BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

IN THE MATTER of the Application of NEVADA POWER COMPANY, seeking approval of the Second Amendment to its Emissions Reduction and Capacity Replacement Plan seeking approval of a 100 MW Purchased Power Agreement with Techren Solar and the retirement of Reid Gardner Unit 4 on or about February 28, 2017.	Docket No. 16-08___

VOLUME 1 OF 4

NEVADA POWER COMPANY D/B/A NV ENERGY

TRANSMITTAL LETTER

August 15, 2016

Ms. Trisha Osborne
Assistant Commission Secretary
Public Utilities Commission of Nevada
1150 East William Street
Carson City, Nevada 89701-3109

RE: Docket No. 16-08____, Nevada Power Company d/b/a NV Energy's Application seeking approval of its Second Amendment to its Emissions Reduction and Capacity Replacement Plan; and request for expedited schedule.

Dear Ms. Osborne:

Enclosed for filing please find the attached Application made by and on behalf of Nevada Power Company d/b/a NV Energy ("Nevada Power" or the "Company") seeking approval of its Second Amendment its Emissions Reduction and Capacity Replacement Plan.

Electronic copies of the filing, along with the executable electronic copies of load forecasting and demand-side plan workpapers will be delivered to the Regulatory Operations Staff ("Staff"), and the Attorney General's Bureau of Consumer Protection ("BCP") in both their Carson City and Las Vegas offices.

Accompanying this transmittal letter are portions of the filing that are to be kept under seal pursuant to NAC § 703.527 *et seq*. This information is contained in a sealed envelope, appropriately marked, and contains the unredacted versions of the following:

- REN-3. 2016 ERCR RE RFP Short List Scoring Report
- REN-4. Initial Screening Evaluation Report of the Independent Evaluator
- REN-5. Final Due Diligence and Selection Reports
- REN-6 Closing Report of the Independent Evaluator
- REN-7 Closing Report Amendment of the Independent Evaluator

Confidentiality of the bid process, including bid terms and the Company's analysis of the bid, is essential to a successful competitive solicitation and qualify for confidential treatment under NRS § 703.190. This information derives independent economic value from not being generally known. This information is not known outside the Company and its distribution is limited within the Company. Releasing this highly sensitive information would disadvantage Nevada Power by limiting its ability to foster competition among prospective energy suppliers; compromising Nevada Power's negotiating position and reducing its bargaining leverage. Publication of this information would unfairly advantage competing market participants and impair Nevada Power's ability to achieve the most favorable pricing and terms and conditions from suppliers on behalf of its customers.

Pursuant to NAC § 703.5274(1), one unredacted copy of the above-described confidential information will be filed with the Commission's Secretary in a separate envelope stamped "confidential." Redacted versions of confidential information will be submitted for processing and posting onto the Commission's public website. Pursuant to NAC § 703.5274(2), Nevada Power hereby requests that the above-described information not be disclosed to the public. Nevada Power requests that this information remain confidential for a period of five years. At the end of the five year period the Commission may return or destroy the confidential information. Confidential treatment of the above-described information will not impair the ability of the Staff or the BCP to fully investigate Nevada Power's proposals.

NRS § 704.751(2) provides that the Commission shall issue an order within 180 days in proceedings requesting approval to amend the ERCR Plan. Thus, by statute, a final order regarding this ERCR Plan 2nd Amendment must be issued on or before Friday, February 11, 2017. However, given the time sensitive nature of the request associated with Reid Gardner Unit 4 the Company requests that the Commission issue a final order no later than December 28, 2016.

Should you have any questions regarding this filing, please contact me at (775) 834-5692 or mgreene@nvenergy.com.

Respectfully submitted,

/s/Michael Greene
Michael Greene
Senior Attorney

TABLE OF CONTENTS

NEVADA POWER COMPANY D/B/A NV ENERGY

TABLE OF CONTENTS

VOLUME 1

VOLUME 2-TECHNICAL APPENDIX

VOLUME 3 -TECHNICAL APPENDIX

VOLUME 4-TECHNICAL APPENDIX

CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing **NEVADA POWER COMPANY D/B/A NV ENERGY'S APPLICATION TO APPROVAL OF THE SECOND AMENDMENT TO ITS EMISSIONS REDUCTION AND CAPACITY REPLACEMENT PLAN** upon the persons listed below by the following**:**

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DATED this 15th day of August, 2016.

/s/ *Connie Silveira*
Connie Silveira
Legal Admin Assistant
Sierra Pacific Power Company
Nevada Power Company

APPLICATION

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

IN THE MATTER of the Application of NEVADA POWER COMPANY, seeking approval of the Second Amendment to its Emissions Reduction and Capacity Replacement Plan seeking approval of a 100 MW Purchased Power Agreement with Techren Solar and the retirement of Reid Gardner Unit 4 on or about February 28, 2017.	)	Docket No. 16-08____

APPLICATION TO APPROVE SECOND AMENDMENT TO EMISSIONS REDUCTION AND CAPACITY REPLACEMENT PLAN

Nevada Power Company, d/b/a NV Energy ("Nevada Power" or "the Company"), makes this Application, pursuant to NRS § 704.7311 *et seq.*, NRS § 704.736 et seq., Nevada Administrative Code § 704.95035, and NAC § 704.9517. This application seeks approval by the Public Utilities Commission of Nevada ("Commission") to amend Nevada Power's currently approved Emissions Reduction and Capacity Replacement ("ERCR") Plan. This Second Amendment to Nevada Power's 2014 ERCR Plan ("ERCR Plan 2nd Amendment") presents the results and recommends approval of a new renewable energy purchased power agreement ("PPA") resulting from the final 2016 Emissions Reduction Capacity Replacement Renewable Energy Request for Proposals ("2016 ERCR RE RFP") issued by the Company, as required by Senate Bill 123 (2013 Nevada Legislature). The filing also seeks approval to construct transmission upgrades necessary to interconnect the project that will provide renewable energy pursuant to the above-described agreement to the bulk transmission system. The filing also seeks Commission approval to retire Reid Gardner Unit 4 ("RG4") after exhausting all existing coal inventory; on or about February 28, 2017. NRS § 704.751(2) provides that the Commission shall issue an order within 180 days in proceedings requesting approval to amend the ERCR Plan. Thus, by statute, a final order regarding this ERCR Plan 2nd Amendment must be issued on or before Friday, February 11, 2017. However, given the time sensitive nature of the request

associated with RG4, the Company requests that the Commission issue a final order no later than December 28, 2016.[1]

I.

SUMMARY AND INTRODUCTION

In the Commission's Modified Final Order in Docket No. 14-05003, Nevada Power was authorized to proceed with three 100 megawatt competitive solicitations for renewable energy resources. The first two PPAs resulting from the first two RFPs were submitted to and approved by the Commission in Docket No. 15-07004. This filing seeks approval of a PPA executed with the winning bidder from the third 100 megawatt RFP. Specifically, Nevada Power has executed a 25-year PPA with Techren Solar, LLC ("Techren") for a 100 MW solar project located in Boulder City, NV, which is located in the Solar Energy Zone in Clark County, Nevada. This project was the top selection from the 2016 ERCR RE RFP. The project is projected to generate 285,952 megawatt-hours of renewable energy and provide 286,980 thousand portfolio credits ("PCs") in its first full year of service.

The non-price terms and conditions of the PPA are similar to those found to be just and reasonable in contracts previously approved by the Commission, and the price terms are the lowest of any PPA brought before the Commission for approval by Nevada Power. The base price of the agreement is $33.99 per MWh escalating at 2 percent per year.

Adding this PPA to the Company's portfolio continues to add fuel diversity at a time when the retirement of coal-fired generation reduces fuel diversity. The PPA enhances Nevada Power's ability to meet its interim and long-term CO2 intensity-based emission targets established by the U.S. Environmental Protection Agency. Moreover, the production from this facility will avoid the need for natural gas purchases by Nevada Power, which also reduces the need for natural gas transportation (*i.e.*, avoids fuel transportation costs). The production profile

[1] As described below and in greater detail in the Narrative, Nevada Power is proposing to dispatch RG4 on January 1, 2017 and run the unit until the existing coal inventory has been exhausted. Nevada Power requires Commission approval of this request no later than December 28, 2016.

of the project fits well with Nevada Power's current load shape, providing energy that generally coincides with periods of higher demand.

Additionally, the PPA offers the best pricing value to the customers and fits well with customers' energy needs. In fact, this PPA is the lowest-priced renewable energy contract ever presented to the Commission for approval to serve Nevada Power's customers. The levelized cost of energy, including investments associated with network upgrades, is $7.99 per MWh, or 16.44 percent, lower than the Playa Solar II PPA. Overall, the project is very reasonably priced when compared to (a) existing solar contracts and (b) some fossil-fuel driven generation. The project advances the purposes of Nevada's ERCR statute, and provides excellent value to its customers.

In addition to the approval of the renewable PPA with Techren, the ERCR Plan 2nd Amendment seeks Commission approval to retire RG4 on or about February 28, 2017. Specifically, Nevada Power proposes to begin dispatching RG4 on or about January 1, 2017 and to run this unit until the entire coal inventory is exhausted. Current projections for 2016 year-end inventory and estimated burn rates beginning January 1, 2017 suggest that the RG4 coal inventory will be fully depleted before the end of February 2017. As set forth in testimony and the narrative, this approach will not adversely impact the Company's ability to meet projected capacity requirements for its 2017 summer peak, avoids increased costs in the form of unburned coal inventory, while providing the lowest overall total fuel and purchased power costs for customers, and facilitates the Company's continued structured and orderly retirement of coal fired generation in southern Nevada.

Finally, the ERCR Plan 2nd Amendment also includes a discussion of the Network Upgrades required to interconnect the new Techren renewable facility to the bulk transmission system. These costs, which will be incurred to construct facilities approved in an ERCR Plan and are necessary to interconnect generating facilities approved in such a plan, will be eligible for the ratemaking treatment provided for in NRS § 704.7317.

II.

THE APPLICANT NEVADA POWER COMPANY

Nevada Power is a Nevada corporation and a wholly owned subsidiary of NV Energy, a holding company that also owns Sierra Pacific Power Company and certain other subsidiaries. Nevada Power provides electric in the State of Nevada pursuant to a certificate of public convenience and necessity issued by this Commission. Nevada Power is a "public utility" as that term is defined and used pursuant to Chapter 704 of the Nevada Revised Statutes.

Nevada Power's primary business office is located at 6226 West Sahara Avenue in Las Vegas, Nevada. All correspondence related to this Application, including discovery requests, should be transmitted to Nevada Power's counsel *and* to Nevada Power's Manager of Regulatory Services, as set forth below:

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III

SUPPORTING MATERIAL

PREPARED DIRECT TESTIMONY

As required by NAC § 704.9517, this Application is accompanied by a multi-volume filing providing narrative, prepared direct testimony of four witnesses, and technical appendices, which are incorporated into this Application by reference. Each of the items required by NAC § 704.9517(1) and (2) is set forth in the narrative and supported by the information provided in the Technical Appendices and the prepared direct testimony. Because this Application involves requests for approval of a renewable energy contract, the provisions of NAC § 704.8885 and NAC § 704.8887 must be followed. Thus, the narrative contains a section-by-section recitation of each regulatory requirement followed by the required information.

The ERCR Plan 2nd Amendment is based on substantially accurate data as required by NAC § 704.163. The information accompanying this Application sets forth all material facts which Nevada Power is prepared to prove and upon which the Commission can base its decision to approve the ERCR Plan. NAC § 703.535. The following witnesses provide prepared direct testimony:

Policy and Executive Sponsor: Mr. James Doubek, Vice President of Resource Planning and Analysis, provides the regulatory background for the filing, supports the reasonableness of the proposed PPA for 100 MW of renewable energy, and supports the recommendation for the Commission to approve the retiring of RG4 on or about February 28, 2017 after exhausting all coal inventory.

Retirement of Reid Gardner Unit 4 and Purchased Power Agreement. Mr. Kevin Geraghty, supports the request to retire RG4 by February 28, 2017 and PPA for 100 MW of renewable energy that resulted from the 2016 ERCR RE RFP.

Economic Analysis. Mr. Robert R. Kocour, Jr., Manager of Long-Term Resource Planning sponsors the Present Worth Revenue Requirement ("PWRR") analysis of the shortlisted bids in the Company's 2016 ERCR RE RFP. Mr. Kocour also sponsors production cost analysis that supports the early retirement decision for the RG4 generating plant.

Transmission Upgrades. Mr. Sachin Verma, Manager, Network and IRP Transmission describes and sponsors the section of the narrative discussing the transmission network upgrades associated with the interconnection of a new 100 MW solar photovoltaic facility at the existing Nevada Solar One substation. Mr. Verma also sponsors the Technical Appendix TRAN-1 Techren Solar Large Generator Interconnection Agreement.

IV.

APPLICATION EXHIBITS

Included with this Application and incorporated herein by reference are the following exhibits:

- **Application Exhibit A**, Action Plan specific requests for approval as required by NAC § 704.9517.
- **Application Exhibit B**, Action Plan Narrative as required by NAC § 704.9517.
- **Application Exhibit** C, a proposed notice of the application as required by NAC § 703.162.

V.

CONFIDENTIALITY

The Company has included a comprehensive list of bidder data, scoring and evaluation material to this Application in order to facilitate review of the reasonableness of the renewable PPA by the Regulatory Operations Staff ("Staff"), and the Attorney General's Bureau of Consumer Protection ("BCP"). Bidder data and bidder evaluation information is included in the Technical Appendices accompanying the filing and is commercially confidential and/or trade secret information subject to protection pursuant to NRS § 703.190. Thus the following Technical Appendix items are provided in confidential volumes without redactions:[2]

- REN-3. 2016 ERCR RE RFP Short List Scoring Report
- REN-4. Initial Screening Evaluation Report of the Independent Evaluator
- REN-5. Final Due Diligence and Selection Reports
- REN-6 Closing Report of the Independent Evaluator
- REN-7 Closing Report Amendment of the Independent Evaluator

[2] Confidential bid and bidder evaluation information will not be provided to any intervener who participated in the 2016 RFP, or who seeks to reserve the opportunity to participate in future renewable competitive solicitations, even pursuant to a protective agreement.

Confidentiality of the bid process, including bid terms and the Company's analysis of the bid, is essential to a successful competitive solicitation and qualify for confidential treatment under NRS § 703.190. This information derives independent economic value from not being generally known. This information is not known outside the Company and its distribution is limited within the Company. Releasing this highly sensitive information would disadvantage Nevada Power by limiting its ability to foster competition among prospective energy suppliers; compromising Nevada Power's negotiating position and reducing its bargaining leverage. Publication of this information would unfairly advantage competing market participants and impair Nevada Power's ability to achieve the most favorable pricing and terms and conditions from suppliers on behalf of its customers.

Pursuant to NAC § 703.5274(1), one unredacted copy of the above-described confidential information will be filed with the Commission's Secretary in a separate envelope stamped "confidential." Redacted versions of confidential information will be submitted for processing and posting onto the Commission's public website. Pursuant to NAC § 703.5274(2), Nevada Power hereby requests that the above-described information not be disclosed to the public. Nevada Power requests that this information remain confidential for a period of five years. At the end of the five year period the Commission may return or destroy the confidential information. Confidential treatment of the above-described information will not impair the ability of the Staff or the BCP to fully investigate Nevada Power's proposals.

VI.

REQUEST FOR DEVIATION FROM REGULATION

NAC § 704.0097 provides that the Commission may allow deviation from any provision of NAC Section 704 if:

(1) Good cause for the deviation appears;

(2) The person requesting the deviation provides a specific reference to each provision of the chapter from which the deviation is requested; and

(3) The Commission finds that the deviation is in the public interest and is not contrary to statute.

