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by: /s LynnDInnocenti

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NPC

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

IN THE MATTER of the Application of
NEVADA POWER COMPANY, seeking
approval of the Third Amendment to its 2016-
2035 Integrated Resource Plan.

Docket No. 17-11 ____

VOLUME 1 OF 3

NEVADA POWER COMPANY D/B/A NV ENERGY

**APPLICATION, EXHIBITS, TESTIMONY
AND TECHNICAL APPENDIX**

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TRANSMITTAL LETTER



November 1, 2017

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

RE: Docket No. 17-11____, Nevada Power Company d/b/a NV Energy's Application seeking approval of the Third Amendment to its 2016-2035 integrated resource plan.

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 Third Amendment to its 2016-2035 integrated resource plan. The filing includes the following parts:

Volume 1

- Application
- Application Exhibit A: Action Plan Amendment Narrative (Redacted)
- Application Exhibit B: Draft Notice
- Prepared Direct Testimony of Marc D. Reyes
- Prepared Direct Testimony of Terry A. Baxter
- Prepared Direct Testimony of Patrick S. Egan
- Prepared Direct Testimony of Dariusz Rekowski
- Prepared Direct Testimony of Sachin Verma
- Prepared Direct Testimony of John M. Wickersham (Redacted)
- Technical Appendix LF-1 (Redacted)

Volume 2

- Technical Appendix LF-2 to LF-7

Volume 3

- Technical Appendix ECON-1 to ECON-2
- Technical Appendix REN-1 to REN-2
- Technical Appendix REN-3 to REN-4 (Confidential)
- Technical Appendix TRAN-1
- Technical Appendix TRAN-2 (Redacted)

Portions of the load forecast section in the Narrative of Exhibit A, Technical Appendix Item LF-1 (Confidential), Mr. Baxter's prepared direct testimony, TRAN-1 and TRAN-2 contains confidential customer-specific information. The confidentiality of the customer-specific information qualifies for confidential treatment under NRS § 703.190. In addition, portions of Narrative discussing the request for proposals of a qualifying facility, REN-3 and REN-4 includes confidential bid information related to an unsuccessful participant's bid information, which qualifies for confidential treatment under NRS § 703.190. This information derives independent economic value from not being generally known and would be harmful for Sierra's future competitive solicitations if the information was disclosed. This information is not known outside the Companies and its distribution is limited within the Companies. Publication of this information would hinder Sierra's ability to achieve the most favorable pricing and terms and conditions from competing suppliers on behalf of its customers. The Company asks that the above information be kept confidential for a period of five (5) years after which it may be destroyed or returned, as is most convenient for the Commission. Finally, portions of Mr. Wickersham's testimony and Technical Appendix TRAN-4 contains a comprehensive analysis of the scenarios, storage plans, transportation plans and restoration methodologies required to recover from a catastrophic event. The information contained is deemed Critical Energy/Electric Infrastructure Information ("CEII") per the FERC Code of Federal Regulations 388.113. The confidentiality of critical infrastructure information qualifies for confidential treatment under NRS § 703.190. Due to the nature of the confidential information (e.g. critical utility infrastructure) the information should be kept confidential indefinitely.

The Companies ask that the Commission maintain the confidentiality of the above-described information pursuant to NRS § 703.190(2) and NAC § 703.527 *et seq.* All confidential information has been printed on pink paper and placed in a sealed envelope appropriately marked, and will be filed separately consistent with NAC § 703.737 *et seq.*

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

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Patrick S. Egan
Dariusz Rekowski
Sachin Verma
John M. Wickersham (REDACTED)

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LF-1 2017 Nevada Power Load Forecast (REDACTED)

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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** in Docket 17-11___ upon the persons listed
below by the electronic service:

Tammy Cordova
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bcpserv@ag.nv.gov

DATED this 1st day of November, 2017.

