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IDAHO PUBLIC
UTILITIES COMMISSION

March 6, 2018

By Federal Express and Electronic Mail

Diane Hanian
Commission Secretary
Idaho Public Utilities Commission
472 West Washington Street
Boise, ID 83702

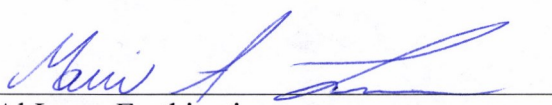
**Re: Notice to Idaho Public Utilities Commission and All Parties of Motion for
Leave to Present Reply Testimony of Rick Gilliam Responding to the Rebuttal
Testimony of Idaho Power Company, Case No. IPC-E-17-13**

Dear Ms. Hanian:

Enclosed, please find for filing in the above-referenced case the nine (9) copies of the Notice to Idaho Public Utilities Commission and All Parties of Motion for Leave to Present Reply Testimony of Rick Gilliam Responding to the Rebuttal Testimony of Idaho Power Company, dated March 6, 2018, and the Reply Testimony of Rick Gilliam, dated March 6, 2018 (one (1) copy designated as reporter's copy).

Please contact me if you have any questions. Thank you for your attention to this matter.

Sincerely,


Al Luna, Earthjustice

Enclosures

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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF)	CASE NO. IPC-E-17-13
IDAHO POWER COMPANY FOR)	
AUTHORITY TO ESTABLISH NEW)	NOTICE OF MOTION FOR LEAVE
SCHEDULES FOR RESIDENTIAL AND)	TO PRESENT REPLY TESTIMONY
SMALL GENERAL SERVICE CUSTOMERS)	OF RICK GILLIAM RESPONDING
WITH ON-SITE GENERATION)	TO THE REBUTTAL TESTIMONY
)	OF IDAHO POWER COMPANY
)	
)	

Vote Solar provides this Notice that at a time and place convenient to the Idaho Public Utilities Commission ("the Commission"), prior to or during the technical hearing scheduled in this matter on March 8, 2018, it will respectfully move the Commission pursuant to the Commission's Rules of Procedure (IDAPA 31.01.01), specifically Rules 36, 38, 56, 214, 231, and 256, to admit additional substantive testimony of Rick Gilliam in this case. Proposed prefiled reply testimony is provided with this Notice to provide parties the substance of the proposed testimony in advance. Additionally, workpapers in support will be made available to the parties.

In support of its anticipated motion, Vote Solar will show:

1. On July 27, 2017, Idaho Power Company ("Idaho Power" or "the Company") applied for authority to establish new schedules for residential and small general service ("R&SGS") customers with on-site generation ("Application").

2. On October 4, 2017, the Commission issued Order No. 33901, in which it provided a Notice of Schedule and Notice of Technical Hearing (“Schedule”) and suspended Idaho Power’s filing for 30 days plus five (5) months pursuant to *Idaho Code* § 61-622(4).

3. The Commission’s October 4, 2017, Schedule set forth dates for intervenors (including Vote Solar) to file direct testimony, for all parties to file rebuttal testimony, and for the Company to file reply testimony. Schedule at 2. There was no date set in the Schedule for parties other than the Company to file reply testimony.

4. Although the Company’s Application and direct testimony contains significant discussion of the cost to serve and the revenues received from net energy metered customers under current rate structures, *see, e.g.*, Application at 5-6; Tatum Di at 4-7, 12-14; Aschenbrenner Di at 25-26, the Company’s rebuttal testimony filed on January 26, 2018, narrows the focus of its request to “one relatively limited, but important, policy issue . . . : ‘Do the different load service requirements and usage characteristics of R&SGS customers who install on-site generation’” justify a separate rate class and rate structure? Tatum Reb at 19:8-15. That is, the Company contends that load service and usage characteristics—and *not cost of service or revenue recovery*—of customers with on-site generation are the bases for creating separate classes for those customers.

5. The Company’s January 26, 2018, rebuttal testimony contained new evidence regarding load factors and load diversity, that was not included in prior testimony. *See, e.g.*, Angell Reb at 3-7 and Figure 1; Faruqui Reb at 13-15 and Figure 4.