NAC § 704.9517(e) provides that if an amendment to an ERCR seeks approval of a renewable energy contract, it must contain information regarding imputed debt mitigation. The Commission's statutes do not require a utility to claim or seek authority to mitigate the effects of any imputed debt arising as the result of a purchased power agreement. Moreover, Nevada Power is not claiming or seeking recovery of imputed debt mitigation related to either of the PPAs that are the subject of this filing. Good cause appearing, Nevada Power asks the Commission to determine that its request to deviate from the provisions of NAC § 704.9517(e) is in the public interest.

VII.

PRAYER

WHEREFORE, Nevada Power requests that the Commission:

(1) Authorize and approve the PPA between Nevada Power and Techren, resulting from the 2016 ERCR RE RFP, after determining that the terms of the agreement are just and reasonable within the meaning of NRS § 704.7821;

(2) Approve the early retirement of Reid Gardner Unit 4 after exhausting all existing coal inventory on or about February 28, 2017.

(3) Grant Nevada Power's request to maintain the confidentiality of the information provided above in section V;

(4) Grant the deviation from NAC § 704.9517(e) as requested above in section VI;

(5) Establish a procedural schedule to accommodate the approval of the ERCR Plan 2nd Amendment no later than December 28, 2016.

(6) Grant any other requests as are specifically set forth in the testimony and exhibits filed herewith, both those that are directly addressed and those that are not directly addressed in this Application;

(7) Grant such additional other relief as the Commission may deem appropriate and necessary.

Dated this 15th day of August, 2016.

Respectfully submitted,

NEVADA POWER COMPANY

/s/Michael Greene
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APPLICATION EXHIBIT A

ACTION PLAN

ACTION PLAN
Nevada Power Company
Docket No. 16-08____
Second Amendment to Emissions Reduction and Capacity Replacement Plan

NAC § 704.9517(1) requires that an electric utility seeking to amend its emissions reduction and capacity replacement action plan include in the filing a section that identifies the items for which the utility is requested specific approval. This information is set forth both in summary fashion and in detail in the narrative attached hereto and incorporated herewith. Nevada Power seeks approval of the following items:

1. *Techren Solar, PPA.* Authorize and approval of the PPA between Nevada Power and Techren, resulting from the 2016 ERCR renewable energy request for proposal, after determining that the terms of the agreement are just and reasonable within the meaning of NRS § 704.7821

2. *Reid Gardner Unit 4 retirement.* Approve the early retirement of Reid Gardner Unit 4 after exhausting all existing coal inventory on or about February 28, 2017.

APPLICATION EXHIBIT B

NARRATIVE

I. ERCR COAL RETIREMENT

A. BACKGROUND

Senate Bill 123 (2013 Nevada Legislature) and the associated regulations require the structured and orderly retirement of coal fired generating assets in southern Nevada. Nevada Power Company ("Nevada Power" or "Company") filed its initial Emissions Reduction and Capacity Replacement ("ERCR") plan on May 1, 2014 and received approval to retire approximately 300 megawatts ("MW") of coal fired generation at Reid Gardner units 1-3 ("RG1-3") before December 31, 2014. The Company's approved ERCR plan also contemplates the retirement of an additional 250 MW of coal fired generation at Reid Gardner Unit 4 ("RG4") before December 31, 2017, as well as the elimination of its interest in the Navajo coal fired facility by the end of 2019.[1]

Through this filing, Nevada Power advances the goals of SB 123 –the orderly and structured retirement of coal-fired generation while, providing for the cost-effective replacement of such retired capacity – by requesting approval to retire RG4 in the first quarter of 2017 (*i.e.*, on or around February 28, 2017). Nevada Power also seeks approval of a 100 MW renewable power purchase agreement, which resulted from the third and final request for proposals issued pursuant to Section 704.7316(2)(b) of the Nevada Revised Statutes ("NRS"). Through a contemporaneously filed integrated resource plan amendment, Nevada Power asks the Commission to approve its acquisition of the South Point Energy Center natural gas fueled combined cycle facility ("South Point") and a lease agreement allowing the customers of Sierra Pacific Power Company ("Sierra") to benefit from 30 percent of South Point. Nevada Power's integrated resource plan amendment is a companion filing to the triennial integrated resource plan filed by Sierra and now assigned docket number 16-07001.

Together, these filings position Nevada Power to meet the objectives of SB 123 while maintaining its ability to provide reliable and low-cost energy services to customers. First, by placing RG4 on must-run status in January and February 2017, Nevada Power ensures that the remaining coal inventory is fully used to provide energy to customers. At the same time, Nevada Power eliminates the possibility that significant costs will be incurred to dispose of unburned coal inventory at the end of 2017. Furthermore, Nevada Power reduces the cost of retiring RG4 in 2017 by burning inventory at the optimal time under currently projected fuel and purchase power prices.

Second, Nevada Power proposes to add a new utility, or "universal" scale solar project to its generation portfolio through a new purchased power agreement ("PPA"). This PPA adds

[1] *See*, Nev. Admin. Code § 704.90593 (defining "eliminate" and "elimination" for the purposes of the Commission's emissions reduction and capacity replacement plan regulations).

approximately 285,000 MWh of renewable energy in the first year of production at a first-year price of $33.99 per MWh. The levelized cost of the contract is $40.62 per MWh. The levelized cost represents a 16.44% reduction from the Playa II renewable PPA, which when approved had the lowest levelized cost of energy of any renewable energy agreement presented to the Commission by Nevada Power. This ERCR amendment advances Nevada's energy policy goals by furthering the development of Nevada's solar resources for the benefit of **all** of the Company's customers with the **lowest** cost solar resource currently available to the Company.

Third, while it is not the subject of this filing, the acquisition of South Point secures needed, flexible and dispatchable capacity at an attractive price for NV Energy's customers. As the Commission's Modified Final Order in Docket No. 15-07004 recognized, Nevada Power's triennial integrated resource plan purposely left unaddressed open capacity positions ("Open Position") in 2018 and 2020, attributable primarily to the planned retirement of resources and the expiration of certain contracts. The acquisition of South Point addresses the most immediate Open Position in the least cost manner.

In summary, the three filings made by Sierra and Nevada Power fit together cohesively to further Nevada's goals of retiring coal-fired generation in an orderly and structured fashion, developing domestic renewable energy resources at the lowest cost, and planning for the long-term energy needs of all Nevadans. Nevada Power respectfully requests that the Commission approve this Second Amendment to the Company's ERCR plan.

B. CAPACITY POSITION

Nevada Power is proposing to acquire South Point at the end of 2016 or early 2017. With the capacity provided by this acquisition, the Company is not planning to acquire any market capacity to meet projected peak requirements in 2017. Assuming the proposed acquisition of South Point, Nevada Power is projected to have 462 MW of resources in excess of projected summer peak 2017 needs. With the South Point acquisition, Nevada Power will still have ample summer 2017 capacity if it retires RG4 early in 2017.

C. STRUCTURED AND ORDERLY RETIREMENT AND LEAST COST PLANNING

Nevada Power has developed a plan to facilitate the closure of RG4 in a structured and orderly manner that will also reduce customer costs. Key assumptions in the analysis included: (1) unburned coal inventory provides customers with no economic benefits and would require additional expenses in the form of disposal at an estimated cost of $40-60/ton; (2) avoiding any months of operational costs reduces overall RG4 costs to customers. Nevada Power evaluated three alternative scenarios for shutting down RG4:

1. Base Case scenario: Traditional economic dispatch through retirement at year end 2017.
2. Retire February 2017 Scenario: Forced dispatch in January and February 2017 to exhaust coal inventory by February 28, 2017.
3. Retire July 2017 Scenario: Forced dispatch in June and July 2017 to exhaust coal inventory by July 31, 2017.

Table RG4-1 shows the total fuel and purchase power cost for each scenario utilizing the Company's June PROMOD production cost model simulations. A more detailed analysis can be found in Technical Appendix Item GEN-1.

TABLE RG4-1 – RG4 RETIREMENT ANALYSIS

		Base Case	Retire Feb 2017	Retire Jul 2017
		2017	2017	2017
System Costs		$1,480,328,878	$1,480,975,715	$1,483,539,499
Coal Tons Remaining		88,381	0*	0**
Cost disposal at $40/ton	$	3,535,250		
Total	$	1,483,864,129	$ 1,480,975,715	$ 1,483,539,499
Change from Base Case			$ (2,888,414)	$ (324,629)

NOTES:
Base Case assumes RG4 economic dispatch thru 12/31/2017.
Retire Feb 2017 case assumes RG4 economic dispatch in 2016, must run in Jan-Feb 2017, and exhausts coal approximately ***2/16/2017****.*
Retire Jul 2017 case assumes RG4 economic dispatch in 2016, continues economic dispatch thru May 2017, becomes must run 6/1/2017, and exhausts coal approximately ***7/11/2017****.*

Scenario 2, Retire Feb 2017, in Table RG4-1, provides customers with the least cost alternative and accomplishes all of the goals of SB 123. Natural gas production displaced by must run coal generation is forecasted to have higher value in the winter season due to higher projected natural gas prices.

Based on this analysis, Nevada Power is proposing to dispatch RG4 on January 1, 2017 and run the unit until the then existing coal inventory has been exhausted. Current projections indicate doing so would use all remaining coal inventory before the end of February 2017. The Company is proposing to retire this unit on or about February 28, 2017.

The primary objective of retiring RG4 on or about February 28, 2017, therefore, is reducing overall costs. Nevada Power's analysis begins with the premise that, under current and projected fuel and purchased power conditions, RG4 will not operate a sufficient number of hours in 2017 to burn all of the existing coal inventory if the dispatch decisions are based solely on incremental cost

economics. This assumption is based on the Base Case results, which leaves approximately 88,000 tons of coal in inventory at the end of 2017.[2] Unused coal inventory negatively affects Nevada Power's customers in two respects. First, the value of the unused inventory would be included in regulatory accounts that would place upward pressure on prices. The prices that Nevada Power would charge for energy would, in effect, reflect the value of this unused inventory while customers would not receive energy from the inventory. Second, and further compounding the problem, the cost of removing the unused inventory would, pursuant to SB 123, eventually be reflected in the prices that Nevada Power's customers pay for energy.

Accordingly, Nevada Power analyzed two different alternatives for burning the existing coal inventory – a winter burn option and a summer burn option. Production cost modeling demonstrated that the winter burn option provides the lowest overall production costs for Nevada Power's customers.

D. ADDITIONAL BENEFITS

Using up existing coal inventory in the early part of 2017 and retiring the unit also provides additional benefits:

1. Appropriate cost structure for 2017 General Rate Case ("GRC")
2. Transitioning employees to other operating sites
3. Expediting removal and remediation activities
4. NERC CIPv6 compliance
5. Environmental Stewardship
6. Continuous Emissions Monitoring Systems and Emissions Testing and Certification

1. Appropriate cost structure for 2017 GRC

Nevada law currently requires Nevada Power to initiate a general rate or regulatory pricing review proceeding every three years. Nevada Power's next scheduled general rate review proceeding will commence in June 2017 and will use as its historical test period the 12-months ending December 31, 2016. However, proforma adjustments are often made to reflect known changes in operating and maintenance expense. Moreover, plant balances are updated to the end of the certification period, which typically is May 31 of the filing year.

Retiring RG4 on February 28, 2017, will allow Nevada Power to prepare a proforma adjustment removing operating and maintenance expense associated with RG4 from the Company's revenue requirement. And, since the plant will be retired, the undepreciated book value of the unit will not be reflected in plant-in-service on May 31, 2017 (the expected certification date for Nevada

[2] Coal inventory typically is included in an energy company's rate base. See Section D, 1, below.

Power's 2017 price review proceeding). Moreover, the coal inventory will be exhausted before the anticipated certification deadline reducing the impact that coal-inventory typically has on the Company's base general operating revenue requirement. When new prices become effective January 1, 2018, those prices will **not** reflect the operation of RG4.[3] Thus, the retirement of RG4 on February 28, 2017, will facilitate the logical establishment of prices for energy that reflect Nevada Power's going forward operating plans.

2. Transitioning employees to other operating sites

One of NV Energy's core principles is employee commitment. Retiring RG4 around February 28, 2017, advances this objective by allowing the logical redeployment of Reid Gardner employees. The retirement of RG4 in February 2017 is also consistent with text of SB 123 requiring a plan for the orderly and structured retirement and replacement of coal-fired generating capacity.

Nevada Power will use existing employees from the Reid Gardner site to assist in the retirement and pre-demolition activities. Additionally, some operational employees will be assigned to other operating locations to augment existing staff and displace contractors, and to fill vacancies expected through normal attrition. Additionally, the proposed South Point acquisition will close with a staffing deficiency, as Calpine is not currently replacing personnel. It will be very efficient to use Reid Gardner employees to fill vacancies as soon as possible in order to allow these employees a period of time to become acquainted with their newly assigned facility in time for peak summer demand.

If RG4 is not allowed to retire in February 2017 and a vacancy exists early in the year, the staffing options become less desirable: fill vacancies by hiring new employees, work shorthanded and place burden on already minimal staffing, or allow RG4 employees to leave earlier and place Reid Gardner in a disadvantaged operational state.

3. Expediting removal and remediation activities

Reid Gardner Units 1, 2 and 3 are in a "cold and dark" state awaiting final demolition. Plant teams performed an extensive amount of equipment isolation, equipment removal, utility relocation, and material salvage in 2015 and 2016. Contractors also demolished some Unit 1, 2, and 3 structures so that petroleum-impacted soil removal actions could be completed in areas of Units 1, 2, and 3. RG4 retirement on or around February 28, 2017 would allow plant employees to complete RG4 decommissioning work prior to mobilizing a demolition contractor in January 2018.

Expediting the removal of all facilities at Reid Gardner also will be beneficial in investigating and determining the need for remediation under the Administrative Order on Consent ("AOC") with

[3] The Company's revenue requirement will reflect regulatory assets provided for by SB 123.

the Nevada Division of Environmental Protection. Investigation of several potential sources within the plant, such as the coal pile areas, is not possible until the surface facilities are removed and coal piles exhausted. In particular, retirement of RG4 on February 28, 2017, would allow earlier investigation of the coal pile areas ahead of plant demolition and will result in an improved conceptual site model, which ultimately determines what, if any, remediation will be required for soil and groundwater under the site

4. NERC CIPv6 Compliance

If it is operated beyond April 1, 2017, RG4 will need to demonstrate compliance with specific NERC Critical Infrastructure Protection plan, version 6 ("CIPv6") requirements. Retiring the unit before this date, would eliminate cost and effort required to comply with the necessary physical and electronic access controls required by CIPv6 requirements, as well as the necessary cyber security awareness training for personnel accessing that site.

5. Environmental Stewardship

Environmental Stewardship and the Company's commitment to reducing the impact of operations on the environment includes moving away from high-carbon intensity generation and focusing on sustainable solutions. While early retirement is justifiable for many economic and operational reasons, there is also a benefit of continued pursuit the Companies' Environmental Commitment including the retirement of the last remaining coal fired generation facility in southern Nevada.

6. Continuous Emissions Monitoring Systems and Emissions Testing and Certification

Completing the coal burn by February 28, 2017, would ensure that all plant operations and emissions would occur in the first quarter of 2017. Operating in both June and July would span two quarters and require compliance stack testing in each quarter. While not expected, there could always be some risk of non-compliance – especially with Mercury and Air Toxics Standard (MATS) testing. Additionally, plant operations in each respective additional quarter will require operation of the continuous emission monitoring system for the boiler and the six ambient air quality monitoring stations around the plant. If the unit is shut down by February 28, 2017, only the ambient air quality monitoring system on the Moapa Indian Reservation will be required to remain in operation.

