

*Agenda 5-23; Item No. 2C Draft Order for discussion at agenda*

**THIS ORDER IS NOT A FINAL ORDER AND MAY BE SUBSTANTIALLY REVISED  
PRIOR TO ENTRY OF A FINAL ORDER BY THE PUBLIC UTILITIES COMMISSION  
OF NEVADA**

**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

Joint Application of Nevada Power Company d/b/a )  
NV Energy and Sierra Pacific Power Company d/b/a )  
NV Energy for approval of the fourth amendment to its ) Docket No. 22-11032  
2021 Joint Integrated Resource Plan. )  
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At a general session of the Public Utilities  
Commission of Nevada, held at its offices  
on March 14, 2023.

PRESENT: Chair Hayley Williamson  
Commissioner C.J. Manthe  
Commissioner Tammy Cordova  
Assistant Commission Secretary Trisha Osborne

**ORDER**

The Public Utilities Commission of Nevada (“Commission”) makes the following findings of fact and conclusions of law:

**I. INTRODUCTION**

On November 30, 2022, Nevada Power Company d/b/a NV Energy (“NPC”) and Sierra Pacific Power Company d/b/a NV Energy (“SPPC”) (collectively, “NV Energy”) filed with the Commission a joint application (“Joint Application”), designated as Docket No. 22-11032, for approval of the fourth amendment to its 2021 Joint Integrated Resource Plan (“IRP”). NV Energy filed the Joint Application pursuant to the Nevada Revised Statutes (“NRS”) and the Nevada Administrative Code (“NAC”) Chapters 703 and 704, including, but not limited to, NRS 704.741, NAC 704.9005 *et seq.*, and Senate Bill 448 (2021) (“SB 448”). Pursuant to NAC 703.190 and NAC 703.527 *et seq.*, NV Energy requests that certain information contained in its Joint Application receive confidential treatment. This order addresses Phase I of the Joint Application and specifically evaluates NV Energy’s request for approval of the Silverhawk Peaking Plant and associated transmission infrastructure.

**II. SUMMARY**

The Commission grants Phase I of NV Energy’s Joint Application as delineated in the order below.

### III. PROCEDURAL HISTORY

- On November 30, 2022, NV Energy filed the Joint Application.
- The Regulatory Operations Staff of the Commission (“Staff”) participates as a matter of right pursuant to NRS 703.301.
- On December 1, 2022, NV Energy filed a corrected Joint Application.
- On December 12, 2022, the Commission issued a Notice of Joint Application and Notice of Prehearing Conference.
- On December 16, 2022, the Nevada Bureau of Consumer Protection (“BCP”) filed a Notice of Intent to Intervene pursuant to Chapter 228 of the NRS.
- On December 19, 2022, the Presiding Officer issued Procedural Order No. 1 adopting a procedural schedule and discovery processes.
- On December 20, 2022, the Las Vegas Global Economic Alliance filed comments. That same day, Western Resource Advocates (“WRA”) filed a Petition for Leave to Intervene (“PLTI”).
- On December 27, 2022, the Commission issued a Notice of Hearing.
- On January 3, 2023, Google LLC filed a PLTI.
- On January 4, 2023, Boyd Gaming Corporation, Station Casinos LLC, and Venetian Las Vegas Gaming, LLC (“SNGG”); Iron Point Solar, LLC (“Iron Point”) and Hot Pot Solar, LLC (“Hot Pot”); Wynn Las Vegas, LLC (“Wynn”) and Smart Energy Alliance (“SEA”); Nevada Resort Association (“NRA”); Caesars Enterprise Services, LLC (“Caesars”); MGM Resorts International (“MGM”); and Interwest Energy Alliance (“Interwest”) each filed PLTIs.
- On January 5, 2023, the Presiding Officer issued an Order granting the intervention of WRA.
- On January 6, 2023, the Presiding Officer held a prehearing conference.
- On January 9, 2023, the Presiding Officer issued Procedural Order No. 2.
- On January 11, 2023, Iron Point and Hot Pot filed a supplement to their PLTI.
- On January 13, 2023, the Presiding Officer issued Procedural Order No. 3. That same day Nevada Workers for Clean and Affordable Energy filed a PLTI.
- On January 17, 2023, the Presiding Officer held a continued prehearing conference.

- On January 18, 2023, NV Energy filed a Response to PLTI of Iron Point and Hot Pot.
- On January 20, 2023, the Presiding Officer issued an Order granting the PLTIs of Google, SNGG, Wynn and SEA, NRA, Caesars, MGM and Interwest.
- On January 24, 2023, the Presiding Officer held a continued prehearing conference.
- On January 27, 2023, NV Energy filed data requested in Procedural Order No. 2.
- On January 30, 2023, Google, WRA, and Staff filed testimony. That same day NV Energy filed data requested in Procedural Orders No. 2 and 3.
- On January 31, 2023, the Presiding Officer held a continued prehearing conference.
- On February 1, 2023, the Presiding Officer issued an Order granting the PLTIs of Iron Point and Hot Pot and Nevada Workers for Clean and Affordable Energy.
- On February 9, 2023, NV Energy filed data requested in Procedural Order No. 2.
- On February 10, 2023, NV Energy filed rebuttal testimony. That same day, the Presiding Officer issued Procedural Order No. 4.
- On February 13, 2023, Google filed an Exhibit list as requested in Procedural Order No. 4.
- On February 14, 2023, the Presiding Officer held a continued prehearing conference. That same day, WRA and Staff filed an Exhibit list as requested in Procedural Order No. 4.
- On February 15, 2023, Advanced Energy United filed comments.
- On February 16, 2023, the Commission held a hearing. NV Energy, Google, WRA, BCP, and Staff made appearances. During the hearing, Exhibit Nos. 100-104, 105-C, 106-109, 110-C, 111-118, 300, 301-C, 500, and 600 were admitted to the record.

#### **IV. JOINT APPLICATION – PHASE 1**

##### **A. Silverhawk Peaking Plant Project**

###### **NV Energy's Position**

1. NV Energy requests approval of its request to amend its Supply Plan to expend approximately \$333 million to purchase, install, and operate a 400 megawatt (“MW”) peaking turbine project (the “Silverhawk Peaking Plant”) at the Silverhawk Generating Station, with a

summer peak rating of 444 megawatts (“MW”), including wet compression, and an in-service date of July 2024. (Ex. 100 at 13.) NV Energy also requests to amend its Transmission Plan to expend \$20 million to construct transmission infrastructure needed to support the interconnection of the Silverhawk Peaking Plant. (*Id.*, Ex. 107 at 4.) NV Energy requests expedited approval of the Silverhawk Peaking Plant and associated transmission infrastructure by March 10, 2023, to allow the materials to be ordered to meet the July 2024 in-service date. (Ex. 100 at 13.) More specifically, NV Energy states that the need for expedited approval by March 10, 2023, is also based on a required progress payment for the combustion turbine equipment purchase in March 2023 and the additional cost that will be committed between March 2023 and June 2023 when the Commission could approve the project under the normal regulatory schedule. (Ex. 113 at 8.)

2. NV Energy states that, although it requests fossil generation, it is not deviating from its clean energy goals and remains committed to Nevada's sustainability goals. (Ex. 114 at 10.) NV Energy states that its Preferred Plan, which includes the Silverhawk Peaking Plant, achieves and exceeds the RPS in all years and targets Nevada's 2050 clean energy goal. (*Id.*) NV Energy states that firm dispatchable resources such as gas turbines contribute much more significantly to capacity in 2050 than energy production, resulting in a positive impact on resource adequacy with minimal carbon dioxide emissions. (*Id.*) NV Energy states that, to support its commitment to state carbon policies, the combustion turbines in the Silverhawk Peaking Plant would be capable of operating on a 15 percent hydrogen mixture with the original equipment manufacturer planning a path toward allowing these units to operate on 100 percent hydrogen. (*Id.*) NV Energy states that the proportion of annual energy provided by firm dispatchable generation only increases slightly even with the addition of the combustion turbines because those turbines are peaking units serving a capacity need and, therefore, operate rarely.

(*Id.* at 10-11.) NV Energy states that these units are proposed to be limited to 700 annual hours of operation in their air permit application. (*Id.* at 11.)

3. NV Energy states that it is requesting expedited approval of the Silverhawk Peaking Plant because it is critical for NV Energy to reliably serve load. (Ex. 113 at 7.) NV Energy states that resource adequacy risks in Nevada and the Western region have been evolving since the summer of 2020. (Ex. 111 at 3.) NV Energy provides that significant regional heat events have occurred for three consecutive summers and risks for the Western region have continued to change for several reasons including shifts in weather and rapidly changing resource mix. (*Id.*) NV Energy states that weather has grown more extreme across the region, resource variability has increased, and continued drought conditions have led to supply reductions from numerous hydroelectric plants. (*Id.*) Moreover, NV Energy states that wildfire activity in 2021 resulted in the loss of more than 5,500 MW of transmission capacity from the Pacific alternate current and direct current interties. (*Id.*) The California Independent System Operator ("CAISO") rule changes have also added uncertainty to the market and coal supply and demand has become an issue for the region. (*Id.*) All of these factors have led to reduced market liquidity, increased prices, and supply curtailments. (*Id.*) NV Energy states that these issues point to added risk in relying on market purchases to cover NV Energy's open positions. (*Id.*) NV Energy expects concerns regarding climate-related events, such as record temperatures, wildfire, and drought, to continue moving forward as the new normal. (*Id.* 3-4.)

