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PUBLIC UTILITIES COMMISSION

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Commissioner

STEPHANIE MULLEN  
Executive Director

January 31, 2019

Richard Combs, Director  
Legislative Counsel Bureau  
Nevada Legislature  
Capitol Complex  
Carson City, Nevada 89710

Re: Report to Legislature pursuant to NRS 704.7825(5)

Dear Mr. Combs:

This Report to the Nevada Legislature was prepared by the Regulatory Operations Staff (Staff) of the Public Utilities Commission of Nevada (PUCN) under the statutory requirements of NRS 704.7825(5) "to compile information that sets forth whether any [electric service] provider has used energy efficiency measures to comply with its [renewable energy] portfolio standard, and if so, the type of energy efficiency measures used and the amount of energy savings attributable to each such energy efficiency measure."

The establishment of Nevada's renewable portfolio standard (RPS) for electric service providers is set forth in NRS 704.7801 through NRS 704.7828, inclusive. NRS 704.7821(2)(b) establishes limits on the use of Portfolio Energy Credits (PECs) derived from energy efficiency measures in meeting the RPS by providers of electric service. NRS 704.7821(2)(b) reads as follows:

Of the total amount of electricity that the provider is required to generate, acquire or save from portfolio energy systems or efficiency measures:

- (1) During calendar years 2013 and 2014, not more than 25 percent of that amount may be based on energy efficiency measures;
- (2) During each calendar year 2015 to 2019, inclusive, not more than 20 percent of that amount may be based on energy efficiency measures;
- (3) During each calendar year 2020 to 2024, inclusive, not more than 10 percent of that amount may be based on energy efficiency measures; and
- (4) For calendar year 2025 and each calendar year thereafter, no portion of that amount may be based on energy efficiency measures.

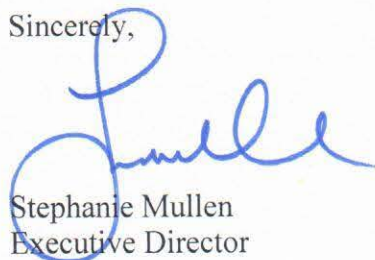
NRS 704.7821(2)(b) further provides that “[I]f the provider intends to use energy efficiency measures to comply with its portfolio standard during any calendar year, of the total amount of electricity saved from energy efficiency measures for which the provider seeks to obtain portfolio energy credits pursuant to this paragraph, at least 50 percent of that amount must be saved from energy efficiency measures installed at service locations of residential customers of the provider, unless a different percentage is approved by the Commission.”

NRS 704.78213(2) establishes limits on the use of PECs derived from energy efficiency measures in meeting the RPS by providers of new electric resources. NRS 704.78213(2) reads as follows: “Of the total amount of electricity that a provider of new electric resources is required to generate, acquire or save from portfolio energy systems or efficiency measures during each calendar year, not more than 25 percent of that amount may be based on energy efficiency measures.”

Energy savings resulting from implementation of efficiency measures are documented by electric service providers Nevada Power Company d/b/a NV Energy (NPC) and Sierra Pacific Power Company d/b/a NV Energy (SPPC) (together, NV Energy), and by new electric resource providers Shell Energy North America (US), L. P. (Shell Energy)<sup>1</sup>, Morgan Stanley Capital Group (Switch)<sup>2</sup>, Exelon Generation Company, LLC (Exelon)<sup>3</sup>, and Tenaska Power Services Co. (Tenaska)<sup>4</sup> in annual RPS compliance filings with the PUCN. The most recent such filings were made in Docket No. 18-03044 for NV Energy, Docket No. 18-03040 for Shell Energy, Docket No. 18-04001 for Switch, Docket No. 18-03042 for Exelon, and Docket No. 18-03038 for Tenaska. Energy savings reported herein are for compliance year 2017, the most recent year for which figures are available.

The attached pages identify the types of energy efficiency measures implemented by providers of electric service in Nevada and outline the amount of PECs earned by each provider through the implementation of such measures.

