2500-10601-2 before the Minnesota Office of Administrative Hearings for the Minnesota Public Utilities Commission (both on behalf of Madison Gas & Electric, Wisconsin Industrial Energy Group, Wisconsin Federation of Cooperatives and the Citizen's Utility Board), concerning the effect upon transmission access of the merger of NSP and WEPCO into Primergy.
13. In re: Application of Wisconsin Energy Corporation, Wisconsin Electric Power Company, Northern States Power Company, and Northern States Power Company-Wisconsin for Approval of a Series of Transactions by Which Northern States Power Company-Wisconsin is merged into Wisconsin Electric Power Company, Northern States Power Company becomes a Subsidiary of Wisconsin Energy Corporation, and Wisconsin Energy Corporation is Renamed Primergy Corporation: Direct Testimony, Rebuttal Testimony and Surrebuttal Testimony on behalf of The Wisconsin Industrial Energy Group, The Citizens' Utility Board, The Wisconsin Federation of Cooperatives and Madison Gas and Electric in Docket Nos. 6630-UM-100 and 4220-UM-101 before the Public Service Commission of Wisconsin, regarding the Transmission System Control Agreement and ISO Bylaws; October 8, 1996. Rebuttal testimony addressed Applicants' settlement offer which was submitted in their FERC merger proceeding; October 24, 1996. The surrebuttal testimony addressed two sets of Rebuttal testimony of Jose Delgado and the Rebuttal Testimonies of Malcolm Bertsch of the Applicants and Don Carlson of Minnesota Power and Light; November 5, 1996.

14. In re: In the Matter of Northern States Power Company's Petition for Approval to Merge with Wisconsin Energy Corporation; OAH Docket No. 6-2500-10601-2: Direct Testimony and Exhibits and Rebuttal Testimony and Exhibits on behalf of Madison Gas and Electric, The Wisconsin Federation of Cooperatives, and The Citizens' Utility Board in Docket No. E, G-002 and PA-95-500 before the Minnesota Office of Administrative Hearings for the Minnesota Public Utilities Commission. The purpose of the direct testimony propose remedies to the proposed merger in order to prevent anti-competitive effects; October 21, 1996. The rebuttal testimony addressed the direct testimony of Dr. Eilon Amit of Minnesota Department of Public Service and Dan Carlson of Minnesota Power and Light; November 8, 1996.
15. In re: Joint Application of WPL Holdings, Inc. and Wisconsin Power & Light Company for all Requisite Approvals in Connection with a Series of Related Transactions by which Interstate Power Company Becomes a Subsidiary of WPL Holdings, Inc., IES Industries, Inc. is Merged into WPL Holdings, Inc. and is Renamed Interstate Power Corporation andfor Certain Related Transactions and Matters: Direct Testimony and two Surrebuttal Testimonies on behalf of Badger Cooperative Group, The Citizens' Utility Board, Madison Gas and Electric, The Wisconsin Federation of Cooperatives, Wisconsin Industrial Energy Group and Municipal Wholesale Power Group in Docket No. 6680-UM-100 before the Public Service Commission of Wisconsin. The direct testimony discussed the characteristics of an appropriate Independent System Operator ("ISO") and presented the ISO recommended by Certain Intervenors; May 7, 1997. Surrebuttal testimony #1 addressed the rebuttal testimony of WP&L's witness Rodney Frame, Arnold Kehrli and Scott Wallace; May 30, 1997. The purpose of surrebuttal testimony #2 was to address the rebuttal testimony of WP&L's witness Arnold Kehrli; May 30, 1997.
16. In re: IES Utilities, Inc., Interstate Power Company, Wisconsin Power & Light Company, South Beloit Water, Gas & Electric Company, Heartland Energy Services, and Industrial Energy Applications, Inc., Docket Nos. EC96-13-000, ER96-1236-000, and ER96-2560- 000, before the Federal Energy Regulatory Commission, on behalf of Wisconsin Intervenors ("WI"). Mr. Russell simultaneously filed 2 sets of testimony; the first, sponsored by the intervenors listed above as well as by Wisconsin Public Service Corporation, and Dairyland Power Cooperative, analyzed engineering and operating problems created by the merger of WP&L, IPW and IES. The second set of testimony discussed how the IEC Independent System Operator fails in general to meet the rigorous and comprehensive ISO standards promulgated by the Wisconsin Public Service Commission. Both sets of testimony (Engineering and ISO) were filed before the Federal Energy Commission; March 27, 1997.
17. In re: Wisconsin Public Power, Inc. Docket No. 05-EI-119 on behalf of Wisconsin Transmission Customer Group, before the Public Service Commission of Wisconsin to address the concerns of municipally-owned utilities within Wisconsin; March 6, 2000.

18. In re: Arrowhead - Westin Transmission Line Project, Docket No. 05-CE-113 on behalf of the Wisconsin Public Service Corporation (“WPSC”), before the Public Service Commission of the State of Wisconsin to provide support for the transmission project as proposed by WPSC and Minnesota Power; November 22, 2000. Rebuttal testimony addressed matters set forth in the direct testimony of other witnesses; December 18, 2000.
19. In re: Ethyl Corporation verses Gulf States Utilities Company, Civil Docket No. M, live direct testimony in a dispute over direct assignment of substation facilities; April 2001.
20. In re: Joint Application of Entergy Louisiana, Inc. and Entergy Gulf States, Inc., Docket No. U-25533 on behalf of Occidental Chemical Corporation, before the Louisiana Public Service Commission for authorization to participate in contracts for the purchase of capacity and electric power for the Summer of 2001; May 3, 2001.
21. In re: Northeast Utilities Service Company Transmission Line Project: direct testimony in Docket No, 217 before the Connecticut Siting Council of the State of Connecticut on behalf of the Attorney General, State of Connecticut for the purpose of (1) whether there is a need for the 345 kV transmission line from Plum-tree to Norwalk; (2) whether the proposed transmission system design is the best option based on current transmission design and (3) whether any approval of the project by the Siting Council should be conditioned upon CL&P and NU's agreement; March 12, 2002.
22. In re: Cannon Power Corporation: Affidavit in Docket No. ER02-2189-000, before the Federal Energy Regulatory Commission on behalf of Whitewater Hill Wind Partners, LLC developing a 66 MW wind power project to be interconnected to Southern California Edison Company; July 29, 2002.
23. In re: Cannon Power Corporation: Affidavit in Docket No. ER02-1764, before the Federal Energy Regulatory Commission on behalf of Cabazon Wind Partners, LLC developing a 66 MW wind power project to be interconnected to Southern California Edison Company; August 2, 2002.
24. In re: Pacific Gas & Electric Company: Direct Testimony in Docket No. ER01-2998, before the Federal Energy Regulatory Commission on behalf of Northern California Power Agency to explain what level of firmness is required of transmission service under the Stanislaus Commitments; December 20, 2002.
25. In re: Pacific Gas & Electric: Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. ER01-2998 on behalf of Northern California Power Agency to respond to testimony from witnesses Judi K. Mosley, Kevin J. Dasso, Dr. Roy Shanker and Linda Patterson; April 1, 2003.
26. In re: Order Instituting Investigation into implementation of Assembly Bill 970 regarding the identification of electric transmission and distribution constraints, actions to

resolve those constraints, and related matters affecting the reliability of electric supply: Direct testimony before the Public Utilities Commission of California on behalf of Oak Creek Energy Systems addressing comments on and recommendations with respect to the Tehachapi Transmission Conceptual Facility Study, performed by Southern California Edison; April 22, 2003. Rebuttal testimony addressed the testimony of Mr. Jorge Chacon and Mr. Melvin Stark on behalf of Southern California Edison Company, taking into account the testimony of Mr. Robert Sparks filed on behalf of the California Independent System Operator; May 13, 2003.

27. In re: California Independent System Operator Corporation: Direct testimony before the Federal Energy Regulatory Commission in Docket No. ER00-2019 on behalf of State Water Contractors and the Metropolitan Water District of Southern California. The purpose of the testimony was to provide a critical analysis of ISO's proposed Transmission Access Charge; June 2, 2003. Rebuttal testimony responded to the Prepared Rebuttal Testimony of Mr. Johannes P. Pfeifenberger on behalf of the ISO; October 20, 2003.
28. In re: Midwest Independent Transmission System Operator, Inc. and Public Utilities with Grandfathered Agreements in the Midwest ISO Region: Prepared Testimony before the Federal Energy Regulatory Commission in Docket Nos. ER04-691-000 and EL04-104-000 on behalf of Marshfield Electric & Water District. The purpose of the testimony was to review Marshfield Electric & Water District's transmission arrangements in order to respond to the Commission's May 26, 2004 Order in this proceeding; June 25, 2004.
29. In re: Southern California Edison Company: Prepared Direct Testimony before the Federal Energy Regulatory Commission in Docket No. ER02-2189-003 on behalf of Whitewater Wind Hill Partners. The purpose of the testimony was to provide support for Whitewater's request that the Commission revise the Interconnection Facilities Agreement between Whitewater and Southern California Edison Company; September 14, 2004. Cross Answering Testimony responded to Commission Staff witnesses, Ms. Tania Martinez Navedo and Mr. Edward W. Mills with respect to the designation of disputed upgrades; November 22, 2004.
30. In re: Cabazon Wind Partners, LLC Complainant vs. Southern California Edison Company Respondent: Affidavit in Docket No. EL04-137 before the Federal Energy Regulatory Commission on behalf of Cabazon Wind Partners, LLC ("Cabazon"). This Affidavit provides support for Cabazon's request that Southern California Edison Company ("SCE") grant Cabazon reimbursement, in the form of a transmission credit or otherwise, for the cost of certain upgrades Cabazon has borne to interconnect its generation to SCE; September 27, 2004. Rebuttal testimony; February 4, 2005. Additional testimony to respond to direct testimony filed on March 14, 2005 and cross answering testimony filed by Southern California Edison and Commission Staff witness, Ms. Emily White; May 20, 2005.
31. In re: Pacific Gas and Electric Company: Phase II Answering Testimony to PG&E's

Supplemental Testimony; Cross Answering Testimony; and Errata of Whitfield A. Russell before the Federal Energy Regulatory Commission in Docket No. ER00-565-000, et al and ER04-1233-000, on behalf of Northern California Power Agency.

32. In re: Southern California Edison Company: Affidavit before the Federal Energy Regulatory Commission in Docket No. EL05-80-000, on behalf of the California Wind Energy Association. The purpose of this affidavit was to explain how and why the proposed Antelope-Tehachapi 230 kV line would be integrated into the regional transmission grid and thereby constitute a network upgrade facility; April 14, 2005.
33. In re: In the Matter of the Arbitrations between PG&E Energy Trading-Power, LP Claimant, Counter-Respondent and Southaven Power, LLC, and Caledonia Generating, LLC, Respondents, Counter-Claimants: Expert Report and litigation before the American Arbitration Association in AAA Nos. 16-198-00206-03 & 16-198-00207-03, on behalf of Williams & Connolly LLP (counsel of Southaven Power, LLC) and Bingham McCutchen LLP (counsel for Caledonia Generating, LLC). The purpose of this expert report was to provide comments on certain elements of the matters in dispute between PG&E Energy Trading-Power, L.P., on the one hand, and each of Southaven and Caledonia, on the other hand; September 8, 2005.
34. In re: Berkshire Power Company, LLC: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER05-1179-001, on behalf of Massachusetts Municipal Wholesale Electric Company, Chicopee Municipal Lighting Plant, and South Hadley Electric Light Department. This affidavit addressed the engineering analysis performed by ISO New England in support of its determination of the system reliability for the Springfield, Massachusetts area in Western Massachusetts; November 7, 2005.
35. In re: Consolidated Edison Energy Massachusetts, Inc.: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER05-903-002, on behalf of Massachusetts Municipal Wholesale Electric Company, Chicopee Municipal Lighting Plant, and South Hadley Electric Light Department. This affidavit addressed the engineering analysis performed by ISO New England in support of its determination of system reliability for the Springfield, Massachusetts area in Western Massachusetts and need for two generating units in that area: (1) the 245 MW Berkshire facility operated by Berkshire Power Company; and (2) the 107 MW West Springfield Unit 3 operated by Consolidated Edison Energy Massachusetts, Inc.; November 10, 2005.
36. In re: Pittsfield Generating Company, LP: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER06-262-000, on behalf of Massachusetts Municipal Wholesale Electric Company, Chicopee Municipal Lighting Plant, and South Hadley Electric Light Department. This affidavit reviewed the engineering analysis performed by ISO New England in support of its evaluation of the system reliability for the Pittsfield, Massachusetts area of Western Massachusetts and need for the 160 MW facility operated by Pittsfield Generating Company, L.P.; December 21,

2005.

