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June 22, 2012

HAND DELIVERED

RECEIVED-FPSC
12 JUN 22 AM 10:45
COMMISSION
CLERK

Ms. Ann Cole, Director
Division of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Petition of Tampa Electric Company to Recovery Capital Costs of Polk Fuel Cost Reduction Project through the Fuel Cost Recovery Clause. Docket No. 120153-EI.

Dear Ms. Cole:

Enclosed for filing in the above-styled matter are the original and five (5) copies of Tampa Electric Company's Answers to Staff's 1st Data Request (Nos. 1-52).

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,



James D. Beasley

JDB/jh

Enclosure

cc: Lisa Bennett (w/encls.)
Patricia Christensen (w/encls.)

COM	_____
AP	_____
FPSC	3 _____
CC	1 _____
RA	1 _____
SM	_____
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RECEIVED - JAMES D. BEASLEY

04 150 JUN 22 2012

FPSC-COMMISSION CLERK

**TAMPA ELECTRIC COMPANY
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1. In paragraph 4 of TECO's Petition, the Company asserts that it has looked at the price forecast of natural gas into "the foreseeable future." Please identify the forecasting models TECO relied on to assess this, including in your response the forward curve date(s) and forecasting assumptions.
 - A. Tampa Electric used its annual fuel price forecast prepared in the summer of 2011. This projection is used in the Florida Public Service Commission ("FPSC") Fuel Clause Projection filed in August and September 2011 and Ten Year Site Plan filed in April 2012.

The foundation of the natural gas projection is the average of the New York Mercantile Exchange ("NYMEX") natural gas futures contract closing price published during five consecutive business days of between July 5 and July 11, 2011. The NYMEX natural gas futures contracts continued for each month through December 2022. After that, the price of natural gas commodity was escalated at the forecasted Consumer Price Index, Less Energy.

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2. Please identify what forecasting model and forecasting assumptions TECO used in evaluating the future price of distillate oil.
 - A. Tampa Electric used its annual fuel price forecast prepared in the summer of 2011. This projection is used in the FPSC Fuel Clause Projection filed in August and September 2011 and Ten Year Site Plan filed in April 2012.

The foundation of the distillate oil forecast is the NYMEX Heating Oil futures contract closing price published for the five consecutive business days between June 1 and June 7, 2011. The NYMEX Heating Oil futures contract prices were only available through December 2012. For the subsequent years, the distillate oil commodity price is maintained as a constant ratio to the natural gas commodity price forecast.

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- 3.** Please identify what forecasting model and forecasting assumptions TECO used in evaluating the future price of propane.
 - A.** Tampa Electric used its annual fuel price forecast prepared in the summer of 2011. This projection is used in the FPSC Fuel Clause Projection filed in August and September 2011 and Ten Year Site Plan filed in April 2012.

The foundation of the propane forecast is the NYMEX natural gas futures contract. The ratio of the Mont Belvieu propane commodity price to the NYMEX natural gas futures settlement price was computed for each of the twelve months between July 2010 and June 2011. This ratio was applied to the monthly natural gas commodity prices to derive the monthly propane prices.

4. In paragraph 6 of TECO's Petition, the Company asserts that the total capital cost for this project is "approximately \$14.8 million." Although TECO is requesting cost recovery of this capital project through the fuel cost recovery clause (fuel clause), how are capital projects ordinarily recovered?

A. When capital projects do not meet the eligibility criteria for recovery through the fuel clause or the environmental cost recovery clause, they are recovered through base rates. At page 5 of Order No. 14546, issued in Docket No. 850001-EI-B, on July 8, 1985 ("Order No. 14546"), the Florida Public Service Commission ("Commission") stated,

Fossil fuel related costs normally recovered through base rates but which were not recognized or anticipated in the cost levels used to determine current base rates and which, if expended, will result in fuel savings to customers. Recovery of such costs should be made on a case by case basis after Commission approval.

Subsequently, at page 9 of Commission Order No. PSC-11-0080-PAA-EI, issued in Docket No. 100404-EI, on January 31, 2011 ("Order No. 11-0080"), the Commission elaborated on the above-referenced passage from Order No. 14546 stating,

We find that the appropriate interpretation of this section of Order No. 14546 is that capital projects eligible for cost recovery through the fuel clause should produce fuel savings based on lowering the delivered price of fossil fuel, or otherwise result in burning lower price fuel for the plant.

Additionally, the Commission concluded at page 10 of Order No. 11-0080,

[W]e believe that the appropriate policy going forward is to restrict capital cost recovery through the Fuel Clause to projects that are "fossil fuel related" and that lower the delivered price, or input price, of fossil fuel. At the same time, we reaffirm our practice of reviewing the eligibility of projects for recovery on a case-by-base basis.

Since the Polk Unit 1 project will result in fuel savings by lowering the delivered price of fossil fuel used in the unit, this capital project meets the

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requirements specified in Order No. 14546 and 11-0080 and is eligible for cost recovery through the fuel clause.

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- 5.** In paragraph 12 of TECO's Petition, the Company asserts that the in service date is projected to be May 2013. Will this project be addressed in TECO's fuel Projection filing due in September 2012, or in a True-up filing for 2013? Please explain your response.
 - A.** The projected fuel usage and expense associated with this project will be included in Tampa Electric's 2013 fuel projection filing that will be filed on August 31, 2012. Tampa Electric is not seeking to recover any costs prior to the anticipated in-service date of May 2013. The company's 2013 levelized fuel factor will reflect a partial year amortization amount since the unit begins commercial operation mid-year.

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6. Applying the formula for Average Net Operating Heat Rate (ANOHR) in TECO's Generating Performance Incentive Factor Implementation Manual (GPIF Manual), what monthly ANOHR is estimated for Polk Unit 1 from January 2013 through December 2017?
- A. The projected monthly ANOHR for Polk Unit 1 from January 2013 through December 2017 is shown in the following table.

Polk Unit 1 Projected ANOHR	
Month	ANOHR (Btu/kWh)
January 2013	10,270
February 2013	10,196
March 2013	10,184
April 2013	10,240
May 2013	10,239
June 2013	10,192
July 2013	10,205
August 2013	10,161
September 2013	10,150
October 2013	10,192
November 2013	10,181
December 2013	10,186
January 2014	10,234
February 2014	10,178
March 2014	10,176
April 2014	10,195
May 2014	10,157
June 2014	10,153
July 2014	10,169
August 2014	10,147
September 2014	10,151
October 2014	10,197
November 2014	10,204
December 2014	10,191
January 2015	10,199
February 2015	10,115
March 2015	10,116
April 2015	10,138
May 2015	10,168

Polk Unit 1 Projected ANOHR

Month	ANOHR (Btu/kWh)
June 2015	10,158
July 2015	10,160
August 2015	10,173
September 2015	10,175
October 2015	10,208
November 2015	10,210
December 2015	10,216
January 2016	10,277
February 2016	10,172
March 2016	10,191
April 2016	10,236
May 2016	10,231
June 2016	10,208
July 2016	10,205
August 2016	10,189
September 2016	10,178
October 2016	10,208
November 2016	10,330
December 2016	10,280
January 2017	10,372
February 2017	10,195
March 2017	10,193
April 2017	10,252
May 2017	10,271
June 2017	10,232
July 2017	10,226
August 2017	10,227
September 2017	10,234
October 2017	10,249
November 2017	10,329
December 2017	10,276

7. Applying the formula for Net Output Factor (NOF) in TECO's GPIF Manual, what monthly NOF is estimated for Polk Unit 1 from January 2013 through December 2017?
- A. The projected monthly Net Operating Factor ("NOF") for Polk Unit 1 from January 2013 through December 2017 is shown in the following table.

Polk Unit 1 Projected NOF	
Month	NOF (%)
January 2013	92.9
February 2013	95.5
March 2013	96.2
April 2013	94.3
May 2013	94.2
June 2013	95.7
July 2013	95.3
August 2013	96.8
September 2013	97.2
October 2013	95.7
November 2013	96.0
December 2013	95.9
January 2014	94.1
February 2014	96.1
March 2014	96.2
April 2014	95.7
May 2014	96.9
June 2014	97.0
July 2014	96.4
August 2014	97.2
September 2014	97.1
October 2014	95.5
November 2014	95.2
December 2014	95.7
January 2015	95.3
February 2015	98.4
March 2015	98.4
April 2015	97.6
May 2015	96.1
June 2015	96.9
July 2015	96.7

Polk Unit 1 Projected NOF

Month	NOF (%)
August 2015	96.4
September 2015	96.3
October 2015	95.2
November 2015	95.0
December 2015	94.8
January 2016	92.8
February 2016	96.5
March 2016	95.8
April 2016	94.1
May 2016	94.5
June 2016	95.1
July 2016	95.3
August 2016	95.9
September 2016	96.1
October 2016	95.3
November 2016	91.1
December 2016	92.9
January 2017	90.0
February 2017	95.7
March 2017	95.9
April 2017	94.0
May 2017	93.3
June 2017	94.6
July 2017	94.8
August 2017	94.7
September 2017	94.5
October 2017	94.0
November 2017	91.5
December 2017	93.1

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- 8.** Please provide an example of the schedule that TECO will submit to the Commission as described in paragraph 11 of the Company's petition. Additionally, please provide sample calculations.

- A.** The requested example schedule, including sample calculations, is attached.

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TAMPA ELECTRIC
WITNESS:
EXHIBIT NO.

FPSC DOCKET NO.
TAMPA ELECTRIC
WITNESS:
EXHIBIT NO.

POLK 1 CONVERSION
SCHEDULE OF DEPRECIATION AND RETURN
FOR THE PERIOD JANUARY, 2013 THROUGH JUNE, 2013

POLK 1 CONVERSION
SCHEDULE OF DEPRECIATION AND RETURN
FOR THE PERIOD JULY, 2013 THROUGH DECEMBER, 2013

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL
1 BEGINNING BALANCE	\$ -	\$ -	\$ -	\$ -	\$ 14,690,000	\$ 14,690,000	\$ -
2 ADD INVESTMENT	-	-	-	-	-	-	-
3 LESS RETIREMENTS	-	-	-	-	-	-	-
4 ENDING BALANCE	-	-	-	-	14,690,000	14,690,000	-
5							
6							
7 AVERAGE BALANCE	-	-	-	-	14,690,000	14,690,000	-
8 DEPRECIATION RATE	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	-
9 DEPRECIATION EXPENSE	-	-	-	-	244,834	244,834	489,668
10 LESS RETIREMENTS	-	-	-	-	-	-	-
11 BEGINNING BALANCE DEPRECIATION	-	-	-	-	-	244,834	-
12 ENDING BALANCE DEPRECIATION	-	-	-	-	244,834	489,668	489,668
13							
14							
15 ENDING NET INVESTMENT	\$ -	\$ -	\$ -	\$ -	\$ 14,445,166	\$ 14,200,332	\$ (489,668)
16							
17							
18 AVERAGE INVESTMENT	\$ -	\$ -	\$ -	\$ -	\$ 14,567,583	\$ 14,322,749	
19							
20 ALLOWED EQUITY RETURN	4.4625%	4.4625%	4.4625%	4.4625%	4.4625%	4.4625%	
21 EQUITY COMPONENT AFTER-TAX	-	-	-	-	65,006	63,915	128,923
22 CONVERSION TO PRE-TAX	1.62800	1.62800	1.62800	1.62800	1.62800	1.62800	
23 EQUITY COMPONENT PRE-TAX	-	-	-	-	105,833	104,054	209,887
24							
25 ALLOWED DEBT RETURN	2.4437%	2.4437%	2.4437%	2.4437%	2.4437%	2.4437%	
26 DEBT COMPONENT	-	-	-	-	35,598	35,000	70,598
27							
28 TOTAL RETURN REQUIREMENTS	-	-	-	-	141,431	139,054	
29							
30 TOTAL DEPRECIATION & RETURN	\$ -	\$ -	\$ -	\$ -	\$ 386,265	\$ 383,888	\$ 770,153
31							
32 ESTIMATED FUEL SAVINGS	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	-
33							
34 TOTAL DEPRECIATION & RETURN	-	-	-	-	386,265	383,888	770,153
35							
36 NET BENEFIT (COST) TO RATEPAYER	\$ -	\$ -	\$ -	\$ -	\$ (386,265)	\$ (383,888)	\$ (770,153)

35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.
36 RETURN ON AVERAGE INVESTMENT IS CALCULATED USING AN ANNUAL RATE OF 8.29% (EQUITY 5.355%, DEBT 2.93%). THIS IS THE MIDPOINT AUTHORIZED BY THE FPSC IN DOCKET NO. 080317-EI.
37 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 38.575%

	compute sav	compute sav	compute sav	compute sav	compute sav	compute sav
A4, cilm m.#2	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
A4, cilm m.GS	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
#2 less GS	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
Gen. Cost Anal. Rept - General	0	0	0	0	0	0
Mult. by 1000.	0	0	0	0	0	0
Cost of propane \$/mmbtu	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Cost of NG \$/mmbtu (A4 Polk)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
NG mmbtu's propane equivalent	-	-	-	-	-	-
Propane conversion savings	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
= Fuel Savings	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1 BEGINNING BALANCE	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000
2 ADD INVESTMENT	-	-	-	-	-	-	-
3 LESS RETIREMENTS	-	-	-	-	-	-	-
4 ENDING BALANCE	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000
5							
6							
7 AVERAGE BALANCE	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	
8 DEPRECIATION RATE	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	
9 DEPRECIATION EXPENSE	244,834	244,834	244,834	244,834	244,834	244,834	1,469,004
10 LESS RETIREMENTS	-	-	-	-	-	-	-
11 BEGINNING BALANCE DEPRECIATION	489,668	734,502	979,336	1,224,170	1,469,004	1,713,838	489,668
12 ENDING BALANCE DEPRECIATION	734,502	979,336	1,224,170	1,469,004	1,713,838	1,958,672	1,958,672
13							
14							
15 ENDING NET INVESTMENT	\$ 13,955,498	\$ 13,710,664	\$ 13,465,830	\$ 13,220,996	\$ 12,976,162	\$ 12,731,328	\$ 12,731,328
16							
17							
18 AVERAGE INVESTMENT	\$ 14,077,915	\$ 13,833,081	\$ 13,588,247	\$ 13,343,413	\$ 13,098,579	\$ 12,853,745	
19							
20 ALLOWED EQUITY RETURN	4.4625%	4.4625%	4.4625%	4.4625%	4.4625%	4.4625%	
21 EQUITY COMPONENT AFTER-TAX	62,823	61,730	60,638	59,545	58,452	57,360	360,548
22 CONVERSION TO PRE-TAX	1.62800	1.62800	1.62800	1.62800	1.62800	1.62800	
23 EQUITY COMPONENT PRE-TAX	102,276	100,496	98,719	96,939	95,160	93,382	586,972
24							
25 ALLOWED DEBT RETURN	2.4437%	2.4437%	2.4437%	2.4437%	2.4437%	2.4437%	
26 DEBT COMPONENT	34,402	33,803	33,205	32,607	32,009	31,410	197,436
27							
28 TOTAL RETURN REQUIREMENTS	136,678	134,299	131,924	129,546	127,169	124,792	
29							
30 TOTAL DEPRECIATION & RETURN	\$ 381,512	\$ 379,133	\$ 376,758	\$ 374,380	\$ 372,003	\$ 369,626	\$ 2,253,412
31							
32 ESTIMATED FUEL SAVINGS	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	-
33							
34 TOTAL DEPRECIATION & RETURN	381,512	379,133	376,758	374,380	372,003	369,626	2,253,412
35							
36 NET BENEFIT (COST) TO RATEPAYER	\$ (381,512)	\$ (379,133)	\$ (376,758)	\$ (374,380)	\$ (372,003)	\$ (369,626)	\$ (2,253,412)

35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.
36 RETURN ON AVERAGE INVESTMENT IS CALCULATED USING AN ANNUAL RATE OF 8.29% (EQUITY 5.355%, DEBT 2.93%). THIS IS THE MIDPOINT AUTHORIZED BY THE FPSC IN DOCKET NO. 080317-EI.
37 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 38.575%

	compute sav	compute sav	compute sav	compute sav	compute sav	compute sav
A4, cilm m.#2	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
A4, cilm m.GS	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
#2 less GS	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000	\$ 0.00000
Gen. Cost Anal. Rept - General	0	0	0	0	0	0
Mult. by 1000.	0	0	0	0	0	0
Cost of propane \$/mmbtu	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Cost of NG \$/mmbtu (A4 Polk)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
NG mmbtu's propane equivalent	-	-	-	-	-	-
Propane conversion savings	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
= Fuel Savings	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

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9. Will the schedule described in paragraph 11 be provided for each individual component? If not, explain what level of detail will be provided and why a component-level of detail does not need to be provided.
- A. The fuel savings associated with two of the three components¹ of the Polk Unit 1 project will be combined in the schedule which is described in paragraph 11 of the company's petition and included in the company's response to Staff's First Data Request, No. 8. Tampa Electric will show the savings associated with the fuel switch from propane to natural gas and fuel switch savings from distillate oil to natural gas, separately. The fuel switch savings from oil to natural gas represents two components of the project, the auxiliary boiler conversion and back-up fuel conversion. The fuel usage from these two components is combined in the monthly A Schedules; however, the individual components can be verified during the annual fuel audits.

