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26-06016

Public Utilities Commission of Nevada
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BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Application of Nexus Fulcrum LLC under the
Utility Environmental Protection Act to
Construct ASR-IX, a 510 MW Natural Gas-
Fueled Electric Generation Plant and Ancillary
Facilities

Docket No. 26-06016

Direct Testimony of Zoë Harrold

on behalf of

Nevadans for Clean Affordable Reliable Energy

September 25, 2026

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1 **I. Introduction**

2 **1. Q: Please state your name, occupation, and business address.**

3 A: My name is Zoë Harrold. I work for Western Resources Advocates (“WRA”) as the
4 Senior Policy Advisor for WRA’s Clean Energy Program in Nevada. My business address is
5 275 Hill Street, Suite 210, Reno, NV 89501.

6 **2. Q: Please describe your professional experience and education.**

7 A: I began working with WRA in May 2026. Prior to my employment at WRA I served as an
8 energy policy analyst consultant and intervenor in California Public Utilities Commission
9 (“CPUC”) energy policy proceedings since 2015 on behalf of the Green Power Institute
10 (“GPI”). My work for GPI included serving as the lead policy analyst on Integrated Resource
11 Planning (“IRP”), Renewable Portfolio Standard (“RPS”), Wildfire Mitigation Planning, and
12 Distribution Resource Planning proceedings. I also participated in California’s High
13 Distributed [renewable] Energy Resource Planning proceeding at the CPUC.

14 My efforts in the CPUC RPS and IRP proceedings included advocacy for advancing and
15 synchronizing IRP emissions reduction targets and RPS clean energy mandates, proactive
16 procurement planning to support the clean energy transition, and repowering renewables
17 slated to retire from the resource stack baseline as a resource bridge.

18 As an intervenor in California’s electric utility wildfire risk mitigation planning
19 proceeding, which fell under the purview of both the CPUC and the California Natural
20 Resources Agency, I supported more comprehensive risk mitigation planning and proactive
21 risk mitigation. I also served as a member of the risk modeling working group where I
22 identified model design shortcomings and facilitated improvements in risk modeling methods
23 applied to guide widespread grid hardening investments. I hold a Bachelor of Science in

Environmental Science with a Minor in Chemistry, and a Doctor of Philosophy in Earth Sciences focused on chemical processes. Please see Attachment ZH-1 for my resumé.

3. Q: On whose behalf are you testifying in this proceeding?

A: I am testifying on behalf of Nevadans for Clean Affordable Reliable Energy, or NCARE.

4. Q: Have you previously testified before the Public Utilities Commission of Nevada?

A: Yes. I previously testified before the Commission in Docket Nos. 26-04026 and 26-04027, the South Valley/Peru Ridge UEPA Applications.

5. Q: Are you sponsoring any attachments with this testimony?

A: Yes, I am sponsoring the following attachments:

Attachment ZH-1	Resumé of Zoë Harrold
Attachment ZH-2	Docket No. 26-06016 Nexus Fulcrum LLC response to Data Request Staff-4
Attachment ZH-3	Docket No. 26-06016, Nexus Fulcrum LLC Response to NCARE Data Requests 1-2 and 1-3
Attachment ZH-4	Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, pdf p. 23
Attachment ZH-5	Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, p. 4-3
Attachment ZH-6	Nexus Fulcrum, LLC Application for a Class I Operating Permit to Construct, November 2025, p. 4-4
Attachment ZH-7	Nexus Fulcrum, LLC Application for a Class I Operating Permit To Construct, November 2025, p. 3-1
Attachment ZH-8	Nexus Fulcrum, LLC, Application for a Class I Operating Permit To Construct, November 2025, Appendix A, Emissions Calculations, pdf. p. 25
Attachment ZH-9	Nexus Fulcrum, LLC, Application for a Class I Operating Permit To Construct, November 2025, Appendix A, Emission Calculations, pdf p. 21
Attachment ZH-10	Docket No. 26-06016, Nexus Fulcrum LLC Response to NCARE Data Request 1-6

6. Q: What is the purpose of your testimony?

A: The purpose of my testimony is to provide NCARE's position and recommendations regarding the Application of Nexus Fulcrum LLC for a permit to construct the proposed ASR-IX Project, an electric generation facility that includes 510 MW of natural gas-powered turbines operated in simple-cycle mode, located at the former Sierra BioFuels Plant site in Storey County. Switch LTD is listed as the owner of the Project site.¹ I will refer to the proposed facility as the "Project". In my testimony I will explain why the Commission should deny the UEPA permit request of Nexus Fulcrum LLC to construct the proposed ASR-IX generating facility.

7. Q: Please summarize your testimony.

A: In order to grant a permit for construction, the Commission must review an application to make seven key findings. My testimony addresses five of those findings. First, I will provide a summary of the Project's purpose and the evaluation basis for the Project as defined by the UEPA statute. Then, I will address the Project's problems and Application deficiencies as they apply to UEPA evaluation criteria, including:

- The nature of the probable effect on the environment for the proposed utility-scale, greenhouse gas emitting facility, and how the Application fails to disclose reasonably adequate or complete information about the Project impacts.
- How the application for the proposed greenhouse gas emitting facility, which does not include renewable energy production, has failed to substantiate that they are needed to ensure reliable service to customers in Nevada or even the proposed data center campus.

¹ Storey County Property Tax Inquiry, Parcel Details for 00507149, <https://storeynv.devnetwedge.com/parcel/view/00507149/2026>, Accessed 8/21/2026. Storey County tax records for 3600 Peru Dr. (APN: 005-071-49) indicate that Switch, LTD is the current owner of the property where the project will be constructed.

- 1 • How the need for the facility, on balance, does not outweigh the reported adverse
- 2 effect on the environment.
- 3 • How the existing record does not establish a basis for determining that the facility
- 4 represents the minimum adverse effect on the environment considering the state of
- 5 available technology and the nature and economics of various alternatives.
- 6 • Why the application does not serve the public interest. As it pertains to public interest,
- 7 I will also address threshold issues regarding the Applicants' characterization of the
- 8 proposed generation facility.

9 **II. Purpose of the Facility and Basis for Evaluation**

10 **8. Q: What is the purpose of the proposed ASR-IX electric generating facility?**

11 A: The Applicant has stated that the Project will provide power via a PPA² to one off-taker,

12 Switch Ltd.,³ that is in “close proximity” to the generating facility, with both located in the

13 Tahoe Reno Industrial Center, or TRIC.⁴ The power is expected to support expanded

14 development of data centers.⁵

15 **9. Q: What factors should the Commission consider in evaluating the request to approve**

16 **the Application for the ASR-IX power plant?**

17 A: The Commission should consider the required findings from the UEPA statute, especially:

- 18 • NRS 704.890(1)(a) The nature of the probable effect on the environment;
- 19 • NRS 704.890(1)(b) If the utility facility emits greenhouse gases and does not use
- 20 renewable energy as its primary source of energy to generate electricity, the extent to
- 21 which the facility is needed to ensure reliable utility service to customers in this State;
- 22 • NRS 704.890(1)(c) That the need for the facility balances any adverse effect on the
- 23 environment;

² Docket No. 26-06016 Nexus Fulcrum LLC response to Data Request Staff-4, Provided as Attachment ZH-2.

³ Docket No. 26-06016, Direct Testimony of Richard Salgo, p. 6.

⁴ Docket No. 26-06016, Nexus Fulcrum LLC UEPA Application, pp. 9-10.

⁵ *Id.* Exhibit F, p. 4.

- 1 • NRS 704.890(1)(d) That the facility represents the minimum adverse effect on the
- 2 environment, considering the state of available technology and the nature and
- 3 economics of the various alternatives; and
- 4 • NRS 704.890(1)(g) That the facility will serve the public interest, including as defined
- 5 in NAC 703.423.

6 **10. Q: Are there any other statutes or regulatory processes relevant to the Commission**
7 **evaluation?**

8 A: Yes, there are two other statutes and regulatory processes that are relevant to serving the
9 public interest. They include: the statewide greenhouse gas emissions reduction statute
10 established by SB 254 (2019) and Nevada’s Integrated Resources Planning “IRP” process.

11 Nevada’s greenhouse gas emission reduction targets apply to all economic sectors.

12 Whether a project moves Nevada towards or further from achieving greenhouse gas emission
13 reductions in alignment with state targets is critical to determining both its impact on the
14 environment and whether that project is in the public interest, per the UEPA evaluation
15 criteria. As the proposed Project is expected to run off fossil fuel natural gas, this is relevant
16 to the proposed Project’s UEPA Permit to Construct Application determination.

17 **11. Q: Does the fact that this UEPA application is for a fossil-fueled generating plant that**
18 **will not be operated or controlled by NV Energy drive NCARE’s interest in**
19 **participating in this proceeding?**

20 A: Yes. Docket 26-06016 is far from a “typical” UEPA application for new gas generation by
21 NV Energy that the PUCN has readily reviewed and approved. UEPA permits for utility-scale
22 emitting resources by NV Energy have followed Commission approval of those resources in
23 an IRP. As part of the IRP-based approval, intervenors have already had the opportunity to
24 weigh in on many of the quantified environmental impacts and how those impacts compare

1 to the identified reliable service-driven need and resource attribute-driven need. My
2 understanding is that, until this year, all UEPA applications for utility-scale fossil-fueled
3 generating plants during at least the prior 20 years have been for NV Energy resources that
4 have been approved in an IRP.⁶

5 This is not the case for the proposed Project. This UEPA Application is the first and only
6 opportunity within the PUCN to contest the Project construction on the grounds of its
7 environmental impacts in relation to its need, among other UEPA criteria.

8 NCARE represents multiple organizations who are also intervenors in Nevada IRPs, and
9 those organizations represent thousands of Nevadans with a vested interest in the
10 environmental and health impacts of electric sector build out. In the absence of an IRP, this
11 UEPA Application must hold up independently under a rigorous assessment of the benefits
12 and environmental impacts of a 510 MW fossil natural gas generation project as it pertains
13 not only to the off-taker but also the interests of Nevadans *writ large*.

14 **III. The Nature of the Probable Effect on the Environment**

15 **A. Generating Facility Scale**

16 **12. Q: You refer to the proposed generating facility as utility-scale. Can you justify this**
17 **designation?**

18 A: Yes. Collectively, its nameplate capacity, baseload designation, anticipated energy
19 generation range, and annual natural gas consumption are comparable to a utility-scale
20 natural gas facility. These Project operating characteristics, as well as other factors such as

⁶ To NCARE's knowledge, the UEPA application of White Pine Energy Associates, LLC in Docket 06-02032 to build a coal-fired plant in White Pine County was the last instance prior to this year where a non-NV Energy entity sought approval to build a utility-scale fossil-fueled generating plant. NCARE intervened and opposed that application, which was withdrawn before hearing.

unit efficiency and reliance on fossil natural gas fuel, inform the probable effect on the environment for each year of operation in terms of annual greenhouse gas emissions.

13. Q: How does its nameplate capacity compare to utility-owned gas plants?

A: The Project proposes a 510 MW nameplate generating facility “ASR-IX” that would include nine Siemens ST-800 B5 or B4 natural gas combustion turbines, at approximately 57 MW each, all operated in simple cycle mode.⁷ A facility of this size would exceed the nameplate capacity of three of Nevada’s twelve operating electric utility owned natural gas plants according to EIA reported data.⁸ Of NV Energy’s 34 gas plant additions with commercial online dates from 1960 to 2024, only 7 are over 500 MW.⁹ The proposed facility would also have a larger nameplate capacity than each of the three incremental Fort Churchill Additions (~400 MW each) for peaker gas generation facilities, proposed by NV Energy in the 2026 IRP.¹⁰

14. Q: What is the estimated annual maximum and actual energy output of the ASR-IX turbines?

A: Actual generation levels depend on many factors including but not limited to unit specifications, ambient operating conditions, and elective operations. Since this information is unit specific, NCARE requested information regarding the generation facility’s annual gross and net MWh output according to the filed NDEP Air Permit Operating Permit to Construct (“OPTC”) and its anticipated actual operations.¹¹ The Applicant did not directly

⁷ Docket No. 26-06016 Nexus Fulcrum UEPA Application, Exhibit F, p. 4.

⁸ EIA, 2024 Form EIA-860 Data - Schedule 3, 'Generator Data' (Operable Units Only), Electricity Data - U.S. Energy Information Administration (EIA), Accessed 8/21/2026. Aggregated nameplate MW based on Plant Code for Group Sector 1 plants, located in Nevada, with Fuel Group “Gas”.

⁹ This includes operating incremental additions. CODs of incremental gas additions > 500MW include 2004, 2006, 2008, and 2011. Docket 26-05007, NV Energy 2026 IRP, V-8, Narrative Supply Plan, Table GEN-1 Generating Unit Summary, p 12 of 245. Docket 26-05007, NV Energy 2026 IRP, V-10 Generation Tech, GEN-1, p. 1.

¹⁰ Docket No. 26-05007, NV Energy 2026 IRP V-8, p. 6.

¹¹ Docket No. 26-06016, Nexus Fulcrum LLC Response to NCARE 1-2 and 1-3. Provided as Attachment ZH-3.

1 provide the requested information and instead provided a reference to their NDEP Air Permit
2 OPTC Application.¹²

3 While the OPTC Application does report information on equipment operating hours,¹³ it
4 does not provide conclusive information on annual generation either associated with the
5 reported OPTC Application emissions or during regular operations. The only MWh values
6 reported in the NDEP OPTC Application may have an erroneous order of magnitude and may
7 result in errors in downstream emissions quantifications within the Project's OPTC
8 Application.¹⁴ In the absence of the requested information I estimated the likely generation
9 based on the Project turbine maximum, the OPTC cap, and a minimum generation level.
10 These metrics also lay the foundation for estimating the impact of greenhouse gases on the
11 environment.

12 The *theoretical maximum* assumes 100 percent output at nameplate capacity during 24-7
13 operation, or 8,760 hours per year, and totals 4,468 GWh annually (gross). This level does
14 not account for downtime due to planned and unplanned outages. The Project's
15 corresponding OPTC Air Permit Application anticipates 7,226 hours of operation each year
16 (82 percent of annual hours) to account for shut-down/start-up cycles and maintenance
17 work.¹⁵ This adjusts the estimated generation to 3,685 GWh per year (gross), translating to a

¹² *Id.*

¹³ Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, pdf p. 23. Provided as Attachment ZH-4.

¹⁴ Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, p. 4-3. Provided as Attachment ZH-5.

¹⁵ Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, pdf p. 23. Provided as Attachment ZH-4.

roughly 82 percent capacity factor. The minimum is likely 40 percent capacity factor according to its baseload designation, which would equate to 1,787 GWh (gross).^{16,17,18}

The Applicant Direct Testimony also indicates a maximum net delivery capacity of 400 MW.¹⁹ Extrapolating this based on 8,760 to 7,226 hours per year equates to 3,504-2,890 MWh per year (net), respectively. Perhaps more importantly, the Project's requested transmission net operating capacity maximum allocation could permit annual generation (net) that approaches the estimated OPTC Application ceiling (gross); suggesting that there may not be a substantial difference between OPTC Application emission cap-based generation and actual generation.