37. In re: Mystic Development LLC: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER06-427-000, on behalf of Massachusetts Municipal Wholesale Electric Company, Wellesley Municipal Light Plant, Reading Municipal Light Department and Concord Municipal Light Plant. This affidavit (a) responded to portions of the testimony offered by Mystic witnesses; and (b) reviewed the December 7, 2004, engineering analysis “Need for Mystic Units 7, 8 and 9 for System Reliability,” performed by ISO New England (“ISO”); January 19, 2006.
38. In re: Mystic Development, LLC: Direct Testimony before the Federal Energy Regulatory Commission in Docket No. ER06-427-000, on behalf of Massachusetts Municipal Wholesale Electric Company, Reading Municipal Light Department Wellesley Municipal Light Plant and Concord Municipal Light Plant. This testimony assessed whether a cost- of-service, Reliability Must-Run Agreement was needed in order to keep Mystic Development LLC’s Units 8 and 9 available to provide reliability service; November 9, 2006.
39. In re: Hydroelectric Production Rates and Rate Modification Plan-2007 and 2008 Rate Years: Direct Testimony and Supporting Exhibits before the New York Power Authority, on behalf of the New York Association of Public Power. This testimony addressed the understatement of capacity at the Niagara and St. Lawrence Projects of the New York Power Authority and how that understatement of capacity improperly reduces the amount of capacity made available to preference customers of the Niagara Project and improperly increases the rates applicable to capacity sold to those customers; April 9, 2007.
40. In re: ISO New England, Inc.: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER08-190-000, on behalf of Massachusetts Municipal Wholesale Electric Company (“MMWEC”). This testimony reviewed the engineering analysis performed by ISO New England Inc. in support of its determination that MMWEC’s Phase II Stony Brook Unit was not qualified to participate in the first Forward Capacity Market auction; November 21, 2007.
41. In re: Niagara Mohawk Power Corporation: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER08-552-000, on behalf of the New York Association of Public Power and several of its members which include Green Island Power Authority, Jamestown Board of Public Utilities, City of Salamanca Board of Public Utilities, City of Sherrill Power & Light and Oneida-Madison Electric Cooperative, Inc. This affidavit reviewed the filing by NMPC for Amendments to its Wholesale Transmission Service Charge for Point-to-Point Transmission service and Network Integration Transmission Service; March 17, 2008.
42. In re: Braintree Electric Light Department, Hingham Municipal Lighting Plant, Hull Municipal Lighting Plant, Mansfield Municipal Electric Department, Middleborough Gas and Electric Department and Taunton Municipal Light Plant v. ISO New England Inc.:

Direct Testimony and Exhibits before the Federal Energy Regulatory Commission in Docket No. EL08-48, on behalf of the individually municipally-owned power systems serving the Massachusetts communities of Hull, Mansfield, Middleborough, Taunton, Braintree and Hingham; March 28, 2008.

43. In re: Entergy Nuclear Operations Inc. and Entergy Nuclear Palisades, Inc. (Palisades Nuclear Plant), Entergy Nuclear Operations Inc. and Entergy Nuclear Fitzpatrick, Inc. (James A. Fitzpatrick Nuclear Power Plant), Entergy Nuclear Operations Inc. and Entergy Nuclear Generation Company (Pilgrim Nuclear Power Station), Entergy Nuclear Operations Inc. and Entergy Nuclear Vermont Yankee, Inc. (Vermont Yankee Nuclear Power Station), Entergy Nuclear Operations Inc.; Entergy Nuclear Indian Point 2, LLC; and Entergy Nuclear Indian Point 3, LLC (Indian Point Nuclear Generating Units Nos. 1, 2, and 3), and Entergy Nuclear Operations Inc. and Entergy Nuclear Palisades, LLC. (Big Rock Point): Affidavit before the Nuclear Regulatory Commission in Docket Nos. 50- 255-LT and 72-7-LT, 50-333-LT and 72-12-LT, 50-293-LT, 50-271-LT, 50-003-LT, 50- 247-LT and 50-286-LT and 50-155-LT and 72-43-LT, on behalf of the Locals 369 and 590, Utility Workers Union of America, AFL-CIO. This affidavit provided support for the April 15, 2008, Reply of Locals 369 and 590, Utility Workers Union of America, AFL- CIO opposing a restructuring of Entergy's nuclear operating companies; April 15, 2008.
44. In re: ISO New England, Inc.: Affidavit before the Federal Energy Regulatory Commission in Docket No. ER08-633-000, on behalf of The Connecticut Department of Public Utility Control. The purpose of this affidavit was to review the reliability analyses performed by the ISO-NE on the need to retain NRG's Norwalk Harbor Units 1 and 2 as listed Capacity Resources in the Forward Capacity Market for the 2010/2011 Capacity Year; April 17, 2008.
45. In re: In the Matter of the Ontario Energy Board Act, 1998, S.O. 1998, C.15 (Sched. B); In the Matter of an Application by Hydro One Networks Inc. pursuant to section 92 of the Act, for an Order or Orders granting leave to construct a transmission reinforcement project between the Bruce Power Facility and Milton switching Station, all in the Province of Ontario: Affidavit and Exhibits before the Ontario Energy Board in Docket No. EB-2007- 0050, on behalf of the Saugeen Ojibway Nations. The purpose of this affidavit was to review the analyses performed by the Ontario Power Authority, Hydro One and the Independent Electric System Operator of Ontario in support of the application to construct a proposed Bruce-to-Milton double circuit 500 kV transmission line project; April 18, 2008.
46. In re: Braintree Electric Light Department, Hingham Municipal Lighting Plant, Hull Municipal Lighting Plant, Mansfield Municipal Electric Department, Middleborough Gas and Electric Department and Taunton Municipal Light Plant v. ISO New England Inc.: Second Affidavit before the Federal Energy Regulatory Commission in Docket No. EL08- 48-000, on behalf of the individual municipally owned power systems serving the Massachusetts communities of Hull, Mansfield, Middleborough, Taunton, Braintree and Hingham.

47. In re: In the Matter of sections 25.30 and 25.31 of the Electricity Act and In the Matter of an Application by Ontario Power Authority for review and approval of its integrated power system plan and approval of its proposed procurement process. Affidavit and Exhibits before the Ontario Energy Board in Docket No. EB-2007-0707, on behalf of the Saugeen Ojibway Nations. The purpose of this affidavit was to review the Integrated Power System Plan prepared by the Ontario Power Authority, and discuss that Plan as it relates to the concerns of the Saugeen Ojibway Nations; Filed August 1, 2008.
48. In re: Ashburnham Municipal Light Plant, Boylston Municipal Light Department, Chester Municipal Electric Light Department, Groton Electric Light, Holden Municipal Light Department, Holyoke Gas & Electric Department, Paxton Municipal Light Department, Princeton Municipal Light Department, Shrewsbury Electric Light and Cable, Sterling Municipal Light Department, Templeton Municipal Light, West Boylston Municipal Light Plant, Westfield Gas & Electric, Chicopee Municipal Lighting Plant, Hudson Light & Power Department, South Hadley Electric Light Department and the Massachusetts Municipal Wholesale Electric Company, Complainants, v. Berkshire Power Company, LLC, and ISO New England Inc., Respondents. Confidential affidavit and exhibits before the Federal Energy Regulatory Commission in Docket No. EL09-3, on behalf of Ashburnham Municipal Light Plant, et al., concerning whether Berkshire Power Company, LLC, is earning sufficient revenues in the market to cover its facility costs; Filed October 8, 2008.
49. In re: Missouri River Energy Services and Midwest Independent Transmission System Operator, Inc. and Missouri River Energy Services and Western Minnesota Municipal Power Agency. Rebuttal Testimony before the Federal Energy Regulatory Commission in Docket No. ER08-370-008 and EL08-22-006, on behalf of Missouri River Energy Services and the Western Minnesota Municipal Power Agency, regarding Missouri River Energy Services filing a proposed formula transmission tariff for the Midwest Independent System Operator territory; Filed October 9, 2009.
50. In re: Southwest Power Pool, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. ER10-1069-000 on behalf of Nebraska Public Power District, Omaha Public Power District, City Utilities of Springfield, Missouri, Lincoln Electric System and The Empire District Electric Company. The affidavit responded to Southwest Power Pool, Inc.'s "Submission of Tariff Revisions to Modify Transmission Cost Allocation Methodology"; Filed May 17, 2010. A second affidavit responds to the testimony of Mr. Bruce Rew; Filed June 7, 2010.
51. In re: The Connecticut Light and Power Company, The Connecticut Transmission Municipal Electric Energy Cooperative. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-31 on behalf of the Connecticut Transmission Municipal Electric Energy Cooperative. The affidavit explains how CTMEEC intends to account for, and recover the transmission revenue requirement associated with, the 345 kV and 115 kV transmission assets that it acquired from CL&P; Filed December 15, 2010. A second affidavit described the proposed revenue requirement and tariff; Filed

April 29, 2011.

52. In re: MidAmerican Energy Company. Answering testimony before the Federal Energy Regulatory Commission in Docket No. ER09-823-001. The testimony responded to the testimony filed in this proceeding by MidAmerican Energy Company by Federal Energy Regulatory Commission Staff; Filed May 2, 2011.
53. In re: Duke Energy Corporation and Progress Energy, Inc. Affidavit before the Federal Energy Regulatory Commission in Docket No. EC11-60-000, ER11-3306-000 and ER11- 3307-000. The affidavit reported on several elements of the proposed merger of Duke Energy Corp. and Progress Energy, Inc.; Filed June 3, 2011. A second affidavit examined the extent to which Duke Energy Corp. and Progress Energy, Inc. proposed interim and permanent mitigation measures satisfy market power concerns; Filed April 25, 2012.
54. In re: New York Power Authority's 2011 Hydroelectric Rate Modification Plan. Affidavit before the Power Authority of the State of New York in I.D. No. PAS-33-11-00001-P on behalf of the New York Association of Public Power. The affidavit discussed the appropriate rates for bulk power service that the New York Power Authority will render in the 2011-2014 rate years to municipal and cooperative preference customers from NYPA's Niagara and St. Lawrence Projects; Filed October 24, 2011.
55. In re: Needs for an Alternatives to (NFAT) Review of Manitoba Hydro's Preferred Development Plan (PDP). Report on behalf of the Manitoba Metis Federation before the Public Utilities Board of Manitoba. The report addressed the limitations associated with Manitoba Hydro hydrocentric future plans; Filed February 12, 2014.
56. In re: BCWF v. Duke Energy Indiana, Inc., No. 1:13-CV-1984-SEB-TAB (S.D. IND.). Expert Report on behalf of Benton County Wind Farm, LLC before the United States District Court Southern District of Indiana Indianapolis Division. The report addressed whether congestion constitutes a reliability threat to the transmission system and if Duke obtained Transmission Services for the BCWF Plant, would BCWF receive dispatch down signals based on Duke's price offer; Filed October 31, 2014. A second report rebuts portions of the October 31, 2014, Statement of Opinions submitted by Mr. Judah L. Rose on behalf of Duke Energy Indiana, Inc.; Filed November 26, 2014. A third report sets for opinions regarding the amount of revenue lost by the BCWF Plant as a result of Duke Energy Indiana's actions; Filed December 5, 2014
57. In re: The Matter of the Application of the Consolidated Edison Company of New York, Inc. Direct testimony on behalf of the County of Westchester, New York before the State of New York Public Service Commission. The testimony addressed the following issues: Hudson Avenue Facility costs, Advanced Metering Infrastructure costs, Depreciation, Transfer of Gas Operations' fixed charges to Electric Operations, Incentives, and other miscellaneous items; Filed May 25, 2016.
58. In re: ISO New England Inc. Participating Transmission Owners Administrative

Committee, et. al., FERC Docket Nos. EL16-19-000 and ER18-2235-000, Affidavit filed on behalf of the Municipal Participating Transmission Facilities Owners, September 6, 2018, regarding concerns with the ISO New England Participating Transmission Owners' proposed transmission formula templates.

Data Responses Table of Contents

CITY-4-61.....	50
CITY-14-273.....	43
CITY-14-285.....	44
CITY-14-295.....	38
COW-2-13.....	35
COW-2-18.....	7
COW-2-39.....	51
COW-2-40.....	54
COW-2-41.....	57
COW-3-56.....	27
COW-3-57.....	33
COW-3-72.....	42
DPS-1-48.....	10
DPS-1-170.....	24
DPS-1-171.....	25
DPS-1-171 Supp 1.....	26
DPS-15-402.....	20
DPS-15-403.....	14
DPS-18-457.....	28
DPS-25-604.....	9
DPS-26-615.....	1
DPS-31-655.....	30
DPS-31-656.....	36
DPS-39-741.....	2
EDF-1-4.....	60
MTA-2-7.....	45
NYECC-1-3.....	4
NYECC-1-4.....	12
NYECC-1-5.....	47
NYECC-2-8.....	40
NYECC-1-13.....	46
NYECC-2-14.....	49
PACE-9-72.....	56
UIU-1-31.....	39

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-26
Date of Response: 4/5/2019
Responding Witness: Property Tax Panel

Question No. : 615

Subject: Property Tax Update

On page 10 of its testimony, the Property Tax Panel indicates that it will provide updates to property tax expense throughout the proceeding.

1. Does the Company currently have new data that would affect the Rate Year forecast? If so, provide the impact of the new data along with all supporting workpapers and calculations.
2. If the new data is not currently available, state when the Company expects to obtain the new information and when the Company will provide the update to Staff.

Response

The Company has new data that would affect the Rate Year forecast for both New York City and Westchester and Other. The new data affecting the Rate Year forecast for New York City includes updated plant additions and the tentative New York City assessments for its Real Estate of Utility Corporations (“REUC”) property for tax year 2019/2020. The impact of this data is reflected in an updated Rate Year forecast set forth in the attached Excel spreadsheet: NYC 2019-2023 (5-Year PT Forecast). All supporting workpapers and calculations are included in this attachment.