II. RENEWABLE ENERGY RESOURCES AND ERCR

A. BACKGROUND FOR 2016 ERCR RENEWABLE ENERGY RFP

Under the original Nevada Power ERCR filing,[4] the Commission approved the plan to issue three separate 100 MW renewable energy requests for proposals ("RFP") as well as contracting for 50 MW of Company-owned renewable generation, as contemplated by SB 123. The first two RFPs and the renewable energy power purchase agreements ("PPAs") associated with them, and 15 MW of the Company-owned renewable generation were approved in Docket No. 15-07003. This 2016 ERCR 2nd Amendment filing includes a summary of the results of a third RFP ("2016 ERCR RE RFP") that includes solicitations to fill the remaining 100 MW renewable PPA and 35 MW Company-owned renewable generation, issued February 24, 2016. Concurrent with the 2016 ERCR RE RFP, Nevada Power solicited customer interest in the NV GreenEnergy Rider ("NGR") program through an open season event. In anticipation of customer interest in this program, the 2016 ERCR RE RFP sought energy in excess of the 100 MW under a PPA.

Consistent with the approach set forth in the ERCR filing, the Company prepared and completed the 2016 ERCR RE RFP for a PPA and Company-owned generation with new renewable energy projects in Nevada. The Company developed and implemented a process for this 2016 ERCR RE RFP consistent with the guidance provided by the Commission's Regulatory Operations Staff ("Staff").

As further described below, the Company successfully completed negotiations for a 100 MW PPA under the 2016 ERCR RE RFP, which is being presented in this filing. However, the Company is not presenting the 35 MWs of Company-owned renewable resources for approval in this filing, nor is it bringing forward any new NGR requests at this time.

B. 2016 RFP PROCESS AND EVALUATION METHODOLOGY

Request for Proposal Protocol

In 2015, Assembly Bill 498 became law. This legislation delayed implementation of the two remaining components of Senate Bill 123. The bill required that the Commission determine Nevada Power had "satisfactorily demonstrate the need for" additional generating capacity before the Company issued the final request for 100 MW of renewable energy proposals. The Commission's modified final order in Docket No. 15-07004 finds that Nevada Power left "unaddressed, a considerable open position in 2018," as well as an Open Position in 2020. The

[4] *See*, Docket No. 14-05003.

order then directs the Company to issue a "non-technology-specific RFP" requesting products that are consistent with its resource needs.[5] This finding expressly determines that Nevada Power has the need for additional capacity in 2018. Based on this finding, Nevada Power issued three separate requests for proposals: a request for 100 MW of renewable energy, a request for 35 MW of renewable energy to be provided by an asset owned by the Company, and an open resource (or non-technology specific) request for a variety of projects to meet the needs of customers beginning in 2018.

For the 2016 ERCR RE RFP the Company prepared a bid protocol ("Protocol") describing the purpose of the RFP, the process by which the RFP would be conducted, the schedule, a description of the information required for each bid, bid submittal instructions and minimum eligibility requirements. The Protocol also included a description of the evaluation process. The Protocol provided a pro-forma PPA for bidders to review and comment for the 100 MW PPA as well as a pro-forma Asset Purchase Agreement ("APA") which included associated Engineering, Procurement and Construction ("EPC") agreement and Operation and Maintenance Term Sheet, for the remaining 35 MW Company-owned renewable generation. In addition, the Company offered the Dry Lake Solar Energy Zone land parcels for consideration as a site location for the RFP bidders.

The Protocol required bidders to register in the Company's PowerAdvocate system, a tool used by the Company's procurement group for competitive bidding processes. Bidders that registered in PowerAdvocate were provided the bid Protocol and attachments.

All communication with bidders was conducted through PowerAdvocate, up to negotiations. Bidders were permitted to submit questions through PowerAdvocate to the Company. Company responses to questions were provided to the bidder through PowerAdvocate. Bids were required to be submitted using the PowerAdvocate tool, which were then provided to Company personnel for evaluation.

A bid fee was required for each bid submittal ($10,000 for 100 MW and greater, $5,000 for 35 MW), including two bid alternatives, and an additional $1,000 fee for up to three more alternative bids.

Selection and Role of the Independent Evaluator

The Company's RFP Protocol called for the use of an IE to monitor and oversee the RFP process to ensure a competitive and transparent process. To select the IE, the Company issued a RFP on February 12, 2016, with proposals due on February 19, 2016. The Company received proposals

[5] Modified Final Order, para. 318, Docket No. 15-07004 (iss. Feb. 12, 2016).]

from five entities. The proposals were evaluated based on qualifications and pricing. The Company selected Merrimack Energy Group ("Merrimack"). The Company reviewed its evaluation and selection of Merrimack as the IE with Staff on February 29, 2016. On March 4, 2016 Staff stated that it reviewed the information describing Merrimack's selection and had no additional questions.

Founded in 1991 and reorganized in 2002, Merrimack provides energy procurement, energy project origination, project development, consulting services and related marketing and analytical support to all segments of the domestic and international energy markets. Merrimack has extensive experience in all phases of power procurement and resource planning in power markets throughout the United States and Canada. Wayne Oliver, Principal of Merrimack, was assigned to Nevada Power's project. Mr. Oliver has managed approximately 45 competitive procurement assignments on behalf of electric utilities, public utility commissions and other power buyers. He has served directly as independent evaluator, monitor, or auditor for more than 25 competitive procurement assignments for conventional resources, renewable resources, demand-side management resources, or distributed resources. Merrimack performed the IE work in both of Nevada Power's prior ERCR competitive solicitations.

For this assignment, the duties and responsibilities of the IE were as follows:

- The IE monitored and oversaw the RFP to ensure that a competitive and transparent RFP process was conducted, including the following:
    - Evaluation and ranking of bid responses;
    - Selection of the Initial Short List of bids;
    - Selection of the Final Short List of bids; and
    - Negotiation of the contracts with successful bidders
- The IE participated in communications and discussions with RFP respondents.
- The IE verified the basis for the Company's selection of the Initial Short List of bids, including:
    - Verifying that the 2016 ERCR RE RFP design requirements pursuant to (NRS § 704.7316(2)(b)(4)) were used as the basis for the Initial Short List; and
    - Verifying that the non-price score was based on project maturity and resource characteristics provided in the RFP (*e.g.*, permit status, COD reasonableness, resource term, portfolio diversity, etc.).
- Completion of the Initial Screening Evaluation Report (Confidential Technical Appendix REN-4).
- The IE verified the basis for selection of the Final Short List of bids, including:
    - Verifying the results of modeling the effect of candidate resources on overall system costs and risks; and

  - Verifying that the portfolio modeling and decision criteria used to select the Final Short List of bids was consistent with the 2016 ERCR RE RFP design evaluation criteria.
- The IE independently scored all of the bids to determine whether the Company's initial and final selections were reasonable.
- The IE and the Company compared scores of selected bids and reconciled and or resolved any differences.
- Completion of a closing report that details bid scoring and evaluation results with a detailed assessment of the Company's selection of the winning proposals (Confidential Technical Appendix REN-6).
- The IE monitored negotiations between the Company and the selected bidders.
- Completion of a supplemental report covering the negotiations (Confidential Technical Appendix REN-7).

2016 ERCR RE RFP Proposals

The 2016 ERCR RE RFP was issued on February 24, 2016. The RFP sought two products for which the Company was seeking competitive proposals. Product 1 was for a 100 MW or greater PPA product and Product 2 was for a 35 MW Company-owned facility. Depending on customer demand under the NGR tariff, the 100 MW PPA product could be increased to meet the needs of customers, so bidders were encouraged to provide pricing above 100 MW as well.

The Company requested proposals from projects that qualified as renewable energy resources under NRS § 704.7811, including but not limited to solar, geothermal, wind, and biomass. Proposals with a capacity of at least 100 MW were considered for the PPA product. The transaction structure was to be a PPA with a term of between 10 and 25 years. The Company expressed a preference for a commercial operation date on or before December 31, 2017, however, during the 2016 ERCR RE RFP process it requested additional pricing for commercial operation dates in 2018, at the request of Staff and the Bureau of Consumer Protection ("BCP") during a meeting on April 15, 2016. Projects were required to be located in Nevada, integrated into the NV Energy transmission system as a network resource and capable of delivering energy to serve the Company's retail load. The 2016 ERCR RE RFP Protocol and attachments are included in Technical Appendix REN-1.

Bids were received on March 18, 2016. The Company received 24 conforming bids from 11 counterparties, totaling 1,310 MW. Eighteen bids were for Product 1 PPAs, of which seven were for PPAs greater than 100 MW. Six bids were received for Product 2 for Company-owned 35 MW assets. All bids proposed multiple alternatives. Although the 2016 ERCR RE RFP was open to all renewable technologies, all conforming bids were for solar photovoltaic ("PV") products. Reasons for non-conformance included out of state resources, inadequate size, incorrect use of Company-

provided development site and financial insolvency of the bidder's parent company. Table REN-1 provides a summary of the bids received in response to the 2016 ERCR RE RFP.

TABLE REN-1 – PROPOSALS RECEIVED FOR 2016 ERCR RE RFP

Technology	Number of Projects (Bids)	Number of Bids+Alternatives	Total MW
Product 1: 100 MW PPA Bids	11	105	1,100
Product 2: 35 MW Company-owned	6	21	210
PPA Bids in Excess of 100 MW	7	54	1,275
Total	**24**	**180**	**2,585**

Initial Evaluation Process

In the initial evaluation phase, bids were ranked based on a combination of three criteria: price, non-price and economic benefits to the State of Nevada.

Price was measured by calculating the levelized cost of energy ("LCOE") over the term of the proposed PPA. The LCOE included projected energy payments under the PPA and the estimated cost of network upgrades for the proposed project. The LCOE accounted for any escalation of the bid price, as well as any degradation in energy deliveries over the term of the PPA, as indicated by the bidder in their bid submittal. The price score was given a 60 percent weight.

The non-price scoring was based on four categories: (1) the bidder's project development experience, (2) the technology of the project, (3) conformity to the pro-forma PPA and (4) project development milestones. The non-price score was given an overall 30 percent weight and was further broken down as follows.

Bidder's Project Development Experience: the Company evaluated the bidder's (a) development experience, (b) ownership/operation and maintenance ("O&M") experience, (c) Occupational Safety and Health Administration recordable incident rate, and (d) financial capability. Bidder's project development experience accounted for 25 percent of the non-price score.

Technology of the project: the Company evaluated the bidder's (a) technical feasibility, (b) resource quality, (c) bidder's equipment supply control and (d) utilization of the resource. Technology of the project accounted for 25 percent of the non-price score.

Conformity to the pro-forma PPA: the Company evaluated the magnitude of the bidder's proposed edits to the pro-forma agreements. Conformity to the pro-forma agreements accounted for 25 percent of the non-price score.

Project Development Milestones: the Company evaluated (a) site control, (b) permitting status and feasibility, (c) financing status, (d) interconnection status, (e) transmission requirements and (f) reasonableness of critical path dates. Project development milestones accounted for 25 percent of the non-price score.

Finally, the economic benefit scoring was based on four categories: (1) jobs to be created during construction, (2) permanent jobs to be created (3) value of direct expenditures of the project in Nevada and (4) other economic benefits to Nevada. The economic benefits score was given a 10 percent (10%) weight.

Based on the resulting weighted scores of the bids, initial shortlists for Product 1 (100 MW PPA) and Product 2 (35 MW APA) were developed. Table REN-2 provides a list of the bids for the 2016 ERCR RE RFP initial shortlist.

TABLE REN-2 – 2016 ERCR RE RFP SHORTLIST

Bidder	Product	Offer COD (Contract Term)
Preferred Bid	Product 1 (100 MW PPA)	12/2018 (25)
Alternate Bid	Product 1 (100 MW PPA)	12/2018 (20)
Preferred Bid	Product 2 (35 MW APA)	12/2018
Alternate Bid	Product 2 (35 MW APA)	12/2018

The initial shortlist selections were reviewed with the IE and the IE concurred with the Company's selection.

Bidders selected for the 2016 ERCR RE RFP initial shortlist were notified on April 26, 2016. Shortlisted bidders were permitted to submit a "best and final" proposal by April 27, 2016. Bidders that were not selected for the shortlist were also notified on May 4, 2016.

Present Worth Revenue Requirements ("PWRR") Analysis

Overview. Bids that made the initial shortlist in the 2016 ERCR RE RFP were evaluated using the Company's Present Worth Revenue Requirement ("PWRR") analysis. Each bid was run through the Company's production cost simulation model ("PROMOD"), and capital expense recovery model ("CER") to determine the potential PWRR impacts that each bid would have on the Company's customers. The total PWRR for each bid scenario was reported and ranked from lowest PWRR to highest PWRR.

Underlying Assumptions. The Company used the 2015 Nevada Power Integrated Resource Plan ("IRP") Preferred Plan as the starting point for the PWRR analysis, modified to reflect the load forecast prepared for Sierra's 2016 triennial IRP and new renewable placeholder build-outs to match the load forecast. The new renewable placeholder build out included a placeholder for the 100 MW PPA and the 35 MW Company-owned project being evaluated as part of the PWRR analysis.

Embedded in the 2015 Nevada Power IRP Preferred Plan are the general assumptions approved by the Commission in its final order in Docket No. 15-07004 for fuel and purchased power price forecasts, and other system configuration and resource mix assumptions. Updates to these input assumptions are not necessary to isolate and select the most favorable bids on behalf of utility customers.

Bid Modeling. For each bid on the initial shortlist, the Resource Planning department executed the following modeling steps:

1) Began with the modified 2015 Nevada Power IRP Preferred Plan as the Base Case;

2) Created a Loads and Resources ("L&R") Table for each bid. Because each bid can potentially provide a different peak planning capacity to the system and because the timing of each bid may be different, the Open Position for each bid scenario could be different. This would create different Open Position costs in each bid scenario. The Open Position cost is computed in the L&R Table then captured in the analysis as a fixed cost. The L&R Tables for each of the two 100 MW PPA bids can be found in Technical Appendix Item ECON-1;

3) Created an Operating Reserves Requirement for each bid. The Company models increased spinning reserve requirements for solar generation due to the intermittent nature of the resource. For every 100 MW of nameplate capacity for solar resources, the

Company adds an additional 4 MW of spinning reserve requirement.[6] The Operating Reserve Requirement is modeled in PROMOD. The operating reserve calculation can be found in Technical Appendix Item ECON-2;

4) The modified 2015 Nevada Power IRP Preferred Plan had placeholder resources for the eventual winners of the 100 MW PPA and 35 MW APA products in PROMOD. These placeholder resources were replaced with the actual bid energy profiles and pricing. Both of the shortlisted bids for the 100 MW PPA were evaluated while the 35 MW APA placeholder remained constant in all cases. The 12x24 supply tables for both bids can be found in confidential Technical Appendix Item REN-5.

5) Some of the bids had capital costs required for network transmission upgrades. These costs were captured in the CER and included in the PWRR analysis. The capital costs for the network transmission upgrades are shown in confidential Technical Appendix Item REN-5.

PWRR Results. Table PWRR-1 shows the PWRR Results for the 100 MW PPA. Annual production costs and PWRR can be found in Technical Appendix Item ECON-3.

TABLE PWRR-1: 100 MW PPA PWRR RESULTS

Project	20 Year PWRR 2017-2036 (million $)	30 Year PWRR 2017-2046 (million $)	20 Year PWRR Increase vs Least Cost (million $)	30 Year PWRR Increase vs Least Cost (million $)	20 Year PWRR Rank	30 Year PWRR Rank
Techren100	$ 21,132	$ 27,162	$ -	$ -	1	1
Alternate Bid	$ 21,138	$ 27,175	$ 7	$ 13	2	2

100 MW PPA Key Result Findings. The following are the key results of the 100 MW PPA PWRR Analysis:

- The Techren100 bid provided energy at a lower cost than the Alternate Bid.
- Although the Alternate Bid provided more energy on an annual basis, the energy was at a higher cost.

