



May 1, 2012

Ms. Breanne Potter, Assistant Commission Secretary  
Public Utilities Commission of Nevada  
Capitol Plaza  
1150 East William Street  
Carson City, Nevada 89701-3109

RE: Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV for approval of proposed trial Non-Standard Metering Option riders and changes to existing rules and schedules associated with implementation of the NSMO riders.

Dear Ms. Potter:

Enclosed for filing with the Commission please find the Application of Nevada Power Company d/b/a NV Energy ("Nevada Power") and Sierra Pacific Power Company d/b/a NV Energy ("Sierra" and, together with Nevada Power, "NV Energy") for the approval of proposed trial Non-Standard Metering Option riders and changes to existing rules and schedules associated with implementation of the NSMO riders. This Application is made pursuant to Section 703.535 of the Nevada Administrative Code ("NAC") and the directive contained in the March 2, 2012, order issued by the Commission in Docket No. 11-10007 (the "Order"). The Application of NV Energy contains the following items:

Application and Exhibits  
Draft Notice  
Testimony  
    Gary P. Smith  
    James R. Christensen  
    Laura I. Walsh  
    Jeff Evans  
Certificate of Service

Should you have any questions regarding this filing, please contact me at (775) 834-5697 or selicegui@nvenergy.com.

Respectfully submitted,

/s/ Shawn M. Elicegui  
Shawn M. Elicegui  
Associate General Counsel

# **APPLICATION**

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

Application of Nevada Power Company d/b/a )  
NV Energy and Sierra Pacific Power Company )  
d/b/a NV Energy for approval of proposed trial ) Docket No. 12-05\_\_\_\_  
Non-Standard Metering Option riders and changes )  
to changes to existing rules and schedules )  
associated with implementation of )  
the NSMO riders. )  
\_\_\_\_\_ )

**APPLICATION**

Nevada Power Company d/b/a NV Energy (“Nevada Power”) and Sierra Pacific Power Company d/b/a NV Energy (“Sierra” and, together with Nevada Power, “NV Energy”) respectfully submit this application (the “Application”). This Application is made pursuant to Section 703.535 of the Nevada Administrative Code (“NAC”) and the directive contained in the March 2, 2012, order issued by the Commission in Docket No. 11-10007 (the “Order”). The Application seeks the authority to establish and implement three separate trial non-standard metering option (“NSMO”) riders: one for Nevada Power, one for Sierra’s electric operations and one for Sierra’s natural gas operations.

The Application is based on the prepared direct testimony of four witnesses filed in support of the Application and the exhibits to the Application.

**I. Summary of Application**

On March 2, 2012, the Commission issued the Order. The Order approves a Report on NV Energy’s Advance Service Delivery Meter Program (the “Report”) and directs NV Energy to “file a Trial Opt-out Tariff with the recommendations in the Report.” Order at 3. Exhibit 1 to this Application is the Tariff Description and Explanation – Trial Non-Standard Metering Option, which explains the terms and conditions of the trial NSMO riders filed by NV Energy. Exhibit 2 contains copies of

1 each of the trial NSMO riders filed by NV Energy. As explained in more detail in the  
2 prepared direct testimony that supports the Application, the trial NSMO riders are  
3 consistent with the recommendations contained in the Report and thus comply with the  
4 Commission's Order.

5 **II. Witnesses supporting the Application**

6 The following witnesses provide prepared direct testimony in support of the  
7 Application:

8 **Gary P. Smith**, Director, Customer Energy Solutions. Mr. Smith  
9 describes the primary terms and conditions contained in the trial NSMO  
10 riders. Together with Ms. Walsh, Mr. Smith supports the proposed trial  
11 NSMO riders and the changes to changes to existing rules and schedules  
12 associated with implementation of the NSMO riders. Mr. Smith explains  
13 that (1) the proposed trial NSMO riders contain (a) proposed enrollment  
14 caps, (b) a proposal for addressing the "premises ownership" issue and  
15 (2) sponsors NV Energy's plan for eliminating the postponement list, all  
16 of which are consistent with the recommendations contained in the  
17 Report.

18 **James R. Christensen**, Director, Meter Services. Mr. Christensen  
19 describes the electric meter, gas module, and meter reading system  
20 technologies selected by NV Energy to be installed pursuant to the trial  
21 NSMO riders. Mr. Christensen's testimony demonstrates that the  
22 electric meter, gas module and meter reading system technologies are  
23 consistent with the recommended alternative set forth in the Report. Mr.  
24 Christensen also supports the cost estimates that are inputs to the cost  
25 model sponsored by Jeff Evans.

26 **Laura I. Walsh**, Manager of Regulatory Pricing and Economic  
27 Analysis. Ms. Walsh supports the cost of service and rate design for the  
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development of the upfront and ongoing monthly rates for the trial NSMO riders. With Mr. Smith, Ms. Walsh also supports the proposed tariffs, the cost of service analyses and resulting rate design for service to a customer choosing not to have a smart meter installed at their premise and requesting service under the trial NSMO riders. Finally, together with Mr. Smith, Ms. Walsh supports the proposed changes to changes to existing rules and schedules associated with implementation of the NSMO riders.

**Jeff Evans**, Executive Consultant with Black & Veatch. Mr. Evans explains and sponsors the cost model that estimates the costs NV Energy reasonably expects to incur in order to provide non-standard meters, meter reading, and billing for customers who subscribe to service under the trial NSMO riders. Mr. Evans sponsors the cost model which is described in Appendix 1 to Exhibit 1. Mr. Evans describes the estimates and assumptions that are used in the cost model. Finally, together with Mr. Smith and Mr. Christensen, Mr. Evans supports the cost of service study.

**III. Exhibits and appendices supporting the Application**

The witnesses sponsor the following, which support the Application:

**Table 1**

<b>Exhibit</b>	<b>Description</b>	<b>Witness</b>
Exhibit 1	Tariff Description and Explanation – Trial Non-Standard Metering Options	Mr. Smith, Mr. Christensen, Ms. Walsh and Mr. Evans
Exhibit 2	Proposed Trial NSMO Riders	Mr. Smith and

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Exhibit	Description	Witness
		Ms. Walsh
Exhibit 3	Changes to existing rules and schedules associated with implementation of the NSMO riders	Mr. Smith and Ms. Walsh

**IV. The Applicants**

Nevada Power is a Nevada corporation and wholly-owned subsidiary of NV Energy, Inc., a publicly owned Nevada corporation and exempt utility holding company. Nevada Power is a public utility as defined in NRS § 704.020, and is subject to the jurisdiction of the Commission. Nevada Power has been authorized by the Commission to conduct its business within its certificated areas in Nevada pursuant to Certificates of Public Convenience and Necessity issued by the Commission. Nevada Power is engaged in providing electric service to the public in portions of Clark and Nye Counties, Nevada. Nevada Power’s primary business office is located at 6226 West Sahara Avenue in Las Vegas, Nevada.

Sierra is a Nevada corporation and wholly-owned subsidiary of NV Energy, Inc., a publicly owned Nevada corporation and exempt utility holding company. Sierra is a public utility as defined in NRS § 704.020, and is subject to the jurisdiction of the Commission. Sierra has been authorized by the Commission to conduct its business within its certificated areas in Nevada pursuant to Certificates of Public Convenience and Necessity issued by the Commission. Sierra provides electric service to the public in portions of fourteen northern Nevada counties, including the communities of Carson City, Minden, Gardnerville, Reno, Sparks, and Elko. Sierra owns and operates a certificated local distribution company engaged in the retail sale of natural gas to

1 customers in the Reno-Sparks metropolitan area. Sierra's primary business office is  
2 located at 6100 Neil Road in Reno, Nevada.

3 All correspondence related to this Application should be served electronically  
4 upon the following address: regulatory@nvenergy.com. Hardcopy documents should  
5 be transmitted to Nevada Power's counsel and Manager, Regulatory Services as set  
6 forth below:

7  
8 Trevor Dillard  
9 Manager, Regulatory Services  
10 6100 Neil Road  
11 Reno, Nevada 89520  
12 Telephone: 775.834.5823  
13 Facsimile: 775.834.4484  
14 regulatory@nvenergy.com

Shawn Elicegui  
Associate General Counsel  
6100 Neil Road  
Reno, Nevada 89520  
Telephone: 775.834.5697  
Facsimile: 775.834.4098  
selicegui@nvenergy.com

13 **V. Tariffs**

14 Tariffs reflecting the proposed trial NSMO riders are set forth in Exhibit 2.  
15 Tariffs reflecting changes to existing rules and schedules associated with  
16 implementation of the NSMO riders are set forth in Exhibit 3. Mr. Smith and Ms.  
17 Walsh direct support and sponsor Exhibits 2 and 3.

18 **VI. Requests for Relief**

19 NV Energy respectfully requests that the Commission issue an order granting  
20 the following relief:

- 21 1. Find that the terms and conditions of the proposed trial NSMO riders  
22 contained in Exhibit 2 are just and reasonable;
- 23 2. Approve the proposed trial NSMO riders contained in Exhibit 2;
- 24 3. Find that the proposed changes to changes to existing rules and  
25 schedules associated with implementation of the NSMO riders contained in Exhibit 3  
26 are just and reasonable;
- 27
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- 1           4.       Approve the proposed changes to changes to existing rules and schedules  
2 associated with implementation of the NSMO riders contained in Exhibit 3;
- 3           5.       Find that NV Energy has complied with directive 2 contained in the  
4 Order; and,
- 5           6.       All such additional relief that the Commission deems just and proper.
- 6           Respectfully submitted this 1st day of May, 2012.

7                                   Nevada Power Company d/b/a NV Energy  
8                                   Sierra Pacific Power Company d/b/a NV Energy

9                                   /s/ Shawn M. Elicegui  
10                                  Shawn M. Elicegui  
11                                  Associate General Counsel  
12                                  Nevada Bar No. 5939  
13                                  6100 Neil Road  
14                                  Reno, Nevada 89511

# **EXHIBIT 1**

# Tariff Description and Explanation – Trial Non- Standard Metering Option

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Nevada Power Company d/b/a NV Energy  
Sierra Pacific Power Company d/b/a NV Energy

5/1/2012

## **Table of Contents**

- A. Introduction
- B. Important terms and conditions of the Trial Non-Standard Metering Option

## **A. Introduction**

Nevada Power Company d/b/a NV Energy (“Nevada Power”) and Sierra Pacific Power Company d/b/a NV Energy (“Sierra” and, together with Nevada Power, “NVE”) respectfully submit this Tariff Description and Explanation to the Public Utilities Commission of Nevada (the “Commission”). The Tariff Description and Explanation is an element of NVE’s filing made in compliance with the Commission’s March 2, 2012, order (the “Order”) approving a Report on NV Energy’s Advanced Service Delivery Meter Program (the “Report”). The Order requires NVE to file with the Commission a trial opt-out tariff that is consistent with the recommendations in the Report.

NVE developed the Trial Non-Standard Meter Option (the “Trial NSMO”) as a “rider” that is available to any “customer” who subscribes to “domestic service” provided by either Nevada Power or Sierra. The Trial NSMO contains two proposed charges – a non-recurring fee and a recurring monthly fee – that apply in addition to all other charges established by the applicable domestic service tariff. As set forth below, the Trial NSMO is consistent with the recommendations in the Report. Moreover, as explained in more detail below and in the Prepared Direct Testimony of Gary Smith, Laura Walsh, James Christensen and Jeffrey Evans, the terms and conditions of the Trial NSMO schedules are just and reasonable. Accordingly, NVE requests that the Commission approve the three separate Trial NSMOs filed by Nevada Power (for its electric service) and Sierra (for its electric and natural gas services).

Section B of this Tariff Discussion and Explanation highlights some of the important terms and conditions of the three Trial NSMOs filed by NVE. Section C of the Tariff Discussion and Explanation contains a summary of the cost estimate, or cost study, prepared by NVE in support of the proposed initial and monthly fees. The cost study identifies and categorizes the estimated and projected costs that Nevada Power and Sierra reasonably expect to incur to implement the Trial NSMOs. Appendix 1 to the Tariff Discussion and Explanation contains the detailed cost study that NVE performed. Section D of the Tariff Discussion and Explanation describes and explains the methodology NVE used to develop the proposed nonrecurring and recurring charges for the Trial NSMO. Exhibit Walsh-Direct-2 contains the marginal cost work papers supporting the charges proposed by NVE. Finally, Section E of the Tariff Discussion

and Explanation describes the transition plan that NVE proposes to implement in order to eliminate the postponement list within 45 days after the Commission issues an order approving the Trial NSMOs. After NVE eliminates the postponement list, it will install non-standard metering options or advanced service delivery meters for customers in an orderly and expeditious manner. Appendix 2 contains copies of communications materials that NVE plans to use during the transition period. Appendix 3 contains description of the non-standard meter that NVE selected.

**B. Important terms and conditions of the Trial NSMO.**

The Trial NSMO is available to a limited number of domestic service customers in Northern and Southern Nevada. A customer who receives domestic service may choose to receive a non-standard meter for any reason, subject to the subscription limitation described below, and specific special conditions listed in the Trial NSMO schedules. The Trial NSMO contains a non-recurring service fee and a recurring monthly service charge. Consistent with the Order and Report issued in Docket No. 11-10007, both charges reflect the incremental cost of providing the non-standard metering option.<sup>1</sup> The proposed charges are:

	Nevada Power Company d/b/a NV Energy	Sierra Pacific Power Company d/b/a NV Energy	
		Electric	Natural Gas
<b>Non-Recurring (Initial) Fee</b>	\$98.75	\$107.66	\$6.08
<b>Recurring (Monthly) Service Charge</b>	\$7.61	\$11.01	\$1.20

The initial charges are roughly equal to the existing non-standard metering charges that the Commission previously found to be just and reasonable. The recurring charges reflect the incremental cost of providing the non-standard metering service. Ms. Walsh and Messrs. Christensen and Evans support the reasonableness of the rates.

<sup>1</sup> Report on NV Energy’s Advance Service Delivery Meter Program at 29, Docket No. 11-10007.

The Report notes that, “[w]ith regard to premise ownership, there is an issue of whether customers who do not own their premises should be allowed to opt-out of a non-standard metering option without the owner’s consent.”<sup>2</sup> The Report then recommends that the Company include in its tariff filing a proposal to address this issue.<sup>3</sup> As set forth in the Trial NSMO, only the “Customer” has the ability to select the non-standard metering option. NVE’s tariffs generally define the “Customer” as the person responsible for paying the bill. Thus, a tenant who is responsible for paying the utility bill may choose the non-standard metering option without obtaining the landlord’s consent. As a corollary, a landlord may not select the non-standard metering option unless the landlord is responsible for paying the utility bill.

The Report also provides that the “trial opt-out tariff must establish a cap that would not jeopardize [Department of Energy (“DOE”) Smart Grid Investment Grant] funding.”<sup>4</sup> Consistent with the Report’s recommendation, each of the Trial NSMO tariffs filed by NVE contains subscription limitations. Nevada Power’s Trial NSMO is limited to 12,000 domestic service customers; Sierra’s Trial NSMO tariffs are limited to 4,500 domestic service customers. These caps ensure that subscription for service under the Trial NSMOs will not jeopardize or limit NVE’s ability to obtain full funding under its Smart Grid Investment Grant. Mr. Smith explains the methodology NVE used to establish these enrollment caps.

The Trial NSMO contains several other important special conditions. First, any customer who chooses to receive service through the Trial NSMO may not participate in any optional time-of-use pricing program offered by either of the Utilities because the non-standard meter cannot record interval usage data. Second, customers who have on-site generation and who rely on either one of the Utilities to provide some of their electrical energy needs are not eligible to receive service under the Trial NSMO. Third, in Northern Nevada, a customer who receives natural gas service may select the non-standard metering option only if the customer also subscribes to service under the Trial NSMO rider for electric

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<sup>2</sup> Id.  
<sup>3</sup> Id.  
<sup>4</sup> Id.

service. Fourth, a customer may not be eligible to receive service under the Trial NSMO rider if the customer does not comply with other provisions of NVE's tariffs.

In summary, the Trial NSMO complies with the Commission's order and is consistent with the Report's primary recommendations. NV Energy proposes the use of a drive-by meter reading solution utilizing the Itron CENTRON C1SR AMR meter (FCC ID SK9C1A-2) configured to utilize a low power transmitter and an ERT type 04 SCM protocol (hereinafter the "Non-Standard Meter") which does not collect or store interval data. The meter uses a low power, one-way radio to transmit usage information, alarms and error checking information. Coupled with Itron's Field Collection System, the Non-Standard Meter permits "drive-by" meter reading as recommended by the Report. The proposed rates were developed using incremental cost principles that, with the exception of potential stranded costs in the event NVE discontinues the Trial NSMO, do not rely on subsidies from the general body of customers through the standard metering option. The Trial NSMO's contain subscription caps that ensure the programs do not jeopardize or limit NVE's ability to maximize funding under its Smart Grid Investment Grant. The filing expressly addresses the issue of premise ownership by proposing to allow the customer – i.e., the customer who is responsible for payment of the bill – to select the Trial NSMO. Finally, as explained in Section E, below, NVE will eliminate the postponement list within 45 days of a Commission order approving the Trial NSMO tariffs, and will implement an orderly, efficient and expeditious process for installing non-standard meters. Accordingly, the Commission should approve the Trial NSMO schedules.

### **C. Summary of Cost Estimates and Cost Study.**

To prepare incremental cost-based recurring and non-recurring charges for the Trial NSMO, the Company prepared a cost assessment. The purpose of the cost assessment was to identify and quantify the non-recurring and recurring costs necessary to offer the Trial NSMO to residential customers. The complete cost assessment accompanies this Tariff Description and Explanation in Appendix 1. This section of the Tariff Description and Explanation summarizes the results of the cost assessment.

The Company identified and quantified five categories of costs that should be recovered through an initial (or non-recurring) fee. Those categories of costs are: (1) installation labor, (2) customer support and application processing labor, (3) ancillary meter supplies, (4) customer communication materials, and (5) reinstallation of a standard meter when the customer served by a Trial NSMO discontinues service. The Company identified and quantified ten categories of costs that should be recovered through on-going (or per meter per month) fees. Those categories of costs are: (1) meter and module expenditures; (2) systems modifications; (3) handheld acquisition and maintenance; (4) vehicular meter reading costs; (5) service technician costs; (6) route analyst costs; (7) billing Customer Service Representative (CSR) costs; (8) materials costs; (9) mobile collector annual maintenance costs; (10) annual hardware maintenance costs; and, (12) annual software maintenance costs.

**1. Costs recovered through initial fee.**

All labor costs – both recurring and non-recurring – are based on actual NVE labor costs. Non-recurring labor costs incorporate 40 minutes of travel time and 10 minutes of on-site installation time for electric meters. For Sierra Pacific, gas encoder receiver transmitter (ERT) module installation costs include an additional 15 minutes of on-site installation time. The source of the hourly labor rates are the Utilities’ respective collective bargaining agreements and include labor loadings, which were based on NV Energy’s 2012 Financial Planning & Analysis Budget book. Labor costs also include a separate supervision cost allocation for each of the Utilities. The application of the supervision cost allocation is consistent with NVE internal financial planning and accounting practices and reflects the cost to provide appropriate supervision of the labor workforce. Labor costs associated with installation of the non-standard metering alternative total \$49.92 for Nevada Power, \$54.68 for the installation of a non-standard electric meter in Sierra’s service territory, and an incremental \$14.74 of labor per hour associated with the installation of a gas ERT.<sup>5</sup>

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<sup>5</sup> The cost study includes a “credit” in the amount of the installation cost that NVE would pay its third-party smart meter installation contractor. This credit recognizes costs that NVE will avoid when it does not make a standard meter installation as part of the NVEnergize project. As noted in Appendix 1, total costs include expenses associated with the installation of a standard meter when a customer served by an TRIAL NSMO terminates service.

NVE separately identified and quantified the costs associated with customer support and application processing. These costs relate to the tasks necessary to communicate with customers currently on the postponement list, establish billing for the Trial NSMO, and initiate a service request for the installation of a non-standard metering option. These estimated costs total \$17.64 for Nevada Power and \$20.44 for Sierra.

NVEnergize conducts a customer communications plan with each AMI meter and module installation that includes mailing a letter to a premise within 30 days of anticipated meter and module installation, calling the customer within five days of anticipated installation, and leaving a door hanger after a successful installation or an installation attempt. NV Energy believes that such communications are critical to ensuring that customers are aware of and prepared for installation activities. NV Energy will conduct a similar communications effort with customers who choose a Trial NSMO. These costs include the cost of informing customers on the postponement list of the Trial NSMO and informing the customer about the scheduled installation of the non-standard metering option. NV Energy incurs a cost of \$1.10 per mailing, \$0.10 per automatic phone call, and \$0.06 per door hanger. Mailing costs include printing, postage, and envelope. Calls are executed via automated calling, also referred to as a robo-call, and the cost is a contractual volume based amount. Door hanger costs include printing.

Finally, NVE will secure each non-standard electric meter with a new locking ring and seal. The locking ring is intended to prevent unauthorized removal of the meter from the socket, enhancing system safety and reliability. The seal provides a visible indicator that allows each of the utilities to identify when a meter has been removed from a socket, which enhances system integrity and provides revenue protection benefits. The unit price of a locking ring is \$9.00 and the unit price of a seal is \$0.17. Sales tax of 8.1% or \$0.74 is applied for the Nevada Power's service territory and 7.725% or \$0.71 is applied to meters installed within Sierra's service territory. Neither a locking ring nor a seal is utilized for the gas ERT installation. Total ancillary supply costs are \$9.91 for electric meters installed in Nevada Power's service territory and \$9.88 for electric meters installed in Sierra's service territory. There are no ancillary supply costs for gas ERT module's installed within Sierra's service territory.

## **2. Costs recovered through per meter, per month fee.**

NVE has selected the Non-Standard Meter as the electric Trial NSMO. Appendix 3 contains a detailed description of the Trial NSMO. The unit price of this meter is \$42.68 for a class 200 meter and \$76.63 for a class 320 meter. Both costs are established by meter procurement contracts. NVE estimates that 99% of the domestic service meter population is class 200 and 1% of the population is class 320. Thus, the weighted cost of the Itron meter is \$43.02 (99% of \$42.68 plus 1% of \$76.63). Sales tax of 8.1% or \$3.48 is applied for the Nevada Power's service territory and 7.725% or \$3.32 is applied to meters installed within Sierra's service territory.

NV Energize chose an Itron ERT module as the gas service Trial NSMO in the Sierra service territory. The unit price of an Itron gas ERT module is \$65.00 per procurement contracts. Sales tax of 7.725% or \$5.02 is applied to the service territory.

The unit meter costs are \$46.50 for electric meters installed in Nevada Power's service territory, \$46.34 for electric meters installed in Sierra's service territory, and an additional \$70.02 for gas ERT module's installed within Sierra's service territory. Total meter costs are \$209,270.79 for electric meters installed in Nevada Power's service territory, \$139,029.89 for electric meters installed in Sierra's service territory, and \$210,063.75 for gas modules installed in Sierra's service territory.

To facilitate the Trial NSMO program, NVE will need to modify existing systems. Specifically, NVE will need to modify its Banner customer information and billing system, modify its MyAccount customer portal, and install a drive-by meter reading system. Modifications to Banner will facilitate the implementation of the Trial NSMO by both Utilities by creating processes that allow enrollment in and billing for the Trial NSMO. The Banner modifications are expected to cost \$96,000. The MyAccount portal will be modified by creating a form that allows customers to initiate a Trial NSMO on-line. The cost to create this form is \$1,000. NV Energy will implement Itron's Mobile Collector Lite (MCL) drive-by meter reading solution. Software and implementation fees are based on a proposal from Itron and cost \$82,430. Additional costs include hardware (servers) at \$75,000 and integrations at \$50,000.

While NV Energy currently utilizes a handheld-based “walk-by” meter reading system for a limited number of customers, this system is not well suited for vehicular drive by and the current system will no longer be supported by the manufacturer after December, 2012. Implementation of the drive-by solution requires the installation of four MCL units in existing NV Energy vehicles, the implementation of handheld devices, and the implementation of the Field Collection System (FCS) software to operate the MCL units. Two MCL units will be deployed in the NPC service territory and two units will be deployed in the SPPC service territory. The unit cost of each unit is \$9,300. Implementation of the drive-by solution also requires the purchase of 20 handheld meter reading devices. Handheld devices are utilized in two ways – connected to an MCL for capture of data or used manually in locations where it is not cost-effective to conduct drive-by meter reading. Four of the 20 handhelds will be located at the Beltway facility where Trial NSMO reading can be centrally located for the Southern service territory. These four handhelds will be used predominantly with the MCL units; one primary and one backup for each MCL. The remaining 16 handhelds will be distributed to district offices in the Northern service territory. Four of the 16 handheld units will be used predominantly with the MCL units. The remaining 12 units will be used in dispersed district offices where it is more cost-effective to manually read meter. Unit cost for the handheld is \$4,590 while the unit cost for the ancillary hardware required to support each handheld is \$423. Annual maintenance costs associated with handhelds is contracted at \$435 for each handheld and \$38 for each handheld docking station. NPC handheld costs are \$21,944 (4 handhelds x (\$4,590 + \$423 + \$435 + \$38)). SPPC handheld costs are \$93,536 (16 handhelds x (\$4,590 + \$423 + \$435 + \$38)). Annual FCS software maintenance costs are contracted at \$1,080. Annual maintenance costs associated with the Mobile Collector Lite (MCL) units are contracted at \$576 for each MCL. Annual maintenance costs in NPC are \$1,152 (2 MCLs x \$576) and in SPPC are \$1,152 (2 MCLs x \$576).

On-going, or recurring costs also include labor costs associated with monthly reading of meters. To read the Trial NSMO meter each month, a NV Energy Service Technician will drive the MCL vehicle on a prescribed route so that the MCL can receive transmitted register readings from each Trial NSMO premise. NV Energy expects that four incremental Service Technicians will be required full-time to reach

each of the estimated 7,500 Trial NSMO meters/modules each month. In both the NPC and SPPC service territories, one Service Technician will act as the primary operator of the MCL while a second will act as a backup.

Service technician rates are based on the Utilities' respective collective bargaining agreements and include labor loadings. The labor loaded hourly rate is \$45.58 for Nevada Power and \$45.44 for Sierra. Transportation costs associated with the travel time to and from the premise are accounted for via a transportation allocation. The average transportation allocation for the NPC is \$6.21 per hour and for the SPPC is \$6.53 per hour.

The annual costs associated with each service technician are the sum of the labor-loaded, hourly rate and the hourly transportation cost multiplied by the number of hours each year (2,080) to read meters divided by the number of customers served through a Trial NSMO. Total annual meter reading costs for service technicians is \$215,456.40 for Nevada Power and \$216,218.71 for Sierra.

In addition to service technicians, NVE will use two full time equivalent employees (one in Southern Nevada and one in Northern Nevada) to plan the daily work of the Service Technicians and process the routes. In Southern Nevada, the Company will use a route analyst, which an hourly rate of \$27.88 and, in Northern Nevada, the Company will use a meter data specialist with an hourly rate of \$22.90. The NPC rate is based on a management position salary. The SPPC rate is established by collective bargaining unit agreement. After applying labor loading factors, the estimated hourly rate in Nevada Power's service territory is \$48.83 and \$40.56 in Sierra's service territory. The total annual costs associated with the Route Analyst and the Meter Data Specialist are the labor-loaded, hourly rate multiplied by the number of hours each year (2,080), which is articulated as \$101,558.00 for Nevada Power and \$84,356.27 for Sierra.

NVE believes that one half FTE Billing CSR (Senior classification) will be required to address and resolve exceptions that occur during the billing process for Trial NSMO customers in both Northern and Southern Nevada. A Senior Billing CSR's hourly rate in the Southern service territory is \$25.68 and is \$21.90 in the Northern service territory. These rates are established by respective collective bargaining

unit agreements. After applying labor loading factors, the estimated hourly rate in Nevada Power’s service territory is \$44.97 and \$38.78 in Sierra’s service territory. The total annual costs associated with the Senior Billing CSR are the labor-loaded, hourly rate multiplied by the number of hours each year (2,080), which is articulated as \$46,764.31 for Nevada Power and \$40,336.30 for Sierra.

Annual materials costs to support monthly meter reading personnel include items such as uniforms and protective devices. The total cost of such materials is \$2,400 allocated by number of FTEs to NPC (2/4) and SPPC (2/4). The total monthly costs, per electric customer, are, based on the assumption that 4,500 customers will subscribe to the Trial NSMO in Southern Nevada and that 3,000 electric customers will subscribe to the Trial NSMO in Northern Nevada are \$10.93 and \$16.04, respectively.

**D. Marginal Costing Exercise and the Development of Nonrecurring and Recurring Charges for the Trial NSMO.**

In accordance with the Commission Order in Docket No. 11-10007, the proposed non-recurring and recurring charges incorporate the full marginal costs of installation, system upgrades, and ongoing personnel requirements to implement and maintain Trial NSMO. The following table summarizes the proposed electric service rates for both Nevada Power and Sierra and also lists the proposed charges for Sierra’s gas customers who choose a non-standard metering option.

**Proposed Recurring and Nonrecurring Charges for Trial NSMO**

	<b>Electric Service</b>	<b>Gas Service</b>
<b>Sierra Pacific</b>		
Upfront Charge	\$107.66	\$6.08
Monthly Recurring Charge	\$11.01	\$1.20
<b>Nevada Power</b>		
Upfront Charge	\$98.75	n/a
Monthly Recurring Charge	\$7.61	n/a

The proposed charges are designed to recover the entire incremental costs of implementing the stated Trial NSMO for customers choosing to opt out of NV Energy’s smart meter installations. The

costs are based on an estimate that 0.5% of all residential customers (7,500 in total, 3,000 for Sierra and 4,500 for Nevada Power) will choose to opt-out of the standard smart meter service and select a Trial NSMO service agreement. The estimated costs are collected through two charges: a non-recurring charge and monthly recurring charges.