The new data affecting the Rate Year forecast for Westchester and Other includes the estimated property taxes for Cricket Valley substation and transmission lines that will be transferred to the Company during the Rate Year. This increase in property taxes has been offset by a lower property tax escalation percentage (*i.e.*, 5% to 4.5%). The impact of this data is reflected in an updated Rate Year forecast set forth in the attached Excel spreadsheet: Westchester and Other 2019-2023 (PT Forecast). All supporting workpapers and calculations are attached.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-39
Date of Response: 4/30/2019
Responding Witness: Property Tax Panel

Question No. : 741

Subject: Company's Property Tax Preliminary Update for NYC

1. According to Con Edison's April 10, 2019 preliminary update, the Company has used newly obtained 2019/2020 New York City tentative property tax assessments to update its Rate Year NYC property taxes forecast. Compared to the Rate Year property tax levels contained in the Company's initial filing, the above updates decreased the NYC property taxes forecast by \$48.301 million for electric service and \$26.654 million for gas service.
 - a. Provide the source documentation for the 2019/2020 New York City tentative property tax assessments of Class 3- REUC, Class 4- REUC and Class 3- Specific Franchise, respectively.
 - b. Explain whether the gas leak prone pipeline/main replacement program that the Company has been pursuing in its prior and current cases has had any impact on the changes to NYC property tax assessment values in either the Company's initial or updated filings in the instant rate proceedings.

Response

1a. The Preliminary update reflects tentative 2019-2020 assessments for REUC and ORE. For REUC, see "DPS-39-741 Att 1 REUC 2019-2020 Tentative Assessments." For ORE, see "DPS-39-741 Att 2 ORE 2019-2020 Tentative Assessments." The Preliminary update reflects the final NYC Special Franchise Assessments for fiscal year 2018-2019. See "DPS-39-741 Att 3 SF 2018-2019 Final Assessments."

Since the Preliminary Update was filed, the Company has received the 2019/20 tentative Special Franchise Assessments (see "DPS-39-741 Att 4- SF 2019-20 Tentative Assessments"). In incorporating these assessments into its property tax forecasts, the Company also updated the property tax base to which Special Franchise Property Tax should be applied. The Company is attaching a revised Property Tax forecast as "DPS-39-741 Att 5- Revised Property Tax Forecast."

The Preliminary Update also included a revised escalation factor for Westchester & Other based on the most recent county, town and city taxes paid in 2019. That supporting documentation is included as “DPS-39-741 Att 6 -Westchester and Other.”

The Company does not anticipate any new information on property tax rates or assessments for the June Update.

1b. The Company’s gas leak prone pipeline/main replacement program did not have any measurable impact on the changes to NYC property tax assessment values in either the Company’s initial or updated filings.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to NYECC Interrogatories – Set NYECC-1
Date of Response: 2/12/2019
Responding Witness: Accounting Panel

Question No. : 3

- a. Referencing page 8, line 6, and page 13, lines 9-17, of your testimony, why is the decrease in amount of the electric revenue requirement \$577 million on page 8 and \$574 million on page 13? Explain any difference between these two amounts or if one of these amounts is a typographical error.
- b. Provide a list of the separate items that constitute “other items” on page 8.
- c. Provide a breakdown in the dollar amounts for the elements comprising the \$577 million amount of the decrease in the electric revenue requirement reflected on page 8.
- d. Provide a breakdown in the dollar amounts for the elements comprising the \$161 million amount of the decrease in the gas revenue requirement reflected on page 8.
- e. Provide a description of, and a breakdown of, any other customer credits that may be available to further reduce the revenue requirement in the electric rate case.
- f. Provide a description of, and a breakdown of, any other customer credits that may be available to further reduce the revenue requirement in the gas rate case.
- g. Is the \$577 million decrease in the electric revenue requirement being made pursuant to the NYS Public Service Commission’s directives to Con Edison requiring sur-credits in electric in the Order Determining Rate Treatment of Tax Changes, issued and effective August 9, 2018 in Case 17-M-0815?
- h. Is the \$161 million decrease in the gas revenue requirement being made pursuant to the NYS Public Service Commission’s directives to Con Edison requiring sur-credits in gas in the Order Determining Rate Treatment of Tax Changes, issued and effective August 9, 2018 in Case 17-M-0815?
- i. Provide the dollar amount of the offset in electric for the expiration of amortization of the reduction in the State corporate tax rate from 7.1% to 6.5% included in current rates.
- j. Provide the dollar amount of the offset in gas for the expiration of amortization of the reduction in the State corporate tax rate from 7.1% to 6.5% included in current rates.

- k. Provide the dollar amount of any other offset in electric.
- l. Provide the dollar amount of any other offset in gas.
- m. Explain whether the elimination of bonus depreciation effective September 27, 2017 under the Tax Cuts and Jobs Act of 2017 affects the decreases in the revenue requirements for electric as set forth in your testimony.
- n. Explain whether the elimination of bonus depreciation effective September 27, 2017 under the Tax Cuts and Jobs Act of 2017 (“Tax Act”) affects the decreases in the revenue requirements for gas as set forth in your testimony.
- o. Explain the extent to which savings from the Tax Act are not preserved for the benefit of electric ratepayers but are instead preserved for the benefit of the Company’s shareholders.
- p. Explain the extent to which savings from the Tax Act are not preserved for the benefit of gas ratepayers but are instead preserved for the benefit of the Company’s shareholders.
- q. Is the \$577 million decrease in the electric revenue requirement for 2020 a recurring annual amount by which the electric revenue requirement may be decreased in subsequent rate years?
- r. Is the \$161 million decrease in the gas revenue requirement for 2020 a recurring annual amount by which the gas revenue requirement may be decreased in subsequent rate years?

Response

- a. The amount on Page 13, Line 10 should be \$577 million.
- b. “Other items” refers to interest synchronization and rounding amounts, if any.
- c. The amounts are rounded to the thousands.

Income taxes		
	Income Tax Rate Change	(273,500)
	Federal Tax Reform Transition Period	(110,200)
	Excess Deferred FIT - Property	(185,400)
	Excess Deferred FIT - Non-Property	(25,900)
	Flow Thru Items	12,000
	Flow Thru Tax Deduction - interest	(10,900)
	Amortization of Deferred ITC	1,700
	R&D Tax Credit	(4,400)
	Amortization of NYS tax rate change	19,800
	Income tax items	(576,800)

d. The amounts are rounded to the thousands.

Income taxes		
	Income Tax Rate Change	(85,300)
	Federal Tax Reform Transition Period	(31,100)
	Excess Deferred FIT - Property	(30,800)
	Excess Deferred FIT - Non-Property	(5,300)
	Flow Thru Items	(4,700)
	Flow Thru Tax Deduction - interest	(7,500)
	R&D Tax Credit	(900)
	Amortization of NYS tax rate change	4,300
	Income tax items	(161,300)

- e. See the discussion of a planned property sale on pages 42 and 43 of the Accounting Panel testimony.
- f. At this time, the Company is not aware of any other customer credits that are available to reduce the revenue requirement in the gas rate case.
- g. Yes.
- h. Yes.
- i. \$19.8 million
- j. \$4.3 million
- k. See the response to part c.
- l. See the response to part d.
- m. See Section V of the direct testimony of the Income Tax Panel and Exhibit ITP-2.
- n. See Section V of the direct testimony of the Income Tax Panel and Exhibit ITP-2.
- o. Savings from the Tax Act were preserved for the benefit of all ratepayers.
- p. Savings from the Tax Act were preserved for the benefit of all ratepayers.
- q. No.
- r. No.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-2
Date of Response: 3/14/2019
Responding Witness: Income Tax Panel

Question No. : 18

If EDFIT were amortized over 3 years rather than 5 years, what would be net reduction to the revenue requirement for RY1, RY2 and RY3? Please provide derivation and workpapers supporting this calculation.

Response

Please see Attachment COW-2-18 for the annual estimated revenue requirement reduction associated with lower FIT expenses if the unprotected EDFIT were amortized over three years rather than five years.

Consolidated Edison Company of New York, Inc.
EDIT Amortization Impact on Revenue Requirements
(\$ in Thousands)

Electric	Unprotected		Total
	Property	Non Property	
Estimated Excess FIT	\$ (92,721)	\$ (487,863)	\$ (580,584)
Amortization periods in formal update	5	5	
Annual amortization amount	(18,544)	(97,573)	\$ (116,117)
Proposed amortization period in settlement	3	3	
Annual amortization amount	(30,907)	(162,621)	\$ (193,528)
FIT Expenses increase/(decrease)	(12,363)	(65,048)	\$ (77,411)
Retention Factor	72%	72%	72%
Revenue Requiriementn increase/(decrease)	\$ (17,271)	\$ (90,875)	\$ (108,146)
Gas	Unprotected		Total
	Property	Non Property	
Estimated Excess FIT	\$ (18,902)	\$ (60,864)	\$ (79,766)
Amortization periods in formal update	5	5	
Annual amortization amount	(3,780)	(12,173)	\$ (15,953)
Proposed amortization period in settlement	3	3	
Annual amortization amount	(6,301)	(20,288)	\$ (26,589)
FIT Expenses increase/(decrease)	(2,520)	(8,115)	\$ (10,635)
Retention Factor	71%	71%	71%
Revenue Requiriementn increase/(decrease)	\$ (3,527)	\$ (11,356)	\$ (14,883)

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-25
Date of Response: 4/4/2019
Responding Witness: Return on Equity

Question No. : 604

Subject: Value Line Electric Utilities

1. List the companies classified by Value Line as electric utilities that were excluded from Witness Villadsen's proxy group. For each company listed, state the reason for its exclusion. If multiple reasons are applicable for any given company, state all the reasons that apply to that company.
2. In her testimony, on page 29, line 24 through page 30, line 2, Witness Villadsen states that she examined the financial reports of Value Line electric utilities and eliminated from her proxy group those companies that have less than 50% of their assets dedicated to regulated electric utility activities. Furthermore, in table BV-2 of Exhibit__ (BV-3), she provides the classification of companies by assets according to Edison Electric Institute. For each Value Line electric utility, state the proportion of assets dedicated to regulated electric utility activities. Provide this information, including all supporting calculations, in Microsoft Excel format with all formulae intact. Note the source of this information.

Response

1. Please see DPS 25-604 (1) Attachment (Sample Exclusion).pdf.
2. As indicated in Exhibit__ (BV-3), Table No. BV-2, Dr. Villadsen relies on Edison Electric Institute's "Regulated," "Mostly Regulated," and "Diversified" classifications, defined as in the footnotes of that table. For the source of the classifications, see, for example, the EEI Rate Review Summary Q4 2018 Regulatory & Financial Update, at PDF page 4, available publicly on EEI's website:
http://www.eei.org/resourcesandmedia/industrydataanalysis/industryfinancialanalysis/QtrlyFinancialUpdates/Documents/QFU_Rate_Case/2018_Q4_Rate_Review.pdf

Company Name: Con Edison
Case Description: Placeholder for 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-XXXX, 19-G-XXXX

Response to DPS Interrogatories – Set DPS-1
Date of Response: 1/29/2019
Responding Witness: Accounting Panel

Question No. : 48

Dues, Industry Associations.

- a) For each industry association/organization, provide by account for the test period, dues for which the company is requesting recovery in its revenue requirement. For each, describe the organization's purpose and provide any descriptive material the company has concerning the organization's financial statements, annual budget, and activities.
- b) For each organization that engages in lobbying or advocacy activities, attempts to influence public opinion, uses institutional or image building advertising, state the company's best estimate of the portion of the organization's expenses devoted to such activities. Explain and show how such estimates were derived.

Response

- a) The Company is a member of the Edison Electric Institute (EEI), American Gas Association (AGA), North American Transmission Forum, Inc. (NATF), and Northeast Gas Association (NGA).
 - EEI is an association of U.S. shareholder-owned electric companies whose members serve 95 percent of the ultimate customers in the shareholder-owned segment of the industry and represent approximately 70 percent of the U.S. electric power industry. During the Historic Year, the Company paid \$1,046,505 in membership dues to EEI, which are included in the Institutional Dues & Subscriptions line of O&M charges in AP-E3, Schedule 6.
 - AGA is an association that represents over 200 local energy companies that deliver clean natural gas throughout the United States. These energy companies serve 92% of the residential, industrial and commercial natural gas customers. During the Historic Year, the Company paid \$576,965 in membership dues to AGA, which are included in the Institutional Dues & Subscriptions line of O&M charges in AP-G3, Schedule 6.
 - NATF's members include investor-owned, state-authorized, municipal, cooperative, U.S. federal, and Canadian provincial utilities. The NATF promotes excellence in the reliability and resiliency of the electric transmission system. During the Historic

Year, the Company paid \$86,654 in membership dues to NATF, which are included in the Ops - System & Transmission Operations (STO) line of O&M charges in AP-E3, Schedule 6.

- NGA represents natural gas distribution companies, transmission companies, liquefied natural gas importers, and associate member companies. These companies provide natural gas to over 12 million customers in nine states. During the Historic Year, the Company paid \$108,625 in membership dues to NGA, which are included in the Institutional Dues & Subscriptions line of O&M charges in AP-G3, Schedule 6.
- b) During the Historic Year, the Company's allocated share of lobbying fees identified on invoices from EEI and AGA amounted to \$197,506 (\$163,965 for EEI and \$33,541 for AGA, respectively). The Company recorded this cost "below the line" to FERC account 4264. In these cases, the Company is not seeking recovery of these lobbying costs. During the Historic Year, NATF and NGA did not engage in lobbying activity.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to NYECC Interrogatories – Set NYECC-1
Date of Response: 2/12/2019
Responding Witness: Accounting Panel

Question No. : 4

- a. Referencing page 9, line 6, and page 18 through page 10 line 5, of your testimony, provide the amount of the \$175 million in electric that is attributed to the proposed increase in the ROE to 9.75%.
- b. Provide the dollar amount attributed for every one basis point increase in the proposed ROE in electric.
- c. Referencing page 9, line 6, and page 18 through page 10 line 5, of your testimony, provide the amount of the \$56 million in gas that is attributed to the proposed increase in the ROE to 9.75%.
- d. Provide the dollar amount attributed for every one basis point increase in the proposed ROE in gas.
- e. Provide the amount of the \$175 million in electric that is attributed to the proposed increase in the proposed increase in the equity ratio from 48.00% to 50.00%.
- f. Provide the amount of the \$56 million in gas that is attributed to the proposed increase in the proposed increase in the equity ratio from 48.00% to 50.00%.
- g. Provide the amount of the \$175 million in electric that is attributed to the proposed increase in the proposed increase in the cost of debt from 4.74% to 4.86%.
- h. Provide the amount of the \$56 million in gas that is attributed to the proposed increase in the proposed increase in the cost of debt from 4.74% to 4.86%.
- i. Provide the amount of the \$175 million in electric that is attributed to the proposed increase in the proposed increase in the customer deposit rate from 0.85% to 2.45%.
- j. Provide the amount of the \$56 million in gas that is attributed to the proposed increase in the proposed increase in the customer deposit rate from 0.85% to 2.45%.
- k. Provide the breakdown dollar amount by category of the proposed \$43 million O&M expense increase in electric.