6 *See*, Direct Testimony of Mr. Richard Salgo in Docket No. 11-03014, Q&A12.

- Techren100 had a lower capital network upgrade cost than the Alternate Bid ($1.4 million vs. $5.1 million).

- Techren100 had a longer term than the Alternate Bid (25 years vs. 20 years). This provided capacity and fuel and purchase power savings for the latter five years.

Additional Analysis of Shortlisted Bids

Additional due diligence was conducted on the shortlisted bids. The due diligence included: (1) status and timing of interconnection, (2) site control, (3) status of material permits, (4) solar panels, (5) other material equipment, (6) delivery profile, (7) milestone schedule, (8) material exceptions to the pro-forma PPA, (9) development and operating experience, (10) financial capability, (11) safety, (12) water supply, and (13) project labor agreement. Burns & McDonnell was retained to evaluate items (4), (5), (6), (7) and (9) and internal subject matter experts evaluated the remaining items. Based on this analysis, the top bidder for negotiations was selected.

No material concerns were raised with the Techren or alternate bids for the 100 MW product.

Final selection

For the 100 MW PPA the Company selected Techren/Boulder City as the preferred proposal. The preferred and alternate bidders were notified, accordingly, of their status in the final selection on May 19, 2016.

The decisions described above were reviewed with the IE and the IE concurred with the Company's selections. The Company's documentation on its final analysis and selection is contained in Confidential Technical Appendix REN-5.

The Company successfully completed negotiations with Techren on the preferred proposal for the 100 MW PPA selected in the 2016 ERCR RE RFP.

For the 35 MW APA, negotiations continued until July 12, 2016. Nevada Power was not able to come to an agreement on several material issues under the APA.

III. APPROVAL OF A 100 MW RENEWABLE PPA

The ERCR legislation and the associated regulations relating to renewable energy require Nevada Power to provide plans for a) the issuance of RFPs for 300 MW of electric generating capacity

from renewable energy facilities and b) the construction or acquisition of 50 MW[7] of electric generating capacity from renewable energy facilities. The Techren PPA represents the final 100 MW of renewable PPAs specified in ERCR legislation. The Techren PPA also will allow the Company to lock in modest levels of renewable energy supply at the current market's attractive pricing for the long-term benefit of its customers.

Nevada Power requests that the Commission's order reflect the statutory consequence of such a finding; namely, that the 100 MW PPA contract and its terms shall be deemed to be a prudent investment and the utility provider may recover all just and reasonable costs associated with the contracts pursuant to NRS § 704.7821(2)(c)(2). Table REN-3 summarizes the new contract completed and filed for Commission approval in this filing.

TABLE REN-3 – NEW CONTRACT

Counterparty	Agreement Type	Technology	Capacity	Expected Commercial Operation
Techren Solar, LLC	PPA	Solar PV	100 MW	Q4 2018

Consistent with NRS § 704.7316, the Company evaluated the RFP responses based on (1) the greatest economic benefit to the State of Nevada, (2) the greatest opportunity for the creation of new jobs in the State of Nevada and (3) the best value to NV Energy's customers.

TECHREN – 100 MW PPA

The proposed plant is a 100 MW (AC) solar PV project being developed by Techren in Boulder City, Nevada. Techren is a U.S.-based company that is headquartered in Irvine, California. It is a subsidiary of Hanwha Q Cells, a vertically integrated South Korean company, which is involved in all aspects of solar PV business including development, construction, financing, and ownership of solar PV facilities worldwide. Hanwha Q Cells is one of the world's largest solar cell manufacturers and has manufactured and deployed over 4.3 gigawatt ("GW") of solar PV cells and panels worldwide.

The project is in advanced stages of development and if approved is expected to be operational in the fourth quarter of 2018. The project is located in Boulder City, Nevada in a specially designated solar energy zone. The project will consist of monocrystalline high-efficiency PV panels mounted

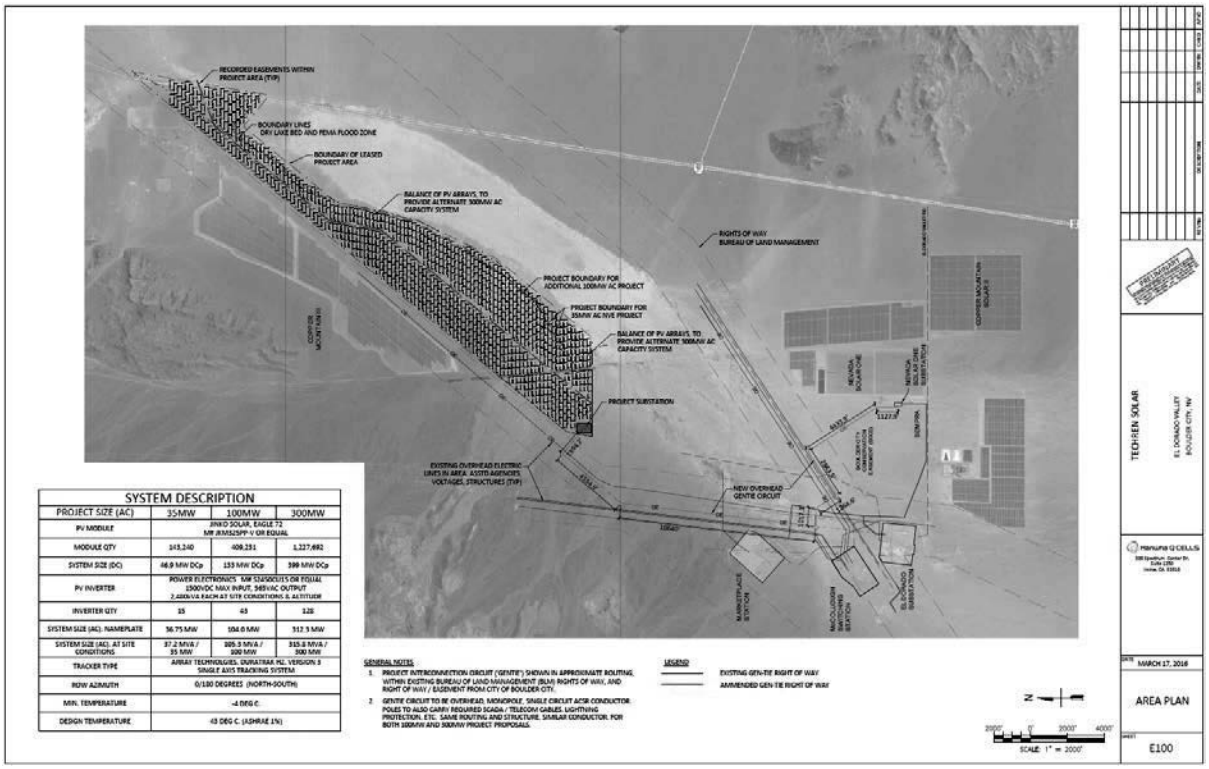
[7] The approved ERCR plan allowed for 50MW of Company-owned renewable generation. 15 MW of that was fulfilled by the Nellis Solar project with 35 MW remaining to be fulfilled.

on horizontal single axis trackers. The DC energy generated by the panels will be wired to combiner boxes, then to inverters which convert the DC energy to AC energy. The AC energy will be routed to a step-up transformer where it will be delivered to NV Energy's Nevada Solar One substation.

A work site agreement, dated June 21, 2016, was successfully executed between Techren Solar, LLC and IBEW Local Unions 357 and 396.

The PPA is for a 25 year term with a base price of $33.99 per MWh escalating at 2% per year. The project has an expected net capacity rating of 100 MW (AC). It is expected to generate 285,952 MWh and provide 286,980 thousand portfolio credits ("kPCs") in the first year. Annual energy production and credits are projected to degrade at approximately three-tenths percent (0.3%) per year. The PPA includes options for Nevada Power to purchase the asset after the sixth, tenth, fifteenth and twentieth year and at the end of the term. The purchase price for the option would be at fair market value. A copy of the PPA can be found in Technical Appendix REN-2. Figure REN-1 shows a map of the project site.

FIGURE REN-1
TECHREN SOLAR – PROJECT SITE



To aid the Commission in its evaluation of Techren's Boulder City Solar Plant, the Company has prepared a summary of the various findings the Commission must make regarding this and any renewable PPA.

NAC § 704.8885 (New renewable energy contracts: Review by Commission; criteria for approval) and NAC 704.8887 (New renewable energy contracts: Determination of whether price for electricity is reasonable) requires that the Company provide specific information regarding new renewable energy contracts for which it is seeking approval. For Techren, this information is set forth below:

NAC § 704.8885(2)(a) requires the Commission to determine the reasonableness of the price of electricity based on the factors set forth in NAC 704.8887, detailed in pertinent part as follows:

NAC § 704.8887(1) instructs the utility to calculate the price for electricity acquired or saved pursuant to a new renewable energy contract or energy efficiency contract by calculating the levelized market price for the electricity.

The LCOE for the contract is $40.62/MWh, including network upgrade costs. A comparison to other projects bid into the 2016 ERCR RE RFP is shown in Confidential Technical Appendix REN-3. The rate is for the purchase of energy and PCs at a blended rate.

NAC § 704.8887(2)(a) requires the Commission to address whether the new renewable energy contract or energy efficiency contract comports with the utility provider's most recently approved plan to increase its supply of or decrease the demand for electricity.

SB123, in particular NRS § 704.7316, coupled with the Commission's regulations implementing the statute, LCB File No. 131-13, require that Nevada Power's ERCR Plan address, among other things, the replacement of retired or eliminated coal-fired capacity by issuing three requests for proposals for 100 MWs each of generating capacity from renewable energy facilities on or before December 31, 2014, December 31, 2015, and December 31, 2016.

NAC § 704.8887(2)(b) addresses the reasonableness of any price indexing provisions set forth in the new renewable energy contract or energy efficiency contract.

The price for renewable energy and PCs set forth in this contract is $33.99 escalating at 2% per year for the term of the contract.

NAC § 704.8887(2)(c) address whether the new renewable energy systems will reduce environmental costs in this State as compared to competing facilities or energy systems that use fossil fuels.

The technology that the Techren project utilizes creates zero air emissions. When compared to a modern gas-fired combined cycle unit, the emissions avoided are shown in Table REN-4.

TABLE REN-4 - AVOIDED AIR EMISSIONS

AVOIDED AIR EMISSIONS*					
	S02	**CO**	**VOC**	**NOX**	**PM**
Project	**ton/yr**	**ton/yr**	**ton/yr**	**ton/yr**	**ton/yr**
Techren PPA	**0.5931**	**0.5237**	**0.03015**	**6.2867**	**2.1748**

* Avoided Emissions derived from average heat rate for a state of the art combined cycle unit. This is a conservative assumption as avoided emissions are likely to be from higher heat rate market purchases or from older, less efficient units.

The project uses de minimis amounts of water. The project creates no waste streams in its production, efficiently utilizes land for solar energy generation, and has minimal impacts on wildlife, including applicable tortoise protection measures.

It should be noted that since this system is fulfilling the renewable requirement under the ERCR plan, an avoided unit may be another renewable project, and thus the emissions savings would be zero.

NAC § 704.8887(2)(d) addresses the net economic impact and all environmental benefits and environmental costs to this State in accordance with NAC §§ 704.9005 to 704.9525, inclusive, and section 7 of this regulation (measurement and verification protocol for all energy efficiency measures).

The net economic impact of the project includes:

- *A temporary increase in workforce during the construction phase of the facility of up to 180 positions paid under a Work Site Agreement with IBEW Local 396 and 357;*

- *A permanent long-term increase in the workforce for the operation and maintenance of the facility of up to 12 positions at $26.21 per hour, and a total payroll of $17.6 million over 25 years;*[8] *and,*
- *The environmental benefit will be a reduction in air emissions as shown in* Table REN-4, above.

NAC § 704.8887(2)(e) addresses any economic benefits that might inure to any sector of the economy of this State.

The economic benefits of the project include increased property tax in Boulder City and Clark County, and sales taxes from the purchase of local goods. Other benefits include an increase in short term construction employment and long term operations employment.

NAC § 704.8887(2)(f) addresses the diversity of energy sources being used to generate electricity that is consumed in this State.

Commission approval of the PPA will increase the diversity of energy sources used to generate electricity that is consumed in Nevada. The Company's portfolio of renewable energy will increase with a commensurate decrease in the Company's reliance on fossil fuel generation.

NAC § 704.8887(2)(g) addresses the diversity of energy suppliers generating or selling electricity in this State.

Techren is a U.S.-based company, headquartered in Irvine, CA. Its parent company, Hanwha Q Cells, is a vertically-integrated solar energy company involved in all aspects of the solar PV business, including the development, construction, financing, and ownership of utility-scale PV facilities in the US and abroad. Hanwha partners with local contractors for all construction projects, providing local employment and enhancing local workers' skills for the emerging green economy. The Techren PPA project will be the first PPA between Techren and NV Energy, thus introducing a new energy supplier for the State.

NAC § 704.8887(2)(h) addresses the value of any price hedging or energy price stability associated with the new renewable energy contract or energy efficiency contract.

The agreement has a low starting price escalating at a fixed percentage each year over the term of the contract. The price is therefore known through the term of the contract and is not

[8] These values are representative of the entire Techren project, not just the 100 megawatt portion.

subject to fuel risk. As a result of the exceptional pricing in this agreement, it represents the lowest LCOE of any renewable agreement the Company has under contract.

NAC § 704.8887(2)(i) addresses the date on which each renewable energy system is projected to begin commercial operation.

The project's commercial operation date is estimated to be December 31, 2018.

NAC § 704.8887(2)(j) addresses whether the utility provider has any flexibility concerning the quantity of electricity that the utility provider must acquire or save pursuant to the new renewable energy contract or energy efficiency contract.

The agreement calls for the Company to take all net energy and PCs generated by the facility. Curtailment or re-dispatch of up to 100 percent of the expected output can be ordered by the Transmission Provider, Electric System Authority, or Market Operator. The Company has no obligation to pay for curtailed product or for generation in excess of the Maximum Amount or beyond the annual Excess Energy threshold.

NAC § 704.8887(2)(k) addresses whether the new renewable energy contract or energy efficiency contract will result in any benefits to the transmission system of the utility provider.

The System Impact Study and Facilities Study for this solar facility have been completed and the project has an executed Large Generator Interconnect Agreement ("LGIA"). The System Impact Study did not identify any negative impacts on Nevada Power's transmission grid that could not be mitigated by the transmission system additions proposed in the study. The project generates electricity which will provide benefits to the transmission grid by providing real and reactive power at the point of interconnection. See Technical Appendix TRAN-1 for information on the LGIA.

NAC § 704.8887(2)(l) addresses whether the electricity acquired or saved pursuant to the new renewable energy contract or energy efficiency contract is priced at or below the utility provider's long-term avoided cost rate.

When compared to the uncapped long-term avoided cost presented to the Commission in the Company's long-term avoided cost rate, filed on July 1, 2015 (see Docket No. 15-07004), the blended rate for energy and PCs is lower in all years.

NAC § 704.8887(3) addresses the price of electricity acquired or saved in a renewable energy contract or energy efficiency contract for the solar energy requirement of its portfolio standard to be evaluated separately.

The cost of power and PCs delivered from the project are competitive to both the prices Nevada Power pays for its current portfolio of renewable projects and the other compliant bids submitted in the 2016 ERCR RE RFP. In addition, the price received in this PPA represents the best price that the Company has ever received for any renewable energy agreement.

NAC § 704.8885(2)(b) addresses the term of the contract.

The term of the PPA is 25 years.

