

LARGE FILING SEPARATOR SHEET

CASE NUMBER: 14-841-EL-SSO
14-842-EL-ATA

FILE DATE: 11/13/14

SECTION: 3

NUMBER OF PAGES: 35

DESCRIPTION OF DOCUMENT:

EXHIBITS

Ohio Valley Electric Corporation
Forecasted Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2013
In thousands of dollars

Duke ESP 3 - 0



Generation Sales	Budget 2013	Projected 2013	Dollar Credit/Debit	Percent Credit/Debit
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Estimated Surplus Energy Use Factor				-18.75%
Demand Charge				
Projected Annual Capital Improvement Costs (including SCR, PRB Coal Switch, FGD and Other Financed Projects)				
Projected Debt Expense Amortization and Short-Term Debt Costs (including FGD Construction Interim Debt)				
\$448 Million - 5.80% Senior Unsecured Notes - Series 2005-A (\$82 million refinanced 6.40%)				
\$300 Million - 5.80% Senior Unsecured Notes - Series 2007-A-C (\$48.9 million refinanced 6.50%)				
\$50 Million - 6.92% Senior Unsecured Notes - Series 2008-A				
\$200 Million - 6.71% Senior Unsecured Notes - Series 2008-B-C (\$50.3 million refinanced 6.81%)				
\$100 Million - Floating Rate Notes - Series 2013-A (previous 2008A)				
\$100 Million - Floating Rate LCO Backed Bonds - OHADA Tax Exempt 2009-A-D				
\$100 Million - Floating Rate Notes - IFX Tax Exempt 2009-E				
\$200 Million - Floating Rate Notes - IFX Tax Exempt 2010-A-B				
\$100 Million - Floating Rate - IFX Tax Exempt 2012-A				
Projected Capital Improvements and Debt Costs (ICPA Component A)				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component C)				
Projected Transmission and Dispatch Costs (ICPA Component D)				
Projected Taxes (ICPA Component E)				
Projected ROE Costs (ICPA Component F)				
Projected Postretirement Benefit Obligation (ICPA Component G)				
Projected Decommissioning and Demolition Obligation (ICPA Component H)				
Total Projected Demand Costs (ICPA Components A, B, C, D, E, F, G, H)			(16,739)	
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (negligent, fuel oil & coal handling less byproduct sales)				
Total Projected Energy Costs			(46,849)	4.62%
Transmission Charge				
Projected Transmission Charge				
Less Transmission Charges Credit to Demand Charge (ICPA Component B)			0	0.00%
Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
Summary of ICPA Billable Power Production Costs				
Summary of ICPA Billable Power Production Costs Less Projected Dividend				

CONFIDENTIAL

OVEC 00101

Ohio Valley Electric Corporation
Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2014 - 2018
In thousands of dollars

	2014	2015	2016	2017	2018
Generation Sales					
Demand Charge					
\$445 Million - 5.00% Senior Unsecured Notes - Series 2005A (\$22 million refinanced 6.40%) \$300 Million - 5.00% Senior Unsecured Notes - Series 2007A-C (\$43.9 million refinanced 6.50%) \$200 Million - 5.00% Senior Unsecured Notes - Series 2008A \$200 Million - 6.71% Senior Unsecured Notes - Series 2008B-C (\$50.3 million refinanced 6.91%) \$100 Million - Floating Rate LOC Backed Bonds - OAGDA Tax Exempt 2009-A-D \$100 Million - 5.025% Bonds - OAGDA Tax Exempt 2009-E \$100 Million - Floating Rate Bonds - IFA Tax Exempt 2010-A-B \$200 Million - 5.00% Bonds - IFA Tax Exempt 2012-A \$100 Million - Floating Rate - IFA Tax Exempt 2012-B-C \$100 Million - Floating Rate Notes - Series 2013-A					
Projected Coal Cost (delivered)					
Energy Charge					
Transmission Charge					
Summary of ICPA Billable Power Production Costs					
Dividend					
Summary of ICPA Billable Power Production Costs Less Projected Dividend					
Projected Power Production Costs Less Projected Dividend - Same as Estimated Surplus Energy Use Factor of 90% Projected Power Production Costs Less Projected Dividend - Same as Estimated Surplus Energy Use Factor of 90%					