1. Provide the breakdown dollar amount by category of the proposed \$41 million O&M expense increase in gas.

Response

- a) The dollar impact associated with the change in the ROE from 9.0% to 9.75% for electric is \$118 million.
- b) The dollar amount attributed for every one basis point increase in the proposed ROE for electric is \$1.55 million.
- c) The dollar impact associated with the change in the ROE from 9.0% to 9.75% for gas is \$38 million.
- d) The dollar amount attributed for every one basis point increase in the proposed ROE for gas is \$497,000.
- e) The dollar impact associated with the change in the proposed increase in the equity ratio from 48.00% to 50.00% for electric is \$34 million.
- f) The dollar impact associated with the change in the proposed increase in the equity ratio from 48.00% to 50.00% for gas is \$11 million.
- g) The dollar impact associated with the change in the proposed increase in the cost of debt from 4.74% to 4.86% for electric is \$18 million.
- h) The dollar impact associated with the change in the proposed increase in the cost of debt from 4.74% to 4.86% for gas is \$5 million.
- i) The dollar impact of the proposed increase in the customer deposit rate from 0.85% to 2.45% for electric is \$5 million.
- j) The dollar impact of the proposed increase in the customer deposit rate from 0.85% to 2.45% for gas is \$2 million
- k) The dollar breakdown by category of the proposed \$43 million of O&M expense increase in electric is reflected in AP-E3 Schedule 1, Page 1.
- l) The dollar breakdown by category of the proposed \$41 million of O&M expense increase in gas is reflected in AP-G3 Schedule 1, Page 1.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-15
Date of Response: 3/22/2019
Responding Witness: Electric Infrastructure & Operations Panel

Question No. : 403

Subject: Reliability Performance Mechanism (RPM) - Network SAIFI, SAIDI and Non-Network SAIDI.

1. Provide in Excel format, with full access rights and all links and formula intact, the calculation methods used to determine the thresholds for network System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI).
2. In reference to the 2007 lightning induced transmission substation outage mentioned on page 208 of the EIOP testimony, provide:
 - a. the network SAIDI before the interruption;
 - b. the network SAIDI after the interruption; and,
 - c. the final network SAIDI for that year.
3. Provide the Company's reasoning for proposing to use SAIDI, considering SAIDI is not the duration metric the Commission uses to track and compare electric utilities performance in New York State.
4. Did Con Edison discuss the Company's proposal to adopt the SAIDI metrics with other utilities in New York or in other states? If so, specify which utility the Company contacted and provide a summary of the feedback Con Edison received from each utility.
5. Con Edison proposed to set the non-network SAIDI target by multiplying the current SAIFI and CAIDI thresholds. Explain the Company's reasoning for not using the historical ten-year average performance data plus one standard deviation to calculate the non-network SAIDI threshold.
6. Considering that the Company is currently deploying AMI meters across its entire territory, provide:
 - a. the potential impact and benefit the AMI project could have on the Company's ability to gather and assess electric distribution reliability data with the outage management system;
 - b. the changes to the Company's Outage Management System as a result of full AMI deployment;

- c. the Company’s reasoning for proposing new reliability metric thresholds during the AMI deployment; and,
- d. whether the Company believes it may be beneficial to keep the current networks metrics until after the full implementation of AMI.

Response

Instructions for Preparing Discovery Responses

- **Response** – Draft response in the Word document located in CaseWorks, do not draft offline and replace the existing file. If you draft something offline, cut and paste the response into the existing file
- **Attachments** –
 - Identify attachments within response: “DPS-1-10 Attachment 1” (Additional description can be added to clarify the nature of the attachment, i.e. “DPS-1-10 Attachment 1 – Cost Estimates”)
 - Confidential attachments should be marked as such, and the filename should begin or end with the word “CONFIDENTIAL”
 - Attachments should be in a searchable PDF format unless requested in another format, e.g. we may need to provide data with the formula(s) used to derive it and then Excel would be necessary.
 - Upload files to the “Attachments” folder in CaseWorks, not in the same workspace as the question document
- **Assigning Users** – Use the “Drafters” or “Reviewers” tab
- **Please let us know ASAP if you believe we will not be able to comply with the filing due date**
- “Flip the switch” when your action is complete. (*Select the appropriate tab – Point Person(s), Drafter(s), or Reviewer(s) – and change the “Not Completed” to a “Completed” and then click “Save.”*)
- If you have any questions, call Tom Whipple at 212-460-3445.

Please fill out the following information, it will assist in expediting resolution of issues that come up in review of the item:

Drafter/SME who provided the information in the response: [redacted] Phone #: (XXX) XXX-XXXX

Contains Confidential Information: [redacted] Yes [redacted] No

Reason(s) for Confidential: [redacted]

1. Trade Secret.
Information, if made publicly available, would likely cause substantial injury to the Company’s competitive position.
2. Private personal data on individuals.
3. Critical System Information

Describe what is confidential:

[redacted]

(e.g. vendor pricing information, proprietary business information, feeder location maps, employee salaries, etc.)

Company Name: Con Edison

Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-15
Date Received: 3/8/201903/08/2019
Filing Due Date: 3/18/201903/18/2019

Question No. : 403

Subject: Reliability Performance Mechanism (RPM) - Network SAIFI, SAIDI and Non-Network SAIDI.

1. Provide in Excel format, with full access rights and all links and formula intact, the calculation methods used to determine the thresholds for network System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI).
2. In reference to the 2007 lightning induced transmission substation outage mentioned on page 208 of the EIOP testimony, provide:
 - a. the network SAIDI before the interruption;
 - b. the network SAIDI after the interruption; and,
 - c. the final network SAIDI for that year.
3. Provide the Company's reasoning for proposing to use SAIDI, considering SAIDI is not the duration metric the Commission uses to track and compare electric utilities performance in New York State.
4. Did Con Edison discuss the Company's proposal to adopt the SAIDI metrics with other utilities in New York or in other states? If so, specify which utility the Company contacted and provide a summary of the feedback Con Edison received from each utility.
5. Con Edison proposed to set the non-network SAIDI target by multiplying the current SAIFI and CAIDI thresholds. Explain the Company's reasoning for not using the historical ten-year

average performance data plus one standard deviation to calculate the non-network SAIDI threshold.

6. Considering that the Company is currently deploying AMI meters across its entire territory, provide:
 - a. the potential impact and benefit the AMI project could have on the Company's ability to gather and assess electric distribution reliability data with the outage management system;
 - b. the changes to the Company's Outage Management System as a result of full AMI deployment;
 - c. the Company's reasoning for proposing new reliability metric thresholds during the AMI deployment; and,
 - d. whether the Company believes it may be beneficial to keep the current networks metrics until after the full implementation of AMI.

RESPONSE: (Do not edit or delete this line. Edit only areas in yellow above. Enter the response below

1. See attachment for the values used to calculate the network SAIFI and SAIDI; attachment "DPS 15-403 Attachment 1 SAIFI SAIDI". Please be advised table "Network SAIFI-CAIDI-SAIDI without Storms" on page 209 of EIOP testimony contained an error. The threshold for SAIFI based on 1 standard deviation from the 10 year average is 0.0185 not the 0.02 shown and the SAIDI based on 1 standard deviation from the 10 year average is 7.50 minutes not the 8.09 shown. The table in Attachment 1 will replace the values used in the testimony.
2. See attachment for the 2007 data for network SAIFI, CAIDI and SAIDI with and without the storm mentioned; attachment "DPS 15-403 Attachment 2 2007 Storm."
3. The Company reasoning for proposing SAIDI is described in the EIOP testimony at page 207.
4. Con Edison did not discuss the proposal of adopting SAIDI as a metric with other utilities in New York. However, in the report filed from audit conducted on all New York State utilities

in 2014 by Overland Consulting titled “Accuracy of New York State Utilities’ Self-Reported Data Electric Reliability,” Con Edison and O&R along with three other utilities cited in that audit stated they were in favor of adopting SAIDI:

Page 4-19

Orange and Rockland (O&R) is in favor of replacing CAIDI with SAIDI as the installation of system improvements, such as distribution automation and smart grid equipment, serve to reduce SAIFI while increasing CAIDI. This occurs because distribution automation and smart grid equipment automatically perform switching to isolate certain faults in less than five minutes, reducing the number of customers experiencing a sustained outage (SAIFI). A byproduct of this reduction is that fewer customers are restored by manual switching, which in O&R’s view serves to artificially raise CAIDI. O&R believes the use of SAIDI as a reliability metric is a superior indicator of overall electric system reliability, since it will account for both frequency and duration.

Page 5-20

Niagara Mohawk Power Corporation (NMPC) believes that as it has made system improvements that reduce the number of shorter outages with fewer customers affected, the remaining outages are longer and impact more customers or the utility suffers one very large outage which drives up the CAIDI metric, while actual outage performance had improved. NMPC believes that SAIDI should be used in place of CAIDI to measure overall performance more accurately.

Page 8-20

Central Hudson reported the NYSPSC used to include reporting requirements for SAIDI, but later revised the reporting to only include SAIFI and CAIDI. Central Hudson believes it has made system improvements that reduce the number of shorter outages with fewer customers affected, and consequently the remaining outages are longer and impact more customers which drives up the CAIDI metric, while actual outage performance had improved. Central Hudson believes SAIDI in combination with SAIFI and CAIDI can serve as a balancing factor recognizing overall performance more accurately.

Page 6-25 and Page 7-26

New York State Electric & Gas and Rochester Gas and Electric (owned by Iberdola) had no position in the audit but they did petition to move to SAIDI in Case 02-E-1240.

5. The Company is not looking to reset the current non-network CAIDI target. The proposal is to replace the existing CAIDI with SAIDI utilizing the current measure, which is why the Company did not use the historical ten-year average but kept the current CAIDI threshold to calculate the new SAIDI.
6.
 - a. The AMI project will provide more detailed visibility into reliability data. After completion of the AMI deployment and full integration with the OMS system, the

Company will have more complete and more accurate information about when outages begin and end, as well as which customers were affected.

- b. After AMI is fully integrated with the Outage Management System, customer electric meters will report outages directly into the outage management system without the need for customer calls. Additionally, our operators will have the ability to confirm power status and voltage levels on the meters to investigate reported outages. The meters will also communicate with the outage management system to indicate when power is restored.
- c. and d.

As discussed in the EIOP testimony at page 202, the Company believes that the current reliability metrics are flawed. For example, as a utility invests and improves its system, it becomes penalized as it shrinks the pool of customers experiencing an outage in a given year. The Company believes that it is important to adopt the proposed metrics without delay because they are more accurate as a measure of overall system performance and are a better measure of overall system performance as experienced by our customers. As explained in the EIOP testimony, the Company has accumulated ten years' worth of system data from its Outage Management System to support its proposal.

The Company does not see AMI deployment as a barrier to instituting new metrics that measure true overall system performance. The Company plans to integrate AMI outage data in its Outage Management System. This does preclude any further changes in target or goals set by newly adopted reliability metrics. As AMI data is integrated, reliability metrics can and will be updated since they rely upon the average of historical data performance. When sufficient historical outage data is available that includes the AMI data, the Company expects that the reliability metrics goals will be updated.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-15
Date of Response: 3/26/2019
Responding Witness: Electric Infrastructure & Operations Panel

Question No. : 402

Subject: Reliability Performance Mechanism (RPM) – Heat Wave Exclusion

1. On page 210 of the EIOP testimony, Con Edison proposes for heat waves above its system design criteria to be classified as excludable events, similar to major storm exclusions. Provide the following information for each year from 2008 to 2018:
 - a. Is Con Edison seeking the exclusion of outages related to heat waves regardless of it does or does not meet the definition of a major storm (i.e., at least 10% of the customers interrupted within an operating area or customers out of service for at least 24 hours)?
 - b. the details (e.g., dates, number of interruptions, length of outages, etc.) of any heat wave event that meet the definition of a major storm;
 - c. the details (e.g., dates, number of interruptions, length of outages, etc.) of any heat wave event that did not meet the definition of a major storm;
 - d. the number of days with a temperature variable equal to or above 85°F; and,
 - e. the number of days with a temperature variable equal to or above 86°F.
2. Con Edison states on page 211 of the EIOP testimony: “The Company’s Climate Change Study, currently being drafted, predicts more frequent heat waves and extreme weather taking place in the future for which the Company will need to account.”
 - a. For each year from 2019 to 2029, provide the number of days that are forecasted to have a temperature variable equal to or above:
 - i. 85°F
 - ii. 86°F
 - b. How frequently and for what duration per year does Con Edison’s overhead and underground equipment would need to experience a temperature variable above the current design criteria before Con Edison decides to change its design criteria?
 - c. When will Con Edison change its design criteria for its equipment to a higher temperature variable rating?
 - d. What will be the new temperature variable rating of its overhead and underground equipment?
3. How does Con Edison differentiate outages due to high load versus outages due to high heat (weather)?