15. Q: What do you think is the most likely level of operation for the Project?

A: It is both possible and not improbable that the Project may operate close to an 82 percent capacity factor, generating approximately 3,685 GWh per year (gross), as based on the NDEP Air Permit OPTC Application. Data centers are high-capacity factor load centers with 24-7 operations.²⁰ One article recounts "Data centers are built on the assumption that, once they are online, they will operate around the clock 365 days per year... In reality, some are seeing uptime close to 80%..."²¹

¹⁶ The ASR-IX OPTC Application indicated that the proposed simple cycle gas turbines are slated for classification as base load facilities; meaning they are anticipated to supply "more than 40% of their potential electrical outputs as net-electric sales on both a 12-operating month and a 3-year rolling average basis." The combination of its nameplate capacity and a baseload designation equating to 40 percent annual capacity factor, assuming 8,760 hours of operation, equates to 1,787 GWh (gross).

¹⁷ Nexus Fulcrum, LLC, Application for a Class I Operating Permit To Construct, November 2025, p. 4-4. Provided as Attachment ZH-6.

¹⁸ Nexus Fulcrum, LLC Application for a Class I Operating Permit To Construct, November 2025, p. 3-1. Provided as Attachment ZH-7.

¹⁹ Docket No. 26-06016, Direct Testimony of Richard Salgo, p. 3.

²⁰ USP&E, AI Data Center Power Requirements: The Complete Capacity Planning Guide for Hyperscalers, Accessed at <https://uspeglobal.com/articles/ai-data-center-power-requirements/>. Accessed on September 15, 2026.

²¹ Fortune. AI's volatile power demand is damaging its own data centers. August 6, 2026. Retrieved from <https://fortune.com/2026/08/06/ais-volatile-power-demand-is-damaging-its-own-data-centers/>. Accessed on September 9, 2026.

1 While it is certainly possible that the Project may operate at a lower capacity factor, such
2 as the 40 percent capacity factor associated with the “baseload” designation, I think it is
3 unlikely. Moreover, the Project applicant declined to provide data on the most likely level of
4 operations. Without that information, I have no reason to assume the Project would operate
5 below the maximum threshold that would be allowed by the OPTC permit.

6 Throughout this testimony, I generally report metrics corresponding to a 40 to 82 percent
7 (gross) capacity factor operating or net capacity delivery benchmark. This range aligns with
8 the reported transmission interconnection request for 400 MW net deliverable capacity.

9 **16. Q: How does Project generation compare to existing utility-scale energy production?**

10 A: The Project’s range of generation rivals that of NV Energy’s natural gas fired generating
11 units. Harry Allen, a 745 MW gas plant, generated 2,959 GWh in 2024.²² The Tracy
12 Generating Facility, a 1,033 MW nameplate capacity plant, reported producing 4,053 GWh in
13 2024.²³

14 Assuming the Project’s first full year of operations could commence as early as 2030,²⁴
15 and a net energy delivery capacity of 400 MW, the estimated maximum annual ASR-IX
16 energy delivery equates to approximately 11 percent of the total thermal generation expected
17 for NV Energy’s Obsidian Plan in 2030.²⁵ For additional perspective, the Project’s
18 deliverable energy output (net) could exceed SPPC’s residential sales in 2025, as shown in
19 Figure ZH-1.

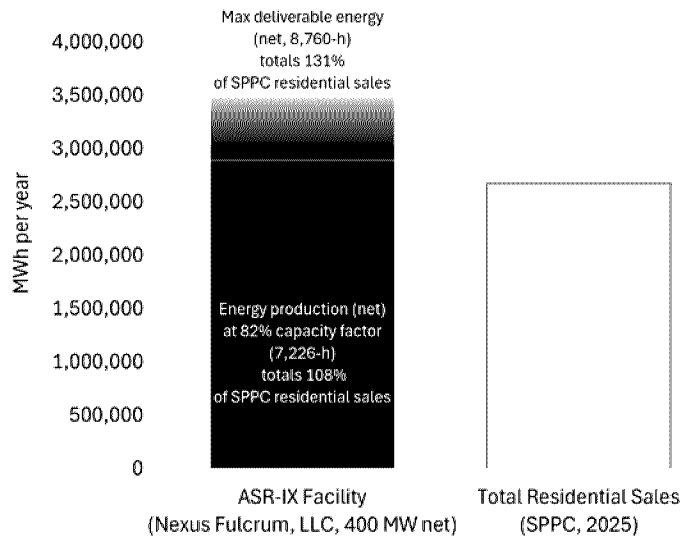
²² EIA, 2024 Carbon Dioxide Emissions at Electric Power Plants.

²³ EIA, 2024 Carbon Dioxide Emissions at Electric Power Plants.

²⁴ Construction completion is expected in Quarter 4, 2029. Docket No. 26-06016, Nexus Fulcrum LLC UEPA Application, Exhibit F, p. 9.

²⁵ Assumes 400 MW net delivery Capacity over 8,760 hours. Percent of the total thermal generation expected for NV Energy’s Obsidian Plan in 2030 decreases to 9 percent assuming 7,226 hours operation. Docket No. 26-05007, Public Workpapers, 2026y IRP Economic Narrative Figures, Tab EA-43 Energy by Plan, Case: Obsidian, PLEXOUT Category: Thermal Generation.

Figure ZH-1. Project deliverable energy (net) compared to SPPC total residential sales in 2025



17. Q: You mentioned Project annual natural gas consumption. How does this compare to electric sector natural gas consumption in Nevada?

A: I requested Project heat rate data beyond what is available in the Project's Air Permit OPTC Application. The Applicant pointed its response to the OPTC Application as a whole.²⁶ Without more specific data, I estimated the Project's turbine OPTC Application maximum annual natural gas consumption based on the provided total emissions and the equipment emissions factor in lbs. per MMBtu, totaling 365 million therms annually.²⁷

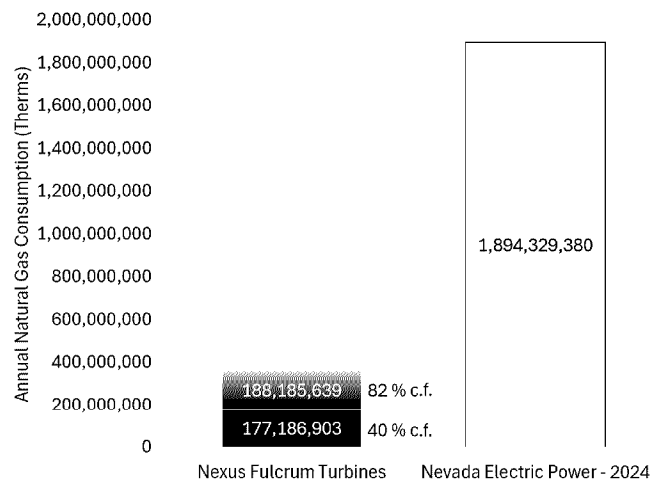
Nevada's total natural gas consumption for electric power production in 2024 was 1,894 million therms. The Project's estimated annual natural gas consumption for the OPTC Application, at 82 percent capacity factor, amounts to 19 percent of Nevada's electric sector

²⁶ Docket No. 26-06016, Nexus Fulcrum LLC Response to NCARE 1-2 and 1-3. Provided as Attachment ZH-3.

²⁷ 2,137,064 tons of CO₂ times 2000 lbs. per ton, divided by 116.98 lbs. per MMBtu times 10 therms per MMBtu. Nexus Fulcrum, LLC, Application for a Class I Operating Permit To Construct, November 2025, Appendix A. Emissions Calculations, pdf. p. 25. Provided as Attachment ZH-8.

natural gas consumption in 2024.²⁸ This is not a wholly unrealistic estimate given evidence of high uptimes for natural gas plants dedicated to power high-capacity factor data centers. The estimated annual natural gas combustion at a base load designation of at least 40 percent capacity factor for the Project turbines totals 177 million therms, or 9 percent to total electric power consumption in Nevada in 2024.

Figure ZH-2. Annual Project turbine natural gas consumption compared to Nevada electric sector usage in 2024



18. Q: How does the estimated generation and natural gas consumption relate to the effect on the environment?

A: These Project operating characteristics, as well as other factors such as unit efficiency and reliance on fossil natural gas, inform the annual greenhouse gas emissions and associated probable effect on the environment for each year of operation. In the following subsections, I describe the likely environmental impacts.

B. Greenhouse Gas Emissions

²⁸ U.S. Energy Information Administration, Natural Gas Consumption by End-Use, https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_snv_a.htm. Accessed on September 24, 2026.

19. Q: Can you summarize the impacts of likely greenhouse gas emissions from the Project?

A: Yes. Carbon dioxide emissions, or CO₂, from the Project will contribute to a long-term increase in atmospheric CO₂ concentration and climate change.²⁹ It is commonly accepted by scientists that anthropogenic greenhouse gas emissions released in large part from fossil fuel combustion is driving global climate change.³⁰ The resulting warming effect is registering at the global, regional, state, and city-scales around the Earth, including in the United States. Since 1970 all 50 states and 240 tracked cities have experienced warming, and Nevada is no exception.³¹

Average annual and summer temperature increases are already detectable in Nevada. Nevada ranks 26th out of 50 states with a +2.8-degree F increase in average temperature from 1970 to 2024.³² However, for multiple years in a row, Reno and Las Vegas hold the record for the first and second fastest warming cities in the United States. As of 2025, Reno, NV has experienced a +7.9-degree F increase in average annual temperature and +11.3-degree F increase in average summer temperature, with +68-days from June-August registering above normal, relative to 1970.^{33, 34} Las Vegas, NV records show a +6.0-degree F increase in average annual temperature and +6.2-degree F increase in average summer temperature from

²⁹ For CO₂ emitted in any given year, approximately 70% is absorbed by sinks within 100 years; an additional 10% is absorbed over the next 300 years, and the remaining 20% lasts for “tens if not hundreds of thousands of years before being removed,” because it is absorbed through long-term processes such as deep ocean circulation and the weathering of silicate rocks. Yale Climate Connections, <https://www.yaleclimateconnections.org/2010/12/common-climate-misconceptions-atmospheric-carbondioxide/>.

³⁰ NASA, Scientific Consensus, Scientific Consensus - NASA Science. Accessed on August 24, 2026.

³¹ Climate Central, Earth Day: Fastest Warming U.S. Cities and States. Earth Day: Fastest-Warming U.S. Cities and States | Climate Central. Accessed August 24, 2026.

³² *Id.* 2025EarthDay_Data Download.xlsx. Accessed August 24, 2026.

³³ Climate Central, Summer Warming (1970-2025) Driven By Climate Change. <https://www.climatecentral.org/climate-matters/summer-package>. Accessed August 24, 2026.

³⁴ Climate Central, Earth Day: Fastest Warming U.S. Cities and States. Earth Day: Fastest-Warming U.S. Cities and States | Climate Central. Accessed August 24, 2026.

1 1970 to 2025, adding 42 days with above normal temperatures between June-August.³⁵

2 Warming is compounded by urbanization and heat islanding effects in these cities. These
3 trends are impacting most Nevadans, given that these cities and the surrounding communities
4 are home to approximately 88 percent of residents.

5 **20. Q: Beyond rising temperatures, what are the anticipated effects on Nevada's**
6 **environment?**

7 A: A report from the University of Nevada, College of Agriculture, Biotechnology, and
8 Natural Resources identifies the impacts of climate change on the environment most likely to
9 occur in Nevada. This includes high confidence that Nevada will experience increasing
10 temperatures, especially in urban areas, and increasing occurrence of heat waves in terms of
11 both frequency and severity. The report also identifies high likelihood of increasing drought
12 frequency and severity, with loss of snowpack, due to shifts from snow to rain and earlier
13 snow melt, regardless of stable or slight increases in precipitation; increasing flooding as
14 snow shifts to rain; and increasing wildfire risk including fire size and severity.

15 Collectively, these climate impacts are expected to result in downstream impacts within
16 Nevada. Examples include increased risk of heat-, fire-, and smoke-related human health
17 impacts, including for farmers, ranchers, and recreators, as well as animal health impacts
18 affecting livestock and wildlife; loss of habitat; and lower water levels that can lead to
19 declining water quality.³⁶

³⁵ *Id.*

³⁶ McAfee, S., Restaino, C., Ormerod, K., Dettinger, M., McEvoy, D., Kalansky, J., Cayan, D., Lachniet, M., Moser, S., VanderMolen, K., Wall, T. 2021, Climate Change Impacts in Nevada, Extension | University of Nevada, Reno FS-21-06. Climate Change Impacts in Nevada | Extension | University of Nevada, Reno. Accessed August 25, 2026.

21. Q: How do these impacts relate to the UEPA determination?

A: Many of the impacts of greenhouse gas emissions that are relevant to Nevadans are also specified in SB 254 (2019),³⁷ which formally recognizes that greenhouse gas emissions, including CO₂, drive climate change and that the resulting impacts are detrimental to the health of Nevada's environment, residents, and economy. As identified by research and recognized in Nevada statute, greenhouse gas emissions, including those from the proposed Project, are directly relevant to evaluating the effect on Nevada's environment, and therefore should be considered under the UEPA permit to construct determination criterion NRS 704.890(1)(a).

22. Q: Can you provide an estimate of the expected carbon dioxide emissions from the proposed ASR-IX facility?

A: Yes, I have estimated the probable CO₂ emissions range for the ASR-IX facility based on the Applicant's OPTC Application. According to the OPTC Application, the Project is expected to emit up to 1.94 MMT of CO₂ annually, corresponding to an adjusted operating duration of 7,226 hours per year, or an 82 percent capacity factor.^{38,39} This equates to an estimated turbine emission rate of 1,160 lbs. of CO₂ per MWh (gross).⁴⁰ This emission rate is comparable to the national average emission rate of 1,180 lbs. of CO₂ per MWh reported for natural gas combustion turbines built since 2015.⁴¹

³⁷ SB 254 (2019).

³⁸ 2,137,064 tons of CO₂ times 2000 lbs. per ton, divided by 116.98 lbs. per MMBtu times 10 therms per MMBtu. Nexus Fulcrum, LLC, Application for a Class I Operating Permit To Construct, November 2025, Appendix A. Emission Calculations, pdf p. 21. Provided as Attachment ZH-9.

³⁹ Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, pdf p. 23. Provided as Attachment ZH-4.

⁴⁰ Metric tons of CO₂ x lbs. per ton, divided by 510 MW x 7225.5 hours, equals 1160 lbs. of CO₂ per MWh (gross).

⁴¹ Andover technology Partners, CO₂ and NO_x Emissions from Natural Gas Combined Cycle and Natural Gas Combustion Turbine Power Plants, Accessed at <https://www.andovertechnology.com/wp-content/uploads/2023/09/CO2-and-NOx-from-NG-plants.pdf>. Accessed on September 15, 2026.

1 The low-end annual emission rate totals 0.94 MMT CO₂ per year, assuming 40 percent of
2 the potential electrical output for 8,760 hours at the same turbine emission rate.^{42,43}

3 **23. Q: Does the OPTC Application’s reported emission ceiling correspond to a realistic**
4 **outcome?**

5 A: Yes. The OPTC Application’s reported emission ceiling could reflect a realistic annual
6 emissions rate.

7 Applicants state that

8 *“The emissions figures modeled in the NDEP Class 1 OPTC application reflect*
9 *worst-case regulatory scenarios required by NDEP for permitting purposes; they are*
10 *not forecasts of how the Facility will actually operate. Actual operations will be*
11 *below permitted maximums given grid engineering constraints in the area. The*
12 *probable effect on the environment is, therefore, likely less than the permitted*
13 *maximums would suggest.”⁴⁴*

14 Without a quantitative response regarding actual anticipated annual emissions, this claim
15 is not verifiable. The Applicant’s assertion that actual emissions will remain below permitted
16 maximums could reflect only a small reduction. Importantly, this claim is also not
17 enforceable. An NDEP OPTC and follow-on operating permit sets the enforceable limit and
18 would allow Project emissions up to the permit maximum, which is a possible and not
19 improbable annual emissions rate.