NAC § 704.8885(2)(c) addresses the location of the portfolio [renewable] energy system or efficiency measure that is subject to the contract.

The project is located in Boulder City, Nevada

NAC § 704.8885(2)(d) addresses the use of natural resources by each renewable energy system that is subject to the contract.

The project utilizes irradiance from the sun gathered by solar panels. No water is consumed during the operation of the project other than the occasional cleaning of the panels.

NAC § 704.8885(2)(e) addresses the firmness of the electricity to be delivered and the delivery schedule.

The project generates non-firm energy that will be delivered into the utility's grid which will be delivered through firm transmission pursuant to the designation of the facility as a network resource.

NAC § 704.8885(2)(f) addresses the delivery point for the electricity.

The generating facility will be interconnected to the existing Nevada Solar One 230 kV Substation. A one-line diagram depicting the interconnection can be found in Exhibit 5 of the PPA, Technical Appendix REN-2.

NAC § 704.8885(2)(g) addresses the characteristics of similar renewable energy systems.

The characteristics of the project are similar to that of Nevada Power's other large scale PV systems, Boulder Solar, Switch Station, Apex Solar, Mountain View Solar, Searchlight Solar, and Spectrum Solar. The plant design is proven technology that is in use worldwide.

NAC § 704.8885(2)(h) addresses the requirements for ancillary services.

Requirements for ancillary services are not affected by the PPA.

NAC § 704.8885(2)(i) addresses the unit contingent provisions.

The energy from the facility is contingent upon the availability of the unit. If the unit is not producing within the performance specifications of the PPA, then the Company will replace the energy from other sources.

NAC § 704.8885(2)(j) addresses the system peak capacity requirements of the utility provider.

Commission approval of the agreement will contribute 38 percent of the nameplate rating of the facility towards the peak capacity requirements of the Company.

NAC § 704.8885(2)(k) addresses the requirements for scheduling.

All net energy from the facility will be delivered directly to the Company's electric grid. The facility will be considered a network resource within the Company's system and output produced by the facility will be used to meet the Company's native load.

NAC § 704.8885(2)(l) addresses conditions and limitations on the transmission system.

The System Impact Study for this project has been completed. Network Upgrades identified for this project are a new 230 kV terminal at Nevada Solar One Substation and associated Communications at the Nevada Solar One Substation. The estimated cost for the Network Upgrades is $1,299,724.

NAC § 704.8885(2)(m) addresses project insurance.

The PPA requires the supplier to provide workers compensation insurance of not less than $1 million per occurrence, general liability of not less than $5 million annual aggregate, and automobile liability insurance of at least $2 million aggregate.

NAC § 704.8885(2)(n) addresses the costs for procuring replacement power in the event of non-delivery.

In the event the project does not meet certain performance requirements, the supplier is obligated to compensate Nevada Power for shortfalls in energy and PCs. Compensation for an energy shortfall is based upon the difference between the cost of replacement power and the PPA

price. However, should the cost of replacement power be less than the contract price of power from supplier, the replacement cost will be $0.00, except that, for the summer on-peak period, a minimum replacement cost is specified in the PPA. Compensation for a PC shortfall is determined by Nevada Power exercising its reasonable discretion based on the estimated cost of purchasing PCs.

NAC § 704.8885(2)(o) addresses information verifying that each renewable energy system transmits or distributes or will transmit or distribute the electricity that it generates in accordance with the requirements of NRS 704.7815, as amended.

The generating facility uses renewable solar energy to generate electricity and transmits that energy to the Company. Therefore the generating facility comports with NRS 704.7815(1)(a) and 704.7815 (1)(b).

NAC § 704.8885(2)(p) addresses the total number of renewable energy systems that the owner of the renewable energy system is or has been associated with as an owner or operator.

Techren and its parent company Hanwha Q Cells have a proven track record of developing, constructing and operating utility-scale solar power plants around the world. Hanwha has manufactured and deployed over 4.3 GW of solar PV cells and panels worldwide. Currently, Hanwha is constructing an 80 MW project in Grand View, Idaho will start construction on the 170 MW project in West Texas in January 2017.

NAC § 704.8885(2)(q) addresses the points of interconnection with the electric system of the utility.

The generating facility will be interconnected to the existing Nevada Solar One 230 kV Substation. A one-line diagram depicting the interconnection can be found in Exhibit 5 of the PPA, Technical Appendix REN-2.

NAC § 704.8885(2)(r) addresses the interconnection priority which has been established for the available transmission capacity of the utility provider for all proposed renewable energy systems that will interconnect and begin commercial operation within the three-year period immediately following the date on which the new renewable energy contract or energy efficiency contract is submitted for approval.

Commission approval of the project will not affect any pending FERC interconnection priorities. Pursuant to the provisions of the Company's FERC approved Open Access Transmission Tariff ("OATT"), interconnection priority of a generator is determined based on the date the requesting customer submits a valid interconnection request.

NAC § 704.8885(2)(s) addresses any requests for transmission service that have been filed with the utility provider.

A Large Generator Interconnection Agreement between Nevada Power and Techren Solar, LLC was executed on May 20, 2016 with an in-service date of October 1, 2017.

NAC § 704.8885(2)(t) addresses any evidence that an environmental assessment, an environmental impact statement or an environmental impact report is being completed or has been completed with regard to the renewable energy system, or any evidence that a contract has been executed with an environmental contractor who will prepare such an assessment, statement or report within the 3-year period immediately preceding the date on which the renewable energy system is projected to begin commercial operation.

The project is in an advanced stage of development with respect to permitting and environmental compliance. The Project's favorable zoning and National Environmental Policy Act status and other environmental support documentation will allow an expedited process for any subsequent modifications. Project site is located in Boulder City's Energy Resource (ER) Zone where solar generating facilities are a permitted use. While the Project's gen-tie is to be sited in an area zoned as Open Space, Boulder City authorization for the gen-tie will be incorporated in the transmission easement which Boulder City is obligated to issue to the Project under its Lease Agreement with Techren.

NAC § 704.8885(2)(u) addresses permits required for the renewable energy systems within the 3-year period immediately preceding the date on which the renewable energy system is projected to begin commercial operation.

Permits necessary for the construction and operation of the Techren project are listed in Exhibit 12 of the PPA, Technical Appendix – REN-2.

NAC § 704.8885(2)(v) addresses applications for development rights with the appropriate Federal agencies (including BLM), where the granting of such developmental rights is not contingent upon a competitive bidding process.

Applications required from federal agencies for the development of Techren Solar are listed in Exhibit 12 of the PPA, Technical Appendix – REN-2

NAC § 704.8885(2)(w) addresses any evidence that establishes rights of ownership, possession or use concerning land or natural resources, including, without limitation, deeds, land

patents, leases, contracts, licenses or permits concerning land, geothermal drilling rights or other rights to natural resources.

Techren Solar has entered into an Option Agreement with the City of Boulder City, dated November 25, 2014, granting Techren Solar an exclusive option to lease the project site, approximately 2,195 acres. The Lease Agreement is a standard solar energy ground lease and allows for the development, construction, operation and maintenance, and decommissioning of one or more utility-scale solar projects for a period of up to fifty years following the commercial operation of the first project phase. In addition, under the lease agreement, Boulder City is to provide water to the tenant/supplier during the construction and operational phases of the Project.

NAC § 704.8885(2)(x) addresses whether the utility provider has any economical dispatch rights.

The Company does not have economic dispatch rights, but curtailment or re-dispatch of up to 100 percent of the net energy can be ordered by the Transmission Provider, Electric System Authority, or Market Operator. The Company has no obligation to pay for curtailed product or for generation in excess of the Maximum Amount of beyond the annual Excess Energy threshold.

IV. NETWORK UPGRADES REQUIRED FOR THE NEW AGREEMENT

TECHREN – 100 MW PPA (NSO 230KV)

The Techren 100 MW PPA project is a 100 MW PV generator which will connect to the Nevada Solar One ("NSO") 230kV bus. A LGIA has been executed for this project. The analysis for this project was performed as a part of the FERC OATT Interconnection Process. NV Energy is requesting Commission approval for the Network Upgrades necessary to facilitate the connection of this generator as described in Figure TP-1:

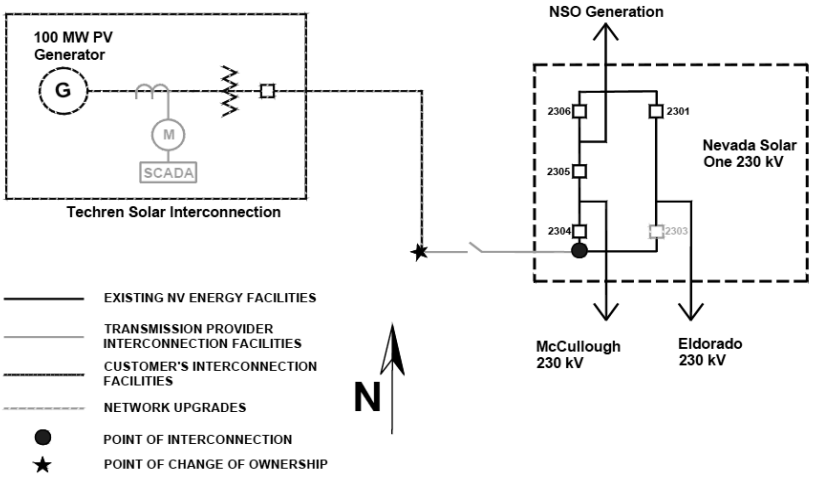
The proposed Commercial Operation Date (COD) for this project is: 12/31/2018

FIGURE TP-1 SUMMARY OF CASH FLOWS FOR TECHREN SOLAR (DOES NOT INCLUDE AFUDC)

	Total	2017	2018	2019	3 Year Total (2017-2019)	Post 2019
Techren 230 kV Solar PV Interconnection	$1,299,724	$1,299,724	$0	$0	$1,299,724	$0

A transmission single-line drawing for the projects is provided in Figure TP-2.

FIGURE TP-2: TECHREN 100 MW PPA PROJECT



V. AMENDED ERCR ACTION PLAN

The Company seeks approval of the following amendment to its ERCR Plan:

Coal Generation Retirement

- Approval to retire Reid Gardner Unit 4 after exhausting all existing coal inventory on or about February 28, 2017.

Renewable Replacement Capacity

- Approval of the long-term 100 MW renewable PPA between Nevada Power and Techren dated June 27, 2016;

- A determination that the terms of the long-term 100 MW renewable PPA between Nevada Power and Techren dated June 27, 2016,, resulting from the 2016 ERCR RE RFP, are just and reasonable within the meaning of NRS § 704.7821:

- Approval of the Network Upgrades described in Figure TP-1 necessary to connect the new renewable project.

APPLICATION EXHIBIT C

DRAFT NOTICE

NEVADA POWER COMPANY
D/B/A NV ENERGY

SECOND AMENDMENT TO ITS EMISSIONS REDUCTION AND CAPACITY REPLACEMENT PLAN

APPLICATION EXHIBIT "C"

DRAFT NOTICE

I. Include a title that describes the relief requested, or proceeding scheduled pursuant to Nevada Administrative Code ("NAC") §703.160 (4) (a.)

IN THE MATTER of the Application of NEVADA POWER COMPANY d/b/a NV Energy seeking approval of the Second Amendment to its Emissions Reduction and Capacity Replacement Plan, seeking approval of a 100 MW Purchased Power Agreement with Techren Solar and the early the exhaustion of all existing coal inventory and retirement of Reid Gardner Unit 4 on or before February 28, 2017.

II. Include the name of the applicant, complainant, petitioner, or the name of the agent for same pursuant to NAC §703.160 (4) (b).

Nevada Power Company, d/b/a NV Energy.

III. Include a paragraph with a brief description of the purpose of the filing or proceeding with an introductory statement in plain English understandable to a person of average knowledge and intelligence, that summarizes the relief requested or proceeding scheduled, **AND** its impact upon consumers, pursuant to NAC §703.160 (4)(c).

Nevada Power is seeking approval of a new twenty-five year renewable energy purchased power agreement resulting from the third Request for Proposals ("RFP") issued by Nevada Power Company consistent with the Company's approved emissions reduction and capacity replacement ("ERCR") plan. The Company seeks approval of the purchased power agreement between Nevada Power and Techren Solar ("Techren"), which was the winning bid from the 2016 ERCR renewable energy RFP. The project is sized at 100 MW of solar photovoltaic capacity and located within the State of Nevada.

Nevada Power is also seeking approval to construct transmission upgrades necessary to interconnect the Techren project to the bulk transmission system.

By statute, the Commission shall issue an order within 180 days of filing.

IV. A declaration by the applicant, petitioner, or complainant whether a consumer session is required by Nevada Revised Statute ("NRS") §704.069 (1). NAC §703.162 (2)

Amendments to the Emissions Reduction and Capacity Replacement Plan do not require a consumer session.

V. 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.

Not applicable.

TESTIMONY

JAMES DOUBEK

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA
Nevada Power Company d/b/a NV Energy
Second Amendment to its 2014 Emissions Reduction Capacity Replacement Plan
Docket No. 16-08___

PREPARED DIRECT TESTIMONY OF

James Doubek

SECTION I: INTRODUCTION TO PREPARED DIRECT TESTIMONY

1. Q. PLEASE STATE YOUR NAME, JOB TITLE, BUSINESS ADDRESS, AND PARTY FOR WHOM YOU ARE FILING TESTIMONY.

A. My name is James Doubek. I am the Vice President, Resource Planning and 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 business address is 6226 West Sahara Avenue, Las Vegas, Nevada. I am filing testimony on behalf of Nevada Power.

2. Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND EXPERIENCE.

A. I have been employed by the Companies since April 2005 and have served as the leader of Resource Planning and Analysis since March 2010.

Prior to my assignment in Resource Planning and Analysis, I held the position of Development Director, Renewable Energy. In that role I worked on development, construction, and operations and maintenance plans associated with potential Company-owned, utility scale, renewable energy projects. Before joining the Renewable Energy department, I held several management positions in the Generation Department focused on the operations and

maintenance of the Companies' various conventional generation stations. I originally joined the Companies as the Plant Director of Lenzie Power Station.

I began working in the power generation industry in 1991 and have held positions of increasing responsibility in power generating stations and engineering support roles, primarily focused on the operations and maintenance of gas turbine power stations and cogeneration plants.

More details regarding my professional background and experience are set forth in my Statement of Qualifications, included as **Exhibit Doubek-Direct-1**.

3. Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA ("COMMISSION")?

A. Yes. I have testified in Integrated Resource Planning dockets and Energy Supply Plan dockets before the Commission, and most recently in Nevada Power's 2015 Triennial Integrated Resource Plan, Docket No. 15-07004; Sierra's 2nd Amendment to its 2014-2016 Action Plan, Docket No. 15-08011; and, Sierra's 2016 Triennial Integrated Resource Plan, Docket No. 16-07001.

4. Q. ARE ANY OF THE MATERIALS YOU ARE SPONSORING CONFIDENTIAL?

A. No.

5. Q. HOW HAVE YOU ORGANIZED YOUR PREPARED DIRECT TESTIMONY?

A. Section II of my testimony introduces Nevada Power's witnesses. In Section III of my testimony, I explain: (a) why Nevada Power solicited proposals from developers for a 100 megawatt ("MW") renewable energy facility and a 35 MW renewable facility; (b) why the 100 MW renewable energy facility is a renewable energy system within the meaning of Nevada Revised Statutes ("NRS") § 704.7815; (c) why the terms and conditions of the power purchase agreement ("PPA") are reasonable and that the contract satisfies the capacity requirements established by NRS § 704.7316(2)(b)(3); and, (d) why the Commission should approve the new PPA for Nevada Power. In Section IV I discuss Nevada Power's request to retire Reid Gardner Unit 4 ("RG4") on or about February 28, 2017.

