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BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Investigation and rulemaking to implement the provisions of SB 65 (2017).	Docket No. 17-07020

JOINT COMMENTS OF WESTERN RESOURCE ADVOCATES, ENVIRONMENTAL DEFENSE FUND, AND INSTITUTE FOR POLICY INTEGRITY

Western Resource Advocates ("WRA"), the Environmental Defense Fund ("EDF"), and Institute for Policy Integrity ("Policy Integrity")[1] submit the following comments in response to the Commission's Notice of Rulemaking, Notice of Request for Comments and Notice of Workshop issued September 27, 2017.

1. Overview of Comments

In order to fulfill the statutory directive provided by SB 65 to provide preference to resources that reduce customer exposure to the potential costs of carbon, we recommend that the Commission require utilities:

(1) to evaluate the societal costs of carbon emissions in their resource plans using the central estimate of the social cost of carbon at a 3% discount rate developed by the federal Interagency Working Group in 2016;

(2) include the societal costs of carbon in the Present Worth of Social Costs ("PWSC") analysis already required under the resource planning process: and

(3) use the PWSC to identify the optimal resource plan.

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[1] Please refer to the home pages for information about each organization and the work they do. Western Resource Advocates: https://westernresourceadvocates.org/ Environmental Defense Fund: https://www.edf.org/ Institute for Policy Integrity: http://policyintegrity.org/

WRA, EDF, and Policy Integrity have not yet developed proposed amendments and revisions to the Commission's resource planning regulations necessary to implement these recommendations. We would recommend the Commission schedule another round of comments and reply comments in November to specifically address proposed language for the regulation. This will provide interested parties the benefit of information gained in the first round of comments and reply comments, and discussions held at the October workshops. The second round of comments and reply comments could be followed by another workshop where interested parties could compare and discuss various drafts of proposed language in an effort to provide the Commission with a working draft of the proposed regulation. At that point, the Commission could commence the formal rulemaking process required under NRS Chapter 233B, the Nevada Administrative Procedure Act.

2. Background to SB 65

SB 65 amends provisions governing integrated resource planning for electric utilities to require the Commission to give preference to those measures and sources of supply that provide the greatest economic and environmental benefits, as well as those that provide for diverse electricity supply portfolios and which reduce customer exposure to price volatility of fossil fuels and the potential costs of carbon. SB 65 also provides for a broader and more transparent pre-filing process, requiring the utility to meet with all interested persons to provide an overview of the anticipated IRP or IRP amendment.

SB 65 arose out of two recommendations to Governor Sandoval made by the New Energy Industry Task Force that were adopted by the Nevada Governor's Office of Energy and pre-filed as proposed legislation for the 2017 Session on November 17, 2016. The "preference" recommendation, addressed in Section 6 of the bill, was described by the Task Force as follows:

> *2. Recommendation:* The New Energy Industry Task Force recommends that the 2017 Legislature consider a bill to amend the Integrated Resource Planning (IRP) process, as set out in NRS 704.736, et seq., including the following revisions:
>
> - Establish preference in NRS 704.746 for measures to reduce demand and increase supply that provide the greatest economic and environmental benefits and the greatest opportunity for the creation of new jobs in the state.
> - Establish preference in NRS 704.746 for measures that diversify energy portfolios and reduce fuel-price and carbon-price risk.
>
> *Background:* This recommendation would establish clear legislative direction for the PUCN to adequately evaluate the costs and benefits of clean energy sources. While NRS 704.746 allows the PUCN to give preference to measures that provide the greatest economic and environmental benefits to the State, the primary focus has been on the "least cost" plan as measured by the present worth of revenue requirements. Some believe this focus on "least cost" undervalues economic and environmental benefits of clean energy sources, does not adequately assess fuel price risk and carbon price risk of over-reliance on natural gas fired generation, and does not diversify energy portfolios.[2]

As made clear by the above language, the Task Force believed the recommendation would require the Commission to give preference for measures that provide the "greatest economic and environmental benefits", and help position Nevada "to lead the nation as a producer and consumer of clean and renewable energy…".[3]

SB 65, by providing that the Commission "shall" provide a preference for resources that "provide for diverse electricity supply portfolios and which reduce customer exposure to the price volatility of fossil fuels and the potential costs of carbon"[4], reflects the legislature's understanding that with a primary focus on "least cost" scenarios, the electric resource planning process for NV Energy has not been achieving these goals.

WRA, EDF, and Policy Integrity look forward to working with other interested persons in this investigation and rulemaking as the Commission crafts regulations that will fulfill the clear

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[2] New Energy Industry Task Force Final Recommendations, September 30, 2016, at page2. http://energy.nv.gov/uploadedFiles/energynvgov/content/Programs/NEITF%20Final%20Recommendations(1).pdf
[3] *Id.*
[4] Section 6, amending NRS 704.746(5).

legislative direction of SB 65 to give preference in the resource planning process to those measures and sources of supply that will provide the greatest economic and environmental benefits, diversify our energy supply away from an overreliance on natural gas generation, take into account the costs of carbon emissions, and reduce customer exposure to the price volatility of fossil fuels and the costs of carbon emissions.

