

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

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|--|---|--------------------------------|
| In the Matter of the Application of Duke |) | |
| Energy Ohio, Inc., for Authority to Establish |) | |
| a Standard Service Offer Pursuant to Section |) | |
| 4928.143, Revised Code, in the Form of an |) | Case No. 17-1263-EL-SSO |
| Electric Security Plan, Accounting |) | |
| Modifications and Tariffs for |) | |
| Generation Service |) | |
| | | |
| In the Matter of the Application of Duke |) | |
| Energy Ohio, Inc., for Authority to Amend its |) | Case No. 17-1264-EL-ATA |
| Certified Supplier Tariff, P.U.C.O. No. 20 |) | |
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| In the Matter of the Application of Duke |) | |
| Energy Ohio, Inc., for Authority to Defer |) | Case No. 17-1265-EL-AAM |
| Vegetation Management Costs |) | |

**SIERRA CLUB’S FIRST SET OF INTERROGATORIES AND REQUESTS FOR
PRODUCTION OF DOCUMENTS TO
DUKE ENERGY OHIO, INC**

Pursuant to Sections 4901-1-19, 4901-1-20, and 4901-1-22 of the Ohio Adm. Code, Sierra Club submits the following Interrogatories and Requests for Production of Documents, for response by the Duke Energy Ohio, Inc. (“Duke” or the “Company”) in the above-captioned proceeding. Sierra Club seeks the responses within the time period required by the Public Utilities Commission of Ohio or its authorized representative. Please produce the requested documents in electronic format to:

Richard C. Sahli (Ohio Bar #0007360)
Richard Sahli Law Office, LLC
981 Pinewood Lane
Columbus, Ohio 43230-3662
Telephone: (614) 428-6068
rsahli@columbus.rr.com

Definitions

As used in these discovery requests, these words and phrases have the following meanings:

- A. The term “Duke,” “Applicant,” or “Company” means Duke Energy Ohio, Inc., including any affiliated companies, predecessors-in-interest, employees, and representatives.
- B. “Application” means the Duke Energy Ohio, Inc.’s Application for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143 in the form of an Electric Security Plan, which was filed by the Company on June 1, 2017, in the above-captioned proceeding, and including all witness testimony and attachments thereto, and all work papers filed by the Company.
- C. “OVEC Units” means Clifty Creek Units 1-6 and Kyger Creek Units 1-5.
- D. “Document” refers to written matter of any kind, regardless of its form, and to information recorded on any storage medium, whether in electrical, optical, or electromagnetic form, and capable of reduction to writing by the use of computer hardware and software, and includes all copies, drafts, proofs, both originals and copies either (1) in the possession, custody, or control of the Company regardless of where located, or (2) produced or generated by, known to or seen by the Company, but now in their possession, custody, or control, regardless of where located whether or still in existence.

Such “documents” shall include, but are not limited to, applications, permits, monitoring reports, computer printouts, contracts, leases, agreements, papers, photographs, tape recordings, transcripts, letters or other forms of correspondence, folders or similar containers, programs, telex, TWX and other teletype communications, memoranda, reports, studies, summaries, minutes, minute books, circulars, notes (whether typewritten, handwritten or otherwise), agenda, bulletins, notices, announcements, instructions, charts, tables, manuals, brochures, magazines, pamphlets, lists, logs, telegrams, drawings, sketches, plans, specifications, diagrams, drafts, books and records, formal records, notebooks, diaries, registers, analyses, projections, email correspondence or communications and other data compilations from which information can be obtained (including matter used in data processing) or translated, and any other printed, written, recorded, stenographic, computer-generated, computer-stored, or electronically stored matter, however and by whomever produced, prepared, reproduced, disseminated or made.

Without limitation, the term “control” as used in the preceding paragraphs means that a document is deemed to be in your control if you have the right to secure the document or a copy thereof from another person or public or private entity having actual possession thereof. If a document is responsive to a request, but is not in your possession or custody, identify the person with possession or custody. If any document was in your possession or subject to your control, and is no longer, state what disposition was made of it, by whom, the date on which such disposition was made, and why such disposition was made.