¹ Tampa Electric withdrew one of the original four components of the project, the equipment related to using natural gas to replace syngas at higher levels of output, from its request for cost recovery, as specified in the company's letter from J.D. Beasley to Ms. Ann Cole, submitted in this docket on June 5, 2012.

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10. Paragraphs 5 and 6 of TECO's petition indicate that the first three components of the overall project involve costs of approximately \$1.3 million, and the fourth component is estimated to cost \$13.5 million. Please show the breakdown of the project activities and costs included in each of the four components.
- A. There are three¹ components, and the requested information about those components is provided below.

Exhibit B Item No.	Description	Fuel Replaced	Total Investment
1	Aux Boiler	Oil	\$792,000
2	Gasifier Preheater	Propane	\$476,000
4	CT1 Startup/Backup	Oil	\$13,422,000

¹ Tampa Electric withdrew one of the original four components of the project, the equipment related to using natural gas to replace syngas at higher levels of output, from its request for cost recovery, as specified in the company's letter from J. D. Beasley to Ms. Ann Cole, submitted in this docket on June 5, 2012

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11. Please complete the table below describing TECO's revenue requirements assuming completion of the fuel reduction project.

Year	Capital CPVRR	Fuel CPVRR	Total
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			

A. The following table describes Tampa Electric's estimated Polk Unit 1 fuel expense and Polk Unit 1 capital cumulative present value revenue requirements assuming completion of the fuel reduction project.

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Year	Capital CPVRR (\$000)	Fuel CPVRR (\$000) ¹	Total (\$000)
2012	0	60,234	60,234
2013	3,803	119,964	123,767
2014	7,953	173,522	181,475
2015	11,445	223,478	234,923
2016	14,412	272,385	286,796
2017	16,932	318,648	335,580
2018	17,649	360,462	378,111
2019	17,649	403,473	421,122
2020	17,649	445,379	463,028
2021	17,649	484,346	501,994
2022	17,649	525,575	543,223
2023	17,649	563,637	581,286
2024	17,649	598,012	615,661

¹ The model calculates the fuel CPVRR beginning with the current year (2012).

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12. Please complete the table below describing TECO's revenue requirements without the fuel reduction project.

Year	Capital CPVRR	Fuel CPVRR	Total
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			

- A. The following table describes Tampa Electric's estimated Polk Unit 1 fuel expense and Polk Unit 1 capital cumulative present value revenue requirements without completion of the fuel reduction project.

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Year	Capital CPVRR (\$000)	Fuel CPVRR ¹ (\$000)	Total (\$000)
2012	0	60,234	60,234
2013	0	123,218	123,218
2014	0	183,073	183,073
2015	0	238,954	238,954
2016	0	293,769	293,769
2017	0	345,673	345,673
2018	0	392,695	392,695
2019	0	440,999	440,999
2020	0	488,024	488,024
2021	0	531,735	531,735
2022	0	577,964	577,964
2023	0	620,593	620,593
2024	0	659,054	659,054

¹ The model calculates the fuel CPVRR beginning with the current year (2012).

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13. Please complete the table below describing the estimated bill impact of the fuel reduction projects.

Year	Bill Impact (\$/1,000 kWh)
2013	
2014	
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	

- A. The requested information is provided in the following table.

Year	Bill Impact (\$/1,000 kWh)
2013	\$(0.01)
2014	\$(0.10)
2015	\$(0.11)
2016	\$(0.21)
2017	\$(0.22)
2018	\$(0.41)
2019	\$(0.47)
2020	\$(0.64)
2021	\$(0.67)
2022	\$(0.86)
2023	\$(0.87)
2024	\$(1.02)

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14. Please complete the table comparing the annual energy production of Polk Unit 1 with and without the reduction projects.

Year	Energy Production with Reduction Projects (MWh)	Energy Production without Reduction Projects (MWh)
2013		
2014		
2015		
2016		
2017		
2018		
2019		
2020		
2021		
2022		
2023		
2024		

- A. The following table shows the estimated annual energy production of Polk Unit 1 with and without the fuel reduction projects. Since there are no expected impacts to this unit's output rating or availability, the estimated energy numbers do not change as a result of this project. Please see attached table.

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Year	Energy Production with Reduction Projects (MWh)	Energy Production without Reduction Projects (MWh)
2013	1,555,500	1,555,500
2014	1,566,190	1,566,190
2015	1,508,350	1,508,350
2016	1,547,460	1,547,460
2017	1,528,490	1,528,490
2018	1,462,450	1,462,450
2019	1,556,900	1,556,900
2020	1,564,820	1,564,820
2021	1,505,980	1,505,980
2022	1,646,290	1,646,290
2023	1,592,740	1,592,740
2024	1,506,890	1,506,890

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- 15.** Please describe any infrastructure associated with the proposed fuel reduction projects that will also be used for TECO's conversion of Polk Units 2-5.
 - A.** There will not be any infrastructure associated with the proposed Polk Unit 1 fuel reduction projects that will also be used for Tampa Electric's conversion of Polk Units 2-5. The Polk Unit 1 fuel reduction projects are completely separate from the conversion of Polk Units 2-5.

16. Is TECO's methodology for determining the annual fuel savings constrained or capped by the Btus of oil and liquid propane that TECO would otherwise have used during the year (absent the natural gas conversion project)? Please explain your response by an example using actual 2011 performance and fuel usage, fuel heat content, and fuel costs for the Polk site as reported on TECO's A-4 fuel schedules for 2011 and assume 2011, not 2013, was the project in-service year for purposes of responding to this question.
- A. Annual fuel savings will be constrained by Btu of oil and propane that Tampa Electric would have otherwise used during the year absent the natural gas conversion project since the dispatch of the unit is not expected to be materially different. Tampa Electric does not believe using 2011 actual performance is a good proxy for determining anticipated fuel savings. In fact, 2011 was the lowest oil consumption year at Polk Unit 1 over the last five years by a significant margin as only 27,374 barrels of oil were consumed compared to a five-year average of 52,640. Tampa Electric believes using projected dispatch data and fuel pricing would provide a much better representation of potential fuel savings from the conversion projects. The projected annual fuel savings for the project are provided in the response to Staff's First Data Request, No. 45.

Notwithstanding the use of 2011 as a representative year, assuming the Polk Unit 1 conversion occurred in May 2011 instead of May 2013 and assuming propane and oil generation was from natural gas results in fuel savings of \$3.3 million over a one year period. However, since costs would have exceeded savings for the eight months in 2011 the fuel recovery would have been limited to \$1.6 million in fuel savings. For 2012, since fuel savings exceeds costs all the costs for the first four months would be included for recovery. It is worth noting that the May 2011 to April 2012 period includes five months with little or no generation from distillate oil, which reduces the potential for savings. The oil costs are derived from the A-4 schedule by taking the fuel expense for that commodity at Polk CT1 and dividing it by the mmBtu consumed. The natural gas costs are derived from the A-4 schedule by taking the fuel expense for that commodity at Polk and dividing it by the mmBtu consumed. The generation is the gross generation in kWh for the given month. Propane information is not reflected in the monthly A-4 schedule, but is provided to the FPSC auditors during the annual fuel audits. An example exhibit reflecting the information described is attached

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**POLK 1 CONVERSION
SCHEDULE OF DEPRECIATION AND RETURN
FOR THE PERIOD JANUARY, 2011 THROUGH JUNE, 2011**

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL
1 BEGINNING BALANCE	\$ -	\$ -	\$ -	\$ -	\$ 14,690,000	\$ 14,690,000	\$ -
2 ADD INVESTMENT	-	-	-	-	-	-	-
3 LESS RETIREMENTS	-	-	-	-	-	-	-
4 ENDING BALANCE	-	-	-	-	14,690,000	14,690,000	-
5							
6							
7 AVERAGE BALANCE	-	-	-	-	14,690,000	14,690,000	-
8 DEPRECIATION RATE	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	-
9 DEPRECIATION EXPENSE	-	-	-	-	244,834	244,834	489,668
10 LESS RETIREMENTS	-	-	-	-	-	-	-
11 BEGINNING BALANCE DEPRECIATION	-	-	-	-	-	244,834	-
12 ENDING BALANCE DEPRECIATION	-	-	-	-	244,834	489,668	489,668
13							
14							
15 ENDING NET INVESTMENT	\$ -	\$ -	\$ -	\$ -	\$ 14,445,166	\$ 14,200,332	\$ (489,668)
16							
17							
18 AVERAGE INVESTMENT	\$ -	\$ -	\$ -	\$ -	\$ 14,567,583	\$ 14,322,749	-
19 ALLOWED EQUITY RETURN	.44625%	.44625%	.44625%	.44625%	.44625%	.44625%	-
20 EQUITY COMPONENT AFTER-TAX	-	-	-	-	65,008	63,915	128,923
21 CONVERSION TO PRE-TAX	1.62800	1.62800	1.62800	1.62800	1.62800	1.62800	-
22 EQUITY COMPONENT PRE-TAX	-	-	-	-	105,833	104,054	209,887
23							
24 ALLOWED DEBT RETURN	.24437%	.24437%	.24437%	.24437%	.24437%	.24437%	-
25 DEBT COMPONENT	-	-	-	-	35,598	35,000	70,598
26							
27 TOTAL RETURN REQUIREMENTS	-	-	-	-	141,431	139,054	-
28							
29 TOTAL DEPRECIATION & RETURN	\$ -	\$ -	\$ -	\$ -	\$ 388,265	\$ 383,888	\$ 770,153
30							
31 ESTIMATED FUEL SAVINGS	\$0.00	\$0.00	\$0.00	\$0.00	\$226,459	\$27,147	253,606
32 TOTAL DEPRECIATION & RETURN	-	-	-	-	388,265	383,888	770,153
33 NET BENEFIT (COST) TO RATEPAYER	\$ -	\$ -	\$ -	\$ -	\$ (159,806)	\$ (356,741)	\$ (516,547)
34							

- 35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.
 36 RETURN ON AVERAGE INVESTMENT IS CALCULATED USING AN ANNUAL RATE OF 8.29% (EQUITY 5.355% , DEBT 2.93%).
 THIS IS THE MIDPOINT AUTHORIZED BY THE FPSC IN DOCKET NO. 080317-EI.
 37 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 38.575%

Computation of Savings	compute sav	compute sav	compute sav	compute sav	compute sav	compute sav	Total
A4,dmnl div by dmn K,#2					\$0.21256	\$0.00000	
A4,dmnl div by dmn K,NG					\$0.06266	\$0.06860	
#2 Oil less NG	\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.14990	(\$0.06860)	
Gen. Anal. Rpt - Generation kWh Gross					1,168,000	0	
Oil conversion Savings	0	0	0	0	175,083	0	
Cost of propane \$/mmbtu					\$17.8223	\$18.3846	
Cost of NG \$/mmbtu (A4 Polk)					\$6.2660	\$6.8600	
NG mmbtu's propane equivalent burned					2,883	1,477	
Propane conversion savings	\$0	\$0	\$0	\$0	\$51,375	\$27,147	
Total Fuel Savings	\$0	\$0	\$0	\$0	\$226,459	\$27,147	\$253,606

ANNUAL DEPR & RETURN

2011 eight months	\$ 3,023,565
2012 four months	\$ 1,454,735
	4,478,300

Fuel Savings

	\$1,596,556
	\$1,656,864
	3,253,421

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**POLK 1 CONVERSION
SCHEDULE OF DEPRECIATION AND RETURN
FOR THE PERIOD JULY, 2011 THROUGH DECEMBER, 2011**

	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1 BEGINNING BALANCE	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000
2 ADD INVESTMENT	-	-	-	-	-	-	-
3 LESS RETIREMENTS	-	-	-	-	-	-	-
4 ENDING BALANCE	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000
5							
6							
7 AVERAGE BALANCE	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	14,690,000	
8 DEPRECIATION RATE	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	
9 DEPRECIATION EXPENSE	244,834	244,834	244,834	244,834	244,834	244,834	1,469,004
10 LESS RETIREMENTS	-	-	-	-	-	-	-
11 BEGINNING BALANCE DEPRECIATION	489,668	734,502	979,336	1,224,170	1,469,004	1,713,838	489,668
12 ENDING BALANCE DEPRECIATION	734,502	979,336	1,224,170	1,469,004	1,713,838	1,958,672	1,958,672
13							
14							
15 ENDING NET INVESTMENT	\$ 13,955,498	\$ 13,710,664	\$ 13,465,830	\$ 13,220,996	\$ 12,976,162	\$ 12,731,328	\$ 12,731,328
16							
17							
18 AVERAGE INVESTMENT	\$ 14,077,915	\$ 13,833,081	\$ 13,588,247	\$ 13,343,413	\$ 13,098,579	\$ 12,853,745	
19 ALLOWED EQUITY RETURN	44625%	44625%	44625%	44625%	44625%	44625%	
20 EQUITY COMPONENT AFTER-TAX	62,823	61,730	60,638	59,545	58,452	57,360	360,548
21 CONVERSION TO PRE-TAX	1,62800	1,62800	1,62800	1,62800	1,62800	1,62800	
22 EQUITY COMPONENT PRE-TAX	102,276	100,496	98,719	96,939	95,160	93,382	586,972
23							
24 ALLOWED DEBT RETURN	24437%	24437%	24437%	24437%	24437%	24437%	
25 DEBT COMPONENT	34,402	33,803	33,205	32,607	32,009	31,410	197,436
26							
27 TOTAL RETURN REQUIREMENTS	136,678	134,299	131,924	129,546	127,169	124,792	
28							
29 TOTAL DEPRECIATION & RETURN	\$ 381,512	\$ 379,133	\$ 376,758	\$ 374,380	\$ 372,003	\$ 369,626	\$ 2,253,412
30							
31 ESTIMATED FUEL SAVINGS	\$422,175	\$7,699	\$211,890	\$9,346	\$237,906	\$453,934	1,342,951
32 TOTAL DEPRECIATION & RETURN	381,512	379,133	376,758	374,380	372,003	369,626	2,253,412
33 NET BENEFIT (COST) TO RATEPAYER	\$ 40,663	\$ (371,434)	\$ (164,868)	\$ (365,034)	\$ (134,097)	\$ 84,308	\$ (910,461)
34							

35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.
36 RETURN ON AVERAGE INVESTMENT IS CALCULATED USING AN ANNUAL RATE OF 8.29% (EQUITY 5.355% , DEBT 2.93%).
THIS IS THE MIDPOINT AUTHORIZED BY THE FPSC IN DOCKET NO. 080317-EI.
37 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 38.575%

Computation of Savings	compute sav	compute sav	compute sav	compute sav	compute sav	compute sav	Total
A4, clmn L div by clmn K,#2	\$0.19864	\$0.00000	\$0.20670	\$0.00000	\$0.21989	\$0.20558	
A4, clmn L div by clmn K,NG	\$0.03970	\$0.05940	\$0.02826	\$0.04105	\$0.07212	\$0.06424	
#2 Oil less NG	\$0.15894	(\$0.05940)	\$0.17844	(\$0.04105)	\$0.14777	\$0.14134	
Gen. Anal. Rpt - Generation kWh Gross	2,450,000	0	1,032,000	0	1,432,000	2,938,000	
Oil conversion Savings	389,403	0	184,150	0	211,607	415,257	
Cost of propane \$/mmbtu	\$18.7937	\$18.7937	\$19.0280	\$19.0435	\$19.1180	\$19.0652	
Cost of NG \$/mmbtu (A4 Polk)	\$3.9700	\$5.9400	\$2.8260	\$4.1050	\$7.2120	\$6.4240	
NG mmbtu's propane equivalent burned	1,744	410	1,458	491	1,376	2,029	
Propane conversion savings	\$32,772	\$7,699	\$27,740	\$9,346	\$26,299	\$38,677	
Total Fuel Savings	\$422,175	\$7,699	\$211,890	\$9,346	\$237,906	\$453,934	\$1,342,951