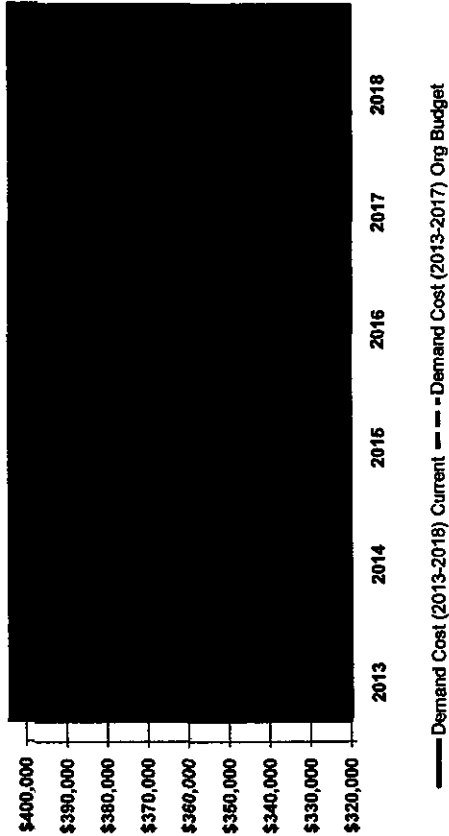
Critical Assumptions:
 Major Environmental Capital Projects (3180 Compliance, Dry Fly Ash Conversion, Pond Modifications, and Landfill Expansion) funded by Long Term Financing beginning in 2019.
 Exclusion of 5 Year Funding Holiday on contributions to Retirement Benefit Obligation from 10/2013 to 12/2016.

Demand Cost Projection

Comparison with prior budget

OVEC/KEC

DEMAND COST COMPARISON



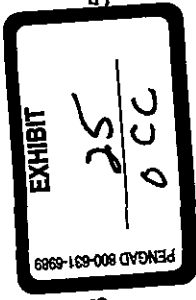
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OVEC 00103

[illegible]

Critical Information: Critical Incident Periods (CRIP) Compliance, Dry Fly Air Conversion, Pencil Modifications, and Laminar Exposure) funded by Long Beach Unified School District.

OVFC 00298



Duke ESP 3

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OVEC-IKEC

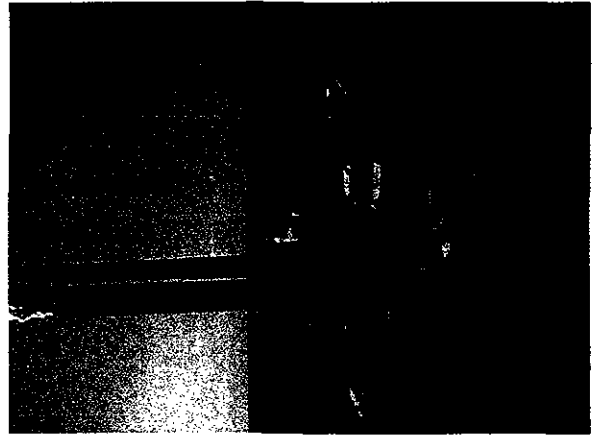
Future Major Environmental Projects

In thousands of dollars

	2016	2017	2018	2019	2020
Projected Kyger FGD Landfill Capital Costs for Phase 2 - 5 and New Landfill	-	-	-	-	-
Projected Clifty FGD Landfill Capital Costs for Phase 2 -4 and Lateral Expansion	-	-	-	-	-
Projected Kyger Dry Flyash Conversion	-	-	-	-	-
Projected Kyger New North Settlement Pond - Wastewater Treatment	-	-	-	-	-
Projected Kyger South Fly Ash Pond Closure	-	-	-	-	-
Projected Kyger BioReactor - FGD WWTP	-	-	-	-	-
Projected Kyger Bottom Ash Pond Reline	-	-	-	-	-
Projected Clifty BioReactor - FGD WWTP	-	-	-	-	-
Projected Clifty West Bottom Ash Pond Reline	-	-	-	-	-
Projected Kyger and Clifty compliance with Section 316b of Clean Water Act	-	24,200	24,200	-	-
Total	-	-	-	-	-