Up-front or nonrecurring costs include, but are not limited to, installation labor, customer support and application processing labor, the digital meter and ancillary supplies, the acquisition of handheld devices and a new mobile collection system, customer communication materials, the cost of returning NV Energy's system to its standard configuration, and a credit for the standard smart meter installation that is avoided. The Companies propose the non-recurring charge to recover some, but not all of these costs. Specifically, the Companies propose to collect the meter and ancillary supply costs and other capitalized expenditures through the recurring monthly charge because that approach is consistent with the approved methodology to recover these costs in the customer's recurring Basic Service Charge ("BSC"). The other non-recurring costs listed are to be recovered through the proposed one-time upfront charge. For Sierra's residential gas customers who choose a Trial NSMO, there are no incremental customer communications and customer support and application processing costs since their request will be implemented at the same time the customer requests a Trial NSMO configuration for their electric service.<sup>6</sup>

Second, on-going or recurring costs (system modification expenditures, handheld acquisition and maintenance costs, drive-by meter reading system costs, back-office labor costs, materials costs and annual hardware and software maintenance costs) and, as noted above, certain non-recurring costs, will be recovered through the proposed monthly charge in addition to the standard BSC. This charge is largely based on the same calculations used to develop the functional customer costs in each of the Company's last approved marginal cost study with two exceptions. First, estimated A&G expenses are already included directly in the calculation of the incremental Customer Accounts and Services cost estimates.

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<sup>6</sup> Only a natural gas customer who also subscribes to electric service under the TRIAL NSMO may subscribe to gas service under the Gas TRIAL NSMO. Moreover, Based on Special Condition X of the proposed rider, if a Sierra customer is an electric and gas customer and they request a TRIAL NSMO, the TRIAL NSMO must be for both electric and gas service, and they must pay both the electric and gas TRIAL NSMO charges.

Therefore, the general A&G values used in each Company's Cost of Service study are excluded in the calculations so that these costs are not included twice. Second, the annual economic carrying charge used in the opt-out calculations have been modified from those used in the most recently approved marginal cost studies at both Companies. The adjustment is made to reflect the shorter life of the meter related investments applicable in this instance, than the overall average life of distribution plant that is reflected in the marginal cost studies.

In Docket 11-10007, the Commission indicated that customers who choose the Trial NSMO should pay the full incremental cost of that decision. Since the smart meter is the Companies' standard metering option, when a customer stops service, or requests to be taken off of the trial opt-out tariff, a Trial NSMO meter will be replaced with a smart meter to restore the Companies' system to the standard configuration. Accordingly, any customer choosing to opt-out of this standard configuration should pay the incremental cost of reinstalling the standard smart meter. However, as an offset against this additional cost, because Trial NSMO customers would have a smart meter installed on their premise but for their election of the Trial NSMO rider (and all customers will receive the value of a smart meter installation at some point), those customers who choose to opt-out of this service should not be unduly penalized for that decision. Therefore, a credit for the cost of a standard planned smart meter installation is also included in the proposed upfront charge.

**E. Plan for Eliminating the Postponement List and Installing New Meters in an Orderly and Efficient Manner.**

As noted above, the Trial NSMOs contain limits that ensure NVE will receive full funding under its SGIG. The Report recommends that NVE "consult with DOE prior to submitting its application to determine the precise number of the cap using the recommended alternative."<sup>7</sup> NVE contacted the DOE before submitting its application for approval of the Trial NSMOs. The DOE could not provide a definitive subscription cap; therefore, NV Energy has defined a cap in Nevada Power's Trial NSMO of 12,000 domestic service customers and in Sierra's Trial NSMO of 4,500 domestic service customers. The

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<sup>7</sup> Report at 29.

DOE has affirmed that any smart meter received into inventory and eventually used as intended to facilitate AMI/smart metering is eligible for reimbursement. These caps represent the volume of meters and modules at which any greater number than this would be considered excess inventory. Excess inventory cannot be retained in NV Energy facilities and, therefore, cannot be received. If inventory cannot be received, it is not eligible for SGIG reimbursement.

With respect to transitioning customers from the postponement list to either the Trial NSMO or the standard meter, NVE proposes to eliminate the postponement list within 45 days after a final Commission order approving the Trial NSMO. Within 5 days after the Commission issues an order, NVE will transmit to customers on the postponement list (as well as those who have requested removal of a smart meter) a letter (see Appendix 2) explaining the Trial NSMO, identifying the methods that customers may use to document their decision to choose either the standard or the non-standard metering option, and indicating that customers who do not respond will be placed in the smart meter installation queue.<sup>8</sup> The deadline for responding to the letter will be 35 days after the day the Commission issues an order approving the Trial NSMO schedules. Approximately 5 days before the deadline, NVE will make automated calls to all letter recipients who have not notified NVE of their desire to have a non-standard meter. The automated call will inform customers that they must respond before the deadline or, once again, NVE will place the customer in the smart meter installation queue. Finally, on the 45th day following the Commission's order, NVE will file with the Commission (under seal) a list identifying the customers that chose to move from the postponement list to the NSMO, a list of the customers placed in the smart meter installation queue, and notice that Nevada Power and Sierra have terminated the postponement list. NVE will schedule the installation of the NSMO when it receives an opt-out request. After NVE terminates the postponement list, Nevada Power and Sierra will install non-standard meters in a reasonable period for any customer who chooses the Non-Standard Meter.

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<sup>8</sup> The letter explains that the customer may call NVE. NVE does not plan to accept verbal requests for a non-standard metering option; instead, NVE's customer service representatives will explain options to the customer and, if the customer selects the non-standard metering option, indicate that the customer needs to return the signed postcard or complete the on-line form to obtain a non-standard meter.

## **Appendix 1. Cost study (detailed)**

The Non-Standard Metering Option (TRIAL NSMO) involves the installation of an electric digital meter with no interval data measurement capability that is read via drive-by meter reading technology. The TRIAL NSMO results in the replacement of a customer's existing electric meter with a tested Itron CENTRON C1SR AMR meter (FCC ID SK9C1A-2) configured to utilize a low power transmitter and an ERT type 04 SCM protocol (Non-Standard Meter). In the Sierra Pacific Power Company service territory where NV Energy delivers gas, the TRIAL NSMO also involves the installation of an Itron ERT on the gas meter that is also read by the same drive-by meter reading technology as the electric drive-by meter. The TRIAL NSMO includes a premise visit to assess the condition of customer-owned facilities for safety and tamper purposes and the installation of new electric meter, locking rings and seals.

NV Energy makes the following assumptions:

- A Sierra Pacific Power Company customer with both electric and gas services that chooses the TRIAL NSMO must do so for both services. The TRIAL NSMO costs associated with both SPPC-Electric and SPPC-Gas will apply.
- Ongoing costs to facilitate the TRIAL NSMO are assigned solely to electric - since implementing the gas service TRIAL NSMO does not incur additional costs.
- While NV Energy was awarded a Smart Grid Investment Grant ("SGIG") in the amount of \$139 million, no costs associated with this TRIAL NSMO are reimbursable via the SGIG.
- The estimated total number of customers choosing a TRIAL NSMO is 7,500, with 4,500 at NPC and 3,000 at SPPC.

NV Energy anticipates that both up-front and on-going operating costs will be incurred to facilitate the TRIAL NSMO.

Costs recovered through an up-front fee include:

- Installation labor
- Customer support and application processing labor
- Customer communications materials
- Reinstallation of a standard smart meter at the time a customer served by a TRIAL NSMO discontinues service

Costs recovered through a per meter, per month fee include:

- Meter/Module and ancillary meter supplies
- Systems modifications
- Handheld acquisition and maintenance
- Vehicular meter reading costs
- Service technician costs
- Route analyst costs
- Billing CSR costs
- Materials costs

- Mobile Collector Lite annual maintenance costs
- Annual hardware maintenance costs
- Annual software maintenance costs

This document explains and justifies NV Energy's estimates of these costs.

## **Costs Recovered Through Up-Front Fee**

Up-front costs include installation labor, customer support and application processing labor, customer communications materials, and reinstallation of a standard smart meter.

### **Installation Labor**

Since the installation of a TRIAL NSMO falls outside of the established AMI meter deployment process, NV Energy will utilize NV Energy employees rather than its contracted endpoint installer, Scope Services, to complete the TRIAL NSMO. Moreover, because the TRIAL NSMO likely will be available to new customers after NVE completes NVEnergize, estimated costs are based on the use of NVE personnel.

To install the tested non-standard meter, a single NV Energy Service Technician will travel to each premise, complete the installation, and return to a NV Energy facility. While on site, the installer will inspect the premise for any signs of tampering or any unsafe conditions. Travel to and from a premise is estimated at 20 minutes each way. Completion of the installation of the electric meter and site inspection are expected to take 10 minutes for a total time of 50 minutes.

For premises in the Sierra Pacific Power Company ("SPPC") service territory where NV Energy delivers gas, the installation of a non-standard gas module is estimated to add 15 minutes of additional labor.

A Service Technician's hourly rate in the Nevada Power Company ("NPC") service territory is \$26.03 and in the SPPC service territory is \$25.66. These rates are established by the respective collective bargaining unit agreements.

Labor loadings for each service territory vary – 75.1% for the NPC and 77.1% for the SPPC.

The labor loaded hourly rate is obtained by adding the labor loading to the hourly rate. For NPC, 75.1% of the hourly rate (\$26.03) is \$19.55. Therefore, the labor loaded hourly rate is \$45.58 (\$26.03 + \$19.55). Similarly for SPPC, 77.1% of the hourly rate (\$25.66) is \$19.78. Therefore, the labor loaded hourly rate is \$45.44 (\$25.66 + \$19.78).

Transportation costs associated with the travel time to and from the premise are accounted for via a transportation allocation. The average transportation allocation for the NPC is \$6.21 per hour and for the SPPC is \$6.53 per hour.

Supervision costs, the allocation of the cost of managing personnel, are accounted for via a supervision allocation. The average supervision allocation for NPC is 31.18% of labor. The average supervision allocation for SPPC electric is 53.18% while the gas allocation is 27.27%.

The total installation cost for this alternative is the sum of the labor-loaded hourly rate, the hourly transportation cost, and the hourly supervision cost multiplied by the number of hours to complete the installation. This is articulated as follows:

$$\text{SUM (labor-loaded hourly rate + hourly transportation cost + hourly supervision cost) x number of hours}$$

The following table lists the specific costs for each of NPC and SPPC.

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC – Electric</b>	<b>SPPC – Gas</b>
Hourly rate	\$26.03	\$25.66	\$25.66
Labor loading	75.1%	77.1%	77.1%
Labor-loaded hourly rate	\$45.58	\$45.44	\$45.44
Hourly transportation cost	\$6.21	\$6.53	\$6.53
Hourly supervision cost	\$8.12	\$13.65	\$7.00
Number of hours to complete installation	0.83	0.83	0.25
<b>Total Installation Cost</b>	<b>\$49.92</b>	<b>\$54.68</b>	<b>\$14.74</b>

### **Customer Support and Application Processing**

NV Energy’s call center will be responsible for communicating with customers about the TRIAL NSMO, establishing the billing for the one-time TRIAL NSMO up-front cost, establishing the billing for the monthly ongoing costs, and initiating a service request to install the TRIAL NSMO.

NV Energy’s average cost per call center call through September 30, 2011 in NPC is \$4.41 and in SPPC is \$5.11. NV Energy believes that a call to discuss TRIAL NSMOs will be more complex than a typical call. In addition, the call center representative will be required to execute at least three different transactions (one-time billing, monthly billing, service request initiation) to implement the TRIAL NSMO. Given this, NV Energy estimates that the duration of a call to address a TRIAL NSMO election will be four times the duration of the average call center call. Therefore, the cost to address a TRIAL NSMO call will be four times the cost to address an average call, or \$17.64 in NPC and \$20.44 in SPPC.

Customer support and application processing costs incurred during implementation of the gas TRIAL NSMO are included in the SPPC costs.

### **Customer Communications and Materials**

NVEnergize conducts a customer communications plan with each AMI meter and module installation that includes mailing a letter to a premise within 30 days of anticipated meter and module installation, calling the customer within five days of anticipate installation, and leaving a door hanger after a successful installation or an installation attempt. NV Energy believes that such communications are critical to ensuring that customers are aware of and prepared for installation activities.

Under Rule 16, NVE provides any customer served through a TRIAL NSMO a written notice 30 days before NVE installs the TRIAL NSMO. NV Energy will conduct a similar communications effort with customers who choose a TRIAL NSMO. NV Energy will mail customers information about the TRIAL NSMO installation within 30 days of installation, will call customers within five days of the TRIAL NSMO installation as a reminder, and will leave a door-hanger to notify customers that the non-standard metering exchange has been completed.

NV Energy incurs a cost of \$1.10 per mailing, \$0.10 per phone call, and \$0.06 per door hanger. Mailing costs include printing, postage, and envelope. Calls are executed via automated calling, also referred to as a robo-call, and the cost is a contractual volume based amount. Door hanger costs include printing.

Customer communications and materials costs incurred during implementation of the gas TRIAL NSMO are included in the SPPC costs.

### **Reinstallation of a Standard Smart Meter**

Because a communicating AMI meter is NVE’s standard metering option, a customer who selects a TRIAL NSMO should be responsible for the cost of returning NVE’s system to the standard configuration. Thus, NV Energy expects that an AMI enabled meter and module (if applicable) will eventually be deployed at each premise. NV Energy labor will be utilized to accomplish this task.

Using the same methodology and justification from the Installation Labor section of this document, the cost to reinstall a standard AMI enabled electric smart meter at a premise in the NPC service territory is \$49.92 and in SPPC service territory is \$54.68. The cost to reinstall a standard AMI enabled gas smart module at a premise in the SPPC service territory is \$14.74.

### **Total Costs Collected through an Up-Front Fee**

The total costs collected through an up-front fee are reflected on a cost per customer basis and are the sum of installation labor customer support and application processing labor, meter/module and ancillary meter supplies, customer communications materials, and reinstallation of standard smart meter/module.

The following table summarizes the up-front costs for each service territory:

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC - Electric</b>	<b>SPPC – Gas</b>
Installation labor	\$49.92	\$54.68	\$14.74
Customer support and application processing labor	\$17.64	\$20.44	n/a
Customer communications materials	\$1.26	\$1.26	n/a
Reinstallation of standard smart meter/module	\$49.92	\$54.68	\$14.74
<b>Total up-front costs</b>	<b>\$118.75</b>	<b>\$131.07</b>	<b>\$29.49</b>

## **Costs Collected through a Per Meter, Per Month Fee**

NV Energy will incur costs to enable TRIAL NSMO. Annual costs include the following:

- Meter/Module and ancillary meter supplies
- Systems Modifications
- Handheld Acquisition and Maintenance
- Mobile Collector Lite costs
- Meter reading costs
- Route analyst and Meter Data Specialist costs
- Billing CSR costs
- Materials costs
- Mobile Collector Lite maintenance costs
- Hardware maintenance costs
- Software maintenance costs

All costs incurred during implementation of the gas TRIAL NSMO are included in the SPPC costs.

### **Meter/Module and Ancillary Supplies**

NV Energize will utilize the Non-Standard Meter. The unit price of this meter is \$42.68 for a class 200 meter and \$76.63 for a class 320 meter. Both costs are established per meter procurement contracts. NV Energy estimated that 99% of the applicable meter population is class 200 and 1% of the population is class 320. The weighted cost of the Itron meter is \$43.02 (99% of \$42.68 plus 1% of \$76.63). Sales tax of 8.1% or \$3.48 is applied for the NPC service territory and 7.725% or \$3.32 is applied to the SPPC service territory.

NV Energize will utilize an Itron ERT module as the gas service TRIAL NSMO in the SPPC service territory. The unit price of an Itron gas ERT is \$65.00 per procurement contracts. Sales tax of 7.725% or \$5.02 is applied to the SPPC service territory.

During the installation of the digital electric meter, NV Energy will secure the meter via locking ring and seal. The locking ring is intended to physically prevent someone from removing the meter from the socket. The seal is another indicator of the meter being removed from the socket. The unit price of a locking ring is \$9.00 and the unit price of a seal is \$0.17. Neither a locking ring nor a seal is utilized for the gas ERT installation. Sales tax of 8.1% or \$0.74 is applied for the NPC service territory and 7.725% or \$0.71 is applied to the SPPC service territory.

Total meter/module and ancillary supplies costs are determined by multiplying the sum of the unit costs by the number of Trial NSMO customers.

The following table lists the specific costs for each of NPC and SPPC.

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC - Electric</b>	<b>SPPC – Gas</b>
Meter/Module	\$43.02	\$43.02	\$65.00
Meter/Module Sales Tax	\$3.48	\$3.32	\$5.02
Locking Ring	\$9.00	\$9.00	n/a
Seal	\$0.17	\$0.17	n/a
Locking Ring and Seal Sales Tax	\$0.74	\$0.71	n/a
<b>Number of Meter/Modules</b>	<b>4,500</b>	<b>3,000</b>	<b>3,000</b>
<b>Total Meter/Module Unit Cost</b>	<b>\$253,878.26</b>	<b>\$168,665.03</b>	<b>\$210.063.75</b>

## **Systems Modifications**

To enable the TRIAL NSMO, NV Energy will modify its Banner customer information and billing system and its MyAccount customer portal and implement a drive-by meter reading system.

Modifications to Banner will address both the NPC and SPPC instances of this system and will enable the sign up and billing of customers to a TRIAL NSMO. Enabling sign up and billing are each expected to cost \$48,000 for a total cost of \$96,000.

The MyAccount portal will be modified by creating a form that allows customers to initiate a TRIAL NSMO on-line. The cost to create this form is \$1,000.

NV Energy will implement Itron’s Mobile Collector Lite (MCL) drive-by meter reading solution. Software and implementation fees per proposal from Itron are \$82,430. Additional costs include hardware (servers) at \$75,000 and integrations at \$50,000.

Annual Field Collection System (FCS) software maintenance costs associated with the drive-by meter reading system software is contracted at \$1,080.

The costs from each of these three system modifications total \$305,510 (\$96,000 + \$1,000 + \$82,340 + \$75,000 + \$50,000 + \$1,080) and are to be allocated proportionally based on the percent of expected TRIAL NSMO customers to the NPC and SPPC service territories. The cost allocated to the NPC service territory is \$183,306 ( $\$305,510 \times 4,500 / (4,500 + 3,000)$ ) and to the SPPC service territory is \$122,204 ( $\$305,510 \times 3,000 / (4,500 + 3,000)$ ).

## **Mobil Collector Lite Maintenance Costs**

Annual maintenance costs associated with the Mobile Collector Lite (MCL) is contracted at \$576 for each MCL. Annual maintenance costs in NPC are \$1,152 (2 MCLs x \$576) and in SPPC are \$1,152 (2 MCLs x \$576).

## **Handheld Acquisition and Maintenance**

To enable reading of the TRIAL NSMOs, NV Energy will purchase 20 handheld meter reading devices.

Four of the 20 handhelds will be located in NPC’s Beltway facility where TRIAL NSMO reading can be centrally located for the NPC service territory. The remaining 16 handhelds will be distributed across

SPPC's dispersed district offices. Unit cost for the handheld is \$4,590 while the unit cost for the ancillary hardware required to support each handheld is \$423. Annual maintenance costs associated with handhelds is contracted at \$435 for each handheld and \$38 for each handheld docking station. NPC handheld costs are \$21,944 (4 handhelds x (\$4,590 + \$423 + \$435 + \$38)). SPPC handheld costs are \$93,536 (16 handhelds x (\$4,590 + \$423 + \$435 + \$38)).

### **Mobil Collector Lite costs**

Implementing the Mobil Collector Lite (MCL) solution requires the installation of four MCL units in existing NV Energy vehicles. Two MCL units will be deployed in the NPC service territory and two units will be deployed in the SPPC service territory. The unit cost of each unit is \$9,300.

### **Meter Reading Costs**

To read the TRIAL NSMO meter each month, a NV Energy Service Technician will drive the MCL vehicle on a prescribed route so that the MCL can receive the transmitted register readings from each TRIAL NSMO premise.

NV Energy expects that four incremental Service Technicians will be required full-time to reach each of the estimated 7,500 TRIAL NSMO meters/modules each month. In both the NPC and SPPC service territories, one Service Technician will act as the primary operator of the MCL while a second will act as a backup.

A Service Technician's hourly rate in the Nevada Power Corporation (NPC) service territory is \$26.03 and in the Sierra Pacific Power Corporation (SPPC) service territory is \$25.66. These rates are established by the respective collective bargaining unit agreements.

Labor loadings for each service territory vary – 75.1% for the NPC and 77.1% for the SPPC.

The labor loaded hourly rate is obtained by adding the labor loading to the hourly rate. For NPC, 75.1% of the hourly rate (\$26.03) is \$19.55. Therefore, the labor loaded hourly rate is \$45.58 (\$26.03 + \$19.55). Similarly for SPPC, 77.1% of the hourly rate (\$25.66) is \$19.78. Therefore, the labor loaded hourly rate is \$45.44 (\$25.66 + \$19.78).

Transportation costs associated with the travel time to and from the premise are accounted for via a transportation allocation. The average transportation allocation for the NPC is \$6.21 per hour and for the SPPC is \$6.53 per hour.

The annual costs associated with each Service Technician are the sum of the labor-loaded, hourly rate and the hourly transportation cost multiplied by the number of hours each year (2,080) to read meters divided by the number of customers served through a TRIAL NSMO. This is articulated as follows:

$$\text{SUM (labor-loaded hourly rate + hourly transportation cost) x 2,080 x \# of FTEs}$$

The following table lists the specific costs for each of NPC and SPPC.

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC</b>
Hourly rate	\$26.03	\$25.66
Labor loading	75.1%	77.1%
Labor-loaded hourly rate	\$45.58	\$45.44
Hourly transportation cost	\$6.21	\$6.53
Number of hours each year	2,080	2,080
Number of Service Technicians	2	2
<b>Total Annual Meter Reading Costs</b>	<b>\$215,456.40</b>	<b>\$216,218.71</b>

### **Route Analyst and Meter Data Specialist Costs**

One FTE Route Analyst (NPC) and one FTE Meter Data Specialist (SPPC) will be required to plan the daily work of the Service Technicians.

A Route Analyst’s hourly rate in the NPC service territory is \$27.88 and a Meter Data Specialist in the SPPC service territory is \$22.90. The NPC rate is based on a management position salary. The SPPC rate is established by collective bargaining unit agreement.

Labor loadings for each service territory vary – 75.1% for the NPC and 77.1% for the SPPC.

The labor loaded hourly rate is obtained by adding the labor loading to the hourly rate. For NPC, 75.1% of the hourly rate (\$27.88) is \$20.94. Therefore, the labor loaded hourly rate is \$48.83 (\$27.88 + \$20.94). Similarly for SPPC, 77.1% of the hourly rate (\$22.90) is \$17.66. Therefore, the labor loaded hourly rate is \$40.56(\$22.90 + \$17.66).

The annual costs associated with the Route Analyst and the Meter Data Specialist are the labor-loaded, hourly rate multiplied by the number of hours each year (2,080). This is articulated as follows:

$$\text{labor-loaded hourly rate} \times 2,080 \times \# \text{ of FTEs}$$

The following table lists the specific costs for each of NPC and SPPC.

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC</b>
Hourly rate	\$27.88	\$22.90
Labor loading	75.1%	77.1%
Labor-loaded hourly rate	\$48.83	\$40.56
Number of hours each year	2,080	2,080
Number of FTEs	1	1
<b>Total Annual Route Analyst/Meter Data Specialist Costs</b>	<b>\$101,558.00</b>	<b>\$84,356.27</b>

### **Billing CSR Costs**

One half FTE Billing CSR (Senior classification) will be required to address and resolve exceptions that occur during the billing process for TRIAL NSMO customers.

A Senior Billing CSR’s hourly rate in the NPC service territory is \$25.68 and is \$21.90 in the SPPC service territory. These rates are established by respective collective bargaining unit agreements.

Labor loadings for each service territory vary – 75.1% for the NPC and 77.1% for the SPPC.

The labor loaded hourly rate is obtained by adding the labor loading to the hourly rate. For NPC, 75.1% of the hourly rate (\$25.68) is \$19.29. Therefore, the labor loaded hourly rate is \$44.97 (\$25.68 + \$19.29). Similarly for SPPC, 77.1% of the hourly rate (\$21.90) is \$16.88. Therefore, the labor loaded hourly rate is \$38.78 (\$21.90 + \$16.88).

The annual costs associated with the Senior Billing CSR are the labor-loaded, hourly rate multiplied by the number of hours each year (2,080). This is articulated as follows:

$$\text{labor-loaded hourly rate} \times 2,080 \times \# \text{ of FTEs}$$

The following table lists the specific costs for each of NPC and SPPC.

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC</b>
Hourly rate	\$25.68	\$21.90
Labor loading	75.1%	77.1%
Labor-loaded hourly rate	\$44.97	\$38.78
Number of hours each year	2,080	2,080
Number of FTEs	0.5	0.5
<b>Total Annual Billing CSR Costs</b>	<b>\$46,764.31</b>	<b>\$40,336.30</b>

### **Materials Costs**

Annual materials costs to support monthly meter reading personnel include uniforms, camelbacks (hydration), umbrellas and protective devices. The total cost of such materials is \$2,400 allocated by number of FTEs to NPC (2/4) and SPPC (2/4).

### **Total Costs Recovered Through Ongoing Fee**

The total cost of operations recovered through a recurring fee is the sum of systems modifications, handheld acquisition and maintenance, Mobile Collector Lite costs, meter reading costs, route analyst costs, billing CSR costs, meter reading materials costs, annual Mobile Collector Lite software maintenance costs, the annual handheld maintenance costs, and the annual field collection system software maintenance costs divided by the number of customers served through a TRIAL NSMO divided by 12.

This is articulated as follows:

$$\frac{\text{SUM (Meter/Module + systems modifications + handheld acquisition and maintenance + Mobile Collector Lite costs + annual meter reading costs + annual route analyst costs + annual billing CSR costs + meter reading materials costs + annual Mobile Collector Lite software maintenance costs + annual handheld maintenance costs + annual field collection system software maintenance costs)}}{\text{(Number of TRIAL NSMOs x 12)}}$$

The following table summarizes the monthly costs for each service territory:

<b>Cost Item</b>	<b>NPC</b>	<b>SPPC - Electric</b>	<b>SPPC - Gas</b>
Meter/Module	\$253,878.26	\$168,665.03	\$210.063.75
Systems modifications	\$183,306	\$122,204	n/a
Mobil Collector Lite Maintenance Costs	\$1,152	\$1,152	n/a
Handheld acquisition and maintenance	\$21,944	\$93,536	n/a
Mobile Collector Lite costs	\$18,600	\$18,600	n/a
Annual Meter Reading Costs	\$215,456.40	\$216,218.71	n/a
Annual Route Analyst/Meter Data Specialist Costs	\$101,558.00	\$84,356.27	n/a
Annual Billing CSR Costs	\$46,764.31	\$40,336.30	n/a
Annual Materials	\$1,200	\$1,200	n/a
Number of TRIAL NSMO customers	4,500	3,000	3,000
Number of months per year	12	12	12
<b>Monthly On-going Cost of Operations</b>	<b>\$15.63</b>	<b>\$20.73</b>	<b>\$5.84</b>

**Appendix 2. Communications Material**

[Date]

Dear (formal name):

Our records indicate that your service address is either on the NVEnergize postponement list or that you have expressed an interest in opting out of the NVEnergize smart meter program. This letter is to inform you that on March 2, 2012, the Public Utilities Commission of Nevada (PUCN) approved a conceptual trial opt-out program. The PUCN approved a trial opt-out tariff on [date]. A copy of the tariff is enclosed.

Customers may now choose between a standard communicating electric meter (smart meter) and/or gas meter and a non-standard metering option (opt-out). Should you choose the opt out option, you must notify NV Energy by Date XX, 2012 by returning the enclosed postage-paid postcard, or you may do so online at [nvenergize.com/optout/](http://nvenergize.com/optout/), or by calling 1-888-559-9744. If your request is not received by Date, XX, 2012, NV Energy will proceed with installation of the standard metering option.

Please note that there is no charge for the standard metering option, or smart meter. We encourage you visit [nvenergize.com](http://nvenergize.com) to learn more about the benefits of smart meters and the NVEnergize program. No further action is required to obtain a smart meter.

However, for additional costs and fees, NV Energy will install the non-standard metering option of an Electronic Receiver Transmitter (ERT) meter. The ERT meter is read monthly using a mobile data collector or handheld device. Please note, should you choose this option, the following PUCN approved charges will be added to your energy bill.

- Electric non-standard metering - Initial setup charge of \$XXXX and a monthly meter-reading charge of \$XXXX
- Gas non-standard metering – Initial set up charge of \$XXXX and a monthly meter reading charge of \$XXXX

The PUCN's decision also directed NV Energy to discontinue the postponement list, which gave customers the ability to postpone installation of a smart meter until the Commission made its final decision. Finally, customers who contacted the company to request removal of a smart meter may also choose the non-standard metering option. If you want to participate in the trial opt-out program, you must return the enclosed postcard or complete the on-line form before [date].

Thank you for your attention to this matter.

Sincerely,

NV Energy Customer Service

[Date]

Dear (formal name):

Our records indicate that your service address is either on the NVEnergize postponement list or that you have expressed an interest in opting out of the NVEnergize smart meter program. This letter is to inform you that on March 2, 2012, the Public Utilities Commission of Nevada (PUCN) approved a conceptual opt-out trial program. The PUCN approved a trial opt-out tariff on [date]. A copy of the tariff is enclosed.

Customers may now choose between a standard communicating electric meter (smart meter) and a non-standard metering option (opt-out). Should you choose the opt out option, you must notify NV Energy by Date XX, 2012 by returning the enclosed postage-paid postcard, or you may do so online at [nvenergize.com/optout/](http://nvenergize.com/optout/), or by calling 402-4273. If your request is not received by Date XX, 2012, NV Energy will proceed with the standard metering option.

Please note that there is no charge for the smart meter. We encourage you visit [nvenergize.com](http://nvenergize.com) to learn more about the benefits of smart meters and the NVEnergize program. No further action is required to obtain a smart meter.

However, for additional cost and fees, NV Energy will install the non-standard metering option of an Electronic Receiver Transmitter (ERT) meter. The ERT meter is read monthly using a mobile data collector or handheld device. Please note, should you choose this option, the following PUCN approved charges will be added to your energy bill.

- Electric non-standard metering - Initial setup charge of \$XXXX and a monthly meter-reading charge of \$XXXX

The PUCN's decision also directed NV Energy to discontinue the postponement list, which gave customers the ability to postpone installation of a smart meter until the Commission made its final decision. Finally, customers who contacted the company to request removal of a smart meter may also choose the non-standard metering option. If you want to participate in the trial opt-out program, you must return the enclosed postcard or complete the on-line form before [date].