4. What is the emergency temperature variable rating of overhead and underground equipment?
5. What procedures does Con Edison have in place to mitigate the impact of heat on its overhead and underground equipment? Provide the specification.
6. Is it Con Edison's position that its current procedures to mitigate the impact of heat on its equipment does not prevent equipment outages? Explain Con Edison's position.
7. Is the impact of these heat waves removed from the historical data used to derive the SAIFI and CAIDI targets proposed by Con Edison? If yes, provide for each year, the historical heat wave data that was removed from the SAIFI and CAIDI calculation. If no, explain why.
8. Describe how the heat wave exclusion proposed in the EIOP testimony impacts the following metrics for each year, 2008 to 2018:
 - a. Network Outages per 1,000 Customers;
 - b. Network Outage Duration;
 - c. Network CAIDI and SAIDI
 - d. Non-network SAIFI; and,
 - e. Non-network CAIDI and SAIDI.

Response

- a) Yes
 - b) and c) See DPS 15-402 Attachment 1 Major Storm Definition
 - d) Fourteen
 - e) Nine
- 1.
- a) We do not have specific forecasted Temperature Variable values by year from the Climate Change Vulnerability study. Chapter 2 of the study evaluates various climate change temperature scenarios. The table below from chapter two of our current draft of the climate study covers temperature variable. The "Projection Time Period" of 2020s represents the likelihood (10th or 90th percentile) of the value occurring within a period of 30 years centered on 2020 and based on an ensemble of 24 climate model projections.

Table IV-2. Projected number of days per year at or above Electric Temperature Variable of 86 °F.

Projection Time Period	La Guardia	White Plains
------------------------	------------	--------------

	Lower Bound (RCP 4.5 10 th percentile)	Upper Bound (RCP 8.5 90 th percentile)	Lower Bound (RCP 4.5 10 th percentile)	Upper Bound (RCP 8.5 90 th percentile)
2020s	2 Days	5 Days	0.8 Days	2 Days
2050s	4 Days	19 Days	2 Days	13 Days
2080s	5 Days	52 Days	3 Days	42 Days

The historical value for La Guardia is 1 day per year and for White Plains is 0.2 days per year.

b) and c) and d)

The Company normalizes its load forecast to a Temperature Variable (“TV”) of 86 degrees and designs the system accordingly. The Company monitors system performance based on experienced historical peak load and TV. The Company monitors the rolling five year TV calculation for any changes to TV. In order for the Company to initiate a study to consider a potential change to system design criteria, the actual rolling five year TV calculation would need to reflect values to warrant it. Currently, there has been no indication of any rise in TV.

2. Con Edison does not differentiate outages due to high load versus outages due to high heat since there is a strong correlation between load and heat. Attachment 2 shows the load vs. temperature variable for the summer months from 2008 to 2018. See DPS 15-402 Attachment 2 High Voltage Load vs Outages.
3. Overhead, pad-mounted and URD transformers are tested and rated in accordance with industry (IEEE C57) standards. They are not rated using the temperature variable calculation.
 - a. IEEE C57 standards require ratings based on a 24 hour average ambient of 30 degrees C or 86 degrees F.
 - b. Temperature variable is calculated as a weighted average of the highest three-hour temperature (dry-bulb) and humidity (wet-bulb) readings each day.

Note that the IEEE C57 standards do allow for emergency ratings beyond the normal ratings. In general, the emergency limits are based on percent overload, overload duration/load cycle, and ambient temperature.

4. To mitigate the impact of heat on network underground equipment when the temperature is above design criteria, the Company utilizes voltage reduction, customer appeals to reduce load, deploying generators to strategic locations and demand response. In addition, we have a procedure to cool transformers. In extreme cases we will implement load shedding procedures or disconnect large customers.

Voltage reduction, customer appeals to reduce load, and demand response also help to mitigate the impact of high ambient temperatures on overhead, pad-mounted and URD transformers. See DPS-150-402 Attachment 3 OP-5022. Additionally the impact of heat on radial units is mitigated through load relief. On overhead, pad-mounted and URD transformers load relief is executed in accordance with EO-2000. See DPS 15-402 Attachment 4 EO-2000.

5. The procedures described in the response to number 5 are intended to prevent equipment outages. Following the procedures allows the Company to reduce load and thus reduce the stress on the equipment or reduce risk by proactively relieving equipment with projected overloads.
6. The impact of heat waves is not removed from the historical data. In Case 16-E-0060, the Company's Electric Service Reliability Performance Mechanism at Appendix 14, page 4, Exclusions (b) states "Heat-related outages are not a major storm. However, the Company may petition the Commission for an exemption for an outage if the Company can prove that such outage, weather related or not, was beyond the Company's control, taking into account all facts and circumstances." The Company petitioned for an overhead heat related exclusion for July 22, 2011 when the TV was 88.7.
7. Attachment 3 contains the data and the graphs for each one of the metrics. This data demonstrates that heat waves do have an impact on each one of the reliability metrics except for network AOD. In 2012, the Network AOD actually increased after the heat wave exclusion since the number of network outages was small with very short duration. As a result, removing these outages actually resulted in an increased AOD.

See DPS 15-402 Attachment 5 Heat Wave Exclusion

Company Name: Con Edison
Case Description: Placeholder for 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-XXXX, 19-G-XXXX

Response to DPS Interrogatories – Set DPS-1
Date of Response: 1/24/2019
Responding Witness: Gas Infrastructure & Operations Panel

Question No. : 170

As adopted by the most recent Company filings, provide the specific emergency response calendar year-end targets for the previous five calendar years.

Response

Emergency Response Time YE Targets

	<i>30 Minutes</i>	<i>45 Minutes</i>	<i>60 Minutes</i>
2013	75%	90%	95%
2014	75%	90%	95%
2015	75%	90%	95%
2016	75%	90%	95%
2017	75%	90%	95%
2018	75%	90%	95%

Company Name: Con Edison
Case Description: Placeholder for 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-XXXX, 19-G-XXXX

Response to DPS Interrogatories – Set DPS-1
Date of Response: 1/24/2019
Responding Witness: Gas Infrastructure & Operations Panel

Question No. : 171

How has the Company performed when compared with that of its specific emergency response calendar year-end targets for the previous five calendar years?

Response

- 2013 – 88.8% exceeding a target of 75% in 30 minutes; 99.4% exceeding a target of 90% in 45 minutes; 99.99 % exceeding a target of 95% in 60 minutes.
- 2014 – 87.8% exceeding a target of 75% in 30 minutes; 99.3% exceeding a target of 90% in 45 minutes; 99.98 % exceeding a target of 95% in 60 minutes.
- 2015 – 88.2% exceeding a target of 75% in 30 minutes; 99.2% exceeding a target of 90% in 45 minutes; 99.98 % exceeding a target of 95% in 60 minutes.
- 2016 – 89.1% exceeding a target of 75% in 30 minutes; 99.3% exceeding a target of 90% in 45 minutes; 99.98 % exceeding a target of 95% in 60 minutes.
- 2017 – 89.9% exceeding a target of 75% in 30 minutes; 99.4% exceeding a target of 90% in 45 minutes; 99.9 % exceeding a target of 95% in 60 minutes.

The data for 2018 will be provided once it is available.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-1
Date of Response: 3/19/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

Question No. : 171-Supp1

How has the Company performed when compared with that of its specific emergency response calendar year-end targets for the previous five calendar years?

Response

- 2014 – 87.8% exceeding a target of 75% in 30 minutes; 99.3% exceeding a target of 90% in 45 minutes; 99.98 % exceeding a target of 95% in 60 minutes.
- 2015 – 88.2% exceeding a target of 75% in 30 minutes; 99.2% exceeding a target of 90% in 45 minutes; 99.98 % exceeding a target of 95% in 60 minutes.
- 2016 – 89.1% exceeding a target of 75% in 30 minutes; 99.3% exceeding a target of 90% in 45 minutes; 99.98 % exceeding a target of 95% in 60 minutes.
- 2017 – 89.9% exceeding a target of 75% in 30 minutes; 99.4% exceeding a target of 90% in 45 minutes; 99.9 % exceeding a target of 95% in 60 minutes.
- 2018 – 91.95% exceeding a target of 75% in 30 minutes; 99.54% exceeding a target of 90% in 45 minutes; 99.97% exceeding a target of 95% in 60 minutes

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-3
Date of Response: 4/22/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 56

Referring to the April 1, 2019 provided chapter in the New Efficiency: New York Proceeding, beginning at p. 17, please explain which EAMs have been in effect previously, and provide a description of the amount of costs incurred for each EAM in each of the last 5 years (if applicable) and the amount amortized in each of the last five years, as well as any split of shared savings.

Response

Of the EAMs proposed in the Con Edison chapter in the April 1, 2019 filing in Case 18-M-0084, only two EAMs are identical to EAMs previously in effect – DER Utilization and GHG Reduction. The DER Utilization EAM was in effect in 2017, 2018, and is in effect in 2019. The GHG Reduction EAM is in effect in 2019.

The Company interprets costs associated with EAMs to mean the amount of EAMs the Company earned from meeting targets established for those EAMs.

EAMs commenced with the 2017 Rate Plan. For DER Utilization, the Company:

- Did not meet 2017 targets and consequently did not earn anything.
- Met the 2018 targets and is collecting \$8.335 million for its achievement.

The Company did not have any share of savings EAM metric associated with energy efficiency in the past 5 years.

All EAMs earned are collected over a 12 month period.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-18
Date of Response: 4/4/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 457

Subject: Verified Gross Savings

On March 15, 2018, the Commission issued the Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2019-2020 in Case 15-M-0252. In this Order, the Commission required that “any utility EAM [Earning Adjustment Mechanism] based on energy efficiency programmatic performance proposed after the date of this order [i.e., March 15, 2018] shall be calculated and awarded based on verified gross savings” (p. 27). The Company’s current EAM proposal does not incorporate this requirement.

1. How does the Company propose to verify the savings associated with its Electric Energy Efficiency (E3) EAM and Natural Gas Energy Efficiency (GE2) EAM, which are based on programmatic performance?
2. How does the process for verifying the gross savings affect the timing of any required EAM reporting and collection of any earned incentives from the EAM?
3. For each Rate Year, what percentage of its portfolio savings does the Company propose to verify? Provide separate percentages for gas and electric portfolios.
4. In the Company’s current scorecard, when the Company reports its gross first-year annual savings (MWh for electric programs and MMBtu for gas programs), are the reported values adjusted for any purpose? For example, does the Company adjust the savings that result from calculations in the NYS Technical Resource Manual to account for free ridership, spillover, realization rates, Quality Assurance/Quality Control findings, etc.?
 - a. If the Company is adjusting its reported gross savings, for each program in the Company’s portfolio, explain the adjustments both qualitatively and quantitatively.

Response

1-2. The Company revised its EAM proposal on April 1, 2019 and submitted it in the Con Edison Chapter of the *NY Utilities Report Regarding Energy Efficiency Budgets and Targets*,

Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers and Requests for Approval in Case 18-M-0084 (starting at p. 67). The Company is no longer proposing the two programmatic EAMs noted in question 1. Until DPS Staff issues guidance and a methodology for calculating gross verified savings in Case 15-M-0252, the Company intends to report gross savings. Further, the Company intends to use gross savings for the EAMs proposed on April 1. Gross savings are the total savings reported by the programs using the formulas consistent with the New York State Technical Resource Manual. The Company is unsure as to the timing of reporting until the Company understands the methodology to be used to determine gross verified savings.

3. The Company will develop plans related to the methodology and schedule for developing verified savings for programs once the guidance has been finalized and issued, and, consequently, the Company does not currently have a proposed percentage of portfolio savings to verify on an annual basis.

1. Reported gross first-year annual savings in the Company's current scorecard include adjustments based on QA/QC findings and M&V analysis for custom projects (which are unique projects designed and implemented specific to a customer's needs). QA/QC activities and impacts vary by program, but may include on-site verification, savings calculation checks, and pre-payment invoice checks. The results of these QA/QC and M&V activities adjust the gross savings' calculation inputs on a project-level basis before the project savings are reported as acquired by the program. For example, in a lighting retrofit, a QA/QC inspection might find that instead of lighting fixtures being replaced inside the business as indicated in the application, they were installed in the parking lot, impacting the reported savings. This would be reported and updated in the tracking system.

Consistent with standard evaluation practice, free ridership and spillover are not accounted for in gross savings. Other adjustments are accounted for in net savings via a net-to-gross ratio. Consistent with New York precedent, the Company has used a default 0.9 net-to-gross ratio.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-31
Date of Response: 4/17/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 655

Subject: Workpapers associated with New Efficiency: New York Filing

In this interrogatory, all requests for workpapers or supporting calculations should be construed as requesting any Word, Excel or other computer spreadsheet models in original electronic format with all formulae intact.

Referring to the *NY Utilities Report Regarding Energy Efficiency Budgets and Targets, Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers and Requests for Approval*, filed on April 1, 2019, in Case 18-M-0084:

1. Does the Panel adopt the Con Edison-specific Chapter on pages 52-84 of this filing as its updated testimonial position?
2. If the answer to question 1 is affirmative, provide all workpapers used to develop:
 - a. Tables 1 through 14 of Con Edison’s Chapter;
 - b. Tables 1 through 15 of Appendix A.

Response

Yes. The Company’s update testimony will adopt the proposals included in the Con Edison Chapter of the EE filing from April 1, 2019 as corrected by the Company’s April 16, 2019 errata filing.