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	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL
1 BEGINNING BALANCE	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ 14,690,000	\$ -	\$ -	\$ 14,690,000
2 ADD INVESTMENT	-	-	-	-	-	-	-
3 LESS RETIREMENTS	-	-	-	-	-	-	-
4 ENDING BALANCE	14,690,000	14,690,000	14,690,000	14,690,000	-	-	14,690,000
5							
6							
7 AVERAGE BALANCE	14,690,000	14,690,000	14,690,000	14,690,000	-	-	
8 DEPRECIATION RATE	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	1.666670%	
9 DEPRECIATION EXPENSE	244,834	244,834	244,834	244,834	-	-	979,336
10 LESS RETIREMENTS	-	-	-	-	-	-	-
11 BEGINNING BALANCE DEPRECIATION	1,958,672	2,203,506	2,448,340	2,693,174	-	-	1,958,672
12 ENDING BALANCE DEPRECIATION	2,203,506	2,448,340	2,693,174	2,938,008	-	-	2,938,008
13							
14							
15 ENDING NET INVESTMENT	\$ 12,486,494	\$ 12,241,660	\$ 11,996,826	\$ 11,751,992	\$ -	\$ -	\$ 11,751,992
16							
17							
18 AVERAGE INVESTMENT	\$ 12,608,911	\$ 12,364,077	\$ 12,119,243	\$ 11,874,409	\$ -	\$ -	
19 ALLOWED EQUITY RETURN	44625%	44625%	44625%	44625%	44625%	44625%	
20 EQUITY COMPONENT AFTER-TAX	56,267	55,175	54,082	52,990	-	-	218,514
21 CONVERSION TO PRE-TAX	1,62800	1,62800	1,62800	1,62800	1,62800	1,62800	
22 EQUITY COMPONENT PRE-TAX	91,603	89,825	88,045	86,268	-	-	355,741
23							
24 ALLOWED DEBT RETURN	24437%	24437%	24437%	24437%	24437%	24437%	
25 DEBT COMPONENT	30,812	30,214	29,615	29,017	-	-	119,658
26							
27 TOTAL RETURN REQUIREMENTS	122,415	120,039	117,660	115,285	-	-	
28							
29 TOTAL DEPRECIATION & RETURN	\$ 367,249	\$ 364,873	\$ 362,494	\$ 360,119	\$ -	\$ -	\$ 1,454,735
30							
31 ESTIMATED FUEL SAVINGS	\$48,171	\$39,649	\$983,878	\$585,166	\$0.00	\$0.00	1,656,864
32 TOTAL DEPRECIATION & RETURN	367,249	364,873	362,494	360,119	-	-	1,454,735
33 NET BENEFIT (COST) TO RATEPAYER	\$ (319,078)	\$ (325,224)	\$ 621,384	\$ 225,047	\$ -	\$ -	\$ 202,129
34							

35 DEPRECIATION EXPENSE IS CALCULATED BASED UPON A FIVE YEAR PERIOD.
36 RETURN ON AVERAGE INVESTMENT IS CALCULATED USING AN ANNUAL RATE OF 9.29% (EQUITY 5.355% , DEBT 2.93%).
THIS IS THE MIDPOINT AUTHORIZED BY THE FPSC IN DOCKET NO. 080317-EI.
37 RETURN REQUIREMENT IS CALCULATED BASED UPON A COMBINED STATUTORY RATE OF 38.575%

Computation of Savings							
	compute sav	compute sav	compute sav	compute sav	compute sav	compute sav	Total
A4,clmn L div by clmn K,#2	\$0.51764	\$0.31454	\$0.22106	\$0.21869			
A4,clmn L div by clmn K,NG	\$0.09291	\$0.06170	\$0.05375	\$0.04818			
#2 Oil less NG	\$0.42474	\$0.25284	\$0.16732	\$0.17052	\$0.00000	\$0.00000	
Gen. Anal. Rpt - Generation kWh Gross	86,000	130,000	5,598,000	3,297,000	0	0	
Oil conversion Savings	36,527	32,869	936,629	562,188	0	0	
Cost of propane \$/mmbtu	\$10.2851	\$10.3446	\$10.9690	\$11.9083			
Cost of NG \$/mmbtu (A4 Polk)	\$9.2906	\$6.1704	\$5.3745	\$4.8175	\$0.0000	\$0.0000	
NG mmbtu's propane equivalent burned	1,133	656	4,308	1,930			
Propane conversion savings	\$11,644	\$6,780	\$47,249	\$22,978	\$0	\$0	
Total Fuel Savings	\$48,171	\$39,649	\$983,878	\$585,166	\$0	\$0	\$1,656,864

17. In paragraph 11 of TECO's petition, the company briefly discusses its proposed methodology for recovering project costs. Please answer the following:
- a) Assuming that project costs are amortized over a five-year period (as TECO proposes), will the recoverable costs in each year of the five year period be capped at the actual fuel savings achieved in each respective year, or will a final true up analysis occur at the end of the fifth year? Please explain why TECO believes this is reasonable.
 - b) Please discuss TECO's proposed regulatory treatment of project costs including capital investment, and/or other associated costs such as fuel oil tank removal, taxes, allowance for funds used during construction (AFUDC), interest, and return on investment if actual fuel savings are less than project costs in one year of the five years.
 - c) Please discuss TECO's proposed regulatory treatment of any unrecovered regulatory asset balance that may exist after the five-year term, if any.
- A. a) Tampa Electric will cap the recoverable costs at the actual fuel savings achieved in each respective year. While Tampa Electric believes a true-up is consistent with the Commission's position in Order No. PSC-97-1045-FOF-EI, where the Commission stated:
- "Finally, if actual fuel savings during the annual period are less than the amortization and return costs, FPC shall limit cost recovery to actual fuel savings and defer recovery of the difference to future periods."
- Tampa Electric believes that it is reasonable to cap the recoverable costs at the actual fuel savings earned in each respective year as opposed to filing a true-up analysis at the end of the fifth year.
- b) While Tampa Electric expects the fuel savings to far exceed the costs, should the costs exceed the savings for any particular year, then they would be treated like other capital projects and recovered through base rates.

- c) Tampa Electric does not plan to create a regulatory asset associated with the Polk Unit 1 project at the end of the five-year term. Recoverable costs assuming fuel savings exceed those costs would be included in the deferred fuel accounts as either a deferred liability in the case of a fuel over-recovery or a deferred asset if there was a fuel under-recovery in a given year. Any unrecovered costs at the end of the year five would be treated like other capital projects and recovered through base rates.

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- 18.** Please list all non-fuel fixed and variable operations and maintenance (O&M) as well as administrative and general (A&G) expenses that TECO typically identifies as base rate expenses (or currently credits against base rate revenues), if any, that will be reduced due to the conversion project and the expected reductions during the five-year period.
- A.** The project will not cause any non-fuel fixed or variable operations and maintenance or administrative and general expenses that Tampa Electric typically identifies as base rate expenses to be reduced.

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- 19.** For each non-zero amount TECO includes in its response to Question 18, please state if TECO excluded the expense from its calculation of the proposed annual fuel clause recovery amount and explain why.
- A.** See the company's response to Staff's First Data Request, No. 18.

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- 20.** Please list all non-fuel fixed and variable operations and maintenance expenses that TECO typically identifies as an Environmental Clause expense, if any, that will be reduced due to the conversion project and the expected reductions for the five-year period.
- A.** The project will not cause any non-fuel fixed or variable operations and maintenance expenses that Tampa Electric typically identifies as an environmental cost recovery clause expense to be reduced.

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- 21.** For each non-zero amount TECO includes in its response to Question 20, please state if TECO includes the expense in its calculation of the proposed annual fuel clause recovery amount and explain why.
- A.** See the company's response to Staff's First Data Request No. 20.

22. Please refer to paragraph 7 of the petition for the following questions.
- a) Please provide TECO's fuel savings calculations for Polk Unit 1 that support the company's statement that the proposed conversion will save approximately \$29.5 million (net present value) over the initial five years. Include all assumptions used, as well as the dates/sources for the fuel forecasts for distillate oil, propane, syngas at higher levels of IGCC output, and natural gas used.
 - b) For each of the four components of the project, show the fuel savings calculations and revenue requirements.
 - c) Please provide spreadsheets showing the fuel savings calculations and revenue requirements for 21a and 21b above, including all associated fuel forecasts.
- A. a) The table below shows the resulting annual savings during the first five years.

Year	Polk 1 Fuel Costs Without Reduction Projects NPV (\$000)	Polk 1 Fuel Costs With Reduction Projects NPV (\$000)	Fuel Cost Delta NPV ¹ (\$000)
2013	62,984	59,730	3,254
2014	59,855	53,559	6,296
2015	55,881	49,956	5,926
2016	54,815	48,907	5,908
2017	51,904	46,263	5,641
2018	47,022	44,418	2,604

Assumptions used when modeling the above scenarios included maintenance plans, expansion plans, and projected fuel costs. Savings were calculated by comparing the fuel price differences between the different fuels for the same mmbtus needed for each of the conversion phases. The fuel costs used are shown in the following table.

¹ The five-year savings are provided over the period May 2013 to May 2018.

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Year	Natural Gas (\$/mmBtu)	Distillate Oil (\$/mmBtu)	Propane (\$/mmBtu)
2013	5.30	26.88	12.79
2014	5.58	27.98	13.31
2015	5.86	29.44	14.01
2016	6.12	30.84	14.67
2017	6.39	32.06	15.25
2018	6.66	33.33	15.86

See the company's responses to Staff's First Data Request, Nos. 1-3, for the dates of the fuel forecasts.

- b) The requested fuel savings calculations and revenue requirements for each of the three² components of the project for which Tampa Electric is seeking cost recovery are shown on the following three tables.

The following table summarizes the annual capital revenue requirements and fuel savings from converting Polk Unit 1 startup fuel from propane to natural gas.

Year	Startup Propane to NG Conversion Capital NPV Revenue Requirements (\$000)	Fuel Savings NPV (\$000)
2012	0	0
2013	123	82
2014	134	168
2015	113	174
2016	96	148
2017	82	153
2018	23	147
2019	0	141

² Tampa Electric withdrew one of the original four components of the project, the equipment related to using natural gas to replace syngas at higher levels of output, from its request for cost recovery, as specified in the company's letter from J.D. Beasley to Ms. Ann Cole, submitted in this docket on June 5, 2012.

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The following table summarizes the annual capital revenue requirements and fuel savings from converting the Polk Unit 1 auxiliary boiler fuel from distillate oil to natural gas.

Year	Aux Boiler Distillate to NG Conversion	
	Capital NPV	Fuel Savings NPV
	Revenue Requirements (\$000)	(\$000)
2012	0	0
2013	205	188
2014	224	363
2015	188	341
2016	160	342
2017	136	325
2018	39	300
2019	0	306

The following table summarizes the annual capital revenue requirements and fuel savings from converting the Polk Unit 1 startup fuel from distillate oil to natural gas.

Year	Startup Distillate to NG Conversion	
	Capital NPV	Fuel Savings NPV
	Revenue Requirements (\$000)	(\$000)
2012	0	0
2013	3,475	2,984
2014	3,791	5,765
2015	3,190	5,410
2016	2,711	5,418
2017	2,303	5,163
2018	655	4,761
2019	0	4,847

- c) Tampa Electric assumes that this question refers to responses 22a and 22b, not 21a and 21b as stated above, and answers as such.

CPVRR (\$000) Without Fuel Reduction Project (Base Case)													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	-	-	-	-	-	-	-	-	-	-	-	-
NPV	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital CPVRR (\$000)	-	-	-	-	-	-	-	-	-	-	-	-	-
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
System Fuel	840,988	880,408	916,250	956,012	985,353	1,002,859	1,038,650	1,074,310	1,103,675	1,144,469	1,193,649	1,242,057	1,285,070
NPV	840,988	815,028	785,219	758,454	723,679	681,840	653,732	625,964	595,318	571,479	551,774	531,514	509,083
Fuel CPVRR (\$000)	840,988	1,656,016	2,441,235	3,199,688	3,923,368	4,605,207	5,258,940	5,884,903	6,480,222	7,051,701	7,603,475	8,134,990	8,644,073
Total CPVRR (\$000)	840,988	1,656,016	2,441,235	3,199,688	3,923,368	4,605,207	5,258,940	5,884,903	6,480,222	7,051,701	7,603,475	8,134,990	8,644,073

CPVRR (\$000) Polk 1 Startup Fuel Conversion from Propane to Natural Gas													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	133	157	142	131	120	37	-	-	-	-	-	-
NPV	-	123	134	113	96	81	23	-	-	-	-	-	-
Capital CPVRR (\$000)	-	123	257	370	466	548	571	571	571	571	571	571	571
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
System Fuel	840,988	880,299	916,054	955,797	985,153	1,002,636	1,038,602	1,074,071	1,103,432	1,144,401	1,193,627	1,242,003	1,285,033
NPV	840,988	814,922	785,052	758,282	723,532	681,688	653,703	625,824	595,187	571,445	551,764	531,491	509,068
Fuel CPVRR (\$000)	840,988	1,655,910	2,440,962	3,199,244	3,922,776	4,604,464	5,258,166	5,883,991	6,479,178	7,050,623	7,602,387	8,133,878	8,642,946
Total CPVRR (\$000)	840,988	1,656,033	2,441,219	3,199,614	3,923,242	4,605,011	5,258,737	5,884,561	6,479,748	7,051,194	7,602,958	8,134,449	8,643,517
Fuel Delta		(115)	(196)	(216)	(201)	(223)	(47)	(299)	(244)	(58)	(22)	(54)	(37)

CPVRR (\$000) Polk 1 Ann Boiler Fuel Conversion from #2 Oil to Natural Gas													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	221	261	237	217	199	61	-	-	-	-	-	-
NPV	-	205	223	188	160	135	38	-	-	-	-	-	-
Capital CPVRR (\$000)	-	205	428	616	776	911	950	950	950	950	950	950	950
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
System Fuel	840,988	880,087	915,816	955,573	984,874	1,002,370	1,038,164	1,073,781	1,103,127	1,143,930	1,193,030	1,241,451	1,284,481
NPV	840,988	814,730	784,847	758,105	723,327	681,508	653,427	625,655	595,023	571,210	551,488	531,255	508,850
Fuel CPVRR (\$000)	840,988	1,655,719	2,440,566	3,198,671	3,921,998	4,603,506	5,256,933	5,882,588	6,477,611	7,048,821	7,600,309	8,131,564	8,640,414
Total CPVRR (\$000)	840,988	1,655,923	2,440,994	3,199,287	3,922,774	4,604,417	5,257,882	5,883,538	6,478,560	7,049,770	7,601,259	8,132,514	8,641,363
Fuel Delta	-	(821)	(434)	(459)	(479)	(488)	(486)	(530)	(548)	(539)	(619)	(606)	(589)

CPVRR (\$000) Polk 1 Backup Fuel Conversion from #2 Oil to Natural Gas													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	3,751	4,418	4,013	3,681	3,376	1,036	-	-	-	-	-	-
NPV	-	3,473	3,786	3,184	2,704	2,295	652	-	-	-	-	-	-
Capital CPVRR (\$000)	-	3,473	7,259	10,443	13,147	15,442	16,094	16,094	16,094	16,094	16,094	16,094	16,094
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
System Fuel	840,988	875,311	909,370	949,050	977,753	995,112	1,030,944	1,065,910	1,094,978	1,135,919	1,183,831	1,232,440	1,275,731
NPV	840,988	810,310	779,324	752,930	718,097	676,573	648,882	621,069	590,627	567,210	547,286	527,399	505,384
Fuel CPVRR (\$000)	840,988	1,651,298	2,430,621	3,183,551	3,901,648	4,578,221	5,227,103	5,848,172	6,438,799	7,006,009	7,553,245	8,080,644	8,586,028
Total CPVRR (\$000)	840,988	1,654,771	2,437,880	3,193,994	3,914,795	4,593,663	5,243,198	5,864,266	6,454,893	7,022,103	7,569,339	8,096,738	8,602,122
Fuel Delta	-	(5,087)	(6,679)	(6,963)	(7,600)	(7,747)	(7,706)	(8,401)	(8,698)	(8,550)	(8,818)	(9,016)	(9,338)

	2012	2013	2014	2015	2016	2017
Total Fuel Cost Delta (\$000)	-	(5,532)	(7,506)	(7,617)	(8,280)	(8,457)

NPV (\$000) (29,480)

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23. For purposes of this data request, assume the Commission approves TECO's petition for cost recovery. Based on TECO's projected dispatch for Polk Unit 1, please provide estimates for the first 12 months of operation after the conversion for the quantity of natural gas TECO would expect to burn if the proposed projects were completed, and the associated \$/MMBTU for the natural gas.

A. Should the Commission approve Tampa Electric's petition for cost recovery, the quantity of natural gas Tampa Electric expects to burn in Polk Unit 1, along with the associated \$/mmBtu, is shown in the table below.

Month-Year	Natural Gas (MCF)	\$/mmBtu
May-2013	29,419	5.12
Jun-2013	28,808	5.16
Jul-2013	29,635	5.19
Aug-2013	29,951	5.22
Sep-2013	29,103	5.23
Oct-2013	29,734	5.28
Nov-2013	26,000	5.41
Dec-2013	29,754	5.64
Jan-2014	29,360	5.76
Feb-2014	27,103	5.73
Mar-2014	18,768	5.64
Apr-2014	28,798	5.37
May-2014	29,970	5.38

24. For purposes of this data request, assume the Commission denies TECO's petition for cost recovery. Based on TECO's projected dispatch for Polk Unit 1, please provide the following estimates for the same 12 months of operation as used to respond to data request 23 above:
- a) The quantity of distillate oil TECO would expect to burn if the proposed projects were not implemented, and the associated \$/MMBTU for the distillate oil;
 - b) The quantity of propane TECO would expect to burn if the proposed projects were not implemented, and the associated \$/MMBTU for the propane; and
 - c) The quantity of syngas at higher levels of IGCC output TECO would expect to burn if the proposed projects were not implemented, and the associated \$/MMBTU for the syngas.
- A. If the Polk Unit 1 projects are not implemented, the quantity of fuel the company expects to burn in Polk Unit 1, along with the associated \$/MMBTU, are shown in the following tables.