For purposes of the production of “documents,” the term shall include copies of all documents being produced, to the extent the copies are not identical to the original, thus requiring the production of copies that contain any markings, additions or deletions that make them different in any way from the original

- E. To “identify” a document means to describe by reference to:
1. The title, heading, or caption of such document, if any;
 2. The identifying number(s), letter(s), or combination thereof, if any, and the significance or meaning of such number(s), letter(s), or combination thereof;
 3. The date appearing on such document and if no date appears thereon, the answer shall so state and shall give the date, or approximate date, on which each document was prepared;
 4. The general nature or description of such document (*i.e.*, whether it is a letter, memorandum, minutes of a meeting, etc.) and the number of pages of which it consists;
 5. The name of the person who signed such document and if it was not signed, the answer shall so state and shall give the name of the person or persons who prepared it;
 6. The name of the person to whom such document was addressed and the name of each person, other than such addressee, to whom such document, or a copy thereof, was sent;
 7. The name of the person who has custody of such document.
- F. To “identify” a person means to state the person’s name, address, and business relationship (e.g., “employee”) to the Company;

- G. “And” and “or” shall be construed either conjunctively or disjunctively as required by the context to bring within the scope of these interrogatories and requests for production of documents any information which might be deemed outside their scope by another construction.
- H. “Any” means all or each and every example of the requested information.
- I. “Communication” means any transmission or exchange of information between two or more persons, whether orally or in writing, and includes, without limitation, any conversation or discussion by means of letter, telephone, note, memorandum, telegraph, telex, telecopy, cable, email, or any other electronic or other medium.
- J. To describe “in detail” means to describe by reference to the underlying specific facts rather than by reference to the ultimate facts or conclusions of law, and wherever possible to use quantitative descriptors in place of qualitative descriptors.
- K. “Person” includes any firm, corporation, joint venture, association, entity, or group of natural individuals, unless the context clearly indicates that only a natural individual is referred to in the discovery request.
- L. The terms “PUCO” and “Commission” refer to the Public Utilities Commission of Ohio, including its Commissioners, personnel (including persons working for the PUCO Staff as well as in the Public Utilities Section of the Ohio Attorney General’s Office), and offices.
- M. The term “reconcile,” when used with respect to two items, means to state whether the two items are the same.
- N. “Relating to” or “concerning” means and includes pertaining to, referring to, or having as a subject matter, directly or indirectly, expressly or implied, the subject matter of the specific request.
- O. The “testimony” of a witness means the witness’s testimony in the above-captioned case, unless a different case number is specified.
- P. “Work papers” are defined as original, electronic, machine-readable, unlocked, Excel format (where possible) with formulas intact.
- Q. “You,” and “Your,” or “Yourself” refer to the party requested to answer interrogatories or produce documents, including any present or former director, officer, agent, contractor, consultant, advisor, employee, partner, or joint venturer of such party.

- R. Each singular shall be construed to include its plural, and vice versa, so as to make the request inclusive rather than exclusive.
- S. Words expressing the past tense shall be deemed to express the present tense; and vice versa

INSTRUCTIONS FOR ANSWERING

- A. All information is to be divulged which is in your possession or control, or within the possession or control of your attorney, agents, or other representatives of yours or your attorney.
- B. Where an interrogatory calls for an answer in more than one part, each part should be separate in the answer so that the answer is clearly understandable.
- C. Each interrogatory shall be answered separately and fully in writing under oath, unless it is objected to, in which event the reasons for objection shall be stated in lieu of an answer. The answers are to be signed by the person making them, and the objections are to be signed by the attorney making them.
- D. If any answer requires more space than provided, continue the answer on an added page.
- E. Your organization(s) is requested to produce responsive materials and information within its physical control or custody, as well as that physically controlled or possessed by any other person acting or purporting to act on your behalf, whether as an officer, director, employee, agent, independent contractor, attorney, consultant, witness, or otherwise.
- F. Where these requests seek quantitative or computational information (e.g., models, analyses, databases, and formulas) stored by your organization(s) or its consultants in computer-readable form, you are requested to produce such computer-readable information, in order of preference:
 - a. Microsoft Excel worksheet files;
 - b. other Microsoft Windows or Excel compatible worksheet or database;
 - c. ASCII text files; and

