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NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

VIA E-Filing

October 27, 2015

Breanne Potter
Commission Secretary
Public Utilities Commission of Nevada
1150 East William Street
Carson City, Nevada 89701-3109

**Re: PUCN Docket Nos. 15-07041 and 15-07042
Direct Testimony and Exhibits of Rick Gilliam**

Dear Ms. Potter,

Enclosed please find the Direct Testimony and Exhibits of Rick Gilliam for filing on behalf of Vote Solar in the above-referenced dockets.

Please feel free to contact me with any questions or concerns.

Sincerely,

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Encls.
cc: Parties of Record

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Application of Nevada Power Company d/b/a)
NV Energy for approval of a cost-of-service study) Docket No. 15-07041
and net metering tariffs.)
_____))
Application of Sierra Pacific Power Company d/b/a)
NV Energy for approval of a cost-of-service study) Docket No. 15-07042
and net metering tariffs.)
_____))

**DIRECT TESTIMONY AND EXHIBITS OF RICK GILLIAM
ON BEHALF OF VOTE SOLAR**

OCTOBER 27, 2015

Table of Contents

I. Introduction.....	1
II. Purpose of Testimony and Summary	3
III. Overview of NVE’s NEM Rate Proposals	6
IV. The Role of SB 374	7
V. NVE’s “Unique Load Characteristics and Cost” Rationale Does Not Justify Separate NEM Rate Classes	14
VI. NVE’s Characterization of Increasing Distribution Costs is Unfounded and Misleading	17
VII. NVE’s Marginal Cost Analysis Is Deficient and Does Not Support the Company’s Proposal	20
1. Transmission and Distribution Load Shapes	25
2. Over Allocation of Customer Costs to NEM Classes	29
3. Double Counting of Excess NEM Generation	37
VIII. Other Technical Problems with the Company’s Analysis	38
IX. When Partially Corrected, NVE’s MCS Shows that NEM Customers Generally Cost Less to Serve than Their Non-NEM Customer Counterparts	43
X. NVE’s Rate Proposal Should be Rejected.....	45
1. NVE’s Proposal Does Not Adequately Reflect the Marginal Cost of Serving Net Metering Customers	45
2. NVE’s Proposed Demand Charges Would Constitute an Unavoidable Fixed Charge on NEM Customers.....	50
3. NVE Has Not Justified its Proposed Generation Meter Requirement	58
XI. Vote Solar’s Proposed TOU Rate Alternative	60

XII. Recommendations63

List of Tables and Charts

Table 1: Existing NEM 1 and Proposed NEM 2 Rate Classes6

Table 2: Nevada Power Company MCS Study Results24

Table 3: Sierra Pacific Power Company MCS Study Results24

Table 4: CWFS Revision Results31

Table 5: Proportion of Per-Customer Costs for NEM Customers Relative to Non-NEM
 Customers – Residential32

Table 6: Proportion of Per-Customer Costs for NEM Customers Relative to Non-NEM
 Customers – General Service32

Table 7: Customer Service Representatives – Nevada Power35

Table 8: Customer Service Representatives – Sierra Pacific35

Table 9: Banking Value Recovered from All Customers38

Table 10: NPC Residential NEM Customer and Capacity Growth41

Table 11: Modified Marginal Cost Study Results – Nevada Power44

Table 12: Modified Marginal Cost Study Results – Sierra Pacific44

Table 13: Impact of Proposed Rate on Typical NEM 2 Customer52

Table 14: Impact of Solar on Customer Peak Demand53

Table 15: NPC NEM 2 Tariffs62

Chart 1: Air Conditioning Startup Power14

Chart 2: Effects of Geographic Diversity15

Chart 3: NPC Marginal Costs Annual Average by Hour55

Chart 4: SPPC Marginal Costs Annual Average by Hour55

List of Exhibits

Exhibit RG-1: Statement of Qualifications

Exhibit RG-2: SB 374

Exhibit RG-3: Copies of Discovery Responses Referenced in Testimony

Exhibit RG-4: Excerpts of Deposition Transcripts Referenced in Testimony

Exhibit RG-5: Comparison of Marginal and Cost-based Class Revenue Requirement and Rates, NPC and SPPC

