

September 7, 2018

**Before the Public Utilities Commission of the State of Colorado**

Proceeding No. 17M-0694E

In the Matter of the Commission's Review of its Rules Governing Electric Resource Planning, Implementing Colorado's Renewable Energy Standard, and Enabling New Technology Integration

**Supplemental Comments on the Social Cost of Carbon from the Institute for Policy Integrity:  
Proposed Changes to ERP Rules**

The Institute for Policy Integrity<sup>1</sup> submits these supplemental comments on integrating the social cost of greenhouse gases into Colorado's electric resource planning process. Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

In our January 2018 initial comments, Policy Integrity proposed that the Commission extend its rational use of the social cost of carbon from Decision No. C17-0316, by integrating the valuation of externalities into its ERP rules. Specifically, we recommended that the Commission require utilities to value greenhouse gas emissions using estimates that quantify, to the extent possible, the full social and environmental externalities of those emissions, based on the best available data and best economic practices. We propose amending Rules 3604 and 3611 as follows:

*At the end of Rule 3604(k), and also at the end of Rule 3611(g), add: **The full costs and benefits of emissions changes shall be quantified and monetized, to the extent possible, based on the best available data, best economic practices, peer-reviewed methodologies, and consensus-driven inputs.***

In our February 2018 response comments, we suggested several alternative options for incorporating our proposed language into the ERP rules. For example, our proposed language could also be harmonized with any of the various amendments proposed by comments from the Western Resource Advocates on including externality costs under § 3604(j); by comments from the Colorado Energy Office on including externality costs under § 3604(q); by comments from the Colorado Independent Energy Associate on assessing the costs and benefits of retirements under § 3604(m); or by comments from the City of Boulder on assessing the costs and benefits of renewable energy targets under § 3604(k).

Our initial comments from January 2018 supported our proposed language by detailing the policy rationales for monetizing the externalities of pollutants like greenhouse gases in electric resource planning: to help the Commission identify the most efficient option that advances social welfare for Colorado; to help stakeholders better understand the environmental effects of the portfolios chosen; and to encourage reciprocal use of the social cost of carbon by other states and other countries, which will directly benefit Colorado. We also highlighted several U.S. states that had already begun to apply the federal Interagency Working Group's estimates of the social cost of carbon to their electricity policy and regulatory decisions, including California, Illinois, Maine, Minnesota, New York, and Washington.

These supplemental comments describe notable developments in states' use of the social cost of carbon since our initial January 2018 comments.

In March 2018, the California Public Utilities Commission's administrative law judge issued a ruling, along with a proposed staff report, which, if adopted by the Commission, would require utilities to

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<sup>1</sup> Note that while Policy Integrity is based at New York University, our legal director, Jason Schwartz, lives and works in Denver, Colorado. No part of these comments purports to present the views, if any, of New York University.

conduct a societal cost test to determine the cost-effectiveness of distributed energy resources.<sup>2</sup> The approach would require utilities to calculate the climate benefits of distributed energy resources by using the social cost of carbon estimates developed by the federal Interagency Working Group in 2016. Specifically, the ruling recommends using the Interagency Working Group’s “high-impact” estimate,<sup>3</sup> because many of the climate damage categories most relevant to California’s electricity infrastructure and economy—such as flooding, wildfires, thermal efficiency decreases, wind turbine efficiency effects, and overheating of electricity system components—are not fully incorporated into the central estimates of the social cost of carbon; consequently, the ruling “find[s] that the high impact value is the more appropriate and defensible estimate.” The ruling and staff report are currently awaiting formal adoption by the California Public Utilities Commission.