20 **24. Q: Is it possible that the Project’s actual emissions could equal the “worst-case”**
21 **estimate in the OPTC Application?**

⁴² The emissions rate 1,160 lbs. of CO₂ per MWh (gross) was used to estimate a minimum emissions per year corresponding to 40 percent capacity factor.

⁴³ Nexus Fulcrum, LLC, Application for a Class I Operating Permit to Construct, November 2025, p. 4-4. Provided as Attachment ZH-6.

⁴⁴ Docket 26-06016, Direct Testimony of Mark Spencer, p. 9.

1 A: Yes. As previously discussed, the OPTC Application's reported emission ceiling is based
2 on 7,226 operating hours or an estimated generation maximum of 3,685 MWh (gross), *not a*
3 *theoretical "24-7" maximum*. The Air Permit regulates emissions of certain pollutants, not
4 operating hours or generation specifically.

5 It would not be a surprise if Project emissions approached the OPTC Application
6 maximum permissible limit, considering that (1) the project has a single, data center off-taker
7 and data centers typically operate at a high capacity factor; (2) there is no clear indication of
8 the Project serving as part of a diverse resource portfolio that could otherwise supplant
9 Project generation; and (3) the Project plans to operate at a baseload capacity factor that has a
10 maximum 400 MW *net* capacity deliverability at the point of connection, such that Project
11 electric generation could presumably deliver up to 3,504 MWh per year (net).

12 **25. Q: If Project turbines are shut-down for maintenance, or the power is sold to other off-**
13 **takers, such as NV Energy, are there any external sources of greenhouse gas emissions**
14 **that could be triggered?**

15 A: Yes. It is reasonable to assume that Project downtime and maintenance hours discounted
16 from the Applicant's OPTC Application do not equate to fully powering down the reliant data
17 center. Rather, these periods of down time, or even periods when the Project generation is
18 allocated to another off-taker such as NV Energy, could trigger data center backup power
19 systems that rely on natural gas or diesel-fired generators.⁴⁵ For example, over the July 4

⁴⁵ Hatton Power and Propulsion, The Impact of Power Outages on Data Centers and the Need for Generators, March 18, 2025, Accessed at <https://hattonpower.com/blog/data-center-backup-power>. Accessed on September 15, 2026.

1 weekend this year, data center diesel backup generation kicked on in Virginia during a
2 reliability risk event triggered by a heat wave.⁴⁶

3 Applicant's direct testimony references a plan for "back-up" generators located at
4 Switch's data center.⁴⁷ These back-up generators could apparently provide not only data
5 center back-up in the event of planned or unplanned outages but may also be utilized as a
6 primary power source if Project generation is sold to other off-takers, such as NV Energy,
7 assuming the Project is connected to NV Energy's grid. Since back-up system emissions are
8 not directly under the purview of a UEPa permit I have not included them in the Project
9 assessment; however, it is important to note that the potential greenhouse gas emission from
10 the Project likely underestimate the total emissions from power generation to the off-taker.

11 **26. Q: How do the Project's estimated carbon dioxide emissions compare to utility-owned**
12 **and operated natural gas plants in Nevada?**

13 A: Assuming a CO₂ emission rate of 1.94 MMT per year,⁴⁸ the proposed ASR-IX natural gas
14 fueled electric generation facility will have a CO₂ emission rate per MW that exceeds all
15 existing electric utility owned thermal generation plants in Nevada, as shown in Table ZH-1.
16 At the projected maximum emissions, as reported in the OPTC Application, the ASR-IX
17 emissions will exceed even the coal-fired generation at North Valmy in 2024. Even at the
18 low-end estimated annual emissions of 0.94 MMT CO₂, corresponding to 40 percent gross
19 Project capacity factor, the resulting CO₂ emissions will exceed all utility-owned, Nevada-
20 sited fossil-fueled generating plants except the North Valmy coal-powered plant in 2024, as

⁴⁶ Business Insider, Dark smoke rose above a Virginia data center as a heat wave pushed the power grid close to its limits, July 10, 2026, Accessed at <https://www.businessinsider.com/virginia-data-center-diesel-backup-generator-heat-wave-pjm-2026-7>. Accessed on September 15, 2026.

⁴⁷ Docket No. 26-06016, Direct Testimony of Richard Salgo, p. 6.

⁴⁸ This corresponds to 82 percent capacity factor and an emissions rate of 1,160 lbs. CO₂ per MWh.

shown in Table ZH-1. Notably this includes multiple Nevada plants with substantially larger capacity, but with higher efficiency and therefore lower emissions per MWh as well as operating at lower capacity factors than the proposed Project.

Table ZH-1. NV thermal generation facility data and CO2 emissions per facility compared to ASR-IX.

Plant Name [1]	Sector Group [1]	Fuel Group [1]	Nameplate MW [2]	MMT CO2 [1]	Metric Tons CO ₂ per MW	Electrical Output (%) [1,3]
North Valmy [6]	Electric Utility	COAL	567	1.55	2731	23%
Higgins Generating Station	Electric Utility	GAS	688	1.17	1695	49%
Tracy	Electric Utility	GAS	1033	1.71	1656	45%
Harry Allen	Electric Utility	GAS	745	1.17	1571	45%
Chuck Lenzie	Electric Utility	GAS	1466	2.10	1431	43%
Fort Churchill	Electric Utility	GAS	230	0.32	1390	25%
Apex Generating Station	Electric Utility	GAS	601	0.79	1310	38%
Silverhawk	Electric Utility	GAS	1120	1.18	1055	29%
Desert Star Energy Center	Electric Utility	GAS	537	0.41	770	22%
Las Vegas Generating Station	Electric Utility	GAS	359	0.21	596	14%
Clark (NVE)	Electric Utility	GAS	1376	0.49	354	8%
Sun Peak Generating Station	Electric Utility	GAS	222	0.03	116	2%
Planned: ASR-IX, Nexus Fulcrum, LLC [4,5]						
Est @ 100%, 8760-h	Data Center Developer	GAS	510	2.35	4609	100%
OPTC, 7226-h	Data Center Developer	GAS	510	1.94	3802	82%
Est. @ 40%, 8760-h	Data Center Developer	GAS	510	0.94	1844	40%

[1] EIA, 2024 Carbon Dioxide Emissions at Electric Power Plants.

[2] EIA, 2024 Form EIA-860 Data - Schedule 3, 'Generator Data' (Operable Units Only).

[3] Generation (MWh), divided by Plant Nameplate (MW) times 8760-h.

[4] Nexus Fulcrum, LLC Application for a Class I Operating Permit to Construct, November 2025, p. 4-4. Provided as Attachment ZH-6, Gross energy is used due to the lack of data provided for emissions associated with expected net energy production.

[5] Nexus Fulcrum, LLC UEPA Application.

[6] North Valmy includes the entire plant capacity, not just the NV Energy owned portion.

27. Q: How does the Project's emission rate compare with other plants in Nevada?

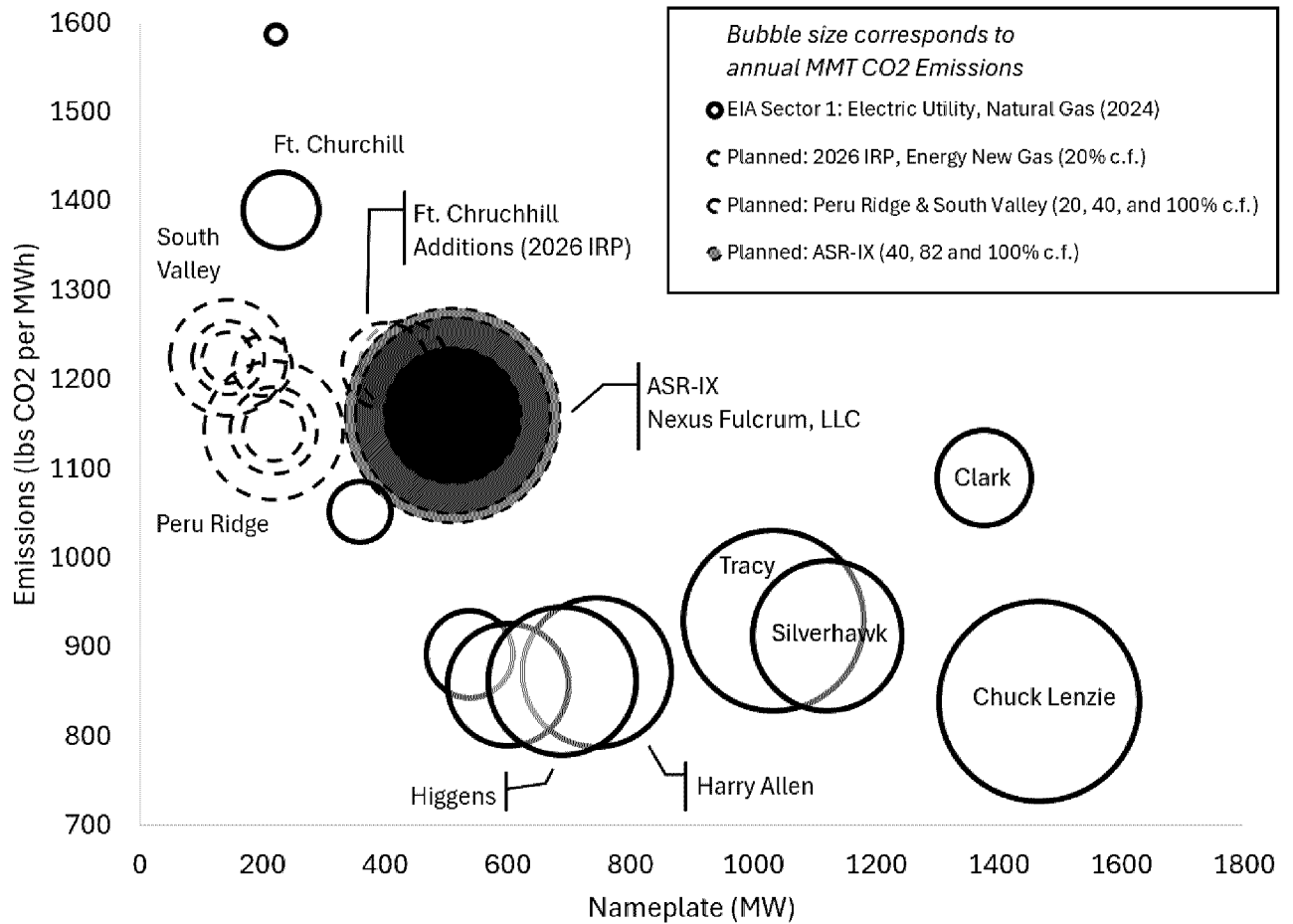
A: Carbon dioxide emissions are a function of many factors including unit efficiency, capacity, and electrical output, among other factors. The proposed Project's emission rate is

1 considerably higher than other power plants in Nevada that operate as baseload facilities. The
2 proposed Project is expected to have a CO₂ emissions footprint more comparable to much
3 larger and generally more efficient utility-owned, Nevada-sited gas plants. This is because
4 most baseload power plants are not the relatively inefficient simple cycle turbines; rather, NV
5 Energy, like most utilities, develops more efficient combined cycle gas plants to serve
6 baseload power needs. Nationally, the average emission rate of a combined cycle plant was
7 863 lbs. per MWh in 2025, 29 percent lower than the estimated emission rate of the proposed
8 Project.

9 Comparing lbs. CO₂ per MWh, nameplate capacity, and total CO₂ emissions for the
10 Project and other Nevada-sited natural gas generation facilities, as shown in Figure ZH-3,
11 offers a visualization of the anticipated ASR-IX turbine CO₂ emissions range relative to the
12 actual reported emissions of other utility-scale facilities.⁴⁹ The concentric rings on the ASR-
13 IX bubble corresponds to higher capacity factor and associated emissions. The inner ring
14 corresponds to a 40 percent capacity factor, and each successive ring plots 82 and 100
15 percent capacity factors. The 40 to 82 percent capacity factor emissions reflect the probable
16 emissions range, with 82 percent totaling the OPTC Application's reported emission ceiling.

⁴⁹ The ASR-IX turbine's projected 1,160 lbs. of CO₂ per MWh (gross) is based on OPTC CO₂ emissions and derived gross generation. Other plotted power plants are calculated based on EIA reported net generation.

Figure ZH-3. Annual CO₂ Emissions as a function of lbs. of CO₂ per MWh and capacity for existing and proposed natural gas generating facilities in Nevada



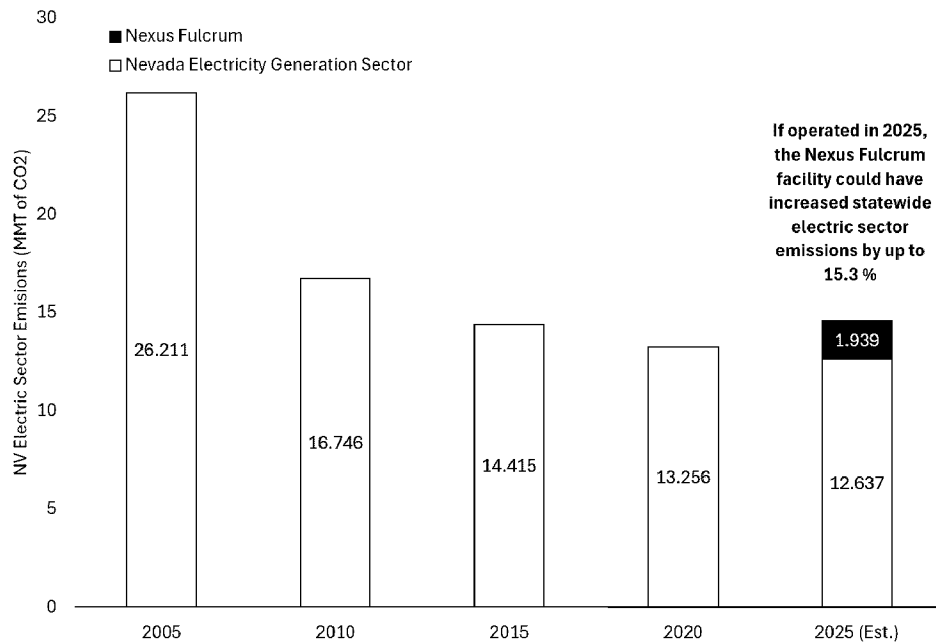
28. Q: To what extent would the proposed facility contribute to annual electric sector greenhouse gas emissions in Nevada?

A: Based on the Project's OPTC Application maximum emissions, ASR-IX could have increased 2025 Nevada electric sector CO₂ emissions by up to 15 percent, shown in ZH-4.⁵⁰ Even at 40 percent potential electrical output, consistent with a base load designation, the Project CO₂ emissions would total an estimated 7 percent of 2025 Nevada electric sector

⁵⁰ NDEP Statewide Greenhouse Gas Emissions Inventory & Projections 1990-2045 - 2025 Report, pp. 28, 30.

emissions. At the upper end, the Project's emissions would effectively eliminate the progress made to reduce electric sector emissions in Nevada since 2015.