1 **BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

2 Direct Testimony of Rick Gilliam

3 On Behalf of Vote Solar

4 Docket Nos. 15-07041 and 15-07042

5 **I. Introduction**

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

7 A. My name is Rick Gilliam. My business address is 590 Redstone Drive, Suite 100,
8 Broomfield, Colorado.

9 **Q. On whose behalf are you submitting this direct testimony?**

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

11 **Q. What is Vote Solar?**

12 A. Vote Solar is a non-profit grassroots organization working to foster economic
13 opportunity, promote energy independence, and fight climate change by making solar
14 a mainstream energy resource across the United States. Since 2002, Vote Solar has
15 engaged in state, local, and federal advocacy campaigns to remove regulatory barriers
16 and implement key policies needed to bring solar to scale. Vote Solar has
17 approximately 60,000 members nationally and 300 in Nevada, including at least 230
18 within Nevada Energy's ("NVE") service territory.

19 **Q. By whom are you employed and in what capacity?**

20 A. I serve as the Program Director of Distributed Generation ("DG") Regulatory Policy
21 for Vote Solar. I oversee policy initiatives, development, and implementation related
22 to distributed solar generation. I also review regulatory filings, perform technical
23 analyses, and testify in commission proceedings around the country relating to
24 distributed solar generation.

1 **Q. Please describe your educational background.**

2 A. I have a Masters Degree in Environmental Policy and Management from the
3 University of Denver, Denver, Colorado. I also have a Bachelor of Science Degree in
4 Electrical Engineering from Rensselaer Polytechnic Institute in Troy, New York.

5 **Q. Please describe your experience in utility regulatory matters.**

6 A. Prior to joining Vote Solar in January of 2012, my regulatory experience included
7 five years in the Government Affairs group at Sun Edison, one of the world's largest
8 renewable resource developers, as a manager, director, and eventually vice president;
9 12 years with Western Resource Advocates (formerly known as the Land and Water
10 Fund of the Rockies) as Senior Policy Advisor; and 12 years in the Public Service
11 Company of Colorado rate division as Director of Revenue Requirements. Prior to
12 that, I spent six years with the Federal Energy Regulatory Commission ("FERC") as a
13 technical witness. All told, I have over thirty-five years of experience in utility
14 regulatory matters, including experience in reviewing legislation and testifying before
15 legislative committees in a number of states on renewable energy, solar energy, and
16 net metering, among other issues. A summary of my background is included as
17 Exhibit RG-1.

18 **Q. Have you previously testified before the Nevada Public Utilities Commission**
19 **("Commission")?**

20 A. Yes, I have.

21 **Q. Before what other utility regulatory commissions have you testified?**

22 A. I have testified in proceedings before the Arizona Corporation Commission, Colorado
23 Public Utilities Commission, Idaho Public Utilities Commission, New Mexico Public

1 Regulation Commission, Utah Public Service Commission, Wisconsin Public Service
2 Commission, Wyoming Public Service Commission, and the FERC.

3 **II. Purpose of Testimony and Summary**

4 **Q. What is the purpose of your testimony in this proceeding?**

5 A. My testimony addresses NVE’s request for Commission approval of a cost of service
6 study and net metering tariffs. NVE seeks to establish separate customer classes and
7 new rate designs, rates and rules for prospective residential and small business net
8 metering customers, i.e. those submitting applications for connecting distributed solar
9 generation (“DSG”) to one of the NVE operating companies subsequent to the 235
10 MW threshold being reached (“NEM 2 customers”). Specifically NVE’s net metering
11 tariff requests consist of three new customer classes for its Northern operating
12 company, Sierra Pacific Power Company (“SPPC”); four new customer classes for its
13 Southern operating company, Nevada Power Company (“NPC”); nine new rate
14 schedules for NPC; seven new rate schedules for SPPC; eight modified rate schedules
15 for NPC; seven modified rate schedules for SPPC; and modification of Rules 9 and
16 15 for each operating company. This request was triggered by the passage of Senate
17 Bill 374 (“SB 374”) earlier this year.¹

18 The purpose of my testimony is to evaluate NVE’s proposals to segregate NEM 2
19 customers from the customer class under which they are currently receiving electric
20 service and place them under new and very different rate structures and tariffs.²

21 **Q. Please summarize your testimony.**

¹ SB 374, as enrolled, is included as Exhibit RG-2.