6. Vote Solar sought the underlying data and basis for the new testimony and figures related to load factors and load diversity through discovery served on January 30, 2018. *See* Seventh Set of Data Requests by Vote Solar to Idaho Power Company. Responses were due and mailed on

February 20, 2018. Vote Solar received the attachments to the Company's responses sent by U.S. Mail on February 24, 2018.

7. On February 28, 2018, via email, Counsel for Vote Solar requested clarification and additional underlying data for workpapers and calculations provided by the Company in the attachments received on February 24, 2018. Counsel for the Company responded on March 1, 2018, that additional underlying data is not available and would not be produced.

8. Vote Solar undertook efforts to check the Company's calculations, recreate the load factor and load shape calculations, and recreate figures provided by the Company based on the data and workpapers provided and, where the underlying data were not provided, by substituting load data previously provided by the Company.

9. Vote Solar contends that the Commission's consideration and understanding of the Company's evidence regarding load factor and load diversity will benefit from additional information not currently included in the prefiled testimony. Specifically, the Company's use of exported electricity rather than consumption of utility-supplied electricity obscures the fact that the actual load factor and hourly loads of customers with on-site generation served by the Company are within the range of all R&SGS customer loads served by the Company.

10. Vote Solar therefore intends to seek leave to either file the attached prefiled reply testimony, or to solicit substantially similar testimony through live examination of Mr. Gilliam, in order to respond to the Company's rebuttal testimony.

DATED this 6th day of March, 2018

Respectfully submitted,

/s/ David Bender

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Counsel for Vote Solar

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this 6th day of March, 2018, served the foregoing NOTICE OF MOTION FOR LEAVE TO PRESENT REPLY TESTIMONY OF RICK GILLIAM RESPONDING TO THE REBUTTAL TESTIMONY OF IDAHO POWER COMPANY upon all parties of record in this proceeding, via the manner indicated:

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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE
APPLICATION OF IDAHO POWER
COMPANY FOR AUTHORITY TO
ESTABLISH NEW SCHEDULES FOR
RESIDENTIAL AND SMALL
GENERAL SERVICE CUSTOMERS
WITH ON-SITE GENERATION.

Case No. IPC-E-17-13

REPLY TESTIMONY OF RICK GILLIAM

ON BEHALF OF VOTE SOLAR

March 6, 2018

Reporter's Copy

1 **Q. Please state your name and business address.**

2 A. My name is Rick Gilliam. My business address is 590 Redstone Drive,
3 Broomfield, CO 80020.

4 **Q. Are you the same Rick Gilliam who has adopted the prefiled direct and**
5 **rebuttal testimony of Briana Kobor?**

6 A. Yes, I am.

7 **Q. On whose behalf are you submitting this reply testimony?**

8 A. I am submitting this reply testimony on behalf of Vote Solar.

9 **Q. What is the purpose of your additional reply testimony?**

10 A. This reply testimony addresses (1) an analysis of load factors for residential non-
11 solar and residential net-metered customers found in the rebuttal testimony of
12 Company witness David M. Angell¹ and (2) an analysis of load diversity found in
13 the rebuttal testimony of Company witness Dr. Ahmad Faruqui.² I find these
14 analyses to be improper and misleading.

15 **Q. Please describe your concerns with Mr. Angell's comparison of load factors.**

16 A. Mr. Angell's analysis, summarized in Figure 1 of his rebuttal testimony, purports
17 to represent a comparison of load factors between residential customers and
18 residential customers with on-site generation. Mr. Angell concludes that
19 residential customers with on-site generation "have notably lower load factors"
20 than those without on-site generation."³ However, based on a review of his

¹ Angell Reb at 3-7; Angell Reb at 6, Figure 1.

² Faruqui Reb at 14, Figure 4.

³ Angell Reb at 6:14-16.

1 workpaper provided in response to discovery,⁴ it appears that Mr. Angell
2 calculates the average load for customers with on-site generation on the basis of
3 net monthly deliveries less exports, rather than the Company's deliveries to the
4 customer. If a customer exports the same number of kilowatt-hours, the net load
5 shows up as zero, and if she exports more than they import in a month, it shows
6 up as a negative average load.