Please see the following attachments for the associated workpapers. These workpapers reflect the changes included in the April 16, 2019 errata filing.

Table	Notes and Attachments
Table 1 – Table 4, Exhibit A Table 1 – Table 15 Exhibit A	DPS-31-655-Attachment 1 – Con Edison NENY Budgets and Targets Full Model
Table 5	The Company plans to file BCA details on

	the Water St/Plymouth NWS under the approved docket for the program by early May 2019. These details will be filed in Case 16-E-0060.
Table 6	DPS-31-655-Attachment 2-OM Program Change Form-EEDM Portfolio
Table 7	DSP Capital - See Company's response to IR DPS-18-468
Table 8	DPS-31-655-Attachment 3-OM Program Change Form-EEDM-DSP
Table 9 and Table 14	DPS-31-655-Attachment 4-Energy Efficiency and EAM BCAs; DPS-31-655-Attachment 5-BCA Input Data
Table 10 – Table 11	DPS-31-655-Attachment 6-AMMBtu EAM Targets; DPS-31-655-Attachment 7-DERU and GHG EAM Targets
Table 11	DPS-31-655-Attachment 7-DERU and GHG EAM Targets; DPS-31-655-Attachment 8-MWh to MW Ratio EAM Targets
Table 12 – Table 13	DPS-31-655-Attachment 9-ConEdison EAM Basis Point Allocation

Table 12 - Cross Commodity EAM Basis Points

		2020	2021	2022
Annual MMBtu EAM	Min	7	7	7
	Mid	21	21	21
	Max	35	35	35
Greenhouse Gas Emissions Reductions EAM	Min	5	5	5
	Mid	15	15	15
	Max	25	25	25
Totals	Min	12	12	12
	Mid	36	36	36
	Max	60	60	60

Table 13 - Electric-Only EAM Basis Points

		2020	2021	2022
MWh:MW Ratio EAM	Min	2	2	2
	Mid	6	6	6
	Max	10	10	10
System Efficiency EAM	Min	N/A	N/A	1
	Mid	N/A	N/A	3
	Max	N/A	N/A	5
DER Utilization	Min	3	3	3
	Mid	9	9	9
	Max	15	15	15
Totals	Min	5	5	6
	Mid	15	15	18
	Max	25	25	30

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-3
Date of Response: 4/24/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 57

Referring to the April 1, 2019 provided chapter in the New Efficiency: New York Proceeding, beginning at p. 17, please provide an example of how each new or revised EAM would be measured and calculated (showing all inputs to the calculations), and also provide the rationale for any sharing of savings or costs.

Response

The Company's April 1, 2019 chapter proposed 6 EAMs. They are:
Cross-commodity EAMs (Electric and Gas)

- Annual MMBtu [NEW]
- Share the Savings EAM based on \$/lifetime MMBtu [NEW]
- GHG Emissions Reductions

Electric Only EAMs

- MWh:MW Ratio [NEW]
- DER Utilization
- System Efficiency [NEW]

Each EAM description included an explanation of how it would be measured. The Company would note that the December 13 Order in Case 18_M-0084 required that it propose EAMs based on share the savings approach.

Examples of calculations for each EAM are:

Annual MMBtu EAM: efficient lighting incited by the Company would be included in this EAM and according to TRM, a replacement of 100W incandescence light bulb with a 15W LED bulb at a convenience store would save approximately 542 kWh annually ($[100W - 15W] / 1000 * 6,376$ hours per year), which is approximately equal to 1.85 MMBtu.

Share the Savings EAM: if it is determined that the 2018 average cost per lifetime-MMBtu was \$10 per MMBtu-year and the Company achieved 2 million MMBtu-year at \$9.5 per MMBtu-year in RY1, then the resulting EAM for RY1 would \$0.5 million ($[\$10 - \$9.5] * 50% * 2$ million MMBtu-year).

MWh:MW Ratio EAM: Using the same example as in Annual MMBtu above, the replacement LED bulb would save approximately 0.542 MWh per year and 85 W of demand; from aggregations of such measures, an overall MWh:MW ratio would be developed.

System Efficiency EAM: The Company will be developing this EAM for 2022. Therefore, no example calculation is available at this time.

The Company's annual EAM reports in 16-E-0060 provide actual calculations for the remaining two EAMs.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-2
Date of Response: 3/14/2019
Responding Witness: Accounting Panel

Question No. : 13

Please state the dollar value of 10 basis points of return on equity under the as-filed Electric cost of service and under the as-filed Gas cost of service in each of RY1, RY2 and RY3.

Response

The dollar amount attributed to every ten basis point increase in the proposed ROE for electric is \$15.5 million.

The dollar amount attributed to every ten basis point increase in the proposed ROE for gas is \$4.97 million.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set DPS-31
Date of Response: 4/17/2019
Responding Witness: Customer Energy Solutions / Accounting Panels

Question No. : 656

Subject: Cross Commodity EAMs

In this interrogatory, all requests for workpapers or supporting calculations should be construed as requesting any Word, Excel or other computer spreadsheet models in original electronic format with all formulae intact.

Referring to the *NY Utilities Report Regarding Energy Efficiency Budgets and Targets, Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers and Requests for Approval*, filed on April 1, 2019, in Case 18-M-0084:

On page 74 of this filing, Con Edison proposes that the basis point values for cross-commodity EAMs be based on the combined electric and gas rate bases, and allocated to electric and gas customers in proportion of their respective rate base sizes.

1. Provide the value of 10 basis points of the combined electric and gas rate bases.
2. Using the Average Electric Rate Base for 2020, shown on page 1 of Exhibit__ (AP-E2) of \$ (000s) 22,202,747, and the Average Gas Rate Base for 2020 shown on page 1 of Exhibit__ (AP-G2) of \$ (000s) 7,096,200, confirm that electric customers would be allocated approximately 76% of the earned cross-commodity EAM awards with the remainder to be collected from gas customers.

Response

1. The value of 10 basis points on a pretax basis using the combined rate base from the Company's initial filing is \$20.5M in RY1, \$21.9M in RY2, and \$23.3M in RY3 calculated as follows:

	Combined		
	RY1	RY2	RY3
	2020	2021	2022
Average Rate Base	\$ 29,298,947,104	\$ 31,311,530,278	\$ 33,345,858,300
Multiply by: Equity Ratio	50.00%	50.00%	50.00%
Equity Portion of Average Rate Base	14,649,473,552	15,655,765,139	16,672,929,150
Multiply by: 10 basis points	0.10%	0.10%	0.10%
After-tax	14,649,474	15,655,765	16,672,929
Divide by: Gross up for FIT, SIT, GRT, UB, LPC	71.55%	71.55%	71.55%
Pre-tax	\$ 20,474,144	\$ 21,880,848	\$ 23,302,762

2. Confirmed. Below is the proposed allocation by rate year based on the relative electric and gas rate bases.

(000's)	Rate Base Allocation		
	RY1	RY2	RY3
	2020	2021	2022
Electric Rate Base	\$ 22,202,747	\$ 23,478,493	\$ 24,758,198
Gas Rate Base	\$ 7,096,200	\$ 7,833,037	\$ 8,587,660
Electric	76%	75%	74%
Gas	24%	25%	26%

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to City of New York Interrogatories – Set CITY-14
Date of Response: 4/30/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 295

What is the total dollar value of all of the energy efficiency incentives proposed by the Company?

Response

The Company notes that the dollar values below are based on the capital assumptions in the Company's rate filing.

Total Proposed EAMs (\$M)

		2020	2021	2022
Totals	Min	\$32.32	\$34.46	\$38.34
	Mid	\$96.97	\$103.37	\$115.02
	Max	\$161.62	\$172.28	\$191.70

Please note that the table above does not include any earnings associated with the proposed Share-The-Savings metric as it is based on a share of cost savings achieved.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to UIU Interrogatories – Set UIU-1
Date of Response: 2/11/2019
Responding Witness: Accounting Panel

Question No. : 31

In the Company's proposed rate filings, what is 100 basis points equivalent to for (a) electric service and (b) gas service?

Response

Please see the table below for the revenue requirement equivalent of 100 basis points return on equity for electric and gas:

	Revenue Requirement Equivalent of 100 Basis Points		
	R _Y 1	R _Y 2	R _Y 3
	2020	2021	2022
Electric	155,086,761.81	163,997,885.38	172,936,655.39
Gas	49,654,680.88	54,810,592.44	60,090,965.33

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to NYECC Interrogatories – Set NYECC-2
Date of Response: 2/20/2019
Responding Witness: Accounting Panel

Question No. : 8

- a) Referencing page 7, lines 6-12 of your testimony, provide the aggregate revenue requirement amounts received by the Company separately in rate years one and two and the amount it expects to receive in rate year three ending December 31, 2019 under its current electric rate plan in Case 16-E-0060.
- b) Referencing page 7, lines 6-12 of your testimony, provide the aggregate revenue requirement amounts received by the Company separately in rate years one and two and the amount it expects to receive in rate year three ending December 31, 2019 under its current natural gas rate plan in Case 16-G-0061.
- c) Referencing page 7, lines 6-12 of your testimony, for each of the three rate years in electric, provide any and all additional amounts of revenue earned (and expected to be earned in rate year three) by the Company above and beyond the revenue requirement earned for each rate year. Provide each amount by separate category, for e.g. specify any additional revenue earned by the Company through an Earnings Adjustment Mechanism (EAM) and under which specific EAM the revenue was earned.
- d) Referencing page 7, lines 6-12 of your testimony, for each of the three rate years in natural gas, provide any and all additional amounts of revenue earned (and expected to be earned in rate year three) by the Company above and beyond the revenue requirement earned for each rate year. Provide each amount by separate category, for e.g. specify any additional revenue earned by the Company through an Earnings Adjustment Mechanism (EAM) and under which specific EAM the revenue was earned.

Response

- a. Total electric sales revenue amounts received and forecasted by the Company for the requested periods are as follows:

	2017	2018	2019 (Forecast)
Sales of Electricity	7,095,997,848.74	7,317,080,188.44	7,211,125,633.26

- b. Total gas sales revenue amounts received and forecasted by the Company for the requested periods are as follows:

	2017	2018	2019 (Forecast)
Sales of Gas	1,648,982,466.53	1,922,447,939.87	1,889,852,476.30

- c. Please refer to the attached NYECC 2-8, Attachment 1, for other operating revenues for 2017 and 2018. Please refer to the attached NYECC 2-8, Attachment 2, for other operating revenues forecasted for 2019. Included within other operating revenues are EAMs and positive incentives that the Company is eligible to earn.

The table below sets forth the Company's EAMs and positive incentives achieved or projected to be achieved for electric and gas for 2017, 2018 and 2019. For the 2019 forecast, the Company made the following assumptions:

- For the energy efficiency and system peak EAMs, the amounts are based on the Company meeting its mid-level targets.
- As the Company is unable to reliably forecast its achievement of outcome-based EAM targets, no amount was forecasted for that item.
- For the AMI Survey EAM, the amounts are based on the Company achieving the maximum incentive (84% allocated to electric and 16% allocated to gas).
- For the various positive incentives, the amounts are based on the Company achieving the maximum incentives.

Please note that due to accounting rules regarding the collection of earned incentives, the Company is not able to record the entirety of positive incentives in its general ledger at the time they are achieved, but rather records them over time as the collection date approaches.

	2017 Actuals	2018 Actuals	2019 Forecast
Electric EAM			
Energy efficiency and system peak reduction programs	12,680,000	16,670,000	11,100,000
Energy Efficiency - Outcome Based		8,335,000	
AMI		210,000	210,000
Electric Positive Incentives			
Residential Service terminations/uncollectibles (split 84%/16%)	5,040,000	5,040,000	5,040,000
Total Achieved	17,720,000	30,255,000	16,350,000
	2017 Actuals	2018 Actuals	2019 Forecast
Gas EAM			
AMI		40,000	40,000
Gas Positive Incentives			
Residential Service terminations/uncollectibles (split 84%/16%)	960,000	960,000	960,000
Leak backlog reductions	2,000,000	1,824,000	2,030,000
Leak prone pipe replacement	4,000,000	3,647,000	4,060,000
Total Achieved	6,960,000	6,471,000	7,090,000

- d. Please see the Company's response to subpart c. above.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-3
Date of Response: 4/26/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 72

Referring to page 46, Lines 10-15 of the Customer Energy Solutions Panel, please identify:

- a. The amounts of each rate year revenue requirements for electric and gas EEDM that will be spent in Westchester County.
- b. The forecasted amounts to be spent for each EEDM program in each rate year.

Response

For proposed spending in each rate year for energy efficiency, please see the Con Edison chapter in the New York Utilities' April 1, 2019 EE filing in Case 18-M-0084 as updated by the April 16, 2019 errata filing. The Company develops its programs on a service territory wide basis, not on a county by county basis. Moreover, the Company does not develop revenue requirement amounts attributable to specific programs. The Company is committed to serving customers in Westchester county, including by offering heating alternatives.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to City of New York Interrogatories – Set CITY-14
Date of Response: 4/30/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 273

What is meant by the statement in the Energy Efficiency Report (p. 54) that EAMs are accompanied by cost-benefit analyses “where available and appropriate?”

Response

The Company did not provide cost-benefit analyses (“BCAs”) on proposed EAMs where either (i) all the data necessary were not available or (ii) a BCA was inapplicable.

For example, the Company did not provide a BCA on DER Utilization or Greenhouse Gas Reduction for years 2021 and 2022 as the Company does not yet have a baseline for the metric and therefore cannot yet propose min, mid, and max points for the metric on which to base a BCA.

