BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Distributed Energy Resources	Rulemaking 14-10-003 (Filed Oct. 2, 2014)

COMMENTS OF THE INSTITUTE FOR POLICY INTEGRITY ON ENERGY DIVISION STAFF PROPOSAL ADDENDUM: INTERIM GHG ADDER

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I. Introduction

In accordance with Rule 14.3 of the California Public Utilities Commission ("Commission") Rules of Practice and Procedure ("Rules"), the Institute for Policy Integrity at New York University School of Law[1] ("Policy Integrity") respectfully submits these comments on the Energy Division Staff Proposal Addendum: Interim GHG Adder issued in the above captioned proceeding on April 3, 2017.[2] Policy Integrity's April 6, 2017 Motion for Party Status is pending before the Commission,[3] as is Policy Integrity's March 23, 2017 Motion for Party Status.[4] Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decisionmaking through encouraging a rational approach to environmental and

[1] These comments do not purport to represent the views of New York University School of Law, if any.
[2] California Public Utilities Commission, Order Instituting a Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Distributed Energy Resources, Rulemaking 14-10-003, Energy Division Staff Proposal Addendum: Interim GHG adder (April 3, 2017) [hereinafter "Staff Proposal"].
[3] Conf. # 107258 (filed Apr. 6, 2017; published Apr. 14, 2017).
[4] Conf. # 106646 (filed Mar. 23, 2017; publication pending).

regulatory policymaking that makes use of the best available economic tools. Policy Integrity advocates for sound cost-benefit analysis at every level of government and argues for an unbiased approach to measuring the costs and benefits of environmental, public health, and safety policy. Policy Integrity has previously filed public comments and written reports and articles on issues pertaining to economic analysis of grid modernization and distributed energy resources. Policy Integrity seeks to apply its economic, legal, and policy expertise to help advise the Public Utilities Commission on how to ensure that its greenhouse gas adder reflects the best available economic analysis.

II. Comments

Energy Department Staff proposes that the Commission use an interim greenhouse gas adder that is in addition to the cap and trade price floor. The adder starts at $0 in 2017 and increases linearly to $250 in 2030. Staff is correct that a greenhouse gas adder is needed in order to properly account for the societal benefits that accrue from decreased greenhouse gas emissions due to energy efficiency programs and other sources of clean energy. However, Staff's proposal as currently framed does not accurately reflect the damages from greenhouse gas emission and could result in distorted incentives. In order to most accurately reflect the value of greenhouse gas reductions, the Commission should use a carbon adder based upon the Interagency Working Group's Social Cost of Carbon, which is the best available estimate of the value of each ton of carbon emission reductions. Even if Staff chooses not to use the Social Cost of Carbon, the adder should start at a level higher than $0 above the cap and trade price floor.

Question 3 asks: The Staff Proposal contends that the interim greenhouse gas adder is needed as soon as possible to inform the energy efficiency potential and goals study. Explain why you do or do not support this timeline.

The Commission Should Immediately Begin Internalizing the Value of Greenhouse Gas Externalities in its Resource Planning Through a Carbon Adder, Ideally One Based on the Social Cost of Carbon

Economic efficiency requires that externalities due to emissions be taken into account in the resource planning process. If these externalities are not fully accounted for, the current methods the Commission is using to calculate the energy efficiency potential will not reflect the true societal benefits of energy efficiency programs. As a result, the number of energy efficiency

programs deemed to be cost-effective could be lower than the socially optimal number. Therefore, Staff is correct to state that an interim greenhouse gas adder is needed as soon as possible.

The economically efficient way to set the value of a carbon adder is based upon the value of the externalities that will be avoided due to the avoided emissions. The proper way to value these externalities is to use the marginal damage values, meaning the values of the additional costs associated with an incremental change in emissions and associated concentrations of a given air pollutant. More detail on why the damage cost approach is preferable to the abatement cost approach is available in Policy Integrity's March 23, 2017 Comments on Staff Proposal Recommending a Social Cost Test and April 6, 2017 Reply Comments on Staff Proposal Recommending a Social Cost Test. Approximating this value for temporary use in an interim process is preferable to ignoring the value entirely. In order to maximize social welfare, however, the Commission should select a value, even in the interim process, that is as close to the most accurate value as possible.

The Commission Should Use the Interagency Working Group's Social Cost of Carbon as Its Greenhouse Gas Adder for Carbon Dioxide

The best estimate for the marginal damage of an increase in carbon emissions is currently the Interagency Working Group's ("IWG") Social Cost of Carbon ("SCC"). This is a measure, in dollars, of the long-term damage done by a ton of carbon dioxide ("CO_2") emissions in a given year, and represents the value of damages avoided for a small emissions reduction.[5] The SCC increases over time to reflect the greater incremental damages from future emissions, as physical and economic systems become more burdened by greenhouses gases in the future, and also due to increased economic damages as GDP is expected to increase.[6]

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[5] INTERAGENCY WORKING GROUP ON SOCIAL COST OF GREENHOUSE GASES, UNITED SATES GOVERNMENT, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866 (2016) [hereinafter "TSD 2016"] at 3 ("The SC-CO_2 is the monetized damages associated with an incremental increase in carbon emissions in a given year."), *available at* https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf.