7 **Q. Why is this approach improper?**

8 A. As Mr. Angell notes, load factor is "a measure of variability of consumption."⁵
9 However, rather than using the utility-supplied electricity consumed by those
10 customers, he reduces that consumption by the separately tariffed export of
11 electricity from the customer to the utility. Net metering is a billing convention
12 that sums two separate transactions. Customers do not reduce "consumption"
13 billed under Schedule 1 by exporting excess generation credited under Schedule
14 84, as Mr. Angell's calculation implicitly assumes. For load factor comparisons
15 to be useful to determine if the service provided by the utility to net-metered
16 customers is similar to that provided to non-net-metered customers, it has to
17 reflect only the service provided by the utility: the delivered loads.

⁴ CONFIDENTIAL Attachment 2 - Response to Vote Solar's Request No. 100 - Angell
REB Fig 1.xlsx.

⁵ Angell Reb 5:2-3.

1 **Q. Do you have other concerns with the Company's analysis presented in Figure**
2 **1?**

3 A. Yes. The analysis underlying Mr. Angell's Figure 1 is based on 843 net-metered
4 customers, which is nearly 50% larger than previous datasets provided through
5 discovery.⁶ In reviewing the data, several concerns arose. First, 268 of the 843
6 customers have less than a full year of data and 14 of the 843 customers have
7 more than 12 months of data (i.e., multiple load factors are provided for a single
8 month, and counted in the average). Next, for those NEM unique identifiers that
9 align with the previous datasets obtained through Staff Request No. 8 and Vote
10 Solar Request No. 59, the peak usage value for the majority of months did not
11 match. I am not including specific examples in this public testimony due to the
12 Company's assertion that the customer identification data is confidential.
13 I also note that it was impossible to trace Mr. Angell's calculations in his
14 workpaper as the average monthly usage values are "hard-pasted" in the
15 spreadsheet, meaning it is simply a number with no formula for how it was
16 derived. The lack of formulae, combined with the mismatches and incomplete
17 data, makes it impossible to replicate the analysis underlying Figure 1 and raises a
18 general concern about the validity of the results.

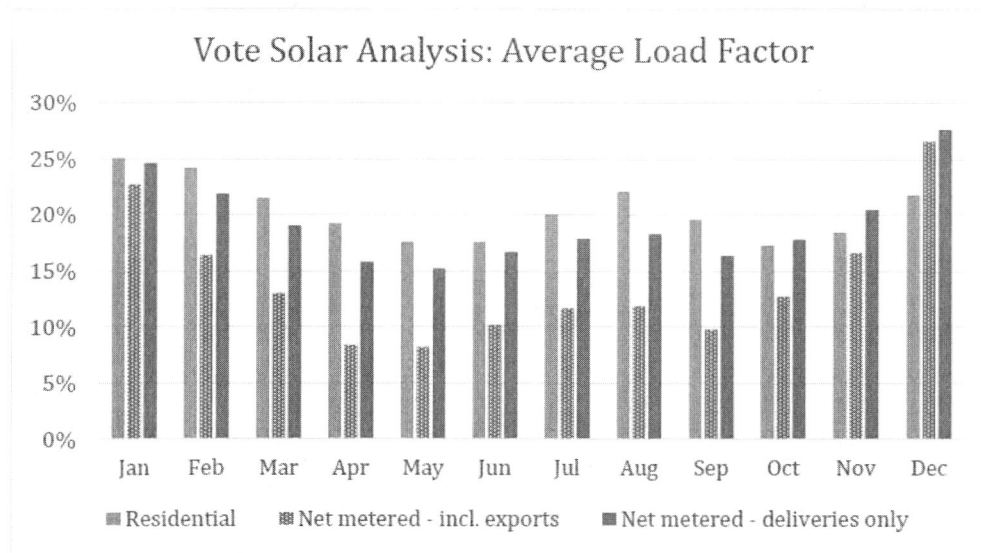
19 **Q. Did Vote Solar perform an analysis similar to the Company's Figure 1?**

20 A. Yes. Using the data set of 565 residential net-metered customers provided to the

⁶ Staff Request No. 8; Vote Solar Request No. 59.

Staff and Vote Solar in discovery, I calculated the load factors both with⁷ and without exports. Figure A below shows these results and compares them to the residential (non-solar) load factors from Mr. Angell's Figure 1.

