



September 2, 2016

NARUC Staff Subcommittee on Rate Design

VIA ELECTRONIC SUBMISSION

Re: Comments on NARUC Manual on Distributed Energy Resources Compensation

The Institute for Policy Integrity at New York University School of Law<sup>1</sup> (“Policy Integrity”) respectfully submits the following comments on NARUC Manual on Distributed Energy Resources Compensation (“Manual”). 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. Policy Integrity has extensive experience advising stakeholders and government decisionmakers on the rational, balanced use of benefit-cost analysis, both in federal practice and in New York.

We applaud the efforts of NARUC Staff Subcommittee on Rate Design (“Subcommittee”) to develop a manual that can provide guidance on compensation for distributed energy resources (“DER”), and its efforts to seek input from interested parties. As DER is becoming more common, and its role in advancing the nation’s clean energy goals is increasing, correctly answering the questions of how we value and compensate these resources is quickly becoming a policy priority. Therefore, it is crucial for the Subcommittee to ensure that the final version of the Manual is complete, accurate, and unbiased. To achieve this goal, the Subcommittee should:

- Discuss the economic rationale for using a societal perspective in decisionmaking and more thoroughly describe the societal benefits of DER, as well as how they can be quantified;
- Clearly differentiate between the concepts related to retail rate design, DER valuation, and DER compensation, and then discuss how these concepts interrelate with one another; and

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<sup>1</sup> No part of this document purports to present New York University School of Law’s views, if any.

- Ensure that the Manual is consistent and accurate in its use of economic and legal terms.

**I. The Manual should discuss the economic rationale for using a societal perspective in decisionmaking, and more thoroughly describe the societal benefits of DER, as well as how they can be quantified**

In order to achieve economic efficiency, the welfare of market participants on both the demand and supply side of the market, as well as externalities should be considered. This requires that regulators adopt a societal perspective and consider all costs and benefits, both private and external, in decisionmaking.

Currently, the Manual does not clearly identify the benefits of DER to society. It includes a vague discussion about the debate about the benefits of DER. The consensus about the categories of benefits of DER is actually stronger than the Manual claims. Several meta studies, as well as many state proceedings coalesce around the same categories of benefits.<sup>2</sup> While there is a debate about how to precisely monetize some of the benefits, like avoided greenhouse gas emissions, there is no debate about the fact that avoided greenhouse gas emissions are a societal benefit, with a real, non-zero value.

Therefore, the Manual should clearly lay out the benefit and cost categories, describe monetization methods for categories with established methodologies, and discuss the state-of-the art approaches to valuing more complex categories, such as external benefits. The Manual should engage fully with these modeling approaches, describing their strengths, as well as their limitations, and leave the decision to regulators about which methodologies to adopt.<sup>3</sup>

Furthermore, the Manual should be careful about the benefit-cost classification and the perspective of analysis. For example, it identifies lost utility revenue as one of the main “costs” of increased DER penetration and focuses heavily on cost-recovery problems faced by utilities. Identifying lost revenues as a “cost” is misleading. While it would be considered a cost from a utility’s perspective, lost revenue is not an actual cost from a societal perspective. Revenue that is lost by a utility is revenue gained by a consumer who

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<sup>2</sup> See ROCKY MOUNTAIN INST., A REVIEW OF SOLAR PV BENEFIT & COST STUDIES 14 (2013) available at [http://www.rmi.org/Knowledge-Center%2FLibrary%2F2013-13\\_eLabDERCostValue](http://www.rmi.org/Knowledge-Center%2FLibrary%2F2013-13_eLabDERCostValue); BROOKINGS INST., ROOFTOP SOLAR: NET METERING IS A NET BENEFIT, available at <https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/>. For a review of state studies on net metering see NORTH CAROLINA CLEAN ENERGY TECHNOLOGY CENTER & MEISTER CONSULTANTS GROUP, THE 50 STATES OF SOLAR: 2015 POLICY REVIEW AND Q4 QUARTERLY REPORT, February 2016, available at <https://nccleantech.ncsu.edu/wp-content/uploads/50sosQ4-FINAL.pdf>.