Impact to OVEC-IKEC Power Cost - Assumed Major Projects Financed

Short Term Debt Expense - LOC estimated % (current)	-	-	-	-	-
Estimated LT Financing	-	-	-	-	-
Estimated LT Financing	-	-	-	-	-
Total	-	-	-	-	-
Power Cost \$/MWhr	\$	\$	\$	\$	\$



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Duke ESP 3



Environmental Capital Projects – BOD Update

October 22, 2014

OVEC 00299

Meeting Agenda

DISCUSSION TOPICS

Introduction..... Mark Peifer

Update on Scrubber Performance Mike Brown

Update on MATS Compliance Preparation..... Mike Brown

Future Environmental Capital Projects..... Mike Brown

Financial Discussion..... John Brodt

Scrubber Performance

■ Kyger Scrubbers:

- JBR 35 - November 2011
- JBR 12 - February 2012

■ Clifty Creek Scrubbers:

- JBR 46 - March 2013
- JBR 13 - May 2013

MATS Compliance - Overview

■ Clifty Creek and Kyger Creek:

- Sorbent Traps for Hg compliance – systems being installed, compliance at both plants expected
- SO₂ emission limit to be used as a surrogate for Acid Gas compliance
- PM Monitors for non-mercury metals compliance – Clifty PM monitor installed, Kyger PM monitor installation under way
- MATS Work Practices Standards for Boiler Tuning and Optimization

Future Environmental Capital Projects – *Four Major Components*

1. Landfill Expansion at both Plants
2. 316(b) Compliance Activities
3. Dry Fly Ash Conversion at Kyger Creek – Three components
4. Other ELG/CCR Compliance Activities
 - Boiler Slag/Bottom Ash Ponds
 - Bioreactor for Selenium Control

Landfill Expansion at both Plants (1)

- Next Phase at Kyger Creek – beginning in 2018
 - [REDACTED] (2018-2020)
- Next Phase at Clifty Creek – beginning in 2019
 - [REDACTED] (2019-2020)
- Longer term spend may be reduced at both locations with Gypsum sales

316(b) Compliance (2)

- Final rule published in Federal Register on 08/15/14
- Requires two-year fish entrainment studies at both plants to begin in March of 2015
 - Studies will be submitted concurrent with the NPDES permit renewal of both plant sites (Clifty by 1/31/2016 and Kyger by 10/31/2018)
 - Study submittal will include recommendation on the impingement technology we intend to install at each location (wedge wire screens or modified traveling screens)
- Current capital forecast is for wedge wire screens
 - [REDACTED] - Clifty
 - [REDACTED] - Kyger

Kyger Creek Plant Dry Fly Ash Conversion (3)

■ December 4, 2012 Resolution approved funding a Phase I study to:

- Perform preliminary engineering and design of a dry fly ash (DFA) handling system for all five Units including conceptual design review,
- Perform preliminary engineering study to close the South Fly Ash Pond (SFAP), and
- Develop a conceptual design for a new wastewater treatment system for residual wastewater currently discharged through the fly ash impoundment

■ Reported the study results and recommendations at the December 2013 Board Meeting

Kyger Creek Plant Dry Fly Ash Conversion (3)

■ Coal Combustion Residuals (CCR) Rule Assumptions

- CCR regulated as non-hazardous waste (Option D)
 - Fly Ash Pond - cease sluicing, close and cap pond
 - Bottom Ash Pond - continue sluicing, clean out pond, reline
- Final CCR Rule December 2014, Compliance Date 4Q2019