Figure A: Average Load Factors for Residential Customers⁸



Comparing only the delivered loads—the customer's consumption of utility-supplied electricity—shows that the load factor for residential net-metered and non-net-metered customers is similar. Put another way, excluding Schedule 84 exports from the load factors calculation for net-metered customers, and reflecting only Schedule 1 deliveries, yields load factors much more aligned with those of customers without on-site generation.

⁷ Differences between Mr. Angell's load factors and my re-calculated load factors for net-metering customers including exports are most likely due to the discrepancies in Mr. Angell's data explained above, and potentially the use of billing period data rather than calendar month.

⁸ Based upon the data provided in response to Staff Request No. 8, Exhibit 104.

1 In conclusion, when comparing apples to apples, there is far less difference
2 between non-net-metered residential customers and residential net-metered
3 customers than the Company's chart implies.

4 **Q. Please describe Dr. Faruqui's Figure 4.**

5 A. Dr. Faruqui's Figure 4 shows the 10th and 90th percentiles of residential non-DG
6 customers overlaid with the average load shape of the residential DG customers.
7 The chart purports to show that at certain times of the day, the DG customers load
8 shape falls outside the 10% to 90% range of the non-DG group.

9 **Q. Do you have concerns with the data and calculations underlying Dr.**
10 **Faruqui's Figure 4?**

11 A. Yes. As with Mr. Angell's Figure 1, Dr. Faruqui improperly includes exports in his
12 DG customer data (Dr. Faruqui calls net-metered customers DG customers, and
13 non-net-metered customers non-DG customers)⁹, resulting in a comparison of
14 Schedule 1 deliveries to non-DG customers, and the sum of deliveries from
15 Company to customer (Schedule 1) and from customer to Company (Schedule 84)
16 for DG customers. It is inappropriate to include two separate electricity
17 transactions into a single load shape.

18 Dr. Faruqui also notes the basis for his analysis is a non-net-metered customer
19 dataset consisting of 521 customers.¹⁰ However, the data sets provided to Vote
20 Solar in response to discovery¹¹ reflected between 468-516 customers, depending

⁹ Faruqui Reb at 8:1-2.

¹⁰ Faruqui Reb at 8:3-6.

¹¹ Response to Vote Solar Request No. 27.

1 on the month. The Company acknowledged certain customers were excluded in
2 the months of June and July.¹² By comparison, Staff witness Dr. Morrison used a
3 load research sample with 487 customers.¹³

4 Here, as in the case of Company witness Angell above, the source of Dr.
5 Faruqui's data is unclear, as is the period of time over which he is averaging both
6 DG and non-DG customer data.

7 **Q. Did you attempt to replicate Dr. Faruqui's charts?**

8 A. Yes. Figure B below shows a scatterplot of the delivered energy values of DG
9 customers for the summer period and the winter period. Each gray dot illustrates
10 an individual customer's average load in the given hour for the specified time
11 period.

¹² Response to Vote Solar Request No. 71.

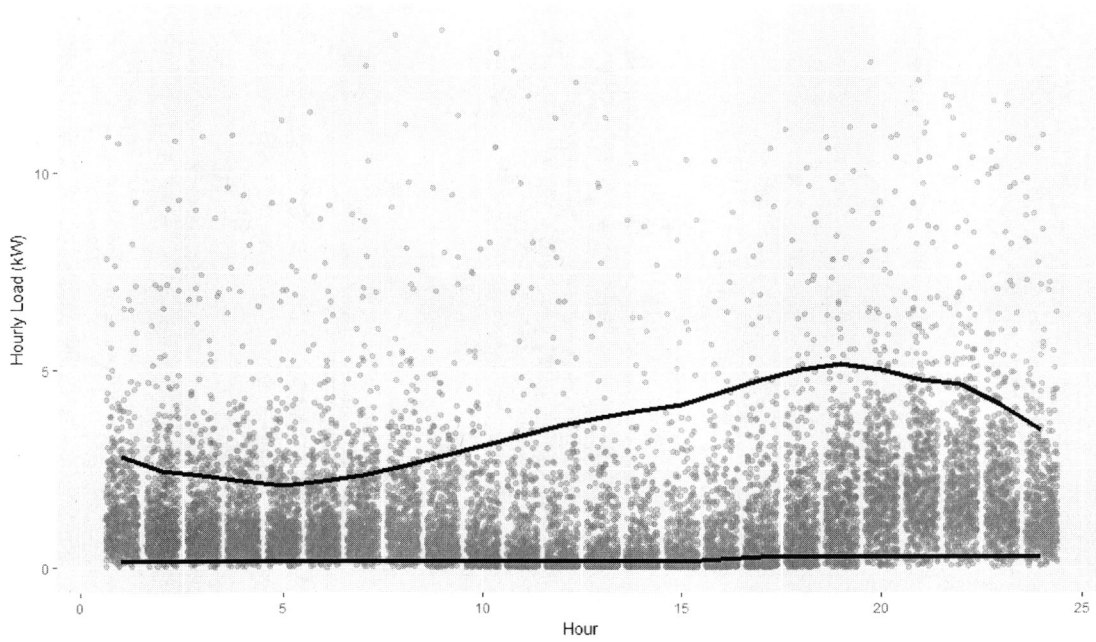
¹³ Morrison Di at 10:25.