- d. such other magnetic media files as your organization(s) may use.
- G. Conversion from the units of measurement used by your organization(s) in the ordinary course of business need not be made in your response; e.g., data requested in kWh may be provided in mWh or gWh as long as the unit measure is made clear.
- H. Unless otherwise indicated, the following requests shall require you to furnish information and tangible materials pertaining to, in existence, or in effect for the whole or any part of the period from November 2014 through and including the date of your response.
- I. Responses must be complete when made, and must be supplemented with subsequently acquired information at the time such information is available.
- J. In the event that a claim of privilege is invoked as the reason for not responding to discovery, the nature of the information with respect to which privilege is claimed shall be set forth in responses together with the type of privilege claimed and a statement of all circumstances upon which the respondent to discovery will rely to support such a claim of privilege (i.e. provide a privilege log). Respondent to the discovery must a) identify (see definition) the individual, entity, act, communication, and/or document that is the subject of the withheld information based upon the privilege claim, b) identify all persons to whom the information has already been revealed, and c) provide the basis upon which the information is being withheld and the reason that the information is not provided in discovery.
- K. Wherever the response to a request consists of a statement that the requested information is already available to Sierra Club, provide a detailed citation to the document that contains the information. This citation shall include the title of the document, relevant page number(s), and to the extent possible paragraph number(s) and/or chart/table/figure number(s).
- L. In the event that any document referred to in response to any request for information has been destroyed, specify the date and the manner of such destruction, the reason for such destruction, the person authorizing the destruction, and the custodian of the document at the time of its destruction.
- M. Sierra Club reserves the right to serve supplemental, revised, or additional discovery requests as permitted in this proceeding.

INTERROGATORIES

1. For each of the years 2012 through 2016, and each month in 2017 to date, and for each of the OVEC Units, identify the:
 - a. Capacity factor
 - b. Availability
 - c. Heat rate
 - d. Forced outage rate
 - e. Unforced outage rate
 - f. Fixed operating and maintenance (“O&M”) cost
 - g. Variable O&M cost
 - h. Fuel cost
 - i. Environmental capital cost
 - j. Non-environmental capital cost
 - k. Depreciation cost
 - l. Return on equity
 - m. Interest expense
 - n. Taxes
 - o. SO₂ emission rate
 - p. NO_x emission rate
 - q. Mercury emission rate
 - r. Particulate matter emission rate
 - s. Hydrochloric acid emission rate

RESPONSE:

2. For each of the years 2002 through 2011, and for each of the OVEC Units, identify the forced outage rate.

RESPONSE:

3. For each of the years 2018 through 2025 and for each unit of the OVEC Units, identify the projected:
 - a. Capacity factor
 - b. Availability
 - c. Heat rate
 - d. Forced outage rate
 - e. Unforced outage rate
 - f. Fixed O&M cost
 - g. Variable O&M cost
 - h. Fuel cost
 - i. Environmental capital cost

- j. Non-environmental capital cost
- k. Depreciation cost
- l. Return on equity
- m. Interest expense
- n. Taxes
- o. SO₂ emission rate
- p. NO_x emission rate
- q. Mercury emission rate
- r. Particulate matter emission rate
- s. Hydrochloric acid emission rate

RESPONSE:

- 4. With regard to each of the OVEC Units:
 - a. Describe in detail any planned outages for maintenance or repair scheduled between January 1, 2018, and June 1, 2025, including the duration of each such outage and the estimated cost of such maintenance or repairs.
 - b. Describe in detail any unplanned outages that have occurred since January 1, 2010, including the duration of each such outage, steps taken to address the cause of each such outage, and the cost of such steps.
 - c. Identify any operational issues that any of the OVEC Units experienced during January, February, or March 2014.
 - d. Identify the forced outage rate for each of the units during each of January, February, and March 2014.

RESPONSE:

- 5. Identify the currently planned retirement date for each of the OVEC Units.

RESPONSE:

- 6. For each year of 2010 through 2016, and each month in 2017 to date, and the Company's portion of each of the OVEC Units, identify by unit:
 - a. Total revenue (including energy, capacity, and ancillary services) earned through operation of the unit;
 - b. Total cost (including depreciation, interest, return on equity, and taxes) of the unit;
 - c. Net book value for each unit.

