

Service Date: July 14, 2016

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER OF NorthWestern Energy's
Application for Interim and Final Approval of
Revised Tariff No. QF-1, Qualifying Facility
Power Purchase

REGULATORY DIVISION
Docket No. D2016.5.39

**DATA REQUESTS VS-001 TO 012
OF VOTE SOLAR AND MONTANA ENVIRONMENTAL INFORMATION CENTER**

Vote Solar and Montana Environmental Information Center, by and through their legal counsel, hereby submit their data requests 001 through 0012 to NorthWestern Energy. Within fourteen (14) days, please forward responses to the data requests below to the undersigned counsel.

GENERAL INSTRUCTIONS

- 1) **Definitions:** For the purposes of these data requests, the following definitions shall apply:
 - a) The terms "NorthWestern Energy" and "NWE" mean NorthWestern Energy, its parent company or companies, and any and all affiliates and/or subsidiaries, successors, predecessors, agents, consultants, and witnesses in this proceeding, and any and all of their affiliates, subsidiaries, or predecessors.
 - b) The term "Company" means and includes NorthWestern Energy, its parent company or companies and any and all affiliates and/or subsidiaries, successors, predecessors, agents, consultants, and witnesses in this proceeding, and any and all of their affiliates, subsidiaries, or predecessors.
 - c) "Document" means all written, recorded or graphic matters, however produced or reproduced, pertaining in any manner to the subject of this proceeding, whether or not now in existence, without limiting the generality of the foregoing, all originals, copies and drafts of all writings, correspondence, telegrams, notes or sound recordings of any type of personal or telephone communication, or of meetings or conferences, minutes of directors or committee meetings, memoranda, inter-office communications, studies, analyses, reports, results of investigations, reviews, contracts, agreements, working papers, statistical records, ledgers, books of account, vouchers, bank checks, x-ray prints, photographs, films, videotapes, invoices, receipts, computer printouts or other products of computers, computer files, stenographer's notebooks, desk calendars,

appointment books, diaries, or other papers or objects similar to any of the foregoing, however denominated. If a document has been prepared in several copies, or additional copies have been made, and the copies are not identical (or which, by reasons of subsequent modification of a copy by the addition of notations, or other modifications, are no longer identical) each non-identical copy is a separate “document.”

- d) “And” or “or” shall be construed conjunctively or disjunctively as necessary to make the requests inclusive rather than exclusive.
- e) The term “you” and “your” refer to “NorthWestern Energy.”
- f) The term “person” means any natural person, corporation, corporate division, partnership, limited liability company, other unincorporated association, trust, government agency, or entity.
- g) The term “regarding” means consisting of, containing, mentioning, suggesting, reflecting, concerning, regarding, summarizing, analyzing, discussing, involving, dealing with, emanating from, directed at, pertaining to in any way, or in any way logically or factually connected or associated with the matter discussed.
- h) The singular as used herein shall include the plural and the masculine gender shall include the feminine and the neuter.
- i) “Identify” or “identifying” or “identification” when used in reference to a person that is a natural person means to state: the full name of the person and any names under which he conducts business; the current employer of the person, the person’s job title and classification, the present or last known work address of the person; and, the present or last known telephone number of the person.
- j) “Identify” or “identifying” or “identification” when used in reference to a document means to provide with respect to each document requested to be identified by these discovery requests a description of the document that is sufficient for purposes of a request to produce or a subpoena duces tecum, including the following:
 - (a) the type of document (e.g., letter, memorandum, etc.);
 - (b) the date of the document;
 - (c) the title or label of the document;
 - (d) the Bates stamp number or other identifier used to number the document for use in litigation;
 - (e) the identity of the originator;
 - (f) the identity of each person to whom it was sent;

- (g) the identity of each person to whom a copy or copies were sent;
 - (h) a summary of the contents of the document;
 - (i) the name and last known address of each person who presently has possession, custody or control of the document; and,
 - (j) if any such document was, but is no longer, in your possession, custody or control or is no longer in existence, state whether it: (1) is missing or lost; (2) has been destroyed; or (3) has been transferred voluntarily or involuntarily, and if so, state the circumstances surrounding the authorization for each such disposition and the date of such disposition.
- k) “Identify” or “identifying” or “identification” when used in reference to communications means to state the date of the communication, whether the communication was written or oral, the identity of all parties and witnesses to the communication, the substance of what was said and/or transpired and, if written, identify the document(s) containing or referring to the communication.
- l) “Current” when used in reference to time means in the present time of this data request.
- m) “Customer” means a person who buys retail electricity on a regular and ongoing basis.
- n) “Workpapers” are defined as original, electronic, machine-readable, unlocked, Excel format (where possible) with formulas in-tact.