4. NV Energy notes the retirement of 18 gigawatts ("GW") of power from coal and natural gas resources on the Western Interconnection over the past decade, with the planned retirement of an additional 26 GW of mostly coal and natural gas resources by 2032. (*Id.* at 4.) NV Energy states that the California Public Utilities Commission also required procurement of

11,500 MW of specifically non-fossil resources by the end of 2026. (*Id.*) NV Energy states that, not only could these changes dramatically affect the resource mix in the region and the availability of market capacity but, in addition, many recent developments could delay planned new renewable resources in the West and across the United States. (*Id.*) These issues are compounded by rule changes implemented and being discussed by CAISO regarding its day-ahead export priorities and ongoing wheel-through initiative, which NV Energy contends adds significant risk to the market as a whole (*Id.* at 4-5.) NV Energy states that the liquidity in the real-time hourly power market has also been reduced significantly as more entities have joined the energy imbalance market. (*Id.* at 5.)

5. NV Energy states that supply curtailments have increased risk for its companies, both of which have experienced major supply curtailment events leading to emergency conditions. (*Id.*) NV Energy states that one such curtailment led to a Level 3 Energy Emergency Alert (“EEA”) in August of 2020 - the highest level of emergency that means load shed is imminent. (*Id.* at 5-6.) In July of 2021, NV Energy states it experienced significant curtailments again, leading to an EEA Level 3 situation. (*Id.* at 6.) NV Energy states that, while the summer of 2022 featured lower volumes of supply curtailments, there was still more than 300 MW of curtailments during the critical hours in the September heat wave. (*Id.*) NV Energy states that such curtailments of those sizes highlight the risk of relying so heavily on market purchases. (*Id.*)

6. NV Energy states that adding in-system generating resources, specifically resources available after solar resources drop off in the evening hours, will reduce NV Energy's open position and thus its reliance on market capacity purchases, helping to mitigate uncertainty surrounding climate change, wildfires, western resource retirements, and the impact of the CAISO rule changes. (*Id.*) NV Energy states that events in the West have resulted in significant

supply curtailments for its companies and in-system generating resources would not be subject to curtailment and could continue providing energy to Nevada customers even when issues such as regional heat waves and wildfires occur. (*Id.*) NV Energy states it is also taking additional actions to address resource adequacy such as participating in phases of the Western Resource Adequacy Program (“WRAP”). (*Id.*)

7. NV Energy states that the base case in its filing, which includes the Silverhawk Peaking Plant, meets or exceeds the current RPS in every year, meets the 16 percent planning reserve margin (“PRM”) for each utility, targets NV Energy’s proportionate contribution to Nevada’s 2050 clean energy goal, and provides for the timely retirement of the Valmy generating station. (Ex. 112 at 13.)

### **Google’s Position**

8. Google recommends the Commission postpone its decision on whether to approve the Silverhawk Peaking Plant until more robust modelling and analysis is completed in a re-filed IRP amendment. (Ex. 500 at 3.) More specifically, Google recommends that NV Energy be required to perform model simulations that include the effects of joining the WRAP and its statutory requirement to join a regional transmission organization (“RTO”) by 2030 on its needs for energy, capacity, and transmission for all years covered by future IRPs and any current and future amendments to its 2021 IRP. (*Id.*) Google states that, as a component of the refiled amendment, NV Energy should provide detailed information and an associated action plan for the Silverhawk Peaking Plant’s potential use of hydrogen with a minimum of a feasibility study and cost-benefit analysis of the facility’s potential hydrogen use. (*Id.* at 3-4.) Google further recommends that the Commission institute a series of workshops to draft standards and

evaluation criteria for the development of hydrogen for use in the electricity sector, including hydrogen-ready and hydrogen-capable resources, for Commission approval. (*Id.*)

9. Google states that NV Energy could satisfy its short-term needs with carbon-free resources instead of constructing the Silverhawk Peaking Plant. (*Id.* at 8.) Google states that NV Energy's Low Carbon case does not include the Silverhawk Peaking Plant and is based on meeting an 80 percent reduction in carbon dioxide emissions by 2030 instead of the 50 percent reduction by 2030 required by the Renewable Portfolio Standard ("RPS"). (*Id.*) Google further states that NV Energy also provided cases that consisted entirely of carbon-free resources such as the BESS North, BESS South, and Geo case. (*Id.* at 8-9.)

10. Regarding NV Energy's IRP modeling, Google recommends that the utility be required to perform model simulations that include the effects of joining the WRAP and a statutorily required RTO by 2030 on its needs for energy, capacity, and transmission for all years covered by future IRPs and any current and future amendments to its 2021 IRP. (*Id.* at 13.) Google states that the results of these analyses should be incorporated in a refiled IRP amendment for Commission approval. (*Id.* at 13-14.)

11. Google states that NV Energy's IRP modeling did not consider its statutory requirement to join an RTO by 2030 nor did it consider any incremental activities toward joining an RTO by 2030, such as joining the WRAP or a day-ahead market. (*Id.* at 9.) Google states that NV Energy is taking steps to join WRAP before 2030 and notes that NV Energy has stated its expectation to recommend a day-ahead market early in 2025 but that it will probably be after 2025 before it can make its recommendation. (*Id.* at 10.) Google provides that these actions are firmly within the 2021 IRP planning horizon. (*Id.*) Google further provides that incremental RTO activities will have an impact on NV Energy's resource needs. (*Id.*) Google states that, in

the near term, joining WRAP and a day-ahead market will have a material impact on NV Energy's forecasted resource needs and, beyond 2025, long-term resource adequacy, regional transmission planning, and regional transmission control will all materially impact NV Energy's needs. (*Id.*)

12. Google contends that NV Energy's incremental activities should be incorporated into the Fourth Amendment to its 2021 IRP, reflecting NV Energy's decision to join these markets and delineate how the utility has evaluated these impacts in the context of other resource decisions that it has proposed. (*Id.*) Google additionally states that NV Energy should be required to present alternative scenarios reflecting various potential RTO footprints that may be available in 2030. (*Id.*) Google states that, while details of whether and what form an RTO may take by 2030 are uncertain, 2030 is firmly within the IRP planning horizon and such a major potential change should be analyzed by the IRP process. (*Id.* at 10-11.)

13. Google states that RTO-related activities should be reflected in NV Energy's IRP because the incorporation of activities in NV Energy's IRP comports with potential future policy recommendations of the Regional Transmission Coordination ("RTC") Task Force, of which NV Energy is a member. (*Id.* at 11.) Google, citing an RTC Task Force Report, states that the exclusion of RTO activities from resource planning could result in an over-estimation of resources. (*Id.*) Google states that RTOs provide more efficient resource commitment and dispatch, lower peak capacity needs, more efficient intermittent generation management, and lower reserve requirements. (*Id.*) Google further states that prudent resource planning must consider efficiencies and the resources available to the utility through regionally integrated transmission operation and wholesale electricity markets. (*Id.*) Google provides that failure to do so could result in increased costs and a reduction of the benefits of joining an RTO. (*Id.*)

14. Google states that NV Energy bases its exclusion of the impact of joining the WRAP, a day ahead market, and a statutorily required RTO from the Fourth Amendment on an assertion that “market considerations are not expected to impact the transmission infrastructure necessary to inject the output of the generator (the Silverhawk Peaking Plant) into the grid or deliver to native load customers.” (*Id.* at 11-12.) Google provides that, in rebuttal testimony filed in the Third Amendment to the 2021 IRP, NV Energy stated that “it cannot include the impacts of joining an RTO in the Fourth or Fifth Amendments because “a full regional model would have to be run by a market operator or RTO administrator after-market footprints are fully defined” and that it will not be able to model a day-ahead or RTO in future IRPs “until the modeling inputs are fully known and NV Energy has the Western Electricity Coordinating Council (“WECC”) runs.” (*Id.* at 12.)

15. Google states that NV Energy’s justifications are not reasonable and explains that there are many forecasts and estimates that go into an IRP that change over time. (*Id.*) Google states that, to the extent that NV Energy has sufficient knowledge to make a reasonable estimate of the impact of joining WRAP, a day ahead market, or an RTO, it should be included in the modeling of an IRP or IRP Amendment, particularly because it does so for other issues, such as the delay or cancellation of resources under development, which it cited as one of the justifications for the need for the Silverhawk Peaking Plant. (*Id.*)

16. Google states that NV Energy likely has access to preliminary results of the cost-benefit study being performed by the Western Markets Exploratory Group by the consulting group E3. (*Id.* at 13.) Google further states that, through its discussions with the CAISO and Southwest Power Pool (“SPP”) stakeholder groups regarding a day ahead market, NV Energy has access to information that will allow it to reasonably estimate the benefits of joining these

organizations. (*Id.*) Google provides that NV Energy can and should have sufficient information to include the benefits of joining WRAP, a day-ahead market, and an RTO in its IRP planning and failing to do so could bias IRPs toward excessive resource investments, including potentially the Silverhawk Peaking Plant. (*Id.*)

17. Google states that the potential use of hydrogen fuel by the Silverhawk Peaking Plant, and in Nevada more generally, should be thoroughly vetted. (*Id.* at 14.) Google states that clean hydrogen is an important tool to enable decarbonization, but the production and use of hydrogen requires strong standards to ensure it does not increase emissions. (*Id.*) Google states that hydrogen production using an electrolyzer directly tied to a carbon-free resource is “green” and does not produce greenhouse gases. (*Id.*) However, Google explains that hydrogen can increase emissions if derived from a process that uses natural gas or fossil fuel unless those emissions are captured and permanently sequestered. (*Id.*) Google states that hydrogen combustion also produces nitrogen oxides, which are associated with adverse public health impacts and act as indirect greenhouse gases. (*Id.*) Google provides that, if hydrogen is produced using grid electricity, it could lead to significant increases in grid emissions (even more than would be emitted by producing hydrogen with gas) unless strict requirements are met to ensure the electrolyzer demand is met with additional carbon-free generation that is matched to the time and location of the electrolyzer’s electricity use. (*Id.* at 15.) Google states that these outcomes underscore the need for strong standards and system planning practices around hydrogen’s production and use. (*Id.*)

18. Google states that NV Energy notes the benefit of the Silverhawk Peaking Plant’s ability to use hydrogen preliminarily in a 15 percent fuel mixture with a manufacturer-planned path to 100 percent hydrogen operation to enable future clean energy options. (*Id.*) However,

Google states that NV Energy does not have a plan or estimated timeline for the use of hydrogen with the Silverhawk Peaking Plant. (*Id.*) Google states that NV Energy intends to develop a plan once hydrogen becomes commercially available in quantities necessary to operate combustion turbines; however, NV Energy has not provided further information about what public information it is following or its estimate of when hydrogen may become commercially available in the necessary quantities. (*Id.* at 15-16.)