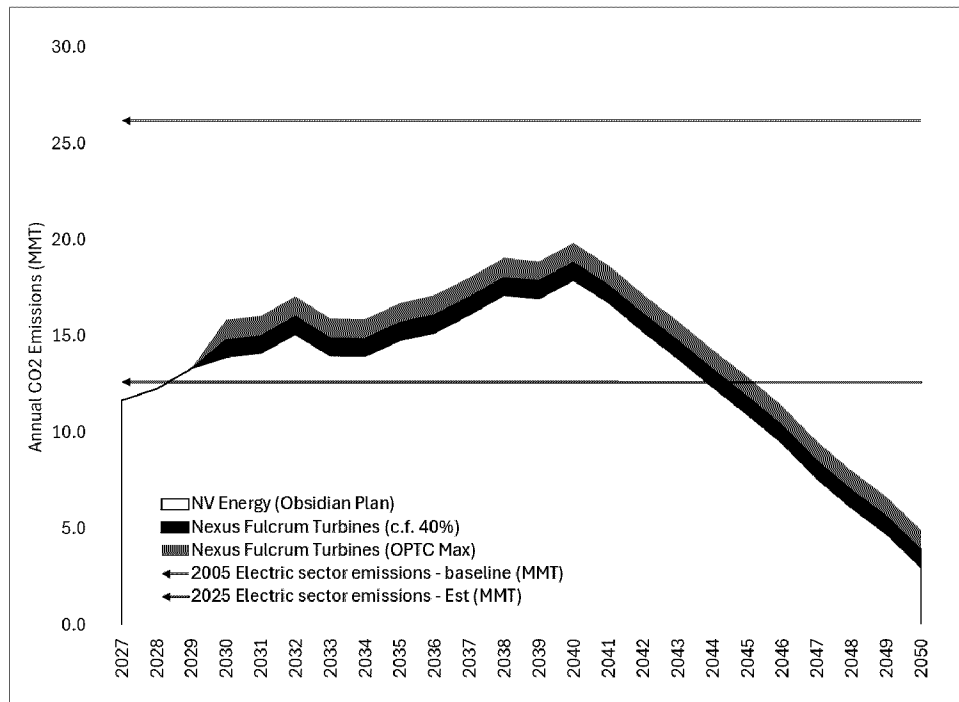
Figure ZH-4. Annual CO₂ Emissions Comparisons (MMT): Nevada Statewide Electricity Generation Sector (2005-2025) versus ASR-IX, Nexus Fulcrum, LLC



NV Energy's generating fleet has been the primary source of statewide electric sector CO₂ emissions. However, the proposed Project, as well as any similar data center bring-your-own-generation projects, may alter this dynamic over the 2027-2050 planning horizon.

Based on similar gas generation facilities, the proposed Project could operate over a lifespan of 30 years or more. Over its lifespan the project is likely to meaningfully increase anticipated statewide annual electric sector emissions. For comparison, Figure ZH-5 shows NV Energy's projected emissions under their pending, preferred resource plan, and the incremental, additional emissions associated with ASR-IX.

Figure ZH-5. Annual emissions projected for ASR-IX compared to NV Energy Thermal Generation Obsidian Plan emissions forecast from 2027-2050



NV Energy's CO₂ emissions under the proposed Obsidian portfolio are projected to decline sharply beginning around 2040. In contrast, the proposed Project is likely to remain a substantial source of electric sector CO₂ for decades after its anticipated 2029 COD. The Project will account for an increasing share of Nevada's electric-sector emissions after 2040, as NV Energy reduces the greenhouse gas intensity of its fleet. For example, by 2050 the Project could be responsible for as much as 39 percent of the electric sector's total emissions.⁵¹ In other words, a single generating plant, allocated to one data center off-taker, will contribute to a sustained reliance on natural gas electric generation that could derail the decarbonization of Nevada's electric sector by 2050, in alignment with achieving zero- or near-zero emissions per SB 254 (2019).

⁵¹ NV Energy's Obsidian Plan projects 3.03 MMT CO₂ emissions in 2050. Combined 2050 emissions are defined as 3.03 MMT CO₂ NV Energy Obsidian Plan emissions + 1.95 MMT CO₂ Project emissions.

1 **29. Q: Are annual carbon dioxide emissions the only relevant metric of the Project's**
2 **impact on the environment?**

3 A: No. Carbon dioxide produced from the combustion of fossil natural gas has an
4 atmospheric residence time spanning hundreds to thousands of years, leading to long-term
5 warming. To better frame the scale of the Project's impact on the environment, it is critical to
6 consider the cumulative Project emissions over the facility's putative lifespan. Projecting
7 total ASR-IX Project emissions over 30 years equates to between 28.2 MMT CO₂ and 58.2
8 MMT CO₂.⁵² The higher figure represents a reasonable estimate based on the high-capacity
9 factor of data centers and associated power generators.⁵³

10 Project emissions beginning in 2030 and extending through 2050 amount to an estimated
11 +20 MMT CO₂ to +41 MMT CO₂, as shown in Figure ZH-6.⁵⁴ Cumulative Project CO₂
12 emissions could equate to up to 13.3 percent of NV Energy's total projected emissions,
13 forecast at +307 MMT CO₂ based on the preferred Obsidian plan.⁵⁵ Meaning, the proposed
14 Project could push total, cumulative electric sector emissions during this timeframe to +348
15 MMT CO₂ by 2050.⁵⁶

⁵² 0.94 MMT CO₂, or a Project 40 percent capacity factor, times 30 years; and 1.94 MMT CO₂, or the Project OPTC emissions maximum corresponding to an 82 percent capacity factor, times 30 years.

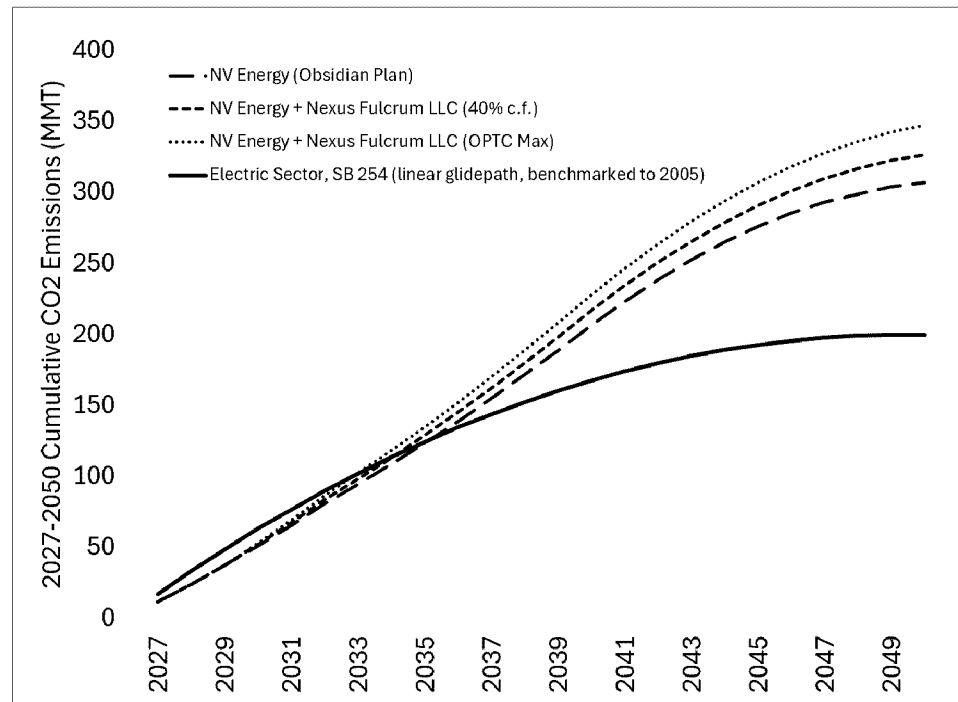
⁵³ Fortune. AI's volatile power demand is damaging its own data centers. August 6, 2026. Retrieved from <https://fortune.com/2026/08/06/ai-volatile-power-demand-is-damaging-its-own-data-centers/>. Accessed on September 9, 2026.

⁵⁴ Assumes 40 percent and 82 percent capacity factor. Timeframe corresponds to 2026 IRP forecast years.

⁵⁵ NV Energy cumulative emissions for the Obsidian preferred plan include 2027-2050.

⁵⁶ Project plus NV Energy Obsidian plan CO₂ emissions.

Figure ZH-6. Cumulative electric sector emissions forecasted for NV Energy plus Nexus Fulcrum and compared to Nevada’s statutory carbon emissions reduction goals.



For comparison, I have also calculated the cumulative electric sector emissions from 2027-2050 assuming Nevada reduced emissions by 28 percent relative to a 2005 baseline by 2025, 45 percent by 2030, and zero or near-zero emissions by 2050.⁵⁷ If Nevada followed an electric sector emissions trajectory in alignment with the goals outlined in SB 254 (2019), the electric sector’s cumulative emissions between 2027 and 2050 would be approximately 200 MMT CO₂. Nevada is projecting a marked departure from this statutory goal and the proposed Project will only exacerbate the problem.

30. Q: Do the Project’s anticipated CO₂ emissions comport with achieving a 45 percent reduction in emissions by 2030?

⁵⁷ This assumes annual emissions reductions from 2027 through 2050 according to a linear glidepath between each benchmark year, referenced to 2005 actual electric sector emissions.

1 A: No. The most recent data available on statewide greenhouse gas emissions are estimated
2 by NDEP for 2025.⁵⁸ The Project's emissions ceiling of 1.94 MMT CO₂⁵⁹ would have
3 measurably increased 2025 statewide emissions from 39.16 MMT to 41.10 MMT, a 5 percent
4 increase.

5 Senate Bill 254 (2019) directed NDEP to report on policy that could achieve greenhouse
6 gas emission reductions of 28 percent below 2005 levels by 2025, 45 percent below 2005
7 levels by 2030, and zero or near-zero by 2050.⁶⁰ In its most recent report, NDEP found that
8 Nevada's existing policy landscape was expected to reduce its greenhouse gas emissions by
9 20 percent below 2005 emissions in 2025, or a shortfall of approximately 8 percent or 3.8
10 MMT CO₂.⁶¹ Based on pre-2026 policy, NDEP also projected that Nevada will fail to achieve
11 the 2030 benchmark goal by a sizeable 24 percent emission reduction shortfall, or 11.9 MMT
12 CO₂.⁶²

13 Those estimates pre-dated the proposed Project, and other data center growth. The
14 Project's emissions will exacerbate Nevada's expected shortfall relative to the 2030 emission
15 reduction milestone and could prevent Nevada from achieving its zero or near-zero emissions
16 milestone in 2050.

17 **31. Q: Is it possible that the Project could rely on renewable natural gas to mitigate its**
18 **greenhouse gas emissions impact on the environment?**

19 A: This is highly unlikely.

⁵⁸ NDEP Statewide Greenhouse Gas Emissions Inventory & Projections 1990-2045 - 2025 Report.

⁵⁹ Air Quality OPTC Application.

⁶⁰ SB 254 (2019).

⁶¹ NDEP Statewide Greenhouse Gas Emissions Inventory & Projections 1990-2045 - 2025 Report, p. 15.

⁶² *Id.*

1 Feedstock availability and the economics of RNG production are generally unfavorable.⁶³
2 Landfill gas makes up over 64 percent of RNG production in the U.S., but only produced
3 1,437 million therms⁶⁴ or only about 4-8 times the projected annual gas consumption of
4 ASR-IX.⁶⁵ Most Western production facilities are located in California while the majority of
5 RNG production facilities are in eastern and mid-west states.⁶⁶ This suggests a potential
6 supply and transport barrier to substantial RNG use at the ASR-IX facility even if RNG is
7 added to the Great Basin Pipeline gas supply. Notably, NV Energy only reports two small
8 RNG landfill gas-to-generation units: Apex Landfill, a 12 MW facility;⁶⁷ and WM
9 Renewable Energy-Lockwood, a 3.2 MW facility.^{68,69}

10 The Applicant also did not indicate any plans to secure RNG in its application or in its
11 response to NCARE Discovery.^{70,71} As such, there is no indication that the Project will
12 utilize any RNG to fuel the Project, and even if it did there is no clear indication that
13 sufficient RNG would be available to meaningfully mitigate the anticipated carbon intensity of
14 ASR-IX greenhouse gas emissions.

15 **C. The UEPA Application's Analysis of Environmental Impacts Is**
16 **Insufficient**

⁶³ PNAS, J. Carey, July 5, 2023, While some tout “renewable natural gas” as a way to mitigate climate change, others see a false solution, accessed from <https://www.pnas.org/doi/epub/10.1073/pnas.2309976120>.

⁶⁴ <https://bioenergyinternational.com/landfill-gas-continues-to-drive-us-rng-growth-abc-data/>

⁶⁵ Estimated based on a 40 to 82 percent capacity factor (gross).

⁶⁶ U.S. EPA, Renewable Natural Gas, <https://www.epa.gov/lmop/renewable-natural-gas>

⁶⁷ Republic Services' Apex Landfill Renewable Energy Generating Facility Project Now Under Way, April 2011, <https://investor.republicservices.com/news-releases/news-release-details/republic-services-apex-landfill-renewable-energy-generating>. Accessed on September 24, 2026.

⁶⁸ Renewable Energy From Waste Management: Lockwood Landfill to Produce 3.2 Megawatts Of Electricity Using Landfill Gas, April 2012, <https://investors.wm.com/news-releases/news-release-details/renewable-energy-waste-management-lockwood-landfill-produce-32/>. Accessed on September 24, 2026.

⁶⁹ Docket No. 26-05007, V-8 Supply Plan, p. 41.

⁷⁰ Docket No. 26-06016, Nexus Fulcrum LLC Response to NCARE 1-6. Provided as Attachment ZH-10.

⁷¹ Docket No. 26-06016, Nexus Fulcrum, LLC UEPA Application, Exhibit I, pdf p. 249.

32. Q: Is the corresponding OPTC Application greenhouse gas emission projection sufficient to satisfy UEPA environmental impact reporting requirements?

A: No. Nevada has higher standards for electric sector greenhouse gas emission impact reporting than what has been provided by the Applicant. Electric sector greenhouse gas emissions are reported in the Project's Air Quality OPTC Application, but NDEP is not charged with considering the associated environmental impacts of those emissions, or how those impacts could be avoided or mitigated. Electric sector greenhouse gas emissions and mitigations, and the associated environmental impacts, are more thoroughly addressed through Nevada's IRP process and UEPA permits to construct.

33. Q: What is typically provided in a UEPA application regarding greenhouse gas emissions and mitigations?

A: A recent example is the UEPA application from Sierra Pacific Power Company, dba NV Energy, for the 400 MW Valmy capacity project, including two new 200 MW natural gas combustion turbines.⁷² SPPC's UEPA application acknowledges and addresses greenhouse gas emissions in multiple ways. While it includes its associated Air Permit OPTC Application with the project's potential to emit annual CO₂ emissions,⁷³ it also cites prior project approval through IRP Docket No. 24-05041,⁷⁴ addresses compliance with federal CO₂ emissions regulations for new gas plants,⁷⁵ and reviews and assesses control technologies for mitigating CO₂ emissions.⁷⁶ The Applicant's UEPA Application does not achieve this same

⁷² Docket No. 25-08009. SPPC, dba NV Energy, APPLICATION FOR A PERMIT TO CONSTRUCT THE 400 MW VALMY CAPACITY PROJECT UNDER THE UTILITY ENVIRONMENTAL PROTECTION ACT, filed August 8, 2025.