■ Effluent Limitation Guidelines (ELG) Rule Assumptions

- Fly Ash – Dry Handling; Bottom Ash – No Changes;
- FGD WWTP Discharge – Bioreactor; Non-Chemical Metal Cleaning Waste – No Changes (manage as low-volume waste);
- CCR Leachate – No Changes (manage in existing impoundments)
- Final ELG Rule September 2015, Compliance Date Follows the NPDES Cycle, assumes 3-year compliance period

Kyger Creek Plant Dry Fly Ash Conversion (3)

■ Wet to Dry Ash Conversion [REDACTED]

- Install vacuum transport system to new filter separators, pressure transport system from filter separators to new silos (2), fly ash conditioning system for ash transport via truck or conveyor and option to sell ash from storage silos

■ North Settling Pond [REDACTED]

- New 15-acre HDPE lined settling pond complex constructed in closed North Fly Ash Pond Area

■ South Fly Ash Pond (SFAP) Closure [REDACTED]

- Closure of 66-acre SFAP, utilize boiler slag, gypsum and fly ash for closure sub-grade, construct final cap cover per OEPA requirements, demolish pond discharge structure

Other CCR/ELG Compliance Activities (4)

Bottom Ash Pond Reline:

- Final ELG Rules are similar to Preferred Option 4a in draft rule - allow Units that are ≤ 400 MW to maintain Bottom Ash Transport Water Impoundments
- Pond Relining required under Final CCR Rules
 - Forecasted spend beginning in 2017 and completed in 2019
 - [REDACTED] for Clifty Creek West Bottom Ash Pond Reline
 - [REDACTED] for Kyger Creek Bottom Ash Pond Reline

Note: Cost estimate assumes entire pond footprint is relined. Reforecast expected to take place once final rules are issued.

Bioreactor for Selenium Control:

- FGD WWTP Bioreactor
 - [REDACTED] per plant (Kyger and Clifty)

Future Environmental Capital Projects -

Projected Costs and Power Cost Impact (in thousands of dollars)

Project	Regulatory Driver	2015	2016	2017	2018	2019	2020	2021
Landfill Expansions:								
Kyger FGD Landfill - Phase 2	Landfill Expansion							
Clifty FGD Landfill - Phase 2	Landfill Expansion							
316(b) Compliance								
Clifty compliance with 316(b)	316(b) Rule							
Kyger compliance with 316(b)	316(b) Rule							
Dry Fly Ash Conversion (Kyger)								
Kyger Dry Fly Ash Conversion	ELG/CCR Rules							
Kyger New North Settlement Pond - WWTP	ELG/CCR Rules							
Kyger South Fly Ash Pond Closure	ELG/CCR Rules							
Other ELG/CCR Compliance								
Kyger BioReactor - FGD WWTP	ELG-Selenium							
Kyger Bottom Ash Pond Reline	CCR							
Clifty BioReactor - FGD WWTP	ELG-Selenium							
Clifty West Bottom Ash Pond Reline	CCR							
Total Major Environmental Projects								

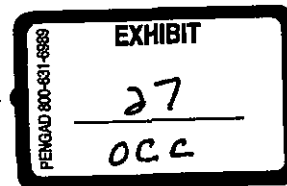
Impact to OVEC-IKEC Power Cost -

Long Term Debt Expense - \$300 M 2018-2020 (issuance)

Total Debt Expense (ICPA Component A)								
Projected Power Cost \$/MWhr (85% Sponsor Use Factor)	\$							
Projected Power Cost \$/MWhr (95% Sponsor Use Factor)								
Projected Power Cost \$/MWhr (75% Sponsor Use Factor)								

QUESTIONS?

Duke ESP 3 -



SPONSORING COMPANY ACKNOWLEDGMENT
TO THE [REDACTED] PROPOSAL FOR
ASSIGNMENT TO [REDACTED] UNDER THE AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [REDACTED] Proposal by August 15, 2013,
by checking one of the boxes below and signing in the appropriate signatory block and return
one fully executed original to [REDACTED].