SB 65 also incorporates a second recommendation made by the New Energy Industry Task Force, addressed in Section 1 of the bill, to provide for a broader and more transparent pre-filing process, requiring the utility to meet with all interested persons to provide an overview of the anticipated IRP or IRP amendment. As described by the Task Force in its Final Recommendations to the Governor:

> **3. *Recommendation*:** The New Energy Industry Task Force recommends that the 2017 Legislature consider a bill to amend the IRP process, as set out in NRS 704.746, to provide for a broader pre-filing process and greater inclusion of all stakeholders.
> ***Background:*** Current regulations in NAC 704.952 require that at least four months before the anticipated date for filing the resource plan, the utility shall meet with staff and the personnel of the Bureau of Consumer Protection (BCP) to provide an overview of the anticipated filing.
> ***Conclusion:*** The Task Force agreed that in order to allow for a more open and transparent planning process, the pre-filing process should be expanded to include greater participation by all interested persons. In order to accomplish this expansion, language from NAC 704.952(5) and (6) could be integrated into NRS 704.746(1), and include language that the utility shall meet with "staff, the personnel of the Bureau of Consumer Protection and all other 'interested persons' to provide an overview of the anticipated filing". PUCN staff would also be required to provide requisite notice to the public of the planning meetings to ensure all interested persons shall have timely notice.

WRA, EDF, and Policy Integrity support the opening up of the pre-filing review process to all interested persons required by Section 1, and believe the language the Commission's existing regulation at NAC 704.952 can be amended to comply with this requirement.

3. Providing Preference to Resources That Reduce the Potential Costs of Carbon

SB 65 directs the Commission to provide preference to resources that "[p]rovide for diverse electricity supply portfolios and which reduce customer exposure to the price volatility of fossil fuels and the potential costs of carbon."[5] WRA, EDF, and Policy Integrity recommend that the regulations adopted in this rulemaking should require the utility to explicitly incorporate the societal cost of CO_2 emissions into its calculation of the PWSC, and to use the PWSC as the primary decision tool for selecting among resource plan alternatives.

In comparing alternative resource plans with different resource options, the Commission's existing regulations require the utility to quantify both the "present worth of revenue requirements" ("PWRR") and the PWSC. PWSC consists of the sum of (1) the PWRR associated with the alternative plan, and (2) the net present value of environmental costs resulting from the alternative plan, except the portion of environmental costs that are internalized in the utility's PWRR analysis.[6] Environmental costs "associated with operating and maintaining a supply plan or demand side plan must be quantified for air emissions, water and land use."[7] As defined by the Commission, "[e]nvironmental costs are those costs, wherever they may occur, that result from harm or risks of harm to the environment after the application of all mitigation measures required by existing environmental regulation or otherwise included in the resource plan."[8]

With respect to CO_2 emissions from power generation, there are two types of environmental costs:

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[5] Section 6, amending 704.746(5).

[6] NAC 704.9737(3),(4).

[7] NAC 703.9359.

[8] *Id.*

1. A *compliance cost*, which is the cost NV Energy would incur by complying with federal or state laws to regulate greenhouse gas emissions, such as federal regulations like the Carbon Pollution Standards for New and Modified Power Plants and the Clean Power Plan, state legislation like California's Global Warming Solutions Act, or federal legislation like the 2009 Waxman-Markey bill.

2. The *societal cost of carbon*, which measures the costs or damages resulting from carbon pollution, such as increased damages from hurricanes, storms, or wildfires; increased costs to manage longer or more intense droughts; health impacts, such as increased rates of heat stroke, asthma, and vector-borne illnesses; the cost of changes to agricultural productivity; and changes in energy system costs, such as reduced heating demands and increased air conditioning loads.[9]

Both of these types of costs are important to consider in determining the preferred set of resources a utility adopts in a resource plan. Compliance costs obviously affect a utility's overall costs of delivering electricity. In recent years, projected compliance costs for carbon pollution reduction requirements have been included in calculating the PWRR for alternative plans. However, what has not been incorporated, even in the PWSC calculation, is an evaluation of the societal costs of the carbon emissions that will result from the different resource plans. In enacting SB 65, the legislature clearly found this approach to addressing carbon costs inadequate.

Including the externality cost of carbon is particularly important; by quantifying and monetizing the societal cost of carbon pollution, the Commission will have the opportunity to evaluate the full impact of resource decisions, and compare the costs and benefits of different resource choices. Incorporating the societal cost of carbon in the PWSC, and using the PWSC

[9] EPA, Social Cost of Carbon. Last viewed January 11, 2017. https://www.epa.gov/climatechange/social-cost-carbon

to identify the optimal resource plan, would fulfill SB 65's directive to give preference to resources that reduce the potential cost of carbon.