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a) Distillate Oil

Month-Year	Distillate Oil (BBL)	\$/mmBtu
May-2013	4,860	26.69
Jun-2013	4,760	26.58
Jul-2013	4,900	26.54
Aug-2013	4,960	26.55
Sep-2013	4,810	26.59
Oct-2013	4,920	26.61
Nov-2013	3,970	26.62
Dec-2013	4,920	26.62
Jan-2014	4,850	28.79
Feb-2014	4,460	28.75
Mar-2014	2,700	28.60
Apr-2014	4,750	27.86
May-2014	4,960	27.70

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b) Propane¹

Month-Year	Propane (GAL)	\$/mmBtu
May-2013	16,830	12.49
Jun-2013	16,830	12.76
Jul-2013	16,830	11.75
Aug-2013	16,830	11.82
Sep-2013	16,830	11.91
Oct-2013	16,830	12.03
Nov-2013	33,660	11.94
Dec-2013	16,830	12.02
Jan-2014	16,830	15.02
Feb-2014	16,830	14.54
Mar-2014	33,660	16.05
Apr-2014	16,830	13.35
May-2014	16,830	12.96

c) None.

¹ Based on one or two starts per month.

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- 25.** In paragraph 3 of TECO's Petition, the Company states that a pet coke/coal blend currently accounts for approximately 98 percent of the energy generated by Polk Unit 1, leaving approximately 2 percent accounted for by the higher-priced fossil fuels. What percentage of the energy generated by Polk Unit 1 will be accounted for by the pet coke/coal blend after the conversion?
- A.** Tampa Electric does not expect a change in the percentage of Polk Unit 1 energy generation accounted for by the pet coke-coal blend as a result of this project.

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- 26.** According to TECO's projected dispatch for the first five years of operation after the conversion, does TECO expect to burn more, less, or the same amount of the pet coke/coal blend for the IGCC at Polk Unit 1? Include in your response an explanation of how this will affect long-term contracts with suppliers during this time period.
- A.** Tampa Electric expects to burn the same amount of the pet coke-coal blend at Polk Unit 1 for the first five years of operation after the conversion. Therefore, the project will not affect long-term contracts with fuel suppliers during this time period.

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- 27.** Is TECO's dispatch projection for Polk Unit 1 for the next five years affected by the proposed conversion project? That is, is the projected percentage use of the IGCC relative to the backup unit for generation identical whether the conversion takes place or not? Please explain.
- A.** Since this project is not expected to impact availability of Polk Unit 1 on its primary fuel, Tampa Electric projected no change in the use of the IGCC relative to the backup unit for generation.

28. After completion of the proposed project, will TECO still produce syngas using the pet coke/coal blend? If so, what percentage of the syngas produced will be replaced by natural gas for the higher levels of IGCC output?
- A. Tampa Electric will still produce syngas using the pet coke-coal blend after completion of the project. Syngas replacement at higher levels of IGCC output has been withdrawn from fuel clause recovery for this project.¹ Efficiency improvements will be available with the replacement of syngas with natural gas at higher levels of IGCC output.

¹ Tampa Electric withdrew one of the original four components of the project, the equipment related to using natural gas to replace syngas at higher levels of output, from its request for cost recovery, as specified in the company's letter from J.D. Beasley to Ms. Ann Cole, submitted in this docket on June 5, 2012.

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29. Please provide the following data for the last 5 years for each instance that TECO has used its backup fuel source for Polk Unit 1:

- a) Date (or dates if usage spans more than one day)
- b) Length of time needed
- c) Reason for use
- d) MWHs generated
- e) Cost of the fuel used
- f) Quantity and type of fuel used

A. a) - f) Tampa Electric's utilization of the backup fuel source (distillate oil) for Polk Unit 1 is shown in the following table.

Polk Unit 1 Backup Fuel Usage from 2007-2011					
Date	Length of Time Needed (hours by month)	Reason for Use	MWH Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
Jan 3-4, 2007	18	Reliability/Startup/Shutdown	2,664	\$12.49	3,834
Feb 8, 2007					
Feb 11, 2007					
Feb 14, 2007	26	Reliability/Startup/Shutdown	3,552	\$14.19	5,069
Feb 26, 2007					
Feb 28, 2007					
Mar 8, 2007					
Mar 16, 2007	28	Reliability/Startup/Shutdown	3,211	\$15.43	5,477
Mar 18, 2007					
Mar 20-21, 2007					

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Polk Unit 1 Backup Fuel Usage from 2007-2011

Date	Length of Time Needed (hours by month)	Reason for Use	MWH Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
Apr 2, 2007					
Apr 19, 2007	19	Reliability/Startup/Shutdown	1,999	\$15.33	3,444
Apr 24, 2007					
Apr 30, 2007					
May 1-2, 2007					
May 4, 2007					
May 5, 2007	45	Reliability/Startup/Shutdown	5,666	\$15.52	8,752
May 11, 2007					
May 16, 2007					
May 17, 2007					
Jun 6, 2007					
Jun 24, 2007	32	Reliability/Startup/Shutdown	4,554	\$16.00	6,788
Jun 27-27, 2007					
Jun 30, 2007					
Jul 1, 2007					
Jul 3, 2007					
Jul 21, 2007	15	Reliability/Startup/Shutdown	2,032	\$16.57	3,202
Jul 23, 2007					
Jul 29, 2007					
Aug 12, 2007					
Aug 16, 2007					
Aug 17, 2007					
Aug 19, 2007	35	Reliability/Startup/Shutdown	4,501	\$16.10	6,888
Aug 20, 2007					
Aug 21, 2007					
Aug 27, 2007					
Aug 30, 2007					

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Polk Unit 1 Backup Fuel Usage from 2007-2011					
Date	Length of Time Needed (hours by month)	Reason for Use	MWH Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
Sep 1, 2007					
Sep 19, 2007	20	Reliability/Startup/Shutdown	2,133	\$17.82	3,791
Sep 22-23, 2007					
Oct 20, 2007					
Oct 28, 2007	18	Reliability/Startup/Shutdown	2,631	\$19.15	3,845
Nov 6, 2007					
Nov 26, 2007	21	Reliability/Startup/Shutdown	2,354	\$19.82	4,412
Nov 28, 2007					
Dec 20, 2007					
Dec 27, 2007	15	Reliability/Startup/Shutdown	1,785	\$20.34	2,460
Dec 29, 2007					
Jan 12, 2008					
Jan 14, 2008	10	Reliability/Startup/Shutdown	920	\$19.52	1,961
Feb 16, 2008					
Feb 18, 2008	25	Reliability/Startup/Shutdown	2,980	\$21.74	4,421
Mar 6, 2008					
Mar 8, 2008					
Mar 12-13, 2008	18	Reliability/Startup/Shutdown	2,612	\$22.71	4,490
Mar 24, 2008					
Apr 1-3, 2008					
Apr 8, 2008					
Apr 10, 2008					
Apr 13, 2008	38	Reliability/Startup/Shutdown	5,263	\$25.28	8,037
Apr 24, 2008					
Apr 26, 2008					

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Polk Unit 1 Backup Fuel Usage from 2007-2011					
Date	Length of Time Needed (hours by month)	Reason for Use	MWH Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
May 1-2, 2008					
May 3, 2008					
May 5, 2008					
May 9, 2008	26	Reliability/Startup/Shutdown	3,858	\$28.30	5,243
May 12, 2008					
May 14, 2008					
Jun 3, 2008					
Jun 16, 2008					
Jun 19, 2008	46	Reliability/Startup/Shutdown	5,339	\$29.09	9,670
Jun 20, 2008					
Jun 24, 2008					
Jul 1, 2008					
Jul 5-7, 2008					
Jul 9, 2008	24	Reliability/Startup/Shutdown	3,054	\$26.19	4,650
Jul 24, 2008					
Aug 8-9, 2008					
Aug 31, 2008	9	Reliability/Startup/Shutdown	1,897	\$24.12	2,512
Sep 8, 2008					
Sep 16-18, 2008	18	Reliability/Startup/Shutdown	2,119	\$22.86	3,485
Oct 14, 2008					
Oct 19-21, 2008	13	Reliability/Startup/Shutdown	2,069	\$15.50	2,950
Nov 2-3, 2008					
Nov 23, 2008	16	Reliability/Startup/Shutdown	2,084	\$13.45	2,647
Nov 25, 2008					
Dec 4, 2008					
Dec 18, 2008	17	Reliability/Startup/Shutdown	3,259	\$10.02	4,618

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Polk Unit 1 Backup Fuel Usage from 2007-2011					
Date	Length of Time Needed (hours by month)	Reason for Use	MWH Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
Jan 21-23, 2009	31	Reliability/Startup/Shutdown	5,539	\$11.13	7,956
Jan 27, 2009					
Feb 1, 2009	2	Reliability/Startup/Shutdown	198	\$10.45	323
Mar 23-24, 2009	44	Reliability/Startup/Shutdown	6,758	\$11.35	9,461
Mar 28, 2009					
Apr 1-2, 2009	31	Reliability/Startup/Shutdown	4,776	\$10.53	6,678
Apr 4-9, 2009					
Apr 12, 2009					
Apr 17, 2009					
Apr 26, 2009					
Apr 28, 2009					
May 2, 2009	22	Reliability/Startup/Shutdown	986	\$12.24	1,800
May 15, 2009					
Jun 7, 2009	17	Reliability/Startup/Shutdown	2,246	\$13.92	3,522
Jun 10, 2009					
Aug 1, 2009	23	Reliability/Startup/Shutdown	2,674	\$14.52	4,603
Aug 9, 2009					
Aug 12, 2009					
Aug 14, 2009					
Sep 11, 2009	19	Reliability/Startup/Shutdown	4,409	\$13.40	7,148
Sep 14-16, 2009					
Nov 2, 2009	21	Reliability/Startup/Shutdown	2,232	\$15.22	3,567
Nov 5, 2009					
Nov 22, 2009					
Nov 28, 2009					
Dec 25, 2009	12	Reliability/Startup/Shutdown	1,541	\$14.80	2,364
Dec 28, 2009					

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Polk Unit 1 Backup Fuel Usage from 2007-2011					
Date	Length of Time Needed (hours by month)	Reason for Use	MWH Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
Jan 3-4, 2010	17	Reliability/Startup/Shutdown	2,618	\$13.85	4,252
Jan 22-23, 2010					
Feb 7, 2010	27	Reliability/Startup/Shutdown	3,143	\$15.14	5,102
Feb 23, 2010					
Feb 24, 2010					
Feb 25, 2010					
Feb 28, 2010					
Mar 4, 2010	25	Reliability/Startup/Shutdown	3,838	\$15.74	3,825
Mar 26-27, 2010					
Apr 10-11, 2010	14	Reliability/Startup/Shutdown	1,759	\$16.62	2,760
May 4, 2010	10	Reliability/Startup/Shutdown	1,341	\$17.35	2,165
May 6, 2010					
May 7, 2010					
Jun 13, 2010	49	Reliability/Startup/Shutdown	3,354	\$14.72	5,386
Jun 17, 2010					
Jun 18, 2010					
Jun 22-23, 2010					
Jul 13, 2010	15	Reliability/Startup/Shutdown	2,143	\$14.97	3,342
Jul 16, 2010					
Aug 15, 2010	18	Reliability/Startup/Shutdown	2,942	\$15.27	2,724
Aug 16, 2010					
Sep 2-3, 2010	30	Reliability/Startup/Shutdown	3,614	\$15.49	5,719
Sep 28, 2010					
Oct 19, 2010	7	Reliability/Startup/Shutdown	1,076	\$16.30	1,725
Nov 2, 2010	28	Reliability/Startup/Shutdown	2,722	\$16.45	5,826
Nov 5, 2010					
Nov 16, 2010					
Nov 19-20, 2010					
Dec 9-10, 2010	70	Reliability/Startup/Shutdown	12,366	\$18.28	16,153
Dec 12-14, 2010					
Dec 29, 2010					

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Polk Unit 1 Backup Fuel Usage from 2007-2011					
Date	Length of Time Needed (hours by month)	Reason for Use	MWHs Generated (By Month)	Cost of Fuel Used (\$/MMBtu by Month)	Quantity of Distillate Oil Used (BBL by Month)
Jan 11, 2011					
Jan 13-14, 2011	35	Reliability/Startup/Shutdown	3,760	\$19.18	6,826
Jan 17, 2011					
Jan 24, 2011					
Mar 2, 2011	8	Reliability/Startup/Shutdown	1,025	\$22.33	1,533
Mar 18, 2011					
Apr 8-9, 2011	14	Reliability/Startup/Shutdown	1,012	\$23.41	2,953
Apr 11, 2011					
May 31, 2011	12	Reliability/Startup/Shutdown	1,168	\$21.32	1,957
July 3, 2011					
July 8, 2011	17	Reliability/Startup/Shutdown	2,450	\$22.77	3,364
July 11, 2011					
Jul 26, 2011					
Sep 19, 2011	10	Reliability/Startup/Shutdown	1,032	\$20.54	1,775
Sep 22, 2011					
Nov 13-14, 2011	13	Reliability/Startup/Shutdown	1,432	\$22.85	2,404
Nov 29, 2011					
Dec 2, 2011	26	Reliability/Startup/Shutdown	2,938	\$21.06	5,173
Dec 8-9, 2011					

30. Why, in calculating the revenue requirement, has TECO chosen to amortize the capital costs over five years?
- A. Tampa Electric proposes to amortize the capital costs over five years because the Commission has previously granted cost recovery for capital projects through the fuel and purchased power cost recovery clause, using a five-year amortization period.¹

¹ See e.g., Orders PSC-95-1089-FOF-EI, PSC-0353-FOF-EI, and PSC-1045-FOF-EI.

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31. Please provide the complete revenue requirement calculation for the project by year.

A. The complete project capital revenue requirements are shown in the following table.

Polk 1 Fuel Cost Reduction Project Capital Revenue Requirements	
Year	(\$000)
2012	0
2013	3,803
2014	4,149
2015	3,492
2016	2,967
2017	2,521
2018	717
2019	0

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32. Please refer to paragraph 8 of the petition. At the time TECO filed its last rate case, had the Company decided to undertake this project? If not, when did the Company begin evaluating the possibility of implementing the project, and when was a decision made to undertake the project? Please explain.

A. Tampa Electric filed its last rate case on August 11, 2008, long before beginning consideration of this project.

Tampa Electric began consideration of replacing gasifier preheater propane and auxiliary boiler oil with natural gas in March 2011 with review of historical fuel consumption and current pricing to determine potential fuel savings. Then the company developed preliminary capital cost estimates in April 2011, along with preliminary economic analyses. These project components were approved by company management in February 2012.

The company also identified potential fuel savings for converting CT1 startup/backup fuel to natural gas. After considerable study by Tampa Electric's engineering staff in conjunction with the original equipment manufacturer, who provided detailed cost estimates in April 2012. This portion of the project was approved by company management in May 2012.

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- 33.** When does TECO anticipate filing its next rate case?
- A.** Tampa Electric does not have a projected filing date for a base rate case.

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- 34.** When did TECO begin the engineering analysis for the components of this project?
- A.** Engineering feasibility analysis began in March 2011. Flowsheet and detailed estimate development for conversion of the gasifier preheater propane and auxiliary boiler oil to natural gas began in April 2011. Flowsheet and detailed estimate development for conversion of CT1 startup/backup fuel to natural gas began in August 2011. Also see the company's response to Staff's First Data Request No. 32.

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- 35.** Please explain how this project will be charged to the Fuel Clause.
- A.** See the response to Staff's First Data Request Nos. 8, 9 and 17.

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- 36.** When will the project costs appear in the company's fuel factor?
- A.** The project capital costs will be included in Tampa Electric's 2013 fuel factor.

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- 37.** Are there any operation and maintenance expenses included in the revenue requirement calculations? If yes, please describe.
- A.** No, there are not any operation and maintenance expenses included in the revenue requirement calculations.

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- 38.** Please refer to the last sentence of paragraph 11 of the petition. Will the fuel savings be calculated using actual delivered fuel prices?
- A.** Yes, project fuel savings will be calculated using actual delivered fuel prices.

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- 39.** Will this project reduce the fuel oil inventory or the need for fuel oil storage facilities for Polk Unit 1? Please explain your response, and include in your response information on what TECO plans to do with its current fuel oil storage facilities.
- A.** Polk Unit 1 fuel oil inventory is not expected to be reduced because the fuel is still used as the backup fuel for Polk Unit 2 and Unit 3 peaking combustion turbines. However, the frequency of replenishing the inventory level may be reduced. The requirements for fuel oil storage facilities are unchanged.

