

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 19-1270-TF

Washington Electric Cooperative tariff filing for rate design changes and a change in rate schedules to be effective on services rendered beginning June 17, 2019	
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**DEPARTMENT OF PUBLIC SERVICE'S RESPONSES TO THE WASHINGTON
ELECTRIC COOPERATIVE'S FIRST SET OF DISCOVERY REQUESTS**

The Department of Public Service (the "Department") hereby provides the following responses to the First Set of Discovery Requests served on the Department by the Washington Electric Cooperative, Inc. (WEC). The Department is serving two copies of these responses on WEC.

GENERAL OBJECTIONS

1. The Department objects to any instructions contained in WEC's discovery requests to the extent such instructions purport to place on the Department greater requirements or reserve greater rights to WEC than are permitted by the Vermont Rules of Civil Procedure as made applicable to Board proceedings through Board Rule 2.214(A).
2. The Department objects to any request for information or production of document(s) that is (or are) subject to the attorney-client privilege, constitute work product, are protected under state or federal law or are proprietary, competitively sensitive or confidential, constitute draft and/or non-final documents and/or constitute communications containing or concerning any of the above.
3. The Department objects to the discovery requests to the extent that they (a) are overbroad or unduly burdensome; (b) are cumulative; (c) call for the production of documents not in the possession, custody, or control of the Department; (d) call for the review, compilation, or production of publicly available documents that could be obtained by the requesting party in a less burdensome manner, including on a public website; (e) call for the review, compilation and/or production of documents already in WEC's possession, custody, or control; (f) are vague and/or ambiguous; (g) seek information not reasonably calculated to lead to the discovery of admissible evidence; or (h) call for the review, compilation, or production of a voluminous number of documents at great expense to the Department.
4. Each of these General Objections shall be incorporated by reference into the below-referenced objections and responses as if expressly restated therein. The Department does not hereby waive any objections, and it reserves the right to later raise any additional, available objections.

I. INTERROGATORIES AND REQUESTS TO PRODUCE

1. (a) Please quantify in detail the extent to which a single block rate of \$0.17796/kWh, as opposed to WEC's proposed two-block rate of \$0.08 and \$0.019961/kWh, will increase electrification of transportation.

(b) Please produce: all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and
- (ii) related to your answer to this interrogatory.

PSD Response: The Department has not performed an analysis regarding the number of electric vehicles that would be encouraged as a result of eliminating the inclining block rate structure. However, an inclining block rate is structured to discourage high consumption, and an electric vehicle can add as much as 313 kWh per month to a customer's usage. Accordingly, removing this disincentive should increase the opportunity for customers to take actions that increase electrification of transportation.

To complete the calculations included in this response, I relied upon data included in the Vermont Agency of Transportation's 2017 *Transportation Energy Profile* report produced as Attachment A.PSD.1.1 (refer to page 44) and a spreadsheet prepared by VEIC's Drive Electric Vermont program produced as Attachment A.PSD.1.2 (refer to cell number C55).

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

2. (a) Please quantify in detail the extent to which a single block rate of \$0.17796/kWh, as opposed to WEC's proposed two-block rate of \$0.08 and \$0.019961/kWh, will increase electrification of heat.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and
- (ii) related to your answer to this interrogatory.

PSD Response: The Department has not performed an analysis regarding the number of cold-climate heat pumps that would be encouraged as a result of eliminating the inclining block rate structure. However, an inclining block rate is structured to discourage high consumption, and a cold climate heat pump with a nameplate capacity of 12,000 BTUs can add approximately 157 kWh per month to a customer's usage. Accordingly, removing this disincentive should increase the opportunity for customers to take actions that increase electrification of heat.

To complete the calculations included in this response, I relied upon data included in the Excel file prepared by the Technical Advisory Group (TAG) for Vermont RES Tier III compliance which is produced as Attachment A.PSD.2.1 (refer to cell H6 on the "Analysis" tab).