Similarly, the Company did not develop a BCA on the proposed Share The Savings EAM as this there are no explicit targets associated with the EAM; rather it is a structure to drive achievement of savings at lower program cost, thereby reducing customer costs.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to City of New York Interrogatories – Set CITY-14
Date of Response: 4/30/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 285

Please explain how the greenhouse gas emissions shareholder incentive is measuring something different from the incentive based on reducing energy usage via energy efficiency (*i.e.*, the MMBtu savings incentive).

Response

At a fundamental level, the greenhouse gas (“GHG”) Emissions Reduction EAM is a measure of activities in the Company territory that result in the beneficial outcome of a reduction of emissions, regardless of whether the activities were directly incented by Con Edison’s programs. During the development of the GHG reduction EAM, through a collaborative process with stakeholders, the GHG emission reductions associated with the Company’s portfolio of energy efficiency programs, except for heat pumps and heat pump water heaters, were excluded from the GHG reduction EAM to encourage the Company to focus on facilitating other emissions reducing, including beneficial electrification, efforts. The GHG reduction EAM therefore is complementary to the EAMs that focus on Company’s Energy Efficiency programs (*i.e.*, the annual MMBtu savings EAM) as it incentivizes the Company to drive GHG emission reductions by helping customers adopt technologies such as solar PV and EVs.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to DPS Interrogatories – Set MTA-2
Date of Response: 4/24/2019
Responding Witness: Customer Energy Solutions Panel

Question No. : 7

Subject: EAM Activities

Please describe the activities that the Company plans to undertake in order to earn the DER Utilization EAM and Electric GHG Emissions Reduction EAM (*see* Customer Energy Solutions Panel Testimony at pages 139 *et seq.*).

Response

The two EAMs described in question 7 are not driven by Con Edison's portfolio of programs, *i.e.*, the EAMs depend on the Company facilitating territory-wide beneficial outcomes through broad efforts with no direct funding available to meet EAM targets. The Company plans to continue its efforts to support and facilitate customer adoption of new technologies that are aligned with the state policy objectives of increased DER penetration and lower GHG emissions, the focus of the two EAMs respectively, through activities such as marketing, outreach, and education on new technologies. For example, Con Edison is partnering with NY-BEST and NYSERDA to host "Con Edison Energy Storage Day" on Monday, May 6, 2019 at the Con Edison Learning Center in Long Island City featuring experts from the energy storage industry, Con Edison, New York City, NYSERDA and the NYS Department of Public Service to provide information on the opportunities for deploying energy storage in Con Edison's territory. In addition, the Company also plans further improvements to its Interconnection Online Application Portal and the interconnection process more generally.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to NYECC Interrogatories – Set NYECC-2
Date of Response: 2/19/2019
Responding Witness: Accounting Panel

Question No. : 13

Referencing page 24, line 1 through page 25, line 6, does the Company see any differences at all between the Commission authorized sharing percentage for non-wire solutions and the Company's proposed implementation of the BCO initiative here regarding O&M costs to achieve that would require different treatment here from the no-wire solutions situation?

Response

No, the Company does not see any relevant or material differences.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to NYECC Interrogatories – Set NYECC-1
Date of Response: 2/12/2019
Responding Witness: Accounting Panel

Question No. : 5

- a. Referencing page 17, line 6 through 15, of your testimony, explain why the Company prior to its implementation of its BCO Company-wide program did not seek to improve processes, functions and tasks, to reduce costs while upholding core strategic imperatives of safety, operational excellence and customer experience.
- b. If the Company did, previous to its BCO Company-wide program, seek to improve processes, functions and tasks, to reduce costs while upholding core strategic imperatives of safety, operational excellence and customer experience, then explain why its BCO Company-wide program is needed and what its BCO Company-wide program provides to ratepayers that is not currently being provided by the Company.
- c. Referencing page 17, line 6 through 15, of your testimony, explain why the Company prior to its implementation of its BCO Company-wide program (1) did not identify ways to improve or re-engineer work that results in reduced O&M costs, (2) did not develop a plan for and implement cost savings initiatives, and (3) did not build a long term and sustainable process for achieving ongoing savings.
- d. If the Company did, previous to its BCO Company-wide program, (1) did identify ways to improve or re-engineer work that results in reduced O&M costs, (2) did develop a plan for and implement cost savings initiatives, and (3) did build a long term and sustainable process for achieving ongoing savings, then explain why its BCO Company-wide program is needed and what its BCO Company-wide program provides to ratepayers that is not currently being provided by the Company.

Response

- A. Prior to implementation of the BCO Program, the Company did seek ways to improve process, functions and tasks to reduce costs while upholding core strategic imperatives of safety, operational excellence and customer experience. As discussed below and in the direct testimony of the Accounting Panel, the BCO Program is an aggressive program that furthers those same goals in a new enhanced way.
- B. The Company voluntarily took a fresh approach on cost management that draws on recent benchmarking and best practices from others. As discussed in the testimony of the

Accounting Panel, we centrally manage the BCO Program to reduce redundancy and have line of sight on cross functional opportunities, and seeks to implement a consistent framework of techniques and approaches across the Company, which now has a broader and deeper capability to take advantage of new digital technologies. The Company worked with a consultant, at its own cost, to develop the program, and the revenue requirements in its rate filings reflect BCO-related efficiency savings well beyond the one percent labor productivity adjustment typically included in rate case filings.

- C. Prior to implementation of the BCO Program, the Company did seek to (1) identify ways to improve or re-engineer work that results in reduced O&M costs and (2) develop a plan for and implement cost savings initiatives. As discussed above and in the direct testimony of the Accounting Panel, the BCO Program is an aggressive program that furthers those same goals in a new enhanced way.
- D. Please see the Company's response to subsection b above.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to NYECC Interrogatories – Set NYECC-2
Date of Response: 2/19/2019
Responding Witness: Accounting Panel

Question No. : 14

- a) Referencing page 25, lines 7-9, does “after the end of the rate period covered by this rate proceeding” mean after three rate years?
- b) Explain why the Company no longer wants any shareholder incentive “after the end of the rate period covered by this rate proceeding.”
- c) Referencing page 25, lines 7-9, explain why “after the end of the rate period covered by this rate proceeding,” the Company no longer needs “an incentive to continually refresh the pipeline of potential initiatives as it identifies further opportunities.”

Response

- a) The Company supports a three-year rate plan. If one is achieved, then “after the end of the rate period covered by this rate proceeding” would be after December 31, 2022. In the event of a one-year rate plan, it would be after December 31, 2020.
- b) The purpose of the shareholder incentive is to compensate the Company for the financial risks associated with attaining the projected BCO savings within the rate period, as well as to incent the Company to continue to pursue savings opportunities aggressively beyond the rate period. The Company does not intend to seek continued shareholder incentives after expiration of the rate plan for any BCO savings achieved during that period, but reserves the right to request shareholder incentives for newly identified BCO savings in future rate proceedings.
- c) Please see the Company’s response to subpart b above.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to City of New York Interrogatories – Set City-4
Date of Response: 3/1/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

Question No. : 61

- a. Does the Company anticipate that the firm gas supply moratorium will be expanded to other regions within its service territory?
- b. If the response to (a) is yes, when does the Company anticipate that the moratorium will be expanded?
- c. Please provide the areas to which an expanded moratorium could apply.

Response

- a. The Company is closely monitoring the supply situation across its service territory. There are no plans to expand the boundaries of the moratorium at this time. However, should it become necessary to impose a moratorium on other parts of the service territory, it would be all of the Bronx, the areas in Queens (First and Third Wards) served by the Company, and all of Manhattan, except for lower Manhattan .
- b. Please see the response to a.
- c. Please see the response to a.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-2
Date of Response: 3/12/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

Question No. : 39

Referring to the Policy Panel - Gas page 40, "...establishing a temporary moratorium on connecting new gas customers in most of Westchester County."

- a. Please provide a geographic map of the Company's gas system in Westchester County showing the area under the gas moratorium.
- b. Please provide the Company's expected timeline for lifting moratorium.
- c. Please provide a detailed explanation of the Company's reasoning for determining the boundaries that are subject to the moratorium.
- d. Please provide the total number of new customer applications for new firm gas service received per month for the last five years.
- e. Please provide the number of new customer applications for new firm gas service received per month for the last five years from the area subject to the moratorium.

Response

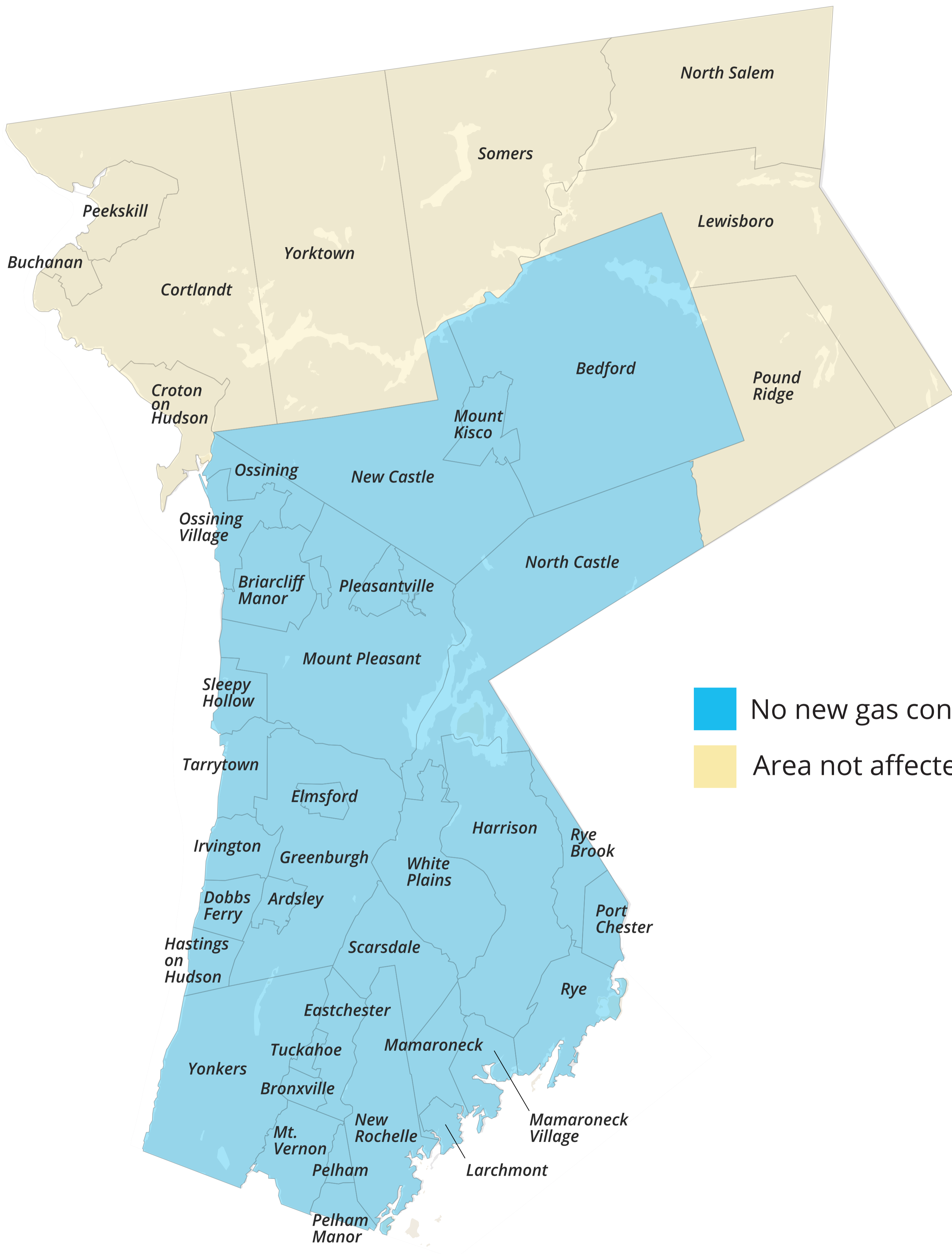
- a) See attachment: COW-2 39 A Attachment. We also have a web page that contains information related to the temporary moratorium:
www.conEd.com/NaturalGasMoratorium
- b) The Company has not indicated a termination date for the Westchester firm gas moratorium, as that date is unknown at this time. The moratorium will be lifted when the supply-demand imbalance is corrected through efficiency measures, alternate technology solutions or additional supply.
- c) The boundaries reflect the municipalities that are served by Tennessee pipeline on a peak day and where the supply constraint makes the moratorium necessary.



- d) Please refer to the table below for the total number of new customer applications for new gas service received per month for the last five years.

	2014	2015	2016	2017	2018	2019	Grand Total
January	276	219	223	197	176	353	1,444
February	268	192	193	223	195	669	1,740
March	342	329	265	262	262	88	1,548
April	311	317	240	244	314		1,426
May	317	273	232	274	277		1,373
June	393	341	233	267	332		1,566
July	330	275	231	200	281		1,317
August	301	298	266	229	315		1,409
September	381	303	288	252	257		1,481
October	380	264	278	259	315		1,496
November	212	210	218	239	239		1,118
December	202	193	199	156	211		1,961
Grand Total	3,713	3,214	2,866	2,802	3,174	1,110	16,879

- e) Please refer to the table below for the number of new customer applications for new gas service received per month for the last five years from the area subject to the moratorium.