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- 40.** Will this project reduce the propane inventory or the need for propane storage facilities for Polk Unit 1? Please explain your response, and include in your response information on what TECO plans to do with its current propane storage facilities.
- A.** Polk Unit 1 propane inventory is not expected to be reduced since propane will remain as the fuel for the Polk Unit 1 flare. However, the frequency of replenishing the inventory level may be reduced. The need for the propane storage facilities will remain unchanged.

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- 41.** Please identify the estimated start times, duration of work activities, and completion estimates for each of the four components of the project.
- A.** Minor work on propane conversion to natural gas began during a planned outage in early 2012 and will continue during subsequent planned outages. Construction activities which can be performed with the unit in normal service will begin in fall 2012 for all three¹ project components. The construction will be completed and commissioning of all three project components will be performed during the spring 2013 planned outage.

¹ Tampa Electric withdrew one of the original four components of the project, the equipment related to using natural gas to replace syngas at higher levels of output, from its request for cost recovery, as specified in the company's letter from J.D. Beasley to Ms. Ann Cole, submitted in this docket on June 5, 2012

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- 42.** Please identify how the proposed work at Polk Unit 1 will impact any of the planned outages for 2012 listed on Page 42 of Exhibit BSB-3 (the estimated Planned Outage schedule for 2012, attached to the Direct Testimony of Brian S. Buckley, filed on September 1, 2011, in Docket No. 110001-EI).
- A.** The proposed work at Polk Unit 1 will not impact the planned outages for 2012 listed on page 42 of Exhibit No. BSB-3 filed on September 1, 2011, in Docket No. 110001-EI.

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43. For purposes of the following requests, please refer to Exhibit B and Paragraph 6 of TECO's Petition:

- a) Please identify the total investment amounts for each of the four components of the project.
- b) For each of the amounts by component identified in response to a., please identify the plant amounts by account.
- c) For each of the accounts identified in response to b., please identify the Company's currently approved depreciation rate.
- d) Please identify, by account and amounts, any investments to be retired, and their associated reserve dollars.

A. a) See the company's response to Staff's First Data Request No. 10.

b) The requested information is provided in the following table.

Exhibit B Item No.	Description	Fuel Replaced	Total Investment	Account	Depreciation Rate
1	Aux Boiler Gasifier	Oil	\$792,000	342	3.4%
2	Preheater CT-1	Propane	\$476,000	342	3.4%
4	Startup/Backup	Oil	\$13,422,000	343	4.5%

c) See the response to subpart b) above.

d) The requested information is provided in the following table.

Account		Retirements	
No.	Description	Cost	Accumulated Reserve
342	Fuel Holders, Producers and Accessories	\$616,102	\$305,417
343	Prime Movers	\$1,252,965	\$724,085

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- 44.** Referring to Paragraph 7, by way of clarification is the remaining life of Polk Unit 1 30 years or 35 years (i.e., 5 plus 30)?
- A.** The remaining life of Polk Unit 1 is 30 years.

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45. Has the Company projected the fuel savings over the projected remaining life of Polk Unit 1? If the response is affirmative, please provide the results of the analysis and identify all assumptions used in the analysis. If the response is negative, please explain why.

A. The requested information is provided in the following table. The assumptions for the analysis were previously described in the company's response to Staff's First Data Request No. 22, subpart a).

Year	Long Term Fuel Savings NPV (\$000)
2012	0
2013	3,254
2014	6,296
2015	5,926
2016	5,908
2017	5,641
2018	5,208
2019	5,294
2020	5,118
2021	4,744
2022	5,000
2023	4,568
2024	4,085
2025	4,100
2026	3,899
2027	3,473
2028	3,511
2029	3,312
2030	2,938
2031	2,969
2032	2,821
2033	2,505
2034	2,499
2035	2,382
2036	2,128
2037	2,124

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Year	Long Term Fuel Savings NPV (\$000)
2038	2,011
2039	1,789
2040	1,778
2041	1,646

46. Please refer to Paragraph 10.
- a) The Company cites to three orders as precedent for its cost recovery proposal. In these orders, it appears the Commission approved a five-year straight line depreciation, a return on the average investment, and recovery of applicable taxes. Are these three items the only ones for which the Company is seeking recovery through the fuel clause?
 - b) If the response to a. is negative, please identify with specificity the items for which cost recovery through the fuel clause is being sought.
 - c) The total projected cost of converting Polk Unit 1 of \$14.8 million is significantly greater than the dollar amounts approved by the Commission in each of the three orders cited by the Company. As such, please explain why accelerated recovery through the fuel clause is appropriate, as opposed to, e.g., recovery through the fuel clause over the unit's remaining life, or through base rates.
- A.
- a) Yes.
 - b) See the company's response to subpart a).
 - c) The capital cost recovery for the Polk Unit 1 conversion will be capped by the actual amount of fuel savings in each year of the project's five-year cost recovery amortization period. Therefore, the customers will experience a benefit or at worst a net zero effect from the project in each of the first five years of operation, and will enjoy all the benefits of the project's fuel savings in later years.

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- 47.** Please provide a copy of the analysis, assumptions, and working papers used to develop the response to Question 10.
- A.** The requested documents are attached.

**TAMPA ELECTRIC COMPANY
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PROJECT: Polk1 CT 1 Secondary Fuel conversion
STATION: Polk unit 1
BUDGET YEAR: 2012/13

Estimate quality: Class III
Typical contingency: 8-12%
Confidence Factor: 75%

INITIATED BY: T. Barry
DEPT: 971

DESCRIPTION	TECO RESOURCE 00-S's	CONTRACT T&M COST	CONTRACT FIXED COST	MATERIAL PURCHASES	STOCK PURCHASES	Contingency	SECTION TOTAL
General Project Support	36,000						36,000
WBS 1 Permitting	3,960	0	5,000	0	0	680	9,640
WBS 2 GE Combustion Turbine Mods	152,550	45,000	8,352,000	10,000	4,000	250,000	8,813,550
WBS 3 TGP NG Conditioning skid & Piping etc.	58,500	435,100	885,000	1,627,000	1,000	587,730	3,594,330
WBS 5 Demo Oil system	0	0	76,925	0	0	23,078	100,003
TOTAL DIRECT COSTS	251,010	480,100	9,318,925	1,837,000	5,000	881,488	12,553,523

	HRS	COST	TECO RESOURCE 00-S's	ADMIN ADJUSTMENT
00 STATION SUPPORT (9XX)	2440	109,800		109,800
00 ENGINEERING SERVICES, START-UP, GRAPHICS/DRAFTING (970)	2150	96,750		96,750
00 PROJECT EXECUTION (PM, CONTROLS), CONSTRUCTION (971)	800	36,000		36,000
00 CORPORATE SAFETY OR ENVIRONMENTAL SUPPORT ADJUSTMENT FOR PROJECT ADMIN SUPPORT (DOC CONTROL, INVOICING, ETC. 972) (10% of 00 time)	88	3,960		3,960
00 PURCHASING & CONTRACTS	100	4500		4500
TOTAL INDIRECT LABOR	5,578	251,010		251,010

TOTAL INDIRECT LABOR & DIRECT COSTS **12,586,798**

01 OPERATORS PAYROLL	0	\$0		0
02 OFFICE AND COOP PAYROLL	40	\$1,200		1,200
02 ADJUSTMENT FOR ADMINISTRATIVE SUPPORT				9,956
03 SUBCONTRACTED SERVICES			\$0	0
04 LIGHT VEHICLE			\$0	0
05 HEAVY VEHICLE			\$0	0
06 TECO STORES ISSUE			\$0	0
07 OUTSIDE MATERIALS			\$0	0
09 TRAVEL EXPENSES			\$0	0
10 MISCELLANEOUS EXPENSES			\$0	0
15 MEAL EXPENSES			\$0	0
30 TEMPORARY PERSONNEL			\$0	0
39 PERSONAL AUTO REIMBRs			\$1,750	1,750
40 SALVAGE CREDITS			\$0	0
41 RECLASSIFICATION COST (Labor only)			\$0	0
70 FRINGES	% of Total 00 labor			105,714
71 FRINGES	% of Total 01 labor			0
72 FRINGES	% of Total 02 labor			4,463
TOTAL ADMINISTRATIVE COSTS ALL DEPTs			\$1,750	\$123,083

PROJECT SUBTOTAL: **\$1,750** **\$0** **\$12,689,880**

41 RECLASSIFICATION COST **DD to be absorbed: 186.75** **\$12,000**
21 PROJECT OVERHEAD A&GPROJECT OVERHEAD A&GPROJECT OVERHEAD A&G 10% of Total Labor **\$25,221**

ADDITIONAL CONTINGENCY AND ESCALATION

CONTINGENCY FROM PREVIOUS TABS	7%	\$861,488	
ADDITIONAL CONTINGENCY (% OF SUBTOTAL)**	6%		\$804,538
ESCALATION-MULTI-YEAR (% OF SUBTOTAL)**	0%		\$0

TOTAL PROJECT: **\$13,532,000**

**TAMPA ELECTRIC COMPANY
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PROJECT: Polk1 Natural Gas phase 1 aux conversion H1221 W1221
STATION: Polk unit 1
SET YEAR: 2012/13

Estimate quality: Class IV
Typical contingency: 10-20%
Confidence Factor: **66%**

INITIATED J. McDaniel
DEPT: 971

	TECO RESOURCE 00-\$'s	CONTRACT T&M COST	CONTRACT FIXED COST	MATERIAL PURCHASES	STOCK PURCHASES	Contingency	SECTION TOTAL
General Project Support	20,250						20,250
WBS 1 Engineering & IFC package	14,490	0	65,000	0	0	19,527	99,017
WBS 2 Gas Conditioning skid & Aux boiler	4,185	0	101,000	358,000	0	46,319	509,504
WBS 3 Construction Contract Incl Pipe	14,850	0	250,000	0	0	25,027	289,877
WBS 4 Misc Pipeline & flair	14,670	0	25,500	41,000	500	13,994	
WBS 5 Permitting	9,900	12,000	0	50,000	0	15,450	87,350
WBS 6 Decomp Furnace	1,980	0	6,000	30,000	0	3,798	
TOTAL DIRECT COSTS	80,325	12,000	447,500	479,000	500	124,115	1,143,440

	HRS	COST	TECO RESOURCE 00-\$'s	ADMIN ADJUSTMENT
00 STATION SUPPORT (9XX)	942	42,390	42,390	
ENGINEERING SERVICES, START-UP, GRAPHICS/DRAFTING (970)	124	5,580	5,580	
PROJECT EXECUTION (PM, CONTROLS), CONSTRUCTION (971)	450	20,250	20,250	
CORPORATE SAFETY OR ENVIRONMENTAL SUPPORT	214	9,630	9,630	
ADJUSTMENT FOR PROJECT ADMIN SUPPORT (DOC CONTROL, INVOICING, ETC. 972) (10% of 00 time)				2,583
00 PURCHASING & CONTRACTS	55	2475	2475	
TOTAL INDIRECT LABOR	1,785	80,325	80,325	2,583

TOTAL INDIRECT LABOR & DIRECT COSTS 1,146,023

01 OPERATORS PAYROLL	0	\$0		0
02 OFFICE AND COOP PAYROLL	0	\$0		0
02 ADJUSTMENT FOR ADMINISTRATIVE SUPPORT				1,937
03 SUBCONTRACTED SERVICES			\$0	0
04 LIGHT VEHICLE			\$0	0
05 HEAVY VEHICLE			\$0	0
06 TECO STORES ISSUE			\$0	0
07 OUTSIDE MATERIALS			\$0	0
09 TRAVEL EXPENSES			\$0	0
10 MISCELLANEOUS EXPENSES			\$0	0
15 MEAL EXPENSES			\$0	0
30 TEMPORARY PERSONNEL			\$0	0
39 PERSONAL AUTO REIMBR.			\$1,750	1,750
40 SALVAGE CREDITS			\$0	0
41 RECLASSIFICATION COST (Labor only)			\$0	0
70 FRINGES		% of Total 00 labor		33,163
71 FRINGES		% of Total 01 labor		0
72 FRINGES		% of Total 02 labor		775
TOTAL ADMINISTRATIVE COSTS ALL DEPTs			\$1,750	\$37,625

PROJECT SUBTOTAL: \$1,750 \$0 \$1,183,648

41 RECLASSIFICATION COST DD to be absorbed: **168.60** **\$6,000**
21 PROJECT OVERHEAD A&G PROJECT OVERHEAD A&G 10% of Total Labor **\$8,033**

ADDITIONAL CONTINGENCY AND ESCALATION

CONTINGENCY FROM PREVIOUS TABS			
ADDITIONAL CONTINGENCY (% OF SUBTOTAL)**	12%	\$124,115	\$71,019
ESCALATION-MULTI-YEAR (% OF SUBTOTAL)**	6%		\$0
	0%		\$0

TOTAL PROJECT: \$1,288,000

- 1) CT startup fuel replacement (tom Berry's project minus \$10,000 for material and minus \$100,000 for engineering for the augmentation)
- 2) Oil Replacement (Aux Boiler)
- 3) Propane replacement (Gasifier preheater – and SAP burners)

I expect they want one bottom-line number for each of the above 3 categories, and these three numbers should total \$14,690,000.

H1305

	PSA	Deduct for spiking		total
1) Polk1 CT 1 Secondary Fuel conversion	\$13,532,000	(\$110,000)		\$13,422,000

H1221

	WBS	\$621,055 balance		
2) Gas Conditioning skid & Aux boiler	\$509,504	\$489,113		\$998,616
3) Decomp Funace+Pipeline n Flare	\$137,442	\$131,942		\$269,384
Total	\$646,946	\$621,055		\$1,268,000

\$14,690,000

- 48.** Please provide a copy of the analysis, assumptions, and working papers used to develop the response to Question 11.
- A.** The requested documents are attached.

		2013	2014	2015	2016	2017	2018	2019
Polk 1 Net Generation	MWH	1,555,500	1,566,190	1,508,350	1,547,460	1,528,490	1,462,450	1,556,900
Oil & Propane Consumption								
Unit 1 Oil	MMBTU	317,330	318,850	306,790	316,450	313,520	300,270	317,700
Unit 1 Propane	MMBTU	23,560	25,240	26,930	23,560	25,240	25,240	25,240
Total Unit 1 Oil and Propane consumption	MMBTU	340,890	344,090	333,720	340,010	338,760	325,510	342,940
Fuel Pricing								
Firm Gas	\$/MMBTU	\$5.30	\$5.58	\$5.86	\$6.12	\$6.39	\$6.67	\$6.93
Interrupt Gas	\$/MMBTU	\$5.82	\$6.05	\$6.34	\$6.44	\$6.71	\$6.98	\$7.24
Oil	\$/MMBTU	\$26.88	\$27.98	\$29.44	\$30.84	\$32.06	\$33.34	\$34.63
Propane	\$/MMBTU	\$12.79	\$13.31	\$14.01	\$14.67	\$15.25	\$15.86	\$16.48
Savings per unit fuel consumption (Using "Firm" NG Price)								
Oil/Gas	\$/MMBTU	\$21.58	\$22.40	\$23.58	\$24.72	\$25.66	\$26.67	\$27.71
Propane/Gas	\$/MMBTU	\$7.49	\$7.73	\$8.15	\$8.55	\$8.86	\$9.20	\$9.55
Savings based on Base Case Oil & Propane Consumption								
Unit 1 Oil	Savings (\$)	\$6,848,724	\$7,142,110	\$7,235,016	\$7,821,315	\$8,045,582	\$8,008,982	\$8,801,942
Unit 1 Propane	Savings (\$)	\$176,521	\$195,200	\$219,402	\$201,426	\$223,606	\$232,147	\$241,050
Total Unit 1 Oil and Propane Savings	Savings (\$)	\$7,025,246	\$7,337,309	\$7,454,418	\$8,022,741	\$8,269,188	\$8,241,129	\$9,042,992
Savings		\$3,512,623	\$7,337,309	\$7,454,418	\$8,022,741	\$8,269,188	\$8,241,129	\$9,042,992
Savings for NPV Calculations (Half years in 2013 and 2018)	Savings (\$)	\$3,512,623	\$7,337,309	\$7,454,418	\$8,022,741	\$8,269,188	\$4,120,565	
								Total NPV
NPV of Customer Savings First 5 years in Service (7.95% Discount Rate)	Savings (\$)	\$3,191,795	\$6,296,389	\$5,925,784	\$5,906,649	\$5,639,734	\$2,653,461	\$29,613,811

NPV Calculations:	Base Date	Discount from	Discount from	Discount from	Discount from	Discount from	Discount from
	07/01/12	10/01/13	07/01/14	07/01/15	07/01/16	07/01/17	04/01/18
	n (years)	1.25	2.00	3.00	4.00	5.00	5.75
	i (Discount rate)	7.95%	7.95%	7.95%	7.95%	7.95%	7.95%