RESPONSE:

7. For each year of 2018 through 2025, and the Company's portion of each of the OVEC units identify, by unit, the projected:
- a. Total revenue (including energy, capacity, and ancillary services) earned through operation of the unit;
 - b. Total cost (including depreciation, interest, return on equity, and taxes) of the unit;
 - c. Net book value for each unit.

RESPONSE:

8. With regard to the Company's portion of each of the OVEC Units, state for each year since 2011 whether each unit has covered its avoidable costs.
- a. If so, by how much?
 - b. If not, identify the size of the shortfall for each unit.

RESPONSE:

9. With regard to the Company's portion of each of the OVEC Units, state for each year since 2011 whether each unit has covered its total costs exclusive of interest, return on equity, and taxes.
- a. If so, by how much?
 - b. If not, identify the size of the shortfall for each unit.

RESPONSE:

10. For each of the OVEC units, and for each of the 2016/2017, 2017/2018, 2018/2019, and 2019/2020 PJM Base Residual Auctions, identify:
- a. The amount of capacity bid into the auction.
 - b. The price at which such capacity was bid into the auction.
 - c. The amount of capacity that cleared the auction.
 - d. The price at which such capacity cleared the auction.
 - e. For each OVEC unit that cleared in the 2018/2019 auction, identify how much capacity cleared as a Capacity Performance Resource and how much cleared as a Base Capacity Resource.
 - f. For each OVEC unit that cleared in the 2019/2020 auction, identify how much capacity cleared as a Capacity Performance Resource and how much cleared as a Base Capacity Resource.

RESPONSE:

11. For each of the OVEC units, and for each of the 2016/2017 RPM Capacity Performance Transition Incremental Auction, and the 2017/2018 RPM Capacity Performance Transition Incremental Auction, identify:
- The amount of capacity bid into the auction.
 - The price at which such capacity was bid into the auction.
 - The amount of capacity that cleared the auction.
 - The price at which such capacity cleared the auction.

RESPONSE:

12. Identify the specific capital investments that the Company anticipates would be needed for each of the OVEC Units to be capable of complying with environmental regulations through 2025. For each such investment:
- Describe the anticipated project and its timeline;
 - Identify the existing or anticipated regulation(s) that such investment would be intended to achieve compliance with.
 - Provide any available estimate of the following parameters of such project, identifying the year's dollars in which costs are stated:
 - In-service date,
 - Required outage period for installation and interconnection,
 - projected capital cost,
 - fixed O&M cost,
 - variable O&M cost,
 - effect on unit heat rate,
 - effect on unit availability.

RESPONSE:

13. State whether the Company or OVEC prepared or caused to be prepared any forecast concerning the price for Cross State Air Pollution Rule ("CSAPR") allowances for:
- Group 1 SO₂
 - Seasonal nitrogen oxide ("NOx")
 - Annual NOx
- If so:
 - Identify the forecasted prices that were identified for years 2017 through 2024.
 - State whether such price forecasts were factored into any production cost modeling analysis performed in support of the Application.
 - If so, explain how.
 - If not, explain why not.
 - If not, explain why not.

RESPONSE:

14. For each of the OVEC Units, identify the dollar value in each year since 2011 of annual coal purchases that were sourced from:
- a. Coal mines located within the State of Ohio;
 - b. Coal mines located outside the State of Ohio.

RESPONSE:

15. For each of the OVEC Units, identify the projected dollar value for each year of 2017 through 2025, for which such projection exists, the dollar value of annual coal purchases that are to be sourced from:
- a. Coal mines located within the State of Ohio;
 - b. Coal mines located outside the State of Ohio.