<sup>3</sup> A current example such methodologies can be found in the analysis provided by prepared by Energy and Environmental Economics for the New York Department of Public Service to inform the ongoing proceeding on the Value of DER. See NYS Public Service Commission, Case 15-E-0751, *Estimates of Value Stack for DER*, filing no 167, (filed Aug 23, 2016)

pays a lower bill. Therefore it is simply a transfer payment between different actors in the market.

The actual economic costs of DER integrations are costs that result from increased use of societal resources, such as interconnection costs or increased costs related to changes in balancing requirements. To achieve economic efficiency, it is important to go beyond the utility perspective, and consider a societal approach. Though, as the Manual notes, different states have different legislative mandates, many utilities commissions are required or permitted to consider a broader, societal perspective in rate design.<sup>4</sup>

Therefore, the Manual should expand the discussion of costs and benefits of DER, identifying different perspectives, including a societal perspective, not just the preferences of utilities and consumer classes. After clearly laying out all the costs and benefits that should be considered, the Manual should explain how these values can be calculated and used in DER compensation methodologies. This will help ensure that the Manual is a comprehensive and an unbiased guide that can be of the greatest practical value to regulators.

## **II. The Manual should clearly differentiate between the concepts of retail rate design, DER valuation, and DER compensation, and then discuss how these concepts interrelate with one another**

While the concepts of retail rate design, DER valuation, and DER compensation are interrelated, they are distinct policy questions. The retail rate design process informs how the approved utility revenue requirements can be recovered from ratepayers. DER valuation methods quantify the value of different DER systems to society. DER compensation methods are used to pay DER owners for the services their systems provide. DER compensation can differ from DER valuation. For example, while DER systems at different locations in a utility's service area may provide different benefits to the grid, and hence have different value, regulators may decide to compensate them the same way for different policy reasons. This compensation may be based on retail rates, but it is not necessary such as in the case of feed-in-tariffs. The Manual should clearly differentiate between these three concepts, while discussing how they are linked and how changes to one policy can have significant consequences for the others.

To give an example, consider the most commonly used method of DER compensation, net metering, which compensates the excess energy generated by a distributed generator at the retail electricity price. This method is actually similar to how a new producer in any

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<sup>4</sup> Richard L. Revesz & Burcin Unel, *Managing the Future of the Electricity Grid: Distributed Generation and Net Metering*, 41 HARV. ENV. L. REV. (forthcoming 2017), NYU Law and Economics Research Paper No. 16-09, at 58-60 (reviewing state utility commission authority to consider environmental externalities), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2734911](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2734911).

perfectly competitive market would get compensated. If a new producer decides to sell one more unit of a product, the compensation she would get would be the prevailing retail market price, which would equal the marginal cost. The retail electricity price, on the other hand, is usually a flat, time- and location-invariant volumetric charge that is set to recover most of the system's costs, including a substantial share of the fixed costs. This means that it is not reflective of marginal costs. Therefore, the observed problems related to cost recovery are actually unintended consequences of the retail electricity rate design and not a problem related to the methodology of net metering. Similarly, any cross-subsidization between different groups of customers is a result of the inefficiencies of retail rate designs and is not caused by the approach of net metering itself. The Manual needs to clearly articulate these concepts and their connections, lay out the reasons why current policies are failing, and provide clear outlines on how to deal with these problems.<sup>5</sup>

Additionally, some of the concepts are not correctly classified. For example, there is a "Demand Charges" section under "Compensation Methodologies." Demand charges, which are charges based on a customer's maximum kW demand during a given period, are considered to be a component of retail rate design. As a demand charge is *paid* by the DER owner to the utility, it cannot be classified as "DER compensation." If a DER owner can avoid paying demand charges due to the installed system, then the *avoided* demand charges can be considered to be compensation to the owner. However, that would not be a separate compensation methodology. Rather, that can be considered net metering with a more sophisticated underlying retail rate design that has three parts.

### **III. The Manual should ensure economic and legal terms are used correctly**

As we mentioned before, this manual is expected to have a long lasting and a significant impact. Not only it will be a helpful educational tool for regulators, it will also be an important resource that will be consulted in regulatory proceedings. Therefore, it is imperative that the terms used in the Manual are correctly defined and used. Having some mistakes and inaccuracies in the draft document is understandable given the very short amount of time the Subcommittee had to put this extensive document together. However, moving forward, the Subcommittee should take its time to thoroughly review the document, and have it vetted and edited by external, unbiased economic and legal experts.