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

3. (a) Please quantify in detail the extent to which eliminating WEC's proposed initial block will further the State's goal of reaching 90% renewable energy in all sectors by 2050.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: The Department has not performed an analysis specifically designed to determine the extent to which eliminating the inclining block rate structure will further the State's goal of reaching 90% renewable in all sectors by 2050. However, an inclining block rate is structured to discourage high consumption, and measures for electrifying the transportation and thermal sectors, e.g. electric vehicles and cold-climate heat pumps, will add a significant amount of load to a customer's usage. Accordingly, removing this disincentive should increase the opportunity for customers to take actions that further the State's goal of reaching 90% renewable in all sectors by 2050.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

4. Please produce all communications, policies, studies, data, memoranda, notes, information, and documents, including draft documents, on which the Department bases its position to recommend elimination of inclining block rates. Please explain in detail the legal rationale for this position and how it conforms to 30 V.S.A. § 218(b).

PSD Response: Objection. The Department objects to this request to the extent it calls for a legal conclusion. Without waiving this objection, the Department responds as follows:

Inclining block rate structures are specifically designed to discourage consumption of electricity above a certain threshold. The Vermont Comprehensive Energy Plan (CEP) includes a section dedicated to “smart rates.” This section encourages utilities to transition to smart rates with a flat rate as a back-up option. Notably, this section does not include a discussion of inclining block rates. (CEP Section on Smart Rates, 10.3.4). The Transportation (starting on pp. 135) and the Heat for Buildings Chapters (starting on pp.88) of the CEP stresses the importance of electrification of these sectors. As discussed above, electrification of these sectors adds load which is in direct conflict with the purpose of inclining block rates.

30 V.S.A. § 218(b) only requires the Commission to consider the creation of an inclining block rate structure. This consideration is one of many that the Commission weighs when reviewing rate designs filed by utilities. Some of the other considerations include state energy policy, including the Comprehensive Energy Plan, and more traditional concepts such as revenue adequacy, fairness, and simplicity.

The CEP is publicly accessible on the Department’s website at:

https://publicservice.vermont.gov/publications-resources/publications/energy_plan

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

5. Please produce all communications, policies, studies, data, memoranda, notes, information, and documents, including draft documents, related to the Department's decision to advocate for elimination of WEC's proposed inclining block rate.

PSD Response: Objection. The Department objects to this request on the basis that it is unduly broad and overly burdensome. The Department also objects to this request to the extent it seeks production of documents already in WEC's possession. Without waiving these objections, the Department responds as follows:

The Department relied upon all testimony, exhibits, and documents produced by WEC over the course of this proceeding. The Department also relied upon all documents specifically referenced in the Department's direct testimony. The Department further relied upon various documents which have been produced in response to specific requests throughout these interrogatories.

Person Responsible for Response: Daniel Potter, Sean Foley, Carol Flint

Title: Energy Policy and Program Analyst; Director of Finance and Economics, Department of Public Service; Director of Consumer Affairs and Public Information, respectively

Date: September 18, 2019

6. (a) Has the PUC and/or the Department held workshops relating to rate design in the last three years? If so, please identify the dates, case names, docket numbers, agendas and topics of each workshop. For each workshop, please explain in detail whether and why the Department addressed elimination of inclining blocks at these workshops.

(b) Please produce all data, studies, communications, arguments, agendas, policies, and other information regarding elimination of inclining blocks that was presented or discussed at any such workshop.

PSD Response: Yes, the Department has held a series of workshops regarding rate design in recent years. WEC was invited to each such workshop. Copies of emails setting the workshops, including agendas, are produced as Attachments A.PSD.6.1 through A.PSD.6.19.

The PUC recently completed a rate design case involving the Green Mountain Power Corporation (Case No. 18-2850-TF). This case did not include a workshop, though the PUC held a public hearing on October 10, 2018, and an evidentiary hearing on November 17, 2018. Transcripts of these hearings and all testimony filed in this case are publicly available in the PUC's ePUC filing system. The Green Mountain Power Corporation's rate design does not include inclining block rates.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

7. Please identify each instance in the last five years where the Department has advocated that an electric distribution utility eliminate an inclining block rate design. For each instance, please include the case name, docket number, PUC decision(s), and all filings relating to elimination and/or preservation of an inclining block rate.