⁷³ *Id.*, Exhibit G, p. 7.

⁷⁴ Docket No. 25-08009. SPPC, dba NV Energy, APPLICATION FOR A PERMIT TO CONSTRUCT THE 400 MW VALMY CAPACITY PROJECT UNDER THE UTILITY ENVIRONMENTAL PROTECTION ACT, filed August 8, 2025, p. 2.

⁷⁵ *Id.*, Exhibit G, pp. 14-15.

⁷⁶ *Id.*, Exhibit G, pp. 28-34.

1 level of robust CO₂ emissions considerations, aside from listing the OPTC projected CO₂
2 emissions in the UEPA permit Application.⁷⁷

3 **34. Q: You mention the IRP. How are project greenhouse gases addressed in prior IRP**
4 **reviews?**

5 A: NV Energy, the utility certificated by the Commission to provide electric utility service in
6 the Project location, is required to file an Integrated Resources Plan, or IRP, every 3 years.⁷⁸
7 Historically, by the time utility-scale fossil thermal generators file for a UEPA permit to
8 construct, they have been scrutinized and litigated as part of Nevada's IRP process.

9 In terms of environmental impacts, Nevada IRP filings include production cost modeling
10 that reflects probable CO₂ emissions, not just maximum permissible emissions reported to
11 NDEP in the OPTC application. IRP filings also include the anticipated impact of greenhouse
12 gas emissions on public health and the environment via the associated Social Cost of Carbon,
13 or "SCC." These reported environmental impacts are weighed against other UEPA relevant
14 criteria in the IRP, such as need⁷⁹ and resource alternatives. The IRP's assessment of
15 greenhouse gas emissions, environmental impacts, and need, informs subsequent UEPA
16 Applications and can support a more streamlined reporting and review process.

17 However, this is not the case for the Nexus Fulcrum LLC Project, which has not been
18 evaluated through an IRP.⁸⁰ The bar for considering the magnitude of CO₂ emissions, its
19 effect on the environment, and any available mitigation approaches for the Nexus Fulcrum
20 Project UEPA Application should be at least as high as is established by NV Energy for other

⁷⁷ *Id.*, Exhibit F, p. 23.

⁷⁸ NRS 704.741(1).

⁷⁹ NAC 703.423(8).

⁸⁰ The Applicant claims that references to the project within the IRP are irrelevant to the Project UEPA Application. However, this is not the case considering a precedence by NV Energy to cite the IRP Docket and IRP Application which contains the proposed project for UEPA permit consideration.

1 utility scale gas generation UEPA Applications, such as Docket 25-08009. Given that utility-
2 proposed projects are scrutinized in an IRP before a UEPA application is filed, this
3 standalone UEPA application should arguably be even *more comprehensive* than a
4 comparable application from the utility.

5 **35. Q: Could the Applicant have provided information directly in its UEPA Application to**
6 **satisfy a more rigorous disclosure of greenhouse gas emissions and its environmental**
7 **impacts?**

8 A: Yes. The Project's UEPA Application offers much less detail than comparable
9 applications submitted by utilities for permanent new gas-fired power plant projects, with
10 little insight into the actual operating plans or environmental impacts. I find that the
11 Application should not be approved given that it fails to adequately disclose the impact of the
12 Project on the environment.

13 **IV. If the utility facility emits greenhouse gases and does not use renewable energy as its**
14 **primary source of energy to generate electricity, the extent to which the facility is**
15 **needed to ensure reliable utility service to customers in this State;**

16 **A. Historical Determinants of New Emitting Generation Facility Need in**
17 **Nevada**

18 **36. Q: Historically, what forms the basis for determining new utility-scale greenhouse gas**
19 **emitting generation need in Nevada?**

20 A: For NV Energy, the need for new utility scale emitting generation facilities has been
21 historically decided in Nevada's IRP filings.

22 In the IRP, a determination of need includes, but is not limited to, a thorough assessment
23 of the proposed load forecast over near-, mid-, and long-term planning horizons; request for
24 proposal "RFP" bids of available generation technologies, and the selection and aggregation
25 of those bids and other prospective generation into a near- to mid-term resource portfolio that

1 meets projected customer demand and achieves reliability standards; long-term capacity
2 expansion modeling to inform the downstream impact on future procurement needs; and an
3 estimate of the economic impact of the resource plan on Nevada's economy.

4 UEPA applications for a utility facility to be used by NV Energy draw on the preceding
5 rigor of the IRP assessment of the facility to substantiate its need, which the Commission
6 determines through prior orders. For example, the SPPC UEPA application for the Valmy
7 expansion project cites the preceding IRP.⁸¹

8 **37. Q: What is the effect of the IRP process and Commission approval on the UEPA**
9 **application review process?**

10 A: In Nevada, UEPA applications for new fossil generation plants for NV Energy are not
11 typically controversial dockets due to the preceding litigated IRP process and resulting
12 Commission decisions. The prior IRP assessment forms a critical foundation that informs the
13 more rapid UEPA review process, including determining the need for new GHG-emitting
14 generation.

15 **38. Q: Does the absence of an IRP filing requirement for an applicant mean that it should**
16 **be exempt from having to provide an equivalently rigorous assessment of need?**

17 A: No, it should not. UEPA applications for new emitting resources that are brought outside
18 of the existing IRP process should be subject to equivalent standards as those proposed in
19 UEPA Applications that previously passed IRP review. This is especially the case for the
20 proposed Nexus Fulcrum LLC project, which the Applicant claims will provide need-based
21 reliable service value to the TRIC area and NV Energy's system.⁸² Substantiating any

⁸¹ Docket No. 25-08009. SPPC, dba NV Energy, APPLICATION FOR A PERMIT TO CONSTRUCT THE 400 MW VALMY CAPACITY PROJECT UNDER THE UTILITY ENVIRONMENTAL PROTECTION ACT, filed August 8, 2025, p. 2.

⁸² Docket No. 26-06016, Direct Testimony of Richard Salgo, p. 4.

1 claimed need for the Project by NV Energy's customers broadly, squarely falls within the
2 realm of inclusion in a detailed IRP application, amendment, or adjustment filing, and
3 subsequent intervenor review and Commission order.

4 **B. Whether a Need for the Proposed Emitting Facility to Ensure Reliable**
5 **Utility Service to Customers in Nevada is Substantiated**

6 **39. Q: How might the facility be needed to ensure reliable utility service to customers in**
7 **Nevada?**

8 A: The Applicant is claiming that the Project can fulfill two needs. The first is to support the
9 power needs of a single off-taker, Switch Ltd. The second claim is that the Project "...has the
10 potential to offer additional reliability improvements to the grid that will have significant
11 benefits to northern Nevada electric customers."⁸³

12 **40. Q: With respect to Switch, Ltd., the single off-taker, has the Applicant provided any**
13 **information as to the amount of power Switch will need for its data center operations?**

14 A: No. In fact, the Application provided no information as to who the off-taker would be.
15 Switch Ltd. was only identified as the off-taker when the Applicant filed its direct testimony
16 on September 11, 2026.

17 **41. Q: Has the Applicant provided any information as to when Switch Ltd. will require the**
18 **power to be supplied from the Project?**

19 A: No.

20 **42. Q: Has the Applicant provided any information as to whether Switch Ltd. has the**
21 **ability to acquire power from alternative sources to meet its future power needs if the**
22 **Project is not built?**

⁸³ *Id.* p. 4.

1 A: No.

2 **43. Q: You mention the claim that the facility can provide reliability improvements to**
3 **northern Nevada customers broadly. Has this been substantiated?**

4 A: No, it has not. Direct Testimony of Mark Spencer states “the facility *will* provide a
5 significant reliability benefit to the NV Energy system [emphasis added].”⁸⁴ The Direct
6 Testimony of Richard Salgo finds that the resource could *potentially* provide system
7 reliability benefits to northern Nevada electric customers. The speculative claim is somewhat
8 more realistic and the definitive claim that it “will” provide “significant” reliability benefits
9 should be discounted.

10 While NV Energy’s 2026 IRP raises reliability concerns and highlights a constrained
11 system in the north, where TRIC is located, due to large load growth, there is a substantial
12 difference between new, purpose-built resources and PPAs proposed in the IRP to serve
13 bundled customers and system reliability needs versus new generating resources purpose-
14 built for the needs of a single unbundled customer, in this case Switch Ltd. Not all resources
15 that are interconnected to the grid automatically constitute reliability benefits to customers.

16 **44. Q: Does NV Energy’s pending IRP identify this Project as necessary to ensure reliable**
17 **service to customers in the State?**

18 A: No. NV Energy’s pending 2026 IRP includes the Project with regards to its pending
19 transmission interconnection request for 400 MW net deliverable capacity.⁸⁵ The Project is
20 not specifically included as a generating resource in NV Energy’s procurement plan designed
21 to serve its bundled customers. Meaning, the pending 2026 IRP does not specifically review

⁸⁴ Docket No. 26-06016, Direct Testimony of Mark Spencer, p. 9.

⁸⁵ Docket No. 26-05007, V-8 Supply Plan, p. 199.

1 the need for this Project to ensure reliable utility service to customers in this state, broadly,
2 via NV Energy's grid.

3 This also means that the UEPA Application is not, and will not be, backed by the rigor of
4 an IRP that included assessments such as load forecasts, alternate resource availability,
5 portfolio adequacy modeling, or an economic impact report. If not shown in the IRP, these
6 assessments that substantiate an emitting project's need to ensure reliable electric service
7 should be shown in a UEPA Application; especially if the Application seeks to secure a
8 UEPA permit on the basis that the Project is needed to support service reliability for
9 customers of Nevada, broadly.

10 **45. Q: Does the 2026 IRP's loss of load probability "LOLP" study, referenced in the Direct**
11 **Testimony of Mr. Salgo, substantiate claims regarding the Project's broad electric**
12 **service reliability need?**

13 A: No, it does not. The LOLP study update performed by E3 for NV Energy's 2026 IRP only
14 analyzed SPPC reliability risk for 2027 and 2028.⁸⁶ ASR-IX will not be operational until
15 2029, therefore it cannot support the identified LOLP risks.

16 Furthermore, the LOLP study was an update to the 2024 LOLP analysis, which was
17 specifically conducted to assess resource sufficiency and reliability concerns prior to
18 completing the Greenlink Nevada projects.⁸⁷ The LOLP assessment extends through
19 12/31/2028, coincident with the planned in-service date of Greenlink North.⁸⁸ The analysis
20 assumes a baseline resource portfolio that includes existing and approved resources located

⁸⁶ Docket No. 26-05007, V-41, ECON-2, E3 LOLP Study, p. 2.

⁸⁷ *Id.*

⁸⁸ *Id.* p. 9.

1 in the SPPC system.⁸⁹ It did not consider any resources submitted for approval in the 2026
2 IRP.

3 The identified reliability risk is expected to resolve in 2029 with the addition of the 400
4 MW Valmy CT and the completion of Greenlink North and SWIP-N.⁹⁰ Though projected
5 load growth may quickly utilize the SPPC system headspace and require additional
6 investments. Beyond what was included in the E3 study, NV Energy is proposing the
7 addition of around 3,700 MW (nameplate) of new renewable, energy storage, and gas
8 resources in the SPPC system through 2032.⁹¹ There is nothing in the E3 LOLP study to
9 suggest that the anticipated and proposed resources are insufficient to achieve local resource
10 adequacy beyond 2028.

11 **46. Q: Is there any evidence outside an IRP that could substantiate the Project’s benefit for**
12 **reliability to customers?**

13 A: Mr. Salgo testifies to discussions with NV Energy “regarding the possibility of providing
14 certain specific grid support services (separate from the general benefits described further
15 below).”⁹² The associated description of system reliability benefits is predicated with “can”
16 and “[NV Energy] ...will have the opportunity...” But the materialization of these benefits
17 requires more than just discussions. They require terms and conditions within signed
18 agreements. Agreements would establish a defensible value of the facility to system
19 reliability. Still, these potential agreements with NV Energy should be evaluated in an NV
20 Energy IRP, rather than the subject of speculation in this UEPa application.

⁸⁹ *Id.* p. 6.

⁹⁰ *Id.* p. 17.

⁹¹ Docket No. 26-05007, Vol. 8, Supply Plan, pdf pp. 23-32; Table REN-1, pdf p. 61.

⁹² Docket No. 26-06016, Direct Testimony of Richard Salgo, p. 6.

1 In sum, the Applicants provided no evidence that the Project is needed to ensure reliable
2 utility service to northern Nevadans broadly.

3 **V. Whether the Need for the Facility Balances Any Adverse Effect on the Environment**

4 **A. Historical Determinants of New Plant Benefits and Adverse Effect on the**
5 **Environment**

6 **47. Q: In servicing an electric need with new resources, what economic impacts are**
7 **quantified in filings to the Commission?**

8 A: Typically, new utility-scale gas plants are first proposed in an IRP, along with a
9 transparent analysis of the economic and environmental impacts of the proposed new
10 resources.

11 Analysis of the anticipated economic benefits of new generation facilities include the
12 number of new construction jobs, long-term operation and maintenance jobs, average salary,
13 and the portion expected to support Nevadans.⁹³ The IRP also contains an economic impact
14 assessment that "...concentrate[s] on the economic impacts of utility resource choices *in*
15 *Nevada*."⁹⁴ These reports quantify some of the resulting net economic impacts to Nevadans.

16 UPEA applications have also referenced "substantial" economic benefits to Nevadans.⁹⁵
17 However, "substantial" is a subjective term that does not provide a measured basis for
18 weighing against statewide climate impacts associated with greenhouse gas emissions.

19 **48. Q: Are there any additional assessments currently employed in Commission dockets to**
20 **quantify the adverse effect of electric sector greenhouse gas emissions on the**

⁹³ Docket No. 26-05007, NV Energy 2026 IRP, V-8 pp. 21, 60-61, 67.

⁹⁴ *Id.* V-31, ECON-9, pp. 45, 65-66.

⁹⁵ Docket 26-04026, UPEA Application of SV RNO Property Owner, LLC, p. 14.

1 **environment?**

2 A: Yes. In NV Energy’s 2026 IRP filing, an environmental impacts assessment⁹⁶ was
3 completed by a third-party consultant in a manner commensurate with satisfying the August
4 2018 Commission rulemaking to implement SB 65 (2017).⁹⁷ This report includes the
5 estimated environmental cost of thermal generation emissions, quantified for air emissions,
6 water and land use, “that result from harm or risks of harm to the environment after the
7 application of all mitigation measures required by existing environmental regulation or
8 otherwise included in the resource plan.”^{98,99}

9 Consistent with SB 65 the environmental costs associated with CO₂ emissions are
10 estimated based on a social cost of carbon “SCC” calculation, or a “monetized estimate of the
11 damages resulting for an incremental increase in CO₂ emissions each year.”¹⁰⁰ The
12 monetized value includes factors such as changes in “net agricultural productivity, human
13 health, property damages from increased flood risk, and the value of the ecosystem services
14 due to climate change.”¹⁰¹ While the monetized environmental costs reflect global impacts,
15 the metric remains relevant to Nevada’s environmental interests and residents’ public interest
16 as it pertains to electric sector buildout.