2) OTHER INSTRUCTIONS

- a) Please provide responses with fourteen (14) days of the date of these requests.
- b) Responses are to be provided in electronic format (e.g., text documents should be in the original word processor file format or PDF, data files should be in Excel).
- c) If you contend that any response to any data request may be withheld under the attorney-client privilege, the attorney work product doctrine or any other privilege or basis, please state the following with respect to each such response in order to explain the basis for the claim of privilege and to permit adjudication of the propriety of that claim:
 - (a) The privilege asserted and its basis;
 - (b) The nature of the information withheld; and,
 - (c) The subject matter of the document, except to the extent that you claim it is privileged.

- d) For any document or set of documents NorthWestern Energy objects to providing on the grounds it is burdensome or voluminous, please identify the specific document.
- e) These data requests are to be answered with reference to all information in your possession, custody or control or reasonably available to you. These data requests are intended to include requests for information, which is physically within your possession, custody or control as well as in the possession, custody or control of your agents, attorneys, or other third parties from which such documents may be obtained.
- f) If any data request cannot be responded to or answered in full, answer to the extent possible and specify the reasons for your inability to answer fully.
- g) These data requests are continuing in nature and require supplemental responses should information unknown to you at the time you serve your responses to these data requests subsequently become known.
- h) For each response, identify all persons (see instruction 1(j)) that were involved in the preparation of the answers to the interrogatories below and/or are responsible for compiling and providing the information contained in each answer.
- i) Identify which witness(es) at the hearing(s) is competent to adopt and/or discuss the response.
- j) Please produce the requested documents in electronic format to the following individuals:

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Bozeman, MT 59715
jharbine@earthjustice.org

Tom Beach
Crossborder Energy
2560 Ninth Street, Suite 213A
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tomb@crossborderenergy.com
- k) Wherever the response to an interrogatory or request consists of a statement that the requested information is already available to Vote Solar and MEIC, 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) Vote Solar and MEIC reserve the right to serve supplemental, revised, or additional data requests as permitted in this proceeding.

Data Requests VS-001–012

VS-001 Subject: Application Workpapers

Please provide all workpapers for NWE’s testimony in Docket No. D2016.5.39, *Application for Approval of Avoided Cost Tariff Schedule QF-1*. Please include in these workpapers:

- a. Mr. Bushnell’s calculation that one single 3-MW solar project will cost consumers approximately \$5.1 million in extra costs over the life of the project, as shown in Exh. JBB-2, page 9 of 10.
- b. The hourly output of the six solar projects that Mr. Bushnell modeled, as referenced on page JBB-5. Also provide the System Advisor Model runs that Mr. Bushnell performed, with all input settings specified.
- c. The details for the determination of the Avoided Cost of Capacity in Exh. JBB-2, page 9 of 10, including the derivation of the levelized 25-year capacity rate of \$115.35/kW-year as referenced by Mr. Bushnell on page JBB-13.
- d. All calculations of the capacity factors and default capacity contributions from hydro, wind, and solar resources, as well as all data used in these calculations, as referenced in Mr. Bushnell’s revised testimony on page JBB-5.
- e. The calculations of the TVPRR, LVLCR, and RCC shown in Exh. JBB-2, page 7 of 10.

Please provide Mr. Bushnell’s and Mr. Hansen’s workpapers in Excel format with all formulas intact.

VS-002 Subject: 2015 Electricity Supply Resource Procurement Plan Workpapers

Please provide all workpapers for NWE’s *2015 Electricity Supply Resource Procurement Plan* (Plan), including in particular the forecasts for natural gas and electric power prices used in the Plan, as referenced by Mr. Hines’ testimony at page JDH-8.

VS-003 Subject: Current Avoided Costs (Hines Testimony)

Concerning NWE's currently effective avoided cost prices, as discussed on page JDH-5 of Mr. Hine's testimony, please provide:

- a. Order No. 7199d in Docket No. D2012.1.3,
- b. the subsequent compliance filing that NWE submitted in August 2013,
- c. the complete workpapers associated with that compliance filing, showing the calculations that NWE used to develop those avoided cost prices, and
- d. NWE's complete testimony in Docket No. D2012.1.3.

VS-004 Subject: Past QF Costs (Exhibit JDH-2)

Please provide a working Excel version of the spreadsheet "Net Tier II CTC – QF Charges Estimates w/Proceeds Credit" attached as Exh. JDH-2 to Mr. Hines' testimony, as well as the full filing from which it was taken.