PSD Response: There have been no rate design cases in the last 5 years where the Department has advocated that an electric distribution utility eliminates an inclining block rate design.

In PUC Docket 8398, filed by Swanton Electric on 12/24/14 (Tariff filing of Swanton Village, Inc. Electric Department re: proposed rate design changes, to take effect January 1, 2015.) Swanton's rate design eliminated an inclining block rate design. Swanton and the Department entered discussions regarding the specific issues in the case. Those discussions resulted in an agreement between Swanton and the Department to support the rate design as filed and that the rate design results in just and reasonable rates for Swanton. Swanton is the only municipal utility or electric cooperative without incline block rates.

Please refer to the response to Interrogatory Number 6 above, which discusses the Green Mountain Power Corporation's most recent rate design case (18-2850-TF), which did include inclining block rates.

The PUC orders for these cases are publicly available on ePUC.

Person Responsible for Response: Sean Foley
Title: Director of Finance and Economics, Department of Public Service
Date: September 18, 2019

8. Please identify each instance in the last five years where the Department has:
- (i) not taken a position on, and
 - (ii) has advocated in favor of, an electric distribution utility's proposed inclining block rate design.

For each instance, please include the case name, docket number, PUC decision(s), and all filings relating the inclining block rate.

PSD Response: In PUC Docket 8463, filed by Stowe Electric file on 03/25/15 (Tariff of Town of Stowe Electric Department requesting approval of proposed revisions to its rate design, to take effect on a service-rendered basis April 1, 2015), the Department informed the PUC that it had reviewed the proposed rate design (which included an inclining block rate) filed by the Town of Stowe Electric Department and finds it to be just and reasonable as filed.

The PUC orders for this case are publicly available on ePUC.

Person Responsible for Response: Sean Foley
Title: Director of Finance and Economics, Department of Public Service
Date: September 18, 2019

9. (a) Please refer to page 4, lines 10-13 of Ms. Flint's testimony (characterizing the nature of areas served by WEC). Please quantify in detail the extent to which the Department's recommendation will increase electrification of transportation for WEC members.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: The Department has not conducted the specific analysis requested in this interrogatory.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

10. (a) Please refer to pp. 4-10 of Ms. Flint’s testimony and pp. 5-7 Mr. Potter’s testimony regarding price signals. Please describe in detail all outreach to Vermont consumers conducted by the Department relating to inclining block rates, price signals, and/or the bases for the Department’s position here. “Public outreach” includes: focus groups, studies relevant to preferences, polls, surveys, studies, and the like (whether or not formal or scientific).

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: The Department has not conducted any outreach to Vermont consumers through focus groups, studies relevant to preferences, polls, surveys, studies, and the like (whether or not formal or scientific) relating to inclining block rates, price signals, and/or the bases for the Department’s position.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

11. (a) Please refer to pp. 4-10 of Ms. Flint’s testimony and pp. 5-7 Mr. Potter’s testimony regarding price signals. Please describe in detail all outreach to WEC members conducted by the Department relating to inclining block rates, price signals, and/or the bases for the Department’s position here. “Public outreach” includes: focus groups, studies relevant to preferences, polls, surveys, studies, and the like (whether or not formal or scientific).

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: The Department has not conducted any outreach to WEC through focus groups, studies relevant to preferences, polls, surveys, studies, and the like (whether or not formal or scientific) relating to inclining block rates, price signals, and/or the bases for the Department’s position.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

12. (a) Please refer to Page 8-9, 10 of Ms. Flint's direct testimony where she refers to the impact on "low-income, low-use customers." Please state whether the Department is concluding that there is a correlation between low-income and low-use customers. If so, please provide quantitative analysis supporting the correlation between low-income and low-use customers showing that low-income customers are also low-use customers.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and
- (ii) related to your answer to this interrogatory.