	2014	2015	2016	2017	2018	2019	Grand Total
January	262	213	206	189	163	334	1,367
February	256	181	186	211	178	649	1,661
March	325	313	251	236	246	86	1,457
April	295	302	226	231	291		1,345
May	304	261	219	241	261		1,286
June	369	329	219	239	314		1,470
July	312	261	218	178	253		1,222
August	291	277	248	216	279		1,311
September	360	284	273	232	214		1,363
October	368	256	261	242	291		1,418
November	200	199	203	219	201		1,022
December	188	187	185	130	189		879
Grand Total	3,530	3,063	2,695	2,564	2,880	1,069	15,801



-  No new gas connections
-  Area not affected

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-2
Date of Response: 3/12/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

Question No. : 40

Referring to the Policy Panel - Gas page 40, “Customers may apply for service until March 15, 2019.”

- a. Please explain in detail why the Company chose this date to begin the moratorium.
- b. Please provide the Company’s daily and monthly peak demand for the last five years for both the Company’s entire system and the territory subject to the firm new gas service moratorium.

Response

- a. The Company wanted to provide as much time as possible for customers to submit applications for projects that would be complete within a two-year window while at the same time implementing a start date that would limit the likelihood that the Company would receive so many applications that it would be forced to turn customers away prematurely.
- b. The Company’s gas system weather adjusted peak demands for the last 5 years are as follows:

Winter Season	CECONY Gas Peak MDt/day
2013/2014	1,283
2014/2015	1,367
2015/2016	1,416
2016/2017	1,496
2017/2018	1,582

The system weather adjusted peak demand for the winter 2018/2019 will be calculated in May.

The Westchester Moratorium Area weather adjusted peak demands for the last 5 years are estimated as follows:

Zone 1 Westchester (Estimated)	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Winter Weather Adjusted Peak (MDt/day)	271	280	290	300	309

This area's weather adjusted peak demand for the winter 2018/2019 will be calculated in May.

The daily and monthly peak demand information is not readily available and would have to be weather normalized.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to Pace Interrogatories – Set Pace-9
Date of Response: 5/9/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

Question No. : 72

On April 24, 2019, the Company announced that it had reached an agreement with owners of the Tennessee Gas Pipeline to upgrade compression facilities on its system in order to provide increased gas capacity to the Company.

According to its press release, the Company anticipates that the incremental capacity could be placed in service by November 2023. Based on this timing, when does the Company anticipate that it will lift the current moratorium in Westchester County? Please explain.

Response

We anticipate that if/when the project goes into service (gas flowing) that we would lift the moratorium at that time.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to County of Westchester Interrogatories – Set COW-2
Date of Response: 3/15/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

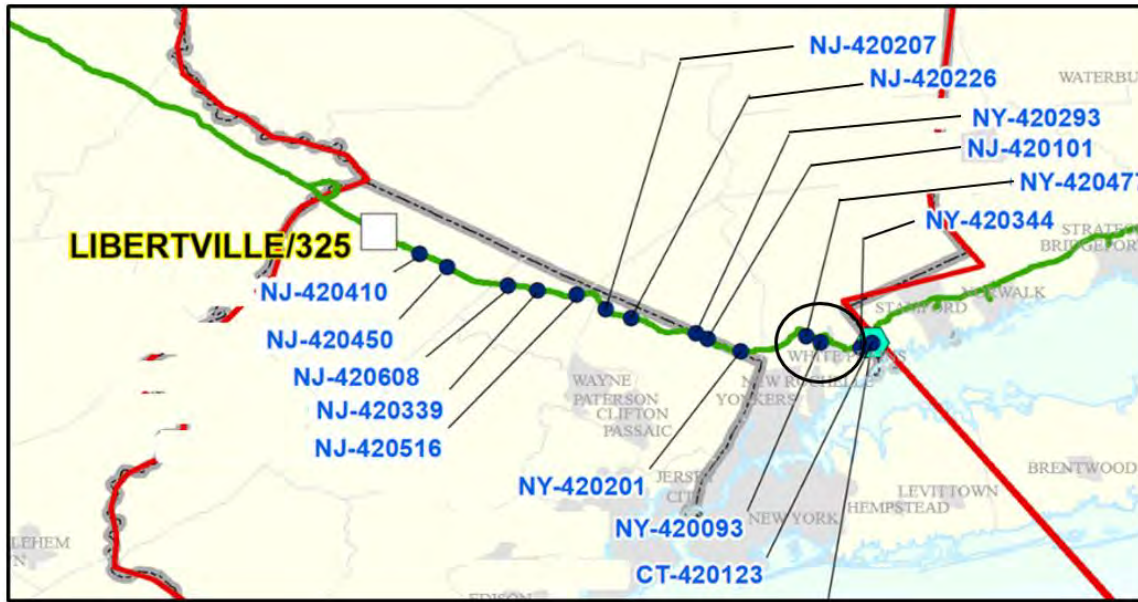
Question No. : 41

Referring to the Policy Panel - Gas page 40, “This temporary moratorium is necessary because there are gas supply constraints in this part of our service territory that limit our ability to meet customer demand on the coldest winter days.”

- a. Please provide a gas pipeline map showing locations of the gas supply constraints.
- b. Please identify the share of gas flowing through these constraint locations that supplies the territory subject to the moratorium.
- c. Please provide the amount of interruptible gas demand from interruptible gas customers available to reduce the winter peak demand.
- d. Please provide the amount of gas demand from interruptible gas customers that was curtailed during the 2016-17 winter peak, 2017-18 winter peak and 2018-19, winter peak.
- e. In the absence of the moratorium, is the peak gas demand expected to exceed the current firm gas customer demands? If so, by how much?
- f. What prevented the Company’s planning procedure from identifying, and developing a solution to, the gas supply constraints at an earlier date?
- g. Is one or more peaking plant a means of mitigating flows through the constraints?
- h. Does the Company expect to incur penalties or loss of incentive payments as a result of the moratorium?

Response

- a. Please see map below for the meter stations circled in black:



- b. The amount of gas flowing through the constrained area changes on a daily basis. The pipelines would have information on the total flow through their system. The Company can provide what is delivered into our system.
- c. The winter peak demand that the Company plans for does not include gas demand from interruptible gas customers.
- d. In the 16-17 Winter, our largest interruption was from 1/8 to 1/9 and reduced an estimated total of 80,426 Dth. In the 17-18 Winter, our largest interruption was from 12/27 to 1/8 and reduced an estimated total of 1,110,764 Dt. In the 18-19 Winter, our largest interruption so far was from 1/30 to 2/2 and reduced an estimated total of 330,747 Dt.
- e. Yes, absent a moratorium, last year's forecast of Westchester's firm gas peak demand was expected to grow approximately 22 MDt/day over the period of the spring of 2018 through the spring of 2023.
- f. Nothing in the Company's planning process prevented it from identifying and developing a potential solution to the gas supply constraints. As early as 2014, the Company had identified the need for new firm pipeline capacity to the moratorium area and began working with interstate pipeline developers on potential solutions. By early 2016, the Company had identified appropriate solutions and was actively negotiating precedent agreements with the pipeline developers. Unfortunately, at the same time, other pipeline projects began encountering difficulties receiving required permits. As a result, the Company and the developers determined that in the current environment the identified projects were no longer viable. The Company continues to seek interstate pipeline solutions that will both meet customer demand and meet federal, state and local requirements. In addition, the Company filed its Smart Solutions program in September 2017, to seek alternatives to pipelines. Unfortunately, the initial benefits of the Smart Solutions program did not supply sufficient volume to avoid the temporary moratorium.
- g. Yes, infrastructure that provides gas peaking services, such as the CNG/LNG solutions proposed and approved in our Smart Solutions Program, may help to mitigate constraints in the area.

- h. No, the Company does not expect to incur penalties or lose incentive payments related to the moratorium.

Company Name: Con Edison
Case Description: 2019 Con Ed Electric & Gas Rate Filings
Case: 19-E-0065, 19-G-0066

Response to EDF Interrogatories – Set EDF-1
Date of Response: 4/24/2019
Responding Witness: Gas Infrastructure Operations & Supply Panel

Question No. : 4

Refer to the Gas Policy Panel Testimony at page 40, which explains that the Company announced a temporary moratorium on connecting new gas customers in most of Westchester County.

- a) Please provide the date on which Con Edison first identified internally that there would be gas supply constraints in this part of its service territory.
- b) Please provide all records including, without limitation, notes, correspondence, and emails relating to, discussing, or otherwise addressing the Westchester County moratorium.

Response

- a) The Company objects to this question as irrelevant and beyond the scope of this proceeding. Notwithstanding this objection, the Company states as follows: The Company first publicly identified the potential for gas supply constraints on September 19, 2016 when the joint proposal became public in Case 16-G-0061. The Joint Proposal provides for a peak demand reduction collaborative and that this collaborative will “examine the potential impact that delays of upstream interstate pipeline construction may have on meeting growing demand associated with oil-to-gas conversions and new business.” The Company notes that EDF participated in the settlement discussions that led to this joint proposal and that EDF is a party to this proposal

b. The Company objects to this request as unduly vague and overly broad. The Company also objects on the basis of relevance and outside the scope of this proceeding.

Wall Street Journal

Fed Officials contemplate thresholds for rate cuts

Mon, Apr 22, 2019

FEDERAL Reserve officials are starting to talk about the conditions under which they would cut interest rates, including a scenario where inflation drifts lower even if the economic growth doesn't falter.

Such a scenario isn't seen as particularly likely, and a rate cut isn't imminent or under consideration for their meeting April 30-May 1. But the thresholds for such action have been a topic of conversations in recent interviews and public remarks.

Inflation rose last year to the Fed's 2% target after years of undershooting it. Central bank officials say the target is symmetric, meaning they expect inflation will drift mildly above and below it at different times.

Price pressures softened beginning last fall, although officials had expected inflation to keep rising amid strong hiring and a burst of fiscal stimulus fueled by tax cuts and government spending.

If inflation runs too far below 2% for a while, it would show "our setting of monetary policy is actually restrictive, and we need to make an adjustment down in the funds rate," Chicago Fed President Charles Evans said Monday, referring to the central bank's benchmark federal-funds rate.

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If inflation runs too far below 2% for a while, it would show "our setting of monetary policy is actually restrictive, and we need to make an adjustment down in the funds rate," Chicago Fed President Charles Evans said Monday, referring to the central bank's benchmark federal-funds rate.

Mr. Evans said his forecast was for inflation to rise over the coming year, justifying a rate increase in late 2020 and possibly again in 2021 to keep price pressures under control.

But if it turns out that core inflation, which excludes volatile food and energy categories,

falls and stays near 1.5% for several months, “I would be extremely nervous about that, and I would definitely be thinking about taking out insurance in that regard” by cutting rates, he said.

Dallas Fed President Robert Kaplan didn’t endorse such a move outright but said Thursday that inflation running persistently around 1.5% or lower is “something I’m going to certainly take into account” when setting rates.

Clearly communicating the rationale for an interest-rate cut would be especially important to avoid signaling alarm about the broader economic outlook, which could chill spending and investment. “We would need to be very careful,” said Mr. Evans.

Fed Vice Chairman Richard Clarida, speaking earlier this month on CNBC, appeared to be lowering the bar for such a move. He volunteered that a recession wasn’t the only situation in which the Fed had cut rates in the past, pointing to instances in the 1990s in which the central bank “took out some insurance cuts.”

Over a 12-month period beginning in February 1994, the Fed raised its benchmark rate to 6% from 3.25%. It then cut rates at three meetings between July 1995 and January 1996 after inflation rose less than anticipated.

Fed officials raised the rate four times last year, most recently in December to a range between 2.25% and 2.5%. They signaled last month they didn’t expect to change rates in 2019.

Recent data indicate the economy has rebounded from a slowdown at the start of the year, which could make officials more comfortable with their wait-and-see posture. While muted inflation may not warrant a rate cut for some officials, it could raise the bar for others to consider additional increases.

Cutting rates also would be complicated coming after President Trump has called on the Fed to do so. Central bank officials have said politics never influence their decisions. But Mr. Trump’s commentary puts more pressure on them to explain why they are changing policy so that doubts about their independence don’t erode their credibility in markets.

The question of whether to reduce rates if inflation slows may not be hypothetical for much longer.

Inflation readings for February and March, measured by the Fed’s preferred gauge, will be released on April 29, just before the coming policy meeting.

Forecasters at JPMorgan Chase expect to see that core inflation rose 1.6% in March from a year earlier, down from 1.8% in January. They see core inflation dipping to 1.5% in July. They estimate a 48% chance that core inflation falls below that level in July, and just a 7% chance it exceeds 2% in October.

Roberto Perli, a Fed analyst at Cornerstone Macro, is among those who view an interest-rate cut as unlikely absent broader economic deterioration. "It is a tough argument to make in the near term...because while it makes sense, what if all of a sudden inflation comes back up," he said. Being forced to later reverse the cuts by raising rates more rapidly could raise the risk of a recession.

On the other hand, if consumers' and businesses' expectations of future inflation were to drift lower, "the case becomes a lot stronger," said Mr. Perli.

Fed officials believe inflation expectations strongly influence actual inflation and could partly explain why price pressures have been soft. The University of Michigan's April consumer survey showed expectations of annual inflation over the next five to 10 years fell to 2.3% from 2.5%, matching an all-time low for the 40-year series.

Central bank officials believe 2% inflation is consistent with a healthy economy. Also, higher inflation can provide more room to reduce nominal interest rates in a downturn.

Fed Chairman Jerome Powell expressed his frustration with the recent readings at his press conference last month. "We're really 10 years deep in this expansion, and inflation is still not clearly meeting our target," he said.

The problem of soggy inflation is puzzling because economists last year expected that tax cuts and federal spending increases would boost demand at a time when they believed there was already little economic slack, pushing up inflation.

The lack of such a response suggests the economy might have more idled resources, such as workers on the job-market sidelines, or that globalization has limited the extent through which declining economic slack leads to more domestic inflation. - WSJ