Below are just two examples of such instances where more accuracy is needed:

- "Grandfathering" refers to declining to apply a new regulatory regime to existing actors.<sup>6</sup> Therefore, the Manual is misapplying terms when it states that

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<sup>5</sup> These concepts are explained more clearly in Revesz & Unel, *supra* note 4.

<sup>6</sup> See Richard L. Revesz & Allison L. Westfahl Kong, *Regulatory Change and Optimal Transition Relief*, 105 NW.U.L. REV. 1581 (2011).

“transition[ing] DER customers from one rate schedule to another” is “known as ‘Grandfathering’ customers into or out of a rate scheme” on page 36. Allowing existing customers to keep their existing rate structure after a new rate schedule is put in place could be considered grandfathering.

- With regard to carbon benefits, the Manual states “Determinations of value should attempt to reflect the actual, market value of a trait as identified and ‘valued’ by that jurisdiction. In this instance, a value for carbon avoidance should be based on market value, and should avoid alternative, non-market based values” on page 46.
  - However, carbon emissions are a textbook example of an externality. Therefore, *by definition*, the cost or the benefit of this externality is not borne by an acting party or reflected in the market price. Therefore, the valuation of these carbon pollution externalities cannot depend on the value created by the market transactions of private actors in the energy markets. When there are externalities, efficiency requires that the full external damage is internalized, not less and not more.
  - Perhaps this passage in the draft Manual means to suggest that the values used for carbon avoidance should come from carbon trading markets, as opposed to other means of valuation. Even this approach is insufficient, as the loose caps and pricing ceilings in carbon trading markets result in carbon market prices that are substantially lower than the true value of one ton of carbon emissions.<sup>7</sup> As a number of jurisdictions, including New York and Minnesota, have begun to recognize, the federal social cost of carbon is the best available estimate of the marginal damage caused by a ton of carbon emissions.<sup>8</sup> Furthermore, a number of studies have found that the federal social cost of carbon is likely an underestimate, and even higher values might be appropriate.<sup>9</sup> Until other regulatory bodies address the underlying deficiencies in the carbon allowance markets, limiting electricity regulators to using only carbon allowance markets to value avoided carbon

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<sup>7</sup> See New York Public Service Comm., Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Institute for Policy Integrity Comments on Staff White Paper on Benefit Cost Analysis (filed Aug. 21, 2015), available at [http://policyintegrity.org/documents/REV\\_Comments\\_Aug2015.pdf](http://policyintegrity.org/documents/REV_Comments_Aug2015.pdf) (explaining how the Regional Greenhouse Gas Initiative carbon allowance market fails to fully account for the effects of each ton of carbon emissions).

<sup>8</sup> See, e.g., Minnesota Office of Administrative Hearings for the Public Utilities Commission, OAH 80-2500-31888, In the Matter of the Further Investigation into Environmental and Socioeconomic Costs Under Minnesota Statutes Section 216B.2422, Subdivision 3, Findings of Fact, Conclusions, and Recommendations: Carbon Dioxide Value 123-24 (Apr. 15, 2016); New York Public Service Comm., Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard 134 (Aug. 1, 2016).

<sup>9</sup> See, e.g., PETER HOWARD, OMITTED DAMAGES: WHAT’S MISSING FROM THE SOCIAL COST OF CARBON (2014).

emissions would likely underestimate the benefits of these avoided emissions and result in an inefficient use of resources.

- While it is important to ensure that double-counting does not occur, the simple existence of a REC payment or a carbon allowance market is not sufficient to warrant advising regulators to decline to value carbon benefits. If the REC payment or carbon market price is not as high as the marginal external damage caused by emissions, additional payment for the difference is needed.

Once again, we applaud the Subcommittee for its efforts in drafting what has the potential to be a tremendously valuable resource for rate design issues related to DER. We encourage the Subcommittee to revise the draft Manual in accordance with these recommendations to ensure that the final Manual is comprehensive, neutral, and consistent with economic best practices.

Respectfully submitted,

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