PSD Response: No, the Department does not conclude that there is a correlation between low-income and low-use customers. The phrase is simply meant to refer to the subset of low-income customers that are part of the greater set of low-use customers.

In addition to the data cited and included as figures, charts or appendices to Ms. Flint's testimony, the following additional information was reviewed in part or in whole:

- *Affordability: Lessons Learned from Gas and Electric Utilities*, WaterWorld.com, September 1, 2018, available at: <https://www.waterworld.com/municipal/water-utility-management/article/16190028/affordability-lessons-learned-from-gas-and-electric-utilities>
- *Energy Burden and the Need for Integrated Low-Income Housing and Energy Policy*, National Center for Biotechnology Information, Diana Hernández and Stephen Bird. Poverty Public Policy November 2010, available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4819257/>
- *Electricity Affordability Metrics for the U.S.*, Webinar slides produced by the Clean Energy Group as part of the Sustainable Solar Education Project, dated June 14, 2018; produced as Attachment A.PSD.12.1.
- *GMLC Electricity Affordability Metrics Maps 2016*, Grid Modernization Laboratory Consortium, U.S. Department of Energy; produced as Attachment A.PSD.12.2
- *Consumer Debt: A Primer*, Aspen Institute; produced as Attachment A.PSD.12.3
- *Performance Metrics for Xcel Energy's Electric Utility Operations*, Great Plains Institute, 2019 Stakeholder Engagement Process; Meeting 1 Summary Report, dated April 5, 2019; produced as Attachment A.PSD.12.4.

Person Responsible for Response: Carol Flint

Title: Director of Consumer Affairs and Public Information

Date: September 18, 2019

13. Please refer to pp. 5-7 of Mr. Potter's testimony. Please state whether WEC's proposed initial block conforms to 30 V.S.A. § 218(b).

(b) Please explain your answer in detail. Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: Objection. The Department objects to this request to the extent it calls for a legal conclusion. Without waiving this request, the Department responds as follows:

30 V.S.A. § 218(b) only requires the Commission to consider the creation of an inclining block rate structure. This consideration is one of many that the Commission weighs when reviewing rate designs filed by utilities. Some of the other considerations include state energy policy, including the Comprehensive Energy Plan, and more traditional concepts such as revenue adequacy, fairness, and simplicity. Please also refer to the Department's response to Interrogatory Number 4 above.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

14. (a) Please refer to pp. 5-7 of Mr. Potter's testimony. Please explain in detail why WEC's proposed initial block sends a "signal" contrary to the State's GHG goals. As part of this explanation, please quantify the effect of this "signal" sent by WEC's proposed initial block.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: WEC's initial block of power does not send a signal that is contrary to the State's GHG goals. However, WEC's second block, which under the proposed inclining block structure would be approximately \$0.19961/kWh, does send a price signal that discourages consumption above the initial block. Installation of a cold-climate heat pump or the adoption of an electric vehicle would automatically place most, if not all, of a customer's usage associated with the device into the second block. These strategies are critical to the ability of the State to meet its GHG goals for the transportation and heating sectors and should not be discouraged by a rate design that tells the customer they will be charged more for additional consumption.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

15. Please refer to page 4, lines 1-3 of Mr. Potter's testimony. Please explain in detail what Mr. Potter means in that sentence.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: Please refer to my response to Question 11, starting on page 6 of my direct testimony, where I state that:

Every customer in the State of Vermont pays a per kWh fee that supports the annual budget and operation of the statewide electric efficiency utility, Efficiency Vermont. Efficiency Vermont uses these funds to create incentives for the purchase of more efficient fixtures and appliances. The residential Energy Efficiency Charge raised \$978,647 from WEC residential customers in 2018 alone. The incentives enabled by this collection of funds are available to all WEC residential customers and encourage the efficient use of electricity in WEC's service territory. Given this existing structure that encourages efficiency, the current era of uniform to declining loads, and a need to electrify other sectors, the Department contends that an inclining block rate structure is no longer a tool the state needs to employ to encourage efficiency.