Thank you for your attention to this matter.

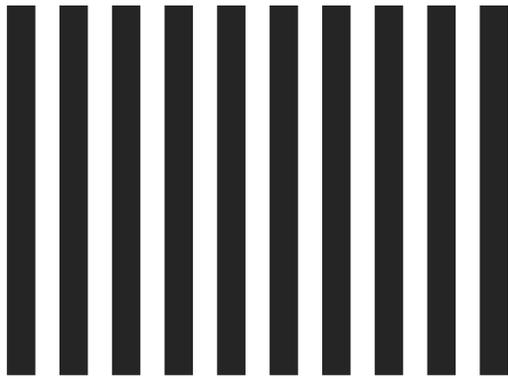
Sincerely,

NV Energy Customer Service

**CUSTOMER NAME  
CUSTOMER SERVICE ADDRESS  
CITY, STATE, ZIP CODE**



**NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES**



**BUSINESS REPLY MAIL**

**FIRST-CLASS MAIL PERMIT NO 294 LAS VEGAS NV**

**POSTAGE WILL BE PAID BY ADDRESSEE**

**M/S 4  
NVENERGIZE  
6226 WEST SAHARA AVE  
LAS VEGAS NV 89195-0870**



*We want to  
hear from you:*

**NVENERGIZE**

Creating an energy-smart future.

**If you choose to opt out of our NVEnergize program, mark the box below and mail this postage-paid card.**

I understand the terms and conditions of the trial opt out program and want to **OPT OUT**.

Signature: \_\_\_\_\_

**Electric non-standard metering:** *Initial set-up charge of \$XXXX and a monthly meter-reading charge of \$XXXX.*



*We want to  
hear from you:*

**NVENERGIZE**

Creating an energy-smart future.

**If you choose to opt out of our NVEnergize program, mark the box below and mail this postage-paid card.**

I understand the terms and conditions of the trial opt out program and want to **OPT OUT**.

Signature: \_\_\_\_\_

**Electric non-standard metering:** Initial set-up charge of \$XXXX and a monthly meter-reading charge of \$XXXX.

**Gas/Electric non-standard metering:** Initial set-up charge of \$XXXX and a monthly meter-reading charge of \$XXXX.





Residential



Business



Community



Environment



Company

MyAccount

username

password

Forgot username or password?

Where do you live?

Northern Nevada

Southern Nevada

Sign In

Register

# Smart Meter Opt-Out Trial Program

Home »

Residential customers can now choose between a standard communicating smart meter or a non-standard metering option. The Public Utilities Commission of Nevada (PUCN) has specified the non-standard metering option as a drive-by meter reading solution that does not collect interval data. Customers that choose the non-standard metering option will bear the full incremental cost of this choice. The Public Utilities Commission of Nevada (PUCN) approved the concept of the trial opt-out program on March 2, 2012 (view the PUCN order here). On {DATEXX}, the PUCN approved a tariff that sets the terms and conditions of the trial opt-out program (view the tariff here).

## How to Opt Out

- Use the [non-standard metering option online form](#) OR
- Return the postcard provided in the letter mailed with your indication to opt-out.
- You can call 702-402-4273 in southern Nevada or 1-888-559-9744 in northern Nevada and request that the postcard be mailed to you.
- **Must be the Customer of Record.**
- **Additional Fees Apply \***

## Meter Comparison

Meters Compared	Standard Meter	Non-Standard Meter
Energy Alerts	Yes	No
View your Daily Energy Use	Yes	No
View your Bill to Date	Yes	No
Outage Notification	Yes	No
Setup Charges	Free	Yes *
Monthly Charges	Free	Yes *



## Non-Standard Meter Costs

Customers who select the non-standard metering option will be assessed the following fees. These charges are in addition to the customer's standard rates:

	Southern NV Electric	Northern NV Electric Only	Northern NV Electric + Gas
<b>Setup Charges</b>	\$98.75	\$107.66	\$113.74*
<b>Monthly Fee</b>	\$ 7.61	\$ 11.01	\$ 12.21*

*\*Breakdown of Northern NV Gas Charges: Incremental Setup Charge is \$6.08 and Incremental Monthly Charge is \$1.20*

These fees will cover the installation costs, monthly manual meter reading costs, and other related costs. Commercial customers will be provided a standard communicating smart meter as a condition of service.

## Trial Program Details

Only customers of record with NV Energy are authorized to select a non-standard metering option for their premise. A property owner that is not the official customer of record with NV Energy cannot select a non-standard metering option. For example, a landlord cannot select a non-standard metering option for its tenants if the landlord is not the official customer of record with NV Energy.

Customers can notify NV Energy of their selection of the non-standard metering option by requesting information about the programs and returning a postage pre-paid postcard to NV Energy. Or, customers can [complete an on-line form here](#).

NV Energy will call customers approximately five days before the installation of the non-standard metering option and will leave a door-hanger after the installation has been completed.

At the first general rate case that occurs after the trial opt-out tariff has been in effect for all 12 months of the test year, NV Energy will file with the PUCN to discontinue the trial if there are insufficient customers to economically support the tariff. If there are sufficient customers to economically support the tariff, NV Energy will file with the PUCN to make the tariff permanent and calculate the actual monthly costs to serve the actual number of opt-out customers who were provided service pursuant to the trial opt-out tariff during the test year.

## How to Select a Non-Standard Metering Option

For your convenience there are several ways to select a non-standard metering option:

- 🏠 Use the [non-standard metering option online form](#) OR
- 🏠 Return the postcard provided by NV Energy. Requests must be made only on the postcard provided.
- 🏠 Call 702-402-4273 in southern Nevada or 1-888-559-9744 in northern Nevada and request that the postcard be mailed to you for completion.
- 🏠 **Must be the Customer of Record.**
- 🏠 **Additional Fees Apply\***

**The postcard must be returned to NV Energy or the online form must be completed to obtain a non-standard meter.**

## Smart Meter Opt-Out Form

You may opt-out using the [non-standard metering option online form](#).

### [Before Cutoff Date] Decided to Upgrade to a Smart Meter?

If you want to upgrade to a smart meter no action is required. You will be notified within 5-days of your scheduled smart meter installation. If you have questions, please call 702-402-4273 in southern Nevada or 1-888-559-9744 in northern Nevada.

### [AFTER Cutoff Date] Decided to Upgrade to a Smart Meter?

If you have a nonstandard meter and want to enjoy the benefits of a smart meter, please call 702-402-4273 in southern Nevada or 1-888-559-9744 in northern Nevada.

## For More Information / Frequently Asked Questions

For information on NVEnergize and the Smart Meter Program you can:

- Visit our website [nvenergize.com](http://nvenergize.com)
- Call 702-402-4273 in southern Nevada or 1-888-559-9744 in northern Nevada
- View [Frequently Asked Questions](#)
- View Smart Meter [Myths vs Facts](#)

#### RESIDENTIAL

[Payment & Billing](#)  
[Paperless Billing](#)  
[Start, Stop or Transfer](#)  
[Report an Outage](#)  
[Call Before You Dig...](#)

#### BUSINESS

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[Start, Stop or Transfer](#)  
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[Volunteerism](#)  
[Scholarships](#)  
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[Renewable Energy RFPs](#)  
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#### COMPANY

[Investor Relations](#)  
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[Media Room](#)  
[Careers](#)  
[Rates](#)



# **AUTOMATED SMART METER OPT OUT FUNCTIONAL REQUIREMENTS**

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# 1. Project Description

This document describes the business and functional requirements for capturing customer information and generating service order requests for customers selecting to opt out of NV Energy’s NVEnergize Smart Meter Opt-Out Trial Program. It does not include requirements for 1) handling requests from customers who have already opted out and wish to return to the smart meter option, or 2) the set up and billing of accounts on the Smart Meter Opt Out Trial.

The opt-out option shall be offered to all eligible customers in NV Energy’s northern and southern service territory.

## 1.1 Requirements Listing

<b>Req. ID #</b>	<b>Requirement Description</b>
5	Create web page on the NVEnergy.com website that will capture customer and meter information.
10	Develop programming logic that will validate the information submitted through the online form against Banner CIS. If validations fail display a page that displays the exception reason to the user.
15	Create a confirmation email that will be sent to the customer to confirm submission of the opt-out request.
20	Generate a duplicate copy of the confirmation email that will be sent to a new internal distribution list
25	Create a new table that will store customer opt out information for completed requests submitted online.
30	Create a new table that will store customer opt out information submitted online that did not successfully pass validation.
60	Create a daily report of all open and completed meter change requests for the opt-out option, and a daily report of all submitted customer requests.

## 1.2 Use Case

### High Level Use Case

Use Case	<b>Smart Meter Opt Out Trial</b>
Actors	Customer
Pre-Conditions	Customer has access to a computer and has a valid NV Energy account number
Post-Conditions	Customer has successfully submitted an opt-out request, and receives a confirmation email
Description	The customer visits the nvenergy.com website and completes the Smart Meter Trial Opt Out form to request participation in the program.

### Expanded Use Case Description

Customer Action	System Response
1. This use case begins when the customer fills the Smart Meter Trial Opt-Out form	
	2. Account is validated for eligibility.
	3. Confirmation page is displayed.
	4. Confirmation email is sent to customer and internal distribution list
5. Customer receives confirmation email	
	6. Row is inserted into new transaction table.
	7. Account is checked for appropriate condition: <ul style="list-style-type: none"> <li>▪ Has no open meter change order</li> <li>▪ Has pending meter change order</li> </ul>
	8. System performs appropriate action on Banner CIS which may include: <ul style="list-style-type: none"> <li>• Update AMI Post Ind</li> <li>• Create meter change order</li> <li>• Insert Note</li> <li>• Cancel existing meter change order</li> <li>• Send email notification</li> </ul>
	9. service order is worked in the field and is closed on Banner (either manual or automated)
	10. System generates daily report of open and closed requests, and customer opt out requests
11. Customer is notified when meter has been exchanged (i.e., door hanger)	

### Alternate Course of Events

#### Step 2.

- If account does not qualify for the Opt-out program, display error message to customer.
- Row is inserted into new exception table.

## 2. Functional Requirements

### 2.1 Smart Meter Opt-Out Trial Form

The following sample page shall be displayed on the MyAccount server and shall be used by the customer to request and authorize opt out from the Smart Meter program.

overlook inquiry Register Sign In



### Smart Meter Opt-Out Trial Form

Residential customers can now choose between a standard communicating smart meter or a non-standard metering option. The Public Utilities Commission of Nevada (PUCN) has specified the non-standard metering option as a drive-by meter reading solution that does not collect interval data. Customers that choose the non-standard metering option will bear the full incremental cost of this choice. The Public Utilities Commission of Nevada (PUCN) approved the concept of the trial opt-out program on March 2, 2012 (view the PUCN order here). On (DATEXX), the PUCN approved a tariff that sets the terms and conditions of the trial opt-out program (view the tariff here).

#### Non-Standard Meter Costs

Customers who select the non-standard metering option will be assessed the following fees. These charges are in addition to the customer's standard rates:

	Southern NV Electric	Northern NV Electric Only	Northern NV Electric + Gas
<b>Setup Charges</b>	\$98.75	\$107.66	\$113.74*
<b>Monthly Fee</b>	\$ 7.61	\$ 11.01	\$ 12.21*

\*Breakdown of Northern NV Gas Charges: incremental Setup Charge is \$6.08 and incremental Monthly Charge is \$1.20

These fees will cover the installation costs, monthly manual meter reading costs, and other related costs. Commercial customers will be provided a standard communicating smart meter as a condition of service.

Please complete all fields in the form below to submit your Smart Meter Opt-Out preference. Fill out this form once per residence that you wish to opt-out of the NVEnergize Smart Meter Program.

#### Customer Information

First Name

Last Name

Last 4 digits of SSN

Account number (19 digits)

E-mail address

Confirm email address

Contact Number ( ) - -

NV Energy Account Password

Are there any conditions that would restrict access to your meter?

Dog

Locked Gate

#### Terms & Conditions

I agree that I am the primary account holder for the customer account number entered above. Further, I am indicating that I want to opt-out of the Smart Meter program, am opting for the non-standard metering alternative, and am aware of the initial setup and ongoing monthly charges which will be added to my utility statement. By opting out, I understand that all SmartMeter enabled services, including Energy Alerts will no longer be available to me, and I thus agree to forfeit these services and benefits.

overlook inquiry

Type the text shown



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## Field Descriptions

1. **First Name** – first name of the customer of record. This is a required field.
2. **Last Name** – last name of the customer of record. This is a required field.
3. **Last 4 digits of Social Security Number (SSN)** of the primary account holder on the account. This is a required field.
4. **Account Number (19 digits)** formatted as follows: This is a required field.
5. **Email Address** - customer email address. Email addresses should be validated for correctness (i.e., ends in a domain name or two letter country, contains @, etc). This is a required field.
6. **Confirm Email Address** – confirmation of email address. Customer cannot cut and paste the email address previously entered. This is a required field.
7. **Contact Number** – Ten (10) digit telephone number. No special characters or spaces allowed. If no phone number is entered, display the message: “**Please provide a day-time contact number.**” This is a required field.
8. **NV Energy Account Password** – display this field only if the account has a password (is not null). This is a required field if displayed
9. **Access Restrictions**  
Are there any conditions that would restrict access to your meter?
  - DOG
  - LOCKED GATE
  - KEY

A customer may select one or all meter restrictions however, a selection is not required.

*For NV Energy – South*, only two options shall be displayed on the page: DOG and LOCKED GATE. The meter reading handheld device can only display two read instructions.

*For NV Energy – North*, all three options shall be displayed on the page: DOG, LOCKED GATE and KEY. If an access restriction is selected, a EWQ shall be generated (see section 2.8.5).

## 10. **Terms and Conditions**

Customer must select the checkbox in order to complete the request.

## 11. **CAPTCHA block**

The CAPTCHA block shall be added to protect the page against bots by generating and grading tests to tell computers and humans apart.

If any of the required fields are incomplete or incorrect, display an error message.

Once the user clicks SUBMIT, the customer information is validated against Banner CIS as described in the next section.

The CANCEL button shall return the user to the calling page.

## 2.2 Customer & Account Validations

Once the customer has entered all required information on the Smart Meter Opt-Out Trial Form, data shall be validated for the following conditions.

Condition	Message
<p><b>Customer Verification – First/Last Name, Account Number, SSN mismatch</b></p> <p>Customer verification shall be performed against the last name, first name, full account number and the last 4 digits of either the SSN number for the primary account holder only. Co-applicants are not allowed to submit a request. All information above must match what is on Banner CIS for the account.</p> <p>Any special characters (e.g., dash, apostrophe, comma, etc) in the last name and first name fields shall be removed when validating information against Banner.</p>	<p>The customer information provided does not match our records.</p>
<p><b>Account status is Final, Inactive, or New</b> = 'F' or 'I' or 'N'</p>	<p>Our records indicate this account is not active.</p>
<p><b>Account has a commercial service type.</b></p>	<p>Our records indicate this account has non-residential services.</p> <p>The Smart Meter Opt-Out Trial program is available to residential customers only.</p>

<p><b>Account has a non-metered private area light or street light</b></p>	<p>A private area light or street light is installed at this service address.</p> <p>These services do not have meters and are billed on flat rates each month.</p>
<p><b>Account has an open opt out meter change</b></p>	<p>Our records indicate a request for the Smart Meter Opt-Out Trial program has already been submitted for this account.</p>
<p><b>Premises has ERT meter/module</b></p>	<p>Our records indicate this account is already active on the Smart Meter Opt-Out Trial program. A non-standard meter has been installed at this service location.</p>
<p><b>Account has open Move Out, Disconnect No Pay or Move In order</b></p>	<p>Our records indicate there is a pending request to stop service at this service address.</p> <p>For assistance on your request, please contact NV Energy at 702-402-5555 or 800-331-3103 (<i>NVE South</i>).</p> <p>For assistance on your request, please contact NV Energy at 775-834-4444 or 800-962-0399. (<i>NVE North</i>)</p>

<p><b>Account status is Active and an open Move Out, Disconnect No Pay or Move In order that has been worked in the field.</b></p> <p style="text-align: center;">OR</p> <p><b>Account status is Active and an open Move In order exists for the same premises that has been worked in the field.</b></p>	<p>Our records indicate this account is not active.</p>
<p><b>Account is on time of use or net metering</b></p>	<p>Our records indicate this account is on our net metering or time-of-use rate.</p> <p>The Smart Meter Trial Opt out is not available for this account.</p>
<p><b>Account password entered does not match Banner password</b></p>	<p>The NV Energy password entered does not match our records.</p>
<p><b>Account has open order</b></p>	<p>Additional information is required. Please contact Customer Services at 702-402-5555 or 800-331-3103 for assistance (<i>NVE South</i>)</p> <p>Additional information is required. Please contact Customer Services at 775-834-4444 or 800-962-0399 for assistance (<i>NVE North</i>)</p>

### 2.3 Exception Page

Account and customer exceptions shall appear with the appropriate description as shown below. If multiple exceptions exist, then the form shall display all applicable messages.

**Smart Meter Opt-Out Trial Exception**

**JOHN DOE  
6226 W SAHARA AVE  
LAS VEGAS, NV 89151  
ACCOUNT: 30011111111111111111**

Your request cannot be submitted for this account for the following reason(s):

- Our records indicate a request for the Smart Meter Trial Opt Out has already been submitted for this account.

DONE

The DONE button shall return the user to the corporate page.

## 2.4 Confirmation Page

Once the user successfully submits an opt-out request, the following confirmation page shall be displayed.

[nvenergy.com](#)   [Register](#)   [Sign In](#)

 **MyAccount**

---

### Smart Meter Opt-Out Trial Confirmation

Name:	John Doe
Account number:	30-XXXXXXXX-XXX6643-6
Service Address:	123 MAIN ST HENDERSON, NV 89002
Date:	04/02/2012

This confirms that you have requested a non-standard metering arrangement as outlined in NV Energy's temporary tariff approved by the Public Commission on Nevada.

Currently, a non-standard metering arrangement is a digital drive-by meter that does not record interval data. Data from this meter will be retrieved remotely by a meter reader who will visit your neighborhood monthly to collect the meter read. As outlined in the temporary tariff, you will be responsible for the costs associated with this non-standard metering arrangement, which will be detailed on your monthly bill.

Unless otherwise requested, this arrangement will remain in effect for this service address only and may be discontinued as a result of future regulatory action.

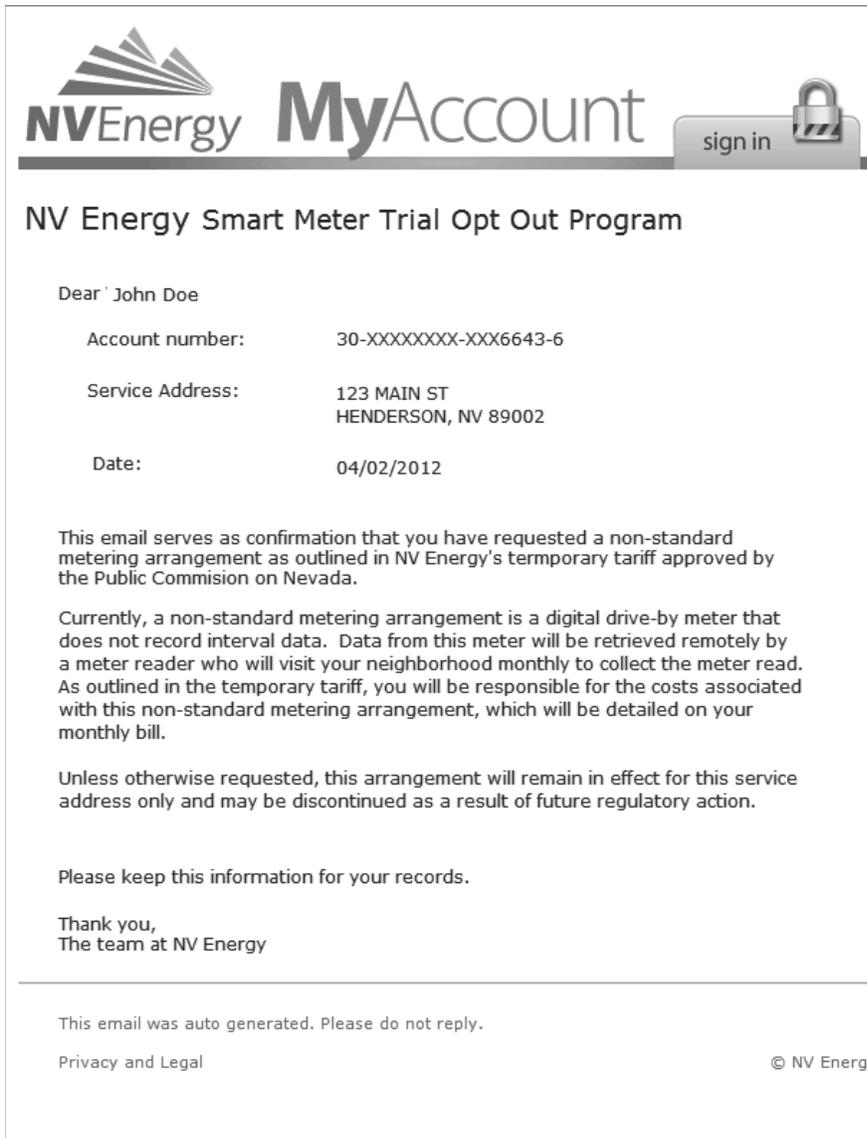
---

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## 2.5 Confirmation Email

Once the customer successfully submits a request, a confirmation email has be sent to the email address provided.

A duplicate copy of this email shall also be sent to new distribution lists for internal records keeping.



The screenshot shows the top of an email with the NV Energy logo and 'MyAccount' text. To the right is a 'sign in' button with a padlock icon. The main heading is 'NV Energy Smart Meter Trial Opt Out Program'. The email is addressed to 'John Doe' and contains account details: account number 30-XXXXXXXX-XXX6643-6, service address 123 MAIN ST, HENDERSON, NV 89002, and date 04/02/2012. The body text explains that the email is a confirmation of a non-standard metering arrangement (digital drive-by meter) approved by the Public Commission on Nevada. It notes that data will be retrieved remotely and that the customer is responsible for associated costs. A disclaimer states the arrangement will remain in effect unless otherwise requested. The email concludes with a thank you to the team at NV Energy and a footer with a privacy notice and copyright information.

**NV Energy MyAccount** [sign in](#)

### NV Energy Smart Meter Trial Opt Out Program

Dear John Doe

Account number: 30-XXXXXXXX-XXX6643-6

Service Address: 123 MAIN ST  
HENDERSON, NV 89002

Date: 04/02/2012

This email serves as confirmation that you have requested a non-standard metering arrangement as outlined in NV Energy's temporary tariff approved by the Public Commission on Nevada.

Currently, a non-standard metering arrangement is a digital drive-by meter that does not record interval data. Data from this meter will be retrieved remotely by a meter reader who will visit your neighborhood monthly to collect the meter read. As outlined in the temporary tariff, you will be responsible for the costs associated with this non-standard metering arrangement, which will be detailed on your monthly bill.

Unless otherwise requested, this arrangement will remain in effect for this service address only and may be discontinued as a result of future regulatory action.

Please keep this information for your records.

Thank you,  
The team at NV Energy

---

This email was auto generated. Please do not reply.

Privacy and Legal © NV Energy

**2.6 Smart Meter Opt Out Customer Table**

The following table shall be created to capture all successfully submitted customer requests (via the web) for the Smart Meter Opt out Trial.

<b>Column</b>	<b>Record value</b>
	Customer’s last name
	Customer’s first name
	19 digit Banner account number
	Last 4 digits of SSN or FTID
	Customer’s email address
	Telephone number area code
	Telephone number
	Access restriction
	Access restriction
	Access restriction
	System Date/Time
	Valid values: W – Web, C- Call Center, P-Postcard

**2.7 Smart Meter Opt Out Exception Table (UXBOPTE)**

The following table shall be created to capture unsuccessfully submitted customer requests for the Smart Meter Opt out Trial.

<b>Column</b>	<b>Record value</b>
	Customer’s last name
	Customer’s first name
	19 digit Banner account number
	Last 4 digits of SSN or FTID
	Customer’s email address
	Telephone number area code
	Telephone number
	Access restriction
	Access restriction
	Access restriction
	Valid values I – Account status is inactive, final new NR – Account is non-residential SL – Account is a street light or PAL MC – Meter change pending OO – Account is already on Smart Meter Trial OT – Account has pending disconnect order PW- NV Energy account password failure NT – Acct is on net metering or time of use rate
	System Date/Time

### 3. Reports

#### 1. Daily Report of Smart Meter Opt Out Trial Requests

*Description:*

Daily detailed report of the customer opt-out requests submitted through the .com website.

*Frequency:*

Run daily after split and prior to 8:00 AM (approximately).

Processing date = system date - 1

*Criteria:*

= system date - 1

*Fields:*

- Name =
- Account Number =
- Email Addr =
- Telephone =
- Access Restrictions =
- Contact Source =

Count total number of opt-out requests

*Sort by:*

Account Number

*Example:*

#### Daily Report of Smart Meter Opt Out Trial Requests

*Processing Date: mm-dd-yyyy*

Name	Account Number	Email Addr	Telephone	Access Restrictions	Contact Source
John Doe	123456789901	<a href="mailto:buffy@yahoo.com">buffy@yahoo.com</a>	702-123-1234	Gate, Locked	Web
Jane Smith	123456789123	<a href="mailto:gopher@hotmail.com">gopher@hotmail.com</a>	702-234-2321	Dog	Call Ctr
Total Requests		2			

#### 2. Daily Report of Smart Meter Opt Out Meter Changes

*Description:*

Daily detailed report of the smart meter opt-out meter changes.

*Frequency:*

Run daily on or after split and prior to 8:00 AM (approximately).  
Processing date = system date - 1

*Criteria:*

= system date - 1

*Fields:*

Service Order =  
Customer =  
Premises =  
Need Date =  
Closed/Cancel Date =  
Route =

*Sort by:*

Account Number

*Example:*

**Daily Report of Smart Meter Opt Out Meter Changes**  
*Processing Date: mm-dd-yyyy*

Service Order	Customer	Premises	Need Date	Closed Cancel Date	Route
<b>Open</b>					
1234567	1234567	1234567	4/1/2012		0130
1234567	1234567	1234567	4/1/2012		0529
1234567	1234567	1234567	4/1/2012		2321
	<b>TOTAL</b>	<b>3</b>			
<b>Closed</b>					
1234567	1234567	1234567	4/2/2012	4/5/2012	8031
1234567	1234567	1234567	3/15/2012	4/5/2012	1201
1234567	1234567	1234567	1/2/2012	4/5/2012	1005
	<b>TOTAL</b>	<b>2</b>			
<b>Canceled</b>					
1234567	1234567	1234567	2/5/2012	4/6/2012	1202
	<b>TOTAL</b>	<b>1</b>			

**4. Approval**

The Project Manager and Project Sponsor(s) indicate their approval of the requirements listed above by their signatures on the first page of this document.

## 5. Document History

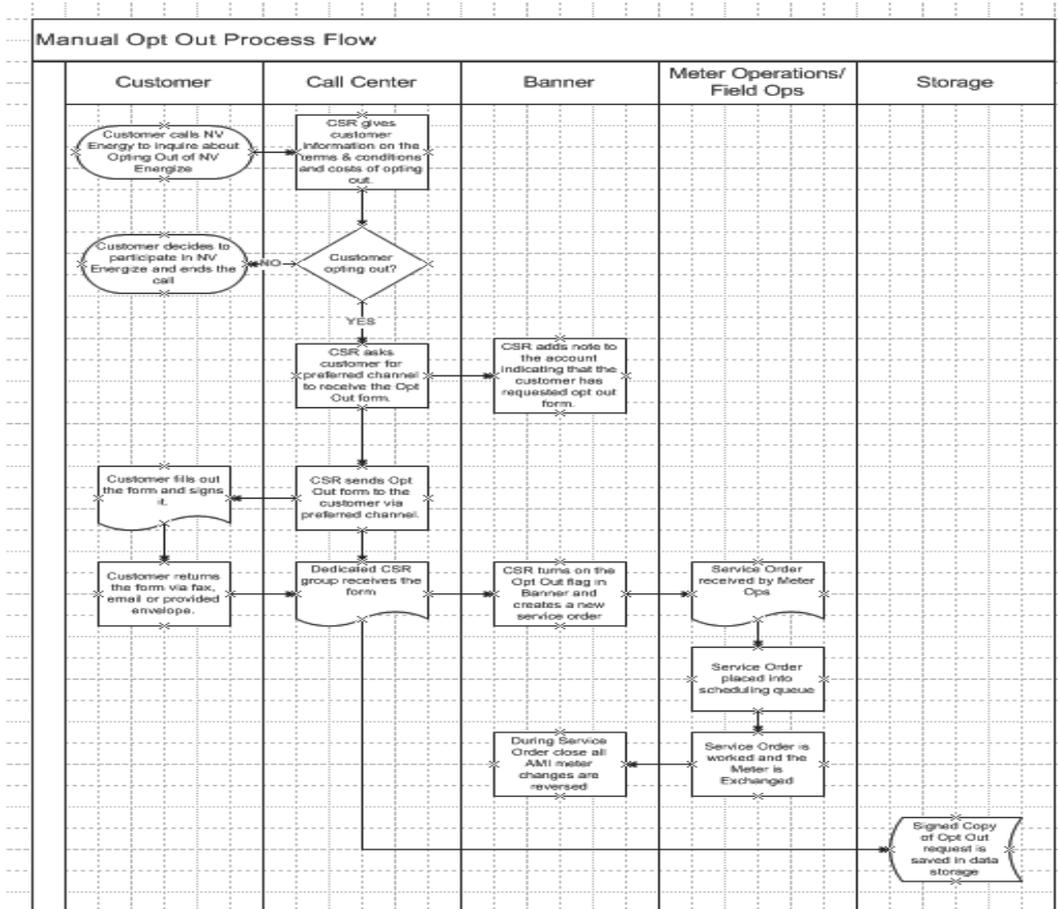
<b>Rev</b>	<b>Date</b>	<b>Description</b>	<b>Author</b>
0	4/9/12	Draft	
1.0	4/13/12	Draft revision	
1.1	4/23/12	Draft revision	
1.2	4/25/12	Final	

## Manual Opt-Out Process

NV Energy has defined a process for manually Opting Out of the NV Energize Smart Meter program. This narrative, along with the supporting process flow diagram explains that process.