6. Q. PLEASE DESCRIBE THE BACKGROUND FOR THIS FILING.

A. In 2013, the Nevada Legislature passed Senate Bill 123, adopting Nevada's emissions reduction and capacity replacement ("ERCR") statute. The statute requires Nevada Power to establish a plan for retiring or eliminating its ownership interest in the coal-fired generating units that were then serving southern Nevada. The statute also provides for the replacement of the retired coal-fired generating capacity with a mixture of non-technology specific generating capacity and renewable energy facilities.

In 2015, Assembly Bill 498 became law. This legislation delayed implementation of two remaining components of Senate Bill 123. The bill required that the Commission determine that Nevada Power "satisfactorily demonstrate the need for" additional generating capacity before the Company

issued the final request for 100 MW of renewable energy proposals.[1] In Docket No. 15-07004, after recognizing that Nevada Power had left "unaddressed, a considerable open position in 2018," as well as an open position in 2020, the Commission directed the Company to issue a "non-technology-specific RFP" requesting products that were consistent with its identified resource needs.[2] Consistent with this directive, Nevada Power issued the Open Source RFP in time to make a filing with the Commission before September 1, 2016.

Nevada Power issued two other RFPs: one for 100 MW of renewable energy products, and another for a 35 MW company-owned renewable facility. These RFPs were issued pursuant to SB 123 and based on the finding in Docket No. 15-07004 that the Company had identified a need for additional capacity to fill both the 2018 and 2020 open positions.[3]

This Second Amendment to Nevada Power's ERCR presents the final 100 MW renewable energy PPA[4] for Commission review and approval, as well as a request to retire coal fired generation at RG4 in February 2017 rather than at the end of December 2017. The PPA is presented for approval through an amendment to Nevada Power's ERCR as required by NRS § 704.732.

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

[1] See Assembly Bill 498 Section 1.
[2] Modified Final Order, ¶ 318, Docket No. 15-07004 (iss. Feb. 12, 2016).
[3] *See id.*
[4] SB 123 allows for Nevada Power's addition of 35MW of renewable capacity to be constructed or acquired and owned. The request for approval of a 35MW addition will be made in a subsequent filing.

A. My testimony provides policy support for the Second Amendment to Nevada Power's approved ERCR (the "Filing"). The Filing requests approval of a PPA (described in detail below), which resulted from a competitive solicitation conducted by Nevada Power and supervised by an independent evaluator. The competitive solicitation resulted in an attractive PPA for Nevada Power's customers. The Filing also requests approval to retire the last remaining coal-fired generation unit in southern Nevada, RG4, in a structured and orderly manner by February 28, 2017.

8. Q. WHAT ARE YOUR RECOMMENDATIONS TO THE COMMISSION?

A. I make several recommendations to the Commission.

First, I recommend that the Commission find that the Techren solar facility is a "renewable energy system" within the meaning of NRS § 704.7815.

Second, I recommend that the Commission find that the terms and conditions of the PPA are just and reasonable and that the PPA meets the capacity requirements established by NRS §§ 704.7316(2)(b)(1) and 704.7316(2)(b)(2).

Third, I recommend that the Commission approve the contract after taking into consideration (a) the cost of the PPA to Nevada Power's customers, (b) the economic benefits the contract provides to Nevada, (c) the job opportunities that the contract provides for Nevadans, and (d) the value that the contract provides to Nevada Power's customers.

Fourth, and finally, I recommend that the Commission approve retiring RG4 on or about February 28, 2017 after exhausting all coal inventory.

II. INTRODUCTION OF NEVADA POWER'S WITNESSES

9. Q. WHO ARE THE WITNESSES THAT SUPPORT THE ERCR AMENDMENT?

A. Along with myself, the following witnesses support this Second Amendment to Nevada Power's 2014 ERCR Plan:

Mr. Kevin Geraghty, Senior Vice President, Energy Supply, sponsors the Renewable Energy PPA with Techren, the Renewable Energy Facility Asset Purchase Agreement, and solicitation, evaluation, and negotiations that resulted in the selection of the preferred resource. Mr. Geraghty also sponsors discussion regarding the orderly retirement of RG4.

Mr. Sachin Verma, Manger, Network and IRP Transmission Planning, sponsors the discussion of Transmission network upgrades necessary to interconnect new Solar PV generating facility.

Mr. Robert R. Kocour, Jr., Manager, Long-Term Resource Planning, sponsors the present worth revenue requirement ("PWRR") analysis of the short listed bids including the inputs, assumptions and methodology used to perform the economic analysis leading to a PWRR ranking of the renewable energy bids. He also supports the production cost analysis evaluating Reid Gardner 4 retirement alternatives.

III. THE COMMISSION SHOULD APPROVE THE RENEWABLE PPA

10. Q. PLEASE DESCRIBE THE 100 MW RENEWABLE CONTRACT FOR THE COMMISSION.

A. The Company is requesting Commission approval of a 25-year PPA with Techren Solar Power, LLC. ("Techren") for a 100MW project that is expected to deliver approximately 286,000 MWh in the first year of commercial operation. Mr. Kevin Geraghty supports the RFP process, the negotiations, and ultimately the final terms of this PPA. This PPA is the

lowest priced renewable energy contract ever presented to the Commission for approval to serve Nevada Power's customers. In fact, the levelized cost of energy, including investments associated with network upgrades, is just $7.99 per MWh, or 16.44%, lower than the Playa II power purchase agreement.

11. Q. WHY DID NEVADA POWER ISSUE A REQUEST FOR PROPOSALS FROM RENEWABLE ENERGY DEVELOPERS?

A. Pursuant to the ERCR statutes and regulations, Nevada Power is required to issue requests for renewable energy proposals that are proposed to be ERCR resources. The statutes provides for the retirement of the coal-fired generation serving southern Nevada and the replacement of the generating capacity with a mixture of resources, including new renewable energy facilities. A component of the capacity replacement plan involves the issuance of requests for renewable energy proposals.

Nevada Power issued the third and final 100 MW RFP in furtherance of its statutory obligations.

Included in the solicitation, the Company requested proposals for the remaining 35 MW of renewable resources that is required to be constructed or acquired and owned by Nevada Power, in order to assist in identifying a preferred resource alternative to meet that requirement.

12. Q. IS THE TECHREN SOLAR PROJECT A RENEWABLE ENERGY SYSTEMS WITHIN THE MEANING OF NRS § 704.7815?

A. Yes. The facility uses solar energy to produce electricity and the electricity will be delivered to Nevada Power (a provider of electric service) for use by Nevada Power's customers in this State. As noted in the narrative accompanying the Filing, the project "utilizes irradiance from the sun gathered by solar panels" to produce electricity that "will be delivered into the utility's grid" through "firm transmission pursuant to the designation of the facility as a network resource." Network resources are used by Nevada Power to serve the needs of retail customers; thus, the electricity produced by the renewable energy system will be delivered to Nevada Power and used by the Company's retail customers located in Nevada.

13. Q. ARE THE TERMS AND CONDITIONS OF THE PPA JUST AND REASONABLE?

A. Yes. The narrative identifies each of the regulations that the Commission adopted to address whether the terms and conditions of renewable PPAs are just and reasonable.[5] The terms and conditions of the PPA are similar to those found to be just and reasonable in contracts previously approved by the Commission. Most importantly, the price terms of the contract are reasonable. The PPA will deliver the lowest price renewable energy of any contract to date serving Nevada Power's customers at a price of $33.99 per MWh, escalating at 2 percent per year.

14. Q. DOES THE CONTRACT SATISFY THE CAPACITY REQUIREMENTS OF NRS § 704.7316(2)(B)?

A. Yes. The Techren contract resulted from a 2016 request for proposals and satisfies the capacity requirement of NRS § 704.7316(2)(b)(3).

[5] See Application Exhibit A (Narrative), Section V.

15. Q. WHAT VALUE DOES THE PPA PROVIDE FOR CUSTOMERS?

A. First, the PPA produces electricity without burning fossil fuels, reducing the CO2 intensity of Nevada Power's operations. The PPA enhances Nevada Power's ability to meet its interim and long-term CO2 intensity-based emission targets established by the United States Environmental Protection Agency.

Second, as discussed in more detail in the testimony of Mr. Kevin Geraghty, the production from this facility will avoid the need for natural gas purchases by Nevada Power, which also reduces the need for natural gas transportation (*i.e.*, avoids fuel transportation costs). The production profile of the project fits well with Nevada Power's current load shape, providing energy that generally coincides with periods of higher demand.

Third, the project provides 38 megawatts of cost effective planning capacity, providing additional value to customers.

16. Q. OVERALL, WHY DO YOU RECOMMEND THAT THE COMMISSION APPROVE THE PPA?

A. The project that Nevada Power selected from the 2016 competitive solicitation offers the best pricing value to customers and fits well with customer's growing energy needs. The timing and size of the addition are consistent with Commission's Modified Final Order in Docket No. 15-07004, which recognized that Nevada Power's triennial integrated resource plan left unaddressed certain resource needs. Adding the Techren PPA to the Company's portfolio adds fuel diversity at a time when the retirement of coal-fired generation reduces fuel diversity. Moreover, the PPA is favorably

priced. The PPA delivers energy and provides capacity at a price that is lower than all previous contracts for solar energy. The project advances the purposes of Nevada's ERCR statute, and provides value to customers. Accordingly, I recommend that the Commission approve the contract.

IV. THE COMMISSION SHOULD APPROVE RETIREMENT OF REID GARDNER UNIT 4

17. Q. WHAT IS NEVADA POWER'S PROPOSAL REGARDING THE RETIREMENT OF RG4?

A. Nevada Power proposes to dispatch RG4 on or about January 1, 2017 and to run this unit until all coal fuel inventory is exhausted. Current projections for 2016 year-end inventory and estimated burn rates beginning January 1, 2017 suggest that coal inventory will be fully depleted before the end of February 2017. Nevada Power proposes to retire RG4 on or about February 28, 2017 and thereafter begin decommissioning of this unit and the entire Reid Gardner Facility.

18. Q. WHY IS RETIRING REID GARDNER EARLY IN 2017 AFTER EXHAUSTING ALL COAL INVENTORY AN APPROPRIATE CHOICE FOR CUSTOMERS?

A. First, following the acquisition of the South Point Energy Center, RG4 is not required to reliably serve Nevada Power's customers. Even after retiring RG4 in February 2017, the Company projects it will have ample capacity to meet its 2017 summer peak demands.

Second, leaving any unburned coal inventory on site after the retirement is costly for customers. Should unburned inventory remain, customers would

pay not only for the value of the coal inventory, but also for disposal, and would receive no energy benefit in return.

Third, burning all coal inventory in January and February 2017 is projected to provide the lowest overall total fuel and purchased power cost for customers. The value of energy produced as compared to projected alternative fuel and power costs is maximized in the winter season. Consuming all of the inventory early in the year ensures no coal remains unburned at year end, while providing flexibility for any outages or challenges encountered burning final inventory.

Fourth, and finally, early retirement provides an opportunity to orchestrate an orderly transition as envisioned by ERCR legislation and regulations. It also provides an opportunity for an early start to site remediation and work related to the Administrative Order on Consent with the Nevada Division of Environmental Protection. Mr. Keven Geraghty provides additional support regarding these benefits.

19. Q. WHY DID NEVADA POWER INCLUDE A REQUEST TO APPROVE AN EARLIER RETIREMENT DATE FOR RG4 IN THIS ERCR AMENDMENT?

A. The Company's Approved ERCR Plan provides for the retirement of RG4 by December 31, 2017. When evaluating appropriate energy supply strategies to be included in Nevada Power's upcoming Energy Supply Plan Update, to be filed September 1, 2017, the Company began considering its plans to efficiently manage coal inventory with a goal of ending the year with no remaining inventory. This type of short term fuel supply strategy

is appropriately considered in the context of an Energy Supply Plan or Energy Supply Plan Update. However, as the Company evaluated alternatives seeking a least cost outcome, it became evident that an early retirement of Reid Gardner 4 offered the best alternative. Because generation asset retirement dates are set in Resource Planning cases, or in this case a specific type of Resource Planning case, the ERCR plan, not Energy Supply plan cases, the Company included its request to retire RG4 on or about February 28, 2017 in this incident case.

20. Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes, it does.

STATEMENT OF QUALIFICATIONS

JAMES DOUBEK
EXECUTIVE, RESOURCE PLANNING AND ANALYSIS
NV Energy
6226 W. Sahara Avenue
Las Vegas, Nevada 89146
702-402-5761

EDUCATION

MBA University of Nevada, Las Vegas, Las Vegas, Nevada

B.S.M.E. Rutgers University College of Engineering, New Brunswick, New Jersey

EXPERIENCE

1/15-Present **NV Energy-Vice President, Resource Planning and Analysis**

4/13-1/15 **NV Energy-Executive, Resource Planning and Analysis**

3/10-4/13 **NV Energy-Director, Resource Planning and Analysis**

Reporting to various Senior Executives, responsible for leading the development of the companies Long and Short Term planning strategies including the development and filling of the companies' Integrated Resource Plans and Energy Supply Plans. These strategies are developed and presented to management for approval by leading a team of economists, planners, engineers and analysts in the assembly of these plans for filling and procedural hearings with the Public Utilities Commission of Nevada (PUCN).

6/08-3/10 **NV Energy-Renewable Energy, Development Director**

Reporting to the Executive, Renewable Energy, responsible for the development of renewable energy projects and evaluation of third party renewable projects for purchase contracts to meet the renewable portfolio standard for utilities in Nevada. Capture industry standard operational expertise to allow successful partnership participation in Renewable Energy projects with various counterparties. Prepare and manage capital and operating budgets for proposed Renewable Energy projects.

4/07-6/08 **NV Energy-Generation Department, Generation Executive (temporary)**

Reporting to the Sr. V.P. Energy Supply, responsible for the operations and maintenance of NV Energy's fleet of conventional fueled power stations, including coal and gas fired boilers as well as simple cycle and combined cycle gas turbines. Directed the activities of corporate generation engineering support

staff. Developed and implemented strategic programs to enhance plant safety, environmental performance, standardized maintenance activities and efficient power production. Implemented cost reduction initiatives to enhance competitive performance and reduce consumer's energy costs. Oversaw capital and operating budgets of approximately $250 million annually. Lead operations portion of due diligence and acquisition teams in support of $500 million Big Horn plant acquisition. Responsible for managing human resources of entire generation division, approximately 600 employees.

1/06-4/07 NV Energy-LNZ/SHS/HA Power Complex, Plant Director

Reporting to the Generation Executive, responsible for the operations and maintenance of a three-plant power generation complexes. Plant technologies included GE gas and steam turbines and Siemens gas turbines. Developed strategic programs to ensure complex safety, environmental compliance and efficient and cost-effective power production. Prepared and managed capital and operating budgets of approximately $50 million annually. Oversaw the activities of all plant personnel.

4/05-1/06 NV Energy-Lenzie/Harry Allen Power Station, Plant Director

Reporting to the Generation Executive, responsible for the operations and maintenance of a gas-fired 1150 MW 2x2x1 GE 7FA combustion turbine combined cycle power plant and 75 MW 2x GE 7EA simple cycle peaking power plant. Coordinated production in accordance with market demands, power trading activities and system demand. During initial start-up and construction served as a construction representative for operations department. Completed initial staffing and participated initial plant start-up. Organized effective work teams for ongoing plant operations and maintenance. Prepared and managed capital and operating budgets of approximately $25 million annually. Participated on due diligence and acquisition teams in support of $200 million Silverhawk plant acquisition. Supervised activities of all plant personnel.