Savings based on Base Case Oil & Propane Consumption (\$000)	2013	2014	2015	2016	2017	2018	
Unit 1 Oil	Savings (\$000)	3,424	7,142	7,235	7,821	8,046	4,004
Unit 1 Total Propane Savings	Savings (\$000)	88	195	219	201	224	116
Start Up Propane Only	Savings (\$000)	83	184	206	189	210	109
Aux Boiler Propane Only	Savings (\$000)	5	12	13	12	13	3
Total Unit 1 Oil and Propane Savings	Savings (\$000)	3,513	7,337	7,454	8,023	8,269	4,121

	7.95%	2012	2013	2014	2015	2016	2017	2018	2019
Long term Fuel Savings (\$)	0	3,512,623	7,337,309	7,454,418	8,022,741	8,269,188	8,241,129	9,042,992	
NPV (\$)	0	3,253,935	6,296,389	5,925,784	5,907,887	5,640,916	5,207,758	5,293,630	

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Polk 1 Net Generation	1,564,820	1,505,980	1,646,290	1,592,740	1,506,890	1,601,360	1,609,030	1,513,010	1,618,620	1,618,330	1,517,660
Oil & Propane Consumption											
Unit 1 Oil	319,150	306,630	335,720	324,250	306,500	325,510	326,640	307,100	328,260	327,980	307,780
Unit 1 Propane	25,240	25,240	25,240	23,560	21,880	21,880	23,560	23,560	25,240	23,560	21,880
Total Unit 1 Oil and Propane consumption	344,390	331,870	360,960	347,810	328,380	347,390	350,200	330,660	353,500	351,540	329,660
Fuel Pricing											
Firm Gas	\$7.19	\$7.44	\$7.70	\$7.87	\$8.04	\$8.21	\$8.39	\$8.56	\$8.74	\$8.93	\$9.11
Interrupt Gas	\$7.50	\$7.76	\$8.02	\$8.18	\$8.36	\$8.53	\$8.70	\$8.88	\$9.06	\$9.24	\$9.42
Oil	\$35.98	\$37.39	\$38.89	\$39.75	\$40.61	\$41.49	\$42.37	\$43.27	\$44.17	\$45.09	\$46.03
Propane	\$17.12	\$17.79	\$18.50	\$18.91	\$19.32	\$19.74	\$20.16	\$20.58	\$21.01	\$21.45	\$21.90
Savings per unit fuel consumption (Using "Firm" NG Price)											
Oil/Gas	\$28.79	\$29.95	\$31.19	\$31.88	\$32.57	\$33.28	\$33.99	\$34.70	\$35.43	\$36.17	\$36.92
Propane/Gas	\$9.93	\$10.35	\$10.80	\$11.04	\$11.28	\$11.52	\$11.77	\$12.02	\$12.27	\$12.53	\$12.79
Savings based on Base Case Oil & Propane Consumption											
Unit 1 Oil	\$9,188,169	\$9,183,660	\$10,471,543	\$10,335,793	\$9,983,226	\$10,831,378	\$11,100,926	\$10,656,769	\$11,629,989	\$11,862,905	\$11,364,253
Unit 1 Propane	\$250,626	\$261,148	\$272,597	\$260,048	\$246,787	\$252,125	\$277,287	\$283,139	\$309,702	\$295,141	\$279,815
Total Unit 1 Oil and Propane Savings	\$9,438,795	\$9,444,809	\$10,744,140	\$10,595,841	\$10,230,013	\$11,083,503	\$11,378,213	\$10,939,909	\$11,939,692	\$12,158,046	\$11,644,068
Savings	\$9,438,795	\$9,444,809	\$10,744,140	\$10,595,841	\$10,230,013	\$11,083,503	\$11,378,213	\$10,939,909	\$11,939,692	\$12,158,046	\$11,644,068

Savings for NPV Calculations (Half years in 2013 and 2018)

NPV of Customer Savings First 5 years in Service (7.95% Discount Rate)

NPV Calculations:

Savings based on Base Case Oil & Propane Consumption (\$000)

- Unit 1 Oil
- Unit 1 Total Propane Savings
 - Start Up Propane Only
 - Aux Boiler Propane Only
- Total Unit 1 Oil and Propane Savings

	7.95%	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Long term Fuel Savings (\$)		9,438,795	9,444,809	10,744,140	10,595,841	10,230,013	11,083,503	11,378,213	10,939,909	11,939,692	12,158,046	11,644,068
NPV (\$)		5,118,413	4,744,488	4,999,714	4,567,582	4,085,116	4,099,989	3,899,034	3,472,754	3,510,999	3,311,912	2,938,306

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	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Polk 1 Net Generation	1,620,450	1,633,330	1,527,810	1,618,340	1,633,230	1,537,140	1,627,830	1,626,890	1,532,120	1,604,620	1,600,530
Oil & Propane Consumption											
Unit 1 Oil	328,270	330,450	309,270	327,940	330,170	310,900	329,380	329,230	309,910	326,290	325,430
Unit 1 Propane	25,240	23,560	25,240	21,880	23,560	25,240	23,560	25,240	23,560	23,560	25,240
Total Unit 1 Oil and Propane consumption	353,510	354,010	334,510	349,820	353,730	336,140	352,940	354,470	333,470	349,850	350,670
Fuel Pricing											
Firm Gas	\$9.30	\$9.49	\$9.69	\$9.89	\$10.09	\$10.30	\$10.51	\$10.72	\$10.94	\$11.16	\$11.16
Interrupt Gas	\$9.61	\$9.81	\$10.00	\$10.20	\$10.40	\$10.61	\$10.82	\$11.04	\$11.25	\$11.48	\$11.48
Oil	\$46.99	\$47.96	\$48.96	\$49.97	\$50.99	\$52.04	\$53.11	\$54.20	\$55.31	\$56.44	\$56.44
Propane	\$22.35	\$22.82	\$23.29	\$23.77	\$24.26	\$24.76	\$25.27	\$25.78	\$26.31	\$26.85	\$26.85
Savings per unit fuel consumption (Using "Firm" NG Price)											
Oil/Gas	\$37.69	\$38.47	\$39.27	\$40.08	\$40.91	\$41.75	\$42.61	\$43.48	\$44.37	\$45.28	\$45.28
Propane/Gas	\$13.05	\$13.33	\$13.60	\$13.88	\$14.17	\$14.46	\$14.76	\$15.06	\$15.37	\$15.69	\$15.69
Savings based on Base Case Oil & Propane Consumption											
Unit 1 Oil	\$12,372,759	\$12,713,238	\$12,144,662	\$13,143,835	\$13,506,000	\$12,979,391	\$14,033,465	\$14,314,986	\$13,751,079	\$14,774,509	\$14,735,568
Unit 1 Propane	\$329,506	\$313,963	\$343,322	\$303,778	\$333,855	\$365,028	\$347,743	\$380,198	\$362,174	\$369,605	\$395,960
Total Unit 1 Oil and Propane Savings	\$12,702,265	\$13,027,201	\$12,487,984	\$13,447,613	\$13,839,855	\$13,344,419	\$14,381,209	\$14,695,184	\$14,113,252	\$15,144,114	\$15,131,528
Savings	\$12,702,265	\$13,027,201	\$12,487,984	\$13,447,613	\$13,839,855	\$13,344,419	\$14,381,209	\$14,695,184	\$14,113,252	\$15,144,114	\$15,131,528

Savings for NPV Calculations (Half years in 2013 and 2018)

NPV of Customer Savings First 5 years in Service (7.95% Discount Rate)

NPV Calculations:

Savings based on Base Case Oil & Propane Consumption (\$000)

- Unit 1 Oil
- Unit 1 Total Propane Savings
 - Start Up Propane Only
 - Aux Boiler Propane Only
- Total Unit 1 Oil and Propane Savings

7.95%	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Long term Fuel Savings (\$)	12,702,265	13,027,201	12,487,984	13,447,613	13,839,855	13,344,419	14,381,209	14,695,184	14,113,252	15,144,114	15,131,528
NPV (\$)	2,969,278	2,820,968	2,505,052	2,498,889	2,382,378	2,127,924	2,124,365	2,010,880	1,789,022	1,778,319	1,645,986

TAMPA ELECTRIC COMPANY
DOCKET NO. 120153-EI
STAFF'S FIRST DATA REQUEST
FILED: JUNE 22, 2012

Propane	
01/01/13 0:00	1447.42
02/01/13 0:00	1398.56
03/01/13 0:00	1543.78
04/01/13 0:00	1286.15
05/01/13 0:00	1248.92
06/01/13 0:00	1276.25
07/01/13 0:00	1175.11
08/01/13 0:00	1182.26
09/01/13 0:00	1190.87
10/01/13 0:00	1202.84
11/01/13 0:00	1193.57
12/01/13 0:00	1201.97
01/01/14 0:00	1502.09
02/01/14 0:00	1453.69
03/01/14 0:00	1604.53
04/01/14 0:00	1335.08
05/01/14 0:00	1296.61
06/01/14 0:00	1325.19
07/01/14 0:00	1222.25
08/01/14 0:00	1230.94
09/01/14 0:00	1240.45
10/01/14 0:00	1253.63
11/01/14 0:00	1246.81
12/01/14 0:00	1260.4
01/01/15 0:00	1577.69
02/01/15 0:00	1527.26
03/01/15 0:00	1687.45
04/01/15 0:00	1406.8
05/01/15 0:00	1366.32
06/01/15 0:00	1396.71
07/01/15 0:00	1287.64
08/01/15 0:00	1296.93
09/01/15 0:00	1307.03
10/01/15 0:00	1320.05
11/01/15 0:00	1311.46
12/01/15 0:00	1323.45
01/01/16 0:00	1467.19
01/01/17 0:00	1525.38
01/01/18 0:00	1586.31
01/01/19 0:00	1647.98
01/01/20 0:00	1711.79
01/01/21 0:00	1778.97
01/01/22 0:00	1850.21
01/01/23 0:00	1890.78
01/01/24 0:00	1932.01
01/01/25 0:00	1973.69
01/01/26 0:00	2015.77
01/01/27 0:00	2058.21
01/01/28 0:00	2101.34
01/01/29 0:00	2145.22
01/01/30 0:00	2189.88
01/01/31 0:00	2235.36
01/01/32 0:00	2281.69
01/01/33 0:00	2328.87
01/01/34 0:00	2376.95
01/01/35 0:00	2425.91
01/01/36 0:00	2475.78
01/01/37 0:00	2526.61
01/01/38 0:00	2578.44
01/01/39 0:00	2631.24
01/01/40 0:00	2685.12
01/01/41 0:00	2685.12

1278.975

1330.9725

1400.7325

Inter Gas	
01/01/13 0:00	582.73
02/01/13 0:00	579.42
03/01/13 0:00	571.63
04/01/13 0:00	556.74
05/01/13 0:00	565.98
06/01/13 0:00	577.45
07/01/13 0:00	585.38
08/01/13 0:00	596.34
09/01/13 0:00	597.16
10/01/13 0:00	585.59
11/01/13 0:00	583.19
12/01/13 0:00	597.85
01/01/14 0:00	607.7
02/01/14 0:00	604.36
03/01/14 0:00	595.93
04/01/14 0:00	576.56
05/01/14 0:00	585.84
06/01/14 0:00	597.29
07/01/14 0:00	609.3
08/01/14 0:00	620.39
09/01/14 0:00	621.62
10/01/14 0:00	610.25
11/01/14 0:00	608.09
12/01/14 0:00	623.69
01/01/15 0:00	637.31
02/01/15 0:00	633.98
03/01/15 0:00	625.46
04/01/15 0:00	603.81
05/01/15 0:00	613.15
06/01/15 0:00	624.74
07/01/15 0:00	636.86
08/01/15 0:00	648.15
09/01/15 0:00	649.69
10/01/15 0:00	638.62
11/01/15 0:00	637.02
12/01/15 0:00	653.28
01/01/16 0:00	643.73
01/01/17 0:00	670.95
01/01/18 0:00	698.03
01/01/19 0:00	724.43
01/01/20 0:00	750.31
01/01/21 0:00	775.8
01/01/22 0:00	801.67
01/01/23 0:00	818.49
01/01/24 0:00	835.58
01/01/25 0:00	852.86
01/01/26 0:00	870.31
01/01/27 0:00	887.91
01/01/28 0:00	905.79
01/01/29 0:00	923.98
01/01/30 0:00	942.49
01/01/31 0:00	961.35
01/01/32 0:00	980.56
01/01/33 0:00	1000.12
01/01/34 0:00	1020.05
01/01/35 0:00	1040.35
01/01/36 0:00	1061.02
01/01/37 0:00	1082.1
01/01/38 0:00	1103.58
01/01/39 0:00	1125.47
01/01/40 0:00	1147.81
01/01/41 0:00	1147.81

581.6216667

605.085

633.5058333

**TAMPA ELECTRIC COMPANY
DOCKET NO. 120153-EI
STAFF'S FIRST DATA REQUEST
FILED: JUNE 22, 2012**

Firm Gas		#2 Oil
01/01/13 0:00	544.83	01/01/13 0:00 2773.9
02/01/13 0:00	541.52	02/01/13 0:00 2766.16
03/01/13 0:00	533.73	03/01/13 0:00 2752.09
04/01/13 0:00	510.84	04/01/13 0:00 2684.25
05/01/13 0:00	512.08	05/01/13 0:00 2668.83
06/01/13 0:00	515.55	06/01/13 0:00 2658.2
07/01/13 0:00	519.48	07/01/13 0:00 2653.51
08/01/13 0:00	522.44	08/01/13 0:00 2655
09/01/13 0:00	523.26	09/01/13 0:00 2658.72
10/01/13 0:00	527.69	10/01/13 0:00 2660.9
11/01/13 0:00	541.44	11/01/13 0:00 2662.1
12/01/13 0:00	563.95	12/01/13 0:00 2661.96
01/01/14 0:00	576.2	01/01/14 0:00 2878.68
02/01/14 0:00	572.86	02/01/14 0:00 2875.2
03/01/14 0:00	564.43	03/01/14 0:00 2860.39
04/01/14 0:00	537.06	04/01/14 0:00 2786.38
05/01/14 0:00	538.34	05/01/14 0:00 2770.74
06/01/14 0:00	541.79	06/01/14 0:00 2760.12
07/01/14 0:00	545.8	07/01/14 0:00 2759.98
08/01/14 0:00	548.89	08/01/14 0:00 2764.32
09/01/14 0:00	550.12	09/01/14 0:00 2769.41
10/01/14 0:00	554.75	10/01/14 0:00 2773.25
11/01/14 0:00	568.75	11/01/14 0:00 2780.86
12/01/14 0:00	592.19	12/01/14 0:00 2791.36
01/01/15 0:00	605.81	01/01/15 0:00 3023.54
02/01/15 0:00	602.48	02/01/15 0:00 3020.71
03/01/15 0:00	593.96	03/01/15 0:00 3008.21
04/01/15 0:00	564.31	04/01/15 0:00 2936.07
05/01/15 0:00	565.65	05/01/15 0:00 2919.71
06/01/15 0:00	569.24	06/01/15 0:00 2909.1
07/01/15 0:00	573.36	07/01/15 0:00 2907.62
08/01/15 0:00	576.65	08/01/15 0:00 2912.53
09/01/15 0:00	578.19	09/01/15 0:00 2918.06
10/01/15 0:00	583.12	10/01/15 0:00 2920.18
11/01/15 0:00	597.68	11/01/15 0:00 2925.05
12/01/15 0:00	621.78	12/01/15 0:00 2931
01/01/16 0:00	612.24	01/01/16 0:00 3083.82
01/01/17 0:00	639.46	01/01/17 0:00 3205.67
01/01/18 0:00	666.55	01/01/18 0:00 3333.81
01/01/19 0:00	692.95	01/01/19 0:00 3463.47
01/01/20 0:00	718.82	01/01/20 0:00 3597.77
01/01/21 0:00	744.31	01/01/21 0:00 3739.34
01/01/22 0:00	770.19	01/01/22 0:00 3889.32
01/01/23 0:00	787.01	01/01/23 0:00 3974.61
01/01/24 0:00	804.1	01/01/24 0:00 4061.27
01/01/25 0:00	821.38	01/01/25 0:00 4148.89
01/01/26 0:00	838.83	01/01/26 0:00 4237.35
01/01/27 0:00	856.43	01/01/27 0:00 4326.56
01/01/28 0:00	874.31	01/01/28 0:00 4417.23
01/01/29 0:00	892.5	01/01/29 0:00 4509.46
01/01/30 0:00	911.02	01/01/30 0:00 4603.35
01/01/31 0:00	929.87	01/01/31 0:00 4698.95
01/01/32 0:00	949.08	01/01/32 0:00 4796.33
01/01/33 0:00	968.64	01/01/33 0:00 4895.52
01/01/34 0:00	988.57	01/01/34 0:00 4996.57
01/01/35 0:00	1008.87	01/01/35 0:00 5099.49
01/01/36 0:00	1029.55	01/01/36 0:00 5204.33
01/01/37 0:00	1050.62	01/01/37 0:00 5311.19
01/01/38 0:00	1072.11	01/01/38 0:00 5420.13
01/01/39 0:00	1094	01/01/39 0:00 5531.12
01/01/40 0:00	1116.34	01/01/40 0:00 5644.37
01/01/41 0:00	1116.34	01/01/41 0:00 5644.37