Sincerely,



Stephanie Mullen  
Executive Director

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<sup>1</sup> Shell Energy is the service provider to the Barrick Goldstrike Mines Inc., Barrick Cortez Inc., as operator of Cortez Joint Venture d/b/a Cortez Gold Mines, and Barrick Turquoise Ridge Inc. as operator of Turquoise Ridge Joint Venture.

<sup>2</sup> Morgan Stanley Capital Group is the service provider to Switch Ltd., however Switch made the 2017 RPS filing on behalf of Morgan Stanley Capital Group.

<sup>3</sup> Exelon is the service provider to Wynn Las Vegas, LLC.

<sup>4</sup> Tenaska is the service provider to MGM Resorts International.



## **I. Definition of Demand Side Management (DSM)**

DSM programs are collectively defined as those comprising an electric service provider's demand side plan in NAC 704.9057: "Demand side plan" means the programs proposed by a utility to promote energy efficiency and conservation." NAC 704.90605 further defines energy efficiency as "a modification of energy use patterns which results in the greater productive use of energy or a reduction in the consumption of electric power."

## **II. Energy Efficiency Measures Undertaken by NV Energy**

Pursuant to NRS 704.7821(2)(b), DSM and related conservation activities cannot account for more than 20 percent of total RPS PECs claimed in 2017. Under the 20 percent limitation, NPC could use up to 822,819,000 PECs and SPPC could use up to 345,505,000 PECs to meet their respective 2017 RPS requirements. Both companies had enough DSM PECs to use the full DSM allowance.

As stated in NV Energy's Annual Renewable Portfolio Standard Compliance Report for 2017, which was assigned Docket No. 18-03044, both NPC and SPPC claimed DSM PECs generated in 2016.<sup>5</sup> NPC's DSM programs saved 1,766,011,084 kilowatt hours (kWh) resulting in 1,443,848,338 DSM PECs, and SPPC's energy efficiency programs saved 540,534,620 kWh savings resulting in 386,043,058 DSM PECs.

Although NV Energy has not yet claimed the DSM PECs generated in 2017, the following DSM programs were offered to NV Energy customers in 2017. Attachment A details the DSM savings used to calculate PECs by program for both NPC and SPPC.

### **DSM Programs offered by both NPC and SPPC in 2017:<sup>6</sup>**

Energy Smart Schools: The Energy Smart Schools Program facilitated energy efficiency improvements and peak demand reductions in public schools by providing design assistance and financial incentives to school districts.

Commercial Services: The Commercial Services Program facilitated the implementation of energy efficient measures in commercial, industrial and institutional facilities for both retrofits and new construction through offering incentives and comprehensive technical service. The Commercial

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<sup>5</sup> In its Annual Report for compliance year 2014, Docket No. 15-03042, NV Energy did not claim PECs derived from 2014 DSM savings, opting instead to include the certification of DSM PECs for 2014 in its Annual Report for compliance year 2015. The RPS compliance report is filed in the spring, and the measurement and verification reports are filed later in the year as a part of the Annual DSM reports. Delaying the certification of DSM PECs and the associated carry-forward request until the following compliance year enables the RPS compliance year report to contain all the approved or accepted measurement and verification results that are necessary to make a decision on the DSM-derived PECs.

<sup>6</sup> NPC and SPPC offered additional DSM Programs in 2017, however they were educational in nature and did not have measured and verified kWh savings associated with the Programs. This includes the Energy Education, Energy Reports, Energy Assessments, and Program Development Programs.

Services Program includes a Non-Profit Agency Grants category. The Non-Profit Agency Grants provided grants for upgrades for energy efficiency projects in new and existing commercial spaces leased or owned by non-profit organizations located in residential, office, and warehouse facilities.

Demand Response: The Demand Response Program recruited residential and commercial customers into an ongoing program in which the customers allow NV Energy to interact temporarily with their end-use loads such as air conditioning on days when system peak loads occur or during emergency conditions to help reduce peak demand. The equipment provided to customers included automation and optimization technology that provides year-round savings.