3/99-3/05 Dynegy-Rockingham Power, Plant Manager

Reporting to the Sr. V.P. Operations, responsible for the operations and maintenance of a dual fuel 900 MW five W501F combustion turbine simple cycle peaking plant. Coordinated production in accordance with market demands, power trading activities and short term capacity contracts. During initial start-up and construction, served as a construction representative for off-site Dynegy construction management. Completed initial staffing and organized effective work teams for ongoing plant operations. Prepared and managed capital and operating budgets of approximately $4 million annually. Supervised activities of all plant personnel.

7/96-3/99 Dynegy-High Sierra Cogen, Plant Supervisor

Under the direction of the O&M Manager, responsible for the operations and maintenance of a 50 MW twin LM2500 gas turbine cogeneration plant. Coordinated production in accordance with steam, power and O&M contracts. Established and administered maintenance activities contributing to 100% availability at capacity for 1996 bonus peak months. Prepared and managed capital and operating budgets

of approximately $2.5 million annually, including coordination of annual plan presentations to equity partners. Supervised activities of all plant personnel.

1/94-6/96 **Destec Energy-McKittrick Cogen, Plant Supervisor**

Under the direction of the O&M Manager, responsible for the operations and maintenance of a 50 MW LM5000 gas turbine cogeneration plant. Coordinated production in accordance with steam, power and O&M contracts. Established and administered maintenance activities contributing to ten consecutive bonus peak months of 100% availability at capacity, including three perfect years of bonus peak operation. Prepared and managed capital and operating budgets of approximately $3 million annually. Supervised activities of all plant personnel including development leading to promotion to supervisory or foreign assignments of five subordinates. Maintained safety standards contributing to five years of accident-free operation.

8/92-1/94 **Destec Energy, California Support Engineer**

Under the direction of the O&M Manager, provided plant engineering, economic analysis, project proposals and construction coordination for three 50 MW twin LM2500 and one 50 MW LM5000 gas turbine cogeneration plants. Focused on plant optimization and improvement projects including coordination of six $1 million gas turbine overhauls. With the gas turbine specialist, completed the first DOC specification for LM2500 gas turbine overhaul.

7/91-8/92 **Destec Energy-Corona Cogen, Plant Engineer**

Under the supervision of the Plant Manager, provided plant engineering, economic analysis, project proposals and construction coordination for a 50 MW LM5000 gas turbine cogeneration plant. Focused on plant optimization and improvement projects including design and implementation of a total water conservation project resulting in $100,000 projected annual savings.

AFFIRMATION

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, JAMES DOUBEK, do hereby swear under penalty of perjury the following:

That I am the person identified in the attached Prepared 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 DOUBEK

Subscribed and sworn to before me
this 27 day of July, 2016.

NOTARY PUBLIC

SUSAN M. WOOD
NOTARY PUBLIC
STATE OF NEVADA
Appt. No. 99-50010-1
My Appt. Expires Dec. 17, 2019

KEVIN GERAGHTY

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA
Nevada Power Company d/b/a NV Energy
Second Amendment to its 2014 Emissions Reduction Capacity Replacement Plan
Docket No. 16-08___

PREPARED DIRECT TESTIMONY OF

Kevin C. Geraghty

I. INTRODUCTION AND BACKGROUND

1. Q. PLEASE STATE YOUR NAME, TITLE, BUSINESS ADDRESS AND PARTY FOR WHOM YOU ARE FILING TESTIMONY.

A. My name is Kevin Geraghty. I am the Senior Vice President of Energy Supply for Nevada Power Company d/b/a NV Energy ("Nevada Power" or "Company") and Sierra Pacific Power Company d/b/a NV Energy ("Sierra" and, together with Nevada Power, the "Companies"). My business address is 6226 West Sahara Avenue in Las Vegas, Nevada. I am filing testimony on behalf of Nevada Power.

2. Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND EXPERIENCE.

A. I hold a Bachelor of Science Degree in Electrical Engineering (December 1987) from the University of Pittsburgh in Pittsburgh, Pennsylvania. Before joining the Companies, I was employed by Allegheny Energy in various director-level positions, where I managed all aspects of the operations of six coal plants, seven small hydro plants, and several combustion turbine sites. While at Allegheny I managed the siting and development of a 1,080 MW combined cycle facility in La Paz County, Arizona, and several of Allegheny's other energy projects and/or contracts in Nevada, Arizona and California. I am

currently responsible for managing all of Nevada Power's and Sierra's supply resources, including Sierra's interests in jointly-owned assets, resource optimization for the companies and gas operations at Sierra. My responsibilities include operations, maintenance, construction, strategic planning, project development, power purchase agreements, renewable programs, capital management, power marketing, fuel procurement and financial functions. More details regarding my professional background and experience are set forth in **Exhibit Geraghty-Direct-1**.

3. Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA ("COMMISSION")?

A. Yes, I have testified in numerous proceedings before the Commission. My most recent appearance in an integrated resource plan ("IRP") case was in Sierra's 2016 Triennial IRP, Docket No. 16-07001.

4. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I support the request to retire Reid Gardner Unit 4 ("RG4") by February 28, 2017 and I also support the Long Term Power Purchase Agreement ("PPA") for 100MW of renewable energy that resulted from the 2016 Emissions Reduction Capacity Replacement Renewable Energy Request for Proposals ("2016 ERCR RE RFP").

5. Q. WHAT EXHIBITS ARE ATTACHED TO YOUR TESTIMONY?

A. I have attached the following exhibits to my testimony:

- Exhibit Geraghty-Direct-1, Statement of Qualifications
- Exhibit Geraghty-Direct-2, Key Provisions of the New PPA

6. Q. WHAT PORTIONS OF THE SECOND AMENDMENT TO THE ERCR ARE YOU SPONSORING?

A. I am sponsoring the following portions of the ERCR Second Amendment:

- Sections I and II of the Narrative except for the subsection on the present worth revenue requirement ("PWRR") analysis being sponsored by Company witness Mr. Robert Kocour.
- Technical Appendices REN-1 through REN-7.

7. Q. ARE ANY OF THE MATERIALS YOU ARE SPONSORING CONFIDENTIAL?

A. Yes. REN-3 is the initial shortlist of bidders including pricing and REN-4, REN-6 and REN-7 contain confidential reports provided by the Independent Evaluator for the 2016 ERCR RE RFP. These items will have information on all bidders which may provide a competitive disadvantage to the unsuccessful bidders.

II. REID GARDNER UNIT 4 RETIREMENT

8. Q. WHY IS THE COMPANY ASKING TO RETIRE RG4 BY FEBRUARY 28, 2017 VERSUS THE CURRENT PLANNED RETIREMENT DATE OF DECEMBER 31, 2017?

A. As explained in the narrative, the Company's decision to retire RG4 on or about February 28, 2017 is primarily an economic one. In light of the estimated cost of natural gas and purchase power, production cost modeling completed by the resource planning team shows that RG4 will have unused coal inventory at the end of 2017. There is an opportunity to use the inventory to produce energy and avoid the disposal cost (estimated to be $40 to $60 per ton), that otherwise would be passed on to the Company's customers. Accordingly, the

Company modeled two different must run scenarios, comparing a must run situation in the winter to a must run situation in the summer. The former scenario produces the lowest production cost and avoids the result of incurring costs to dispose of unused inventory **and** the upward price pressure associated with including the cost of unused inventory in future energy prices. In short, the winter must run scenario produces the best result (the lowest overall cost) for customers.

9. Q. BESIDES THE FAVORABLE PWRR, ARE THERE OTHER REASONS TO RETIRE RG4 BY FEBRUARY 28, 2017?

A. Yes. Retiring RG4 on or about February 28, 2017 advances Nevada's energy policies as well as the Company's core principles. The Company identified additional areas of benefits associated with the February 28, 2017, retirement date: 1) Appropriate cost structure for the 2017 Nevada Power General Rate Case, 2) Transitioning employees to other operating sites, 3) Expediting plant removal and remediation activities, 4) North American Electric Reliability Corporation Critical Infrastructure Plan version 6 compliance, 5) Environmental stewardship and 6) Continuous emissions monitoring systems and emissions testing and certification. Each of these areas are more clearly explained in the narrative.

In summary, the first area improves transparency and therefore advances regulatory integrity. The second area is consistent with the Company's commitment to its employees, while providing for the orderly and structured retirement of coal-fired generation and replacement of the retired capacity. The third, fourth, and sixth areas improve the efficiency of Company operations and reduce upward pressure on prices, consistent with our

commitment to our customers and the core principle of regulatory integrity. Finally, the fifth area is consistent with our core principle of environmental respect.

III. 2016 EMISSIONS REDUCTION AND CAPACITY REPLACEMENT PLAN RENEWABLE ENERGY REQUEST FOR PROPOSALS ("ERCR RE RFP")

10. Q. PLEASE DESCRIBE THE 2016 ERCR RE RFP.

A. The 2016 ERCR RE RFP was issued on February 24, 2016. The Company sought proposals for two different renewable energy products: 1) a 100MW PPA and 2) a 35MW company-owned resource. The Company requested proposals from projects that qualified as renewable energy resources under NRS § 704.7811, including but not limited to solar, geothermal, wind, and biomass. As part of the 2016 ERCR RE RFP, the Company also offered the Dry Lake solar energy zone to bidders as a potential location for the 100 MW PPA product.

The bid protocol and attachments for the 2016 ERCR RE RFP are included in Technical Appendix Item REN-1.

11. Q. WHAT WERE THE RESULTS OF THE RFP?

A. For the 100 MW PPA product, the Company successfully completed negotiations with Techren Solar, LLC ("Techren") for the 100 MW PPA and selected Techren's bid as the preferred proposal.

The Company is not seeking approval to fill 35 MW of Company-owned renewable resources in this filing. However, the Company will pursue Commission approval of the remaining 35 MW ERCR resource in a future

filing. The Company's final due diligence reports for the 2016 ERCR RE RFP are included in Confidential Technical Appendix Item REN-5.

12. Q. WHAT WAS THE ROLE OF THE INDEPENDENT EVALUATOR ("IE")?

A. The IE monitored and oversaw the 2016 ERCR RE RFP process to ensure a competitive, fair and transparent process.

The IE monitored all aspects of the 2016 ERCR RE RFP process including review of the its design, communications between bidders and the Company, the initial evaluation and selection of the initial shortlists, the additional analysis of the shortlisted bids, the final selection for negotiations, and the negotiation of the PPAs.

13. Q. WHAT CONCLUSION DID THE IE REACH?

A. The IE came to the same conclusion and concurred with the Company's selection of the initial shortlist and the final selection.

The IE completed three reports detailing their findings and conclusions regarding the 2016 ERCR RE RFP process and results, which are included in the filing as Confidential Technical Appendix Items REN-4, REN-6, and REN-7.

14. Q. WHAT ARE THE IMPACTS OF THE TECHREN 100 MW PPA ON CUSTOMERS?

A. In 2019, the first year following commercial operation, the contract will, at its expected production, result in approximately $9.72 million of fuel and

purchase power costs. The facility will generate almost 286,000 MWh of renewable electricity, or enough energy to supply approximately 21,000 single family residential houses. This cost – $9.72 million – does not reflect the cost of natural gas that Nevada Power would otherwise have to purchase in order to generate an equivalent amount of energy. Assuming a heat-rate of 7,500 Btu per kilowatt-hour, Nevada Power would have to spend $6.44 million on natural gas and transportation (assuming $3.00 per MMBtu) to generate 286,000 MWh of electricity. Accordingly, the estimated net first year impact to customers is reduced to $3.28 million. In addition, the project will contribute 38 MW towards the peak planning capacity requirements of the Company.

The ERCR Action Plan amendment includes a discussion of the Network Upgrades required to interconnect the facility to the bulk transmission system. The costs of those network upgrades are described in Figure TP-1. These costs, which will be incurred to construct facilities approved in an emissions reduction and capacity replacement plan and necessary to interconnect generating facilities approved in such a plan, will receive the ratemaking treatment provided for in NRS 704.7317.

15. Q. WHAT ARE THE POSITIVE ECONOMIC IMPACTS OF THE PROJECT?

A. The project is located in Nevada, providing local tax benefits in addition to the job opportunities discussed below. Techren estimates that sales tax associated

with the project will total approximately $3.54 million and ongoing property taxes will average more than $569 thousand annually for the life of the project.

16. Q. WHAT JOB OPPORTUNITIES DOES THE CONTRACT CREATE FOR NEVADA?

A. Techren estimates that the project will employ approximately 180 positions during the construction phase, and result in 12 full-time equivalent positions. Over a 25-year period, a preliminary estimate of the total payroll impact of the project is approximately $37 million.

17. Q. PLEASE EXPLAIN WHY THE COMPANY RECOMMENDS COMMISSION APPROVAL OF THIS POWER PURCHASE AGREEMENT.

A. The agreement resulted from the last 100 MW RFP required under NRS 704.7316 at historically low pricing.[1] Similar to the agreements approved by the Commission in Docket 15-07003, the Techren 100 MW PPA was selected through a competitive process that was fair and transparent. The process was overseen by an IE, and the IE has issued formal reports concurring with the Company's selection of the winning bidder. Through the RFP process the Company has selected proposals that meet the criteria of NRS § 704.7316(2)(b)(4); that is, proposals providing the greatest economic benefit to this State; the greatest opportunity for the creation of new jobs in this State; and the best value to customers of the electric utility.

18. Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?

A. Yes, it does.

[1] The proposed PPA LCOE is the lowest the Company has negotiated to date.

KEVIN C. GERAGHTY
VP, POWER GENERATION
NV Energy, Inc
6226 West Sahara Avenue
Las Vegas, NV 89146
(702) 402-5662

Mr. Geraghty joined NV Energy, Inc ("NVE") in June 2008 as Vice President, Power Generation. He has over 25 years of experience in power generation with extensive knowledge of operations, maintenance, construction and management of coal, gas and hydro facilities. Mr. Geraghty has prepared and /or directed the preparation of various reports and analyses for submission to multiple state jurisdictions, EPA, NERC and FERC. Mr. Geraghty has also sponsored testimony before the Arizona Corporation Commission.

EMPLOYMENT HISTORY

NV Energy, Inc.
6/08 to Present

VP, Energy Supply
Responsible for managing all of NV Energy's power generation assets and interests in jointly-owned assets. Responsibilities include coal procurement, operations, maintenance, construction, strategic planning, capital management and financial functions associated with power production.

Allegheny Energy
12/87 to 6/08

Director Level Assignments:
Smith, Western, Fort Martin and Harrison Regions
5/99 to 12/07

Managed all aspects of six (6) coal plants, seven (7) small hydro plants and multiple peaking combustion turbine sites. Managed the development and siting of a 1,080 MW combined cycle facility in La Paz County, Arizona. Managed the company's interest in several other energy projects and/or contracts in Nevada, Arizona and California.

Manager Level Assignments:
Operations, Maintenance and Engineering –
Hatfield's Ferry and Harrison Power Stations
4/93 to 5/99
Managed all departmental-specific functions at two (2) large, coal-fired facilities; each facility had three (3) large (555-665) supercritical units.

Engineering Level Assignments:
Plant (Hatfield's Ferry) and Construction
12/87 to 4/93
Performed plant engineering assignments in support of production, reliability and performance at the 1,665 MW coal-fired Hatfield's Ferry Power Station.
Performed construction engineering assignments in support of large O&M and CAPEX projects at every facility in the fleet (including coal, gas, hydro and oil facilities).