☒ SPONSORING COMPANY AGREES WITH THE [REDACTED] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [REDACTED]
PROPOSAL

SPONSORING COMPANY

Kentucky Utilities Company

By: *John N. Voyles Jr.*

Name: John N. Voyles Jr.

Title: Vice President

Date: 8/12/13

SPONSORING COMPANY ACKNOWLEDGMENT
TO THE [REDACTED] PROPOSAL FOR
ASSIGNMENT TO [REDACTED] UNDER THE AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the DEO Proposal by August 15, 2013,
by checking one of the boxes below and signing in the appropriate signatory block and return
one fully executed original to [REDACTED]

☒ SPONSORING COMPANY AGREES WITH THE [REDACTED] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [REDACTED] INC.
PROPOSAL

SPONSORING COMPANY

Louisville Gas & Electric Company

By: *John N. Givler Jr.*
Name: John N. Givler Jr.
Title: Vice President
Date: 8/12/13

SPONSORING COMPANY ACKNOWLEDGEMENT

TO THE [REDACTED], FOR
ASSIGNMENT TO [REDACTED] LLC UNDER THE AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [REDACTED] Proposal by August 15, 2013,
by checking one of the boxes below and signing in the appropriate signatory block and return
one fully executed original to [REDACTED]

☒ SPONSORING COMPANY AGREES WITH THE [REDACTED] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [REDACTED]
PROPOSAL.

SPONSORING COMPANY

Signed: Stephen T. Haynes
Name: Stephen T. Haynes
Title: Vice President
Date: 8/13/13

SPONSORING COMPANY ACKNOWLEDGMENT

TO T [REDACTED] INC. PROPOSAL FOR
ASSIGNMENT TO [REDACTED] UNDER THE AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010.

Please evidence your agreement or disagreement with the [REDACTED] Proposal by August 15, 2013,
by checking one of the boxes below and signing in the appropriate signatory block and return
one fully executed original to [REDACTED]

☒ SPONSORING COMPANY AGREES WITH T [REDACTED] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH [REDACTED]
PROPOSAL

SPONSORING COMPANY

Appalachian Power

By:

Stephan T Haynes

Name:

Stephan T Haynes

Title:

Vice President

Date:

8/14/13

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [REDACTED] FOR

ASSIGNMENT TO [REDACTED] UNDER THE AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010.

Please evidence your agreement or disagreement with the [REDACTED] Proposal by August 15, 2013,
by checking one of the boxes below and signing in the appropriate signatory block and return
one fully executed original to [REDACTED]

☒ SPONSORING COMPANY AGREES WITH THE [REDACTED] PROPOSAL.

☐ SPONSORING COMPANY DISAGREES WITH THE [REDACTED]
PROPOSAL

SPONSORING COMPANY

Indiana Michigan Power

By:

Name:

Title:

Date:

Stephen T. Hayes

Stephen T. Haynes

Vice President

8/14/13

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [REDACTED] PROPOSAL FOR
ASSIGNMENT TO [REDACTED] UNDER THE AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

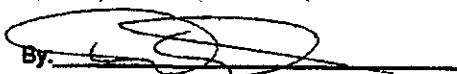
Please evidence your agreement or disagreement with the [REDACTED] Proposal by August 15, 2013,
by checking one of the boxes below and signing in the appropriate signatory block and return
one fully executed original to [REDACTED]

☐ SPONSORING COMPANY AGREES WITH THE [REDACTED] PROPOSAL

☒ SPONSORING COMPANY DISAGREES WITH THE [REDACTED]
PROPOSAL

SPONSORING COMPANY

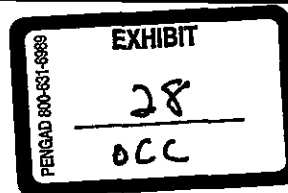
Peninsula Generation Cooperative

By: 

Name: Dan DeCoeur

Title: President & CEO

Date: 08-14-2013



Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Twelfth Set Interrogatories
Date Received: August 13, 2014

OCC-INT-12-345

REQUEST:

For the most recent 12 months of available data, please identify the Utility's (a) total retail bad debt expense; and (b) the portion of the total retail bad debt expense incurred by the Utility associated with those accounts billed subject to the Utility's purchase of receivables ("POR") program.