RESPONSE:

16. PJM's Enhanced Liaison Committee (Capacity Performance) tabulated hours that would have triggered performance assessments in its file titled "Performance Assessment Hours for 2011-2014" (3-23-2015; <http://www.pjm.com/~media/committees-groups/committees/elc/postings/performance-assessment-hours-2011-2014-xls.ashx>) and reproduced below.

| Date | Performance Region (1) | Start Time (EPT) | Stop Time (EPT) | Number of Performance Assessment Hours (3) |
|--------------------|---------------------------|---------------------|--------------------|--|
| March 4, 2014 | PJM RTO | 5:30 AM | 8:30 AM | 4 |
| January 30, 2014 | PJM RTO | 6:50 AM | 7:35 AM | 2 |
| January 8, 2014 | PJM RTO | 6:00 AM | 7:00 AM | 1 |
| January 7, 2014 | PJM RTO | 4:00 PM | 6:16 PM | 3 |
| January 7, 2014 | PJM RTO | 12:55 AM | 12:14 PM | 13 |
| January 6, 2014 | PJM RTO | 7:27 PM | 9:23 PM | 3 |
| July 18, 2013 | PJM RTO | 2:40 PM | 6:00 PM | 4 |
| July 17, 2012 | PJM RTO (4) | 3:08 PM | 7:05 PM | 5 |
| July 22, 2011 | PJM RTO | 1:30 PM | 7:37 PM | 7 |
| September 11, 2013 | AEP/ATSI - Control Zones | 2:00 PM | 6:12 PM | 5 |
| September 11, 2013 | AEP - Control Zone | 1:30 PM | 7:30 PM | 7 |
| September 10, 2013 | AEP_Canton SubZone | 4:45 PM | 9:30 PM | 6 |
| July 18, 2013 | AEP_Canton SubZone | 3:00 PM | 6:00 PM | 3 |

Please provide the operational status of each OVEC Unit during these flagged periods

RESPONSE:

17. Please provide monthly on- and off-peak quantities of power availed by Duke under the OVEC entitlement January 1, 2012 to the present. For purposes of your response, if Duke has a standard definition of on- and off-peak power used for its customary energy transactions, please provide this definition. Otherwise please define on-peak power as power used during weekday hours ending 8 am to 11 pm, and off-peak as all other hours. Please indicate whether these values are before or after deduction for transmission losses.

RESPONSE:

18. Provide the monthly on- and off-peak energy production at each of the OVEC generating units from January 1, 2012 to the present.

RESPONSE:

19. Provide the itemized monthly demand charges as calculated by OVEC for the period January 1, 2012 to the present, as described in the Amended and Restated Inter-Company Power Agreement, dated September 10, 2010, Section 5.03.

RESPONSE:

20. Please provide a record of all funds accrued by OVEC “in connection with the decommissioning, shutdown, demolition and closing of the Project Generating Stations” as described in Section 5.03(f) and Section 7.04 of the Amended and Restated Inter-Company Power Agreement, dated September 10, 2010.

RESPONSE:

21. Please provide any assessment of the sufficiency of OVEC's funding to support decommissioning, shutdown, demolition and closing of the Project Generating Stations.

RESPONSE:

22. Has Duke incurred any charges in connection with causing Minimum Loading Events, as described in the Amended and Restated Inter-Company Power Agreement, dated September 10, 2010, Section 5.05, during the period from January 1, 2012 to the present?
- a. If so, describe all such charges including months incurred and amount of such charge.

RESPONSE:

REQUESTS FOR PRODUCTION OF DOCUMENTS

1. Produce all discovery responses provided to any other party in this proceeding.
2. Provide a copy of all formal and informal requests (e.g. interrogatories, data requests) made by the Commission, the PUCO Staff, and the PUCO's Attorneys General in this Proceeding to the Company, and the responses to those requests provided by the Company.
3. Produce a non-redacted, full-color, electronic version of the Application package, including the testimony of all witnesses; all attachments, exhibits, and appendices; and all work papers. Please produce this copy of the Application package in an unsecured PDF format (i.e., without the security restrictions placed on the publicly-filed version of the Application package).
4. Please produce copies of all work papers for each of the Company's witnesses in Excel spreadsheet format with formulas intact.
5. Produce an authentic copy of the current OVEC Inter-Company Power Agreement.
6. For each of the following existing, proposed, or potential regulatory requirements, produce any study, evaluation, or analysis that the Company, OVEC, or another entity has completed or reviewed of the pollution controls that would be needed, or the estimated costs that would be incurred, to bring each of the OVEC Units into compliance with each of these requirements:
 - a. Section 316(a) of the Clean Water Act
 - b. Section 316(b) of the Clean Water Act
 - c. Clean Water Act Effluent Limitations Guidelines
 - d. Cross State Air Pollution Rule
 - e. Ozone NAAQS
 - f. PM2.5 NAAQS
 - g. 1-hour SO2 NAAQS
 - h. Coal Combustion Residual rules

The timeframe for this request is from January 1, 2012, through the date of your response.