/s/ Lynn D'Innocenti
Lynn D'Innocenti
Sr. Legal Admin Assistant
Sierra Pacific Power Company
Nevada Power Company

APPLICATION

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BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

IN THE MATTER of the Application of)
NEVADA POWER COMPANY, seeking)
approval of the Third Amendment to its 2016-) Docket No. 17-11 ____
2035 integrated resource plan.)

**APPLICATION TO APPROVE THIRD AMENDMENT TO
2016-2035 INTEGRATED RESOURCE PLAN**

Nevada Power Company, d/b/a NV Energy (“Nevada Power” or “the Company”), makes this Application, pursuant to Nevada Revised Statute (“NRS”) § 704.741 *et seq.*, and Nevada Administrative Code (“NAC”) § 704.9005 *et seq.* This Application seeks approval by the Public Utilities Commission of Nevada (“Commission”) of Nevada Power’s third amendment to its 2016-2035 integrated resource plan (“IRP”). Pursuant to NRS § 704.751(2),¹ the Commission must issue an order accepting or modifying a IRP amendment within 165 days of filing, or the filing is deemed approved. Thus the deemed approve date of this IRP amendment is April 16, 2018.

Nevada Power has prepared an update to the load forecast to incorporate the most recent information available. The updated forecast includes refreshed assumptions for large customer loads, population, energy efficiency, and econometric variables. Nevada Power is seeking Commission approval of the updated forecast as setting forth the most accurate information available upon which to base long-term resource planning decisions. Nevada Power seeks to amend its approved IRP to include the acquisition of a new long-term power purchase agreement (“PPA”) with Techren Solar III, LLC, (“Techren Solar III”) as part of its qualifying facility (“QF”) request for proposal (“RFP”) in compliance with the Commission’s modified final order in Docket Nos. 16-07001, 16-07007 and 16-08027 issued on February 16, 2017 (“Consolidated Dockets”). In addition, the Company requests Commission approval

¹ As modified by SB 146 (2017 Nevada Legislative Session), increasing the time the Commission must issue an order accepting or modifying an IRP amendment from 135 to 165 days.

1 for two transmission projects. Specifically, the Company seeks approval to of the McDonald
2 230/138 kV substation upgrade project (“McDonald Project”) and approval of its Grid
3 Resilience Plan. Lastly, Nevada Power is requesting Commission approval of certain projects
4 in its generation capital budget plan for 2018.

5
6 **I.**
SUMMARY AND INTRODUCTION

7 Section 704.9516(1) of the NAC requires that an electric utility seeking to amend its
8 IRP include in the filing a section that identifies the items for which the utility is seeking
9 specific approval. This information is set forth both in summary fashion and in detail in the
10 narrative attached hereto and incorporated herewith. In short, with this amendment the
11 Company seeks Action Plan approval of the following items:

- 12 1. *A Revised Load Forecast.* A finding that the 2017 third amendment IRP load
13 forecast is suitable for making long-term planning decisions and is based on
14 substantially accurate data.
- 15 2. *Techren Solar III PPA.* Approval of the long-term PPA between Nevada
16 Power and Techren Solar III for all the output of the 25 MW Techren Solar III
17 solar generating facility. The Techren Solar III PPA was the successful bid in
18 the Company’s QF RFP, which was issued in compliance with the
19 Commission’s Consolidated Orders. The Techren Solar III PPA is for a 25-
20 year term with a base price of \$34.20 per MWh with no escalation. The
21 Techren III solar facility is being developed in Boulder City, Nevada, is
22 expected to be operational in the third quarter of 2020, and has an expected
23 net capacity rating of 25 MW (AC). It is also expected to generate 72,622
24 MWh and provide 72,622 thousand portfolio credits (“kPCs”) in the first year.
- 25 3. *McDonald Project.* Approval to upgrade the McDonald 230/138 kV
26 Substation. The McDonald Project is required to alleviate overloads on the
27 138 kV system between the Arden and Avera 138 kV substations due to load
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1 growth in the area. This overload occurs for the loss of the Arden to Camero
2 138 kV line. Under this contingency, the entire load is forced to be served
3 from the other end of the 138 kV loop and causes system overloads for the
4 single contingency. As part of the McDonald Project, Nevada Power plans to
5 install a 230/138 kV transformer at the existing McDonald Substation along
6 with a three breaker ring 230 kV substation addition, and the necessary
7 communication and protection equipment.