The first step of the process happens when a customer contacts NV Energy with a request to Opt Out. The Customer Service Rep (CSR) gives the customer information on the terms & conditions and costs of opting out. Assuming that the customer agrees with the information provided, the CSR will then ask the customer how they prefer to receive the Opting Out form. Based on the customer's stated preference, the CSR will send out the form to the customer. The customer then fills out the form and returns it to NV Energy. After receiving the form, NV Energy will run through several backend processes that get the request entered into the system and placed in a queue for change out. The meter replacement will then be scheduled. NV Energy will communicate with the customer before the date of the installation. Once the work is done and the meter replacement is complete, NV Energy will close out the service order and work the back end processes to ensure that the customer's account reflects the correct information.

There are several steps involved in the process of Opting Out of the NV Energize Smart Meter program. Following the steps outlined will ensure a successful result.



### Appendix 3. Description of Meter

#### NV Energy Non-Standard Meter

In order to offer the Commission's Recommended Alternative for the non-standard meter option, NV Energy proposes to use the Itron CENTRON C1SR AMR meter (FCC ID SK9C1A-2) configured to utilize a low power transmitter and an ERT type 04 SCM protocol (Non-Standard Meter).. The meter registers energy consumption and delivers its data in what Itron describes as a 'Standard Consumption Message (SCM)'. Utilizing the 96-bit Itron® SCM, the Non-Standard Meter provides the energy (kWh) consumption, ERT module ID number, tamper indications, meter type, and error checking information in each radio frequency transmission.

The Non-Standard Meter uses frequency hopping and transmits within the unlicensed 910 to 920 MHz band at an average of once per second. In order to avoid interference from other devices, the transmission frequencies and time interval between transmission cycles are completely random in nature.

The Non-Standard Meter is factory programmed with tuning information, ERT module ID, tamper indicators, meter type, energy consumption, and scaling factor (a one (1) for this application). The program and all register information are stored in non-volatile memory in the event of a power outage. Upon power restoration following an outage, all of the information in the non-volatile memory is restored to the appropriate registers and the meter begins normal operation.

This meter complies with part 15 of the FCC Rules; reference materials related to this meter can be found under FCC ID: SK9C1A – 2.

#### Meter Reading Data Collection System

NV Energy proposes to use the Itron Field Collection System (FCS) as an enterprise solution to perform meter reading collection from its opt-out meter population. FCS is a state-of-the-art, open-architecture software solution that works with Itron handheld and mobile technologies to provide seamless integration with Itron's ERT module endpoints. FCS will be installed at NV Energy's corporate data center. A key feature of FCS is the flexibility to support both handheld and mobile collection devices.

NV Energy plans to use an Itron Mobile Collector Lite unit that consists of a handheld installed in a truck mount in order to read meters. NV Energy will utilize handhelds as a walk-by tool when necessary in certain difficult to access module locations.

## System Communications

FCS will utilize NV Energy's secure corporate network to upload data from the handhelds and to download the routes to be read each day.

## Data Security

FCS supports advanced user authentication, as well as role-based functional security, so utilities can secure FCS based on specific business requirements. All passwords are encrypted or maintained by Microsoft Windows and all logins are recorded. Each collection device is authenticated by FCS prior to downloading data. FCS also provides the ability to filter data that can be viewed within the software system based on the utility's organizational structure. Upper-level managers have access to data that provide a global view of meter data collection system status and performance, while office employees see only data relevant to their office and task.

## **EXHIBIT 2**

## **Sierra Pacific Power Company Gas Tariffs**

**Schedule NSMO-1**  
**TRIAL NON-STANDARD METERING OPTION ("NSMO") RIDER**

(N)

**APPLICABLE**

The NSMO Rider is available to Customers who receive Domestic Service, subject to the special terms and conditions set forth in this Schedule. This NSMO Rider is offered on a trial basis. After the Utility has at least 12-months of operating results and information regarding subscription to service under this NSMO Rider, the Utility will make a filing with the Commission to either terminate the trial Rider or make the NSMO Rider a permanent service offering.

**TERRITORY**

Entire Nevada Service Area, as specified.

**DESCRIPTION OF SERVICE**

A Customer who receives Domestic Service may request to have the Utility install a non-standard meter at the Customer's Premise pursuant to this NSMO Rider. Provided that the Customer meets the requirements set forth in the Special Condition section of this NSMO Rider and within a reasonable time of receiving such request, the Utility shall install a non-standard meter as defined in the Metering Equipment section of this NSMO Rider. Customer must request the installation of a non-standard meter by using the methodology specified by the Utility.

**RATES**

\$6.08 – Initial Fee;

\$1.20 – Per Meter Per Month

All rates charged under this NSMO Rider are in addition to charges, rates and fees contained the Customer's otherwise-applicable rate schedule ("OARS"). Service under this NSMO Rider shall commence following the date of meter installation. Accordingly, the Utility shall include the full amount of the Initial Fee and the full amount of the Per Meter Per Month charge on the Customer's first bill following installation of the non-standard meter.

**METERING EQUIPMENT**

The non-standard meter option is a meter with a transmitting module that contains a radio capable of transmitting usage information to a portable, remote meter reading device such as a handheld or vehicle-mounted meter reading device as the meter reading device comes within range of the service location. The non-standard meter shall not communicate with the Utility's advanced service delivery network.

(Continued)

(N)

<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>300-G</b></p>	<p>Issued By:  Michael J. Carano  Executive</p>	
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**Schedule NSMO-1**  
**TRIAL NON-STANDARD METERING OPTION ("NSMO") RIDER**  
**(Continued)**

(N)

**SPECIAL CONDITIONS**

1. **Application for Service.** Application for service hereunder will be accepted by the Company on a first-come, first-serve basis and is pursuant to the requirements set forth in this Rider. Required metering equipment will be installed accordingly, subject to availability. Service under this NSMO Rider is limited to 4,500 services.
  
2. **Customer who Receives Electric Service.** A Customer who also receives service from the Utility under Electric Tariff No. 1 must request and take service under Electric Schedule NSMO-1 in addition to service under this Rider.
  
3. **Discrepancy between Meter Reading and Register.** If at any time there should exist a difference between the remote meter read and the meter's register, the Utility shall bill the customer based on the meter's register.

(N)

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# **Sierra Pacific Power Company Electric Tariffs**

**Schedule NSMO-1**  
**TRIAL NON-STANDARD METERING OPTION("NSMO") RIDER**

(N)

**APPLICABLE**

The NSMO Rider Meter Opt-Out Rider is available to Customers who receive Domestic Service, subject to the special terms and conditions set forth in this Schedule. This NSMO Rider is offered on a trial basis. After the Utility has at least 12-months of operating results and information regarding subscription to service under this NSMO Rider, the Utility will make a filing with the Commission to either terminate the trial NSMO Rider or make the NSMO Rider a permanent service offering.

**TERRITORY**

Entire Nevada Service Area, as specified.

**DESCRIPTION OF SERVICE**

A Customer who receives Domestic Service may request to have the Utility install a non-standard meter at the Customer's Premise pursuant to this NSMO Rider. Provided that the Customer meets the requirements set forth in the Special Condition section of this NSMO Rider and within a reasonable time of receiving such request, the Utility shall install a non-standard meter as defined in the Metering Equipment section of this NSMO Rider. Customer must request the installation of a non-standard meter by using the methodology specified by the Utility.

**RATES**

NSMO

\$107.66 – Initial Fee;

\$11.01 – Per Meter Per Month

All rates charged under this NSMO Rider are in addition to charges, rates and fees contained the Customer's otherwise-applicable rate schedule ("OARS"). Service under this NSMO Rider shall commence following the date of meter installation. Accordingly, the Utility shall include the full amount of the Initial Fee and the full amount of the Per Meter Per Month charge on the Customer's first bill following installation of the non-standard meter.

**METERING EQUIPMENT**

The non-standard meter is a digital electric meter that records energy consumption data and stores only the total energy consumed to date; the non-standard meter shall not record or store usage data for shorter or more discrete periods of time (e.g., fifteen minutes). The non-standard meter shall contain a radio capable of transmitting usage information to a portable, remote meter reading devices such as a handheld or vehicle-mounted meter reading device as the meter reading device comes within range of the service location. The non-standard meter shall not communicate with the Utility's advanced service delivery network.

(Continued)

(N)

<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>533-E</b></p>	<p align="center">Issued By:                  Michael J. Carano                  Executive</p>	
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**Schedule NSMO-1**  
**TRIAL NON-STANDARD METERING OPTION("NSMO") RIDER**  
**(Continued)**

**SPECIAL CONDITIONS**

1. **Application for Service.** Application for service hereunder will be accepted by the company on a first-come, first-serve basis and is pursuant to the requirements set forth in this Rider. Required metering equipment will be installed accordingly, subject to availability. Service under this NSMO Rider is limited to 4,500 services.
2. **Optional Time-of-Use Rates and Net Metering.** A Customer who receives service pursuant to the NSMO Rider is not eligible to receive service under any optional time-of-service schedule (such as Schedule OD-1-TOU) offer by the Utility. Likewise, a Customer who receives service pursuant to the NSMO Rider is not eligible to receive service under Schedule NMR or Schedule SSR.
3. **Other Optional Programs.** A Customer who receives service pursuant to the NSMO Rider may not be eligible to participate in optional programs offered by the Utility if the Utility determines, in its reasonable discretion, that the NSMO service makes the Customer's participation in the optional program inefficient, not feasible, or too costly.
4. **Related Services Located on Same Premise.** A Customer who receives service pursuant to the NSMO Rider and who receives a separately metered service on the same premise may request the Utility to install a non-standard meter for the related service. The Utility may grant the request and install a non-standard meter if the Utility determines, in its discretion, that the separate service is reasonably related to the Domestic Service provided to the Customer. This will be a separate service under this rider. By way of example and not limitation, the Utility could determine that service to a separately metered, stand-alone garage is reasonably related to the Domestic Service and grant a request to install a non-standard meter to the stand-alone garage. If the Utility grants a request to install a non-standard meter under this Special Condition 4, the Customer shall pay an additional initial fee and a separate monthly fee for each non-standard meter.
5. **Failure to Make Timely Payment.** Any Customer who fails to make timely payments towards the Customer's bill in accordance with the provisions of Rule 5(B) twice in any 12-month period shall not be eligible for service under this NSMO Rider.
6. **Evidence of Tamper.** If the acts of the Customer or the conditions upon his premises are such as to indicate to the utility his intention to defraud the utility or the Customer tampers or interferes with the operation of the Utility's Meter, the Utility may deny any request for, or revoke, service under this NSMO Rider.
7. **Customer Who Receives Gas Service.** A Customer who also receives service from the Utility under Gas Tariff No. 1 must also request service under Gas Schedule NSMO-1.

(N)

(N)

<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>533-E</b></p>	<p>Issued By:                  Michael J. Carano                  Executive</p>	
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## **Nevada Power Company Electric Tariffs**

**Schedule NSMO-1**  
**TRIAL NON-STANDARD METERING OPTION (“NSMO”) RIDER**

(N)

**APPLICABLE**

The NSMO Rider Meter Opt-Out Rider is available to Customers who receive Domestic Service, subject to the special terms and conditions set forth in this Schedule. This NSMO Rider is offered on a trial basis. After the Utility has at least 12-months of operating results and information regarding subscription to service under this NSMO Rider, the Utility will make a filing with the Commission to either terminate the trial NSMO Rider or make the NSMO Rider a permanent service offering.

**TERRITORY**

Entire Nevada Service Area, as specified.

**DESCRIPTION OF SERVICE**

A Customer who receives Domestic Service may request to have the Utility install a non-standard meter at the Customer’s Premise pursuant to this NSMO Rider. Provided that the Customer meets the requirements set forth in the Special Condition section of this NSMO Rider and within a reasonable time of receiving such request, the Utility shall install a non-standard meter (as defined in the Metering Equipment section of this NSMO Rider). Customer must request the installation of a non-standard meter by using the methodology specified by the Utility.

**RATES**

- \$98.75 – Initial Fee;
- \$7.61 – Per Meter Per Month

Service under this NSMO Rider shall commence following the date of meter installation. Accordingly, the Utility shall include the full amount of the Initial Fee and the full amount of the Per Meter Per Month charge on the Customer’s first bill following installation of the non-standard meter.

**METERING EQUIPMENT**

The non-standard meter is a digital electric meter that records energy consumption data and stores only the total energy consumed to date; the non-standard meter shall not record or store usage data for shorter or more discrete periods of time (e.g., fifteen minutes). The non-standard meter shall contain a radio capable of transmitting usage information to a portable, remote meter reading devices such as a handheld or vehicle-mounted meter reading device as the meter reading device comes within range of the service location. The non-standard meter shall not communicate with the Utility’s advanced service delivery network.

(Continued)

(N)

<p>Issued:      <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>417</b></p>	<p>Issued By:  Michael J. Carano  Executive</p>	
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**Schedule NSMO-1**  
**TRIAL NON-STANDARD METERING OPTION ("NSMO") RIDER**

(N)

**SPECIAL CONDITIONS**

1. **Application for Service.** Application for service hereunder will be accepted by the company on a first-come, first-serve basis and is pursuant to the requirements set forth in this Rider. Required metering equipment will be installed accordingly, subject to availability. Service under this NSMO Rider is limited to 12,000 services.
  
2. **Optional Time-of-Use Rates and Net Metering.** A Customer who receives service pursuant to the NSMO Rider is not eligible to receive service under any optional time-of-service schedule (such as Schedule OD-1-TOU) offer by the Utility. Likewise, a Customer who receives service pursuant to the NSMO Rider is not eligible to receive service under Schedule NMR or Schedule SSR.
  
3. **Other Optional Programs.** A Customer who receives service pursuant to the NSMO Rider may not be eligible to participate in optional programs offered by the Utility if the Utility determines, in its reasonable discretion, that the NSMO service makes the Customer's participation in the optional program inefficient, not feasible, or too costly.
  
4. **Related Services Located on Same Premise.** A Customer who receives service pursuant to the NSMO Rider and who receives a separately metered service on the same premise may request the Utility to install a non-standard meter for the related service. The Utility may grant the request and install a non-standard meter if the Utility determines, in its discretion, that the separate service is reasonably related to the Domestic Service provided to the Customer. This will be a separate service under this rider. By way of example and not limitation, the Utility could determine that service to a separately metered, stand-alone garage is reasonably related to the Domestic Service and grant a request to install a non-standard meter to the stand-alone garage. If the Utility grants a request to install a non-standard meter under this Special Condition 4, the Customer shall pay an additional initial fee and a separate monthly fee for each non-standard meter.
  
5. **Failure to Make Timely Payment.** Any Customer who fails to make timely payments towards the Customer's bill in accordance with the provisions of Rule 5(B) twice in any 12-month period shall not be eligible for service under this NSMO Rider.
  
6. **Evidence of Tamper.** If the acts of the Customer or the conditions upon his premises are such as to indicate to the utility his intention to defraud the utility or the Customer tampers or interferes with the operation of the Utility's Meter, the Utility may deny any request for, or revoke, service under this NSMO Rider.

(N)

<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>417</b></p>	<p align="center">Issued By:  Michael J. Carano  Executive</p>	
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## **EXHIBIT 3**

## **Sierra Pacific Power Company Gas Tariffs**

**Table of Contents**  
**GAS RATES**

<b><u>SCHEDULE</u></b>	<b><u>TYPE OF SERVICE</u></b>	<b><u>PUCN SHEET NO.</u></b>
DEAA	Deferred Energy Account	2B(1) – 2G(1)
REPR	Renewable Energy Program Rate	2B(1)(a)
RATES	Statement of Rates	2H
RNG	Residential Natural Gas Service	3
NSMO-1	Trial Non-Standard Metering Option (“NSMO”) Rider	3A – 3AA (N)
RNME	Retrofit Neighborhood Main Extensions	3A(1) – 3A(2)
INGR	Incentive Natural Gas Rate	3B – 3D
COMP	Gas Service For Compression	3E – 3F
LPG	Liquefied Petroleum Gas Service	3H – 3I
SCNG	Small Commercial and Industrial Natural Gas Service	3J – 3K
LCNG	Large Commercial and Industrial Natural Gas Service	3L – 3M
SC	Service Charges	4 – 4B
TAR	Tax Adjustment Rider	5
SCE	Service to Company Employees	5B – 5B(1)
SSG	Shared Savings – Gas	5C
TF	Firm Transportation of Customer-Owned Natural Gas	6 – 6D
TI	Interruptible Transportation of Customer-Owned Natural Gas	6E – 6I
TOP	Transportation of Customer-Owned Natural Gas, Operating Procedures and Imbalance Trading	6O – 6GG

Issued: **05-01-12**

Effective:

Advice No.: **300-G**

Issued By:  
Michael J. Carano  
Executive

**RULES AND REGULATIONS**

**GAS DEPARTMENT**

**General**

Utility shall furnish service under its rate schedules and these rules and regulations as approved from time to time by the Public Service Commission of Nevada and in effect at that time, and these rules and regulations shall govern all service except as specifically modified by the terms and conditions of the rate schedules or written contracts. Copies of current effective rules and regulations are available at the office of the Utility.

**TABLE OF CONTENTS**

<b><u>RULE NO.</u></b>	<b><u>TITLE</u></b>	<b><u>PSCN SHEET NO.</u></b>	
1	Definitions	8 - 13A	
2	Description of Service	14	
3	Application for Service	15 - 16	
4	Notices	17	
5	Bills for Service	18 - 19H	
6	Discontinuance, Termination, Restoration and Refusal of Service	20 - 23I	
7	Information Available to the Public	24 - 25	
8	Continuity of Service	26	
9	Gas Main Extensions	27 - 29k	
10	Contracts	30	
11	Information on Forms	31	
12	Establishment and Reestablishment of Credit	32 - 32B	(T)
13	Deposits	33 - 33D	(T)
14	Disputed Bills	34	
15	Temporary Service	35	
16	Service Connections, Meters and Customer's Facilities	36 - 38B	(T)
17	Meter Tests and Adjustments of Bills for Meter Error	39 - 40A	
18	Supply to Separate Premises and Resale	41	
19	Examination and Testing of Lines and Equipment in Mobile Home Parks	42	
	Reserved for Future Use	43 - 44	
20	Standby Service	45	
	Reserved for Future Use	46	
22	Gas Service Area	47 - 48.1	
	Reserved for Future Use	49 - 50	

Issued: **05-01-12**

Effective:

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Issued By:  
 Michael J. Carano  
 Executive

**RULE NO. 16**  
**SERVICE CONNECTIONS, METERS AND CUSTOMER'S FACILITIES**  
**(Continued)**

**B. Meter Installation (Continued)**

- 2. Number of Meters
  - a. Where service is first requested after February 1, 1981, a Utility owned meter will be required for each residential or commercial unit in which the occupant controls at least a portion of the gas usage in that unit.
  - b. A Utility owned meter shall be required for each premises upon which, gas provided by the Utility, is utilized.

(T, D)

**C. Relocation/Retrofit of Meters, Service and other Facilities**

- 1. In those instances when, in the judgement of Utility, the relocation of a service pipe or metering facilities is necessary, and is due either to the maintenance of adequate service or the operating convenience of the Utility, the Utility normally will perform such work at its own expense.
- 2. In those instances where relocation of the service pipe and/or metering facilities is due solely to meet the convenience of the Applicant or Customer, or is made necessary by acts of the Customer which create hazards or which make the meter inaccessible, such relocation, including metering facilities, will be performed by Utility at the expense of such Applicant or Customer.
- 3. Should an excess flow valve that was previously installed under paragraph A.1.d., above, require maintenance or removal/replacement subsequent to installation by the Customer requesting such installation or subsequent Customers at that service connection, those services shall be performed by the Utility at the Customer/Applicant's expense.

(L)

**D. Customer's Responsibilities**

- 1. Utility Owned Facilities.  
 Utility property installed on the premises served for the purpose of measuring or supplying service to a Customer is placed there under the Customer or property owner's protection. The Customer or property owner will be held responsible for the breaking of seals, tampering or interfering with Utility's meter or meters or other equipment of Utility placed under their protection. Only authorized employees of Utility will be allowed to make repairs or adjustments to meters or other apparatus belonging to Utility. Where such repairs or adjustments are necessary, a charge shall be made to the Customer or property owner as appropriate, in addition to actual material costs. See Schedule SC, PUCN Sheet Nos. 4 and 4A.

(D)

(Continued)

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Issued: <b>05-01-12</b> Effective: Advice No.: <b>300-G</b>	Issued By: Michael J. Carano Executive	
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**RULE NO. 16**  
**SERVICE CONNECTIONS, METERS AND CUSTOMER'S FACILITIES**  
**(Continued)**

**D. Customer's Responsibilities (Continued)**

2. Non-Utility Owned Facilities

The Customer shall, at his own risk and expense, furnish, install, and keep in good and safe condition all regulators, gas piping, appliances, fixtures and apparatus of any kind or character located beyond the point of delivery which may be required for receiving gas from the Utility and for applying and utilizing gas, including all necessary protective appliances and suitable housing therefore, and the Utility shall not be responsible for any loss or damage occasioned or caused by the negligence or wrongful act of the Customer or any of his agents, employees or licensees in installing, maintaining, using, operating, or interfering with any such regulators, gas piping, appliances, fixtures, or apparatus.

**E. Exceptions and Unusual Circumstances**

In unusual circumstances when the application of this rule appears impractical or unjust to either party, the Utility, the Applicant or the Customer may refer the matter to the Public Utilities Commission of Nevada for special ruling or for the approval of special conditions which may be mutually agreed upon, prior to commencing construction.

**F. Tax Liability of Customer contributions**

Contributions by Customers of or for facilities or equipment provided under this rule will be increased by the appropriate tax liability factor from Section C.5. of Rule No. 9 to cover the Utility's taxliability on such contributions. Such tax liability will be paid in cash.

(L, L)

(L)

(L)

<p>Issued: <b>05-01-12</b>                  Effective:                  Advice No.: <b>300-G</b></p>	<p style="text-align: center;">Issued By:                  Michael J. Carano                  Executive</p>	
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**HELD FOR FUTURE USE**

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Issued: <b>05-01-12</b> Effective: Advice No.: <b>300-G</b>	Issued By: Michael J. Carano Executive	
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# **Sierra Pacific Power Company Electric Tariffs**

**TABLE OF CONTENTS**  
**ELECTRIC RATES**

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DEAA	Deferred Energy Accounting Adjustment	63
EE	Energy Efficiency	63A
REPR	Renewable Energy Program Rate	63B
MC	Miscellaneous Charges	63C – 63D
TAR	Tax Adjustment Rider	63E
SCE	Service to Company Employees	63F – 63F(1)
RATES	Statement of Rates	63G – 63M
D-1	Domestic Service	64 – 64A
DM-1	Domestic Multi-Family Service	64C – 64D
NSMO-1	Trial Non-Standard Metering Option (“NSMO”) Rider	64D(1) – 64D(2)
OD-RHEVRR-TOU	Residential Hybrid Electric Vehicle Recharge Rider – Time-of-Use	64E – 64F
D-1-TOU-E	Dynamic Pricing Trial Optional Domestic Service - Time-of-Use	64G – 64G(7)
D-1-CPP	Dynamic Pricing Trial Optional Domestic Service - Critical Peak Price Time-of-Use	64H – 64H(10)
DM-1-TOU-E	Dynamic Pricing Trial Optional Domestic Service Multi-Family - Time-of-Use	64I – 64I(8)
DM-1-CPP	Dynamic Pricing Trial Optional Domestic Service Multi-Family - Critical Peak Price Time-of-Use	64J – 64J(10)
GS-1-TOU-E	Dynamic Pricing Trial Options General Service - Time-of-Use	64K – 64K(9)
GS-1-CPP	Dynamic Pricing Trial Options General Service – Critical Peak Price Time-of-Use	64L – 64L(11)
GS-1	Small General Service	65 – 65A
GS-2	Medium General Service	66 – 66B
GS-2-TOU	Medium General Service – Time-of-Use	66D-66F
GS-3	Large General Service	67 – 67B
OGS-HEVRR-TOU	General Service Hybrid Electric Vehicle Recharge Rider – Time-of-Use	67C – 67C(1)
WP	City of Elko Water Pumping	68
IS-1	Irrigation Service	69 – 69A
IS-2	Interruptible Irrigation Service	69B – 71A
OLS	Outdoor Lighting Service	72 – 72C
SL	Street Lighting Service	75 – 75D
OD-1-TOU	Optional Domestic Service - Time-of-Use	76 – 76B
ODM-1-TOU	Optional Domestic Service Multi-Family – Time-of-Use	76C – 76D
OGS-1-TOU	Optional General Service - Time-of-Use	77 – 77A
OGS-2-TOU	Optional Medium General Service - Time-of-Use	78 – 78C
GS-4	Large Transmission Service	80 – 80C
IP	Incremental Price Tariff	80G-80J
NMR	Net Metering Rider	81D(1)-81D(3)(b)
SSR	Small Standby Service Rider	81D(4) – 81D(15)

(N)

(Continued)

<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>533-E</b></p>	<p>Issued By: Michael J. Carano Executive</p>	
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**Schedule MC**  
**MISCELLANEOUS CHARGES**

**APPLICABLE**

For all service classifications for services rendered by the Utility on a one-time basis.

**TERRITORY**

Entire Nevada Service Area, as specified.

**RATES**

Call out charge for customer-requested emergency and non-emergency visits by Utility personnel:

Visits to Utility-owned facilities or operation of a switch or other device to physically disconnect the Customer from the Utility's system for safety or tariff-related matters No charge

Visits to operate a switch or other device to physically reconnect the Customer to the Utility's system after Termination of Service \$30.00

All other visits involving dispatch of Utility personnel \$30.00

Same day service, or after hours charge \$40.00

Reconnection of an IS-2 customer (including IS-1 customers who were under the IS-2 schedule during the irrigation months) following voluntary disconnection is set forth in Schedule IS-2 Special Condition 13.

Late charge for amounts deemed past due as set forth in Rule 5, percent of total unpaid amount that is past due on monthly bill 1.00%

Returned check charge for each check processed by the Utility and returned by a bank to the Utility \$10.00

Supporting the Processing of NRS 704B Applications (D)  
 First Application No Charge  
 Second and Subsequent Applications per Service Location \$28,000

(Continued)

Issued: <b>05-01-12</b>  Effective:  Advice No.: <b>533-E</b>	Issued By: Michael J. Carano Executive	
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**RULE NO. 16**  
**SERVICE CONNECTIONS, METERS AND CUSTOMER'S FACILITIES**

**E. Responsibility for loss or damage**

The Utility will not be responsible for any loss or damage caused by any negligence or wrongful act of a Customer or Customer's authorized representatives in installing, maintaining, or operating the receiving facilities or utilizing equipment for which electric energy is being supplied.

The Customer shall, at the Applicant's sole risk and expense, furnish, install, inspect and keep in good and safe condition all electrical wires, lines, machinery and apparatus of any kind or character which may be required for: (1) receiving electric energy from the lines of the Utility, regardless of the location of the transformers, meters or other equipment of the Utility; and (2) applying and utilizing such energy, including all necessary protective appliances and suitable housing therefor.

The Customer shall also transmit and deliver and be solely responsible for the transmission and delivery of all electric energy over or through Customer's wires and equipment, regardless of the place where such electric energy may be transformed or metered.

**F. Customer's Responsibilities**

**Utility Owned Facilities**

Utility property installed on the premises served for the purpose of measuring or supplying service to a customer is placed there under the Customer or property owner's protection. The Customer or property owner will be held responsible for the breaking of seals, tampering or interfering with Utility's meter or meters or other equipment of Utility placed under their protection. Only authorized employees of Utility will be allowed to make repairs or adjustments to meters or other apparatus belonging to Utility. Where such repairs or adjustments are necessary, a charge shall be made to the customer or property owner as appropriate, in addition to actual material costs. See Schedule MC.

**G. Tax Liability on Customer Contributions**

Contributions by customers of or for facilities or equipment provided under this rule will be increased by the appropriate tax liability factor from Section A.18 of Rule No. 9. to cover the Utility's tax liability on such contributions. Such tax liability will be paid in cash.

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<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>533-E</b></p>	<p style="text-align: center;">Issued By: Michael J. Carano Executive</p>	
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**RULE NO. 16**  
**SERVICE CONNECTIONS, METERS AND CUSTOMER'S FACILITIES**

**H. Inspection of Customer's Installations**

1. Inspection Required by Law

Where the inspection of wiring by any governing body is required by ordinance, the Utility is not permitted to furnish service until it receives a certificate signed by the proper inspecting official, except when it is amply established as a matter of law that no certificate of inspection is required. In cases where no inspection by a governing body is required under the law, the Customer must provide a written declaration to Utility certifying that the installation meets appropriate codes and is safe to install. Such a declaration must be signed by a professional engineer licensed by the State of Nevada. All of the Customer's wiring shall be done in accordance with the National Electric Code as may be modified by local ordinance.

2. Utility Right to Inspect

Utility reserves the right, but does not assume the duty, to inspect Customer's installation at any time. The Customer's installation includes all wiring and equipment (except Utility's meter installation) on the Customer's side of the point of delivery of Utility's electrical energy.

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Issued: **05-01-12**

Effective:

Advice No.: **533-E**

Issued By:  
Michael J. Carano  
Executive

## **Nevada Power Company Electric Tariffs**

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The following listed sheets contain all of the effective rules and regulations affecting rates and service and information relating thereto in effect on and after the date indicated thereon:

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DEAA	Deferred Energy Accounting Adjustment	9B
REPR	Renewable Energy Program Rate	9C
EE	Energy Efficiency	9D
RATES	Statement of Rates	10 – 10M
RS	Residential Service	11
RM	Residential Service – Multi-Family	11A
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RM-TOU-E	Dynamic Pricing Trial Optional Multi-Family Residential Service – Time-of-Use	11R – 11R(8)
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GS	General Service	12

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<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>417</b></p>	<p>Issued By:  Michael J. Carano  Executive</p>	
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(Continued)

ELECTRIC SERVICE RULES

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13	Deposits	89-90-A	
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<p>Issued: <b>05-01-12</b>  Effective:  Advice No.:<b>417</b></p>	<p>Issued By:  Michael J. Carano  Executive</p>	
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**Schedule MC**  
**MISCELLANEOUS CHARGES**

**APPLICABLE**

For all service classifications for services rendered by the Utility on a one-time basis.