Under existing regulations, an electric utility must include in its PWRR calculation for each alternative plan "a reasonable range of costs associated with the emissions of carbon in the 20-year period of the resource plan as private costs to the utility."[10] NV Energy in its IRP filings over the last several years has therefore been quantifying and modeling a *compliance cost* of carbon emissions in comparing the PWRR for alternative plans.[11] However, NV Energy has not been quantifying and including the *societal cost of carbon* as an environmental cost in comparing the PWSC for alternative plans.[12]

To evaluate a complete picture of the full societal costs of NV Energy's resource choices, the Commission should include the full societal cost in the resource selection process.

The best estimate of the societal costs of carbon emissions has been developed by a federal Interagency Working Group (IWG), comprised of twelve agencies. This "Social Cost of Carbon" quantifies costs or damages (and benefits) borne in many different sectors of society, from agricultural productivity to health impacts to drought costs. Federal agencies have used the Social Cost of Carbon to evaluate costs and benefits of an action, such as appliance efficiency standards[13] or air pollution standards. State public utility commissions have also used the Social

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[10] NAC 704.937(3).

[11] For example, in Sierra Pacific Power Company's triennial integrated resource plan filing in Docket No. 16-07011, NERA Economic Consulting in accounting for a range of possibilities for CO_2 compliance costs developed two scenarios, a "Clean Power Plan" scenario and a "Mid CO_2 Price" scenario, that were used by Sierra in its modeling and calculation of PWRR for the alternative plans presented. *Application of Sierra Pacific Power Company d/b/a NV Energy for approval of its 2017-2036 Triennial Integrated Resource Plan and its Energy Supply Plan for 2017-2019*, Docket No. 16-07001, Vol. 10, p. 109 of 396.

[12] NV Energy has used NERA Economic Consulting to develop "illustrative" environmental costs for CO_2 emissions, but these illustrative costs have not been included in the PWSC calculations. *See*, for example, Docket No. 16-07001, Vol. 10, pp. 112-114 of 396; p. 116 of 396.

[13] In August, 2016, a three judge panel of the 7th Circuit Court of Appeals unanimously affirmed the Department of Energy's use of the SCC in establishing efficiency standards for refrigerators. *Zero Zone, Inc. v. U.S. Dept. of Energy*, 832 F.3d 657 (7th Cir. 2016).

Cost of Carbon: in Colorado, the Public Utilities Commission will model the Social Cost of Carbon as a sensitivity in Xcel Energy's ongoing 2016 Electric Resource Plan, and in Minnesota, the Commission used the Social Cost of Carbon (with slight adjustments) as the externality value for the cost of carbon; New York and Illinois have used the Social Cost of Carbon to determine the value of "zero emission credits"; and other states including California, Washington, and Maine have adopted the Social Cost of Carbon for various energy and clean air proceedings.

The Social Cost of Carbon was last calculated in 2013, with minor updates made in 2015 and 2016. The IWG calculated the Social Cost of Carbon using three integrated assessment models; the agencies calculate the average cost across the three models for each year or time period modeled. They then apply three different discount rates: 2.5%, 3%, and 5%. Those values represent the average calculation of the damages caused by carbon emissions. The IWG also provides a fourth value, using the 95^{th} percentile damage estimate across all three models, with a 3% discount rate applied. This fourth value reflects the fact that low probability but catastrophic climate impacts could occur, and that the potential for those events and their associated costs should be considered by policy makers. The IWG used the best available data and techniques to quantify the benefits of reducing carbon pollution, basing its analysis on leading, independent, peer-reviewed science and economic models, with multiple rounds of public input.

For the Nevada resource planning process, we recommend that in assessing the societal costs of carbon emissions, the Commission adopt the Social Cost of Carbon value from the IWG's 2016 Technical Update. In order to ensure that this value reflects the state of the art assessment of the societal costs of carbon and for purposes of simplifying the modeling involved, we recommend using the "central" value of the Social Cost of Carbon using a 3% discount rate. Those values are listed in Table 1, below. We further recommend using the fourth value, using the 95% percentile Social Cost of Carbon value, as a sensitivity case to further illustrate the carbon price mitigation potential of different resource plans.

Table 1. Social Cost of Carbon, using the average cost under three models and a 3% discount rate.[14]

Year	Value (in 2007 dollars per metric ton of CO_2) Average Cost, 3% Discount Rate
2015	$36
2020	$42
2025	$46
2030	$50
2035	$55
2040	$60
2045	$64
2050	$69

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Respectfully submitted,

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[14] Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Technical Update to the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (2016), available at: https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf.

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CERTIFICATE OF MAILING

Docket No. 17-07020

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