17 The 2026 IRP also models the environmental cost of conventional air emissions and air
18 toxics.¹⁰² These and other impact values reported in the IRP establish a robust basis for

⁹⁶ Docket No. 26-05007, NV Energy 2026 IRP, V-31, Econ-9, p. 1.

⁹⁷ Docket No. 17-07020.

⁹⁸ Docket No. 26-05007, NV Energy 2026 IRP, V-31, Econ-9, p. 11.

⁹⁹ NAC 704.9359.

¹⁰⁰ Docket No. 26-05007, NV Energy 2026 IRP, V-31, Econ-9, p. 124.

¹⁰¹ *Id.*

¹⁰² *Id.* p. 29.

1 weighing the environmental impacts of emitting facilities against an identified need for
2 northern Nevadan's.

3 **B. Whether the Project Need Justifies the Environmental Impact**

4 **49. Q: Based on the UEPA Application, what need does the Project serve?**

5 A: As previously discussed, the proposed Project is intended solely to serve the undefined
6 power needs of one off-taker, Switch Ltd. It is not designed to meet the reliability needs of
7 any other customer, nor is there an adequate showing that it will ensure reliable electric
8 service for any other customer.

9 **50. Q: What are the associated benefits of this service need to the identified off-taker and**
10 **to Nevadans broadly?**

11 A: The UEPA Application does not provide a comprehensive quantitative assessment of the
12 benefits to its own business or to Nevadans. At a high level, the associated benefits to the off-
13 taker, Switch Ltd., may include but are not limited to cost savings from transmission line
14 needs¹⁰³ and business revenue associated with electric service in a development market
15 increasingly driven by speed-to-power.¹⁰⁴

16 The Applicant does not adequately quantify benefits to Nevadans in its Application. The
17 limited information that is provided estimates peak construction employment, likely through
18 temporary work, and makes a generic statement regarding tax revenue and direct and indirect
19 benefits.¹⁰⁵ In particular, the Applicant does not provide a complete job creation and
20 economic impact assessment that is typically provided in preceding IRP filings.

¹⁰³ Docket No. 26-06016, Direct Testimony of Richard Salgo, p. 7.

¹⁰⁴ EPRI, Speed to Power Data Centers, Executive Summary, <https://speed2power.epri.com/executive-summary.html>. Accessed on September 24, 2026.

¹⁰⁵ Docket No. 26-06016, Nexus Fulcrum UEPA Application, p. 12.

1 There does not appear to be any party in this UEPA Docket that can offer a more
2 comprehensive quantitative assessment of the benefits of the Project to the Applicant, off-
3 taker, or Nevadans.

4 **51. Q: Has the Applicant provided an estimate of the Social Cost of Carbon “SCC” of its**
5 **Project?**

6 A: No, the Applicant does not provide an estimate of the SCC in its UEPA Application or
7 reference any other Commission Docket where the information might be contained. The
8 Project emissions are also not included in the 2026 IRP or any other IRP Amendment where
9 it would have been included in an SCC assessment.

10 I generated an SCC range for the proposed Project turbines’ carbon dioxide emissions
11 using a publicly available tool that allows a user to output the SCC for greenhouse gas
12 emissions in a given year based on a suite of inputs and according to the Interagency
13 Working Group “IWG” 2021 method.¹⁰⁶ While the source provides multiple SCC analytical
14 methods I selected parameters that most closely resemble the method employed in NV
15 Energy’s contract SCC analysis.^{107, 108} I also only estimate the SCC for carbon dioxide.
16 Excluding the SCC of associated methane and nitrous oxide emissions provides a more
17 conservative SCC estimate.

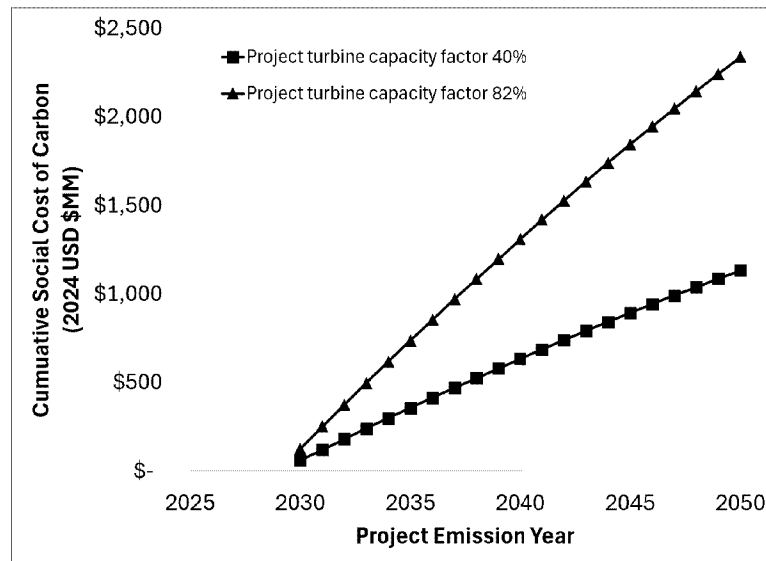
¹⁰⁶ Calculating the Social Cost of Greenhouse Gases, The Cost of Climate Pollution, Accessed at <https://costofcarbon.org/calculator>. Accessed on September 11, 2026.

¹⁰⁷ Inputs used in this testimony include the Interagency Working Group on the Social Cost of Carbon, 2021 interim estimate method, a discount rate of 3 percent Average, 2026 as the year of analysis, 2030-2050 as the years of emissions, and carbon dioxide emissions from the Project turbines in metric tons based on the OPTC Application emissions report, corresponding to a derived capacity factor of approximately 82 percent (1.94 MMT CO₂ per year), and carbon dioxide emissions estimated for Project turbine if operated at 40 percent capacity factor (0.94 MMT CO₂ per year).

¹⁰⁸ Docket 26-05007, V-31, ECON-9, p. 23.

Based on my analysis, the total social cost of carbon dioxide of the Project turbines is estimated to reach between \$ 1,135 million and \$ 2,340 million¹⁰⁹ by 2050, respectively, assuming an operating capacity factor of 40 to 82 percent each year, beginning in 2030 (Figure ZH-7). Again, this is a somewhat conservative estimate as it does not include project total greenhouse gas emissions and utilizes the IWG 2021 method, which has lower SCC values than the method developed by EPA in 2023.

Figure ZH-4. Social Cost of Carbon Estimated for the Project Turbines



52. Q: Did the Project proponents estimate the damages associated with conventional air emissions and air toxics?

A: No.

53. Q: Did you prepare an estimate of the project's environmental cost of conventional air emissions and air toxics?

A: I did not. However, this should not be taken to reflect its true impact, but rather to recognize that the SCC underestimates the Project's total environmental impact and that the

¹⁰⁹ In 2024 USD.

1 Application is incomplete. It is the responsibility of the Applicant to complete the full suite
2 of environmental impact assessments underlying a typical Nevada UEPA application for an
3 emitting utility-scale project. The Applicant should be required to have filed a comprehensive
4 UEPA application addressing the full suite of environmental impacts that otherwise underpin
5 historical utility-scale emitting resource UEPA applications, including the environmental cost
6 of conventional air emissions and toxics.

7 **54. Q: Based on your assessment, do you find that the need balances the environmental**
8 **impact?**

9 A: No. The Project will supply electricity to Switch Ltd., but the Applicant has provided no
10 details as to the amount or timing of Switch's future power needs in support of the Project.
11 The Project will primarily benefit the developers and Switch Ltd. and has an unquantified
12 benefit to Nevadans' *writ large*. However, the Project's CO₂ emissions will undoubtedly
13 contribute to climate change and its wide-ranging environmental impacts, both in Nevada
14 and beyond the state's borders. Current best estimates of the resulting costs total \$1.1-2.3
15 Billion in 2024 USD. This also reflects a conservative estimate based on the SCC method
16 used and the exclusion of other greenhouse gas emissions, air toxins, and water usage.

17 Based on the information provided, the primary electric service benefits to the off-taker
18 and unknown benefits to Nevadans do not outweigh the anticipated impacts of the Project's
19 emissions.

20 **VI. Whether the facility represents the minimum adverse effect on the environment**
21 **considering the state of available technology and the nature and economics**
22 **of the various alternatives.**

23 **A. Historical determinants of whether a new gas plant represents the**
24 **minimum adverse effect on the environment considering alternatives.**

1 **55. Q: What are the tools and processes historically used in Nevada energy sector planning**
2 **to determine whether a new utility-scale gas plant represents the minimum adverse**
3 **effect on the environment considering available technology and economics of**
4 **alternatives?**

5 A: In Nevada, for NV Energy facilities, this is typically determined in the IRP filing, review,
6 and decision process. For example, in the present IRP, NV Energy issued an all-source
7 request for proposals (“RFP”), reported on the bids received, identified forecasted load and
8 reliability requirements, and summarized limitations of various alternatives. A critical aspect
9 of this process is transparency and the opportunity to scrutinize the planning process. This
10 includes a review of whether due diligence was completed to thoroughly consider less
11 environmentally impactful alternatives, including lower or non-emitting technologies.

12 Through the IRP, a regulated utility is expected to consider resource availability and
13 viability. This creates opportunities to leverage a wide range of available resource
14 technologies and alternatives to emitting resources.

15 **B. Whether the Project represents the minimum adverse effect on the**
16 **environment.**

17 **56. Q: Is there a different standard occurring in this instance?**

18 A: This raises an important consideration. In the case of the Nexus Fulcrum, LLC Project, the
19 listed non-viable renewable alternatives are largely based on the economic benefits of Project
20 proximity for the off-taker¹¹⁰ and the attributes of the parcel selected for the generating
21 facility.¹¹¹ This parcel, owned by Switch Ltd.,¹¹² is not part of the data center property, and

¹¹⁰ Docket No. 26-06016, Nexus Fulcrum, LLC UEPA Application, p. 11.

¹¹¹ Docket No. 26-06016, Direct Testimony of Mark Spencer, pp. 10-11.

¹¹² Storey County Property Tax Inquiry, Parcel Details for 00507149,
<https://storeynv.devnetwedge.com/parcel/view/00507149/2026>, Accessed 8/21/2026. Storey County tax records for

1 the plant is not described as an off-grid self-generation project. Approving a UEPA permit to
2 construct for this Project runs the risk of establishing a precedent that data centers or other
3 large load customers may elect to purchase small, localized plots and use the plot attributes
4 as a justification that limits the viability of alternative non-emitting generation technologies.
5 That is, Project viability is predicated on the off-taker's site selection, not on a leveled
6 assessment of viable alternative resource technologies.

7 The Application indicates one intended off-taker, Switch Ltd. Assuming a single off-
8 taker, setting this precedent could favor off-taker benefits, allowing the recipient to pre-select
9 small, localized plots that may reduce its transmission costs and thwart the viability of
10 alternative non-emitting resources.

11 Direct testimony suggests potential future benefits to the bulk system and Nevadans,
12 broadly. If the Commission finds this to be a probable Project outcome, then the implication
13 of resource siting limitations becomes even more salient. An emitting resource intended to
14 serve Nevada customers, *writ large*, should minimally be held to the same standards as those
15 expected of a public utility and filed in an IRP. These resource selections should include
16 evidence that there were no alternative Nevada-based resources with lower environmental
17 impact and favorable economics, either in silo or as part of a portfolio, that could fulfill the
18 identified need.

19 This UEPA Docket should take care not to set precedent that private entities can pre-
20 select a generation resource plot that best suits the off-taker needs and find that the only

3600 Peru Dr. (APN: 005-071-49) indicate that Switch, LTD is the current owner of the property where the project will be constructed.

1 viable resource is an emitting fossil-fueled natural gas plant that is necessary to provide
2 reliable electric service to the off-taker and customers of Nevada.

3 **57. Q: What if the emitting resource is part of a larger portfolio?**

4 A: This is possible. Switch Ltd. as an NRS 704B customer is required to source its
5 electricity from a provider meeting the RPS, and has a long history in Nevada of going above
6 and beyond the RPS by committing to offset 100% of its electricity use in the state with
7 renewable energy. As stated on its website:

8 *“Powered by 100% renewable energy since 2016, Switch’s focus on sustainability and*
9 *efficient technologies make our exascale ecosystems the most sustainable and cost-*
10 *effective colocation environment in the industry. The Switch ecosystem empowers*
11 *clients with a myriad of options for innovation, economies of scale, risk mitigation,*
12 *sustainability and investment protection.”* ¹¹³

13 However, we have no information in this proceeding as to how Switch’s use of this emitting
14 resource will fit into its portfolio of resources, or whether it represents an abandonment or
15 modification of its long-standing renewable energy commitments. This information gap
16 masks whether the proposed facility is part of a larger resource portfolio that incorporates
17 non-emitting resources and whether an effort was made to mitigate the emissions associated
18 with serving the new energy service need.

19 **VII. Whether the Facility Will Serve the Public Interest**

20 **58. Q: What should be included in a public interest assessment of the Project?**

21 A: A public interest assessment should consider the long-term net impacts of the Project on
22 the public.

¹¹³ Switch, 2024 ESG Report, <https://www.switch.com/esg-2024/>. Accessed September 24, 2026.

1 **59. Q: Has the applicant provided sufficient information to assess the long-term net**
2 **impacts of the project on the public?**

3 A: No. While the potential adverse environmental impacts from increased greenhouse gas
4 emission are evident, the UEPA Application does not enumerate the economic benefits to
5 Nevadans that will result from providing reliable electric service to the intended off-taker,
6 nor does it report the generating unit's direct and indirect economic impact. Even considering
7 the Project's direct and indirect benefits to Nevadans, it is purpose-built to benefit a single
8 off-taker, Switch Ltd.

9 Information was also not provided as to whether the eventual electric service provider or
10 off-taker considered alternative non-emitting generation resources beyond what could be
11 supported by a pre-selected site. And the Application failed to report the expected greenhouse
12 gas emissions and its environmental impacts, which include wildfires, flooding, and drought,
13 as well as downstream impacts to public interests such as human and livestock health.

14 **VIII. Recommendations**

15 **60. Q: What are your recommendations on the application?**

16 A: NCARE recommends the Commission deny the Nexus Fulcrum, LLC UEPA Application
17 to construct a 510 MW fossil natural gas-fueled generation facility on the grounds that it fails
18 to satisfy the UEPA criteria NRS 704.890(1)(a-d) and NRS 704.890(1)(g) for the following
19 reasons:

- 20 • The Applicant did not provide sufficient information to determine the full scope of
21 environmental impacts of the Project, especially the impacts of greenhouse gas
22 emissions. These deficits are not in alignment with standards for the approval of new
23 utility-scale gas plant construction in Nevada.