**TERRITORY**

Entire Nevada Service Area, as specified.

**RATES**

Call out charge for customer-requested emergency and non-emergency visits by Utility personnel:

Visits to Utility-owned facilities or operation of a switch or other device to physically disconnect the Customer from the Utility's system for safety or tariff-related matters	No Charge
Visits to operate a switch or other device to physically connect or reconnect the Customer to the Utility's system after Termination of Service, or any other Visit involving dispatch of Utility personnel, including Visits associated with establishing or re-establishing service.	\$30.00
Visits requested by the customer for the same day or after-hours to operate a switch or other device to physically connect or reconnect the Customer to the Utility's system after Termination of Service, or any other Visit involving dispatch of Utility personnel, including Visits associated with establishing or re-establishing service	\$40.00
Remote connection or reconnection of the Customer to Utility's system, including such remote connections associated with establishing or re-establishing service.	\$6.00
Late charge for amounts deemed past due as set forth in Rule 5, as a percent of total unpaid amount that is past due on monthly bill	1.5%
Returned check charge for each check processed by the Utility and returned by a bank to the Utility	\$12.00
Additional Meter Test Advance Charge – More than one Meter test in a year, per event, in addition to the above Customer Visit charges	\$10.00
Broken Seal Charge	\$5.00

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(Continued)

<p>Issued: <b>05-01-12</b></p> <p>Effective:</p> <p>Advice No.: <b>417</b></p>	<p align="center">Issued By:  Michael J. Carano  Executive</p>	
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**Rule No. 16**  
**SERVICE CONNECTIONS, METERS AND CUSTOMER'S FACILITIES**  
**(Continued)**

F. Customer's Responsibilities

All property of the Utility installed in or upon Customer's premises used and useful in supplying service is placed there under Customer's protection. The Customer will be held responsible for the breaking of seals, tampering or interfering with the Utility's Meter or Meters or other equipment of the Utility installed on Customer's Premises, and no one except employees of the Utility will be allowed to make any repairs or adjustments to any meter or other piece of apparatus belonging to the Utility except in case of emergency.

G. Schedule of Charges

Charges applicable in those instances wherein property of the Utility, as discussed in Paragraph F above, has been damaged, are set forth in Schedule MC.

I. Inspection of Customer's Installations

1. Inspection Required by Law

Where the inspection of wiring by any governing body is required by ordinance, the Utility is not permitted to furnish service until it receives a certificate signed by the proper inspecting official, except when it is amply established as a matter of law that no certificate of inspection is required. In cases where no inspection by a governing body is required under the law, the Customer must provide a written declaration to Utility certifying that the installation meets appropriate codes and is safe to install. Such a declaration must be signed by a professional engineer licensed by the State of Nevada. All of the Customer's wiring shall be done in accordance with the National Electric Code as may be modified by local ordinance.

2. Utility Right to Inspect

Utility reserves the right, but does not assume the duty, to inspect Customer's installation at any time. The Customer's installation includes all wiring and equipment (except Utility's meter installation) on the Customer's side of the point of delivery of Utility's electrical energy.

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<p>Issued: <b>05-01-12</b>  Effective:  Advice No.: <b>417</b></p>	<p style="text-align: center;">Issued By:  Michael J. Carano  Executive</p>	
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NEVADA POWER COMPANY dba NV Energy  
P.O. Box 98910  
Las Vegas, NV 89151-0001  
Tariff No. 1-B  
cancels  
Tariff No. 1-A (withdrawn)

Cancelling 1st Revised  
Original

PUCN Sheet No. 99A  
PUCN Sheet No. 99A

**HELD FOR FUTURE USE**

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Issued: **05-01-12**

Effective:

Advice No.: **417**

Issued By:  
Michael J. Carano  
Executive

**DRAFT NOTICE**

**PUBLIC UTILITIES COMMISSION OF NEVADA**  
**DRAFT NOTICE**  
**(Applications, Tariff Filings, Complaints, and Petitions)**

Pursuant to Nevada Administrative Code (“NAC”) 703.162, the Commission requires that a draft notice be included with all applications, tariff filings, complaints and petitions. Please complete and include ONE COPY of this form with your filing. (Completion of this form may require the use of more than one page.)

**A title that generally describes the relief requested (see NAC 703.160(5)(a)):**

Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of proposed trial Non-Standard Metering Option riders and changes to changes to existing rules and schedules associated with implementation of the NSMO riders.

**The name of the applicant, complainant, petitioner or the name of the agent for the applicant, complainant or petitioner (see NAC 703.160(5)(b)):**

Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV

**A brief description of the purpose of the filing or proceeding, including, without limitation, a clear and concise introductory statement that summarizes the relief requested or the type of proceeding scheduled AND the effect of the relief or proceeding upon consumers (see NAC 703.160(5)(c)):**

The filing seeks permission to establish three trial non-standard metering option riders to implement the Commission’s March 2, 2012, order in Docket No. 11-10007.

**A statement indicating whether a consumer session is required to be held pursuant to Nevada Revised Statute (“NRS”) 704.069(1)<sup>1</sup>:**

The application is not a general rate application, an application to recover the an application to recover the increased cost of purchased fuel, purchased power, or natural gas purchased for resale or an application to clear its deferred accounts. Nor does it appear that the trial riders will generate increases in net income; instead, the trial riders appear to be revenue neutral because any additional revenue would be offset by incremental costs incurred to implement the riders.

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<sup>1</sup> NRS 704.069 states in pertinent part:

1. The Commission shall conduct a consumer session to solicit comments from the public in any matter pending before the Commission pursuant to NRS 704.061 to 704.110 inclusive, in which:
  - (a) A public utility has filed a general rate application, an application to recover the increased cost of purchased fuel, purchased power, or natural gas purchased for resale or an application to clear its deferred accounts; and
  - (b) The changes proposed in the application will result in an increase in annual gross operating revenue, as certified by the applicant, in an amount that will exceed \$50,000 or 10 percent of the applicant’s annual gross operating revenue, whichever is less.

**If the draft notice pertains to a tariff filing, please include the tariff number AND the section number(s) or schedule number(s) being revised.**

Sierra Pacific Power Company Tariff Gas No. 1 PUCN Sheet No. 1, 3A, 3AA, 7, 38A, 38B, and 38C.

Sierra Pacific Power Company Tariff Electric No. 1 PUCN Sheet No. 56G, 56H, 62, 63C, 64D(1) and 64D(2).

Nevada Power Company Tariff No. 1-B PUCN Sheet No. 2, 5, 9, 11B, 11B(1), 99 and 99A..

**GARY P. SMITH**

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

PREPARED DIRECT TESTIMONY OF GARY P. SMITH  
ON BEHALF OF SIERRA PACIFIC POWER COMPANY AND  
NEVADA POWER COMPANY D/B/A NV ENERGY

Docket No. 12-05\_\_\_\_\_

**1. Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Gary P. Smith. My business address is 6100 Neil Road, in Reno, Nevada.

**2. Q. WOULD YOU PLEASE STATE BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?**

A. I am employed by Nevada Power Company d/b/a NV Energy (“Nevada Power” or the “Company”) and Sierra Pacific Power Company d/b/a NV Energy (“Sierra” and, together with Nevada Power, the “Companies”), as Director, Customer Energy Solutions.

**3. Q. WOULD YOU PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EMPLOYMENT EXPERIENCE?**

A. I have a Bachelor of Science Degree in Business Administration earned from the University of Nevada, Reno. I began working for Sierra in 1986 and have held several positions with Sierra and its affiliates. I have more than 14-years’ experience as a senior manager, with broad experience in electric and gas distribution operations with an emphasis in new business and process improvement.

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My education and professional experience is listed in greater detail in Exhibit Smith-Direct-1.

**4. Q. WHAT ARE YOUR RESPONSIBILITIES AS THE DIRECTOR, CUSTOMER ENERGY SOLUTIONS?**

A. I am responsible for the overall management and implementation of the Companies’ advanced service delivery (“ASD” or “Advanced Service Delivery”) project. Together with the Advanced Service Delivery project legal team, I am responsible for negotiating project contracts. I also provide all necessary project management, manage the project budget, manage reporting to the Department of Energy (“DOE”), and other regulatory agencies. Fundamentally, I am responsible for scope, cost and schedule for the program.

**5. Q. WHAT IS THE PURPOSE OF YOUR PREPARED DIRECT TESTIMONY?**

A. Together with Laura Walsh, I support the Companies’ application for approval of trial Non-Standard Metering Option Riders (“Trial NSMO Riders”). In this regard, I describe and support several terms of the Trial NSMO Riders.

**6. Q. WHY IS THE TRIAL NSMO RIDER ONLY AVAILABLE TO CUSTOMERS WHO RECEIVE DOMESTIC SERVICE FROM THE COMPANIES?**

A. The Report recommended that any trial opt-out tariff filed by the Companies be made available only to residential customers. See Report at 29. For the purposes of the Companies’ tariffs, residential customers

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receive “domestic service”. Therefore, the Companies limited the Trial NSMO’s to domestic service customers.

**7. Q. THE REPORT PROVIDES, “WITH REGARD TO PREMISE OWNERSHIP, THERE IS AN ISSUE OF WHETHER CUSTOMERS WHO DO NOT OWN THEIR PREMISES SHOULD BE ALLOWED TO OPT-OUT OF A NON-STANDARD METERING ARRANGEMENT WITHOUT THE OWNER’S CONSENT. THE COMPANIES SHOULD INCLUDE IN ITS APPLICATION FOR A TRIAL OPT-OUT TARIFF A PROPOSAL TO ADDRESS THIS ISSUE.” DO THE TRIAL NSMO RIDERS INCLUDE A PROPOSAL TO ADDRESS THE PREMISE OWNERSHIP ISSUE?**

A. Yes.

**8. Q. HOW DO THE TRIAL NSMO RIDERS ADDRESS THE PREMISES OWNERSHIP ISSUE?**

A. The Trial NSMO Riders allow the “Customer” and only the customer to request service under the NSMO Rider.

**9. Q. PLEASE EXPLAIN HOW THE COMPANIES’ PROPOSAL ADDRESSES THE PREMISES OWNERSHIP ISSUE?**

A. The Companies’ tariffs generally provide that the person who is responsible for paying the utility bill is the customer. When a person rents property, either the tenant or the landlord (or in some cases, a property management company) is responsible for the utility bill. By allowing the customer (and only the customer) to choose service under

1 the NSMO Rider, the person who is responsible for paying the utility bill  
2 has the ability to decide whether they want to incur the initial charge and  
3 the additional monthly charge, limit their ability to participate in optional  
4 programs offered by the Companies, and forego the opportunity to obtain  
5 interval usage information. If the tenant is responsible for the utility bill,  
6 the tenant has the ability to choose a non-standard meter. This makes  
7 sense because the tenant will be responsible for the additional charges  
8 and will be the person who is unable to participate in optional programs  
9 offered by the Companies. If, on the other hand, the landlord or a  
10 property management company is responsible for paying the utility bill,  
11 the landlord or the property management company should have the  
12 ability to decide whether they incur the additional fees.

13  
14 **10. Q. EACH OF THE TRIAL NSMO RIDERS CONTAINS AN**  
15 **ENROLLMENT CAP IN SPECIAL CONDITION 1. WHY DID**  
16 **THE COMPANIES INCLUDE ENROLLMENT CAPS IN THE**  
17 **TRIAL NSMOS?**

18 A. The Companies included enrollment caps in the Trial NSMO Riders in  
19 order to comply with the Commission’s Order. The Order directs the  
20 Companies to file trial opt-out tariffs that are consistent with the Report.  
21 See Order at 3. (“Within sixty days of the issuance of this Order, NV  
22 Energy shall file a Trial Opt out Tariff with the Commission consistent  
23 with the recommendations in the Report.”). The Report recommends  
24 that the Companies trial opt-out tariffs include “a cap that would not  
25 jeopardize DOE funding.” Report at 29. The enrollment caps proposed  
26 by the Companies are designed to ensure that the Trial NSMO Riders  
27 will not jeopardize Department of Energy funding for NV Energize.  
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**11. Q. HOW COULD AN OPT-OUT TARIFF JEOPARDIZE DEPARTMENT OF ENERGY MATCHING FUNDS?**

A. An opt-out tariff theoretically could jeopardize Department of Energy matching funds in two ways. First, an opt-out tariff could result in a situation where the Companies fail to satisfy a material obligation under the Department of Energy funding agreement. Second, an opt-out tariff could result in a situation where the Companies are unable to obtain the full amount of the Smart Grid Investment Grant to which they are entitled under the funding agreement.

**12. Q. PLEASE EXPLAIN HOW YOU DEVELOPED THE ENROLLMENT CAPS.**

A. To calculate the enrollment caps, I first consulted with the DOE to determine if there was a specific limitation. The DOE could not provide a definitive subscription cap. However, the DOE did confirm that any smart meter received into inventory by the Companies would be eligible for reimbursement under the Smart Grid Investment Grant. This piece of information is important because it allowed me to calculate a cap based on the expected failure rate of meters, the anticipated participation in the non-standard metering tariff, and reasonable inventory levels. Based on that information, I calculated separate enrollment caps for Nevada Power and Sierra that will not jeopardize DOE funding and should allow the Company to obtain the full amount of the SGIG authorized by the DOE.

Those enrollment caps are 12,000 service connections for Nevada Power and 4,500 service connections for Sierra. The cap is basically 1.5 percent of the domestic service customers, which represents an

1 appropriate level of inventory that each of the Companies would  
2 maintain in light of current growth rates and meter replacements. The  
3 inventory accounts for an anticipated growth rate of approximately 1  
4 percent and takes into consideration expected and known smart meter  
5 failure rates estimated at 0.5 percent.

6  
7 **13. Q. ARE THE ENROLLMENT CAPS ADEQUATE TO ENSURE**  
8 **THAT THE COMPANIES WILL BE ABLE TO FULLY USE**  
9 **DEPARTMENT OF ENERGY MATCHING FUNDS?**

10 A. Yes. The enrollment caps establish limits that should ensure the  
11 Companies will be able to use the full amount of federal matching funds  
12 the DOE committed to NV Energize. Accordingly, the enrollment caps  
13 satisfy the recommendation contained in the Report; namely, that the  
14 trial opt-out tariffs include caps that ensure the Trial NSMO Riders will  
15 not jeopardize federal matching funds.

16  
17 **14. Q. SPECIAL CONDITION 2 OF TRIAL NSMO RIDERS FILED BY**  
18 **NEVADA POWER AND SIERRA'S ELECTRIC DIVISION**  
19 **PREVENTS A CUSTOMER WHO CHOOSES A NON-**  
20 **STANDARD METER FROM ALSO RECEIVING SERVICE**  
21 **UNDER THE COMPANIES' NET METERING AND SMALL**  
22 **STANDBY SERVICE RIDERS. WHY DID THE COMPANIES**  
23 **INCLUDE THESE LIMITATIONS IN THE TRIAL NSMO**  
24 **RIDERS?**

25 A. As James Christensen explains in his prepared direct testimony, the  
26 Companies selected a digital meter in compliance with the Report. The  
27 digital meter selected by the Companies is not capable of recording  
28

1 interval data; equally important, the non-standard meter selected by the  
2 Companies does not support net metering. Moreover, the non-standard  
3 meter does not contain the functionality that is necessary to provide  
4 service to a customer who also subscribes to the Small Standby Service  
5 Rider offered by the Companies. The Companies included Special  
6 Condition 2 in the Trial NSMO Riders for that reason.

7  
8 **15. Q. SPECIAL CONDITION 2 ALSO PREVENTS CUSTOMERS WHO**  
9 **RECEIVE SERVICE UNDER THE TRIAL NSMO RIDERS**  
10 **FROM ALSO REQUESTING SERVICE UNDER OPTIONAL**  
11 **TIME-OF-USE SCHEDULES OFFERED BY THE COMPANIES.**  
12 **WHY IS THIS SPECIAL CONDITION NECESSARY?**

13 A. As Mr. Christensen explains, the non-standard meter does not record,  
14 store or transmit interval usage data. Instead, the non-standard meters  
15 only provide register readings. While the Companies can use register  
16 readings to determine monthly usage, the Companies will not obtain the  
17 usage information necessary to facilitate time-of-use billing.  
18 Accordingly, customers who choose the non-standard meter will not be  
19 able to also sign up for optional time-of-use schedules.

20  
21 **16. Q. PLEASE DESCRIBE SPECIAL CONDITION 3 CONTAINED IN**  
22 **THE TRIAL NSMO RIDERS FILED BY NEVADA POWER AND**  
23 **SIERRA'S ELECTRIC DIVISION.**

24 A. Special Condition 3 informs customers who choose a non-standard meter  
25 that they might not be able to participate in other voluntary programs  
26 offered by the Companies. The non-standard meter might not be  
27 compatible with and facilitate existing and future optional programs,  
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such as Nevada Power’s Optional Load Management offering. Special Condition 3 gives the Companies the discretion to deny a request by a customer to participate in an optional program when the non-standard meter is not capable of supporting the service offered by the Companies.

**17. Q. SPECIAL CONDITION 4 OF THE NEVADA POWER TARIFF AND THE SIERRA ELECTRIC TARIFF ADDRESS “RELATED SERVICES LOCATED ON THE SAME PREMISES.” PLEASE EXPLAIN THE PURPOSE OF THIS SPECIAL CONDITION.**

A. Under certain circumstances, both Nevada Power and Sierra have allowed residential customers to receive service through two separate meters. This situation typically occurs when a customer has a separate meter for a stand-alone garage or a water heater located on the same premises as the customer’s residence. The separate service sometimes is considered general service (rather than domestic service). It seems reasonable to allow the Companies the discretion to determine that, under these circumstances, the customer may choose a non-standard meter for both the domestic service and the related “general” service. If the customer wants a non-standard meter for the separate-but-related service, the customer should pay additional up-front and monthly charges for the separate service.

Special Condition 4 thus is designed to allow the Companies to address special circumstances where a customer has multiple services on the same premise as the customer’s residence and the separate services are sufficiently related to domestic service. While Special Condition 4 gives the Companies discretion to deny a request for a non-standard meter for

1 the separate non-domestic service, the Special Condition should not lead  
2 to undue or inappropriate discrimination. Any customer who feels that  
3 the Companies have unreasonably refused to deny a non-standard meter  
4 can seek redress from the Commission  
5

6 **18. Q. DO THE TRIAL NSMO RIDERS CONTAIN OTHER SPECIAL**  
7 **CONDITIONS ALLOW THE COMPANIES TO DENY A**  
8 **REQUEST FOR A NON-STANDARD METER?**

9 A. Yes. The NSMO Rider contains two other eligibility limitations. The  
10 Companies will not install a non-standard meter for a customer if the  
11 customer has had service disconnected for nonpayment two or more  
12 times in the last 12 months or if there is evidence of tampering at the  
13 customer's premises.  
14

15 **19. Q. WHY ARE SPECIAL CONDITIONS 5 AND 6 NECESSARY?**

16 A. These conditions are necessary because the non-standard meters do not  
17 communicate with the Companies' smart meter network and are  
18 designed to ensure that operational benefits and savings associated  
19 attributable to NV Energize are realized.  
20

21 As Mr. Christensen explains, the non-standard meter will not  
22 communicate with NVE's smart meter network. Accordingly, the  
23 Companies will not be able to disconnect and reconnect service to  
24 customers served by a non-standard meter. Instead, the Companies will  
25 have to manually disconnect and reconnect service in the event of non-  
26 payment or service termination. Similarly, the Companies will not  
27 receive timely tamper alarms from the non-standard meters, although the  
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non-standard meters will transmit alarm information to remote reading devices with monthly usage information.

**20. Q. PLEASE EXPLAIN, IN MORE DETAIL, WHY THE COMPANIES INCLUDED SPECIAL CONDITION 5 IN THE NON-STANDARD METERING TARIFF.**

A. The Companies identified several operational benefits when they presented the NV Energize project to the Commission for approval, including operational savings associated with remote disconnection and reconnection of service. This availability of this functionality not only allows the Companies to reduce operation costs (by avoiding vehicle, labor and fuel costs), but also improves customer service (by allowing the Companies to connect service in a more timely manner). The non-standard meter could undermine the operational savings associated with remote disconnection and reconnection, especially if the Companies have to disconnect and reconnect NSMO service frequently. Special Condition 5 prevents customers who frequently fail to pay their bills from choosing a non-standard meter. Special Condition 5 will prevent the need for the Companies to hire additional personnel to disconnect and connect service for non-standard meter customers. Thus, Special Condition 5 provides a preventative tool that prevents the NSMO Rider from significantly undermining the Companies' ability realize operational savings. At the same time, the condition protects other non-standard metering customers from increased costs that could be caused by NSMO customers who frequently fail to pay their utility bills.

- 1    **21.    Q.    PLEASE EXPLAIN, IN MORE DETAIL, WHY THE**  
2                   **COMPANIES INCLUDED SPECIAL CONDITION 6 IN THE**  
3                   **TRIAL NSMO RIDERS.**
- 4                   A.    The Companies’ smart meter system also has the ability to send alarms  
5                   notifying the Companies when someone is tampering with a standard  
6                   meter. This functionality has the potential to reduce the costs associated  
7                   with damage to the Companies’ property and theft of electricity. The  
8                   non-standard meter does not have the same ability to provide timely  
9                   notices of tampering activities. Special Condition 6 allows the  
10                  Companies to refuse service under the NSMO Rider if the condition of  
11                  the customer’s premises suggests that the customer has tampered with an  
12                  existing meter. Similar to Special Condition 5, this condition provides a  
13                  preventative tool designed to prevent the NSMO Rider from significantly  
14                  eroding operational savings. Again, at the same time, Special Condition  
15                  6 protects other non-standard metering customers from increased costs  
16                  associated with the theft of electric service.
- 17
- 18    **22.    Q.    ARE SPECIAL CONDITIONS 5 AND 6 REASONABLE?**
- 19                  A.    Yes, both of these conditions are reasonable and necessary.
- 20
- 21    **23.    Q.    COULD SPECIAL CONDITIONS 5 AND 6 LEAD TO UNDUE**  
22                   **DISCRIMINATION?**
- 23                  A.    I don’t believe that Special Conditions 5 and 6 will lead to undue  
24                  discrimination. The conditions provide a means for the Companies to  
25                  refuse service under the NSMO Rider when the facts and circumstances  
26                  suggest that providing service under the NSMO Rider could undermine  
27                  the Companies’ ability to realize operational savings that will benefit  
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customers. Moreover, if the Companies deny service to any customer under the NSMO Rider, the customer may make a complaint to the Commission.

**24. Q. SIERRA’S ELECTRIC AND GAS TARIFFS REQUIRE A CUSTOMER WHO RECEIVES BOTH ELECTRIC AND GAS SERVICE TO CHOOSE THE NSMO FOR BOTH SERVICES OR THE STANDARD METER OPTION FOR BOTH SERVICES. PLEASE EXPLAIN HOW THIS CONDITION WORKS AND WHY IT IS APPROPRIATE.**

A. Sierra provides both electric and natural gas service to customers in the Truckee Meadows. As Ms. Walsh explains, Sierra developed an incremental charge for the installation of a non-standard meter reading device on a gas meter. The incremental gas charge assumes that Sierra is visiting the customer’s premise to install a non-standard electric meter. The Special Conditions thus allows Sierra to have a single charge, uniform charge throughout its electric service territory for the installation of a non-standard electric meter. The Special Conditions also ensure that a person who wants the non-standard gas metering option pays the full incremental cost of that service (i.e., by requiring a customer who wants the non-standard gas metering option to subscribe to the NSMO Rider for electric service, the gas customer will shoulder the full cost of the field visit).

**25. Q. EXHIBIT 3 TO THE APPLICATION CONTAINS PROPOSED CHANGES TO EXISTING RULES AND SCHEDULES. WHAT ARE THESE CHANGES?**

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A. The changes complement and implement the NSMO riders. They eliminate provisions of Rule 16 that are no longer necessary and eliminate from schedule MC the remote metering charge, which also is unnecessary.

**26. Q. DOES THIS COMPLETE YOUR PREPARED DIRECT TESTIMONY?**

A. Yes.

## STATEMENT OF QUALIFICATIONS

GARY P. SMITH

6100 Neil Rd

Reno, NV 89511

775-834-5775

gsmith@nvenergy.com

### **Summary of Qualifications**

24 years Utility experience with 14+ years of Senior Manager roles within NV Energy Distribution Operations with major emphasis in large scale process improvement and business redesign, including upgrades and replacements of operational technology systems.

### **Position at NV Energy**

Director, Customer Energy Solutions

The **NV Energy Director** is accountable for achieving the goals of the ASD project, and will be responsible for:

- Communicates project status, issues and needs to the project sponsors
- Negotiating project contracts, along with NV Energy legal and other support staff
- Ensuring an integrated, collaborative effort, in execution of program goals
- Providing all necessary project management support including leading the Project Management Office for the program
- Manages the program budget and DOE reporting requirements
- Responsible for scope, cost and schedule control
- Responsible for risk mitigation of ASD program

### **Relevant Employment History**

- **Director, Customer Energy Solutions, NV Energy**  
November 2008 to Present
- **Project Manager, NV Energy - Large Scale Process Improvement Service Delivery and Operations**  
November 2005 to November 2008
- **Manager, Distribution Design Sierra Pacific (Electric and Gas) & Project Manager, Nevada Power Distribution Re-engineering**  
March 2005 – November 2005
- **Director, Distribution Sierra Pacific (Electric and Gas)**  
August 1999 – March 2005
- **Merger Core Team, Nevada Power/ Sierra Pacific**  
January 1999 - August 1999

- **Supervisor, Distribution Design, Sierra Pacific (Electric, Gas, & Water)**  
April 1998 - August 1999
- **Account Manager New Development, Sierra Pacific Distribution**  
November 1996 - April 1998
- **Senior Consultant, Sierra Pacific Human Resources Division**  
July 1995 - November 1996
- **Merger Core Transition Team, Sierra Pacific & Washington Water Power**  
October 1994 - July 1995
- **Senior Planning Analyst, Sierra Pacific**  
October 1991 - October 1994
- **Materials Coordinator, Sierra Pacific Materials Management**  
August 1989 - July 1990
- **Buyer, Sierra Pacific Purchasing and Materials Management**  
July 1987 - August 1989
- **Distribution Design Planner, Sierra Pacific Utility Services Division**  
October 1986 - July 1987
- **Business Internship, Sierra Pacific Materials Management**  
March 1986 - October 1986

### **Education**

- Graduate of the University of Idaho Utility Executive Program, 2001
- Bachelor of Science, Business Administration  
University of Nevada, Reno, May 1987
- Associate of Arts, Business Information Systems  
Truckee Meadows Community College, December, 1985
- Certified Purchasing Manager - Registration No. 19055  
National Association of Purchasing Management, Tempe, Arizona, 1991
- Certified Master Coach – Continuous Process Improvement, Richard Chang Associates, Irvine, California, 1997.
- Gold Certified- 4-Disciplines of Execution, Covey 2009

Sierra Pacific Power Company and  
Nevada Power Company  
d/b/a NV Energy

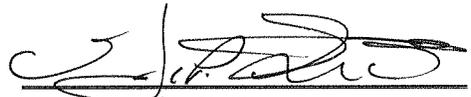
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AFFIRMATION

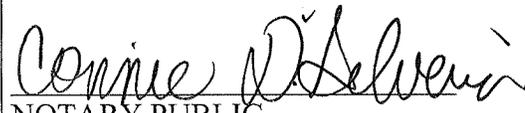
STATE OF NEVADA        )  
  ) ss.  
COUNTY OF WASHOE    )

I, GARY P. SMITH, do hereby swear under penalty of perjury the following:

That I am the person identified in the attached Pre-filed Testimony and that such testimony was prepared by me or under my direct supervision; that the answers and information set forth therein are true to the best of my knowledge and belief; and that if asked the questions set forth therein, my answers thereto would, under oath, be the same.

  
GARY P. SMITH

Subscribed and sworn to before me  
this 26<sup>th</sup> day of April, 2012.

  
NOTARY PUBLIC



**JAMES R. CHRISTENSEN**

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

PREPARED DIRECT TESTIMONY OF JAMES R. CHRISTENSEN  
ON BEHALF OF SIERRA PACIFIC POWER COMPANY AND  
NEVADA POWER COMPANY D/B/A NV ENERGY

Docket No. 12-05\_\_\_\_\_

**I. INTRODUCTION AND SUMMARY**

**1. Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?**

A. My name is James R. Christensen, and my business address is 7155 Lindell Road, Las Vegas, Nevada 89118.

**2. Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?**

A. I am employed by Nevada Power Company d/b/a NV Energy (“Nevada Power”) and Sierra Pacific Power Company d/b/a NV Energy (“Sierra” and, together with Nevada Power, “NVE” or “Companies”) as Director, Meter Services. In that capacity I am responsible for the timely and accurate measurement of all energy flowing into and out of the Companies’ systems (e.g., meter engineering, meter installation, meter testing, meter reading) for customers billed under all of the Companies’ rate schedules.

**3. Q. WOULD YOU PLEASE BRIEFLY DESCRIBE YOUR BACKGROUND AND EXPERIENCE?**

1 A. I have a Bachelors of Science degree in Mechanical Engineering and,  
2 since 1982, I have been employed by Nevada Power in a variety of  
3 capacities, primarily in its metering, customer service and retail business  
4 departments. I have been Director, Meter Services for the Companies  
5 since August 1999. Since that time, I have had daily operational  
6 responsibility for all metering activities in the Companies' service areas.  
7

8 **4. Q. HAVE YOU PREPARED A MORE DETAILED DESCRIPTION**  
9 **OF YOUR EDUCATIONAL BACKGROUND AND**  
10 **EMPLOYMENT EXPERIENCE?**

11 A. Yes, it is attached as **Exhibit Christensen-Direct-1**.

12  
13 **5. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. I describe the electric meter, gas module, and meter reading system  
15 technologies selected by NVE to be installed under the Trial Non-  
16 Standard Meter Option Rider (the "Trial NSMO Rider") and will  
17 demonstrate that they are consistent with the recommendations in the  
18 Report on NV Energy's Advanced Service Delivery Meter Program (the  
19 "Report") that was approved by the Commission's March 2, 2012, order  
20 (the "Order"). In addition, I provide support for cost estimates that are  
21 inputs to the cost model sponsored by Jeff Evans.  
22

23 **6. Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

24 A. Yes. The Trial NSMO Rider allows customers who receive domestic  
25 service to select a non-standard meter. Consistent with the  
26 recommendation contained in the Report, NVE selected meter, gas  
27 module, and meter reading system technologies that support drive-by  
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meter reading. NVE also conducted a cost study to develop non-recurring and recurring charges for customers who select a non-standard meter. The cost study assumes that a population of 7,500 customers will subscribe to service under the Trial NSMO, with 4,500 customers in Southern Nevada and 3,000 customers in Northern Nevada.