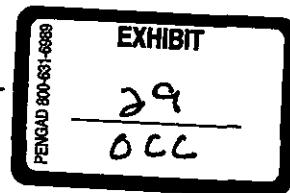
RESPONSE:

The total charge-offs for the twelve months ended March 31, 2014 for residential accounts was \$2,154,941.

The total charge-offs for the twelve months ended March 31, 2014 for non-residential accounts was \$113,418.

The portion of the total retail bad debt expense associated with POR accounts is not available.

PERSON RESPONSIBLE: James E. Ziolkowski



Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014

**OCC-INT-16-416 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY**

REQUEST:

The response to OEG-DR-01-001 HIGHLY CONFIDENTIAL provides capacity prices and revenues.

- a. Capacity prices in PJM are established on the basis of "delivery years" from June 1 through May 31. Identify the capacity prices that were assumed in preparing the annual "PJM Capacity (\$/MW-Day)" values shown in OEG-DR-01-001 HIGHLY CONFIDENTIAL.
- b. PJM capacity prices have only been established through May 31, 2018 at this time. Describe how the capacity prices shown in the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL for June 1, 2019 through 2024 were developed.

RESPONSE:

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY

Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only

- a. The annual prices shown for 2015 – 2018 are based on the published prices through May 2018 plus an estimate for Jun – Dec 2018 that is [REDACTED] of the [REDACTED] from the [REDACTED] through [REDACTED] auctions. The annual prices were derived using a 365 day convention with 151 days for the Jan – May period and 214 days for the Jun – Dec period. As an example, the 2015 annual price is the weighted average of the 2014/2015 prices and 2015/2016 prices, with the 2014/2015 price covering 151 days and the 2015/2016 price covering the remaining 214 days. The table below shows the prices that were used to derive the annual prices.

Capacity Prices	S/MTW-Day
2014/2015	\$125.99
2015/2016	\$136.00
2016/2017	\$99.37
2017/2018	\$120.00
2018/2019	
2019	
2020	
2021	
2022	
2023	
2024	

- b. The 2019 through 2024 prices represent an average of an internal Duke Energy capacity price forecast and a forecast from Energy Ventures Analysis (EVA). The EVA data was provided on a calendar year basis.

PERSON RESPONSIBLE: Bryan Dougherty



Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014

**OCC-INT-16-417 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY**

REQUEST:

The response to OCC-INT-09-169 HIGHLY CONFIDENTIAL states that Duke Energy Ohio offered and cleared [REDACTED] MW, [REDACTED] MW and [REDACTED] MW of its entitlement to OVEC capacity in the RPM base residual auctions for 2015/16, 2016/17 and 2017/18 respectively.

- a. What explains the [REDACTED] in the quantity offered and cleared over this period?
- b. The response to OEG-DR-01-001 HIGHLY CONFIDENTIAL, part b, states that Duke Energy Ohio uses [REDACTED] MW as a forecast for UCAP for the period between 2015 and 2024. Explain the basis for this assumption.

RESPONSE:

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY

Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only

Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection, to the extent discoverable, and in the spirit of discovery:

- a. At the time of the 2015/16 auction, Duke Energy Ohio's entitlement to OVEC was treated as part of an overall portfolio and no attempt was made to reflect assumptions about forced outages; consequently, the UCAP equaled the ICAP.

For the 2016/17, Duke Energy Ohio's entitlement to OVEC was addressed separately including outage assumptions; consequently, the change from 2015/16 to 2016/17 is due to recognizing the UCAP.

After the 2016/17 auction and as a result of the environmental equipment installed at OVEC's generating stations, the ICAP for Kyger Creek and Clifty Creek was reduced.

Consequently, the combination of assumed EFOR rates and the lower ICAP values, the available capacity associated with Duke Energy Ohio's entitlement to OVEC capacity for 2017/18 was [REDACTED] from the 2016/17 values.