19. Google states that hydrogen production is being developed in the West, and the Infrastructure Investment and Jobs Act will establish six to ten regional clean hydrogen hubs – some of which are being pursued in California, Washington, and the Western Inter-States Hydrogen Hub. (*Id.* at 16.) Google states that in Nevada Air Liquide recently opened a hydrogen production facility in North Las Vegas that will serve the hydrogen vehicle market in California. (*Id.*)

20. Google states that the Silverhawk Peaking Plant anticipates being designed to make the transition to hydrogen less expensive than on a unit initially designed to burn natural gas and to accommodate additional selective catalytic reduction (“SCR”) catalyst that would be required to operate on hydrogen; however, NV Energy has not provided an estimate of the costs that will be incurred to modify the Silverhawk Peaking Plant. (*Id.* at 16-17.) Google states that NV Energy should be required to produce such an estimate. (*Id.* at 17.) Similarly, NV Energy has not provided any analysis to establish the feasibility of hydrogen as a fuel for the Silverhawk Peaking Plant but should be required to do so. (*Id.*) Google states that, in order to justify the construction and cost recovery of the project, including changes to accommodate future hydrogen use, NV Energy should be required to establish with a high degree of certainty that 1) hydrogen will be available; and 2) that it has adequate transportation and storage infrastructure to

deliver and store the hydrogen fuel for use by the project – all within a timeframe that corresponds to the operating life of the units. (*Id.*)

21. Google states that NV Energy has not provided a cost-benefit analysis to evaluate the use of hydrogen in place of natural gas as a fuel by the Silverhawk Peaking Plant; however, it should be required to do so. (*Id.*) Google states that, in addition to the modifications to facilitate hydrogen and accommodate its greater volumetric needs compared to natural gas, it must also consider emissions. (*Id.*) Google explains that it requires about three times the volume of hydrogen compared to natural gas to produce an equivalent amount of electricity and, due to the potential need to limit nitrogen oxide emissions associated with hydrogen's use, the operational efficiency of the project could be negatively affected. (*Id.* at 17-18.) Google states that, at a minimum, such a cost-benefit analysis should include an estimate of the costs to convert the generating technology of the project to burn hydrogen; the incremental costs of procuring, transporting, and storing hydrogen relative to natural gas; the impact on emissions of burning different mixtures of hydrogen to be used with the project; and the difference in the cost of production (\$/MWh) of using hydrogen instead of natural gas as fuel. (*Id.* at 18.)

22. Google states that NV Energy should also be required to establish a plan for using hydrogen as fuel. (*Id.*) Google states that the plan should include a timeline and be based on research and analysis of the possible avenues by which it can viably procure, transport, and generate electricity from hydrogen, including how it will overcome the limitations of existing natural gas infrastructure to carry more than a fraction of hydrogen fuel. (*Id.* at 18-19.) Google further states that the plan should provide details to ensure the hydrogen used is certified “clean” and carbon-free. (*Id.* at 19.)

23. Google states that additional planning must be performed to ensure that NV Energy's use of clean hydrogen also furthers Nevada's clean energy goals. (*Id.*) Google states that, in order to increase clean resources and further Nevada RPS goals, NV Energy should ensure that new clean energy is deployed at the same time that hydrogen production is deployed in a location as the same electrical zone as the electrolyzer used to produce the hydrogen. (*Id.*) Google provides that, if the clean resource is built in a distant location, it may not displace fossil fuel production and could simply displace other clean resources. (*Id.*)

24. Google states that NV Energy must also plan for granular matching of clean energy production with electricity demand because emissions can vary widely by time-of-day. (*Id.* at 20.) Google provides that to "green up" the hydrogen the producer will need to acquire time-based clean energy attribute certificates similar to, but more granular than, portfolio energy credits for all grid electricity consumed in the production of hydrogen. (*Id.*)

25. Google recommends that, as a component of a refiled IRP amendment, NV Energy should provide detailed information and an associated action plan for the Silverhawk Peaking Plant's potential use of hydrogen including, at a minimum, a timeline, feasibility study, and a cost-benefit analysis of the facility's hydrogen use. (*Id.*)

#### **WRA's Position**

26. WRA recommends that the Commission not approve NV Energy's request and instead direct NV Energy to file supplemental testimony in this proceeding, which includes revised quantitative analysis substantiating the need for and benefits from the Silverhawk Peaking Plant or, in the alternative, WRA recommends that NV Energy be directed to file a separate application with a revised analysis. (Ex. 600 at 4, 27.) WRA states that the revised analysis for consideration of the immediate reliability need should include at a minimum: 1) an

updated and improved Loss of Load Expectation (“LOLE”) study quantifying the enhanced reliability risks identified qualitatively throughout NV Energy's filing; 2) a robust analysis of resource options, including, but not limited, to the Silverhawk Peaking Plant, including a full assessment of reliability contributions, economic costs and benefits, and environmental impacts of differing procurement strategies; and 3) a request for procurement approval of the resource or portfolio of resources identified by NV Energy, through the analysis articulated above, as the best strategy for meeting its resource needs and the policy energy goals of Nevada. (*Id.* at 4-5.) WRA also recommends that NV Energy be directed to perform similar levels of reliability analysis for all future IRP filings and amendments, including more robust mid and long-term analysis considering a range of potential future risks, to mitigate the risk of urgent, just in-time procurement currently proposed by the Commission. (*Id.* at 5.)

27. WRA states that, while NV Energy's filing makes a strong and plausible qualitative case for the need for additional reliability resources in the face of growing reliability risk and resource delays, its filing lacks the technical analysis necessary to address whether NV Energy has: 1) quantified and demonstrated the urgent need for new reliability resources through robust technical analysis; 2) sufficiently considered the range of potential supply and demand-side resources which could fulfill this need; and 3) concluded and demonstrated that the Silverhawk Peaking Plant is the best option for meeting customer needs consistent with the energy policy goals of Nevada. (*Id.* at 6.)

28. WRA states that NV Energy's request does not include any probabilistic reliability analysis of the emergent reliability risks described in its filing and does not appear to have updated past or performed new reliability analysis to determine which resources could be capable of meeting that risk and instead relies on outputs of outdated reliability analysis

performed in 2020 and 2021, which assessed a different portfolio of resources and set of market and reliability conditions than is discussed in the instant filing. (*Id.*) WRA provides that NV Energy's prior analyses are also deficient and points to NV Energy's treatment of its hydroelectric contracts as a firm resource in its reliability modeling and analysis of its open capacity position. (*Id.* at 6-7.) WRA further provides that, unless or until the obligation to analyze and allocate reliability requirements becomes a regional responsibility of the Western Power Pool ("WPP") as part of the WRAP, NV Energy's internal approach to reliability must be modernized to leverage modern tools and current input assumptions. (*Id.* at 7.) WRA contends that NV Energy's lack of an original probabilistic reliability analysis supporting its proposal leaves the Commission with insufficient information to approve its request at this time. (*Id.*) WRA states that the time and cost of its recommendation is trivial in the context of NV Energy's request, yet also vital to the ability of the Commission to act upon it. (*Id.*)

29. WRA states that NV Energy's overarching reliability concerns regarding itself and the broader WECC are valid. (*Id.*) WRA states that the confluence of resource retirements, load growth, drought risk, regional competition for scarce resources, and extreme weather pose both reliability and economic risks for utilities with open capacity and energy positions. (*Id.*) WRA states that NV Energy's concerns are echoed in analyses from WECC, WPP, CAISO, and joint analysis funded by the major Desert Southwest utilities and have been a present theme throughout recent NV Energy IRP filings. (*Id.* at 7-8.)