7. For each of the OVEC Units:
 - a. Produce any analysis or assessment of the economics of continued operation of each unit or the entire plant;
 - b. Produce the most-recent condition assessment for each unit or the entire plant;
 - c. Produce any analysis or assessment of the need for the continued operation of each unit or the entire plant.

8. For each dispatch, financial, or economic modeling run you carried out or reviewed in developing or evaluating the Application:
 - a. Produce a working version of the modeling program that was used.
 - b. Produce any technical documentation for the model program.
 - c. Produce, in electronic machine readable format with formulas intact, as used in the modeling, with protections removed, all input and output files for the modeling.
 - d. Produce, in electronic machine readable format with formulas intact, any workpapers related to such modeling.
 - e. Produce any report documenting the results of that modeling.
9. Provide all invoices for payments under Duke Ohio's OVEC entitlements from January 1, 2012 to the present.
10. Please provide copies of all communications with OVEC and the Sponsoring Companies, as defined in the Amended and Restated Inter-Company Power Agreement, relating to Duke's efforts to transfer its OVEC entitlement to its unregulated generation affiliate, or to any other party.
11. Provide copies of all documents or communications submitted by or on Duke's behalf to the Ohio General Assembly related to OVEC since January 1, 2014.
12. Provide copies of all documents or communications submitted by or on Duke's behalf to the office of the Governor of Ohio related to OVEC since January 1, 2014.

Dated: November 30, 2017

Respectfully submitted,

/s/ Richard C. Sahli

Richard C. Sahli (Ohio Bar #0007360)

Richard Sahli Law Office, LLC

981 Pinewood Lane

Columbus, Ohio 43230-3662

Telephone: (614) 428-6068

rsahli@columbus.rr.com

Attorney for Sierra Club

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing *Sierra Club's First Set of Interrogatories and Requests for Production of Documents to Duke Energy Ohio, Inc.* has been served upon the following parties via electronic mail on November 30, 2017.

/s/ Richard C. Sahli

Richard C. Sahli

Service List

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| amy.spiller@duke-energy.com jeanne.kingery@duke-energy.com elizabeth.watts@duke-energy.com Rocco.dascenzo@duke-energy.com steven.beeler@ohioattorneygeneral.gov William.michael@occ.ohio.gov Kevin.moore@occ.ohio.gov fdarr@mwncmh.com mpritchard@mwncmh.com mkurtz@BKLawfirm.com jkylercohn@BKLawfirm.com dstinson@bricker.com Bojko@carpenterlipps.com Perko@carpenterlipps.com cmooney@ohiopartners.org mfleisher@elpc.org charris@spilmanlaw.com joliker@igsenergy.com mnugent@igsenergy.com whitt@whitt-sturtevant.com campbell@whitt-sturtevant.com glover@whitt-sturtevant.com | dwilliamson@spilmanlaw.com lbrandfass@spilmanlaw.com paul@carpenterlipps.com Rick.sites@ohiohospitals.org dborchers@bricker.com dparram@bricker.com eakhbari@bricker.com tdougherty@theOEC.org mleppla@theOEC.org slesser@calfee.com jlang@calfee.com talexander@calfee.com mkeaney@calfee.com mdortch@kravitzllc.com rparsons@kravitzllc.com jdortch@kravitzllc.com mjsettineri@vorys.com mjsettineri@vorys.com glpetrucci@vorys.com |
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in

Case No(s). 17-1263-EL-SSO, 17-1264-EL-ATA, 17-1265-EL-AAM

Summary: Text Sierra Club Discovery to Duke electronically filed by Mr. Richard C. Sahli on behalf of Sierra Club