- 8 4. *Grid Resilience Plan.* Approval of the Company’s Grid Resilience Plan. The
9 Companies have developed a Grid Resilience Plan to address the increasing
10 risk to utilities based on the possibility that critical substations experience
11 catastrophic damage as a result of physical attack, natural disaster, or extreme
12 weather conditions. To meet the grid resilience effort, the Companies assumes
13 grid disruption where all of the substations’ transformers are damaged
14 simultaneously within one region for such an extreme event. Nevada Power
15 is seeking Commission approval to acquire five transformers in addition to the
16 infrastructure improvements required to store and maintain the assets.
- 17 5. *Generation Capital Budget for 2018.* Nevada Power is requesting Commission
18 approval of 72 separate projects in its generation capital budget plan for 2018,
19 which equate to approximately \$61.9 million in costs. These projects are
20 primarily focused on required spending to maintain unit reliability or spending
21 to ensure the safe operation of the generating units.

22
23 **II.**
THE APPLICANT NEVADA POWER COMPANY

24 Nevada Power is a Nevada corporation and a wholly owned subsidiary of NV Energy,
25 a holding company that also owns Sierra Pacific Power Company (“Sierra”) and certain other
26 subsidiaries. Nevada Power provides electric service in the State of Nevada pursuant to a
27 certificate of public convenience and necessity issued by this Commission. Nevada Power is
28

1 a “public utility” as that term is defined and used pursuant to Chapter 704 of the Nevada
2 Revised Statutes.

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

7
8 Michael Greene
9 Senior Attorney
10 6100 Neil Road
11 Reno, NV 89511
12 775-834-5692
13 mgreene@nvenergy.com

8 Lorelei Reid
9 Manager, Regulatory Services
10 6100 Neil Road
11 Reno, NV 89511
12 775-834-5823
13 regulatory@nvenergy.com

14 **III.**
15 **APPLICATION EXHIBITS**

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

- 16 • **Application Exhibit A**, is the amended Action Plan Narrative as required by NAC
17 §§ 704.9489 and 704.9516.
- 18 • **Application Exhibit B**, is a proposed notice of the application as required by NAC
19 § 703.162.

20
21 **IV.**
22 **SUPPORTING MATERIAL**

22 Section 704.9321 of the NAC provides that a utility’s resource plan must be based on
23 substantially accurate data, adequately demonstrated and defended, and adequately
24 documented and defended. As is set forth below, the reader will find all material required to
25 adequately demonstrate and defend the substantially accurate data supporting the analysis and
26 the requests for affirmative relief set forth herein. A summary of this information, which
27
28

1 includes narrative, technical appendices,² and supporting prepared direct testimony,³ is set
2 forth by general topic below.

3 **A. Policy Sponsor and Economic Analysis.**

4 Mr. Marc Reyes, Director of Resource Planning and Analysis, provides overall policy
5 support for this third amendment filing, and introduces the witnesses supporting the various
6 components of the Amendment. Additionally, Mr. Reyes sponsors the economic analysis and
7 long-term avoided cost portion of the narrative. Mr. Reyes also sponsors Technical Appendix
8 Items ECON-1 and ECON-2.

9 **B. Load Forecast.**

10 Mr. Terry A. Baxter, Manager of Load Forecasting, sponsors the Load Forecast
11 portion of the narrative addressing the long-term load forecast used for the Third Amendment
12 to the 2016-2035 IRP. Mr. Baxter also sponsors Technical Appendix Items LF-1 through LF-
13 7.

14 **C. Generation Resources**

15 Mr. Dariusz Rekowski, Generation Executive, supports the request for approval of
16 Nevada Power's generation-related projects in the Company's generation capital budget plan
17 for 2018.