² As the net metering capacity threshold has already been reached, the Commission approved interim net energy metering tariffs for NEM 2 customers that reflect the terms and conditions of the existing NEM 1 (pre-threshold) program while NEM 2 tariffs are being considered. *See* Interim Order, ¶ 98, PUCN Docket Nos. 15-07041, 15-07042 (Sept. 1, 2015).

1 A. NVE’s proposals to segregate new residential and general service DSG customers
2 into their own rate classes with different rates and rate structures is based on a
3 mischaracterization of SB 374 and is unsupported by the evidence NVE has put
4 forward.

5 I conclude that NVE’s rationale underlying its proposal is unfounded. Specifically,
6 NEM customers do not have unique load and cost characteristics as compared to non-
7 NEM customers, and do not unreasonably shift costs to non-NEM customers under
8 current rates. My findings are consistent with the Energy + Environmental Economics
9 (“E3”) cost-benefit study performed last year for this Commission.

10 The marginal costs of service studies (“MCS”) submitted by NVE includes flawed
11 NEM load shapes, which were used to allocate transmission and distribution costs;
12 over-allocation of customer costs to the NEM classes; and double-recovery of
13 revenue related to NEM customer excess generation. When these flaws are corrected,
14 the MCS study actually indicates that the cost to serve NEM customers is less than
15 the cost to serve non-NEM customers. Indeed, these customers should receive a small
16 credit on their current bills to reflect this finding.

17 In addition to these flaws, there are underlying data problems with the MCS that
18 likely lead to skewed results. However, it isn’t possible to fully understand the impact
19 of these data problems at this time, and the data issues cannot be addressed in this
20 proceeding.

21 I further conclude that NVE’s tariff proposals do not meet the purpose and policy of
22 SB 374, do not adhere to the marginal cost requirement in SB 374, and incorporate a
23 tariff element, namely a demand charge, that provides poor pricing signals and is bad

1 for the solar market.

2 In light of the flaws in NVE’s proposals and the lack of any existing unreasonable
3 cost shift, I recommend the Commission reject NVE’s proposed tariffs and permit
4 NEM 2 customers to continue to take service under current rates, as reflected in the
5 recently approved interim tariff.

6 However, in an effort to continue to gather information to help inform future potential
7 rate design, I have developed an alternate tariff based upon appropriate corrections to
8 the MCS, where possible. The alternate tariff complies with SB 374, does not include
9 demand charges, and reflects marginal costs in its peak time-of-use period. In
10 addition, it collects the embedded revenue requirement and does not result in an
11 unreasonable cost shift.

12 I recommend the Commission implement this alternate time of use (“TOU”) tariff
13 through shadow billing so that NVE can gather more data and the Company and
14 NEM 2 customers can gain a better understanding of the effects of a marginal cost
15 based rate before any such rate would go into effect. In other words, under my
16 proposal, NEM 2 customers would be billed under the existing rate (as reflected in
17 the interim tariff), but would also see the effect of the alternate TOU tariff applied to
18 their billing determinants for a period of at least a year. NVE can then make an
19 informed decision about pursuing a TOU-based NEM rate, as SB 374 permits.

20 Finally, I recommend that each operating company of NVE perform a new MCS
21 study using consistent data and incorporating the other corrections included herein as
22 part of their next rate case. A corrected MCS will help the Company and Commission
23 determine whether a new rate for NEM 2 customers is beneficial and in the public

1 interest.

2 **III. Overview of NVE’s NEM Rate Proposals**

3 **Q. Please describe NVE’s proposal to establish separate net metering customer**
4 **classes and new tariffs for these customers.**

5 A. NVE proposes to establish four new customer classes for NPC and three new
6 customer classes for SPPC.³ Each new class includes an increased customer charge, a
7 new demand charge, and a reduced energy charge and export credit. Each new rate
8 class also has a TOU option. The net effect is that NEM 2 customers will be paying
9 more for NVE power as a result of making the choice to install DSG in their homes
10 and businesses. The proposed new rate classes for NEM 2 customers parallel the
11 existing rate classes in which NEM 1 customers reside under the existing two-part
12 rate structures (i.e. with no demand charges). Table 1 summarizes the existing and
13 proposed new classes.