- b. The [REDACTED] MW value had been used in prior long term forecasts and was assumed to continue for the entire forecast period. This was a simplifying assumption that did not factor in the actual capacity bid into the auctions.

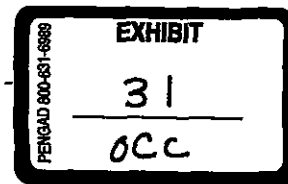
PERSON RESPONSIBLE:

As to objection - Legal

As to response -

(a) William Don Wathen Jr.

(b) Bryan Dougherty



Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
SIERRA CLUB Third Set Interrogatories
Date Received: September 12, 2014

SIERRA-INT-03-072 HIGHLY CONF

REQUEST:

Please refer to the spreadsheet in Attachment to Highly Confidential Response OEG-DR-01-001.

On the tab labelled "puco request" please explain the following:

- a. Why does generation volume (row 8) [REDACTED] in 2019 to [REDACTED] GWhs and remain at similar levels through 2024? Please provide supporting analyses and workpapers.
- b. What is the basis for the increase in capacity prices (row 10) beginning in 2019? Please provide supporting analyses and workpapers.
- c. What is the basis for the increase in energy costs (row 21) starting in 2019? Please provide supporting analyses and workpapers.
- d. What is the basis for the increase in energy revenue rate (row 29) starting in 2020? Please provide supporting analyses and workpapers.

RESPONSE:

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
Produced for purposed of PUCO Case Nos. 14-841-EL-SSO, 14-842-EL-ATA only
FOR ATTORNEYS' EYES ONLY

- a. The 2015 – 2018 data is from a model run that utilized market curves, while the 2019 – 2024 data is from a model run that utilized a set of fundamental curves. Some further clarification can be found in the table below, which shows the peak and off-peak power prices, the energy costs and the resulting margin rates on a per unit basis for 2015 – 2019. Again, the 2015 – 2018 data represent market curves while the 2019 data represents fundamental curves. The data shows [REDACTED] margin rates for peak power for the entire period, but note the relatively low off-peak margins for 2015 – 2018 and then a [REDACTED] in the off-peak margins in 2019 when the fundamental curves are used. This [REDACTED] of almost \$ [REDACTED]/MWh in the off-peak margins from 2018 to 2019 indicates that there will be [REDACTED] off-peak hours in the money in 2019 compared to the prior years, so much of the

volume [REDACTED] between 2018 and 2019 is due to [REDACTED] modeled off-peak hours.

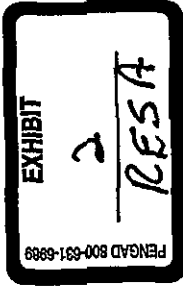
Margin Rate Cales (\$/MWh)	2015	2016	2017	2018	2019
AD Hub Peak Power Price	[REDACTED]				
Energy Cost					
Peak Margin Rate					
AD Hub Off-Peak Power Price	[REDACTED]				
Energy Cost					
Off-Peak Margin Rate					

- b. The capacity prices for 2019 – 2024 represent an average of an internal Duke Energy capacity price forecast and an external forecast. The table below shows the relevant prices used in the analysis:

Capacity Prices (\$/MW-Day)	2019	2020	2021	2022	2023	2024
External Capacity Forecast	[REDACTED]					
Internal Capacity Forecast						
Average External and Internal Forecast						

- c. The large increase in energy costs on row 21 in 2019 compared to prior years is due the [REDACTED] modeled generation volumes. The further increase in 2020 from 2019 is primarily due to the inclusion of costs associated with [REDACTED] that are included in the fundamental data set. Please see the responses to OCC-INT-16-420 and OCC-INT-16-421 for additional details.
- d. The power prices in the fundamental curve dataset show a [REDACTED] from 2019 to 2020 and this is reflected in the modeled energy revenues. Per the response to c. above, 2020 includes costs for [REDACTED] and the power prices reflect a similar [REDACTED] to account for these additional costs.