30. WRA states that NV Energy's actions to reduce its open positions, particularly during evening hours, appear prudent based on current trends and market risks, including the potential peaking thermal resources. (*Id.* at 8.) WRA states that such actions reduce NV Energy's exposure to severe market prices and reduce the risk that NV Energy would have

reliability shortfalls in the event of severe weather; however, WRA provides that the prudence of such actions are conditional on corroborating quantitative analysis. (*Id.*) WRA states that detailed analysis is merited prior to committing hundreds of millions of dollars to a specific solution and such analysis is not present in this proceeding. (*Id.*)

31. WRA states that NV Energy did not apply best practice tools and methods to its analysis of the reliability concerns discussed in the filing. (*Id.* at 11.) WRA provides that NV Energy did not perform any probabilistic modeling to assess the emergent reliability concerns raised in its narrative and, consequently, did not and could not assess whether the Silverhawk Peaking Plant (or any alternatives) can resolve that concern. (*Id.*) WRA states that NV Energy relied on static outputs of prior analyses which, while robust, do not reflect the current understanding of system conditions or NV Energy's latest portfolio. (*Id.*)

32. WRA states that the correct tools and methods were used by NV Energy in 2020 and 2021 to inform the resource planning questions at the time that they were performed but those tools and methods have not yet been applied to the emerging needs identified by NV Energy or the Silverhawk proposal. (*Id.* at 11-12.) WRA states that the instant filing is rife with urgent and emergent risks and is a significant change to NV Energy's portfolio mix, which merits fresh analysis prior to the consideration of a \$333 million investment in new gas capacity. (*Id.* at 12.) WRA states that, without updated analysis, it is impossible to assess the appropriate amount of thermal capacity to meet its desired reliability standard, what quantity of alternative resources could meet the same reliability standard, or whether those alternative resources would come at a lower cost. (*Id.*) Moreover, WRA states that NV Energy's anticipated participation in the WRAP does not eliminate the need for NV Energy to perform its own internal, probabilistic resource

modeling for Commission review until its participation with WRAP is fully underway and its resource accounting standards are aligned with WRAP obligations. (*Id.* at 12-13.)

33. WRA states that it has concerns with NV Energy utilizing its 2020 and 2021 reliability analyses as the basis for its reliability modeling. (*Id.* at 13.) For example, WRA states that Loss of Load Expectation (“LOLE”) analyses assess how a resource portfolio performs as a system and the effects of different resource interactions. (*Id.*) WRA states that, if electrification or climate change result in different load patterns, the LOLE results and corresponding Effective Load Carrying Capability (“ELCC”) and Planning Reserve Margins (“PRM”) outputs will change as well. (*Id.*) WRA states that ELCC results are a function of the resource portfolio being analyzed and a material shift in the amount of solar and storage within NV Energy’s portfolio to gas and geothermal will inherently change the resulting values of all resources involved as well as the combined portfolio effects. (*Id.*) WRA provides that it does not appear that NV Energy generated new ELCC values to reflect the individual or aggregate ELCC of the new portfolio in the instant filing. (*Id.* at 13-14.) WRA further provides that the shape of the ELCC results will also shift because of other material changes identified in NV Energy’s filing, such as the revised shape and magnitude of NV Energy’s load forecast filed in its Third IRP Amendment in Docket No. 22-09006. (*Id.* at 14.)

34. WRA states that, in contrast to the ELCC, the PRM has increased potential for stability if executed with a consistent metric – perfect capacity – which refers to a hypothetical resource class with perfect dispatch, infinite ramp rate, and with no outage risk, and is the unit in which ELCC is typically expressed. (*Id.*) WRA states that all resources have limitations and ELCC analysis may be used to determine how a resource compares to perfect capacity, as NV Energy has done for solar, wind, storage, and geothermal resources; however, these ELCC

values were not updated and may introduce error in the relationship between the PRM and desired reliability standard. (*Id.* at 14-15.) WRA states that NV Energy appears to apply the full summer rating to its thermal and hydro resources with no modification of these resources' values to perfect capacity, overlooking their real-world limitations and significantly overstating their reliability contributions. (*Id.* at 15.) For example, WRA provides that NV Energy's filing simultaneously provides full capacity credit to its Hoover Dam contract in its modeling and position analysis while contemplating a potential near-term future in which Lake Mead is a dead pool no longer capable of producing energy. (*Id.*) WRA states that this simplification, alongside NV Energy's use of summer peak rating for thermal resources, excluding any consideration of outages, has the effect of destabilizing the relationship between the PRM and the Commission's approved LOLE standard. (*Id.*)

35. WRA states that E3's ELCC study recommends that, if any factors related to characteristics of load, other resources in the portfolio, or the portfolio itself change significantly, then the ELCC values in its study should be revisited. (*Id.*) WRA states that, similarly, NV Energy's PRM study indicates that several future changes may eventually require NV Energy to revisit its PRM requirement, such as fundamental changes in the shape of NV Energy's load, major changes in its resource portfolio, and improved understanding of impacts of climate change on extreme weather events that affect system reliability. (*Id.* at 15-16.) WRA states that, since the completion and approval of NV Energy's ELCC and PRM studies, NV Energy has: 1) filed a revised load forecast reflecting significant changes to the shape and magnitude of its load driven by electrification, energy efficiency and demand response, behind-the-meter resources, and large customer activity; 2) proposed a substantial modification to its portfolio resource mix through the replacement of the Iron Point and Hot Pot solar and Battery Energy Storage System

(“BESS”) projects with new geothermal, standalone BESS, and natural gas resources; 3) identified significant changes in the availability of market purchases from other regions driven, at least in part, by the correlated effects of weather on regional resource performance and load; and 4) identified significant risk that its contracted hydroelectric capacity may be reduced or unavailable as a result of drought conditions. (*Id.* at 16.)

36. WRA states that, to the extent that these changes are material enough to drive the emergency need for the Silverhawk Peaking Plant, and expedited treatment in this case, it is also material enough to merit updated or original analysis quantifying and justifying that reliability need. (*Id.*) WRA states that prior analyses should not be considered sufficiently precise or specific for the execution of major procurement decisions in the current environment considering that procurement decisions dwarf the cost of revised modeling. (*Id.* at 17.) WRA states that approval of major procurement based on outdated analysis would represent a step backwards in NV Energy’s best practices for resource planning and would be troubling precedent for the Commission. (*Id.*)

37. WRA states that, at a minimum, NV Energy should ensure its LOLE model is updated to assess the integrated reliability of each portfolio under consideration. (*Id.*) WRA states that each portfolio should be assessed discreetly to confirm that it meets a desired reliability standard as expressed in reliability risk (such as LOLE). (*Id.*) WRA states that this is in contrast to NV Energy’s current practice, which performs a static analysis of need based on PRM and resource counting rules and attempts to derive equivalent portfolios using similar open positions between all cases developed. (*Id.*) WRA states that this method is not sufficient for determining whether each individual portfolio considered is reliable nor to consider whether the

portfolios being compared, and their associated costs, provide equivalent reliability benefits. (*Id.* at 17-18.)

38. WRA states that, for a specific reliability need such as the need identified for the Silverhawk Peaking Plant, LOLE analysis can indicate the relative reliability contribution resulting from including or excluding that specific unit and can indicate the equivalent capacity for other resource technologies needed to meet the same LOLE standard. (*Id.* at 18.) As an example, WRA provides that through this analysis NV Energy could articulate the volume of BESS in installed megawatt hours (“MWhs”) necessary to achieve the same reliability standard as the Silverhawk Peaking Plant proposal, confirm that both achieve the Commission’s desired reliability standard of 0.1, and present to the Commission the relative merits of these competing solutions. (*Id.*) WRA states that the current analysis of the competing solutions appears focused exclusively on the economic results of portfolios based on PRM, not an LOLE standard, and does not provide an equivalent comparison of resources based on their reliability contribution as measured in loss of load. (*Id.*) WRA states that NV Energy could also include thermal outages, hydro risk, import resources, geothermal, and additional reliability tests in their analytical refresh. (*Id.* at 18-21.)

39. WRA states that, with the revised and updated model articulated above, NV Energy would be prepared to make a meaningful quantitative assessment of its reliability need and consideration of resource options. (*Id.* at 22.) WRA provides that, in addition to passing candidate projects through an economic screen, NV Energy should be assessing the reliability risk of each integrated portfolio under consideration, an analysis which is roughly approximated through its static capacity position analysis. (*Id.*) WRA further provides that NV Energy should begin with an analysis of its base portfolio – its currently owned and contracted resources plus a

reasonable percentage of market purchases – to assess its baseline reliability risk. (*Id.*) WRA states that, if NV Energy’s hypothesis is correct, the LOLE of its base portfolio is likely to experience reliability events in near-term years that will be greater than 0.1, meaning its portfolio is likely to experience reliability events more frequently than one day in ten years, thereby failing to meet the standard set by the Commission. (*Id.*) WRA states that, starting from this baseline, NV Energy can assess how the LOLE changes as a result resource additions or retirements. (*Id.*) WRA states that, once NV Energy has a robust understanding of the equivalent resource capacity which could achieve the same reliability standard using different technologies, it would be reasonable to screen these resource alternatives in a manner similar to that which was undertaken in its economic analysis to present equivalent alternatives for the Commission’s consideration with clear analysis supporting the conclusion that the resource solutions would help NV Energy achieve the desired LOLE standard. (*Id.* at 23.)

40. WRA states that peaking thermal units are the traditional solution to peak reliability needs; however, other resources, such as BESS, firm renewables, demand-side management (“DSM”), and firm imports may be capable of meeting the same technical need. (*Id.* at 23-24.) WRA states that, while NV Energy undertook a series of increasingly committing actions to develop the Silverhawk Peaking Plant from September 2021 to present, it is unclear that it took any comparable actions to identify or solicit bids for any of these alternate resource types. (*Id.* at 24.)