**II. DESCRIPTION OF SELECTED TECHNOLOGIES**

**7. Q. WHAT ELECTRIC METER HAS NVE SELECTED TO INSTALL TO IMPLEMENT THE TRIAL NSMO RIDER?**

A. NVE has selected the Itron CENTRON C1SR AMR meter (C1SR) with FCC ID SK9C1A-2 configured to utilize a low power transmitter and an encoder receiver transmitter (ERT) type 04 SCM protocol as the non-standard meter (the “Non-Standard Meter”). A specification sheet for this meter is provided as **Exhibit Christensen-Direct-2**. NVE considered available drive-by meters and chose the C1SR because of our familiarity with the Itron technology and the meter, the reliability of this product, the compatibility of this meter with existing meter reading equipment, and the suitability of this meter for the intended use.

The Companies have used the Non-Standard Meter for several years since its market introduction to address customer requests and NVE’s necessity for remote metering pursuant to Rule 16 requirements. The Non-Standard Meter has been very reliable, can be read with the existing handheld metering system until the end of 2012 (when the existing devices must be retired and new metering reading equipment can be

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acquired), and is fully compatible with the drive-by system described later in this testimony.

**8. Q. IS THE NON-STANDARD METER A DIGITAL METER?**

A. Yes, the Non-Standard Meter is based on the widely used CENTRON solid-state metering platform. The C1SR model of the CENTRON measures kilowatt-hours and tamper data and transmits them using a radio to either a mobile receiver or a handheld meter reading device. This is an important attribute of the C1SR that makes it particularly suited for deployment as the Non-Standard Meter. As I explain later in this prepared direct testimony, NVE will use handheld devices to augment the vehicle-based meter reading system to complete drive-by meter reads.

The Non-Standard Meter does not record, store or transmit interval data and is not equipped with a service disconnect switch. In addition, the Non-Standard Meter is not compatible with NVE’s advanced service delivery network. The Non-Standard Meter therefore cannot communicate with the Companies’ Smart Meter Network.

**9. Q. PLEASE DESCRIBE THE FUNCTIONALITY OF THE RADIO IN THE NON-STANDARD METER.**

A. The Non-Standard Meter has a one-way radio that is programmed at the factory to deliver data using an ERT type 04 (low power) standard consumption message (SCM) protocol. Each message contains the ERT unit ID number, unit type, energy usage, and tamper status, as well as the Cyclic Redundancy Check (CRC) to ensure message integrity. The Non-

1 Standard Meter uses the 910 to 920 MHz frequency range (an unlicensed  
2 portion of the wireless spectrum) with one transmission per second and a  
3 random scheduling of the transmission within that second. The  
4 transmitter's power is 0.02265 watts.

5  
6 **10. Q. SIMILAR TO THE COMPANIES' STANDARD METERS, THE**  
7 **NON-STANDARD METERS USE RADIO TRANSMISSIONS AND**  
8 **THEREFORE HAVE RADIO FREQUENCY (RF) EMISSIONS.**  
9 **DO THE NON-STANDARD METER RF EMISSIONS MEET THE**  
10 **LIMITATIONS ESTABLISHED BY THE FEDERAL**  
11 **COMMUNICATIONS COMMISSION ("FCC")?**

12 A. Yes, the Non-Standard Meter has been certified to comply with the  
13 FCC's maximum permissible exposure ("MPE") limit as part of its grant  
14 of equipment authorization. Further, NVE engaged Exponent to estimate  
15 the RF exposure from the Non-Standard Meter. Exponent calculated the  
16 typical estimated exposure to be 0.000033 milliwatts per square  
17 centimeter (mW/cm<sup>2</sup>) at a distance of 1 foot from the front of the meter.  
18 This exposure is much lower (about 1/18,000) than the FCC's 0.6 mW/  
19 cm<sup>2</sup> maximum permissible exposure limit.

20  
21 **11. Q. ARE THE RADIO MESSAGES TRANSMITTED BY THE NON-**  
22 **STANDARD METER ENCRYPTED?**

23 A. No, the messages are not encrypted. The messages do not contain any  
24 personal identifiable information (as defined by the Nevada Revised  
25 Statutes). The meter itself does not have an external communication  
26 port and cannot be accessed directly without breaking seals, bypassing  
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the locking ring, and connecting a personal computer with a special software application and meter password.

**12. Q. WHAT COLLECTION SYSTEM WILL NVE USE TO GATHER THE METER READINGS EACH MONTH?**

A. The Companies’ existing Premierplus4 meter reading system will be de-supported by the manufacturer (see **Exhibit Christensen-Direct-3**) and retired after December 2012. The Companies plan to use the existing system to gather meter reads upon Commission approval of the Trial NSMO Riders until a replacement system can be implemented, which will be done as expeditiously and efficiently as possible. The Companies’ have already selected the Itron Field Collection System (“FCS”) as the new replacement system. This system is designed for use with a truck mounted Itron Mobile Collector Lite (“MCL”) and handhelds, or with handhelds alone, to read the Non-Standard Meters. Once the new system is in place, the highly efficient MCL will be used to gather reads in the denser urban areas such as Las Vegas, North Las Vegas, Henderson, Reno, Carson City, etc. The less dense population areas within the Companies’ territory will be read using a handheld in a slower moving vehicle unless the read is not obtainable using that method, in which case the technician will approach the customer premise on foot carrying a handheld until close enough that a read can be captured. Most reads are anticipated to be obtainable without leaving the vehicle.

**13. Q. ARE THE HANDHELDS AND THEIR DATA SECURE?**

1 A. Yes. Remember, the Companies already use similar meters and  
2 equipment to obtain remote meter reads when access to a customer's  
3 premises cannot be obtained. The Non-Standard Meter has similar  
4 security characteristics; the meter reading collection handhelds are  
5 secured using MS Windows type security and will transmit their data  
6 onto the Companies' secure network that is not accessible from outside  
7 the company.  
8

9 **14. Q. IS THE USAGE DATA COLLECTED FROM THE NON-**  
10 **STANDARD METERS SUBJECT TO NVE'S PRIVACY AND**  
11 **SECURITY POLICIES?**

12 A. Yes, all customer data is safeguarded by NVE's policies as well as  
13 regulation and statute. These are the same polices, regulations and  
14 statutes that apply to usage information previously collected by analog  
15 meters and the usage information that is being collected by the more than  
16 829,000 smart meters deployed as of April 28, 2012, in the Companies'  
17 Southern and Northern service territories.  
18

19 **15. Q. WHAT WILL BE THE METER READING PROCESS USING**  
20 **THE NEW DRIVE-BY SYSTEM?**

21 A. The process for meter reading begins a day ahead of a scheduled meter  
22 read when the Banner customer information system (Banner) prepares a  
23 list of meters that need to be read the next day. That list is sent from  
24 Banner through an interface to FCS via the Companies' secure network  
25 where it is manually reviewed and the routes are checked and balanced  
26 as necessary for efficient reading. Later that day the meter reads are  
27 received by FCS for the current day through a secure network connection  
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from the handhelds using an internet protocol as they are placed in docking stations across the service territory. Once this upload is complete, the next day's routes are downloaded to the handhelds so they are ready to be taken to the field the next morning. As the meter readings are received by FCS any missing reads are assigned to be reread the next day and included in the download back to the handhelds. The completed reads are then sent from FCS back through the interface to Banner and processed for billing.

**16. Q. WHY DO THE COMPANIES NEED TO PURCHASE 20 HANDHELD METER READING DEVICES?**

A. As noted above, while the Non-Standard Meter is compatible with existing handheld devices, the existing devices must be retired in December 2012 because they will no longer be supported by Itron. Therefore, the Companies will purchase new handheld devices and use the devices as follows.

The larger urban areas will be read using eight handhelds with four being assigned to Reno and four to Las Vegas. Of these, four will be primarily connected to truck mounted MCLs (two in the north and two in the south) and each of these areas must have a spare in case of damage or defect to avoid any delays in billing processes. The other two will be used without an MCL to read smaller communities such as Laughlin, Fallon, Mt. Charleston, and Lake Tahoe that are assigned to be read from the urban areas. The remaining twelve units will be distributed to each of the remote northern district offices for reading rural routes without MCLs. This includes one shared spare unit.

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The four incremental employees shown in the plan for performing meter reader functions will be allocated equally north and south. However, the meter reading work will be spread across about sixteen employees statewide as a portion (about a fourth) of their workday and the four incremental employees will not be dedicated solely to meter reading. Based on my experience, this plan provides a reasonable, appropriate and efficient program for reading the Non-Standard Meters.

**17. Q. WHAT ERT GAS MODULE HAS NVE SELECTED FOR USE IN ITS NORTHERN SERVICE TERRITORY?**

A. NVE has selected the Itron 40G gas module (40G) with FCC ID EO940GN-1 for this purpose. A specification sheet for this meter is in **Exhibit Christensen-Direct-4**. NVE used similar rationale for making this selection as for the electric meter. Sierra has used the 40G series gas module for many years to address its necessity for remote metering reading requirements. This module has been very reliable, can be read with the existing handheld metering system until the new system is implemented, and is fully compatible with the drive-by system described in this testimony.

**18. Q. DOES THE 40G MODULE WORK THE SAME AS THE NON-STANDARD METER?**

A. The 40G is similar in many ways to the Non-Standard Meter, but has a few differences because it is powered from a battery instead of a direct connection to electricity. The 40G has a radio with two components, a receiver and a transmitter, each operating on different frequencies. Instead of transmitting once per second, the 40G operates in traditional

1 wake-up mode and transmits meter reads and tamper information in  
2 response to a wake-up signal from an Itron radio-equipped handheld or  
3 mobile reader. By only sending data infrequently in this manner, and at  
4 lower power (0.00075 watts), the design battery life is 20 years. The  
5 messages are not encrypted, and they contain no personal identifiable  
6 information. The module does not have an external communication port  
7 and cannot be accessed directly. The 40G does not store interval data.  
8

9 **19. Q. DOES THE 40G MODULE MEET FCC REQUIREMENTS?**

10 A. Yes, it uses a lower power transmitter than the ERT Meter, and  
11 transmits only when it receives the wake up signal. Exponent calculated  
12 the typical estimated exposure to be 0.0000048 milliwatts per square  
13 centimeter ( $\text{mW}/\text{cm}^2$ ) at a distance of 1 foot from the front of the  
14 module. This exposure is much lower (about 1/125,000) than the FCC's  
15 0.6  $\text{mW}/\text{cm}^2$  maximum permissible exposure limit.  
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17 **III. COMPLIANCE WITH PUCN RECOMMENDATIONS**  
18

19 **20. Q. DOES THE REPORT PROVIDE RECOMMENDATIONS FOR**  
20 **THE TRIAL NSMO?**

21 A. Yes. The Report recommends that the Companies should offer a digital  
22 meter that is capable of drive-by reading and which does not store or  
23 transmit interval data for the Trial NSMO Rider.  
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25 **21. Q. DO THE TECHNOLOGIES SELECTED BY THE COMPANIES**  
26 **MEET THIS RECOMMENDATION?**  
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A. Yes. All the technologies selected were designed and intended to be used for drive-by meter reading and, as mentioned above, the Non-Standard Meter is a digital meter. Moreover, the Non-Standard Meter and the Gas ERT do not record, transmit or store interval data.

**22. Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?**

A. Yes.

QUALIFICATIONS OF  
JAMES R. CHRISTENSEN

EXPERIENCE:

Nevada Power Company d/b/a NV Energy and  
Sierra Pacific Power Company d/b/a NV Energy

1999-Current Director, Meter Services, Meter Services Department. Directs the Field Metering, Meter Test Shop, Field Services, and Meter Reading groups statewide at NV Energy. Ensures accuracy of all classes of metering devices. Coordinates the monthly reading of meters. Administers meter testing and maintenance, including creation of comprehensive records of all work performed, for meters and associated equipment. Directs meter engineering and meter standards development and maintenance. Responsible for the timely installation of meters on all new services and the turn on/turn off of existing meters.

Nevada Power Company

1994 Manager, Major Customer Services, Retail Business Planning Department. Managed the Load Survey & Billing, Customer Engineering, and Major Account Executive groups. Provided any support services needed by the customers that are billed on the LGS tariff. Responsibilities included providing a timely bill and supporting billing information (load analysis reports) to the customers. Administered the database of customer load data for billing, load forecasting, rates, etc. Coordinated the flow of information between departments to ensure responsive service and planning for construction of new service to customer projects.

1994 Manager, Customer Engineering, Retail Business Planning Department. Managed a group of engineers that administer commercial DSM programs. Also directed engineering research and studies into energy saving equipment and operational methods. Responsible for providing technical seminars and assistance for facility managers and engineers who maintain the varied large commercial customers' facilities in southern Nevada.

- 1992            Manager, Customer Service, Customer Service Department. Managed the Credit & Collections, Payment Processing, Customer Service Offices, Customer Information Center, and Customer Service Training & Special Projects groups. Provided a full range of services for all customers at all public offices and through phone services. Responsible for maintaining customer satisfaction by resolving billing questions, initiating service connection, making payment arrangements, etc. Ensured the timely processing of billings and revenues. Also, minimized write-offs by administering credit policies.
- 1992            Manager, Metering, Meter Operations Department. Managed the Field Metering, Shop Test, Meter Reading, Meter Records, Tampering, and Field Services groups. Ensured accuracy of all classes of metering devices. Coordinated the monthly reading of all meters. Administered the maintenance of a comprehensive database of hard copy and software records of all meters and associated equipment. Responsible for the timely installation of meters on all new services and the turn on/turn off of existing meters. Also responsible for detection of tampering.
- 1987            Superintendent, Metering, Metering Department. Managed the Field Metering, Meter Records, and Shop Test groups. Ensured accuracy of all classes of metering devices. Coordinated the monthly reading of time of use meters (LGS and survey). Administered the maintenance of a comprehensive database of hard copy and software records of all meters and associated equipment. Responsible for the timely installation of meters on large residential (400 amps and higher) and commercial services.
- 1985            Assistant Superintendent, Metering, Metering Department. Responsibilities included preparation of written procedures and standards. Participated on regional and national committees for standardization representing the company. Performed several administrative duties such as budgeting and work order preparation. Provided equipment and work method improvements to increase efficiency and productivity.
- 1983            Engineer I, Metering Department. Responsible for maintaining the test standards and test boards at approved levels of accuracy. Acted as the department interface to other departments throughout the company. Provided technical support for field metering activities. Also responsible for developing varied schemes to measure quantities such as temperature and humidity in conjunction with the more standard power measurements such as watt-hours and var-hours for special projects.

- 1982 Engineer I, Transmission & Distribution Work Management Department. Responsible for time studies and setting time standards. Also assisted in pre-construction planning of substations using critical path methods. Assisted the department manager in formulating computer programs used in analysis and planning. Studied and documented construction and maintenance operations at field locations. Worked with several of the work groups in the Transmission and Distribution department including substations, metering, and the line department.
- 1982-Present Member, Tau Beta Pi Engineering Honor Society  
Member, American Society of Mechanical Engineers  
Member, Electric Utility Service Requirements Committee (EUSERC)  
Past Committee Vice Chair  
Member, EEI Metering Committee  
Past Member, EEI Meter and Service Committee  
Sub-Committee Vice Chair and Chair  
Past Member, Program Planning Committee of Western Electrical and Communications Association (WECA) Customer Service and Marketing Sub-Committee  
Sub-Committee Vice Chair and Chair

EDUCATION:

- 1982 Bachelor of Science in Mechanical Engineering, Minor in Mathematics from Brigham Young University, Provo, Utah
- 1983-84 Graduate Level Electrical Engineering Power Courses, University of Colorado, Boulder Colorado
- 2007 Utility Executive Course, University of Idaho, Moscow, Idaho



Knowledge to Shape Your Future



## introduction

### **CENTRON C1SR**

The Radio Frequency Personality Module allows meter data to be collected automatically, helping to save time, improve reliability, increase accuracy and ensure data security.

The CENTRON C1SR is a Radio Frequency (RF) Personality Module based on the CENTRON solid-state metering platform. Kilowatt-hours and tamper data are reported through RF transmissions. Message retrieval can be performed using either a mobile receiver or a handheld off-site reading device.

The meter can be reset by using the ZRO-C2A which resets both the kWh register and tamper status counters.

## features

### **Standard Features**

- > Electronic LCD Display
- > Polycarbonate Cover
- > Test LED

### **Option Availability**

- > Glass Cover
- > Electronic Detent
- > Identification/Accounting Aids

### **Radio Frequency Personality Module**

- > The C1SR is a one-way, unlicensed RF device which uses the Itron standard consumption message protocol. It is fully compatible with Itron Mobile and off-site systems.

### **Energy RF Transmission**

- > Each RF message contains the unit ID number, unit type, energy usage, and tamper status, as well as the Cyclic Redundancy Check (CRC) to ensure message integrity.

C1SR  
**CENTRON**<sup>®</sup>

# specifications

## **Tamper Detection**

The Itron patented method of tamper detection identifies:

- > Power Removal Tamper — Increments a counter each time the meter is removed from a live socket.
- > Meter Inversion Tamper — Increments a counter each time the meter senses reverse power flow. This indication is communicated in the RF transmission.

## **Technical Data**

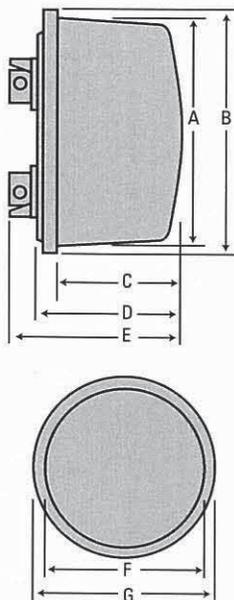
Meets Applicable Standards:

- > ANSI C12.1 - 1995
- > ANSI C12.10 - 1997
- > ANSI C12.20 (Class 0.5) -1998
- > ANSI C37.90.1 - 1989
- > ANSI C62.45 - 1992
- > IEC 61000-4-4
- > IEC 61000-4-2
- > FCC Part 15, Subclass C

## **Reference Information**

- > CENTRON Technical Reference Guide
- > CENTRON C1S Specification Sheet
- > CENTRON C1SC Specification Sheet
- > CENTRON C1SD, T, L Specification Sheet
- > Price Bulletin 110
- > Hardware Specification Form
- > ZRO-C2A Handheld Resetter Operating Instructions

# specifications



## Dimensions

Polycarbonate						
A	B	C	D	E	F	G
6.29"	6.95"	2.7"	3.16"	4.53"	6.29"	6.95"
16c	17.7c	6.9c	8c	11.5c	16c	17.7c
Glass						
A	B	C	D	E	F	G
6.42"	6.95"	3.03"	3.55"	4.9"	6.42"	6.95"
16.3c	17.7c	7.7c	9c	12.5c	16.3c	17.7c

## Shipping Wt.

Polycarbonate	Pounds	Kilograms
4 Meter Cartons	8.9 lbs	4.04 kg
96 Meter Pallets	214 lbs	97.30 kg
Glass	Pounds	Kilograms
4 Meter Cartons	13.96 lbs	6.35 kg
96 Meter Pallets	335 lbs	152.30 kg

## Specifications

<b>Power Requirements</b>	Voltage Rating: 240V, 120V	Operating Voltage: ± 20% (60Hz), ±10%, (50 Hz)
	Frequency: 60 Hz, (50 Hz)	Operating Range: ± 3 Hz
<b>Transmitter Frequency</b>	910-920 MHz Frequency Hopping	
<b>Operating Environment</b>	Temperature: -40° to +85°C	
	Humidity: 0% to 95% non-condensing	
	Transient / Surge Suppression:	ANSI C37.90.1-1989 IEC 61000-4-4 ANSI C62.45-1992
<b>Accuracy</b>	ANSI C12.20 0.5 accuracy class	
<b>General LCD Display</b>	Five-digit liquid crystal display	
	Data digit height: 0.4"	
	Annunciator height: 0.088" Electronic Load Indicator	
<b>Characteristic Data</b>	Starting Watts:	5 Watts
	Temperature Rise Specifications:	Meets ANSI C12.1 Section 4.7.2.9
<b>Burden Data *</b>	Voltage Circuit:	
	Voltage 240	Watts 1.79 VA 7.45
	Current Coil-Self Contained:	
	Service 3-Wire Test Current (Amps) 30	VA < 0.50

\*Burden Data applies to FM2S 240V meter.

## Product Availability

Volts & Service	Meter Class	Test Amps	Kh (Pulse/Wh)	Form No.	Register Description	Digits & Multipliers	Catalog Number w/glass	Catalog Number w/poly
120V 2-wire	100	15	1.0	1S	LCD	5x1	98150	98151
120V 2-wire	100	15	1.0	1S	LCD	4x10	98152	98153
240V 3-wire	200	30	1.0	2S	LCD	5x1	98012	98013
240V 3-wire	200	30	1.0	2S	LCD	4x10	98014	98015
240V 3-wire	320	50	1.0	2S	LCD	5x1	98174	98175
240V 3-wire	320	50	1.0	2S	LCD	4x10	98176	98177
120V 2-wire	20	2.5	1.0	3S	LCD	5x1	98154	98155
120V 2-wire	20	2.5	1.0	3S	LCD	4x10	98156	98157
240V 2-wire	20	2.5	1.0	3S	LCD	5x1	98158	98159
240V 2-wire	20	2.5	1.0	3S	LCD	4x10	98160	98161
240V 3-wire	20	2.5	1.0	4S	LCD	5x1	98162	98163
240V 3-wire	20	2.5	1.0	4S	LCD	4x10	98164	98165

Refer to the CENTRON Technical Reference Guide for the catalog numbers and burden data for the FM 1S CL100, FM 2S CL320, FM 3S CL20, FM 4S CL20, FM 12S CL200, and FM 25S CL 200 meters.



profile

**Itron Inc.**

Itron is a leading technology provider and critical source of knowledge to the global energy and water industries. More than 3,000 utilities worldwide rely on Itron technology to deliver the knowledge they require to optimize the delivery and use of energy and water. Itron delivers value to its clients by providing industry-leading solutions for electricity metering, meter data collection, energy information management, demand response, load forecasting, analysis and consulting services, distribution system design and optimization, web-based workforce automation; and enterprise and residential energy management.

**To know more, start here: [www.itron.com](http://www.itron.com)**



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**Corporate Headquarters**

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**Itron Inc.**

**Oconee Electricity Metering**

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*Electric / Gas / Water*  
*Information collection, analysis and application*

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December 15, 2008

## **End of New Sales Announcement for Premierplus4 and G5 handhelds**

Dear Premierplus4 Customer,

For over seven years Premierplus4 and G5 handheld computers have been the meter data collection solution of choice for many Utilities. As is true with all technology-based systems, new technological advances, parts scarcity and the introduction of next generation systems eventually leads to the end of product life cycles. That is currently the case with Premierplus4 and G5 handhelds. Parts availability for the G5 will become an issue by the end of 2009, and because Premierplus4 requires the G5, Itron will discontinue selling both of these products.

Itron has established December 31, 2009 as the End Of New Sales (EONS) date for both Premierplus4 and G5 handhelds. Itron is committed to our Premierplus4 and G5 handheld customers and will continue to provide contract maintenance support for these products for an additional three (3) years after the EONS. The End of Support (EOS) date for Premierplus4 and G5 handhelds will be December 31, 2012.

The Itron Field Collection System (FCS) and the Field Collector 200 (FC200) handheld computer is the next generation meter data collection solution from Itron. This solution is available now and has been developed with our Premierplus4 customers in mind. This Automated Meter Reading (AMR) system combines 30 years of Itron meter reading system expertise and extensive customer input to offer the business efficiencies and system reliability you have come to depend on from Itron. FCS is the premier, client server, meter data collection solution in the market today. It was designed to ensure an efficient and timely upgrade for our Premierplus4 customers by providing compatibility with your current meters, endpoints and mobile collection systems. FCS also eliminates the requirement of programming new file interfaces with the ability to import and export Premierplus4 MRI and MRE files. The FC200 handheld is ergonomically designed and runs on the Windows® CE .NET platform for ease of use in the field.

FCS with FC200 and Itron's Mobile Collection systems is the best of breed meter data collection solution available today. Its advanced features enable you to meet your meter data collection needs now and well into the future.

If you have any questions or if there is anything else we can do for you, please contact your Itron representative or call me at (509) 891-3236.

Sincerely,

Rich Layton  
Product Manager  
Itron, Inc.

**Note: the information contained in this document is considered confidential to Itron and its customers. It is not intended for distribution beyond your company or organization.**



*Knowledge to Shape Your Future*

## functionality profile

### **40G ERT Module**

The 40G ERT module serves as the data collection endpoint device for Itron's industry-leading portfolio of RF-based meter data collection solutions for natural gas meters.

The 40G ERT module encodes consumption and tamper information from a natural gas meter. When the module receives a wake-up signal, the device then transmits the data to a radio-equipped handheld computer, Itron's vehicle-based mobile AMR system such as the Mobile Collector, or an Itron fixed network data collection system.

The 40G ERT module is mounted directly on gas meters and works equally well indoors or outdoors. Its unobtrusive profile features a durable polycarbonate plastic housing. The module requires no external antenna or connections, and the original index can be retained. It is powered by a long-life, replaceable "A" cell lithium battery, which provides an average battery life of 20 years. The electronics board is completely encapsulated to protect it from environmental hazards and tampering.

The 40G ERT module can be installed easily on widely used American, Invensys (Rockwell), Schlumberger (Sprague) and National aluminum case gas meters.

The 40G ERT module now employs a mechanical, mercury-free, tilt tamper switch.



# 40G ERT<sup>®</sup>

module

# specifications

## Functional

- > Power source: "A" cell lithium battery
- > Radio programming parameters: index reading, test hand multiplier, index rollover, pressure compensation security level
- > Tamper detection: meter removal, magnetic tamper
- > Operating temperature: -40° to +158°F (-40° to +70°C)
- > Operating humidity: 5 to 95% relative humidity
- > Product identification: numeric and bar-coded ERT module serial number

## Regulatory & Standards

- > FCC compliance: Part 15 certified
- > ISC compliance: TRC-76 certified
- > Safety approvals: intrinsically safe per factory mutual and CSA Class 1, Division I, Groups A, B, C, D

## Operational

- > Receive frequency: 952 and 957 MHz (MAS Bands)
- > Transmit frequency: spread spectrum 910-920 MHz
- > Data integrity: verified in every message

## Physical

- > Materials of construction: gray polycarbonate ERT module housing, clear polycarbonate cover and encapsulated electronics

## Dimension

- > 5.54" x 2.57" x 3" (140 x 65 x 76 mm)

## Meter Compatibility

- > Installs on many popular brands including American, Invensys (Rockwell), Schlumberger (Sprague) and National meters. Please refer to the meter compatibility guide for a detailed listing.

## Shipping Information

- > Approximately 22 lbs (9.9 kg) per box of 30 modules
- > Approximate box size 20" x 16" x 8" (508 x 406 x 203 mm)



## Itron Inc.

### Corporate Headquarters

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[www.itron.com](http://www.itron.com)

Sierra Pacific Power Company and  
Nevada Power Company  
d/b/a NV Energy

AFFIRMATION

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STATE OF NEVADA        )  
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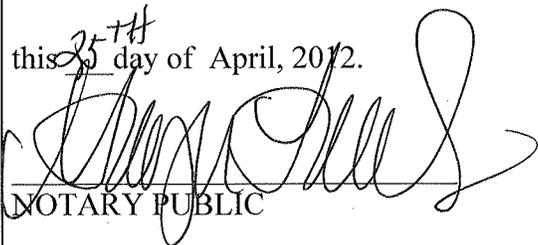
I, JAMES R. CHRISTENSEN, do hereby swear under penalty of perjury the following:

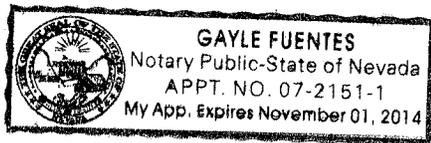
That I am the person identified in the attached Pre-filed Testimony and that such testimony was prepared by me or under my direct supervision; that the answers and information set forth therein are true to the best of my knowledge and belief; and that if asked the questions set forth therein, my answers thereto would, under oath, be the same.

  
\_\_\_\_\_  
JAMES R. CHRISTENSEN

Subscribed and sworn to before me

this <sup>25<sup>th</sup></sup> day of April, 2012.

  
\_\_\_\_\_  
NOTARY PUBLIC



**LAURA I. WALSH**

**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

PREPARED DIRECT TESTIMONY OF LAURA I. WALSH  
ON BEHALF OF SIERRA PACIFIC POWER COMPANY AND  
NEVADA POWER COMPANY D/B/A NV ENERGY

Docket No. 12-05\_\_\_\_\_

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**1. Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

A. My name is Laura I. Walsh. I am the Manager of Regulatory Pricing and Economic Analysis for Nevada Power Company d/b/a NV Energy (“Nevada Power” or the “Company”) and Sierra Pacific Power Company d/b/a/ NV Energy (“Sierra” and, together with Nevada Power, the “Companies”). My primary business address is 6100 Neil Road in Reno, Nevada.

**2. Q. DOES THE EXHIBIT WALSH DIRECT-1, “QUALIFICATIONS OF WITNESS LAURA I. WALSH,” ACCURATELY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE?**

A. Yes, it does.

**3. Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND RELATED EXPERIENCE.**

A. I have a Bachelor of Science Degree in Electrical Engineering and a graduate degree in Secondary Education. I have almost twenty five years of utility experience in regulatory matters, tariff interpretation, cost of service, and rate design related to electric, gas and water services. My utility experience also includes work in transmission planning. Prior to coming to

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work for Sierra, I worked as an Engineering Assistant for Lawrence Livermore Laboratory and EG&G Energy Measurements. My training includes marginal cost of service and rate design classes from NERA, rate and regulatory training from EEI, Transmission Planning from PTI and various other courses related to engineering, utility issues, and computer techniques. I have prepared and presented studies and testimony before this Commission and the California Public Utilities Commission on many occasions in both formal hearings and informal workshops.