VS-005 Subject: Capacity Contribution of Wind and Solar (Bushnell Testimony)

Concerning the proposed method to calculate the capacity contribution of wind and solar resources (Bushnell testimony, at p. JBB-10):

- a. Please provide references to any other jurisdiction that uses an 85% exceedance value in the highest 10% of load hours in the on-peak period to set the capacity value of solar or wind resources.
- b. Please provide references to all documents, sources, or reports that Mr. Bushnell reviewed or consulted in deciding to choose this method for establishing the capacity contribution of wind and solar resources.
- c. Mr. Bushnell states that "Opinions differ as to the capacity contribution of intermittent QF resources" (p. JBB-13). Please provide his understanding of what those differences of opinion are.
- d. Was Mr. Bushnell's testimony in Docket No. D2012.1.3 concerning the use of 85% exceedance to determine capacity contribution (as referenced on page JBB-11) adopted by the Commission?

VS-006 Subject: NWE Generating Resources

Please provide the nameplate capacity and assumed firm capacity contribution from all of NWE's owned and contracted generating resources, including its owned and contracted hydro, wind, and solar resources. This data should be consistent with NWE's current Plan.

VS-007 Subject: Value of Environmental Benefits (Exhibit JBB-2)

Concerning the value of the Environmental Benefits shown in Exh. JBB-2, pages 1 to 3 of 10:

- a. Please provide the basis for the value of the Environmental Benefits that NWE has assumed.
- b. Please explain why a 5-year contract is necessary in order for QFs to derive any monetary benefit from transferring these benefits to NWE.

VS-008 Subject: Avoided Costs (Hansen Testimony)

Concerning Table 2 of Mr. Hansen's testimony:

- a. Please explain fully why the avoided cost price under the Long-1 condition is not the market price, because that is the opportunity cost of the utility to sell lower-cost power into the higher-priced market.
- b. Please explain fully why the avoided cost price under the Long-2 condition is not the market price, because that is the lower cost at which the utility could buy power to serve its load, displacing its own generation with higher variable costs.
- c. Please provide the number of hours in each PowerSimm run for each type of QF resource in which the avoided energy cost was zero as a result of the Long-2 condition.

VS-009 Subject: Avoided Costs Methodology

Please explain whether and when the Commission has adopted the use of production cost model results for setting avoided cost prices.

VS-010 Subject: Interconnection Requests (Exhibit AMM-1)

Concerning the interconnection requests received by NWE, as discussed by Mr. Hines (p. JDH-7) and Ms. Mueller (p. AMM-5), please provide an Excel version of Exh. AMM-1.

VS-011 Subject: NWE's Avoided Transmission and Distribution Costs

For use in calculating NWE's avoided transmission and distribution costs, please provide:

- a. The voltage level at which each of the still-active solar projects in NWE's current interconnection queue would interconnect. Please indicate whether this is a distribution or transmission voltage on the NWE system.
- b. For the most recent calendar year for which such data is available, please provide the following data:
 - i. The hourly loads (i.e. the 8,760 hourly loads over the year) for each distribution substation on the company's system. Generic (e.g. numbered) substation labels may be used if the company prefers, for security reasons or to preserve customer confidentiality. Please indicate for what percentage of such substations the company has such hourly data. If hourly load data is only available for those distribution substations with SCADA, please provide that data for the substations with SCADA.
 - ii. Alternatively, if hourly load data is not available for some distribution substations, please provide the magnitude of the annual peak load (in MW) at each such distribution substation that does not have hourly load data, and the time and date of such peak load, if available.
 - iii. The maximum kW capacity of each distribution substation.
- c. For the most recent calendar year for which such data is available, please provide the following data:
 - i. The hourly loads (i.e. the 8,760 hourly loads over the year) for each transmission substation on the company's system. Generic (e.g. numbered) substation labels may be used if the company prefers, for security reasons or to preserve customer confidentiality. Please indicate for what percentage of such substations the company has such hourly data. If hourly load data is only available for those transmission substations with SCADA, please provide that data for the substations with SCADA.
 - ii. Alternatively, if hourly load data is not available for some transmission substations, please provide the magnitude of the annual peak load (in MW) at each such transmission substation that does not have hourly load data, and the time and date of such peak load, if available.
 - iii. The maximum kW capacity of each transmission substation.
- d. Please provide the company's current investment plan for its transmission and distribution facilities, preferably over the next five years, but for at least the next three years. This should include:

- i. The annual transmission and distribution plant additions and retirements in each year, by FERC account if available.
 - ii. The forecasted annual peak demands, in MW, on the company's transmission and distribution systems.
- e. Please provide data, by FERC account, on the company's historical investments for its transmission and distribution facilities for the last ten years (2006-2015).

VS-012

Subject: Natural Gas Cost

Please provide NWE's historical burnertip cost of natural gas, on an annual basis from 2001-2015.

CERTIFICATE OF SERVICE

I hereby certify that on the 14th day of July, 2016, I served the foregoing by first-class mail, postage prepaid, and electronic mail on the following:

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