41. WRA states that NV Energy should have executed WRA’s proposed analysis to substantiate the need for the Silverhawk Peaking Plant and meaningfully consider alternative resources; however, the analysis could still be done today because the core infrastructure for the analysis exists and has already been utilized for similar analysis by NV Energy’s consultant, and

a specific analysis of the Silverhawk Peaking Plant may simply need an updated portfolio and the improvements articulated above. (*Id.* at 24-25.) Similarly, NV Energy's in-house modeling tools such as PLEXOS and PROMOD are both capable of performing LOLE analysis with the proper setup and parameters. (*Id.* at 25.) WRA states that moving forward NV Energy should make inclusion of a probabilistic reliability analysis an integral part of its portfolio assessment process, screening just as it currently does for portfolios based on their economics. (*Id.*)

42. WRA states that NV Energy's ability to meaningfully consider other resources is more complicated due to the delay between NV Energy's initiation of efforts to develop the Silverhawk Peaking Plant proposal and NV Energy's efforts to gain regulatory approval for its intended procurement strategy. (*Id.*) WRA provides that significant time has elapsed that could have been used to assess and pursue alternative resources or re-engage with developers who participated in NV Energy's earlier solicitations. (*Id.*) WRA states that this delay limits the options available to the Commission and may preclude better alternatives that could have achieved improved reliability, reduced costs, and/or reduced emissions. (*Id.*)

43. WRA states that, with respect to the environmental implications of the Silverhawk Peaking Plant proposal, the energy produced by the project will likely displace other fossil energy generation with a similar or worse emissions profile. (*Id.*) However, WRA provides that such a conclusion would fail to recognize NV Energy's missed opportunity to consider and potentially pursue emissions-free alternatives which could have provided the same energy and capacity benefits as the Silverhawk Peaking Plant, such as targeted demand response contracts intended to offset some or all of the need for the Silverhawk Peaking Plant, or a solar and storage hybrid contract to displace the delayed capacity from Iron Point and Hot Pot. (*Id.* at 25-26.)

44. WRA states that the potential environmental impact benefits of hydrogen blending for the Silverhawk Peaking Plant hinge on several key factors, such as how the hydrogen is sourced, transported, and how it is combusted. (*Id.* at 26.) WRA further states that a 15 percent blend of hydrogen by volume is significantly lower than a 15 percent blend by energy content as potentially as low as 5 percent of the energy delivered would ultimately come from hydrogen based on a 15 percent blend by volume. (*Id.*) WRA states that most significant uncertainty to achieving the benefits of hydrogen blending is whether it will occur at all. (*Id.*) WRA provides that, currently, NV Energy does not have a plan to source and blend hydrogen for its facilities, although NV Energy has noted its intention to decarbonize such units when economically feasible. (*Id.* at 26-27.) WRA states that, until NV Energy analyzes and articulates a strategy to source and blend emissions-free hydrogen for its generating facilities, the Commission should disregard the blending capabilities of the proposed facility. (*Id.* at 27.)

#### **Staff's Position**

45. Staff recommends that the Commission approve NV Energy's request to construct the Silverhawk Peaking Plant Project, but with a 2050 retirement date instead of the proposed 2054 date. (Ex. 300 at 2, 10.) Staff states that the project will help close NV Energy's open position for numerous years to come and that, absent its construction, the only short-term alternative is to rely on external market purchases with the hope that external entities and other situations (such as wildfires) do not impact deliveries of those market purchases, which has occurred over the last three summers. (*Id.* at 10.) Staff states that the 2054 retirement date for the Silverhawk Peaking Plant peakers is inconsistent with Nevada's net zero carbon goal by 2050. (*Id.* at 2.) Staff contends that it is illogical to set a depreciation date beyond 2050 for a carbon emitting generator that NV Energy does not intend to run beyond 2050 and that, if such a

date were used for depreciation purposes, it would cause ratepayers in years 2051 through 2054 to help pay for facilities that arguably give them no benefit. (*Id.*)

46. Staff states that the proposed combustion turbines are needed on several bases. (*Id.*) Staff provides that, during the August 2020 heat storm event, NV Energy experienced unprecedented firm market purchase curtailments with as much as 1,243 MW curtailed - an amount that is approximately 15 percent of the NV Energy Balancing Area Authority ("BAA") peak load and on par with NV Energy's entire planning reserve margin. (*Id.* at 2-3.) For the summer of 2021 and beyond, curtailment of NV Energy's firm purchases worsened because of newly enacted CAISO rules. (*Id.* at 3.) Staff notes that one such rule lowered the priority of wheel-through transactions and another lowered the priority for exports not explicitly backed by capacity designated solely to serve external load. (*Id.*) Staff provides that these changes significantly increased the likelihood of NV Energy's firm purchases being curtailed. (*Id.*) Staff states that, for NV Energy to meet its reserve requirements during the August 2020 heat event, it had to solely rely on the Northwest Power Pool ("NWPP") for four hours. (*Id.*) Staff provides that after the heat event the NWPP changed its reserve sharing rules such that NV Energy can only rely on NWPP reserve sharing for one hour. (*Id.*) Staff states that had that rule been in place in August 2020, the proposed combustion turbines would have been necessary for three hours. (*Id.* at 3-4.)

47. Staff states that in July of 2021 there was another milder heat event that required NV Energy to enact the emergency clause of the Valmy Operating Agreement and run Idaho Power's share of Unit 1 for a total of 16 hours. (*Id.* at 4.) Staff states that NV Energy also ran 60-year-old 6 MW diesel generators for an hour that were historically intended for black start

purposes only until NV Energy was able to get approval for limited use for power generation.

*(Id.)*

48. Staff states that during the first week of September of 2022 the western United States experienced another heat wave with record temperatures that resulted in emergency declarations by various load serving entities across the West. *(Id.)* Staff further states that the WECC as a whole set a new peak load record that month. *(Id.)* Staff provides that NV Energy was able to avoid declaring a formal emergency during this period; however, six of the first seven days of September were new record high peak loads for the month of September and NV Energy had all available internal generation at peak output. *(Id.)*

49. Staff states that NV Energy's loads are forecasted to be higher in 2023 and subsequent years while the Hot Pot and Iron Point solar PV plus battery projects are not included in the forecast as available resources, which would have contributed approximately 540 MW to NV Energy's combined loads and resources table. *(Id. at 4-5.)* Staff states that resource adequacy and energy scarcity issues are expected to continue for the foreseeable future as detailed in the NERC Long Term Reliability Assessment published in December of 2022. *(Id. at 5.)* Staff states that the assessment looked at the coming ten-year period and categorized the entire western U.S. as being "at risk" of energy shortfalls during extreme weather conditions, except for California which was deemed "high risk" and does not meet applicable reliability requirements set forth by the National Electric Reliability Council. *(Id.)*

50. Given the above, Staff states that more internal generation capacity would be useful because firm market purchases are no longer always guaranteed and because NV Energy maxed out all possible internal generation, including Idaho Power's share of Valmy 1 (which is only available in emergencies) on multiple occasions during the last three summers to avoid loss

of load. (*Id.* at 6.) Staff states that the proposed generation addition is crucial to maintain reliable service while continuing to work toward Nevada's 50 percent in 2030 RPS requirement and towards Nevada's goal of zero net carbon by 2050. (*Id.*)

51. Staff states that, given the need for additional capacity, the proposed combustion turbines are a reasonable plan to pursue to obtain needed energy and generation capacity. (*Id.*) Staff states that there is no other internal generation that can be permitted, constructed, and placed into service in this short of a time frame because most of the necessary infrastructure is already present at the Silverhawk site. (*Id.*) Staff further states that it compared the capacity from the proposed combustion turbines to the BESS project proposed in the instant filing at the North Valmy Station site and to the BESS and combined cycle upgrade projects proposed in Docket No. 21-06001 (NV Energy's most recent joint IRP) and that the combustion turbines are the most economic capacity of the four. (*Id.*) Staff states that the proposed Silverhawk Peaking Plant project also has the advantage of achieving commercial operation sooner than the Valmy BESS by one year and will have twice the MW impact as the BESS. (*Id.* at 7.) Moreover, Staff states that the Valmy BESS project will not be an incremental increase in capacity and would instead offset some of the loss of capacity associated with the retirement of the Valmy coal plants. (*Id.*) Staff provides that the BESS project also introduces an inefficiency to the grid because the Valmy BESS project will store non-renewable energy not associated with a renewable facility. (*Id.* at 7-8.) Staff provides that the emissions associated with the stored energy will be greater because more energy has to be produced in order to overcome the round-trip losses of the BESS. (*Id.* at 8.)