**4. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. I support the cost of service and rate design for the development of the upfront and ongoing monthly rates for both Sierra Pacific’s and Nevada Power’s proposed opt-out tariffs, as directed by the Commission in its Order in the Investigation regarding NV Energy’s Advanced Service Delivery Meter Program a/k/a Smart Meter and its implementation (Docket No. 11-10007). The underlying cost of service and its inputs are explained in detail in the Tariff Description and Explanation portion of this filing.

Additionally, I support the proposed tariffs, the cost of service analyses and resulting rate design for service to a customer choosing not to have a smart meter installed at their premise and requesting service under a trial Non-Standard Metering Option (“NSMO”). The NSMO is defined as a digital meter that does not collect interval data and requires manual reading by meter reading personnel using a drive-by system. I also support the changes to Schedule MC and Rule 16.

**COST OF SERVICE AND RATE DEVELOPMENT**

**5. Q. WHAT ARE THE PROPOSED RECURRING AND NONRECURRING CHARGES UNDER THE TRIAL NSMO RIDER?**

A. In accordance with the Commission Order in Docket No. 11-10007, the proposed upfront and ongoing monthly charge calculations incorporate the full marginal costs of installation, system upgrades, and ongoing personnel requirements to implement and maintain the trial NSMO. Table 1 summarizes the proposed electric service rates for both Companies and also lists the proposed charges for Sierra’s customers who also take gas service and who choose a non-standard meter or, in the case of gas service, a remote reading module.

**Table 1. Proposed Charges**

	Electric Service	Gas Service
<b>Sierra Pacific</b>		
Upfront Charge	\$107.66	\$6.08
Monthly Recurring Charge	\$11.01	\$1.20
<b>Nevada Power</b>		
Upfront Charge	\$98.75	n/a
Monthly Recurring Charge	\$7.61	n/a

**6. Q. PLEASE BRIEFLY EXPLAIN THE METHODOLOGY USED TO CALCULATE THE PROPOSED ELECTRIC CHARGES.**

A. The proposed charges are designed to recover the incremental cost of implementing the NSMO for customers who choose a non-standard meter and are calculated in accordance with the Report on NV Energy’s Advanced Service Delivery Meter Program approved by the Commission in Docket

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No. 11-10007. System costs that have to be stated on a per customer basis are costs based on the estimated number of customers who are expected to choose to opt-out of the standard smart meter service and select non-standard meter. This is 0.5% of all residential customers (7,500 in total, made up of 3,000 customers for Sierra and 4,500 customers for Nevada Power.) The costs associated with choosing a non-standard meter are recovered through two charges, an upfront charge and a monthly recurring charge.

The one-time upfront charge is designed to recover most nonrecurring costs such as installation labor, customer support and application processing labor, customer communication materials, the cost of returning NV Energy's system to its standard configuration, and a credit for the standard smart meter installation that is avoided. The second charge, a recurring monthly charge is designed to recover the costs of the meter spread over its life, system modifications, handheld devices, drive-by meter reading system, back-office labor and materials and annual hardware and software maintenance fees. This is largely consistent with the current marginal cost methodology used by each utility for calculating marginal customer costs and to develop the Basic Service Charge ("BSC"). Therefore, these costs will be collected from customers who choose a non-standard meter in a fixed monthly charge that is in addition to their otherwise applicable Basic Service Charge. This charge applies to each non-standard meter necessary to serve a residential customer.

- 1     **7.     Q.     DOES THE CALCULATION OF THE MONTHLY NSMO CHARGE**  
2                   **DIFFER FROM THE APPROVED METHODOLOGY IN THE**  
3                   **MARGINAL COST STUDY OF EACH UTILITY?**
- 4             A.     As stated above, the monthly recurring charge is largely based on the  
5                   calculation used to develop the marginal customer costs in each of the  
6                   Company’s last approved marginal cost study.  However, there are two  
7                   exceptions.  First, because estimated A&G expenses are already included  
8                   directly in the calculation of the underlying incremental NSMO Customer  
9                   Accounts and Services cost estimates, the general A&G values used in each  
10                  Company’s Cost of Service study are not applied in the calculation of the  
11                  full marginal cost for the recurring charge.  This is done to ensure that these  
12                  costs are not included twice.  Second, the annual economic carrying charge  
13                  used in the opt-out calculations is recalculated to reflect the life that would  
14                  be applicable to the specific cost that it is intended to recover.  The  
15                  economic carrying charge reflects the life of the meter related investments  
16                  applicable in this instance, which is shorter than the overall average life of  
17                  distribution plant that is reflected in the in the marginal cost studies.
- 18
- 19     **8.     Q.     DO THE PROPOSED CHARGES FOR SIERRA’S CUSTOMERS**  
20                   **WHO ALSO TAKE GAS SERVICES USE THE SAME**  
21                   **METHODOLOGY?**
- 22             A.     Not entirely.  The same methodology is used to develop the upfront charge  
23                   for gas customers who choose service under the Trial NSMO Riders.  
24                   However, the recurring charge is developed in a slightly different manner  
25                   since the cost of service methodology used to develop the approved BSC  
26                   for gas service is based on an embedded cost allocation methodology.
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Additionally, as described in Special Condition 7 of the proposed electric rider and Special Condition 1 of the gas rider, if a Sierra gas customer requests service under Sierra’s electric NSMO Rider, then they must elect to opt-out for both their electric and gas services and pay both the electric and gas NSMO charges. These two special conditions are necessary because the calculation of the upfront gas fee includes no incremental travel time costs for installation labor, customer communications and customer support or application processing since their request will be implemented at the same time the customer requests a NSMO configuration for their electric service.

**9. Q. WHY DOES THE UPFRONT CHARGE INCLUDE THE COST OF REINSTALLING A SMART METER?**

A. In Docket 11-10007, the Commission agreed with the Report on NV Energy’s Advance Service Delivery Meter Program that “no costs for opting-out, including a low-income subsidy, should be borne by the general body of customers who do not elect to opt-out.” Report at 29. So, the proposed rates for customers choosing to opt-out of the Companies’ standard metering arrangement include the full incremental cost of that decision. Since the smart meter is the Companies’ standard configuration, when a customer stops service, or requests to be taken off of the trial NSMO Rider, and the non-standard NSMO meter will be replaced with a smart meter to restore the premise to the standard configuration. Therefore, the customer choosing a non-standard meter should pay the incremental cost of reinstalling the standard smart meter. However, as an offset against this additional cost, those customers who choose to opt-out of this service

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receive a credit for the cost of the standard planned smart meter installation in the calculation of the proposed upfront charge.

**10. Q. THE COST OF THE INCREMENTAL NON-STANDARD METER OR MODULE IS NOT INCLUDED IN THE UPFRONT CHARGE. IF IT WERE INCLUDED, WHAT WOULD THE IMPACT BE TO THE PROPOSED RATES?**

A. The incremental costs for the electric digital meter, sales tax, locking ring, seal, and gas module necessary to implement the NSMO Rider are included in the monthly recurring charge, rather than the upfront charge, even though it is an upfront expense to the Companies. This is done to be consistent with the current cost recovery for all electric and gas customers that collect meter costs through the Companies' monthly Basic Service Charges ("BSC"). Therefore, the recovery of the incremental electric meter and gas module cost is also recovered through the on-going charge. Additionally, the previously filed methodology in Docket No. 11-10007 recovered the cost of the electric meter in the upfront charge and Gas service was not addressed. Since the Order in the docket also specified drive-by meter reading, not only does the smart meter gas module have to be removed and later replaced, an ERT module must be installed as part of the non-standard gas meter installation. However, for information purposes, Page 5 of Exhibit Walsh-Direct-2 shows the impact to the proposed rates if the incremental gas module cost were to be collected entirely through the upfront charge. It shows that there would be an increase to the upfront charge of approximately \$70 and the recurring monthly charge for Sierra's opt-out gas customers would be completely eliminated.

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**11. Q. PLEASE EXPLAIN HOW THE NUMBER OF CUSTOMERS CHOOSING A NON-STANDARD METER WOULD AFFECT THE PROPOSED RATES.**

A. The upfront charge is not dependent on the number of customers choosing to opt-out of having a smart meter as this charge includes the total costs that are specific to each NSMO installation. However, the costs to upgrade and maintain the systems necessary to implement the proposed opt-out tariff are common to all opt-out customers. Pursuant to the Commission Order in Docket No. 11-10007, customers choosing service under the NSMO Rider will pay the full incremental costs of their decision. Therefore, rates are designed to collect all these costs from only these customers. However, the proposed monthly charge is dependent on the number of customers and an estimate was used. If the number of actual NSMO Rider customers is less, the rate will be insufficient to recover the cost. Any costs that have been incurred, but not yet recovered from these customers, will have to be deferred and recovered from all customers through general rates in a future proceeding. If the number is greater and sustained for the assumed life that the costs were spread over, more than the cost will be collected.

As noted in the Report, “At the first general rate case that occurs after the trial opt-out tariff has been in effect for all 12 months of the test year, NV Energy should file to discontinue the trial if there are insufficient customers to economically support the tariff. If there are sufficient customers to economically support the tariff, NV Energy should file to make the tariff permanent and calculate the actual monthly costs to serve the actual number of opt-out customers who were provided service pursuant to the trial opt-off tariff during the test year.” Thus, the Companies will either terminate the trial NSMO Riders or change the charges based on actual participation.

1 The variability in the proposed monthly charges based upon the number of  
2 opt-out customers can be substantial. Using the estimated number of opt-  
3 out customers of 0.5% of all residential customers, or 7,500 customers  
4 across both Companies as a base; Page 6 of Exhibit Walsh-Direct-2 details  
5 the impact to the monthly recurring electric charges under three different  
6 participation scenarios: 50%, 150% and 10% of the estimated opt-out  
7 levels. At 50% participation, the monthly charges increase from \$11.01 to  
8 \$21.75 at Sierra, and from \$7.61 to \$14.92 at Nevada Power. At 150%  
9 participation, the monthly charges decrease to \$7.42 at Sierra, and to \$5.15  
10 at Nevada Power. If only 10% of the estimated number of customers choose  
11 to opt-out then the proposed monthly rates would increase to \$107.73 and  
12 \$73.58 for Sierra and Nevada Power, respectively.

13  
14 **12. Q. ARE THERE ANY OTHER SCENARIOS THAT WOULD**  
15 **RESULT IN A STRANDED COST TO BE RECOVERED FROM**  
16 **GENERAL RATE PAYERS?**

17 A. Yes, as stated above, the proposed methodology recovers the meter cost  
18 over the expected life. This assumed that the meter can be reused. If the  
19 trial tariff is discontinued, these meter costs cannot be recovered directly  
20 from the opt-out customers and would have to be recovered from all  
21 ratepayers.

22  
23 **TARIFF SPECIAL CONDITIONS**

24 **13. Q. WHY IS A SIERRA CUSTOMER WHO RECEIVES BOTH GAS**  
25 **AND ELECTRIC SERVICE FROM SIERRA AND ELECTS TO**  
26 **RECEIVE SERVICE THROUGH A NON-STANDARD METER**  
27 **REQUIRED TO DO SO FOR BOTH SERVICES?**

1 A. It is unlikely that an electric and gas customer choosing to receive  
2 service under the NSMO Rider would elect to choose this option for only  
3 one of their meters. However, if a separate opt-out was allowed, it  
4 would result in incongruent and duplicate means of meter reading and  
5 data processing. This would result in more complexity for Sierra billing  
6 and tracking, increasing administrative cost and this was not discussed as  
7 a possibility by any party in Docket 11-10007 nor addressed in the  
8 Order.

9 .  
10 **14. Q. DO THE TARIFFS ADDRESS THE ISSUE OF A TENANT**  
11 **VERSUS PROPERTY OWNER CHOOSING TO OPT-OUT OF**  
12 **HAVING A SMART METER?**

13 A. Yes, in Special Condition 1, Application for Service, a person choosing  
14 to opt-out of having a smart meter installed must be the customer of  
15 record to initiate the request to elect the trial opt-out schedule. It is not  
16 possible or appropriate for the Companies to differentiate between  
17 property owner and tenant as our relationship is with the customer of  
18 record. They are the ones who are responsible for these additional  
19 charges if they choose to take service under the trial opt-out tariff. The  
20 tariff requires return to the standard meter configuration so the property  
21 owner should be unaffected.

22  
23 **15. Q. WHY ARE OPTIONAL TIME-OF-USE, NET METERING AND**  
24 **STANDBY RESIDENTIAL CUSTOMERS EXCLUDED FROM**  
25 **TAKING SERVICE UNDER THE NSMO RIDER?**

26 A. The non-standard meter configuration will not support the data  
27 requirements of these rate options. It will only record energy  
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consumption data and store only the total energy consumed to date. It will not record or store interval usage data or communicate with NV Energy's network. Since these optional schedules require interval data for billing purposes, the installation of a meter that is unable to collect this information precludes them from taking service under the NSMO Rider. Additionally, customers electing this optional rider will not be able to review their detailed usage information through the MyAccount website, or any of the other available online tools requiring interval data. Therefore, they will have chosen to have less information than customers who have the standard metering arrangement.

**16. Q. IN ADDITION TO SCHEDULE NSMO, YOU ARE SUPPORTING CHANGES TO RULE 16 AND SCHEDULE MC CONTAINED IN EXHIBIT 3 TO THE APPLICATION. WHAT CHANGES ARE MADE?**

A. The changes to Rule 16 and Schedule MC are necessary to implement the NSMO riders. The changes to Rule 16 eliminate those provisions that are no longer necessary related to the past practice for remote metering or non-standard metering configurations. Schedule MC is modified to remove the remote metering charge which becomes unnecessary once the NSMO tariffs are approved. However, it is important to note that there can be situations that would require remote metering for employee safety or access considerations that could occur between the time that these tariffs are approved and when smart meters are available and adequate network coverage is established throughout the service territories. In those few cases, should they arise, the Company would not charge for the

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temporary non-standard remote installation which would later be  
exchanged for a standard smart meter once coverage is available.

**17. Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes it does.

**STATEMENT OF QUALIFICATIONS**  
**LAURA I. WALSH**  
**MANAGER, REGULATORY PRICING & ECONOMIC ANALYSIS**  
**SIERRA PACIFIC POWER & NEVADA POWER COMPANIES d/b/a NV Energy**  
6100 Neil Road  
Reno, Nevada 89511-1137  
(775) 834-5821

Ms. Walsh became an employee of Sierra Pacific Power Company almost twenty-five years ago. Her expertise and experience for the past twenty-five years have been concentrated on electric cost of service and rate design issues, including the preparation and presentation of studies and testimony for general rate cases, deferred filings, investigations into restructuring of the electric utility industry and various other regulatory dockets. Ms. Walsh has been involved in resolving issues related to the implementation of tariffs both in-house and with regulators and has provided support to contract negotiations with large customers at both utilities. She has substantial experience with issues relating to cost of service, rates, tariffs, load research, unbundling, and open access. Ms. Walsh has prepared numerous statements, reports, data responses and studies on these issues for regulators and intervenors. She has testified before the Public Utilities Commission of Nevada (PUCN) and the California Public Utilities Commission (CPUC). She was also previously responsible for water and gas cost of service filings for Sierra Pacific Power Company.

In addition to her regulatory experience, Ms. Walsh has an Electrical Engineering degree and held a position within the Company's Transmission Planning department. She also had a utility consulting business for a short time to assist the Company and large customers on rate related matters. Prior to joining the Company she worked as an Engineering Assistant for Lawrence Livermore Laboratory and EG&G Energy Measurement. Ms. Walsh also has a graduate degree in secondary education and taught high school math and computer science.

**Employment History**

**Sierra Pacific Power & Nevada Power Companies d/b/a NV Energy**

May 1987 to Present

**Manager, Regulatory Pricing & Economic Analysis**

March 1998 to Present

- Developing technical and theoretical support for various rate and tariff filings for the PUCN, the CPUC, and the Federal Energy Regulatory Commission (FERC)
- Support management and other divisions of the Company regarding regulatory filings, practices and rate and tariff interpretation concerning cost of service and rate design issues
- Direct senior analysts and economists in the development of :
  - Rate design proposals
  - Marginal and embedded costing
  - Load research
  - Expert testimony and related analyses
  - Business and regulatory strategies affecting electric, and gas divisions (previously water)
  - Support for contract administration, and related regulatory activities

- Merger team member: identified systems, processes, and resources for integration of two separate utilities into one for Regulatory Accounting, Rates and Regulatory; Load Research, FERC areas.

**Supervisor, Rates and Economic Analyses**

April 1993 to August 1995

- Directed senior analysts in the development and presentation of financial, regulatory and economic analyses.
- Provided expert testimony and related Analyses

**Senior Engineer, Pricing (8/97 to 2/98); Senior Engineer (5/91 to 4/93), Engineer (1/90 to 5/91), Associate Engineer (11/88 to 1/90), Cost of Service & Rate Design**

- Working with finance, engineering, legal, accounting, and planning staffs:
  - Prepared marginal and embedded cost studies for development of rates and provided expert testimony.
  - Supported negotiations with large customer contracts and established methods for contract administration.

**Associate Engineer (1/88 to 12/88), Engineering Intern (5/87 to 1/88), Transmission Planning**

- Developed engineering and economic studies on Sierra's transmission system.
- Designed, planned for, and coordinated transmission additions for new business customers
- Developed IPS mapping software for electric system load flow maps. Created associated documentation and training material. Assisted Engineers with transmission planning cases.

**Non-Sierra Employment:**

**Hug High School, Reno**

August 1996 to July 1997

**Math & Computer Science Teacher**

- Taught classes in Algebra and Computer Science Skills.

**Mentor Consulting, Reno**

May 1996 to July 1997

**Principal**

- Provided consultation on utility regulation, planning and engineering matters for utilities and commercial customers.

**Lawrence Livermore Laboratory, Las Vegas**

June 1986 to January 1987

**EG&G Energy Measurements, Las Vegas**

June 1983 to January 1985 (Summer/Christmas break)

**Engineering Assistant**

- Installed and maintained a local area network and developed network manager software.

- Designed digital circuitry used in shaping video camera signals and manipulating resulting display to monitors.
- Assisted engineers in the design of electronic instrumentation unique to the high-speed nuclear diagnostics effort.

### **Prior Testimony Before Public Utilities Commissions**

PUCN Docket Nos.: 90-524, 91-7079, 92- 12020, 94-1020, 97-8001, 97-8002, 98-2036, 98-5034, 98-2036, 99-4001, 01-10001, 01-11029, 01-11030, 02-2002, 02-5044, 02-1031, 02-11021, 03-1014, 03-6040/03-6041, 05-10003, 06-01016, 06-05007, 06-06007, 06-11022, 07-09009, 07-12001, 08-12002, 08-03025, 09-2029, 09-06028, 09-07014, 09-07016, 09-0818, 09-08020, 09-0920, 10-10024/10-10025, 10-10031/10-10035, 10-02009, 10-02009/10-03022/10-03023, 10-03023, 10-06001, 10-06021, 10-08014, 10-08015, 10-10024, 10-10025, 11-06006, 11-07026, 11-07027, 12-03004, 12-03005 and 12-03006.

CPUC Application Nos.: 92-05-040, 93-08-049, 00-07-001, 01-06-041, 04-05-004, 05-06-018, 06-04-002, 08-08-004, Rulemaking/Investigatory R.94-04-031/I.94-04-037

### **Education**

#### **University of Nevada, Reno**

Bachelor of Science in Electrical Engineering, December 1987

#### **Sierra Nevada College, Incline**

Secondary Education Graduate Program, May 1996

Honors: Tau Beta Pi, Eta Kappa Nu, Phi Kappa Phi, Who's Who in American College Students

### **Continuing Education Courses**

PTI Transmission Planning Techniques

EI Rate Fundamentals course

NERA Marginal Cost Ratemaking in a Competitive World

NERA Marginal Cost Methodology for Electric Utilities

University of Nevada-Reno, Power Electronics

Seminars on costing, supervision, computers & utility matters

### **Community Activities & Committees**

ACE Charter High School Board Member

NWF Professional Development Series Graduate

Presenter/participant - professional seminars

Member of IEEE

MATHCOUNTS Committee Member

HS Student Government Advisor

Three year Junior Achievement Advisor

UNR Alumni Association Member

Corporate Challenge

### Summary of Proposed Opt-Out Charges for Non-Standard Metering Option

	Electric Service	Gas Service
<b>Sierra Pacific</b>		
Upfront Charge	\$ 107.66	\$ 6.08
Monthly Recurring Charge	\$ 11.01	\$ 1.20
<b>Nevada Power</b>		
Upfront Charge	\$ 98.75	n/a
Monthly Recurring Charge	\$ 7.61	n/a

## Calculation of Non-Standard Metering Option Charges (Sierra Pacific - Electric)

Line No.	Category	Factor Docket No. 10-06001	Company Cost	Non-Standard Metering Option	Line No.
5					5
6	Number of Opt-Out Customers			3,000	6
7	Percent of Total Opt-Out Customers	3,000 / 7,500		40.0%	7
8					8
9	<b>Upfront Costs per Opt-Out Customer</b>				9
10	Non-Standard Meter Installation Costs			\$ 54.68	10
11	Customer support and application processing			\$ 20.44	11
12	Customer Communications			\$ 1.26	12
13	Reinstallation of Standard Smart Meter			\$ 54.68	13
14	Credit for standard planned enroute installation			\$ (23.40)	14
15	<b>Total Upfront Costs per Opt-Out Customer</b>			<b>\$ 107.66</b>	15
16					16
17	<b>Incremental Costs within Recurring Charge</b>				17
18	Incremental Meter Cost (Meter, Ring & Seal, Tax)			\$31.22	18
19					19
20	System Costs			(per Opt-Out Customer)	20
21	Banner upgrade		\$38,400	\$12.80	21
22	Portal		\$400	\$0.13	22
23	Manual/Vehicular meter reading system		\$83,404	\$27.80	23
24	Handhelds (16 North and 4 South handhelds)		\$85,968	\$28.66	24
25	Mobile Collector Lite (2 vehicles)		\$18,600	\$6.20	25
26	Annual Licensing requirements		\$9,152	\$3.05	26
27	Total System Costs		\$235,924	\$78.64	27
28					28
29	<b>Total Investment per Opt-Out Customer</b>			<b>\$109.86</b>	29
30					30
31	With General Plant Loading	5.85%		\$116.29	31
32					32
33	Annual Economic Carrying Charge with A&G loading (Book Life)				33
34	Meter (20)	9.91%			34
35	Information Technology (8)	17.24%			35
36	Equipment (15)	11.57%			36
37					37
38	Annualized Cost			\$17.20	38
39					39
40	<u>Customer Accounts and Service</u>				40
41	Customer Accounts and Services		\$342,111	\$114.04	41
42	With A&G Loading	n/a		\$114.04	42
43					43
44	Customer-related Costs Exc. Working Capital			\$131.24	44
45					45
46	<u>Working Capital</u>				46
47	Materials & Supplies	0.88%		\$1.02	47
48	Cash Working Capital Plant-related	-0.26%		(\$0.30)	48
49	O&M-related	5.99%		\$6.83	49
50	Total			\$7.55	50
51					51
52	Revenue Requirement	11.19%		\$0.85	52
53					53
54					54
55					55
56	<u>Total Customer-Related Marginal Cost</u>			\$132.08	56
57					57
58	<b>Marginal Monthly Cost per Opt-Out Customer</b>			<b>\$11.01</b>	58

## Calculation of Non-Standard Metering Option Charges (Sierra Pacific - Gas)

Line No.	Category	Non-Standard Metering Option	Line No.
5			5
6	<b>Upfront Costs per Opt-Out Customer</b>		6
7	Non-Standard Meter Installation Costs*	\$ 14.74	7
8	Customer support and application processing	**	8
9	Customer Communications	**	9
10	Reinstallation of Standard Smart Meter	\$ 14.74	10
11	Credit for standard planned enroute installation	\$ (23.40)	11
12	<b>Total Upfront Costs per Opt-Out Customer</b>	<b>\$ 6.08</b>	12
13			13
14	<b>Incremental Costs within Recurring Charge</b>		14
15	Incremental Cost per NSMA - ERT module	\$ 70.02	15
16			16
17	Gas Cost of Service Study (000s) - Docket No. 10-06002		17
18	Residential Customer Net Rate Base Investment***	\$ 52,537	18
19	Customer Revenue Requirement†	\$ 10,842	19
20			20
21	Residential Customer Revenue Requirement per \$ of Investment	\$ 0.21	21
22			22
23			23
24			24
25	Annualized Customer Cost	\$ 14.45	25
26			26
27	<b>Monthly Customer Charge</b>	<b>\$ 1.20</b>	27
28			28
29	*Does not include travel time to and from premise for installation. These costs are included in the electric charge. If the travel time was split equally between each charge, the electric charge would decrease by \$43.74 and the upfront charge for gas customers would increase by \$39.32.		
30			30
31			31
32	**Costs included in proposed upfront electric charge.		
33	***Cost of Service Study, Page 26 of 27, Line 37.		
34	†Excludes O&M, Other Revenues (Late Fees, Returned Checks, Misc. Charges) and adjustments to Operating Income. Cost of Service Study; Page 27 of 27, Line 17.		

## Calculation of Non-Standard Metering Option Charges (Nevada Power)

Line No.	Category	Factor Docket No. 11-06006	Company Cost	Non-Standard Metering Option	Line No.
5					5
6	Number of Opt-Out Customers			4,500	6
7	Percent of Total Opt-Out Customers	4,500 / 7,500		60.0%	7
8					8
9	<b>Upfront Costs per Opt-Out Customer</b>				9
10	Non-Standard Meter Installation Costs			\$ 49.92	10
11	Meter testing & processing			\$ 17.64	11
12	Customer Communications			\$ 1.26	12
13	Reinstallation of Standard Smart Meter			\$ 49.92	13
14	Credit for standard planned enroute installation			\$ (19.99)	14
15	<b>Total Upfront Costs per Opt-Out Customer</b>			<b>\$ 98.75</b>	15
16					16
17	<b>Incremental Recurring Costs</b>				17
18	Incremental Meter Cost (Meter, Ring & Seal, Tax)			\$31.42	18
19					19
20	System Costs			(per Opt-Out Customer)	20
21	Banner upgrade		\$57,600	\$12.80	21
22	Portal		\$600	\$0.13	22
23	Manual/Vehicular meter reading system		\$125,106	\$27.80	23
24	Handhelds (16 North and 4 South handhelds)		\$20,052	\$4.46	24
25	Mobile Collector Lite (2 vehicles)		\$18,600	\$4.13	25
26	Annual Licensing requirements		\$3,692	\$0.82	26
27	Total System Costs		\$225,650	\$50.14	27
28					28
29	<b>Total Investment per Opt-Out Customer</b>			<b>\$81.56</b>	29
30					30
31	With General Plant Loading	1.0450		\$85.23	31
32					32
33	Annual Economic Carrying Charge with A&G loading (Book Life)				33
34	Meter (20)	9.69%			34
35	Information Technology (12)	12.77%			35
36	Equipment (15)	11.34%			36
37					37
38	Annualized Cost			\$10.04	38
39					39
40	Customer Accounts and Services Expenses		\$364,979	\$81.11	40
41	Meter-Related O&M Expense			\$0.00	41
42	Total			\$81.11	42
43	With A&G Loading	n/a		\$81.11	43
44					44
45	Uncollectibles Accounts Expense			\$0.00	45
46	Total Customer-Related Cost			\$91.14	46
47					47
48	Materials and Supplies	0.76%		\$0.65	48
49	Prepayments	0.69%		\$0.59	49
50	Customer-Related Cash Working Capital	0.86%		\$0.70	50
51	Total Working Capital			\$1.94	51
52					52
53	Revenue Requirement for Working Capital	10.48%		\$0.20	53
54					54
55	<u>Total Customer-Related Marginal Cost</u>			<u>\$91.35</u>	55
56					56
57	<b>Marginal Monthly Cost per Opt-Out Customer</b>			<b>\$7.61</b>	57

**Comparison of Proposed Charges and Charges including Gas Meter in Upfront Charge**

<b>Category</b>	<b>Proposed Charge</b>	<b>Meter in Upfront Charge</b>	<b>Difference</b>
<b>Sierra Pacific</b>			
Upfront Charge	\$ 6.08	\$ 76.10	\$ 70.02
Monthly Recurring Charge	\$ 1.20	-	\$ (1.20)
<b>Nevada Power</b>			
Upfront Charge	n/a	n/a	n/a
Monthly Recurring Charge	n/a	n/a	n/a

### Comparison of Proposed Charges at Different Participation Levels

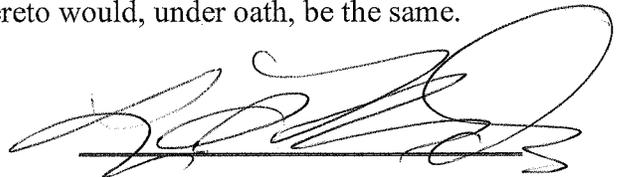
	Proposed		50% of Estimate	150% of Estimate	10% of Estimate
<b>Sierra Pacific</b>					
Number of Opt-Out Customers		3,000	1,500	4,500	300
Upfront Charge	\$	107.66	\$ 107.66	\$ 107.66	\$ 107.66
Monthly Recurring Charge	\$	11.01	\$ 21.75	\$ 7.42	\$ 107.73
<b>Nevada Power</b>					
Number of Opt-Out Customers		4,500	2,250	6,750	450
Upfront Charge	\$	98.75	\$ 98.75	\$ 98.75	\$ 98.75
Monthly Recurring Charge	\$	7.61	\$14.92	\$5.15	\$73.58
<b>Difference from Proposed Rates</b>					
<b>Sierra Pacific</b>					
Number of Opt-Out Customers			(1,500)	1,500	(2,700)
Upfront Charge	\$		\$ -	\$ -	\$ -
Monthly Recurring Charge	\$		\$ 10.75	\$ (3.58)	\$ 96.72
<b>Nevada Power</b>					
Number of Opt-Out Customers			(2,250)	2,250	(4,050)
Upfront Charge	\$		\$ -	\$ -	\$ -
Monthly Recurring Charge			\$7.31	(\$2.47)	\$65.97

AFFIRMATION

1  
2 STATE OF NEVADA )  
3 ) ss.  
4 COUNTY OF WASHOE )

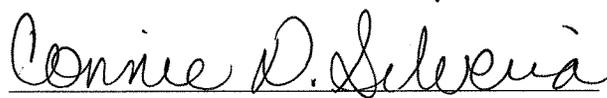
5  
6 I, LAURA I. WALSH, do hereby swear under penalty of perjury the following:

7  
8 That I am the person identified in the attached Pre-filed Testimony and that such  
9 testimony was prepared by me or under my direct supervision; that the answers and  
10 information set forth therein are true to the best of my knowledge and belief; and that if asked  
11 the questions set forth therein, my answers thereto would, under oath, be the same.

