

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 23-3501-PET

Petition of Green Mountain Power for approval
of its zero outages initiative as a strategic
opportunity pursuant to 30 V.S.A. § 218d and
GMP's multi-year rate plan

**PREFILED SURREBUTTAL TESTIMONY OF
BILL JORDAN
ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE**

May 13, 2024

Summary: My testimony responds to Green Mountain Power Corporation's ("GMP") rebuttal testimony, describes two remaining areas of disagreement between GMP and the Vermont Department of Public Service ("Department"), and recommends some revisions to Rule 4.900.

Mr. Jordan Sponsors the Following Exhibits:

Exhibit DPS-BJ-10

A.DPS.GMP.3-5

Exhibit DPS-BJ-11

Calculations on Exhibit DPS-BJ-10

1 **Q1. Please state your name, title, and business address.**

2 A1. My name is Bill Jordan. I am the Director of Engineering at the Department. My
3 business address is 112 State Street, Montpelier, Vermont 05620.

4 **Q2. Have you previously submitted testimony in this case?**

5 A2. Yes, I submitted prefiled direct testimony in this case on behalf of the Department
6 on March 15, 2024.

7 **Q3. What is the purpose of your surrebuttal testimony?**

8 A3. My testimony responds to GMP's rebuttal testimony, describes two remaining
9 areas of disagreement between GMP and the Department, and recommends some
10 revisions to Rule 4.900.

11 **Q4. In your direct testimony, you suggested that GMP provide histograms on
12 frequency and duration of outages.¹ Did GMP provide what was requested?**

13 A4. GMP only provided histograms for calendar year 2023 because it "involved an
14 extremely large set of data and took a significant amount of time to create."² For
15 the histogram on outage frequency provided as Exhibit GMP-MB-15a, GMP
16 provided the type of data that was requested. For the histogram on outage duration
17 provided as Exhibit GMP-MB-15b, GMP misinterpreted the request and provided
18 SAIDI as a function of the number of outages. For both of these exhibits, I
19 appreciate that GMP went above and beyond and broke the data down by district,

¹ "GMP should provide a histogram for each of calendar years 2020, 2021, 2022, and 2023 indicating number of individual customers on the vertical axis and bins with number of outages experienced on the horizontal axis GMP should also provide a histogram for each of calendar years 2020, 2021, 2022, and 2023 indicating number of individual customers on the vertical axis and bins with total outage duration experienced on the horizontal axis." Jordan pf. at 18.

² Burke reb. at 31.

1 which is extremely helpful. GMP was asked in discovery how to interpret Exhibit
2 GMP-MB-15b and GMP's response is included in **Exhibit DPS-BJ-10**. GMP was
3 also asked in discovery to provide the histogram on outage duration as originally
4 requested, and GMP provided what was requested (also included in Exhibit DPS-
5 BJ-10).

6 **Q5. Do you have any comments on the histograms GMP provided?**

7 A5. As expected, the histograms provided illuminate the range of reliability
8 experienced by GMP customers that is hidden in the system-wide averages of
9 SAIFI and CAIDI (presumably, data from other utilities would look similar). GMP
10 has indicated that it is using data analytics such as these to target areas for the ZOI.
11 I agree with this approach and would urge GMP to prioritize bringing those
12 customers on the tail end of the curve to improved reliability.

13
14 In addition, this type of granular data, on the individual-customer level, could assist
15 in the future with combining the system-wide averages of SAIFI and CAIDI with
16 targets for upper bounds on individual customer outage frequency and duration, if
17 Vermont chooses to take that approach. For example, the histogram on system-
18 wide outage duration that GMP provided in discovery (see Exhibit DPS-BJ-10)
19 indicates that, on the tail end of the curve, 460 customers experienced between 192
20 and 300 hours of outages in 2023. Should "adequate" service be considered on a
21 system-wide-average basis or on an individual-customer basis? Is up to 300 hours
22 (12.5 full days) out of service in a year "adequate?" **Exhibit DPS-BJ-11** is a tabular
23 analysis of the data in this histogram. As can be seen in Column I of the table,

1 approximately 96% of GMP customers are experiencing equal to or greater than
2 99% reliability [fewer than 87.6 hours out of service per year (8,760 hours)], while
3 the 460 customers experiencing the longest outage durations in 2023 had at least
4 96.58% reliability. While these percentages may seem high, this is still a lot of
5 hours (or days) to be out of service and is extremely disruptive to the customer. At
6 the end of my testimony, I make recommendations for improving Rule 4.900 and
7 SQRP to account for individual customer experience using data analytics such as
8 these.

9 **Q6. In your direct testimony, you recommended that major storms should be**
10 **included in GMP's SQRP reliability performance measures if or when the ZOI**
11 **is approved and constructed. In rebuttal, GMP indicated it would be willing**
12 **to report data including major storms (as it currently does for Rule 4.900), but**
13 **that GMP shouldn't be financially penalized in SQRP if including major**
14 **storms causes it to not meet its performance measures. Do you have any**
15 **further comments?**

16 A6. Yes. This is a remaining area of disagreement between the GMP and the
17 Department. Department witness Carol Flint and I continue to believe that major
18 storms should be included in SQRP metrics for those circuits that have completed
19 ZOI build-out. The rationale is that the full ZOI build-out, at an estimated \$1.5+
20 billion, may very well be the largest expenditure of ratepayer money by a
21 distribution utility in the last 50+ years since the Vermont Yankee Nuclear Power
22 Station was constructed by the Vermont distribution utilities in the late 1960's and
23 early 1970's. GMP is promising zero outages for its customers, and GMP's

1 shareholders will earn a rate of return on GMP rebuilding most of its distribution
2 system. It seems fair, given GMP's large expenditure of ratepayer dollars, GMP's
3 promise of zero outages, and the upside for GMP's shareholders, that GMP (and
4 GMP's shareholders) share in the risk and be held financially accountable if GMP
5 does not deliver on its promise.

6 **Q7. Are there any other areas of disagreement you would like to mention?**

7 A7. Yes. One other area of disagreement is how to account for outages on the GMP
8 system that are mitigated by battery storage. This is covered in the surrebuttal
9 testimony of Department witness Kevin Mara, who is recommending that the
10 solution to this issue be resolved by updating the definition of "outage" in Rule
11 4.900. I agree with this approach.

12 **Q8. Do you have any additional recommendations for the Commission?**

13 A8. Yes. If the Commission opens the investigation recommended by Department
14 witness Anne Margolis, I respectfully recommend that the Rule 4.900 revision be
15 included in that process for a holistic approach. I further recommend that any
16 revision to Rule 4.900 should also consider including: a) definitions for "adequate"
17 and "reliable" service, as those terms are used in Title 30; b) additional
18 informational reporting requirements similar to the histograms provided by GMP
19 in this proceeding to indicate the true picture of customer experience behind the
20 system-wide averages of SAIFI and CAIDI [reporting these histograms would
21 include the data for reporting the metric CELID (Customers Experiencing Long
22 Interruption Durations) in IEEE Standard 1366 (IEEE Guide for Electric Power
23 Distribution Reliability Indices)]; and c) targets for upper bounds for outage

1 frequency and duration experienced by any customer (these could be implemented
2 in the SQRP in conjunction with SAIFI and CAIDI).

3 **Q14. Does this conclude your testimony?**

4 A14. Yes, it does.