52. Staff states that it is not concerned with the 700-hour run time restriction for the proposed projects but notes that it could be a concern if Nevada begins the process or policy of

mandating electrification of winter heating load. (*Id.*) In that circumstance, a project with that kind of runtime restriction would not help serve a new winter peak and a totally new resource portfolio might need to be considered. (*Id.* at 9.) Staff states its concern that the Silverhawk Peaking Plant project might not be completed on schedule by July 1, 2024. (*Id.*) Staff states that there is no room for error in NV Energy's construction schedule and the effort to expedite the ambitious schedule could add costs. (*Id.*) Staff states that, despite these concerns, it still recommends the plant as the best course of action; however, NV Energy should closely monitor the progress and be prepared to backfill the capacity if the project is not available by the summer of 2024. (*Id.*)

#### **NV Energy's Rebuttal**

53. NV Energy states that it is not necessary for the Silverhawk Peaking Plant to retire prior to 2050 to achieve Nevada's 2050 clean energy goal. (Ex. 117 at 10.) NV Energy states that Nevada's 2050 goal envisions an amount of zero-carbon generation equal to the amount of electricity sales in the State in 2050. (*Id.*) NV Energy provides that, due to ordinary system losses, electricity sales are a subset of total generation and, therefore, some amount of fossil units can exist in a resource portfolio that meets the goal as modeled in its economic analysis for its Preferred Plan. (*Id.*) NV Energy states that it is expected that a decarbonized portfolio will continue to require firm capacity resources past 2050. (*Id.*)

54. NV Energy states that it expects decarbonization to occur alongside the continuing but less frequent operation of gas-fired generation. (*Id.* at 11.) NV Energy explains that gas turbines are firm dispatchable resources in its portfolio and the Preferred Plan, which achieves the State's 2050 clean energy goal, includes the addition of firm dispatchable placeholder resources to its portfolio over the years. (*Id.*) NV Energy further explains that firm

dispatchable resources are modeled with the characteristics of gas turbines due to the lack of sound data on proven, appropriate low carbon alternatives. (*Id.*) NV Energy provides that new firm dispatchable resources could include the use of hydrogen as fuel, fuel cells, or biofuel combustion units. (*Id.*) NV Energy states that gas turbines, such as the Silverhawk Peaking Plant, while constituting a diminishing percentage of the portfolio's installed capacity and energy over the years, are necessary to maintaining a reliable decarbonized system and are a fundamental part of a least-cost decarbonized portfolio. (*Id.*) NV Energy states that, while generation and installed capacity for firm dispatchable resources declines from 2025 to 2050, such resources still account for a significant share of the effective capacity needed to satisfy reliability needs. (*Id.* at 12.) NV Energy states that such resources will provide a strong contribution of firm dispatchable resources to resource adequacy in 2050 despite constituting a relatively small percentage of installed or nameplate capacity. (*Id.*) NV Energy states that these resources will contribute significantly to system reliability while minimizing carbon dioxide emissions. (*Id.*)

55. NV Energy states that it derived its PRM to ensure reliability based on a 1-in-10 LOLE metric. (Ex. 117 at 2.) NV Energy states that it performed detailed analysis to determine the PRM requirement to ensure an LOLE standard of 0.1 days per year and a PRM of 16 percent above peak demand was determined based on analysis of the system in each of the four years between 2021 and 2024. (*Id.*) NV Energy provides that it should not be required to perform reliability modeling for each scenario evaluated in each IRP rather than relying on the PRM established for that purpose. (*Id.*)

56. NV Energy explains that, while its analysis focused on its near-term resource adequacy needs, the PRM requirement derived from its analysis may also be used to inform NV

Energy's long-term resource planning. (*Id.*) NV Energy further explains that the relative stability of its 16 percent PRM requirement across four years in which its portfolio undergoes significant changes is a result of the use of ELCC to accredit renewable and storage capacity value; so long as an ELCC approach is used to accredit these resources, large changes to the PRM requirement would not be expected. (*Id.*) NV Energy states that several future changes may require it to revisit its PRM requirement to ensure it maintains a level of reliability consistent with the LOLE standard of 0.1 days per year such as fundamental changes in load shape, major changes in the resource portfolio beyond those contemplated in its analysis, and improved understanding of the impacts of climate change on extreme weather events that affect system reliability. (*Id.* at 2-3.) NV Energy states that, until those changes become material, a PRM requirement of 16 percent provides a reasonable measure of the capacity needs of the system to maintain a LOLE of 0.1 days per year. (*Id.* at 3.) NV Energy states that it intends to update its PRM on a regular basis to ensure that its portfolio continues to meet the desired standard of reliability based upon system changes and the availability of new data. (*Id.*) NV Energy further states that it is currently taking steps to commence the process of reassessing its ELCC values and reviewing its PRM for use in the 2024 Joint IRP. (*Id.*)

57. NV Energy disagrees with WRA's position that NV Energy's PRM is outdated. (*Id.* at 4.) NV Energy states that, while its load forecast has increased relative to the forecast used in the 2021 Joint IRP, the load shape has not changed significantly. (*Id.*) NV Energy states that factors eventually requiring NV Energy to revisit its PRM requirement include fundamental changes in load shape, but not changes in load magnitude. (*Id.*) NV Energy explains that the PRM is not expected to change with renewable resource additions due to the use of ELCC for these projects and the fossil fleet has been static fairly since the PRM study. (*Id.*) NV Energy

states that future assessments of the PRM will incorporate historic, not prospective, fossil resource performance. (*Id.*)

58. NV Energy states that a procurement decision such as the Silverhawk Peaking Plant is not a trigger for reevaluation of the PRM. (*Id.*) NV Energy states that the relative cost of the proposed projects is not a factor considered to reassess the PRM and the relative significance of a procurement decision has no impact on the reliability of a portfolio. (*Id.*) Moreover, NV Energy states that it is not aware of available data to realistically quantify risk due to reliance on market capacity. (*Id.*) NV Energy states that events over the past three years demonstrate that market availability and deliverability has been uncertain, typically at times of great need. (*Id.* at 4-5.) NV Energy explains that to address this concern, rather than assign an outage rate or make another form of risk assignment, it has reduced its reliance on the uncertain market availability and deliverability. (*Id.* at 5.)

59. NV Energy states that, contrary to WRA's assertion, NV Energy did not apply the full summer rating to its thermal and hydro resources without modification to perfect capacity. (*Id.*) NV Energy states that, in determining capacity contribution of resources toward the PRM, it applies ELCC to dispatch-limited resources and applies rated capacity to firm resources, accounting for the impact of forced outages of firm resources in the PRM. (*Id.*) As such, NV Energy states that it uses an installed capacity PRM rather than an unforced capacity PRM. (*Id.*) NV Energy states that because its most significant hydro resource is the Hoover Dam, for which NV Energy receives energy allocations and can dispatch the energy to meet load, this contracted resource is modeled as a firm source. (*Id.*) NV Energy states that, while it does not apply an ELCC to other hydro resources in its portfolio, it limits the capacity of these resources to the dependable capacity forecast by the project owners. (*Id.*) NV Energy states that, because these

resources represent a de minimus portion of its portfolio, this approach has a negligible impact. (*Id.* at 5-6.)

60. NV Energy states that it did not file an updated load forecast in this proceeding and relied on the forecast filed in Docket No. 22-09006. (Ex. 118 at 2.) NV Energy disagrees with WRA's characterization of that load forecast as "reflecting significant changes to the shape and magnitude of its load" since the load forecast approved in the 2021 Joint IRP. (*Id.*) NV Energy provides that WRA's specific reference to NV Energy's filing in Docket No. 22-09006 to support its statement does not refer to load shape and there is no representation of a significant change in the magnitude of the load forecast, but rather the updated load forecast results in annual energy sales increase in 2023 by 831 gigawatt-hours ("GWh"), or 2.6 percent, and the peak MWh values increase by 107 MW in 2023, or 1.4 percent, as compared to the approved forecast in the 2021 Joint IRP. (*Id.*) NV Energy states that, considering all hours of the year from the greatest load hour to the smallest load hour, both load forecasts show a similar distribution of load variation and increases in magnitude. (*Id.* at 2-3.) NV Energy states that increases in load magnitude are not a trigger for revisiting the PRM requirement. (*Id.* at 3.) NV Energy provides that the shape by hour of the day for July in years 2023, 2024, and 2025 demonstrate that the time-of-day pattern of both the 2021 Joint IRP forecast and the updated load forecast from the Third Amendment are very similar. (*Id.*) NV Energy contends that WRA's recommendation is based on a mischaracterization of the updated load forecast. (*Id.* at 5.) NV Energy states that, because there is no evidence of a change in the load shape, there is no support for recommending the PRM study be updated at this time based upon the load forecast. (*Id.*)

61. NV Energy states that, contrary to WRA's testimony, NV Energy applied an ELCC surface in multiple dimensions specific to the resource mix proposed in the Fourth

Amendment to account for diversity benefits. (Ex. 117 at 6.) NV Energy states that it used an ELCC surface that assesses the diversity benefit of incremental solar photovoltaic and BESS in various combinations, as these are the dominant variable resources in the portfolio buildout. (*Id.*) NV Energy states that the incremental ELCC values developed in the study remain appropriate. (*Id.*)

62. NV Energy disagrees with Google's assertion that the Silverhawk Peaking Plant was selected to address a short-term reliability need in 2024 using its long-term planning models. (*Id.*) NV Energy provides that the project was chosen to address a long-term reliability need that starts in the near term. (*Id.*) Moreover, contrary to WRA's assertion, NV Energy states that in performing its economic analysis it considered other resources than the Silverhawk Peaking Plant including combustion turbines, BESS, and geothermal resources. (*Id.* at 7.). NV Energy states that, while it does not assess DSM in its economic analysis of resources, instead treating it as a modifier, it actively manages its DSM portfolio of programs. (*Id.* at 7-8.)

63. NV Energy states that it is still developing and investigating its participation in WRAP, a day-ahead market, or an RTO and as a result cannot determine whether such participation would materially impact its need for additional resources. (*Id.* at 8.). However, NV Energy states that, regardless of its participation in those organizations, additional resources will be needed in the long and short-term to ensure the reliable supply of energy to its customers. (*Id.*) NV Energy states that all future markets are expected to have a resource requirement to maintain reliability and failure to meet those requirements could result in both significant financial penalties and/or a lack of access to available supply in the market. (*Id.*) Thus, NV Energy provides that, while participation in those organizations may improve resource utilization and minimize costs, it will not relieve NV Energy from ensuring it has adequate resources to

meet customer demand. (*Id.*) NV Energy states that the Silverhawk Peaking Plant will help address its near and longer-term capacity and energy needs. (*Id.*) Moreover, NV Energy states that a specific model of WRAP, a day-ahead market, or an RTO is not needed to make an effective evaluation of the Silverhawk Peaking Plant. (*Id.* at 9.) NV Energy states that it analyzed its ability to reliably serve the customers' load with available resources and the economic evaluation shows that the Silverhawk Peaking Plant is an economic choice to meet its short and long-term resource needs. (*Id.*)

64. As discussed in more detail below, NV Energy states that neither of Google's claims (that there have been too many amendments to the 2021 Joint IRP and that Google lacks the same tools used by NV Energy to repeat its analysis) has bearing on the selection of the project as the best choice to meet the needs of its customers. (Ex. 117 at 9.)