14 **Table 1: Existing NEM 1 and Proposed NEM 2 Rate Classes**

Company	NEM 1 Rate	NEM 1 Option	NEM 2 Rate	NEM 2 Option
NPC	RS	ORS TOU	RS-NEM	ORS TOU-NEM
NPC	RM	ORM TOU	RM-NEM	ORM TOU-NEM
NPC	LRS	OLRS TOU	RSL-NEM	OLRS TOU-NEM
NPC	GS	OGS TOU	GS-NEM	OGS TOU-NEM
SPPC	D1	OD1 TOU	D1-NEM	OD1 TOU-NEM
SPPC	DM1	ODM1 TOU	DM1-NEM	ODM1 TOU-NEM
SPPC	GS1	OGS1 TOU	GS1-NEM	OGS1 TOU-NEM

15

16 **Q. What is the basis of NVE’s proposals?**

17 A. NVE submitted its applications pursuant to Section 4.5 of SB 374 and ordering

³ There are no current NEM customers for SPPC’s DM-1 class and SPPC has not developed hourly marginal costs for these customers. As a result, my analysis herein excludes the SPPC DM-1 NEM group.

1 paragraph 2 in the Commission’s March 31 Order in Docket No. 14-06009.⁴ As
2 stated in the applications, NVE’s justification for the proposals is the requirements of
3 SB 374 and the Commission’s order.⁵

4 **Q. Does NVE present any other reason to support its proposal for a separate rate**
5 **class for NEM customers and three-part rate design?**

6 A. Yes. NVE contends that customers who install renewable distributed generation have
7 unique load and cost characteristics, including different metering and customer
8 service and customer accounting requirements, and different load factors and load
9 levels.⁶ NVE states that its proposal recognizes these differences.⁷ I address these
10 rationales below.

11 **IV. The Role of SB 374**

12 **Q. What is the role of SB 374 in this proceeding?**

13 A. SB 374 is the driving force behind this proceeding. The legislation requires utilities to
14 offer net metering to customers who seek to install systems after the capacity
15 threshold is met. To this end, the bill directs utilities to file proposed net metering
16 tariffs with the Commission and outlines the process for Commission review. With
17 the important caveat that I am not a lawyer and am not offering legal opinions, I will
18 offer my view of the plain language of the bill, as it relates to this proceeding, based
19 on my regulatory and legislative experience.

20 **Q. What is your understanding of what SB 374 requires?**

21 A. Section 4.5 of SB 374 requires that each utility file a net metering tariff required by

⁴ NPC and SPPC Applications at 1. NVE also filed its applications pursuant to NAC § 703.535.

⁵ NPC and SPPC Applications at 3-4 (Part II: Justifications for the Application).

⁶ NPC and SPPC Applications at 1.

⁷ See, for example, NPC Narrative (Vol. 2) at 3.

1 Section 2.3 and a cost-of-service study by July 31, 2015. Section 2.3, in turn, requires
2 each utility to offer net metering to customer-generators who submit applications to
3 install net metering systems within its service territory after the date on which the
4 cumulative capacity cap is met. The tariff must establish the terms and conditions for
5 net metering service for customer-generators who apply to install net metering
6 systems after the date the tariff takes effect.

7 **Q. Based on your review of SB 374, what is your understanding of the purpose of**
8 **the legislation’s requirement that utilities offer net metering to new (i.e. NEM 2)**
9 **customers in accordance with approved tariffs?**

10 A. I believe the legislature made clear, in Section 2.8, that its purpose and policy in
11 enacting this requirement, along with the existing net metering law, is to:

- 12 1. Encourage private investment in renewable energy resources;
- 13 2. Stimulate the economic growth of this State;
- 14 3. Enhance the continued diversification of the energy resources used in this
15 State; and
- 16 4. Streamline the process for customers of a utility to apply for and install net
17 metering systems.