12  
13 

14 LAURA I. WALSH

15  
16 Subscribed and sworn to before me  
17 this 20<sup>th</sup> day of April, 2012.

18  
19 

20 NOTARY PUBLIC



**JEFF EVANS**

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

PREPARED DIRECT TESTIMONY OF JEFF EVANS  
ON BEHALF OF SIERRA PACIFIC POWER COMPANY AND  
NEVADA POWER COMPANY D/B/A NV ENERGY

Docket No. 12-05\_\_\_\_

- 1. Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**
- A. My name is Jeff Evans. I am an Executive Consultant with Black & Veatch. Black & Veatch has been hired as the program integrator for NVEnergize. My primary business address is 5613 DTC Parkway, Suite 700, Greenwood Village, Colorado. A detailed explanation of my professional qualifications is attached as Exhibit Evans-Direct-1.
- 2. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**
- A: I developed the cost model that estimates the costs Nevada Power Company d/b/a NV Energy (“Nevada Power”) and Sierra Pacific Power Company d/b/a NV Energy (“Sierra” and, together with Nevada Power, “NV Energy”) reasonably expect to incur in order to provide non-standard meters, meter reading, and billing for customers who subscribe to service under the trial Non-Standard Metering Option Rider (“NSMO”). I therefore sponsor the cost model which is described in Appendix 1 of the Tariff Description and Explanation – Trial Non-Standard Metering Option Filing. My testimony lists the estimates and assumptions that are used in the cost model. Finally, together with other witnesses that provide prepared direct testimony, I support the cost of service study.

1 **3. Q. WHAT IS THE BASIS OF THE SERVICE TECHNICIAN AND**  
2 **FIELD SERVICE REP HOURLY RATES USED IN THE COST**  
3 **MODEL?**

4 A. The cost of service study is predicated on the assumption that NV Energy  
5 personnel will install non-standard meters when a customer requests service  
6 under the trial NSMO Rider. Installation costs thus are based on the use of  
7 a “Service Technician” in Sierra’s service territory and a “Field Service  
8 Rep” in Nevada Power’s service territory. The Service Technician, Job  
9 Class 8888, 1-year step rate has an hourly rate of \$25.66 under Sierra’s  
10 Collective Bargaining Agreement with IBEW Local 1245. The Field  
11 Service Rep, Job Code 5161, 3rd Six Months 02/11/12 has an hourly rate of  
12 \$26.03 under Nevada Power’s Collective Bargaining Agreement with  
13 IBEW Local 396.

14  
15 **4. Q. WHAT IS THE BASIS OF THE LABOR LOADING RATES USED IN**  
16 **THE COST MODEL?**

17 A. The cost model uses labor loading rates. The source of the labor loading  
18 rates is NV Energy’s Financial Planning & Analysis (FP&A) 2012 Budget  
19 Guide Book. The FP&A organization prepares the Budget Guide Book  
20 annually. Sierra’s labor loading rate is 77.1% and Nevada Power’s rate is  
21 75.1%.

22  
23 **5. Q. WHAT ARE TRANSPORT COSTS AS REFERENCED IN THE**  
24 **COST MODEL?**

25 A. NV Energy personnel will, of course, use vehicles to install and read non-  
26 standard meters. The transportation costs reflect the cost of acquiring,  
27 operating, and maintaining vehicles.

28

- 1   **6.    Q.    WHAT IS THE BASIS OF THE TRANSPORT COSTS USED IN THE**  
2                   **COST MODEL?**
- 3            A.    The transportation rates used in the cost model reflect the average monthly  
4                   cost per vehicle for the entire NV Energy fleet of vehicles. These values are  
5                   obtained from NV Energy’s Fleet charge-back reports for the 12 months  
6                   ending February, 2012. The monthly rate for Sierra is \$1,130 and the  
7                   Nevada Power monthly transportation rate is \$1,075 month. The hourly  
8                   rate used in the cost model is calculated by dividing each monthly rate by  
9                   173 hours – the average number of working hours in a single month.
- 10
- 11   **7.    Q.    WHAT ARE SUPERVISION COSTS REFERENCED IN THE COST**  
12                   **MODEL?**
- 13            A.    Supervision costs reflect the cost to provide appropriate supervision of the  
14                   labor workforce and are reflected as a percentage of the hourly labor rate of  
15                   the workforce being supervised before labor overheads are applied.
- 16
- 17   **8.    Q.    WHAT IS THE BASIS OF THE SUPERVISION RATES USED IN**  
18                   **THE COST MODEL?**
- 19            A.    The Supervision rates of 31.18% for the Nevada Power, 53.18% for Sierra’s  
20                   electric operations, and 27.27% for Sierra’s gas operations were obtained  
21                   from NV Energy’s Financial Planning & Analysis (FP&A) 2012 Budget  
22                   Guide Book.
- 23
- 24   **9.    Q.    WHAT IS THE BASIS OF THE 20 MINUTE TRAVEL TIME TO A**  
25                   **PREMISE AND 20 MINUTE TRAVEL TIME FROM A PREMISE**  
26                   **INCLUDED IN THE DURATION OF INSTALLATION LINE ITEM**  
27                   **OF THE COST MODEL?**
- 28

1           A.     From a starting location of NV Energy’s Beltway meter operations facility,  
2           NV Energy estimates the average travel time to any premise within the Las  
3           Vegas metropolitan area to be approximately 20 minutes. NV Energy used  
4           the same average travel time for installations in Sierra’s service territory.  
5

6   **10.   Q.     WHAT IS THE BASIS OF THE 10 MINUTE SITE INSTALLATION**  
7           **TIME FOR AN ELECTRIC METER USED IN THE COST MODEL?**

8           A.     The December 1-20, 2011 period of electric meter installations by Scope  
9           Services serves as a proxy for average installation duration of an electric  
10          meter. During this period, Scope Services installers averaged  
11          approximately 6 electric meter installations per hour per installer. For  
12          purposes of calculating the hourly rate of installation, Scope Services  
13          installers assume an 8 hour work day which includes 30 minutes for lunch  
14          and two 15 minute breaks.  
15

16   **11.   Q.     WHAT IS THE BASIS OF THE INCREMENTAL 15 MINUTE SITE**  
17           **INSTALLATION TIME FOR A GAS MODULE USED IN THE COST**  
18           **MODEL?**

19          A.     The March 1-31, 2012 period of gas module installations by Scope Services  
20          serves as a proxy for average installation duration of a gas module. During  
21          this period, Scope Services installers averaged approximately 3.5 gas  
22          module installations per hour per installer.  
23

24   **12.   Q.     WHAT IS THE BASIS OF THE CUSTOMER SUPPORT AND**  
25           **APPLICATION PROCESSING COST USED IN THE COST**  
26           **MODEL?**  
27  
28

1 A. NV Energy Customer Service Representatives (CSR) will handle calls from  
2 customers electing the NSMO. As of September 2011, the average cost per  
3 call for a CSR in Nevada Power's service territory was \$4.41 and in Sierra's  
4 service territory was \$5.11. During a call to establish the NSMO, NV  
5 Energy CSRs will be required to answer questions about the NSMO,  
6 establish billing for the NSMO up-front charge, establish billing for the  
7 NSMO on-going charge, and create a service request to enable the  
8 installation of the NSMO. Accomplishing these four activities is estimated  
9 to require four times the amount of time of a typical call. The customer  
10 support and application processing cost used in the cost model is calculated  
11 by multiplying the September 2011 average cost per call by four.

12  
13 **13. Q. WHAT IS THE BASIS OF THE LOCKING RINGS COST USED IN**  
14 **THE COST MODEL?**

15 A. The unit price of \$9.00/locking ring is based on NV Energy's existing  
16 contract with DeWalch Technologies, Inc.

17  
18 **14. Q. WHAT IS THE BASIS OF THE SEAL COST USED IN THE COST**  
19 **MODEL?**

20 A. The unit cost of \$0.17/seal is based on NV Energy's existing contract with  
21 Inner-Tite Corp.

22  
23 **15. Q. WHAT METER WILL BE USED AS THE ELECTRIC NSMO?**

24 A. NV Energy will utilize the Itron Centron C1SR CENTRON C1SR AMR  
25 meter (FCC ID SK9C1A-2) configured to utilize a low power transmitter  
26 and an ERT (Encoder Receiver Transmitter) type 04 SCM protocol  
27 (hereafter referred to as "C1SR").  
28

- 1    **16.    Q.    WHAT IS THE BASIS OF THE METER COST USED IN THE COST**  
2                   **MODEL?**
- 3            A.    The unit price of a class 200 C1SR is \$42.68 while the unit price of a class  
4                   320 C1SR is \$76.63 for a class 320 meter. Both costs are based on a  
5                   proposal provided by Itron, Inc. In the current NV Energy meter  
6                   population, 99% of the NSMO-eligible meter population is class 200 and  
7                   1% of the NSMO-eligible meter population is class 320. The weighted cost  
8                   of the C1SR meter used in the cost model is \$43.02 (99% of \$42.68 plus 1%  
9                   of \$76.63).
- 10
- 11    **17.    Q.    WHAT MODULE WILL BE USED AS THE GAS NSMO?**
- 12            A.    NV Energy will utilize the Itron 40G low power ERT module.
- 13
- 14    **18.    Q.    WHAT IS THE BASIS OF THE MODULE COST USED IN THE**  
15                   **COST MODEL?**
- 16            A.    The unit price of a gas ERT is \$65.00 is based on a proposal provided by  
17                   Itron, Inc. The total is approximately \$70.00 with tax.
- 18
- 19    **19.    Q.    WHAT IS THE BASIS OF THE SALES TAX RATES USED IN THE**  
20                   **COST MODEL?**
- 21            A.    The sales tax rate of 8.1% for Clark County, Nevada is used for Nevada  
22                   Power’s purchases and the sale tax rate of 7.725% for Washoe County,  
23                   Nevada is used for Sierra’s purchases.
- 24
- 25    **20.    Q.    WHAT IS THE BASIS OF THE CUSTOMER COMMUNICATIONS**  
26                   **– LETTER COST USED IN THE COST MODEL?**
- 27
- 28

1 A. Letter and envelope material and printing costs are estimated at  
2 \$0.74/mailing based on NV Energy's existing contract with Las Vegas  
3 Color Graphics. Postage for each mailing is estimated at \$0.36/mailing  
4 based on current US Postal Service rates.

5  
6 **21. Q. WHAT IS THE BASIS OF THE CUSTOMER COMMUNICATIONS -**  
7 **ROBO-CALL COST USED IN THE COST MODEL?**

8 A. The unit price of \$0.10/call is based on NV Energy's existing contract with  
9 Televox Software, Inc.

10

11 **22. Q. WHAT IS THE BASIS OF THE CUSTOMER COMMUNICATIONS -**  
12 **DOOR-HANGER COST USED IN THE COST MODEL?**

13 A. The unit price of \$0.06/door-hanger is based on NV Energy's existing  
14 contract with Las Vegas Color Graphics.

15

16 **23. Q. HOW DID NV ENERGY CALCULATE THE COST OF**  
17 **INSTALLING A STANDARD METER WHEN A CUSTOMER**  
18 **TERMINATES SERVICE UNDER THE NSMO RIDER AND WHY**  
19 **IS THE COST OF INSTALLING A STANDARD METER**  
20 **INCLUDED IN THE COST MODEL?**

21 A. NV Energy calculated the cost of installing a standard meter in the same  
22 manner that it calculated the cost of installing a non-standard meter. As Ms.  
23 Walsh explains, the NSMO Rider up-front (or initial charge) should recover  
24 the cost of returning NV Energy's network to its standard configuration.  
25 Thus, a customer who selects a NSMO should be responsible for the cost of  
26 installing the standard meter at the end of the NSMO Rider service.

27

28

- 1   **24.   Q.    WHAT IS THE BASIS OF THE BANNER (NORTH AND SOUTH)**  
2           **COST INCLUDED IN THE COST MODEL?**
- 3           A.    The cost to modify NV Energy’s Banner customer information system is  
4           based on previous work completed by NV Energy to complete similar  
5           modifications.  NV Energy’s Information Technology (IT) organization  
6           estimates a cost of \$48k to modify Banner to enable functionality that will  
7           allow customers to subscribe to service under the trial NSMO Rider and an  
8           incremental \$48k to modify Banner to enable billing for the trial NSMO  
9           Rider costs.
- 10
- 11   **25.   Q.    WHAT IS THE BASIS OF THE PORTAL COST INCLUDED IN THE**  
12           **COST MODEL?**
- 13           A.    The cost to create a new form on NV Energy’s existing portal application to  
14           enable opt-out sign up is based on comparable work previously completed  
15           by NV Energy.
- 16
- 17   **26.   Q.    WHAT IS THE BASIS OF THE SOFTWARE (FCS LICENSING)**  
18           **COST INCLUDED IN THE COST MODEL?**
- 19           A.    The Field Collection System (FCS) is the system required to operate the  
20           NSMO.  The FCS license cost is based on a maximum of 25,000 endpoints  
21           and is based on a proposal provided by Itron, Inc.
- 22
- 23   **27.   Q.    WHAT IS THE BASIS OF THE HARDWARE (SERVERS) COST**  
24           **INCLUDED IN THE COST MODEL?**
- 25           A.    The hardware (servers) required to operate the FCS application are based on  
26           specifications provided by Itron, Inc.  The cost of the recommended  
27           hardware (servers) is based on cost estimates provided by NV Energy’s IT  
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organization utilizing hardware (server) costs established in existing NV Energy contracts with Dell, Inc.

**28. Q. WHAT IS THE BASIS OF THE INTEGRATIONS COST INCLUDED IN THE COST MODEL?**

A. NV Energy’s Service Oriented Architecture (SOA) integration team estimates that three interfaces will need to be built and implemented to enable the communication of data between the FCS and NVE’s Banner and Meter Data Management (MDM) systems. Approximately 144 hours of effort is required to complete the three interfaces.

**29. Q. WHAT IS THE BASIS OF THE ITRON IMPLEMENTATION COST INCLUDED IN THE COST MODEL?**

A. Itron implementation costs required to implement the NSMO solution are based on a proposal provided by Itron, Inc.

**30. Q. WHAT IS THE BASIS OF THE FCS SOFTWARE ANNUAL MAINTENANCE COST INCLUDED IN THE COST MODEL?**

A. The FCS annual software maintenance cost is based on a proposal provided by Itron, Inc.

**31. Q. WHAT IS THE BASIS OF MOBILE COLLECTOR LITE ANNUAL MAINTENANCE COST INCLUDED IN THE COST MODEL?**

A. The Mobile Collector Lite annual maintenance cost is based on a proposal provided by Itron, Inc.

- 1   **32.   Q.    WHAT IS THE BASIS OF THE UNIT PRICE OF HANDHELDS**  
2                   **COST INCLUDED IN THE COST MODEL?**
- 3           A.    The unit price of each handheld is based on a proposal provided by Itron,  
4                   Inc.
- 5
- 6   **33.   Q.    WHAT IS THE BASIS OF THE ANCILLARY HARDWARE COST**  
7                   **INCLUDED IN THE COST MODEL?**
- 8           A.    Ancillary hardware costs include the cost of the handheld docking station,  
9                   the handheld power supply, and the power supply power cord and are based  
10                  on a proposal provided by Itron, Inc.
- 11
- 12   **34.   Q.    WHAT IS THE BASIS OF THE HANDHELD ANNUAL**  
13                   **MAINTENANCE COST IN THE COST MODEL?**
- 14           A.    Handheld annual maintenance costs include both handhelds and docking  
15                   station and are based on a proposal provided by Itron, Inc.
- 16
- 17   **35.   Q.    WHAT IS THE BASIS OF THE MOBILE COLLECTOR LITE**  
18                   **(MCL) COST IN THE COST MODEL?**
- 19           A.    As James Christensen explains in more detail in his prepared direct  
20                   testimony, NV Energy plans to acquire four MCL units to implement the  
21                   trial NSMO Rider. Two of those units will be deployed in Sierra’s service  
22                   territory and two units will be deployed in Nevada Power’s service territory.  
23                   Unit costs for each MCL are based on a proposal provided by Itron, Inc.
- 24
- 25   **36.   Q.    WHAT IS THE BASIS FOR THE NUMBER OF SERVICE**  
26                   **TEHNICIANS INCLUDED IN THE ONGOING COSTS?**
- 27
- 28

1 A. As James Christensen explains in more detail in his prepared direct  
2 testimony, NV Energy plans to use two incremental service technicians in  
3 each of Sierra's and Nevada Power's respective service territories. Two  
4 technicians are needed for each service territory to ensure redundancy and  
5 backup when one technician is not available (e.g. due to sickness or  
6 vacation).

7  
8 **37. Q. WHAT IS THE BASIS FOR THE NUMBER OF ROUTE ANALYSTS**  
9 **INCLUDED IN THE ONGOING COSTS?**

10 A. NV Energy will utilize one route analyst position in each of the Sierra and  
11 Nevada Power service territories to schedule and coordinate the work of the  
12 service technicians in each service territory.

13  
14 **38. Q. WHAT IS THE BASIS OF THE ROUTE ANALYST HOURLY**  
15 **RATES USED IN THE COST MODEL?**

16 A. The BU Meter Data Specialist, Job Class 9745, 1-year step rate (NV  
17 Energy's Collective Bargaining Agreement with IBEW Local 1245) of  
18 \$22.90/hour was used for the Sierra service territory. An annual labor rate  
19 of \$58,000 per year (\$27.88/hour) was used for the equivalent position in  
20 the Nevada Power service territory.

21  
22 **39. Q. WHAT IS THE BASIS FOR THE NUMBER OF BILLING CSRS**  
23 **INCLUDED IN THE ONGOING COSTS?**

24 A. NV Energy will utilize half the time of a billing CSR in each of the Sierra  
25 and Nevada Power service territories to address the exceptions that NV  
26 Energy expects to occur from NSMO billing.

27  
28

1 **40. Q. WHAT IS THE BASIS OF THE BILLING CSR HOURLY RATE**  
2 **USED IN THE COST MODEL?**

3 A. The Rep Cust Service, Job ID 9776 (New), 3-year step rate (NV Energy's  
4 Collective Bargaining Agreement with IBEW Local 1245) of \$21.90/hour  
5 was used for the Sierra service territory. The Sr. Customer Service Rep,  
6 Job Code 5174, 5th Six Months 09/11/11 rate (NV Energy's Collective  
7 Bargaining Agreement with IBEW Local 396) of \$25.68 was used for the  
8 Nevada Power service territory.

9  
10 **41. Q. WHAT IS THE BASIS OF THE INCREMENTAL ANNUAL**  
11 **MATERIALS COST IN THE COST MODEL?**

12 A. NV Energy provides field personnel with uniforms, and protective devices  
13 to ensure safe working conditions. The historical annual cost of materials  
14 per person is \$600. NV Energy will provide these materials to each of the  
15 four Service Technicians included in the ongoing costs.

16  
17 **42. Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT**  
18 **TESTIMONY?**

19 A. Yes.  
20  
21  
22  
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26  
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## Jeff Evans

### Executive Consultant

With more than 20 years of energy/utility experience, Mr. Evans offers expertise in advanced metering and smart grid technologies. He effectively leverages a strong utility background and understanding to identify and communicate opportunities for improvements that increase efficiency and profitability. His areas of expertise include:

- Strategy development
- Requirements analysis
- Business case development
- Solution benefits identification and qualification
- Vendor evaluation
- Contract negotiations
- Solution implementation
- Project management

### PROFESSIONAL EXPERIENCE

**Black & Veatch | 2010 to Present**

#### Executive Consultant

**Enspira Solutions, Inc. | 2006 to 2010**

#### Executive Consultant

**Exelon Energy Delivery (EED) | 1991 to 2001**

**Project Manager—Meter Reading Technology, ComEd and PECO**

**Product Portfolio Manager—Business Marketing**

**ComEd**

**Sales Planning Coordinator —Sales Organization**

**Project Manager—Billing Audit and Quality Control**

**Project Engineer— Customer Information System Implementation**

**Administrative Coordinator to the Vice President of Sales**

**Account Manager—Sales Organization**

### PROJECT EXPERIENCE

**Alliant Energy**

Mr. Evans served as Project Lead for Black & Veatch's engagement at Alliant Energy.

- Assisted with planning an AMI/MDM (Meter Data Management) project. Revised AMI business case. Defined high-level enterprise requirements for AMI technology, information systems and systems integration, endpoint installation services, and business process impacts. Supported Alliant's

### EXECUTIVE CONSULTANT

**Specialization:**  
AMI, Smart Grid

**Office Location**  
Chicago, IL

#### Education

- MBA, Kellogg Graduate School of Management, Concentrations in Marketing and Management & Strategy, Northwestern University
- BS, Mechanical Engineering, Bradley University

#### Professional Memberships and Affiliations

- Utilimetrics, member
- AMI MDM Working Group, member

**Year Career Started**  
1992

**Year Started with B&V**  
2010

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project team in recommending pilot project charter, goals, requirements, recommendations, and costs/benefits to senior management.

- Supported the vendor selection phase of the project to develop and evaluate AMI technologies. Developed detailed requirements specification for AMI technology, installation of endpoints, and MDMS/system integration. Managed customer segmentation analysis, deployment planning, and change management planning. Developed a procurement strategy and appropriate competitive solicitations for AMI procurement. Provided RFP and evaluation support, and assisted with contract negotiations for AMI system components.
- Supported initial phase of deployment. Provided overall project management support for Alliant's deployment from acquisition, through installation and provisioning, to activation. Executed the field acceptance test for the selected AMI technology.
- Facilitated smart grid visioning workshops and provided support for regulatory compliance activities and ARRA funding application.

#### **Baltimore Gas & Electric (BGE)**

Mr. Evans developed BGE's AMI business case and a procurement strategy and appropriate competitive solicitations for the procurement of an AMI and demand response (DR) system. He then refined the AMI business case in subsequent engagement to prepare BGE for regulatory filings.

#### **Columbia (TN) Power and Water**

Mr. Evans developed Columbia Power and Water's AMI business case.

#### **ENMAX**

Mr. Evans developed ENMAX's AMI business case and comprehensive functional, performance, and technical specifications and provided associated regulatory support.

#### **Exelon Energy Delivery**

Mr. Evans provided AMI/MDMS/smart grid support including performing an AMI market and regulatory assessment for Exelon/ComEd. This included a state-by-state regulatory assessment, market penetration by technology; technical assessment; and assessments for MDMS and meters.

#### **Nicor Gas**

Mr. Evans performed a strategic assessment of AMI solutions and refreshed/revised Nicor's AMI business case.

#### **NV Energy (NVE)**

Mr. Evans is currently leading Black & Veatch's engagement at NVE.

- Developed initial smart grid strategy and roadmap; working to evolve strategy and roadmap as smart grid deployment continues.

- Developed and secured management and regulatory approval for the Advanced Service Delivery (ASD) business case (now known as NVEnergize) across two operating companies. The business case includes AMI technology, customer portal, demand response, meter data management system, and endpoint installation services components.
- Developed and executed a procurement strategy and appropriate competitive solicitations for the procurement of NVEnergize components.
- Facilitated contract negotiations with NVEnergize vendors resulting in execution of contracts for \$303 million project.
- Secured Smart Grid Investment Grant (SGIG) worth \$139million for NVEnergize project.
- He is executing program and systems integration services for NVEnergize project including:
  - Development of overall solution architecture and solution requirements specifications.
  - Ongoing field acceptance testing of AMI technology solution.
  - Ongoing systems testing of all applications and interfaces between applications.
  - Management of AMI technology, MDMS, customer portal, systems integration, and endpoint installation vendors.
  - Ongoing leadership of project management office.
  - Implemented ESIntial™ tool, which has continuously expanded to other uses, to assess system performance and facilitate cutover of meters to AMI register billing.
  - On-time, on-budget, on-schedule implementation of project.
  - Ongoing regulatory support associated with IRP, business case, and opt-out filing strategies.

### **Pepco Holdings, Inc (PHI)**

Mr. Evans is currently leading Black & Veatch's engagement at PHI.

- Developed and secured approval for AMI business case across three operating companies and four regulatory bodies which included AMI technology, MDMS, systems integration, distribution automation, and endpoint installation services components.
- Developed comprehensive functional, performance, and technical specifications.
- Developed and executed a procurement strategy and appropriate competitive solicitations for the procurement of an AMI system.

- Facilitated contract negotiations with PHI vendors resulting in execution of contracts for project.
- Designed Smart Grid and Distribution Automation (DA) strategy to ensure a successful AMI implementation.
- Developed an implementation plan and timeline.
- Provided regulatory compliance support.
- Facilitating the ongoing field acceptance testing of both gas and electric components of the selected AMI technology.
- Facilitating ongoing system performance assessment utilizing ESIntial tool including daily delivery of interval data, network optimization.
- Facilitating development of exception management process and understanding of alarms and events produced by AMI systems.

### San Diego Gas & Electric (SDG&E)

Mr. Evans developed SDG&E's AMI business case and comprehensive functional, performance, and technical specifications. He developed a procurement strategy and appropriate competitive solicitations for the procurement of AMI solution components.

### Southern Maryland Electric Cooperative

Mr. Evans supported Southern Maryland Electric Cooperative's strategic assessment of AMI and related technologies, integrated smart grid strategy and roadmap, and business case analysis.

### Tri-State Generation & Transmission

Mr. Evans provided consulting services for Tri-State G&T's MDMS initiative. Support focused on assisting with requirements, technology assessment, technology/vendor selection, solution architecture, and vendor scope of work development.

## PUBLICATIONS AND PRESENTATIONS

“Consumer Confidence at NV Energy.” *Electric Energy T&D*, May/June 2012.

“The Opt-Out Challenge.” *Electric Light & Power*, March/April 2012.

“The NVEnergize Solution Enables NV Energy Customers to take Ownership of their Energy Usage.” (Co-presenter Gary Smith, NV Energy), Autovation 2011.

“How to Evaluate Your System for Future Technologies.” 2011 RMEL Smart Grid Conference - Intelligent Technologies.

“Benefits Realization for Smart Grid Investments.” *Electric Energy T&D*, May 2011.

- 
- “AMI Rollout — Identifying AMI Technical, Functional, and Performance Issues.”  
*Pennwell AMR/AMI eNewsletter*, June 2010.
- “NV Energy’s Advanced Service Delivery Solution.” (Co-presented with NV Energy), DistribuTECH 2010 and Metering/Billing/CIS America 2010.
- “Using AMI Data Throughout the Enterprise.” Course, Autovation 2009. (Co-presented with Glenn Pritchard, PECO), September 2009.
- “Using AMI for Outage Notification at PECO.” (Co-author Glenn Pritchard, PECO),  
*Utility Automation and Engineering T&D*, April 2009.
- “Proactive AMI Vendor Selection.” (Co-author Dale Gant, Pepco), *Intelligent Utility Magazine*, January/February 2009.
- “AMI and Smart Grid at Pepco Holdings.” (Co-presented with Pepco), Smart Metering East Coast 2008.
- “Enhancing Outage Management with Smart Metering.” featured speaker for EUCI Webinar 2008 (co-presented with PECO and United Illuminating).
- “Proactive AMI Solution Selection, Effectively Addressing Regulatory Concerns.” (Co-presenter Dale P. Gant, Pepco Holdings), Autovation 2008.
- “Utility Business Transformation with AMI, DR and SmartGrid.” (Course, co-instructed with Hahn Tram), Autovation 2008.
- “Technical and Operational Considerations in Using Smart Metering for Outage Management.” 2008 IEEE PES T&D Conference.
- “Pre-deployment area selection and deployment sequencing at Alliant Energy.” (Co-author Rick Potter, Alliant Energy), DistribuTECH 2008.
- “Strategies for Building the AMI/MDM/DR Business Case.” featured speaker for Chartwell Webinar, March 2008.
- “Asset Management for Advanced Metering Infrastructure.” *Electric Energy T&D Magazine*, Sept/Oct 2007.
- “Advanced Metering System Implementation at Alliant Energy.” (Co-author Rick Potter, Alliant Energy), *Next Generation Power and Energy* (Podcast Interview), Q3 2007.
- “AMI Deployment Sequencing Optimization.” (Co-author Rick Potter, Alliant Energy), AMRA 2007.
- “How Do Utilities Ensure a Successful AMI Deployment?” EUCI (Electric Utility Consultants, Inc.) Conference: The Real Story on AMI: From Conception to Completion, Learning from Those Who Have Lived It, March 2007.

“AMI and Smart Grid Deployment: Geographic sequencing by benefit maximizes utility ROI.” *Utility Automation AMR and Metering eNewsletter*, October 2006.

“A Smart Solution to Energy Theft — PECO leverages knowledge gained from its AMR system to identify and reduce meter tampering and energy theft.” (Co-author Glenn Pritchard), *Transmission & Distribution World*, April 2006.



## **CERTIFICATE OF SERVICE**

**CERTIFICATE OF SERVICE**

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I hereby certify that I have served **SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY AND NEVADA POWER COMPANY D/B/A NV ENERGY'S APPLICATION FOR APPROVAL OF PROPOSED TRIAL NON-STANDARD METERING OPTION RIDERS AND CHANGES TO EXISTING RULES AND SCHEDULES ASSOCIATED WITH IMPLEMENTATION OF THE NSMO RIDERS** in Docket 12-05\_\_\_ by electronic service to the following:

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DATED this 1<sup>st</sup> day of May, 2012.

*/s/ Connie Silveira*  
Connie Silveira  
Legal Secretary  
Sierra Pacific Power Company