65. NV Energy states that Google's recommendation to require NV Energy to establish a plan for using hydrogen is very premature. (Ex. 115 at 2.) NV Energy states that there is currently no large-scale production or interstate transportation of hydrogen near the Silverhawk Plant, or near any of NV Energy's other generating stations. (*Id.*) NV Energy states that it does not currently have a plan to source hydrogen but is following the industry development and will develop a plan when hydrogen supply is commercially available. (*Id.*) NV Energy states that it is appropriate to wait to develop a plan for hydrogen until a regional plan to produce and transport it is a reality. (*Id.*)

66. NV Energy states that it is only aware of one project in the West that is planned to produce hydrogen to operate a power plant. (*Id.*) NV Energy states that the project at the Intermountain Power Project near Delta, Utah, is a hydrogen production facility coupled with a hydrogen-fueled power plant. (*Id.* at 2-3.) NV Energy provides that it is intended to start

operation in 2025 with 25 percent hydrogen and operate with 100 percent hydrogen by 2045. (*Id.* at 3.) NV Energy states that the project has not begun commercial operation of either of the electrolyzers that will convert hydrogen or the combustion turbines that will operate on hydrogen. (*Id.*) NV Energy further provides that, at this point, the hydrogen production is only intended to supply this single power plant and has yet to be proven. (*Id.*)

67. NV Energy states that the Air Liquide hydrogen plant referenced by Google is the company's largest plant world-wide and is only producing enough hydrogen to support the transportation industry. (*Id.* at 3.) NV Energy states that, according to Air Liquide's website, the plant will produce thirty tons of hydrogen per day. (*Id.*) NV Energy provides that in comparison, if all of the output of the Air Liquide plant went the Silverhawk Peaking Plant, it could only supply 6 percent of what the peakers need to operate at full load. (*Id.*) NV Energy states that Air Liquide is not a viable option worth exploring for the Silverhawk Peaking Plant peakers, let alone the basis to delay the project to create a plan as proposed by Google. (*Id.*)

68. NV Energy states that the U.S. Department of Energy ("DOE") is in the study phase for the development of regional hydrogen hubs and other infrastructure. (*Id.*) NV Energy states that there is no timeline on when the DOE will proceed past the study phase and begin development. (*Id.*) NV Energy provides that, based on these examples of development of the hydrogen market, it is far too soon for NV Energy to develop a plan to source and supply hydrogen for its generating facilities in the absence of a viable market or realistic hydrogen supply options. (*Id.* at 4.)

69. NV Energy states that, although hydrogen supply is in an infantile stage of development, it is still beneficial for NV Energy to consider a unit's hydrogen capability as a benefit in resource planning. (*Id.*) NV Energy states that the ability to operate on hydrogen in

the future can provide benefits to customers and the company; however, NV Energy did not economically or otherwise justify the Silverhawk Peaking Plant based on its hydrogen capability. (*Id.*) NV Energy provides that the ability to operate on hydrogen is an additional benefit that can be realized once hydrogen production and supply infrastructure develops into a commercially viable fuel source. (*Id.*)

70. NV Energy states that the Silverhawk Peaking Plant will have negligible modifications during construction that are designed to allow them to operate on hydrogen or hydrogen mixtures in the future. (*Id.*) NV Energy states that all of the General Electric 7FA.05 combustion turbines are designed to operate on a mixture of up to 15 percent hydrogen without any significant modifications. (*Id.* at 4-5.) NV Energy states that there will be no design changes or associated costs incorporated into the initial design for the project's combustion turbines themselves. (*Id.* at 5.) NV Energy states that the only design modification outside of the combustion turbines during the initial construction to accommodate future hydrogen operation is additional space in the exhaust ducting for a potential future incremental catalyst to address higher nitrous oxide emissions that can be expected from operating on hydrogen or hydrogen mixtures. (*Id.*)

71. NV Energy states that there are additional benefits to having extra space for additional catalyst in the SCR section of the turbine exhaust, as it could address the normal degradation of the installed catalyst over time or allow greater reduction in nitrous oxide emissions if needed in the future. (*Id.*) NV Energy states that the cost of adding extra space in the SCR section for the future addition of more catalyst was already priced into the project and a specific cost is not available without an engineering study to change the design, but it is estimated that the incremental cost is approximately \$200,000 to \$300,000. (*Id.*) NV Energy

states that it would not be beneficial to complete a cost-benefit analysis of adding the additional space because the cost is negligible when compared to the project costs and, although the benefits may not be quantifiable at this time, there is value in having the space. (*Id.* at 6.)

72. NV Energy states that it is participating in discussions and development of the WRAP, day-ahead market, and RTOs; however, it is too early to know the specific requirements associated with participation in any of these organizations and it would be speculative to assume the impacts on NV Energy's resource needs. (Ex. 116 at 2.) NV Energy further states that it is known currently that all future markets are expected to have a resource requirement to maintain reliability and failure to meet those requirements could result in significant financial penalties and/or lack of access to available supply in the market. (*Id.*)

73. NV Energy states that membership in WRAP is expected to require demonstrating generation capacity to meet 100 percent of forecasted peak demand, which will be done through a forward-showing program in advance of each binding season. (*Id.*) NV Energy states that, if a participant fails to pass this forward-showing requirement, it will be assessed a deficiency charge to be applied to the month in which it is identified. (*Id.*) NV Energy states that the charge will be based off of the cost of new entry which is the estimated cost of a new peaking natural gas-fired generation facility, the volume of deficiency, and additional adders based on the size of the deficiency. (*Id.* at 2-3.) NV Energy states that, without additional resources, it will fail to meet this requirement by 2026, assuming all approved projects meet their in-service dates. (*Id.* at 3.) NV Energy states that the need for new resources continues throughout the study period due to growing customer demand. (*Id.*)

74. NV Energy explains that both CAISO and SPP impose resource adequacy requirements on participating load serving entities ("LSEs"). (*Id.*) NV Energy states that under

the CAISO tariff LSEs must meet: 1) a PRM set by the local regulatory authority; 2) local capacity requirements set by CAISO; and 3) flexible reserve requirements set by CAISO. (*Id.*) NV Energy provides that LSEs are required to demonstrate that they have secured adequate capacity in annual and monthly resource plans and, under Section 43A of the tariff, the CAISO can engage in backstop procurement of capacity to address deficiencies and allocate the costs to the LSEs experiencing the shortfall. (*Id.*) NV Energy further provides that similarly in the SPP an individual LSE's resource adequacy requirements are equal to its summer-season net peak demand plus a PRM requirement. (*Id.*) NV Energy states that, if an LSE fails to meet its requirement, SPP will charge them a deficiency payment based on its capacity shortfall. (*Id.*) NV Energy states that SPP determines its PRM through a LOLE study that calculates SPP's ability to reliably serve its balancing authority area's forecasted peak demand and it is based on the inputs and assumptions SPP develops with input from stakeholders. (*Id.*) NV Energy further states that SPP performs a LOLE study at least every two years, although it may occur more often as needed. (*Id.* at 4.) NV Energy states that currently, SPP ensures the applicable planning year's LOLE does not exceed one day in ten years, or 0.1 day per year. (*Id.*)

75. NV Energy states that the CAISO Extended Day Ahead Market ("EDAM") also has resource adequacy requirements by way of a resource sufficiency evaluation ("RSE") intended to ensure that each EDAM entity, including the ISO, can meet BAA obligations (forecasted demand, uncertainty, ancillary service requirements) prior to engaging in transfers with other participating BAAs through the day-ahead market. (*Id.*) NV Energy states that the current EDAM proposal includes consequences for failure to pass the EDAM RSE with a surcharge commensurate with the magnitude of the failure. (*Id.*) NV Energy further states that the surcharge would be based on the maximum hourly deficiency as determined by the EDAM

RSE application. (*Id.*) NV Energy provides that, for every additional failure over a rolling 30-day window, one percent is added to the surcharge starting with the second failure. (*Id.*)

76. NV Energy states that the SPP Markets+ program will have a forward showing requirement to ensure each participant can demonstrate adequate capacity and transmission to cover loads. (*Id.*) NV Energy states that SPP will likely utilize the WRAP forward-showing methodology as its standard. (*Id.*) NV Energy provides that SPP perceives resource adequacy programs as a means to ensure sufficient installed capacity to maintain reliability while allowing entities to benefit from the diversity of a broader regional footprint through lower individual capacity requirements. (*Id.*) NV Energy states that, for the same reason that most RTO/ISO markets have a common resource adequacy requirement, SPP “believes a common resource adequacy requirement for Markets+ is an appropriate and necessary prerequisite to market participation.” (*Id.* at 5-6.) NV Energy states that this will enhance reliability by verifying that each load-responsible entity contributes its individual share of the overall capacity needs of the market footprint. (*Id.* at 6.)