### **DSM Programs offered by NPC only in 2017:**

Residential High Efficiency Air Conditioning: The Residential High Efficiency Air Conditioning Program provided incentives to homeowners, residential homebuilders, and HVAC contractors to properly maintain high efficiency air conditioning equipment and to optimize the operation of less efficient AC equipment.

### **III. Energy Efficiency Measures Undertaken by Shell Energy**

The following energy efficiency measures yielded 49,203,125 PECs claimed by Shell Energy for 2017, as shown in its Annual Renewable Portfolio Standard Compliance Report for 2017, which was assigned Docket No. 18-03040.

#### Gold Strike Energy Efficiency Measures:

Air Liquide Electrical Savings - Management of liquid oxygen supplies resulting in reduced electric power consumption.

Air Products Electrical Energy Savings - Installation of optimization software to reduce electricity consumption at the mines.

Confidential Contract Agreements: Shell Energy requested that the contracts be kept confidential.

### **IV. Energy Efficiency Measures Undertaken by Switch**

Switch did not claim PECs from energy efficiency measures in its 2017 Annual Renewable Portfolio Standard Compliance Report.

### **V. Energy Efficiency Measures Undertaken by Exelon and Tenaska**

Exelon and Tenaska each claim PECs associated with energy efficiency measures for Compliance year 2017. These PECs were received by the retail customer from NPC pursuant to the Commission's Orders in Docket No. 15-05017 and 15-05006. The DSM PECs include NPC surplus DSM PECs and PECs generated from energy efficiency measures installed when the retail



customer participated in NPC's Commercial Services DSM Program when it was a fully bundled retail customer.

Exelon claimed 9,054,336 PECs, the maximum number of PECs associated with energy efficiency measures allowed for 2017.

Tenaska claimed 46,817,867 PECs, the maximum number of PECs associated with energy efficiency measures allowed for 2017.

## **VI. Measurements of Energy Efficiency and Savings**

Energy efficiency and savings for DSM programs are estimated by means of measurement and verification (M&V) procedures. These are reported by utilities for each project proposed or implemented. The M&V process typically involves two separate calculations: First, to determine the potential savings a given measure can achieve, baseline energy use requirements are estimated through site inspections, phone surveys, spot measurements, and commissioning activities. Second, following implementation of efficiency measures, actual savings are sampled by comparing energy use levels after the measure is implemented with the baseline values previously calculated, with any necessary adjustments made to account for climatic and other differences between the two periods evaluated.

## **VII. DSM Collaborative**

The DSM Collaborative was established in 2001 in Docket Nos. 01-7004 and 01-7016, at which time the Commission ordered NPC and Sierra to "work collaboratively to develop a list of feasible projects, to determine the appropriate cost/benefit test(s), to determine the projects that should be proposed as either trial or full, to determine the appropriate amount that should be spent on demand-side projects, staff, rebates, etc., and to discuss and resolve any such matters that the parties deem appropriate."

In its 2005 Order in Docket Nos. 05-08019 and 05-08020, the PUCN ordered NPC and SPPC to work with members of the Collaborative towards developing energy efficiency program designs and analysis and sponsor Collaborative meetings. In its Order in Docket Nos. 06-03038 and 06-04018, the PUCN further ordered both utilities to "make an effort to expand participation [in the Collaborative] to include a wider base of constituencies in this process to ensure that programs are designed to deliver energy savings measures in a manner that is both efficient and meets the needs of the constituency."

DSM Collaborative meetings were held in 2018 on the following dates: March 12, May 11, June 11, October 22 and December 4. Participants throughout 2018 included the Attorney General's Bureau of Consumer Protection (BCP), Natural Resources Defense Council (NRDC,) Southwest Energy Efficiency Project (SWEET), Nevadans for Clean Affordable Reliable Energy (NCARE), Nevada Green Institute, U.S. Department of Energy, NV Energy, and Staff.

## VIII. Summary of Portfolio Energy Credits Derived from Energy Efficiency Measures

Table 1 summarizes the total amount of PECs claimed in 2017 from NV Energy's energy efficiency programs, total PECs carried over from previous years, and total PECs applied to NV Energy's 2017 RPS, as described in Section II.