PERSON RESPONSIBLE: Bryan Dougherty



Duke Energy Ohio
Allocations of Capacity Costs for Rate Design - January 2012 - May 2013

No	Description	Allocation of Rider RC Revenue Requirement ⁽¹⁾			
		Percent of Total	Allocated \$	kWh Sales ⁽²⁾	Rate (¢/kWh) ⁽³⁾
Rate Schedule:					
1	Residential (RS, TD, ORH)	39.12%	\$46,658,850	10,195,029,765	0.46
2	Electric Space Heating (EH)	0.47%	\$561,859	146,825,619	0.38
3	Secondary Distribution - Small (DM)	3.05%	\$3,638,480	785,510,905	0.46
4	Unmetered Small Fixed Load (GSFL, ADPL)	0.17%	\$200,728	44,017,767	0.46
5	Secondary Distribution (DS)	36.50%	\$43,648,928	9,390,338,772	0.46
6	Primary Distribution (DP)	9.66%	\$11,525,976	3,248,073,423	0.35
7	Transmission Voltage (TS)	10.33%	\$12,324,786	4,695,906,496	0.26
8	Lighting	0.59%	\$698,123	152,543,234	0.46
9	Total	100.00%	\$119,257,730	28,658,245,981	0.42

Note: ⁽¹⁾ Rider RC is allocated in the following manner: First, the total amount is allocated to DP and TS based on 1 CP allocator. The allocation among all other classes is based on energy.

⁽²⁾ Projected kWh sales for the period January 1, 2012, through May 31, 2013.

⁽³⁾ Average Rider RC rates are shown for comparison only. The actual rates for each class are calculated on Exhibit 2 (Attachment B), page 2.

Duke Energy Ohio
Convert Capacity and Energy Prices for Proposed Delivery Periods

Period	Methodology for Calculating Average Price for Rider RC				
	Underlying Capacity Price		Days in Period	Capacity Cost To Recover ⁽³⁾	Projected MWh in Period ⁽⁴⁾
	Demand ⁽¹⁾	FZCP ⁽²⁾			
Jan '12 - May '12	4,732	\$116.16	152	\$88,980,437	8,533,333
Jun '12 - May '13	4,732	16.46	365	30,277,293	20,473,777
Jun '13 - May '14	4,732	27.73	365	51,007,857	20,810,354
Jun '14 - May '15	4,732	125.99	365	231,751,890	21,177,162
					Average Capacity Price ⁽⁵⁾
					\$4.11
					2.45
					10.94

Note: ⁽¹⁾ Reliability Obligation as reported to PJM. (Will need to update future years for any growth).
⁽²⁾ PJM's Final Zonal Capacity Price. Prices shown for June 2012 through May 2015 are based on the results of the Base Residual Auctions for those delivery periods.
⁽³⁾ FZCP Prices are at load zone. Gross up by 6.5% for average T&D losses.
⁽⁴⁾ Estimated MWh sales as shown in Attachment WDW-2.
⁽⁵⁾ Assumes first delivery period is January 2012 through May 2014.

Calendar Year	Calculate Average Price for Rider RE	
	Mkt Price ⁽¹⁾	Avg Energy
Jan '12 - Dec '12	\$61.40	\$56.19
Jan '13 - Dec '13	66.30	64.35
Jan '14 - Dec '14	78.70	71.62
Jan '15 - Dec '15 ⁽³⁾	90.40	79.46

Delivery Period	Price for Period	
	Wtd Energy ⁽⁴⁾	Avg Cap
Jan '12 - May '13	\$58.59	\$4.11
Jun '13 - May '14	68.59	2.45
Jun '14 - May '15	76.19	10.94

⁽¹⁾ Total Projected Retail Market Price from JLR Testimony, Exhibit W. At the meter.
Figures in Exhibit W are in Calendar Year.
⁽²⁾ Weighted average capacity price converted to average per MWh.
⁽³⁾ ESP ends on May 31, 2015.
⁽⁴⁾ Weighted by months of calendar year prices from Exhibit W in each delivery period.