18 I believe it is important for the Commission to keep this purpose and policy in mind
19 when reviewing NVE and other parties’ net metering proposals in this proceeding.

20 **Q. In reviewing and approving a tariff for NEM 2 customers, does the Commission**
21 **have to establish separate rate classes for net metered customers?**

22 A. No. Section 2.3 of SB 374 addresses this issue. Specifically, paragraph 2 of this
23 section states, among other things, the following:

1 2. For the purposes of evaluating and approving any tariff filed with the
2 Commission pursuant to subsection 1 and otherwise carrying out the provisions of
3 this section, the Commission:

4 (a) *May* establish one or more rate classes for customer-generators.

5

6 (e) *Shall not* approve a tariff filed pursuant to subsection 1 or authorize any rates
7 or charges for net metering that unreasonably shift costs from customer-
8 generators to other customers of the utility.

9 (Emphasis added).

10 Note that “establish[ing] one or more rate classes for customer-generators” is an
11 option for the Commission and not a requirement, as indicated by the use of the word
12 “may.” The requirement placed on the Commission is to “not approve a tariff” or
13 “authorize any rates or charges” that unreasonably shift costs to other customers of
14 the utility.

15 **Q. Do you agree that the Commission should not approve rates that unreasonably**
16 **shift costs?**

17 A. Yes. Regulatory commissions, like the PUCN, have a general responsibility to ensure
18 that all rates are just and reasonable and to avoid unjust discrimination in rate
19 relationships among customers and customer classes.⁸ Thus, while SB 374 focuses on
20 cost shifting from customer-generators to other customers, the Commission should
21 also avoid rates that unreasonably shift costs in the other direction.

22 **Q. Do you think the Commission should approve a separate rate class for new net**
23 **metering customers?**

24 A. No. A separate rate class is not necessary at this time for several reasons I discuss in
25 detail below. There is no unreasonable shifting of costs under the current interim

⁸ See N.R.S. 704.040 (charges for services must be just and reasonable) and 704.120 (the Commission has the power to fix rates found to be unjust, unreasonably or unjustly discriminatory, or preferential).

1 tariff. As I discuss later in my testimony, my analysis of the current rates indicates
2 that the cost to serve NEM customers is less than the cost to serve non-NEM
3 customers.

4 In addition, the penetration level of NEM customers is still small and, given the
5 uncertainty regarding the future of the federal investment tax credit, could well
6 remain so. NVE has not shown infrastructure cost increases that have resulted or will
7 result in increased costs at current or anticipated penetration levels.

8 **Q. In approving a tariff for NEM 2 customers, does the Commission have to**
9 **approve a three-part rate design, including demand charges, as NVE has**
10 **proposed?**

11 A. No. The language of Section 4.5(3) of SB 374 is very careful to not specify a
12 particular rate form through the use of the terms “may include, without limitation.”
13 Additionally, and contrary to what NV Energy suggests in its application and
14 testimony,⁹ I do not believe that SB 374 establishes a preference for the three-part
15 rate structure the Company proposes in these cases.

16 **Q. Do you think the Commission should approve a demand charge component in**
17 **NEM 2 rates?**

18 A. No. Demand charges may be appropriate for large commercial and industrial
19 customers that are able to manage their energy and peak demand levels, but are
20 wholly inappropriate for small customers, as I discuss below. Small customers have
21 little ability to manage the peak demand upon which demand charges are based, and
22 rooftop installations have little effect on a customer’s peak demand, regardless of
23 orientation. Finally, demand charges have been demonstrated to have a significant

⁹ See, e.g., NPC and SPPC Applications at 3; NPC and SPPC Narratives at 4.

1 negative impact on the market for distributed solar resources. Therefore singling out
2 DSG customers and subjecting them to these charges would not “[e]ncourage private
3 investment in renewable energy resources.”¹⁰

4 **Q. Are there other provisions of SB 374 that you believe are relevant to this**
5 **proceeding?**

6 A. Yes. N.R.S. 704.085 places a prohibition on mandatory TOU rates for residential
7 customers. However, Section 2.5 of SB 374 creates an exception for schedules or
8 rates imposed on customer-generators (in other words, net metered customers). This
9 express exception to the existing bar on mandatory TOU rates for residential
10 customers creates the option of TOU-based rates for residential customer-generators.
11 Another relevant provision is Section 4.5(3), which provides that charges included in
12 any new net metering tariff “must adequately reflect the marginal costs of providing
13 service to customer-generators.”