Please also refer to my response to Question 12, starting on page 7 of my direct testimony, where I state that:

The purpose of an inclining block rate is to send a strong price signal to conserve and use energy efficiently. Ms. Richards states in her direct testimony that the average monthly kWh consumption by a WEC member has decreased over the past decade and that the average monthly use of 455 kWh is well below the statewide average. Ms. Richards attributes these reductions to the price signal that WEC has been sending to its customers through its inclining block rate structure. However, it is unclear that these savings are directly attributable to WEC's rate design. Decreases in average monthly consumption could also be attributed to WEC customers taking advantage of the incentives offered by Efficiency Vermont or by fuel switching their appliances away from electricity. For example, a customer could either purchase a more efficient electric range using incentives offered by EVT or switch from an electric range to a propane-fired range and both would lower the household's monthly electric consumption figures. Absent compelling data that demonstrates causality, it is impossible to attribute these savings to the presence of WEC's inclining block rate structure.

Person Responsible for Response: Daniel Potter
Title: Energy Policy and Program Analyst
Date: September 18, 2019

16. Please refer to p. 7, lines 11-22 of Mr. Potter's testimony. Please explain in detail whether Mr. Potter is asserting that the decrease in WEC members' average monthly consumption is actually tied to factors other than efficiency or the inclining block, or whether he is asserting that this decrease "could" be.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: I am asserting that it is unclear that decreases in WEC members' average monthly consumption is tied directly to the inclining block rate structure. Such decreases could also be a result of fuel switching or members taking advantage of programs and incentives offered by Efficiency Vermont. WEC has not provided compelling data demonstrating causality between its inclining block rate structure and decreases in members' average monthly consumption.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

17. (a) Please refer to Page 8 of Mr. Potter's direct testimony and Page 2 of Mr. Foley's direct testimony where they state that the energy charge for the residential class would be \$0.17796/kWh under the Department's proposal to eliminate the inclining block rate and gradually phase-in the customer charge over four steps over the next three years.

(b) Please produce the work papers (with formulas intact) and supporting analysis to support the stated energy charge of \$0.17796/kWh under the Department's proposal.

(c) Please produce: all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: Please refer to Attachment A.PSD.17.1.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

18. Please refer to Page 9 of Mr. Potter’s direct testimony where he states that “for [time-of-use] rates to be effective, they should be designed with a peak to off-peak ratio of at least 2:1 and, ideally, 3:1 or 4:1.”

(a) Please explain in detail the basis for this testimony, including how the Department was able to determine that these ratios are “ideal.”

PSD Response: The portion of my testimony referenced above is based on my professional opinion, which has been formed through both experience and the review of industry publications regarding rate design, for example *Time-Varying and Dynamic Rate Design* by the Regulatory Assistance Project. I have also reviewed segments of the following articles: *A Review of Alternative Rate Designs: Industry Experience with Time-Based and Demand Charge Rates for Mass-Market Customers*. Rocky Mountain Institute; *Rate Design Matters: The Intersection of Residential Rate Design and Energy Efficiency*. American Council for an Energy-Efficient Economy; *Smart Grid Investment Grant: Consumer Behavior Study Analysis*. Lawrence Berkely National Lab. Mr. Potter also participated in the rate design workshops discussed in response to Interrogatory Number 6 above.

(b) Please explain in detail whether the Department’s analysis contemplates instances where the price/cost structure of peak vs. off-peak generating units for WEC purchased power and WEC-owned generation is above or below the “ideal” ratios of 3:1 or 4:1?

PSD Response: Yes, my professional opinion regarding the need for sufficient differentiation between on-peak and off-peak prices contained within a time-of-use rate includes a consideration of instances where the price/cost structure of on-peak vs off-peak generating units for WEC purchased power and WEC-owned generation is above or below a 3:1 or 4:1 ratio.