**Table 1. NV Energy's 2017 PECs from Energy Efficiency Measures**

	<b>NPC PECs</b>	<b>SPPC PECs</b>
<b>Total Allowable PECs Claimed in 2017</b>	1,443,848,000	386,043,000
<b>PECs Carried Forward from Prior Years</b>	3,803,529,000	892,935,000
<b>Total Allowable PECs Applied to 2017 RPS</b>	822,819,000	345,505,000

Table 2 below gives the amount of PECs claimed in 2017 from each of Shell Energy programs, as described in Section III above. Table 2 also shows total PECs carried forward from previous years and total PECs applied to Shell Energy's 2017 RPS.

**Table 2. Shell Energy's 2017 PECs from Energy Efficiency Measures**

	<b>PECS</b>
Energy Efficiency Measures at Goldstrike Mines	4,657,041
Confidential Contract	4,844,276
Confidential Contract	7,987,067
Confidential Contract	31,714,741
<b>Total Allowable PECs Claimed in 2017</b>	49,203,125
<b>PECs Carried Forward from Prior Years</b>	11,987,980
<b>Total Allowable PECs Applied to 2017 RPS</b>	47,044,639



**Kilowatt hour savings by program used to calculate DSM PECs claimed by NPC for the last five years.**

Programs	Total Savings kWh				
	2013 <sup>1</sup>	2014 <sup>2</sup>	2015 <sup>3</sup>	2016 <sup>4</sup>	2017 <sup>5</sup>
<b>Residential</b>					
Energy Star Lighting	-	504,377,987	425,015,968	290,399,381	287,233,659
2nd Refrigerator Recycling	-	52,422,331	57,043,640	59,651,234	62,144,913
Energy Smart Manufactured Homes	-	2,588,044	2,588,044	2,588,044	2,588,044
High Eff. Res. AC	-	116,526,515	127,685,876	133,772,940	143,623,158
Pool Pumps	-	24,791,879	34,892,788	46,326,890	50,569,634
Energy Smart Home Plus	-	15,573,532	15,573,532	15,573,532	15,573,532
Consumer Electronics	-	19,300,302	17,513,292	13,044,005	13,044,005
Low Income Weatherization	-	9,921,393	9,921,393	9,921,393	9,921,393
HomeFree Nevada	-	138,154	2,242,398	13,012,691	22,092,284
Solar Thermal Water Heating	-	110,560	123,561	128,619	132,213
Advance Build. Tech.	-	866,304	866,304	866,304	866,304
Direct Install	-	-	-	-	4,295
Demand Response	-	9,356,271	13,567,445	21,731,026	19,565,545
<b>Commercial</b>					
Commercial Construction	-	145,276,830	145,276,830	145,276,830	145,276,830
Energy Smart Schools	-	61,622,031	70,096,390	81,418,718	87,542,020
Commercial Incentives	-	667,586,313	722,008,964	780,158,086	893,067,132
Sure Bet Hotels/Motels	-	6,765,014	6,765,014	6,765,014	6,765,014
Consumer Electronics/80 Plus	-	2,591,308	924,350	613,651	613,651
Non-Profit Agency Grants	-	2,072,068	2,920,521	3,594,497	4,102,310
Commercial DR	-	-	2,174,508	2,545,797	1,285,148

**NPC's DSM kPECs used toward RPS Compliance**

	2013	2014	2015	2016	2017
<b>kPECs Carried Forward from Prior Years</b>	2,859,166	1,905,868	2,700,815	3,481,285	3,803,529
<b>New kPECs Claimed</b>					
Residential kPECs Claimed	-	880,951	833,478	717,055,486	720,962
Commercial kPECs Claimed	-	863,902	813,631	690,617,730	722,886
<b>Total kPECs Claimed</b>	-	1,744,853	1,647,109	1,407,673	1,443,848
<b>Total Allowable kPECs Applied to RPS</b>	(953,298)	(949,906)	(866,639)	(863,262)	(822,819)
<b>Ending DMS kPEC Balance</b>	1,905,868	2,700,815	3,481,285	3,803,529	4,424,558

1. See Docket No. 14-04001, NV Energy Portfolio Standard Annual Report, Compliance Year 2013. NPC did not claim DSM PECs generated in 2013, opting instead to claim them in the Annual Report for Compliance Year 2014. NPC was able to use the maximum number of DSM PECs allowed for its 2013 RPS compliance by applying DSM PECs carried forward from previous years.