77. NV Energy states that significant movement and progress is being made in the WRAP and SPP proposes that the program be used as the common, FERC-approved resource adequacy for regional markets. (*Id.*) NV Energy states that, while it is currently unknown what the impacts of participating in these organizations will have on NPC and SPPC, each organization will require NV Energy to meet a resource adequacy standard. (*Id.*) NV Energy provides that the Silverhawk Peaking Plant will help meet such standards. (*Id.*)

### **Commission Discussion and Findings**

78. The Commission finds that the Silverhawk Peaking Plant is a reasonable addition to NV Energy’s Supply Plan. NV Energy and Staff have both identified a concern over resource

adequacy in the peaking summer hours in the prior three years where available resources have been inadequate or curtailed. Both NV Energy and Staff assert that the Silverhawk Peaking Plant is the best option to meet this identified need and ensure reliable service. Pursuant to NRS 703.151(3), 704.001(3), and 704.746(5)(c), this Commission is charged with ensuring reliable service. The IRP process was created to facilitate ensuring reliable electric service in both the short and long term. The Commission find that the Silverhawk Peaking Plant is necessary for reliable electric service in both the short and the long term.

79. The Commission recognizes and continues to support Nevada's clean energy requirements. NV Energy asserts that, with the construction of the Silverhawk Peaking Plant, NV Energy can meet the RPS and Nevada's 2050 zero carbon goal that envisions an amount of zero-carbon generation equal to the amount of electricity sales in the State in 2050. The Silverhawk Peaking Plant is intended to fill a specific need at the peak of the system and, therefore, operate at a limited number of hours each year. According to Staff, some of those hours are currently relying on the Valmy coal plant output. No party suggested an alternative to construction of the Silverhawk Peaking Plant that could fill the peaking requirement, with a summer of 2024 in-service date and with less of a carbon footprint.

80. Staff suggests that the retirement date for the Silverhawk Peaking Plant be set at 2050, to align with Nevada's 2050 zero carbon goal. The Commission declines to mandate a 2050 retirement date at this time and instead approves the 2054 retirement date requested by NV Energy. The Commission finds that the Silverhawk Peaking Plant is currently necessary to ensure reliable electric service. Modifications to the retirement date are more appropriately evaluated in a future filing once the facility is in-service.

81. No party opposed the approval of the necessary transmission facilities to implement the Silverhawk Peaking Plant. NV Energy's request to amend its Transmission Plan to interconnect the Silverhawk Peaking Plant is approved.

82. Both WRA and Google proposed a variety of additional analysis be conducted prior to the Commission making a determination on the Silverhawk Peaking Plant. However, based on the substantial evidence in the record, a delay in a Commission decision regarding the Silverhawk Peaking Plant to conduct additional analysis would delay the in-service date of an asset needed for reliable service. Given the evidence presented regarding the unpredictability of the regional electric markets, the volatile weather patterns, and the supply chain disruptions in recent years, the Commission finds a delay to conduct additional analysis an unacceptable risk to reliability at this time.

83. The Commission also declines to direct further analysis on the potential use of hydrogen in the Silverhawk Peaking Plant or other NV Energy generating facilities. As noted by NV Energy, limited commercially viable information is currently available and such evaluation is premature. The potential future use of hydrogen or other fuels in the Silverhawk Peaking Plant, or other NV Energy generating facilities, is an important discussion when additional commercially viable opportunities exist. The Silverhawk Peaking Plant is being approved to meet a peaking resource need now and in the future, and the potential for future adaption to utilize hydrogen as the fuel should be addressed in a future IRP.

## **B. IRP Process Reforms**

### **Google's Position**

84. Google recommends that the Commission take immediate steps to identify and implement needed IRP process improvements. (Ex. 500 at 3.) More specifically, Google

recommends that the Commission conduct a series of workshops to consider draft IRP process reforms, including, but not limited to: a) steps to reform the current practice wherein multiple significant amendments to a Commission-approved IRP are made within a single year; b) a requirement for NV Energy to give stakeholders free access to its IRP models and tools, including software, in order to better understand the assumptions that drive NV Energy's "Preferred Plan" and allow alternatives to be considered by the Commission; and c) a requirement for NV Energy to institute competitive all-source procurement for future resource acquisitions. (*Id.* at 4.)

85. Google states that NV Energy has filed 37 volumes of information and 51 sets of testimonies in its 2021 IRP, including four amendments and an expected fifth amendment. (*Id.* at 21.) Google states that there are too many filings and changes to NV Energy's long-term resource plan in too little time. (*Id.* at 23.) Google states that the sheer volume of information filed for review on a compressed time frame deprives stakeholders of the opportunity to fully participate in proceedings and address issues of great importance. (*Id.* at 23-24.) Google states that some discipline and order need to be brought to the IRP process. (*Id.* at 24.)

86. Moreover, Google states its concern that it is difficult if not impossible to understand how the changes in various amendments interact and manifest in the long-term resource plan or what triggers the filing of a new Preferred Plan. (*Id.*) Google states that NV Energy filed three new preferred plans in the span of 18 months, which is inconsistent with long-term planning. (*Id.*) Google contends that NV Energy's long-term plan is driven by short-term events when the opposite should occur. (*Id.*) Google states that the Second and Third Amendments focused on short-term planning in 2022 and 2023 and included requests for a budget approval for the 2023 DSM portfolio and new rate schedules. (*Id.*) Google states that it is

not clear that these filings belong in the same proceeding as long-term resource planning. (*Id.*) Moreover, Google states that no line was drawn between the changes proposed in those amendments and impact on the Preferred Plan, which Google contends provides reason to move these issues into a different resource proceeding. (*Id.*)

87. Google states that NV Energy should be directed to allow stakeholders to access its IRP models at no cost to improve transparency, foster better understanding of the assumptions driving NV Energy's Preferred Plan, and allow it to model alternatives for the Commission's consideration. (*Id.* at 24-25.) Google provides that this is done in other jurisdictions such as Arizona and South Carolina. (*Id.* at 25.) Google contends that the Silverhawk Peaking Plant in the instant filing was selected to address short-term reliability needed in 2024 using NV Energy's long-term planning models; however, if the short-term reliability need had been addressed outside the long-term planning process, the Silverhawk project may never have been proposed. (*Id.*)

88. Google states that short-term reliability can be addressed outside of the long-term planning process through competitive all-source solicitations. (*Id.* at 26.) Google states that all-source solicitations are used by many investor-owned utilities across the U.S. and provides that they can elicit a diversity of options not contemplated by the utility and result in enhanced value to customers. (*Id.*) Google states that all-source solicitations would not conflict or undermine the long-term resource plan because these solicitations would be complementary to long-term planning and allow for more diversity, innovation, and competition. (*Id.*) Google states that NV Energy's long-term planning process is highly circumscribed and may be excluding viable and potentially superior resource options. (*Id.* at 26-27.)

89. Google recommends that the Commission institute a series of workshops to consider and draft IRP process reforms, including, but not limited to: a) steps to reform the current practice, wherein multiple significant amendments to a Commission-approved IRP are made within a single year; b) a requirement for NV Energy to give stakeholders free access to its IRP models and software in order to better understand the assumptions that drive its Preferred Plan and allow alternatives to be modeled; and c) a requirement for NV Energy to institute competitive all-source procurement for future resource acquisitions. (*Id.* at 27.)

### **NV Energy's Rebuttal**

90. NV Energy disagrees with Google's assertion that the introduction of the Silverhawk Peaking Plant demonstrates that IRP process reforms are needed. (Ex. 117 at 9.) NV Energy states that Google justifies its claim by stating that there have been too many amendments to the 2021 Joint IRP and that Google lacks the same tools used by NV Energy to repeat its analysis. (*Id.*) NV Energy states that neither claim has bearing on the selection of the project as the best choice to meet the needs of its customers. (*Id.*) NV Energy states that half of the amendments to its 2021 Joint IRP were required by legislative mandate and the remaining amendments were required by regulation to enable NV Energy to acquire long-term assets to reliably serve its customers. (*Id.*) NV Energy further states that it is required to file a Preferred Plan whenever a change to the Supply Side Plan is proposed. (*Id.*) Moreover, regarding Google's suggestion that NV Energy give stakeholders free access to the commercially available software used to conduct NV Energy's analysis and provide its input data, NV Energy states that it would be inappropriate for a market participant to request access to commercially sensitive data. (*Id.* at 9-10.)

91. Regarding requests for proposals (“RFPs”), NV Energy states that contrary to Google’s assertion, NV Energy annually issues all source RFPs, usually for short-term capacity, in addition to large renewable and storage RFPs seeking long-term projects. (Ex. 117 at 10.)

### **Commission Discussion and Findings**

92. The Commission finds that it is not necessary to conduct a series of workshops to consider draft IRP process reforms at this time. The Commission shares some of Google’s concerns about the shortened time frame under which IRP amendments are evaluated and, in particular, requests by NV Energy for expedited review of IRP Amendments and encourages the entities which participate in IRP proceedings before the Commission to meet and confer regarding the process. NAC 704.952 requires NV Energy to conduct sessions for reviewing plans prior to filing, which is an opportunity to discuss some of Google’s concerns. Further, this Order is limited to Phase I of this docket. Additional issues may be raised in the next phase.

THEREFORE, it is ORDERED:

1. Phase 1 of the Joint Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of the fourth amendment to its 2021 Joint Integrated Resource Plan is approved and the underlying relief requested in prayers are granted as modified by this order.

By the Commission,

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HAYLEY WILLIAMSON, Chair

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C.J. MANTHE, Commissioner

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TAMMY CORDOVA,  
Commissioner and Presiding Officer

Attest: \_\_\_\_\_  
TRISHA OSBORNE,  
Assistant Commission Secretary

Dated: Carson City, Nevada

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(SEAL)

DRAFT