Unit Fuel Consumption (Units x 1000)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Polk 1 - Base Case														
PROPANE (GAL x1000)	235.62	252.45	269.28	235.62	252.45	252.45	252.45	252.45	252.45	252.45	235.62	218.79	218.79	235.62
POLK #2OIL (BBL x1000)	54.75	55.01	52.93	54.60	54.09	51.81	54.81	55.06	52.90	57.92	55.94	52.88	56.16	56.36
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Calc PROPANE (mmBtu)	21,563	23,103	24,643	21,563	23,103	23,103	23,103	23,103	23,103	23,103	21,563	20,023	20,023	21,563
Calc POLK #2OIL (mmBtu)	324,230	325,769	313,451	323,341	320,321	306,819	324,585	326,063	313,274	343,002	331,277	313,155	332,580	333,764
PaR PROPANE (mmBtu)	23,560	25,240	26,930	23,560	25,240	25,240	25,240	25,240	25,240	25,240	23,560	21,880	21,880	23,560
PaR POLK #2OIL (mmBtu)	317,330	318,850	306,790	316,450	313,520	300,270	317,700	319,150	306,630	335,720	324,250	306,500	325,510	326,640

Unit Fuel Consumption (Units x 1000)	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Polk 1 - Base Case															
PROPANE (GAL x1000)	235.62	252.45	235.62	218.79	252.45	235.62	252.45	218.79	235.62	252.45	235.62	252.45	235.62	235.62	252.45
POLK #2OIL (BBL x1000)	52.98	56.64	56.59	53.10	56.64	57.01	53.36	56.58	56.97	53.64	56.83	56.80	53.47	56.30	56.15
	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Calc PROPANE (mmBtu)	21,563	23,103	21,563	20,023	23,103	21,563	23,103	20,023	21,563	23,103	21,563	23,103	21,563	21,563	23,103
Calc POLK #2OIL (mmBtu)	313,748	335,422	335,126	314,458	335,422	337,613	315,998	335,067	337,376	317,656	336,547	336,370	316,649	333,409	332,520
PaR PROPANE (mmBtu)	23,560	25,240	23,560	21,880	25,240	23,560	25,240	21,880	23,560	25,240	23,560	25,240	23,560	23,560	25,240
PaR POLK #2OIL (mmBtu)	307,100	328,260	327,980	307,780	328,270	330,450	309,270	327,940	330,170	310,900	329,380	329,230	309,910	326,290	325,430

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TEC System Fuel Cost by Fuel											
Polk 1 Base Total (Dollars)	60,233,730	67,991,150	69,750,430	70,296,700	74,436,560	76,087,380	74,411,110	82,517,600	86,717,070	87,015,500	99,343,230
POLK COAL	25,175,730	28,197,960	28,376,120	28,940,950	30,305,810	30,826,410	29,642,160	32,413,290	33,644,320	33,382,790	37,727,010
POLK PETCOKE	27,459,690	30,968,040	32,125,580	31,941,010	34,026,260	34,825,530	34,357,990	38,684,780	41,158,370	41,717,730	48,092,020
PROPANE	308,860	304,370	338,000	375,880	345,700	385,080	400,460	416,030	432,140	449,100	467,090
POLK #2OIL	7,289,450	8,520,780	8,910,730	9,038,860	9,758,790	10,050,360	10,010,500	11,003,500	11,482,240	11,465,880	13,057,110
Polk 1 - Fuel Cost with Propane to NG Conversion (Dollars)	60,233,730	67,902,889	69,555,230	70,077,298	74,235,134	75,863,774	74,178,963	82,276,550	86,466,444	86,754,352	99,070,633
Polk 1 - Fuel Cost with Distillate to NG Conversion (Dollars)	60,233,730	64,566,788	62,608,320	63,061,684	66,615,245	68,041,798	66,402,128	73,715,658	77,528,901	77,831,840	88,871,687
Polk 1 - Fuel Cost with Complete Reduction Project	60,233,730	64,478,527	62,413,121	62,842,282	66,413,819	67,818,192	66,169,981	73,474,608	77,278,275	77,570,691	88,599,090
Polk 1 - Fuel Cost with Reduction Project (5 Year Total)	60,233,730	64,478,527	62,413,121	62,842,282	66,413,819	67,818,192	70,290,545				
Delta (Change - Base)	-	(3,512,623)	(7,337,309)	(7,454,418)	(8,022,741)	(8,269,188)	(4,120,565)				
Savings NPV	(\$29,628,790)										

Propane to NG Total Savings

	2012	2013	2014	2015	2016	2017	Mid 2018
Savings based on Base Case Oil & Propane Consumption (\$000)							
Unit 1 Total Propane Savings	-	88	195	219	201	224	116
Unit 1 Oil	-	3,424	7,142	7,235	7,821	8,046	4,004
Start Up Oil Only	-	3,221	6,719	6,806	7,358	7,568	3,767
Aux Boiler Oil Only	-	203	424	429	464	477	237
Total Unit 1 Oil and Propane Savings	-	3,513	7,337	7,454	8,023	8,269	4,121

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Savings based on Base Case Oil & Propane Consumption (\$000)											
Unit 1 Total Propane Savings	-	88	195	219	201	224	232	241	251	261	273
Unit 1 Oil	-	3,424	7,142	7,235	7,821	8,046	8,009	8,802	9,188	9,184	10,472
Start Up Oil Only	-	3,221	6,719	6,806	7,358	7,568	7,534	8,280	8,643	8,639	9,851
Aux Boiler Oil Only	-	203	424	429	464	477	475	522	545	545	621
Total Unit 1 Oil and Propane Savings	-	3,513	7,337	7,454	8,023	8,269	8,241	9,043	9,439	9,445	10,744

Fuel Cost with Start Up Propane to NG Switch (\$000)	60,234	67,903	69,555	70,077	74,235	75,864	74,179	82,277	86,466	86,754	99,071
Fuel Cost with Start Up (Only) Oil to NG Switch (\$000)	60,234	64,770	63,032	63,491	67,079	68,519	66,877	74,238	78,074	78,376	89,493
Fuel Cost with Aux Boiler (Only) Oil to NG Switch (\$000)	60,234	67,788	69,327	69,868	73,973	75,610	73,936	81,996	86,172	86,471	98,722

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	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TEC System Fuel Cost by Fuel											
Polk 1 Base Total (Dollars)	98,892,560	96,312,470	105,307,550	108,792,020	105,244,670	115,684,970	118,789,920	114,558,820	125,587,640	129,826,550	124,864,310
POLK COAL	37,593,580	36,644,140	40,105,850	41,448,770	40,114,550	44,123,970	45,352,080	43,756,460	47,993,430	49,659,460	47,768,230
POLK PETCOKE	47,965,950	46,797,810	51,264,880	53,027,610	51,358,450	56,530,490	58,142,110	56,145,210	61,604,940	63,780,050	61,375,710
PROPANE	445,510	422,700	431,820	474,960	484,960	530,480	505,460	479,120	564,320	597,610	587,920
POLK #2OIL	12,887,520	12,447,820	13,505,000	13,840,680	13,286,710	14,500,030	14,790,300	14,168,030	15,425,050	15,849,430	15,140,450
Polk 1 - Fuel Cost with Propane to NG Conversion (Dollars)	98,632,512	96,065,683									
Polk 1 - Fuel Cost with Distillate to NG Conversion (Dollars)	88,556,767	86,329,244									
Polk 1 - Fuel Cost with Complete Reduction Project	88,296,719	86,082,457									
Polk 1 - Fuel Cost with Reduction Project (5 Year Total)											
Delta (Change - Base)											
Savings NPV											
Propane to NG Total Savings											
Savings based on Base Case Oil & Propane Consumption (\$000)											
Unit 1 Total Propane Savings											
Unit 1 Oil											
Start Up Oil Only											
Aux Boiler Oil Only											
Total Unit 1 Oil and Propane Savings											
Savings based on Base Case Oil & Propane Consumption (\$000)	2023	2024									
Unit 1 Total Propane Savings	260	247									
Unit 1 Oil	10,336	9,983									
Start Up Oil Only	9,723	9,391									
Aux Boiler Oil Only	613	592									
Total Unit 1 Oil and Propane Savings	10,596	10,230									
Fuel Cost with Start Up Propane to NG Switch (\$000)	98,633	96,066									
Fuel Cost with Start Up (Only) Oil to NG Switch (\$000)	89,170	86,921									
Fuel Cost with Aux Boiler (Only) Oil to NG Switch (\$000)	98,280	95,720									

T&C System Fuel Cost by Fuel	2034	2035	2036	2037	2038	2039	2040	2041
Polk 1 Base Total (Dollars)	155,831,800	140,488,100	135,800,140	147,562,460	151,376,970	146,174,080	189,632,260	139,311,700
POLK COAL	52,029,120	53,895,890	52,029,140	56,595,460	58,070,510	56,108,690	42,423,680	42,312,050
POLK PETCOKE	66,887,130	69,218,470	66,965,880	72,877,750	74,811,040	72,308,900	78,158,800	77,953,140
PROPANE	520,050	571,590	625,810	595,320	650,930	619,970	632,670	677,860
POLK #2OIL	16,385,510	16,837,110	16,180,110	17,493,980	17,844,490	17,141,520	18,417,110	18,388,650

Polk 1 - Fuel Cost with Propane to NG Conversion (Dollars)
 Polk 1 - Fuel Cost with Distillate to NG Conversion (Dollars)

Polk 1 - Fuel Cost with Complete Reduction Project

Polk 1 - Fuel Cost with Reduction Project (5 Year Total)
 Delta (Change - Base)
 Savings NPV

Propane to NG Total Savings

Savings based on Base Case Oil & Propane Consumption (\$000)

Unit 1 Total Propane Savings
 Unit 1 Oil
 Start Up Oil Only
 Aux Boiler Oil Only
 Total Unit 1 Oil and Propane Savings

Savings based on Base Case Oil & Propane Consumption (\$000)

Unit 1 Total Propane Savings
 Unit 1 Oil
 Start Up Oil Only
 Aux Boiler Oil Only
 Total Unit 1 Oil and Propane Savings

Fuel Cost with Start Up Propane to NG Switch (\$000)
 Fuel Cost with Start Up (Only) Oil to NG Switch (\$000)
 Fuel Cost with Aux Boiler (Only) Oil to NG Switch (\$000)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Unit Fuel Consumption (Units x 1000)															
Polk 1	535.0	598.4	601.3	578.6	596.8	591.3	566.3	599.1	601.9	578.3	633.1	611.5	578.0	613.9	616.0
POLK COAL	237.3	274.3	275.6	265.2	273.5	271.0	259.6	274.6	275.9	265.1	290.2	280.3	264.9	281.4	282.4
POLK PETCOKE	297.7	324.1	325.7	313.4	323.2	320.2	306.7	324.5	326.0	313.2	342.9	331.2	313.1	332.5	333.6
PROPANE (GAL)	252.5	235.6	252.5	269.3	235.6	252.5	252.5	252.5	252.5	252.5	252.5	235.6	218.8	218.8	235.6
POLK #2OIL (BBL)	49.1	54.8	55.0	52.9	54.6	54.1	51.8	54.8	55.1	52.9	57.9	55.9	52.9	56.2	56.4
Unit Generation (GWh)															
Polk 1	1,389	1,556	1,566	1,508	1,547	1,528	1,462	1,557	1,565	1,506	1,646	1,593	1,507	1,601	1,609
Detailed Unit Fuel Energy (MMBTU x 1000) - Start Fuel Included															
Polk 1															
POLK COAL	5,599	6,474	6,504	6,259	6,456	6,396	6,126	6,481	6,511	6,255	6,849	6,615	6,253	6,640	6,663
POLK PETCOKE	8,335	9,076	9,119	8,774	9,051	8,967	8,588	9,086	9,128	8,770	9,602	9,273	8,766	9,310	9,342
PROPANE	25	24	25	27	24	25	25	25	25	25	25	24	22	22	24
POLK #2OIL	284	317	319	307	316	314	300	318	319	307	336	324	307	326	327
Unit Heat Rate (Btu/kWh)															
Polk 1	10,237	10,200	10,179	10,170	10,225	10,256	10,266	10,203	10,198	10,180	10,196	10,179	10,170	10,164	10,150
Unit Starts (No. of START)															
Polk 1	15	14	15	16	14	15	15	15	15	15	15	14	13	13	14
Unit Heat Operating Factor (NOFS)															
Polk 1	94.3	95.4	96.1	96.4	94.6	93.8	93.5	95.5	95.7	96.3	95.7	96.3	96.6	96.8	97.3

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Unit Fuel Consumption (Units x 1000)															
Polk 1	579.1	619.1	618.5	580.4	619.1	623.2	583.2	618.4	622.7	586.3	621.2	620.9	584.4	615.3	613.7
POLK COAL	265.5	283.8	283.5	266.0	283.8	285.6	267.3	283.5	285.4	268.7	284.7	284.6	267.9	282.1	281.3
POLK PETCOKE	313.7	335.3	335.0	314.4	335.3	337.5	315.9	335.0	337.3	317.6	336.4	336.3	316.6	333.3	332.4
PROPANE (GAL)	235.6	252.5	235.6	218.8	252.5	235.6	252.5	218.8	235.6	252.5	235.6	252.5	235.6	235.6	252.5
POLK #2OIL (BBL)	53.0	56.6	56.6	53.1	56.6	57.0	53.4	56.6	57.0	53.6	56.8	56.8	53.5	56.3	56.2
Unit Generation (BWh)															
Polk 1	1,513	1,619	1,618	1,518	1,620	1,633	1,528	1,618	1,633	1,537	1,628	1,627	1,532	1,605	1,601
Detailed Unit Fuel Energy (MMBTU x 1000)															
Polk 1															
POLK COAL	6,265	6,697	6,691	6,279	6,697	6,741	6,309	6,690	6,736	6,342	6,719	6,716	6,322	6,656	6,639
POLK PETCOKE	8,783	9,388	9,380	8,802	9,388	9,451	8,845	9,379	9,443	8,892	9,420	9,416	8,863	9,332	9,307
PROPANE	24	25	24	22	25	24	25	22	24	25	24	25	24	24	25
POLK #2OIL	307	328	328	308	328	330	309	328	330	311	329	329	310	326	325
Unit Heat Rate (Btu/MWh)															
Polk 1	10,149	10,140	10,133	10,140	10,129	10,116	10,121	10,132	10,108	10,113	10,117	10,118	10,114	10,167	10,166
Unit Starts (No. of Starts)															
Polk 1	14	15	14	13	15	14	15	13	14	15	14	15	14	14	15
Unit Net Operating Factor (NOF%)															
Polk 1	97.3	97.6	97.9	97.6	98.0	98.5	98.3	97.9	98.8	98.6	98.4	98.4	98.6	96.8	96.8

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Month / Year	Polk 1 ANOHR (Btu/kWh)	Month / Year	Polk 1 NOF%
Jan-13	10,270	Jan-13	92.9
Feb-13	10,196	Feb-13	95.5
Mar-13	10,184	Mar-13	96.2
Apr-13	10,240	Apr-13	94.3
May-13	10,239	May-13	94.2
Jun-13	10,192	Jun-13	95.7
Jul-13	10,205	Jul-13	95.3
Aug-13	10,161	Aug-13	96.8
Sep-13	10,150	Sep-13	97.2
Oct-13	10,192	Oct-13	95.7
Nov-13	10,181	Nov-13	96.0
Dec-13	10,186	Dec-13	95.9
Jan-14	10,234	Jan-14	94.1
Feb-14	10,178	Feb-14	96.1
Mar-14	10,176	Mar-14	96.2
Apr-14	10,195	Apr-14	95.7
May-14	10,157	May-14	96.9
Jun-14	10,153	Jun-14	97.0
Jul-14	10,169	Jul-14	96.4
Aug-14	10,147	Aug-14	97.2
Sep-14	10,151	Sep-14	97.1
Oct-14	10,197	Oct-14	95.5
Nov-14	10,204	Nov-14	95.2
Dec-14	10,191	Dec-14	95.7
Jan-15	10,199	Jan-15	95.3
Feb-15	10,115	Feb-15	98.4
Mar-15	10,116	Mar-15	98.4
Apr-15	10,138	Apr-15	97.6
May-15	10,168	May-15	96.1
Jun-15	10,158	Jun-15	96.9
Jul-15	10,160	Jul-15	96.7
Aug-15	10,173	Aug-15	96.4
Sep-15	10,175	Sep-15	96.3
Oct-15	10,208	Oct-15	95.2
Nov-15	10,210	Nov-15	95.0
Dec-15	10,216	Dec-15	94.8
Jan-16	10,277	Jan-16	92.8
Feb-16	10,172	Feb-16	96.5
Mar-16	10,191	Mar-16	95.8
Apr-16	10,236	Apr-16	94.1
May-16	10,231	May-16	94.5
Jun-16	10,208	Jun-16	95.1
Jul-16	10,205	Jul-16	95.3
Aug-16	10,189	Aug-16	95.9
Sep-16	10,178	Sep-16	96.1
Oct-16	10,208	Oct-16	95.3