2. Docket No. 15-03042, NV Energy Portfolio Standard Annual Report, Compliance Year 2014.

3. Docket No. 16-04003, NV Energy Portfolio Standard Annual Report, Compliance Year 2015.

4. Docket No. 17-03044, NV Energy Portfolio Standard Annual Report, Compliance Year 2016.

5. Docket No. 18-03044, NV Energy Portfolio Standard Annual Report, Compliance Year 2017.

Kilowatt hour savings by program used to calculate DSM PECs claimed by Sierra for the last five years.

Programs	Total Savings kWh				
	2013 <sup>1</sup>	2014 <sup>2</sup>	2015 <sup>3</sup>	2016 <sup>4</sup>	2017 <sup>5</sup>
<b>Residential</b>					
Energy Star Lighting	-	181,461,613	173,426,395	136,750,781	101,827,184
Refrigerator Recycling	-	22,159,185	24,227,089	25,398,347	26,870,676
Energy Smart Manufactured Homes	-	387,161	387,161	387,161	387,161
High Eff Residential AC	-	321,994	321,994	321,994	-
Low Income Weatherization	-	2,342,294	2,342,294	2,125,272	1,593,941
Consumer Electronics	-	5,413,192	5,366,906	5,366,906	5,366,906
Solar Thermal Water Heating	-	92,120	110,059	125,666	170,394
Home Energy Reports	-	-	2,103,998	7,726,917	16,242,474
	-	-	-	-	1,529
Demand Response	-	25,541	247,604	544,030	702,774
<b>Commercial</b>					
Commercial Construction	-	30,233,434	38,895,544	38,895,544	38,895,544
Energy Smart Schools	-	19,049,541	20,994,653	21,759,901	22,891,801
Commercial Incentives	-	242,084,946	250,912,299	284,701,086	314,034,578
Sure Bet Hotels/Motels	-	7,593,674	7,593,674	7,593,674	7,593,674
Consumer Electronics/80 Plus	-	420,136	281,277	281,277	281,277
Non-Profit Agency Grants	-	2,045,977	2,303,013	2,794,228	3,329,433
Demand Response	-	-	7,564	10,250	345,274

**Sierra's DSM kPECs Used toward RPS Compliance**

	2013	2014	2015	2016	2017
<b>kPECs Carried Forward from Prior Years</b>	777,535	410,715	580,100	777,116	892,935
<b>New kPECs Claimed</b>					
Residential kPECs Claimed	-	272,410	270,177	231,079	197,050
Commercial kPECs Claimed	-	261,343	256,686	218,278	188,993
<b>Total kPECs Claimed</b>	-	533,753	526,863	449,358	386,043
<b>Total Allowable kPECs Applied to RPS</b>	(366,820)	(364,368)	(329,847)	(333,540)	(345,505)
<b>Ending DMS kPEC Balance</b>	410,715	580,100	777,116	892,934	933,473

1. See Docket No. 14-04001, NV Energy Portfolio Standard Annual Report, Compliance Year 2013. Sierra did not claim DSM PECs generated in 2013, opting instead to claim them in the Annual Report for Compliance Year 2014. Sierra was able to use the maximum number of DSM PECs allowed for its 2013 RPS compliance by applying DSM PECs carried forward from previous years.

2. Docket No. 15-03042, NV Energy Portfolio Standard Annual Report, Compliance Year 2014.

3. Docket No. 16-04003, NV Energy Portfolio Standard Annual Report, Compliance Year 2015.

4. Docket No. 17-03044, NV Energy Portfolio Standard Annual Report, Compliance Year 2016.

5. Docket No. 18-03044, NV Energy Portfolio Standard Annual Report, Compliance Year 2017.