[6] *See id.* at 16 ("As was the case in the 2010 TSD, the SC-CO_2 increases over time because future emissions are expected to produce larger incremental damages as physical and economic systems

The SCC was developed by the IWG, which was comprised of economic and scientific experts from the White House and multiple federal agencies that regularly met to review technical literature, consider public comments, and discuss relevant inputs and assumptions. The SCC has been regularly updated over time to account for changing information and evolving climate effects.[7] Though President Trump's Executive Order 13,783 has withdrawn the IWG's technical support documents,[8] these documents remain the best available estimate of the social costs of greenhouse gases.[9] The National Academies of Sciences has recommended certain updates to the models in the long run,[10] but the IWG's values remain a reasonable starting point for the Commission's estimates.[11]

Though the SCC is the best available estimate of the climate effects of CO_2, additional research has found that the SCC is likely too low because it currently omits a number of types of damages from the analysis.[12] Therefore, if the Commission chooses not to use the SCC itself as the interim GHG adder, it should treat the SCC as a floor. However, if the Commission treats the SCC as a floor, it should be careful to keep the carbon adder from rising too high. If the adder is inappropriately high, the Commission may approve programs that are needlessly expensive for ratepayers without corresponding benefits coming from the program.

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become more stressed in response to greater climatic change, and because GDP is growing over time and many damage categories are modeled as proportional to gross GDP.").

[7] *Id.* at 3-4.

[8] Exec. Order No. 13,783, 82 Fed. Reg. 16,093 at § 5 (Mar. 28, 2017).

[9] Richard G. Newell et al., *Carbon Market Lessons and Global Policy Outlook*, 343 SCIENCE 1316 (2014); Bonnie L. Keeler et al., *The Social Costs of Nitrogen*, 2 SCIENCE ADVANCES e1600219 (2016); Richard L. Revesz et al., *Global Warming: Improve Economic Models of Climate Change*, 508 NATURE 173 (2014) (co-authored with Nobel Laureate Kenneth Arrow, among others). *See also* NAT'L ACAD. OF SCI., ENG'G, & MED., ASSESSMENT OF APPROACHES TO UPDATING THE SOCIAL COST OF CARBON: PHASE 1 REPORT ON A NEAR-TERM UPDATE (2016) [hereinafter "NAS 2016"] (explaining that the integrated assessment models used in developing the IWG's social cost estimates are the most cited models in the peer-reviewed literature); Michael Greenstone et al., *Developing a Social Cost of Carbon for US Regulatory Analysis: A Methodology and Interpretation*, 7 REV. OF ENVTL. ECON. & POL'Y 23 (2013) (same).

[10] NAT'L ACAD. OF SCI., ENG'G, & MED., VALUING CLIMATE DAMAGES: UPDATING ESTIMATION OF THE SOCIAL COST OF CARBON DIOXIDE (2017).

[11] *See* NAS 2016, *supra* note 9, at 1.

[12] PETER HOWARD, INSTITUTE FOR POLICY INTEGRITY, OMITTED DAMAGES: WHAT'S MISSING FROM THE SOCIAL COST OF CARBON 1 (2014), *available at* http://policyintegrity.org/publications/detail/omitted-damages-whats-missing-from-the-social-cost-of-carbon.

The Social Cost of Carbon is the best available estimate of the monetary value of external damages caused by CO_2 emissions. Therefore the Commission should use the SCC as the greenhouse gas adder in the Energy Efficiency Potential Study.

The Carbon Adder Should Start at a Level Higher than the Cap and Trade Floor Price

The current staff proposal for the interim GHG adder defines it as the cost of carbon reduction in addition to the current cap and trade floor price for allowances.[13] Using the RESOLVE mode would result in a $0 adder until 2022 and a rapid increase after that point. Staff's proposed carbon adder therefore modifies the RESOLVE model prices to result in a proposed carbon adder that starts at $0 on top of the cap and trade floor price in 2017 and increases linearly to $250 per ton in 2030.[14] However, the cap and trade floor price is not an adequate representation of the true benefits of emission reductions at the present time.

Current California cap and trade floor price is too low to fully reflect the marginal damages. The current cap and trade floor price is $13.57 per ton,[15] in comparison to the current SCC, which is $36.[16] In order to accurately reflect the marginal damages of carbon emissions, the Commission should a carbon adder based upon the SCC. Even if the Commission chooses not to use the SCC, it should use a value for a carbon adder that starts at a level higher than $0 above the cap and trade floor price. Setting the carbon adder equal to the cap and trade price floor and no higher ignores the very real emission damages that are happening now. This would put a thumb on the scales against energy efficiency and other clean energy sources.

[13] *See* Staff Proposal, *supra* note 2, at 5.
[14] *See id.* at 7.
[15] California Air Resources Board, Auction Notice of Joint Auction of Greenhouse Gas Allowances on May 16, 2017 (March 17, 2017) at 3.
[16] *See* TSD 2016, *supra* note 5, at 16.

III. Conclusion

For the foregoing reasons, the Commission should use an interim carbon adder. It should base that carbon adder upon the IWG's Social Cost of Carbon, rather than the proposed value that increases linearly from $0 above the cap and trade price floor to $250 in 2030.

Respectfully submitted,

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