- 1 • The Project's greenhouse gas emissions will have a negative effect on the
2 environment. The social cost of carbon dioxide of the Project ranges from \$1.1-2.3
3 Billion by 2050. This is a conservative estimate that does not include other
4 greenhouse gas emissions or the costs associated with criteria pollutant emissions.
- 5 • The Project is purpose-built to serve a single off-taker, Switch Ltd, but the Applicant
6 has provided no information on the amount and timing of the power needs of that off-
7 taker, nor whether it has the ability to meet those needs from alternative resources if
8 the Project is not built. The project energy and capacity is not included in the 2026
9 IRP resource plan and there is no existing agreement that ensures the Project will
10 serve system needs during normal or strained conditions. The suggested system
11 reliability benefit to Nevadans *writ large* would be secondary, is not quantified, and is
12 speculative.
- 13 • The Application does not quantify the direct and indirect economic impacts to
14 Nevadans that may result from the Project and off-taker's resulting electric service.
- 15 • Neither the Application nor any references therein provide any showing that
16 alternative non-emitting resources were considered prior to, and beyond the
17 limitations of a pre-selected project site. There is also no evidence provided that
18 identifies whether this Project and its viability was considered as part of a diverse
19 resource portfolio.
- 20 • This Project is not in the public interest given the impacts on the environment and the
21 lack of reported economic benefits to Nevadans. The project is purpose-built to serve
22 the interests of a single data center off-taker.

1 **61. Q: Does this conclude your testimony?**

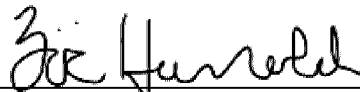
2 A: Yes

AFFIRMATION

Pursuant to the requirements of NRS 53.045 and NAC 703.710, ZOE HARROLD states that she is the person identified in the foregoing prepared testimony and/or exhibits; that such testimony and/or exhibits were prepared by or under the direction of said person; that the answers and or information appearing therein are true to the best of her knowledge and belief; and that if asked the questions appearing therein, her answer would, under oath, be the same.

I declare under penalty of perjury that the foregoing is true and correct.

Date: September 25, 2026


Zoë Harrold

ZOË HARROLD PH.D.

Sparks, NV 89431
zoe.harrold@westernresources.org

EDUCATION

University of Washington

Ph.D., Earth Sciences, Department of Earth and Space Sciences

Seattle, WA

2008-2014

Thesis: Geomicrobiology, Thermodynamics of endospore surface reactivity

University of Rochester

B.S. Environmental Science, Minor in Chemistry

Rochester, NY

2004-2008

SKILLS & ABILITIES

- Environmental and energy system research
- Evidence-based policy analysis
- Project management
- Plan and program evaluation (incl. electric utility and PUC)
- Technical and grant writing
- Personnel management
- Data analysis
- Attention to detail
- Proactive self-starter
- Excel, MATLAB

EXPERIENCE

Western Resources Advocates

Senior Policy Advisor, Clean Energy, Nevada
Provide energy policy evaluation, data analysis, and recommendations on IRP, UEPA, RA and other related cases at the PUCN.

Reno, NV

2026-Present

Clear Horizons Consulting LLC (*prev. Sole Proprietor**)

Owner/Consultant

Provide energy policy evaluation and recommendations, data analysis, grant & technical writing consulting and services to non-profits.

**Formerly operated as a Sole Proprietor 2015-2021 and 2005-2008.*

Sparks, NV

2021-Present

**2015-2021*

**2005-2008*

Client: Green Power Institute (GPI)

Consulting Role/Title: Expert – Public Policy Analyst Level IV
Review and evaluate rulemaking proceedings and electric utility plans regarding GHG reduction goals (Renewable Performance Standard, Integrated Resources Planning), distributed renewable energy integration goals (Distributed Resource Planning, High Distributed Energy Resources), long-term energy planning (Integrated Resources Planning), and wildfire mitigation (Wildfire Mitigation Planning). Work is conducted on behalf of GPI.

Berkeley, CA

Remote work

2015-2026

2005-2008

Desert Research Institute

Assistant Research Scientist, Postdoctoral Researcher
Research, experimental design, and data analysis in Earth systems, geochemical, and biological sciences. Topics: Prototype nanomotion technology and AFM application R&D. Microplastics research.

Reno, NV

2019-2020

2017-2019

University of Nevada, Las Vegas

Postdoctoral Researcher

Built research capabilities at host lab for geochemical and biological sciences. Topics: Geochemistry of microbe-water-rock systems; pertinent to snow albedo, melt rate, and climate change.

Manage/mentor direct reports.

Las Vegas, NV

2016-2017

EXPERIENCE CONTINUED

Montana State University

Postdoctoral Researcher

Research, experimental design, data analysis, and modeling in Earth systems, geochemical (incl. thermodynamics), and biological sciences.
Topic: Chemolithoautotrophic metabolism in water-rock systems.

Bozeman, MT

2014-2015

University of Washington

Teaching Assistant: Introduction to Geology, Geomicrobiology.

Colorado College Co-teaching Fellow: Human Impacts on Biogeochemical Cycles. Manage/mentor direct reports.

Seattle, WA

2008-2014

US Forest Service/GSA Geo corps

Field Hydrologist Intern

Freshwater spring surveys for USFS water rights claims.

Durango, CO

2008

SELECTED GRANTS & AWARDS

Total grant funding secured:

\$2.4+M on behalf of clients and for scientific research

Present

David A Johnson Award for Research Excellence

2013

NSF Graduate Research Fellow (3-year fellowship)

2009

UW Top Scholar award and Scholarship

2008

Honor Society for Earth Scientists, Zeta Phi Chapter, Sigma Gamma Epsilon

2008

High Distinction and High Honors in Research in Env. Sci., U of R

2008

SELECTED PUBLICATIONS & PRESENTATIONS

Invited Speaker on behalf of Clean Up The Lake. "Insights from Lake Tahoe Litter

Removal with Results from the Lake Tahoe Monitoring Project." Tahoe Litter Summit. 5/15/24

Invited Keynote Speaker. University of Washington, Department of Earth and Space Sciences Graduation (2023) University of Washington, Seattle, WA

Invited Speaker. **Harrold Z.**, West, C. Remediating submerged lakebed litter accumulations in Lake Tahoe. Seminar series, University of Nevada, Las Vegas. November 9, 2022.

Harrold, Z., Arienzo, M. M., Collins, M., Davidson, J. M., Bai, X., Sukumaran, S., & Umek, J. (2022). A peristaltic pump and filter-based method for aqueous microplastic sampling and analysis. *ACS ES&T Water*, 2(2), 268-277.

Venturelli, L., **Harrold, Z. R.**, Murray, A. E., Villalba, M. I., Lundin, E. M., Dietler, G., Sandor, K & Foschia, R. (2021). Nanomechanical bio-sensing for fast and reliable detection of viability and susceptibility of microorganisms. *Sensors and Actuators B: Chemical*, 348.

Harrold, Z. R., Hausrath, E. M., Garcia, A. H., Murray, A. E., Tschauner, O., Raymond, J. A., & Huang, S. (2018). Bioavailability of mineral-bound iron to a snow algal-bacterial coculture and implications for albedo-altering snow algal blooms. *Applied and Environmental Microbiology*, 84(7), e02322-17.

Carey, A., **Harrold, Z.**, Darrah, T., and Poreda, R. (2006) The Effects of Coal-Fired Power Plant Emissions on a Regional Watershed. Geological Society of America *Abstracts with Programs*, Vol. 38, No. 7, p. 95

Date Sent: 7/31/2026

Date Due: 8/14/2026

Date Received:

ER Date:

Staff - 3 Requester: Sinclair Telephone: (775) 684-6147

Reference: Application page 10, lines 3-7 (The Need to Ensure Reliable Service)

Question: The Application's page 10, lines 3-7 discusses the need to ensure reliable service. Please describe the extent to which the Nexus Fulcrum Project will enhance the reliability of utility service in Nevada.

Responder: Mark Spencer Telephone: (617) 901-5977

Notes: Electrical load within the TRIC is projected to grow rapidly in the near future.¹ By serving the 400 MW needs of a large load customer, the project will reduce the strain on the NV Energy (NVE) system in the area and preserve existing generation and transmission for NVE customers. This will increase the reliability of the system in this already-constrained area.²

Locating additional grid-connected generation near large loads increases reliability by maintaining voltage stability, avoiding transmission line losses, and reducing congestion on the existing NVE transmission.

Date Sent: 7/31/2026

Date Due: 8/14/2026

Date Received:

ER Date:

Staff - 4 Requester: Sinclair Telephone: (775) 684-6147

Reference: Application page 10, lines 3-7 (The Need to Ensure Reliable Service)

Question: The Application's page 10, lines 3-7 discusses the need to ensure reliable service. Please confirm that the Nexus Fulcrum Project will NOT provide utility service to any customers.

Responder: Mark Spencer Telephone: (617) 901-5977

¹See NPC-SPPC Integrated Resource Plan Application, Volume 29 of 41, Tran 14 at 19 (noting "The TRI Center area has received load requests in the thousands of MW's. To support this load, the Western Nevada Master Plan was created to outline what projects are required to support this load and when these projects are required.").

² See *id.*, Vol. 41 of 41, Esp Econ 2 (2026 Sierra Subsystem Resource Adequacy Assessment) at 237 (discussing the strains on NV Energy's Sierra subsystem and noting that "NV Energy's current load forecast for the Northern system continues to grow at roughly 300 MW per year beyond 2028, which would quickly erode the headroom that is present in 2029. Under these circumstances, additional resources or investments in additional transmission to increase import capability would be needed to avoid elevated reliability risks due to local constraints.").

Notes: Confirmed. See Response to Staff 2.

Date Sent: 7/31/2026

Date Due: 8/14/2026

Date Received:

ER Date:

Staff - 5 Requester: Sinclair

Telephone: (775) 684-6147

Reference: UEPA

Question: Please confirm that Nexus Fulcrum LLC is NOT in the business of selling electricity to retail customers for consumption in Nevada. For the purposes of this DR, the phrase, "retail customers," shall mean "an end-use customer that purchases electricity for consumption in this state."

Responder: Mark Spencer

Telephone: (617) 901-5977

Notes: Confirmed. See Response to Staff 2.

Date Sent: 7/31/2026

Date Due: 8/14/2026

Date Received:

ER Date:

Staff - 6 Requester: Sinclair

Telephone: (775) 684-6147

Reference: UEPA

Question: Please confirm that Nexus Fulcrum LLC will NOT sell any of the electricity generated at the Nexus Fulcrum Project to retail customers for consumption in Nevada. For the purposes of this DR, the phrase, "retail customers," shall mean "an end-use customer that purchases electricity for consumption in this state."

Responder: Mark Spencer

Telephone: (617) 901-5977

Notes: Confirmed. See Response to Staff 2.

Date Sent: 7/31/2026

Date Due: 8/14/2026

Date Received:

ER Date:

Staff - 7 Requester: Sinclair

Telephone: (775) 684-6147

Reference: UEPA

Question: Please confirm that Nexus Fulcrum project will be behind the meter and is not connected to NV Energy System in any way.

Responder: Mark Spencer

Telephone: (617) 901-5977

Public Utilities Commission of Nevada

Application of Nexus Fulcrum LLC, under the provisions of the Utility Environmental Protection Act, for a permit to construct ASR-IX consisting of a nominal 510 MW natural gas-fueled electric generation plant and associated facilities to be located on private land within the Tahoe Reno Industrial Center complex in Storey County, Nevada.

Docket No. 26-06016

Responses to NCARE Data Requests Nos. 1-14

NCARE 1-1	Requestor: George Cavros	775-430-4640
Request:	Provide copies of all Commission Regulatory Operations Staff data requests and the Applicant responses to those requests.	
Responder:	Mark Spencer	Telephone: (617) 901-5977
Response:	Applicant has provided copies of all responses to Staff's data requests propounded to date and will provide non-confidential data responses pursuant to applicable law and regulation should any be propounded.	

NCARE 1-2	Requestor: George Cavros	775-430-4640
Reference:	For the Nexus Fulcrum facility, Applicant's NDEP OPTC Application Appendix A, Table 8, reports CO ₂ e emissions in tons per year for the Turbines and Natural Gas Generator, totaling 1,938,822 and 175 metric tons, respectively.	
Request:	(a) For the Turbines, provide the corresponding annual MWh of projected gross and net generation used to calculate the emissions. (b) For the Turbines, provide the corresponding annual MMBtu per year of natural gas projected to be combusted and used to calculate the emissions. (c) For the Natural Gas Generator, provide the corresponding annual MWh of projected gross and net generation used to calculate the emissions. (d) For the Natural Gas Generator, provide the corresponding annual MMBtu per year of natural gas projected to be combusted and used to calculate the emissions.	
Responder:	Mark Spencer	Telephone: (617) 901-5977
Response:	(a) Supporting information regarding Applicant's NDEP OPTC Application AP4911-5057, FIN A0921, Air Case 12767 ("Applicant's NDEP OPTC Application") is included in Applicant's NDEP OPTC Application. Applicant's NDEP OPTC Application is publicly available on NDEP's online application database: https://ndep-onbase.nv.gov/ (b) See response to 1-2(a).	

(c) See response to 1-2(a).

(d) See response to 1-2(a).

NCARE 1-3 Requestor: George Cavros 775-430-4640

Reference: For the Nexus Fulcrum facility, Applicant's NDEP OPTC Application Appendix A, Table 8, reports CO₂e emissions in tons per year for the Turbines and Natural Gas Generator. This constitutes an estimate of maximum emissions, assuming 8,760 hours of operation at full capacity.

Request: (a) For the Turbines, provide the anticipated average annual MWh of projected net generation.
(b) For the Turbines, provide the anticipated CO₂e emissions based on (a).
(c) For the Turbines, provide the corresponding annual MMBtu per year of natural gas based on (a).

Responder: Mark Spencer Telephone: (617) 901-5977

Response: (a) See response to 1-2(a).
(b) See response to 1-2(a).
(c) See response to 1-2(a).

NCARE 1-4 Requestor: George Cavros 775-430-4640

Reference: Application.

Request: (a) For the Turbines, please provide the standard heat rate as well as the anticipated average, maximum, and minimum heat rates, considering the project location.
(b) For the proposed electric generation facility, please provide the standard heat rate as well as the anticipated average, maximum, and minimum heat rates, considering the project location.

Responder: Mark Spencer Telephone: (617) 901-5977

Response: (a) See response to 1-2(a).
(b) See response to 1-2(a).

NCARE 1-5 Requestor: George Cavros 775-430-4640

Reference: The Application Exhibit F at p. 4 states "Natural gas will be supplied to the site from an interconnection with a new lateral to the Great Basin Pipeline system. Great Basin will construct the lateral pipeline."

Request: (a) Please explain whether the natural gas supply is dependent on the Great Basin Gas Transmission Company 2028 Expansion Project.