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Figure B: Diversity in Residential Delivered Load Profiles

2

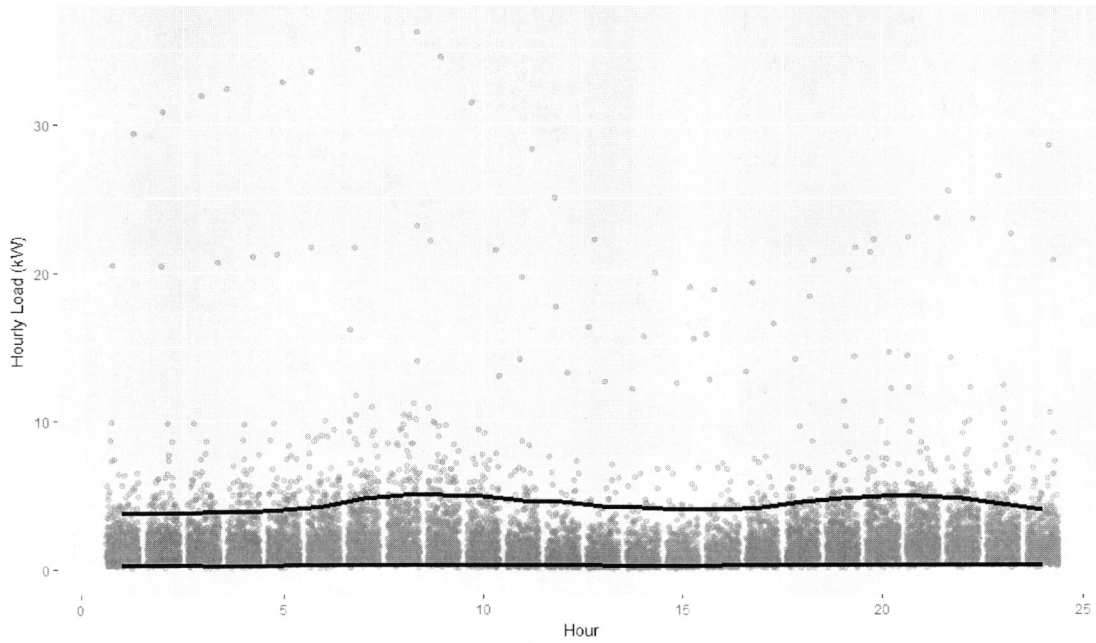
Summer



3

4

Winter



5

1 The black lines on the plots illustrate the hourly load at the 90th and 10th percentile
2 usage in each hour across the residential non-DG customer sample, based on the
3 2016 load research sample provided by the Company in response to Vote Solar
4 Request No. 27.¹⁴

5 For DG customers, I used the 2016 net metering hourly loads provided in
6 response to Staff Request No. 8. The data set contains net hourly usage for 565
7 residential net-metered DG customers from which export values were removed.
8 The conclusion to be drawn from these two plots is that the vast majority of
9 deliveries to DG customers in both the summer and winter timeframes fall well
10 within the 10% to 90% bracket of Dr. Faruqui.

11 **Q. Does this complete your reply testimony?**

12 **A.** Yes.

¹⁴ The dataset contained a stratified sample of 516 residential customers. However, data for 30 customers was incomplete and removed. The plot utilizes the hourly profiles only for the remaining 486 customers.