Time-of-use rates need to be designed in such a way to induce customer behavior; the intent is to incent customers to shift load to the off-peak hours. If the price differential between the on-peak and off-peak hours is not enough to actually motivate customers, then the time-of-use rate will not be successful. Ratemaking allows for the allocation of costs based on the factors that cause the costs to be incurred. The costs associated with capacity, transmission, and distribution do not need to be spread evenly across all hours. These costs can, and should, be weighted towards those hours when the system is most heavily utilized. It is these addition of these costs to the peak hours that can cause the differential to rise to 3:1 or 4:1.

(c) Please explain in detail if purchased power bills support only a differential of 1.5:1, and if the Department implying that WEC time-of-use rates still be designed utilizing an “ideal” 3:1 or 4:1 ratio between peak vs. off-peak?

PSD Response: Yes. Please refer to my response to Interrogatory Number 18(b) above.

(d) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: The studies reference in Mr. Potter's response to subpart (a) above are produced as: Attachments A.PSD.18.1 through A.PSD.18.4.

Person Responsible for Response: Daniel Potter

Title: Energy Policy and Program Analyst

Date: September 18, 2019

19. (a) Please refer to p. 1, lines 19-20 and p. 2, line 1 of Mr. Foley's testimony. Please explain in detail what is meant by causation.
- (b) Please produce all data, studies, communications, information and documents:
- (i) regarding causation,
 - (ii) that you considered in preparing this testimony, and
 - (iii) related to your answer to this interrogatory.

PSD Response: By "causation," I mean an action that gives rise to a phenomenon, or condition. In reference to this case actions that give rise to particulate costs, such as the use of energy at a certain time and/or amount. Identifying causation allows for the functionalized costs; production, transmission, distribution, customer, or general in nature.

Person Responsible for Response: Sean Foley
Title: Director of Finance and Economics, Department of Public Service
Date: September 18, 2019

20. Please refer to Page 4-5 of Mr. Foley's testimony where he states that the methodology employed by WEC in their rate design varies considerably from past practice in Vermont but provides only one example of "allocating Production Plant costs" only to demand and not energy.

(a) Please identify each example of past practice Mr. Foley relies on.

PSD Response: Along with GMP rate design filings I relied upon up on WEC's two most rate design filings and the cases cited in most responses to discovery Requests 7 and 8 above.

(b) For each example identified (including the example used in Mr. Foley's testimony) please explain in detail whether the utilized methods diverge from practice in Vermont.

PSD Response: The methods utilized in these cases do not diverge from practice in Vermont but set the past practice in Vermont.

(c) Please identify each PSB/PUC matter in the last five years where the "Fuel Offset Method" was considered and/or applied.

PSD Response: To the best of my knowledge, The GMP rate design case cited is the only case where the "Fuel Offset Method" was considered and/or applied in the last 5 years.

(d) Please identify each PUC/PSB rate design matter in the last five years where a "very tradition method" of allocation was considered and/or applied.

(e) Please produce:

- (i) all data, studies, communications, information, and documents that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: There were no PUC/PSB rate design matter in the last five years where a "very tradition method" of allocation was considered and/or applied in a similar manner as this case.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

21. (a) Please refer to pp. 4-5 of Mr. Foley's testimony where he states that there "is no universally accepted method for classifying and allocating embedded costs" and "that these decisions are usually based on judgments and depend mostly on the objectives of the cost analyst and the characteristics of the company being analyzed." Please explain this testimony in detail.

(b) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: In my experience the methodologies used in rate design are generally not accepted by everyone without disagreement. The disagreement usually stems from the objective that that party may be advancing. A net metering supporter may advocate for all cost being allocated to the energy charge, a customer with an interruptible load may advocate for most of the cost being allocated based on coincidence peak.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

22. Please refer to Page 5 of Mr. Foley's testimony where he states:

Past practice in Vermont included cost allocation methodologies that vary significantly from this very traditional approach. As an example, in Green Mountain Power's (GMP) most recent rate design, GMP employed a methodology in which production plant costs were classified and allocated in an embedded cost-of-service study using a Fuel Offset Methodology [citation omitted]. In WEC's prior rate design filings, Production Plant was allocated based on energy.