Table 3. Steady State Emissions per Unit Type

Turbine Model	Number of Units	Hours of Operation	Annual Emission Rates						
			NOx (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	Max Single HAP (tpy)
SGT-800	9	7225.51	112.52	68.50	29.42	13.21	71.80	21.80	4.91
Fire Pump	1	100.00	0.12	0.11	0.01	0.00	0.01	0.01	1.14E-02
NG Backup Generator	1	100.00	0.82	1.65	0.41	0.00	0.03	0.03	7.68E-01

1. Hours of operation is based on the total hours in a year minus the duration of SU/SD events in a year and assuming

2. Annual emission rates are based on the annual average short term emission rate at 54 Fahrenheit times the hours of operation and number of units

4 hours of downtime for each SU/SD event

Table 4. Start up and Shut Down Emission Factors Per Turbine

Turbine Model	Number of Units	Duration (minutes)	Short Term Emission Rates					
			NOx (lb/event)	CO (lb/event)	VOC (lb/event)	SO ₂ (lb/event)	PM ₁₀ (lb/event)	Max Single HAP (lb/event)
SGT-800	9	59.90	24.50	130.00	20.40	0.46	2.60	0.17

1. SU/SD emissions is based on the worst case total emissions for a startup and shutdown event as provided by the manufacturer. SO₂/HAP SU/SD emissions are based on the worst case hourly emission rates derived from AP-42 Table 3.1.2a and 3.1.3, respectively, and the duration of the SU/SD event

Table 5. Start up and Shut Down Emissions for All Turbines

Turbine Model	Number of Units	Number of Events	Annual Emission Rates					
			NOx (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	Max Single HAP (tpy)
SGT-800	9	307.00	33.85	179.60	28.18	0.63	3.59	0.23

1. Based on the number of start up and shut down events, the number of units, and the lb/event emission factor.

Table 6. Total Annual Emissions for the Turbines Inclusive of SU/SD/SS

Turbine Model	Number of Units	Annual Emission Rates						
		NOx (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	Max Single HAP (tpy)
SGT-800	9	146.37	248.10	57.60	13.85	75.39	25.39	2.38

1. Based on the sum of the SU/SD/SS turbine emissions.

Citation	Summary of Requirements	Compliance Strategy
	(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; (2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	1. The turbine will operate at a max SO₂ emission rate of 0.46 lb/hr, conservatively corresponding to a gross power output of 18.9 MWh or 2.43E-08 lb SO₂/MWh. Therefore, the turbines will comply with the emission limits in this part. 2. The requirement to monitor fuel sulfur for SO₂ monitoring does not apply if potential sulfur emissions expressed as SO₂ are less than 0.060 lb/MMBtu. Nexus Fulcrum proposes to use fuel tariff sheet or purchase contract information or representative fuel sampling performed per 40 CFR 75 Appendix D to show that fuel sulfur will comply with the applicable limit.
40 CFR 60.4333(a)	You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.	Nexus Fulcrum will operate and maintain the stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices and will minimize emissions at all times including SU/SD
40 CFR §60.4340(b)(1) 40 CFR 60.4345(a)	Option to use a NO _x continuous emissions monitoring system (CEMS).	Nexus Fulcrum will install and operate a NO _x CEMS in accordance with the requirements of 40 CFR Part 75 Appendix A.
40 CFR 60.4405	Initial performance testing requirements if a NO _x -diluent CEMS is installed.	Nexus Fulcrum proposes to use NO _x CEMS RATA as the initial NO _x performance test.
40 CFR 60.4375	Reporting requirements for excess emissions and monitor downtime.	Nexus Fulcrum will comply with the requirements to report excess emissions and monitor downtime in accordance with 40 CFR 60.7(c). Excess emissions will be reported for all periods of unit operations, including start-up, shutdown, and malfunction.

Nexus Fulcrum will comply will all applicable monitoring, recordkeeping, and reporting requirements as well as any applicable emission limits in NSPS Subpart KKKK.

4.1.2.7 NSPS Subpart TTTT – Greenhouse Gas Emissions for Electricity Generating Units

NSPS Subpart TTTT, Standards of Performance for Greenhouse Gas Emissions for Electricity Generating Units, applies to stationary combustion turbines that commenced construction after January 8, 2014, but on or before May 23, 2023. The natural gas turbine will commence construction after May 23, 2023; therefore, NSPS Subpart TTTT does not apply to the Facility.

4.1.2.8 NSPS Subpart TTTTa – Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electricity Generating Units

NSPS Subpart TTTTa, Standards of Performance for Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electricity Generating Units, applies to stationary combustion turbines with a base load rating greater than 260 gigajoules per hour (GJ/h) (250 MMBtu/h) and serves a generator or generators capable of selling greater than 25 megawatts (MW) of electricity to a utility power distribution system that commence construction or reconstruction after May 23, 2023. The natural gas turbines will have a base load rating greater than 250 MMBtu/hr, will be capable of selling electricity to a utility power distribution system, and will commence construction after May 23, 2023; therefore, the turbines are subject to the requirements of NSPS Subpart TTTTa.

NSPS Subpart TTTTa requires meeting emission limits for three classes of turbines, and it is anticipated that the turbines at the Facility will be classified as base load combustion turbines, supplying more than 40% of their potential electrical output as net-electric sales on both a 12-operating month and a 3-year rolling average basis. Nexus Fulcrum will meet the requirements of NSPS Subpart TTTTa for base load combustion turbines.

Nexus Fulcrum will maintain records of electric sales and will only burn natural gas, which is a uniform fuel per 60.5520a(d)(1). Therefore, the turbines are only required to maintain purchase records of natural gas and are not subject to any other monitoring or reporting requirement under this subpart.

4.1.3 National Emission Standards for Hazardous Air Pollutants

NESHAPs have been established in 40 CFR Part 61 and Part 63 to control emissions of HAP from stationary sources. A HAP major source is defined as having potential emissions in excess of 25 tpy for total HAP and/or potential emissions in excess of 10 tpy for any individual HAP. An area source is a stationary source that is not a major source for HAP. Based on proposed emissions from the Facility, the site will be classified as an area source of HAP.

4.1.3.1 NESHAP Subpart A – General Provisions

All “affected sources” subject to a NESHAP Subpart are also subject to the applicable General Provisions of NESHAP Subpart A unless specifically excluded by a specific NESHAP Subpart. Because the proposed Project will include an affected source subject to a specific NESHAP Subpart, the NESHAP Subpart A General Provisions will apply.

4.1.3.2 NESHAP Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

NESHAP Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines, applies to owners and operators of stationary combustion turbines located at major sources of HAPs. The Facility is not a major source of HAPs, therefore Subpart YYYY does not apply to the Facility.

4.1.3.3 NESHAP Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

NESHAP Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, applies to any new or existing stationary RICE operated at a

3. EMISSIONS QUANTIFICATION

This section addresses the methodology used to quantify the emissions from the site and assesses permit program applicability. Complete documentation of these calculations is provided in Appendix A.

3.1 Emission Calculation Methodology

This section summarizes the calculation methodologies for each of the emission units used to establish the Facility-wide potential to emit (PTE). Facility information is contained in Section 2 and detailed calculations of all emissions units are available in Appendix A.

3.1.1 Siemens SGT-800 Turbines

The proposed Facility will include nine Siemens SGT-800 turbines each rated at a max gross power output of 57 MW per Appendix B. The turbines will fire natural gas and are equipped with selective reduction catalyst (SCR) and oxidation catalyst. As discussed, the units are proposed to operate in a continuous manner. In order to establish conservative PTE calculations the following assumptions were made:

- ▶ Each turbine is conservatively anticipated to have 307 startup and shutdown (SU/SD) events per year, lasting ~60 minutes total per event (e.g., one SU/SD event per turbine last 60 mins in total).
 - As these turbines are designed to operate in a continuous manner, it is likely that the turbines will operate for multiple days prior to undergoing a SU/SD event. Additionally, maintenance activities require the turbines to be SD for prolonged periods. Therefore, it is unlikely the turbines will require 307 SU/SD events per year.
 - It is assumed each SU/SD event will correspond to 4 hours of turbine downtime for maintenance activities or until the turbine is dispatched again.
 - Therefore, for every SU/SD event there are ~5 hours of turbine downtime or SU/SD activities (e.g., four hours of downtime and ~ one hour of SU/SD).
 - To establish the Steady State (SS) emission rate per turbine, the total downtime associated with all the SU/SD events was subtracted from the continuous operation hours per year (8,760 hr/yr).
 - ♦ E.g., $8,760 \text{ hr/yr} - (307 \text{ SU/SD events/yr} * \sim 5 \text{ hrs/SU/SD event}) = 7,225.51 \text{ hr/yr per turbine}$

NOX, CO, VOC, and PM emission factors for SS operations are per nominal manufacturer estimates included in Appendix B. PM10 and PM2.5 emissions are conservatively assumed to be the same as PM emissions. The SO2 emission factor for SS and SU/SD operations is given per Air Pollution (AP)-42 Chapter 3.1, Table 3.1-2a for natural gas fired turbines. SU/SD emissions are based on a lb/event emission factor and the number of events in a year.

The HAP emission factors for SS and SU/SD operations are given per AP-42 Chapter 3.1 Table 3.1-3 for natural gas fired turbines, assuming catalysts for oxidizing CO and NOX.

Since it is anticipated that these turbines will operate for continuous duty near the maximum load, short-term (lb/hr) emissions for SS operations assume the worst-case ambient temperature resulting in the highest emission rate at 100% load (e.g., the highest 100% load NOX emission factor of 3.90 lb/hr occurs at -4.3 Fahrenheit per Appendix B). Annual (tpy) emissions assume the average annual ambient temperature at 100% load (e.g., the average annual NOX emission factor of 3.46 lb/hr occurs at the average annual ambient temperature of 54.2 degrees per Appendix B).

Table 8. GHG Emissions for All Units

Pollutant	Turbine Emission Factor (lb/MMBtu) ¹	Diesel Fire Pump Emission Factor (lb/MMBtu) ¹	Natural Gas Generator Emission Factor (lb/MMBtu) ¹	GWP ²	Turbine Emissions (lb/hr) ³	Diesel Fire Pump Emissions (lb/hr) ³	Natural Gas Generator Emissions (tpy) ³	Turbine Emissions (tpy) ³	Diesel Fire Pump Emissions (tpy) ³	Natural Gas Generator Emissions (tpy) ³
CO ₂	116.98	163.05	147.45	1	61,003	426	3856	2137064	21	193
CH ₄	2.20E-03	6.61E-03	2.20E-03	28	32.19	4.84E-01	1.61E+00	7.93E+01	2.42E-02	8.07E-02
N ₂ O	2.20E-04	1.32E-03	2.20E-04	265	30.47	9.15E-01	1.53E+00	4.21E+01	4.58E-02	7.64E-02
CO₂e (Total)					61,065.54	427.13	3,858.71	2,137,185.11	21.36	192.94

1. Emission factor from 40 CFR 98 Subpart C Table C.1 and Table C.2

2. Global Warming Potential (GWP) from 40 CFR 98 Subpart A Table A.1

3. Emissions are calculated by the following equations:

Emissions (lb/hr) = unit rating (MMBtu/hr) * emission factor (lb/MMBtu) * GWP

Emissions (tpy) = Emissions (lb/hr) * 55(SU/SD hours per year

Table 1. Site Wide Annual Emissions

	NO _x	CO	VOC	SO ₂	Annual Emissions (tpy)					GHG
					PM10	PM2.5	Total HAPs	Max Single HAP		
Turbine Emissions	146.37	248.10	57.60	13.85	75.39	75.39	6.00	2.38	2,137,185.11 (1,938,821.72)	
Diesel Fire Pump Emissions	0.12	0.11	1.31E-02	2.26E-04	6.17E-03	6.17E-03	1.14E-02	7.28E-03	21.36 (19.37)	
Natural Gas Generator Emissions	0.82	1.65	0.41	7.69E-04	0.03	0.03	0.77	0.54	192.94 (175.03)	
Sitewide Annual Emissions ¹	147.32	249.85	58.03	13.85	75.42	75.42	6.78	2.92	2,137,399.4 (1,939,016.12)	
Environmental Evaluation Threshold	25	25	25	25	25	25	-	-	--	
Emissions Exceed Environmental Evaluation Thresholds?	Yes	Yes	Yes	No	Yes	Yes	No	No	No	
NDEP Class I Thresholds ²	100	100	100	100	100	100	25	10	--	
Emissions Exceed Class I Thresholds?	Yes	Yes	No	No	No	No	No	No	No	
PSD Thresholds (tpy) ^{3,4}	250	250	250	250	250	250	--	--	82,673.35 (75,000.00)	
Emissions Exceed PSD Thresholds?	No	No	No	No	No	No	No	No	See Footnote 5.	

1. Sitewide Annual Emissions includes emissions from the diesel fire pump, natural gas generator, and turbines.
2. Environmental evaluation thresholds defined per NAC 445B.310 as 25 tpy of a regulated air permit for a new facility.
3. The major source thresholds are defined in NAC 445B.094 as 100 tpy of any air contaminant and 10 tpy of any individual HAP or 25 tpy of combined HAP.
4. PSD major source thresholds per 40 CFR 52.21(b)(1)(i). The Facility is not on the list of 28 categorical sources and therefore the thresholds are 250 tpy for any NSR pollutant.
5. The 75,000 metric ton threshold for GHG is only triggered when another criteria pollutant exceeds the PSD threshold. GHG emissions are presented as tons (metric tons).

(b) Please explain if the “new lateral to the Great Basin Pipeline system” is part of the Great Basin Gas Transmission Company 2028 Expansion Project.

Responder: Mark Spencer Telephone: (617) 901-5977

Response: See objections filed on August 14, 2026. Notwithstanding and without waiving the objection, Applicant provides the following information. As stated in the Application, gas will be supplied to the site from an interconnection with a new lateral to the Great Basin Pipeline system. Applicant’s understanding is the lateral is part of Great Basin’s 2028 Expansion Project.

NCARE 1-6 Requestor: George Cavros 775-430-4640

Reference: The Application Exhibit F at p. 4 states “Natural gas will be supplied to the site from an interconnection with a new lateral to the Great Basin Pipeline system.”

Request: (a) Please explain whether the natural gas supply is expected to include Renewable Natural Gas (RNG, e.g. biogas).
(b) If the answer to (a) is yes, provide the expected sources and providers.
(c) If the answer to (a) is yes, provide the expected MMBtu of RNG per year, and percent of total annual MMBtu consumption.
(d) If the answer to (a) is yes, provide whether Applicant has entered into a contract that ensures RNG delivery.

Responder: Mark Spencer Telephone: (617) 901-5977

Response: See objections filed on August 14, 2026. Notwithstanding and without waiving objection, Applicant provides the following information. A fuel supply contract has not been executed.

NCARE 1-7 Requestor: George Cavros 775-430-4640

Reference: Class 1 OPTC Air Permit Application at p. 4-4 states “[t]he natural gas turbines will have a base load rating greater than 250 MMBtu/hr, will be capable of selling electricity to a utility power distribution system, and will commence construction after May 23, 2023; therefore, the turbines are subject to the requirements of NSPS Subpart TTTTa...Nexus Fulcrum will maintain records of electric sales and will only burn natural gas...”

Request: (a) Please explain whether the Applicant intends to interconnect the natural gas turbine to the NV Energy grid in the future.
(b) If the answer to (a) is yes, please provide when.
(c) If the answer to (a) is yes, please provide whether the Applicant intends to transfer ownership of the facility to NV Energy and receive energy through a sleeved power purchase agreement, or other mechanism; or if it intends to sell energy to NV Energy.

CERTIFICATE OF SERVICE

Docket No. 26-06016

I hereby certify that I have on this date served the foregoing document upon all parties of record in this proceeding by electronic mail to the recipient's current electronic mail address:

Don Lomoljo Staff Counsel Division	PUCN	dlomoljo@puc.nv.gov pucn.sc@puc.nv.gov
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Dated September 25, 2026.

Completed By:

/s/ Jeff Griffin

Program and Legal Assistant
Western Resource Advocates