18 **D. Renewable Resources.**

19 Mr. Pat Egan, Senior Vice President of Renewable Energy and Smart Infrastructure,
20 and supports discussions regarding the results of the 2017 PURPA⁴ Qualifying Facility
21 ("QF") Request for Proposals ("2017 QF RFP"), and the PPA ("Techren PPA"), between the
22

23 ² NAC § 704.922 provides that a utility's resource plan must include technical appendices that contain
24 sufficient detail to enable a technically proficient reader to understand how the resource plan and its forecasts
25 were prepared and to evaluate the validity of the assumptions and the accuracy of the data used, including,
26 without limitation, a list of the major assumptions used, a description of the forecasting methods employed and
27 a description of the software utilized.

28 ³ NAC § 704.9321(4) provides that all direct testimony offered in support of a utility's resource plan be
filed with the resource plan.

⁴ Public Utility Regulatory Policy Act of 1978

1 Company and Techren Solar III LLC entered into as a result of the long term avoided costs
2 (“LTAC”) calculations in compliance with NAC § 704.9496 and the Commission’s orders in
3 the Consolidated Dockets.

4 **E. Transmission Resources.**

5 **Mr. Sachin Verma**, Manager, Network and IRP Transmission Planning, sponsors the
6 portion of the narrative discussing the Nevada Power Transmission system and associated
7 projects, and the Technical Appendices TRAN 1, that support the Company’s request for
8 approval of the installation of a 230/138 kV transformer at McDonald Substation.

9 **Mr. John Wickersham III**, Director of Transmission Business Planning, describes
10 the concept of Grid Resiliency and describes the process the Companies undertook to address
11 the increasing risk of catastrophic damage to critical utility infrastructure. Mr. Wickersham
12 sponsors the analysis supporting Nevada Power’s acquisition of five transformers and the
13 infrastructure improvements required to store and maintain the assets. Mr. Wickersham
14 supports the Confidential Technical Appendix item TRAN-2.

15 **V.**
16 **CONFIDENTIALITY**

17 Certain information set forth in the narratives and technical appendices is
18 commercially confidential and/or trade secret information subject to protection pursuant to
19 NRS § 703.190. Specifically, the confidential information in this filing, along with the basis
20 for each assertion of confidentiality, is set forth below.

21 **Customer Specific Information.** Portions of the load forecast section in the Narrative
22 of Exhibit A, and Technical Appendix Item LF-1, containing customer-specific information
23 regarding projected loads of specific customers have been redacted. Customer-specific
24 information qualifies for confidential treatment under NRS § 703.190.

25 **Renewable Resources.** Portions of Narrative discussing the request for proposals of
26 a qualifying facility, REN-3 and REN-4 includes confidential bid information related to an
27 unsuccessful participant’s bid information qualifies for confidential treatment under NRS §
28

1 703.190. This information derives independent economic value from not being generally
2 known and would be harmful for Nevada Power’s future competitive solicitations if the
3 information was disclosed. This information is not known outside the Companies and its
4 distribution is limited within the Companies. Publication of this information would hinder
5 Nevada Power’s ability to achieve the most favorable pricing and terms and conditions from
6 competing suppliers on behalf of its customers.

7 **Critical Energy/Electric Infrastructure Information.** Portions of Mr.
8 Wickersham’s testimony and Technical Appendix TRAN-2 contains a comprehensive
9 analysis of the scenarios, storage plans, transportation plans and restoration methodologies
10 required to recover from a catastrophic event. The information contained is deemed Critical
11 Energy/Electric Infrastructure Information (“CEII”) per the FERC Code of Federal
12 Regulations 388.113. Due to the nature of the confidential information (e.g. critical utility
13 infrastructure) the information should be kept confidential indefinitely.

14 Pursuant to NAC § 703.5274(1), one unredacted copy of the confidential information
15 will be filed with the Commission’s Secretary in a separate envelope stamped “confidential.”
16 Redacted versions of confidential information will be submitted for processing and posting
17 onto the Commission’s public website.