In reference to the passage above, please respond to the following:

(a) Please explain in detail whether the Department considers the "very traditional approach" to be unjust, unreasonable and/or discriminatory;

PSD Response: Yes, in this case WEC's cost allocation methodologies would result in unjust, unreasonable and discriminatory rates. The allocation of costs associated with Production Cost do not follow what I consider the correct functionalization. This incorrect functionalization allocates cost to rate classes in a way that varies for what I consider the cost causation. As stated in my testimony, the Coventry generation facility is best suited to run as much as possible throughout all hours of the day not just for the peak periods of system load.

(b) In reference to the cited testimony supporting the Fuel Offset methodology, please explain in detail whether the PUC accepted this methodology in referenced (GMP) rate case.

PSD Response: The Fuel Offset methodology was not specifically referenced in the PUC's order but the PUC approved proposed rate design that came as a result of this methodology.

(c) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: There are no applicable responsive documents.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

23. Please refer to Page 6 of Foley’s testimony where he states that “[s]ince WEC did not adjust rate case revenue based on the results of [sic] the cost-of-service study, my concerns about the underlying methodology employed by WEC are ameliorated.”

(a) Please explain in detail and specifically support this statement correlating the decision by WEC not to change the level of revenue collected by rate class with the implication that this lessens the credibility of the cost-of service study methodology and results;

(b) Please identify and explain in detail the Department’s specific “concerns about the underlying methodology employed by WEC.”

(c) For each concern, explain in detail how that methodology would render the cost of service study results unjust, unreasonable, and/or discriminatory.

(d) Please produce all data, studies, communications, information, and documents:

- (i) that you considered in preparing this testimony, and**
- (ii) related to your answer to this interrogatory.**

PSD Response: It is not my testimony that WEC’s decision not to change the level of revenue collected by rate class lessens the credibility of the cost-of service study methodology and results.

In addition to the concerns described in my direct testimony, I also have concerns about the Incremental Cost Analysis. The Incremental Cost Analysis appears to be based on the embedded cost of service and does not represent what I would classify as a marginal cost study. A marginal cost study differs from an embedded cost study in that it is forward-looking and analyzes how the costs of the electric system would change in order to provide an incremental increase in service. Because marginal costs are current or future costs, planning documents are the primary source of data. Such documents might include production cost model outputs, transmission and distribution power flow models, and fuel forecasts. A marginal cost study is particularly useful for informing rate design, since according to economic theory, prices should be set equal to marginal cost to provide efficient price signals. As described in the 1992 NARUC Electric Utility Cost Allocation Manual, page 147:

[T]he major reason for allocating costs using marginal cost principles is to promote economic efficiency and societal welfare by simulating the pricing structure and resulting resource allocation of a competitive market. Competition drives production and consumption to where customers are willing to pay a price for the last or marginal unit consumed equal to the lowest price producers are willing to accept for their product. This situation occurs where the supply (marginal cost) and demand curves intersect.

A copy of the 1992 NARUC manual is produced as Attachment A.PSD.23.1.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

24. Please produce complete and detailed resumes and/or CVs for Carol Flint, Dan Potter, and Sean Foley.

PSD Response: A professional resume for Ms. Flint is produced as Attachment A.PSD.24.1. Messrs. Potter and Foley do not have recently updated resumes, but refer to their respective testimonies for their professional experience and background.

Person Responsible for Response: Sean Foley

Title: Director of Finance and Economics, Department of Public Service

Date: September 18, 2019

Dated at Montpelier, Vermont, this 18th day of September, 2019.

As to objections:

By: /s/ Daniel C. Burke
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