In March 2018, the Minnesota Public Utilities Commission denied a petition for reconsideration of its order adopting a value for the social cost of carbon for use in resource planning.<sup>4</sup> (Recall from our response comments that, in February 2018, Public Service’s parent company Xcel Energy recommended denying that petition, praising Minnesota’s use of the social cost of carbon to evaluate environmental and social costs.<sup>5</sup>)

In May 2018, the New Jersey legislature approved a Zero Emission Credit program similar to New York and Illinois. While the legislation stipulates that the value of ZECs would be lower than the social cost of carbon, it acknowledges that “[t]he social cost of carbon, as calculated by the U.S. Interagency Working Group on the Social Cost of Carbon in its August 2016 Technical Update, is an accepted measure of the cost of carbon emissions.”<sup>6</sup>

In May 2018, the Washington State Utilities and Transportation Commission issued approvals for the integrated resource plans for the state’s three investor-owned utilities. The acknowledgement letters indicated that, in the future, utilities would need to use a more robust estimate of the cost of carbon, and suggested the companies use the 2016 estimates from the Interagency Working Group in their next integrated resource plans, scheduled for 2019.<sup>7</sup>

In August 2018, the Nevada Public Utilities Commission updated their regulations requiring utilities to consider the economic and environmental benefits of their integrated resource plans, specifically requiring the monetization of the social costs of carbon.<sup>8</sup> The new regulations specify that “***In calculating the present worth of societal costs for each alternative plan pursuant to this subsection,***

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<sup>2</sup> <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M212/K023/212023660.PDF>

<sup>3</sup> The Interagency Working Group provided a range of four estimates of the social cost of carbon. Their central estimate is based on a 3% discount rate and takes the average estimate from a probability distribution. Two other estimates explore sensitivity to discount rate, by using either a 2.5% rate or a 5% rate. The fourth estimate, called the “high-impact” estimate, takes the 95<sup>th</sup> percentile from the probability distribution calculated using the 3% discount rate. This high-impact estimate is motivated by the fact that the probability distribution for the social cost of carbon has a very long right-hand tail, which reflects the risk that catastrophic outcomes and other uncertain and unknown damage categories are not fully incorporated into the methodology for estimating the social cost of carbon.

<sup>4</sup> <https://www.edockets.state.mn.us/Efiling/edockets/searchDocuments.do?method=showPoup&documentId={D00F5462-0000-CE18-A3FF-0400765EEBE7}&documentTitle=20183-141308-01>. Note that, while Minnesota did not adopt the Interagency Working Group’s full estimate of the social cost of carbon, it relied on the Interagency Working Group’s methodology.

<sup>5</sup> <https://www.edockets.state.mn.us/Efiling/edockets/searchDocuments.do?method=showPoup&documentId={B0595861-0000-CA11-8965-2EB04B3FB6C7}&documentTitle=20182-139736-01>.

<sup>6</sup> [https://www.njleg.state.nj.us/2018/Bills/AL18/16\\_.PDF](https://www.njleg.state.nj.us/2018/Bills/AL18/16_.PDF).

<sup>7</sup> <https://www.utc.wa.gov/aboutUs/Lists/News/DispForm.aspx?ID=527>.

<sup>8</sup> [http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS\\_2015\\_THRU\\_PRESENT/2017-7/32153.pdf](http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2017-7/32153.pdf).

***the utility shall include as environmental costs the utility's estimate of the level of environmental costs resulting from carbon dioxide emissions for that year and the social cost of carbon,*** later clarifying that ***"the net present value of the future global economic costs resulting from the emission of an additional ton of carbon dioxide must be calculated using the best available science and economics such as the analysis set forth in the . . . Interagency Working Group . . . 2016 [technical support document]."*** The Colorado Public Utilities Commission could consider modeling its own revision to the ERP rules after the language adopted in Nevada.

In August 2018, the New York Independent System Operator and the New York State Public Service Commission released draft recommendations on incorporating the social cost of carbon into the wholesale electricity market in New York State through a carbon price.<sup>9</sup>

A growing number of states continue to use the social cost of carbon in a growing number of ways to design rational electricity policies that advance the social welfare of their citizens. The Commission should ensure that Colorado maintains its role among states as a leader on sensible energy and climate policies, and should incorporate the social cost of carbon into its ERP rules.

Sincerely,

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<sup>9</sup> [http://www.nyiso.com/public/webdocs/markets\\_operations/committees/bic\\_miwg\\_ipptf/meeting\\_materials/2018-08-06/Carbon%20Pricing%20Draft%20Recommendations%2020180802.pdf](http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg_ipptf/meeting_materials/2018-08-06/Carbon%20Pricing%20Draft%20Recommendations%2020180802.pdf)