18 Pursuant to NAC § 703.5274(2), Nevada Power hereby requests that the above-
19 described information not be disclosed to the public. Nevada Power requests that this
20 information remain confidential for a period of five years, except information related to
21 critical utility infrastructure which should be kept confidential indefinitely.

22 Confidential treatment of the above-described information will not impair the ability
23 of the Regulatory Operations Staff (“Staff”) or the Office of the Attorney General’s Bureau
24 of Consumer Protection (“BCP”) to fully investigate Nevada Power’s proposals. Pursuant to
25 NAC § 703.527 and § 703.5274, Staff and BCP have already have executed a protective
26 agreement for this case and will be immediately provided unredacted copies of the filing.

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VI.
DEVIATION FROM REGULATIONS

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.

Sierra requests a deviation from the following provisions of NAC § 704.9516 (Contents of amendment to action plan) for the reasons set forth below:

IMPUTED DEBT

NAC § 704.9516(g) provides that if an amendment to an IRP 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, Sierra asks the Commission to determine that its request to deviate from the provisions of NAC § 704.9516(g) is in the public interest.

With respect to the remaining requirements of NAC § 704.9516 the Company has provided all applicable and relevant information by and through this application, the narrative and supported by the information provided in the Technical Appendices and the prepared direct testimony.

**VII.
CONSOLIDATION WITH SIERRA IRP AMENDMENT**

1
2 Concurrently with this filing, on November 1, 2017, Sierra filed its second amendment
3 to its 2017-2036 IRP, in which it requests Commission approval of: (1) two new long-term
4 PPAs, (2) a new transformer at its East Tracy Substation, (3) its Grid Resilience plan, and (4)
5 certain projects in the Company's generation capital budget plan for 2018. Nevada Power's
6 third amendment to its 2016-2035 IRP seeks approval of a PPA that was selected in the same
7 QF RFP and the same Grid Resilience plan, and it contains the same justification for the
8 generation capital budget plan for 2018. Given the overlap between these two filings, Nevada
9 Power formally requests that this third amendment to its 2016-2035 IRP be consolidated with
10 Sierra's second amendment to its 2017-2036 IRP, which was filed on November 1, 2017.

**VIII.
PRAYER**

11
12
13 WHEREFORE, Nevada Power requests that the Commission:

14 (1) Accept without modification the amended Action Plan as it is set forth in
15 Exhibit A to this Application, which includes the following items:

- 16 a) Approval of the long-term base load forecast presented in the narrative of this
17 filing and a finding it is suitable for making long-term planning decisions through
18 the Action Plan period and is based on substantially accurate data;
- 19 b) Approval of the long-term PPA between Nevada Power and Techren Solar III for
20 the 25 MW solar photovoltaic Techren Solar III solar facility;
- 21 c) Approval of the upgrades to the McDonald 230/138 kV Substation;
- 22 d) Approval of the Company's Grid Resilience Plan and the proposed actions
23 contained within the plan; and
- 24 e) Approval of 72 separate projects in the Company's generation capital budget plan
25 for 2018.
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1 (2) Make an express finding that Nevada Power has complied with the
2 Commission's Modified Final Order in, Docket Nos. 16-07001, 16-07007 and 16-08027
3 related to the issuance of a QF request for proposal in determining the long-term avoided cost.

4 (3) Grant Nevada Power's requests to maintain the confidentiality of the
5 information listed, justified and prescribed in Section V above.

6 (4) Grant Nevada Power's request to consolidate this filing with Sierra's second
7 amendment to its 2017-2036 IRP, which was concurrently filed with the Commission.

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

10 Dated this 1st day of November, 2017.

11 Respectfully submitted,

12 NEVADA POWER COMPANY d/b/a NV
13 ENERGY

14 /s/Michael Greene

15 Michael Greene
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APPLICATION EXHIBIT A

NARRATIVE

NEVADA POWER COMPANY D/B/A NV ENERGY THIRD AMENDMENT TO 2016-2018 ACTION PLAN

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