EDUCATION

University of Pittsburgh, Pittsburgh, PA
Bachelor of Science in Electrical Engineering – December 1987

ASSOCIATIONS AND MEMBERSHIPS

- Association of Edison Illuminating Companies (AEIC) Electric Utility Cost Group (EUCG)
- RMEL

KEY PROVISIONS OF THE NEW RENEWABLE ENERGY PPA

Provision	Techren PPA
Supplier	Techren Solar Power, LLC
Buyer	Nevada Power Company, dba NV Energy
Term	25 years
Net Capacity	100 MW
Expected Commercial Operation	Q4 2018
Annual Supply Amount (Contract Year 1)	285,952 MWh
Yearly PC Amount (Contract Year 1)	286,980 kPCs
Maximum Amount (Contract Year 1)	100 MWh in any hour.
Degradation	Annual Supply Amount, hourly Supply Amounts, Yearly PC Amount and Maximum Amount each decline by 0.3% per year.
Product Rates	
Product Rate	$ 33.99 per MWh, escalating at 2% per year
Excess Energy Rate	Same as Test Product Rate
Excess Energy	Delivered amounts above 100% of the Annual Supply Amount, adjusted for Excused Product
Test Product Rate	Lesser of 1) 50% of Product Rate or 2) the Mead Index for the hour
Maximum Amount	No payment for amounts delivered above the Maximum Amount in any hour.
Energy Delivery Requirements	
Measurement Periods	Two consecutive Contract Years (not overlapping), separate measurements for Summer On-peak and Non-Summer On-peak
Performance Factor	90% of total supply amount for the Measurement Period, adjusted for Excused Product
Shortfall	Amount of undelivered energy below the 90% performance factor
Replacement Cost	Positive difference, if any, between the average Mead Index and the Product Rate, with a minimum replacement cost for Summer On-peak period of 10% of the Product.

KEY PROVISIONS OF THE NEW RENEWABLE ENERGY PPA (cont.)

PC Delivery Requirements	
Measurement Period	Two consecutive Contract Years (not overlapping)
Performance Factor	90%
PC Shortfall Amount	Amount of undelivered PCs below 100% of the Yearly PC Amount
PC Replacement Cost	Determined by Buyer based on cost to replace PCs from market or from PCs in Buyer's account including penalties associated with PC Shortfall Amount
Replacement PCs	At NV Energy's option, Supplier can provide comparable PCs to cure a PC Shortfall, in lieu of payment of PC Replacement Costs.
Purchase Options	
Early Purchase Option	Buyer has options to purchase facility at 6th 10th 15th and 20th anniversaries of COD at the fair market value.
End of Term Purchase Option	Buyer has option to purchase facility at the end of the PPA term at fair market value.
Right of First Offer	Buyer has right of first offer for certain Restricted Transactions, as defined in the PPA.
Security	
Development Security	$1,500,000 prior to PUCN approval $6,000,000 after PUCN approval
Operating Security	$9,856,770
Delay Damages, Deficit Damages	
Delay Damages	If Supplier does not achieve commercial operation by December 31, 2018, Supplier pays $12,000.00 per day for the first 60 days, $25,000.00 per day for the next 60 days, and $44,000 per day for the following 120 days, that commercial operation has not been achieved. If commercial operation has not been achieved within 240 days after December 31, 2018, Buyer may terminate the PPA.
Nameplate Damages	If the Certified Net Capacity Rating is less than the Expected Nameplate Capacity Rating, Supplier will pay Deficit Damages of $400,000 per MW below 100 MW, up to $4,000,000. If the Certified Net Capacity Rating is greater than the Expected Nameplate Capacity Rating by more than 7%, Supplier will pay an amount of one half of the Development Security to Buyer.

KEY PROVISIONS OF THE NEW RENEWABLE ENERGY PPA (cont.)

Termination Rights	
Event of Default	The Non-Defaulting Party may terminate the PPA if the Defaulting Party has not cured an Event of Default within the applicable Cure Period.
PUCN Approval	Buyer may terminate the PPA if it is not approved by the PUCN Approval Deadline or if the PPA is approved with conditions unacceptable to Buyer.
Force Majeure	Buyer may terminate the PPA if Suppliers' obligations have been excused by an event of Force Majeure for longer than 12 consecutive months or 360 days within a 540 day period.

AFFIRMATION

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, KEVIN GERAGHTY, do hereby swear under penalty of perjury the following:

That I am the person identified in the attached Prepared 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.

KEVIN GERAGHTY
Senior Vice President, Energy Supply

Subscribed and sworn to before me
this 27 day of July, 2016.

NOTARY PUBLIC

SUSAN M. WOOD
NOTARY PUBLIC
STATE OF NEVADA
Appt. No. 99-50010-1
My Appt. Expires Dec. 17, 2019

ROBERT R. KOCOUR JR.

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Nevada Power Company d/b/a NV Energy
Second Amendment to its 2014 Emissions Reduction Capacity Replacement Plan
Docket No. 16-08___

PREPARED DIRECT TESTIMONY OF

Robert R. Kocour, Jr.

1. Q. PLEASE STATE YOUR NAME, JOB TITLE, BUSINESS ADDRESS AND PARTY FOR WHOM YOU ARE FILING TESTIMONY.

A. My name is Robert R. Kocour, Jr. I am the Manager of Long-Term Resource Planning 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 business address is 6226 West Sahara Avenue in Las Vegas, Nevada. I am filing testimony on behalf of Nevada Power.

2. Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND EXPERIENCE.

A. I have a Bachelor of Science degree in Electrical Engineering from the Georgia Institute of Technology. My energy industry career begin in 2001 when I joined Henwood Energy Services, Inc. as a consultant tasked with implementing production cost software at various utilities nationally and internationally. In 2005, I became an employee of the Companies. My career at the Companies began as a production cost modeler tasked with providing analysis to support the short-term to mid-term power and gas trading activities. In 2009, I accepted a position in charge of originating and executing mid-term power and gas transactions. In 2012, I accepted the

position of Manager, Long-Term Resource Planning. More details regarding my professional background and experience are set forth in **Exhibit Kocour-Direct-1**.

3. Q. WHAT ARE YOUR RESPONSIBILITIES AS MANAGER OF LONG-TERM RESOURCE PLANNING?

A. As the Manager of Long-Term Resource Planning, I am responsible for leading a staff of analysts who perform technical analyses in the area of production cost and capital expense recovery modeling. My team models, simulates, and analyzes different alternative plans to support the integrated resource planning efforts of the Company and the selection of the Company's Preferred Plan.

4. Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA ("COMMISSION")?

A. Yes. I have provided written and oral testimony in several dockets before the Commission, most recently in Docket No. 16-07001, Sierra's 2016 Triennial Integrated Resource Plan filing, in Docket No. 15-07003, Nevada Power's 1st Amendment to the 2014 Emissions Reduction Capacity Replacement Plan ("ERCR") filing, in Docket No. 15-07004, Nevada Power's 2015 Triennial Integrated Resource Plan filing, in Docket No. 15-07041, Nevada Power's Net Energy Metering Tariffs filing, and in Docket No. 15-07042, Sierra's Net Energy Metering Tariffs filing.

5. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I am sponsoring the Present Worth Revenue Requirement ("PWRR") analysis of the shortlisted bids in the Company's third ERCR renewable request for proposals ("2016 ERCR RE RFP"). I also sponsor production cost analysis that supports the early retirement decision for the Reid Gardner 4 generating plant.

6. Q. WHAT EXHIBITS AND TECHNICAL APPENDICES ARE YOU SPONSORING?

A. In addition to **Exhibit Kocour-Direct 1**, I am sponsoring Technical Appendix Items ECON-1 through ECON-4 in their entirety and the production cost analysis portion of Technical Appendix Item GEN-1. For completeness, the following is the title of the aforementioned Technical Appendix Items:

- ECON-1: L&R Tables
- ECON-2: Operating Reserves Calculation
- ECON-3: 100 MW PWRR (Production Costs + Capital)
- GEN-1: Reid Gardner 4 Key Decision Report and Production Cost Analysis

7. Q. ARE ANY OF THE MATERIALS YOU ARE SPONSORING CONFIDENTIAL?

A. No.

8. Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE PWRR ANALYSIS PERFORMED TO EVALUATE THE BIDS THAT WERE SUBMITTED IN RESPONSE TO THE 2016 ERCR RE RFP.

A. Bids that made the Initial Short List in the 2016 ERCR RE RFP were provided to the Resource Planning department by the Renewables & Origination department and run through the Company's Loads and Resources Tables ("L&R Tables"), production cost simulation model and capital expense recovery model to determine the potential PWRR impacts that each bid would have on the Company's customers. The total PWRR for each Bid Scenario was reported and ranked from lowest PWRR to highest PWRR. The results of the PWRR analysis can be found in the PWRR analysis section of the ERCR 2nd Amendment narrative.

9. Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE PRODUCTION COST ANALYSIS PERFORMED TO EVALUATE THE EARLY RETIREMENT OF REID GARDNER 4.

A. The Company used its Energy Supply Plan model and analyzed three possible cases for the retirement of the Reid Gardner 4 generating plant ("RG4"). The first case is labeled the Base Case and contemplates RG4 being dispatched economically through 2017 and retiring at the end of 2017. The cost to remove any remaining coal that has not been burned by the end of 2017 is added to the production cost analysis for this case.[1] The second case is labeled the Retire Feb 2017 case. This case assumes RG4 is must run beginning January 1, 2017 and runs until the middle of February 2017 when the coal inventory is exhausted. The third case is labeled the Retire Jul 2017 case. This case assumes RG4 is economically dispatched from January 1, 2017 through May 31, 2017 and must run beginning June 1, 2017. RG4 runs

[1] Note that this understates the overall impact of this case on customers. As Mr. James Doubek explains, the cost of the coal inventory should be factored into the analysis. The value of the unused coal inventory would be reflected in the balance of the regulatory asset provided for under Senate Bill 123.

until the middle of July 2017 when the coal inventory is exhausted. The total costs for the three cases were compared and the case with the lowest total cost was the Retire Feb 2017 case.

10. Q. DOES THIS COMPLETE YOUR TESTIMONY.

A. Yes, it does.

STATEMENT OF QUALIFICATIONS OF WITNESS
ROBERT R. KOCOUR, JR.
NEVADA POWER & SIERRA PACIFIC POWER COMPANIES d/b/a NV Energy

6226 W. Sahara Ave.
Las Vegas Nevada 89146
(702) 402-2165

I am Robert R. Kocour, Jr., Manager, Long-Term Resource Planning, responsible for leading a staff of analysts who perform technical analyses to evaluate the production cost, capital cost, and reliability of various generation, transmission, purchase power, and demand side alternatives to ensure sufficient electric resources are available to provide reliable and economical electric service to NV Energy customers. I direct the development of detailed system production cost modeling to accurately represent system operating constraints for production cost studies of existing and future power supply options. I began this position in September 2012.

I graduated from the Georgia Institute of Technology in 1998 with a Bachelor of Science degree in Electrical Engineering. My energy industry career began in 2001 when I joined Henwood Energy Services, Inc. as a consultant tasked with implementing production cost software at various utilities around the world. My responsibilities included designing, implementing, and managing medium to large scale software implementation projects for customers seeking a production cost modeling solution to assist with their short-term and mid-term decisions around unit commitment and dispatch, power trading activities, gas trading activities, and unit maintenance scheduling.

In 2005, I joined NV Energy as a production cost modeler tasked with providing analysis to support short to mid-term power and gas trading activities. One of my first roles upon joining the Company was to complete the software implementation of the production cost model used at the time. Over the next several years, the department used this software to provide the analytical support needed for short-term trading activities. Additionally, I took on the role of implementing a mid-term model that made use of probabilistic analysis used to evaluate mid-term power sales and purchase opportunities.

In 2009, I accepted a position in charge of originating, negotiating, and executing mid-term power and gas transactions. My responsibilities included identifying needs for the Company, interfacing with counterparties to understand their power and gas needs, and negotiating potential power and gas transactions with counterparties. A particular focus was on sales opportunities of excess power capacity that both Sierra and Nevada Power have during non-peak periods of the year.

AFFIRMATION

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

I, ROBERT KOCOUR, do hereby swear under penalty of perjury the following:

That I am the person identified in the attached Prepared 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.

ROBERT KOCOUR

Subscribed and sworn to before me
this 28th day of July, 2016.

Susan M. Wood

NOTARY PUBLIC

SUSAN M. WOOD
NOTARY PUBLIC
STATE OF NEVADA
Appt. No. 99-50010-1
My Appt. Expires Dec. 17, 2019

SACHIN VERMA

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA
Nevada Power Company d/b/a NV Energy
Second Amendment to its 2014 Emissions Reduction Capacity Replacement Plan
Docket No. 16-08____

PREPARED DIRECT TESTIMONY OF

Sachin Verma

1. Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND PARTY FOR WHOM YOU ARE FILING TESTIMONY.

A. My name is Sachin Verma. I am the Manager, Network and IRP Transmission for Sierra Pacific Power Company d/b/a NV Energy ("Sierra) and Nevada Power Company d/b/a NV Energy ("Nevada Power," or the "Company" and together with Sierra, the "Companies"). My business address is 6100 Neil Road, Reno, Nevada. I am filing testimony on behalf of Nevada Power.

2. Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGER, NETWORK AND IRP TRANSMISSION?

A. I am responsible for all transmission planning associated with resource planning, compliance and retail transmission load addition functions for the Companies.

3. Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EMPLOYMENT EXPERIENCE?

A. I have a Bachelor of Science Degree in Electrical Engineering and a Master of Business Degree with a focus in Finance, both from the University of Nevada, Reno. I am a registered Professional Engineer in the State of

Nevada. I began my employment with the Companies as a student engineer in 2007. I have experience in transmission planning, distribution service, electric metering and system protection. More details regarding my professional background and experience are set forth in my Statement of Qualifications, included as **Exhibit Verma Direct-1**.

4. Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA?

A Yes, I testified in Sierra's 2nd Amendment to its 2014-2033 Integrated Resource Plan in 2015 (Docket No. 15-08011) and the Sierra's 2017-2036 Triennial Integrated Resource Plan (Docket No. 16-07001).

5. Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I sponsor the section of the attached narrative discussing the transmission network upgrades associated with the interconnection of a new 100 MW solar photovoltaic facility at the existing Nevada Solar One substation. I sponsor the Technical Appendix TRAN-1 Techren Solar Large Generator Interconnection Agreement.

6. Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?

A. Yes it does.

STATEMENT OF QUALIFICATIONS
SACHIN VERMA

My name is Sachin Verma. My business address is 6100 Neil Road, Reno, Nevada. I have been employed with Sierra Pacific Power Company ("Sierra" or "the Company") since 2007. I am currently the Manager of IRP and Transmission System Planning for Sierra and Nevada Power Company ("Nevada Power", or collectively "the Companies").

I have held my current management position since June 29, 2015 and have worked as a transmission planning engineer for a cumulative three years. As a transmission planning engineer I have performed studies for significant load and generation additions as well as assisted in the compilation of NERC Compliance studies focused on the reliability of the Company's transmission grid and its ability to serve it's customers.

Also, I have worked in Electric Meter Operations as both a supervisor and an engineer. In this position, I inspected installation of renewable generation, reviewed and approved electrical panels for new service and designed metering installation for high voltage generation projects. As a distribution engineer I worked with commercial and residential customers to analyze power quality concerns, performed distribution design for equipment replacement and additions and coordinated fuse protection on the system.

I am a Registered Professional Engineer in Nevada -- License #021884. I graduated from the University of Nevada, Reno in 2008 with a Bachelor of Science Degree in Electrical Engineering focused in power systems and in 2014 with a Master of Business Administration focused in finance.

AFFIRMATION

STATE OF NEVADA)
) ss.
COUNTY OF WASHOE)

I, SACHIN VERMA, do hereby swear under penalty of perjury the following:

That I am the person identified in the attached Prepared 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.

SACHIN VERMA

Subscribed and sworn to before me
this 28th day of July, 2016.

LYNN D'INNOCENTI
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 13-10786-2 - Expires May 2, 2017

NOTARY PUBLIC