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Month / Year	Polk 1 ANOHR (Btu/kWh)	Month / Year	Polk 1 NOF%
Nov-16	10,330	Nov-16	91.1
Dec-16	10,280	Dec-16	92.9
Jan-17	10,372	Jan-17	90.0
Feb-17	10,195	Feb-17	95.7
Mar-17	10,193	Mar-17	95.9
Apr-17	10,252	Apr-17	94.0
May-17	10,271	May-17	93.3
Jun-17	10,232	Jun-17	94.6
Jul-17	10,226	Jul-17	94.8
Aug-17	10,227	Aug-17	94.7
Sep-17	10,234	Sep-17	94.5
Oct-17	10,249	Oct-17	94.0
Nov-17	10,329	Nov-17	91.5
Dec-17	10,276	Dec-17	93.1
Jan-18	10,359	Jan-18	90.5
Feb-18	10,236	Feb-18	94.4
Mar-18	10,426	Mar-18	88.6
Apr-18	10,257	Apr-18	93.7
May-18	10,251	May-18	94.0
Jun-18	10,231	Jun-18	94.5
Jul-18	10,233	Jul-18	94.6
Aug-18	10,227	Aug-18	94.8
Sep-18	10,222	Sep-18	94.8
Oct-18	10,244	Oct-18	94.2
Nov-18	10,285	Nov-18	92.9
Dec-18	10,291	Dec-18	92.7

Polk 1 Fuel Consumption

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	
Propane (GAL x1000)	16.83	16.83	33.66	16.83	16.83	16.83	16.83	16.83	16.83	16.83	33.66	16.83	16.83	16.83	33.66	16.83	16.83	16.83	16.83	16.83	16.83	33.66	16.83	33.66	33.66
#2 Oil (BBL x1000)	4.81	4.44	2.71	4.71	4.86	4.76	4.9	4.96	4.81	4.92	3.97	4.92	4.85	4.46	2.7	4.75	4.96	4.8	4.94	4.87	4.8	4.91	3.96	4.91	
Propane (mmBTU x1000)	1.68	1.68	3.37	1.68	1.68	1.68	1.68	1.68	1.68	1.68	3.37	1.68	1.68	1.68	3.37	1.68	1.68	1.68	1.68	1.68	1.68	3.37	1.68	3.37	
#2 Oil (mmBTU x1000)	27.88	25.71	15.69	27.28	28.18	27.56	28.4	28.72	27.86	28.5	23.02	28.52	28.12	25.83	15.68	27.55	28.74	27.82	28.64	28.82	27.84	28.46	22.87	28.49	
Total (mmBTU)	29,540	27,390	19,060	28,960	29,860	29,240	30,080	30,400	29,540	30,180	26,390	30,200	29,800	27,510	19,050	29,230	30,420	29,500	30,320	30,500	29,520	30,140	25,240	31,860	
Equivalent NG (MCF)	29,123	26,985	18,778	28,532	29,419	28,808	29,635	29,951	29,103	29,734	26,000	29,754	29,360	27,103	18,768	28,798	29,970	29,064	29,872	30,049	29,084	29,695	25,852	31,389	

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- 49.** Please provide a copy of the analysis, assumptions, and working papers used to develop the response to Question 12.
- A.** The requested documents are attached.

RR Input Assumptions		
Current Year	2012	
Common Equity	11.25%	53.96%
Preferred Stock	7.25%	0.00%
Debt	6.90%	46.04%
WACC		7.95%
Tax Rate	38.58%	
Property Tax & Ins. Rate	2.25%	
Book Life (Yrs)	5	
Tax Life (Yrs)	5	
Total Project Cost (\$000)	14,690	
Startup Fuel Conversion (only) Cost (\$000)	476	
Aux Boiler Fuel Conversion (only) Cost (\$000)	792	
Backup Fuel Conversion (\$000)	13,422	

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CPVRR (\$000) Without Fuel Reduction Project (Base Case)													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR													
NPV													
Capital CPVRR (\$000)													
Polk 1 Fuel Cost (\$000)	60,234	67,991	69,750	70,297	74,437	76,087	74,411	82,518	86,717	87,016	99,343	98,893	96,312
NPV	60,234	62,984	59,855	55,881	54,815	51,904	47,022	48,305	47,024	49,711	46,229	42,630	38,460
Fuel CPVRR (\$000)	60,234	123,218	183,073	238,954	293,769	345,673	392,695	440,999	488,024	531,735	577,964	620,593	659,054
NPV (Mid 2013 In Service thru Mid 2018)	60,234.73	123,218	183,073	238,954	293,769	345,673	392,695	440,999	488,024	531,735	577,964	620,593	659,054
Total CPVRR (\$000)	60,234	123,218	183,073	238,954	293,769	345,673	392,695	440,999	488,024	531,735	577,964	620,593	659,054

CPVRR (\$000) With Fuel Reduction Project (Change Case)													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	4,106	4,835	4,393	4,029	3,695	1,134	-	-	-	-	-	-
NPV	-	3,803	4,149	3,492	2,967	2,521	717	-	-	-	-	-	-
Capital CPVRR (\$000)	-	3,803	7,953	11,445	14,412	16,932	17,649	17,649	17,649	17,649	17,649	17,649	17,649
Polk 1 Fuel Cost With Reduction Project (\$000)	60,234	64,479	62,413	62,842	66,414	67,818	66,170	73,475	77,278	77,571	88,599	88,297	86,082
Mid 2013 In Service thru Mid 2018	60,234	64,479	62,413	62,842	66,414	67,818	70,291	-	-	-	-	-	-
NPV	60,234	59,730	53,559	49,956	48,507	46,263	41,814	43,011	41,906	38,367	41,229	38,067	34,375
NPV (Mid 2013 In Service thru Mid 2018)	60,234	59,730	53,559	49,956	48,507	46,263	44,818	-	-	-	-	-	-
Fuel CPVRR (\$000)	60,234	119,964	173,522	228,478	272,585	318,648	360,462	403,473	445,379	484,346	525,575	563,637	598,012
Total CPVRR (\$000)	60,234	119,964	173,522	228,478	272,585	318,648	360,462	403,473	445,379	484,346	525,575	563,637	598,012

	2012	2013	2014	2015	2016	2017	2018	Total NPV
Fuel Cost Delta (Change - Base) (\$000)	-	(3,513)	(7,337)	(7,454)	(8,023)	(8,269)	(4,121)	\$29,626
NPV of Customer Savings First 5 years in Service (7.95% Discount Rate) (\$000)	Savings (\$)	\$3,254	\$6,298	\$5,926	\$5,907	\$5,640	\$2,604	\$29,626
NPV Calculations:	Base Date	Discount from	Discount from	Discount from	Discount from	Discount from	Discount from	
	7/1/2012	10/01/13	7/1/2014	7/1/2015	7/1/2016	7/1/2017	4/1/2018	
	n (years)	1.00	2.00	3.00	4.00	5.00	6.00	
	i (Discount rate)	7.95%	7.95%	7.95%	7.95%	7.95%	7.95%	

Question 22a	Base Fuel Cost	With Fuel Cost Reduction Project	Delta
2013	62,984	59,730	3,254
2014	59,855	53,559	6,296
2015	55,881	49,956	5,926
2016	54,815	48,507	6,308
2017	51,904	46,263	5,641
2018	47,022	44,818	2,204
	TOTAL Savings:	29,629	

CPVRR (\$000) Without Fuel Reduction Project (Base Case)													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	-	-	-	-	-	-	-	-	-	-	-	-
NPV	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital CPVRR (\$000)	-	-	-	-	-	-	-	-	-	-	-	-	-
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Polk 1 Fuel Cost (\$000)	60,234	67,991	69,750	70,297	74,437	76,087	74,411	82,518	86,717	87,016	99,343	98,893	96,312
NPV	60,234	62,984	59,855	55,881	54,815	51,904	47,022	48,305	47,024	43,711	46,229	42,630	38,460
Fuel CPVRR (\$000)	60,234	123,218	183,073	238,954	293,769	345,673	392,695	440,999	488,024	531,735	577,964	620,593	659,054
Total CPVRR (\$000)	60,234	123,218	183,073	238,954	293,769	345,673	392,695	440,999	488,024	531,735	577,964	620,593	659,054

CPVRR (\$000) Polk 1 Startup Fuel Conversion from Propane to Natural Gas													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	133	157	142	131	120	37	-	-	-	-	-	-
NPV	-	123	134	113	96	82	23	-	-	-	-	-	-
Capital CPVRR (\$000)	-	123	258	371	467	549	572	572	572	572	572	572	572
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Polk 1 Fuel Cost (\$000)	60,234	67,903	69,555	70,077	74,235	75,864	74,179	82,277	86,466	86,754	99,071	98,633	96,066
NPV	60,234	62,902	59,688	55,707	54,666	51,751	46,875	48,163	46,889	43,580	46,102	42,518	38,362
Fuel CPVRR (\$000)	60,234	123,136	182,824	238,531	293,197	344,948	391,823	439,987	486,875	530,455	576,557	619,075	657,437
Total CPVRR (\$000)	60,234	123,259	183,081	238,901	293,664	345,497	392,395	440,559	487,447	531,027	577,129	619,647	658,008
Fuel Delta	-	(80)	(195)	(219)	(201)	(224)	(232)	(241)	(251)	(261)	(273)	(260)	(247)
Fuel Delta NPV	-	(80)	(168)	(174)	(148)	(153)	(147)	(141)	(136)	(131)	(127)	(112)	(89)

CPVRR (\$000) Polk 1 Aux Boiler Fuel Conversion from #2 Oil to Natural Gas													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	221	261	237	217	199	61	-	-	-	-	-	-
NPV	-	205	224	188	160	136	39	-	-	-	-	-	-
Capital CPVRR (\$000)	-	205	429	617	777	913	952	952	952	952	952	952	952
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Polk 1 Fuel Cost (\$000)	60,234	67,788	69,327	69,868	73,973	75,610	73,936	81,996	86,172	86,471	98,722	98,280	95,720
NPV	60,234	62,796	59,492	55,540	54,473	51,578	46,722	47,999	46,729	43,438	45,940	42,366	38,224
Fuel CPVRR (\$000)	60,234	123,030	182,521	238,062	292,535	344,113	390,835	438,834	485,563	529,000	574,940	617,306	655,530
Total CPVRR (\$000)	60,234	123,235	182,950	238,679	293,312	345,026	391,786	439,785	486,514	529,952	575,892	618,257	656,481
Fuel Delta	-	(208)	(424)	(429)	(464)	(477)	(475)	(522)	(545)	(545)	(621)	(613)	(592)
Fuel Delta NPV	-	(188)	(363)	(341)	(342)	(325)	(300)	(296)	(295)	(274)	(289)	(284)	(236)

CPVRR (\$000) Polk 1 Start Up Fuel Conversion from #2 Oil to Natural Gas													
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital RR	-	3,751	4,418	4,013	3,681	3,376	1,036	-	-	-	-	-	-
NPV	-	3,475	3,791	3,190	2,711	2,303	655	-	-	-	-	-	-
Capital CPVRR (\$000)	-	3,475	7,266	10,457	13,168	15,471	16,125	16,125	16,125	16,125	16,125	16,125	16,125
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Polk 1 Fuel Cost (\$000)	60,234	64,770	63,032	63,491	67,079	68,519	66,877	74,238	78,074	78,376	89,493	89,170	86,921
NPV	60,234	60,000	54,090	50,471	49,397	46,741	42,261	43,458	42,337	39,371	41,645	38,439	34,710
Fuel CPVRR (\$000)	60,234	120,234	174,323	224,794	274,191	320,932	363,193	406,651	448,988	488,359	530,004	568,443	603,153
Total CPVRR (\$000)	60,234	123,709	181,590	235,251	287,358	336,402	379,318	422,776	465,113	504,485	546,129	584,568	619,278
Fuel Delta	-	(3,221)	(6,719)	(6,806)	(7,358)	(7,568)	(7,534)	(8,280)	(8,643)	(8,639)	(9,851)	(9,723)	(9,391)
Fuel Delta NPV	-	(2,984)	(5,785)	(5,410)	(5,418)	(5,169)	(4,761)	(4,847)	(4,687)	(4,340)	(4,584)	(4,191)	(3,790)

	2012	2013	2014	2015	2016	2017	2018
Total Fuel Cost Delta (\$000)	-	(3,513)	(7,337)	(7,454)	(8,023)	(8,269)	(4,121)
Total NPV							
NPV of Customer Savings First 5 years in Service (7.95% Discount Rate) (\$000)	Savings (\$)	\$3,254	\$6,296	\$5,926	\$5,907	\$5,640	\$2,604
\$29,626							
NPV Calculations:	Base Date	Discount from	Discount from	Discount from	Discount from	Discount from	Discount from
	7/1/2012	10/01/13	7/1/2014	7/1/2015	7/1/2016	7/1/2017	4/1/2018
	n (years)	1.00	2.00	3.00	4.00	5.00	6.00
	i (Discount rate)	7.95%	7.95%	7.95%	7.95%	7.95%	7.95%

Year	Complete Project Capital Revenue Requirements NPV	Complete Fuel Cost Reduction Project Fuel Cost Delta NPV	Propane to NG Capital Revenue Requirements NPV	Propane to NG Fuel Savings NPV
2012	0	0	0	0
2013	3,803	3,254	123	82
2014	4,149	6,296	134	168
2015	3,492	5,926	113	174
2016	2,967	5,908	96	148
2017	2,521	5,641	82	153
2018	717	2,604	23	147
2019	0		0	141

Year	Aux Boiler Oil to NG Capital Revenue Requirements NPV	Aux Boiler Oil to NG Fuel Savings NPV	Startup Oil to NG Capital Revenue Requirements NPV	Startup Oil to NG Fuel Savings NPV	Total Capital RR (NPV)	Total Capital CPVRR	Total Savings NPV	
2012	0	0	0	0	0	0	0	
2013	205	188	3,475	2,984	3,803	3,803	3,254	
2014	224	363	3,791	5,765	4,149	7,953	6,296	
2015	188	341	3,190	5,410	3,492	11,445	5,926	
2016	160	342	2,711	5,418	2,967	14,412	5,908	
2017	136	325	2,303	5,163	2,521	16,932	5,641	
2018	39	300	655	4,761	717	17,649	5,208	2,604
2019	0	306	0	4,847	0	17,649		

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- 50.** Please provide a copy of the analysis, assumptions, and working papers used to develop the response to Question 13.
- A.** The requested documents are attached.

Year	Total Costs without the Project (000)	Total Costs with the Project (000)	Difference (000)	Recoverable Difference (000)	Retail Energy (MWh)	CPVRR \$/MWh	Year	Bill Impact (\$/1,000 kWh)
2013	123,218	122,988	-230	-230	20,179,450	\$ (0.01)	2013	\$ (0.01)
2014	183,073	180,796	-2,277	-2,277	20,223,680	\$ (0.11)	2014	\$ (0.10)
2015	238,954	234,659	-4,295	-4,295	20,357,210	\$ (0.21)	2015	\$ (0.11)
2016	293,769	287,132	-6,637	-6,637	20,570,200	\$ (0.32)	2016	\$ (0.21)
2017	345,673	336,618	-9,055	-9,055	20,771,920	\$ (0.44)	2017	\$ (0.22)
2018	392,695	379,431	-13,264	-13,264	20,991,680	\$ (0.63)	2018	\$ (0.41)
2019	440,999	422,442	-18,557	-18,557	21,219,120	\$ (0.87)	2019	\$ (0.47)
2020	488,024	464,348	-23,676	-23,676	21,440,320	\$ (1.10)	2020	\$ (0.64)
2021	531,735	503,315	-28,420	-28,420	21,650,290	\$ (1.31)	2021	\$ (0.67)
2022	577,964	544,544	-33,420	-33,420	21,849,310	\$ (1.53)	2022	\$ (0.86)
2023	620,593	582,606	-37,987	-37,987	22,045,340	\$ (1.72)	2023	\$ (0.87)
2024	659,054	616,981	-42,073	-42,073	22,240,410	\$ (1.89)	2024	\$ (1.02)

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- 51.** Please provide a copy of the analysis, assumptions, and working papers used to develop the response to question 14.

- A.** The requested documents were provided as the company's response to Staff's First Data Request No. 48.

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- 52.** Please provide a copy of the analysis, assumptions, and working papers used to develop the response to question 15.
- A.** There are no documents to provide. See the response to Staff's First Data Request No. 15.