14 **Q. What is the timeline for considering new NEM tariffs?**

15 A. SB 374 requires each utility to file tariffs and a cost of service study by July 31, 2015,
16 which NPC and SPPC have done. The Commission must review each proposed tariff
17 and issue a written order approving or disapproving, in whole or in part, the proposed
18 tariff by December 31, 2015. The Commission may also make modifications without
19 limitation. If, for any reason, the Commission does not approve a tariff by the end of
20 the year, the utility must offer net metering in a manner consistent with existing NEM
21 provisions. In essence, the current net metering policies and practices remain in place
22 until a new tariff is approved.

¹⁰ SB 374, Section 2.8.

1 **Q. Please summarize your view of the requirements of SB 374 as it relates to NVE's**
2 **proposal in these cases.**

3 A. As it relates to this proceeding, I believe the key requirements of SB 374 are (1) each
4 utility is to submit a NEM 2 tariff and a cost of service study; (2) the Commission is
5 to approve or reject the tariff and may make modifications without limitation; (3) the
6 rate components of the tariff are to reflect marginal costs incurred by the utility to
7 provide service to customer-generators; and (4) the Commission is not to approve a
8 tariff or authorize any rates or charges for net metering that unreasonably shift costs
9 from customer-generators to other customers of the utility.

10 At least as important are the elements *not required* by SB 374. It does not require the
11 establishment of a separate rate class, and it does not require the use of a three part
12 rate that includes a demand charge.

13 Additionally, SB 374 removes the bar on mandatory TOU rates for residential
14 customers who are users of net metering systems, creating a new potential option for
15 NEM rates going forward.

16 Finally, SB 374 provides flexibility to the Commission, should it not be able to
17 approve a tariff before the end of the year for any reason.

18 **Q. In addition to SB 374, you also mentioned the Commission's March 31 Order in**
19 **Docket 14-06009. What did that Order say about a cost-of-service study and rate**
20 **changes?**

21 A. Paragraph 2 from the Commission Order in Docket No 14-06009 is similar to the
22 requirements of SB 374 in that it seeks submission of a cost of service study along
23 with any proposed rate design changes:

1 2. Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company
2 d/b/a NV Energy shall each conduct a cost of service study to determine whether
3 any systemic rate design changes should be made for its customer classes in
4 response to the requirements of net energy metering/distributed generation
5 customers. The cost of service studies, along with any proposed rate design
6 changes, shall be filed with the Commission no later than July 31, 2015.

7 **Q. Did the Order direct NVE to establish a separate rate class and/or demand**
8 **charges for NEM customers?**

9 A. No, it did not.

10 **V. NVE’s “Unique Load Characteristics and Cost” Rationale**

11 **Does Not Justify Separate NEM Rate Classes**

12 **Q. Turning to the reasoning underlying NVE’s proposal, what does NVE say about**
13 **NEM customer characteristics in proposing to separate DSG customers into**
14 **their own rate classes?**

15 A. In its Applications, NVE suggests that customers who install renewable distributed
16 generation have unique load and cost characteristics. NVE states:

17 Net metering customers are partial requirements customers requiring a standby
18 aspect to their electrical service, have different metering and customer service and
19 customer accounting requirements, and have different load factors and load levels.
20 For instance, on an annual basis, the average single family residential NEM1
21 customer has a higher total electrical usage than the average single family full
22 requirements residential customer at [Nevada Power/Sierra].¹¹

23 **Q. Do net metered customers require a standby aspect to their electric service, as**
24 **NVE asserts?**

25 A. All customers have a standby aspect to their electric service. Residential service loads
26 are not constant; they vary throughout the day, in some cases dramatically, and
27 utilities must stand ready to meet the entire customer load at all times. For example,

¹¹ NPC and SPPC Applications at 1.

