

**State of Rhode Island Public Utilities Commission**

**In Re: Review of Electric Distribution Design**  
**Pursuant to Rhode Island General Laws §39-26.6-24**

**Docket No. 4568**

**Pre-Filed Testimony of**

**Michelle Carpenter**

**November 23, 2015**

**I. Introduction and Qualifications**

1 **Q. Please state your name and business address.**

2 A. My name is Michelle Carpenter and my business address is 3760 Quaker Lane, North  
3 Kingstown, Rhode Island 02852.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by Green Development, LLC dba Wind Energy Development, LLC  
6 (“WED”) where I work as the Chief Operating Officer.

7 **Q. When was WED formed?**

8 A. The company was founded in 2009.

9 **Q. What was your professional background before working at WED?**

10 A. Prior to WED I ran project origination in the Northeast for NextEra Energy Resources,  
11 LLC’s Distributed Generation [team](#) focused on sourcing, developing and structuring  
12 acquisitions of more than 70 MW of solar projects. Prior to NextEra, I held various roles  
13 at Real Goods Solar supporting solar project development in excess of 30MW.

14 **Q. What is WED’s mission?**

15 A. To be the lead developer of wind energy for Rhode Island, provide competitively  
16 priced clean, renewable energy, create jobs and help preserve farms and open space.

17 **Q. How has the business done to date?**

18 A. The business is progressing well, but not without substantial challenges typical of any  
19 renewable energy development company.

20

1 **Q. What are the successes?**

2 A. WED built one of the first DG projects in North Kingstown, next to the principal Mark  
3 DePasquale’s house, proving that we can deliver and operate wind projects effectively.  
4 That turbine is performing as predicted. WED has six additional projects permitted and  
5 under construction in Coventry consisting of ten 1.5MW turbines. Two of those turbines  
6 (WED Coventry Three, LLC and WED Coventry Four, LLC) are enrolled in the  
7 Distributed Generation (“DG”) Standard Contract program. We have a Net Metering  
8 Finance Agreement to net meter energy with one turbine (WED Coventry One, LLC) for  
9 a portion of the power to the Town of Coventry and the balance of power will be sold to  
10 National Grid under the DG Standard Contract program. We have entered an agreement  
11 to sell three turbines (WED Coventry Two, LLC) to the Town of West Warwick, who  
12 will net meter production. We have been awarded Renewable Energy Growth Program  
13 (“RE Growth Program”) enrollment for three turbines (WED Coventry Six, LLC). We  
14 intend to either enroll our final turbine (WED Coventry Five, LLC) under the RE Growth  
15 Program or sell the turbine to a public entity. WED is under contract to remove the  
16 existing turbine owned by the Town of Portsmouth and replace it with a new turbine that  
17 will be net metered to the Town of Portsmouth. We are planning additional projects in  
18 West Warwick, North Smithfield and a number of other locations. We are optimistic  
19 about the opportunity for cost effective renewable energy in Rhode Island given the  
20 current administration of the Office of Energy Resources, net metering opportunities, the  
21 RE Growth Program and the recently approved State Energy Plan. We see a great

1 opportunity to preserve farms and open space by providing supplemental income to land  
2 owners for hosting wind turbines.

3 **Q. What are the challenges?**

4 A. The challenges and risks to our business are substantial. The risks of project  
5 development range from siting challenges, to local permitting and taxation policies to  
6 lead time requirements for procuring equipment and interconnecting projects. The  
7 returns for projects are extremely thin. Our North Kingstown turbine is currently  
8 generating revenue that barely covers its debt service. The contracted DG rate of \$0.1335  
9 per kWh was far too low to sustain the project cost, as has been borne out by the major  
10 subsequent increase in the ceiling price for wind projects. We have established  
11 relationships with vendors, investors and banks, based on the current market dynamics  
12 that could be jeopardized by a midstream change, as is currently proposed by National  
13 Grid.

14 **Q. Are there any documents you will be referring to in your testimony?**

15 A. Yes, the following documents are referenced in my testimony.

16 1) *Smart Rate Design*, Regulatory Assistance Project, July 2015 (already on file in this  
17 docket).

18 2) *Beyond Utility 2.0 to Energy Democracy*, John Farrell, The Institute for Local Self  
19 Reliance (on attached disk as **Exhibit WED 1** and also available at [https://ilsr.org/report-](https://ilsr.org/report-energy-democracy/)  
20 energy-democracy/).

21 3) the accompanying testimony from our expert Karl Rabago.

1 **Q. What is your general impression of the rate recommendation National Grid has**  
2 **filed in this docket?**

3 A. Our main concern is with the proposed access fee for renewable energy projects.  
4 Much of the basis for that concern was presented in our Motion for Summary Disposition.  
5 Generally speaking, the proposed fee adds an ongoing, fixed cost to renewable energy  
6 projects that was not initially contemplated as part of our financial assessment of wind  
7 projects. Furthermore it ignores (and thereby discounts) any possibility that distributed  
8 generation might not increase the cost of operating the distribution grid and could even  
9 reduce it. Mr. Karl Rabago's testimony addresses this concern directly (and see also  
10 *Smart Rate Design*, Regulatory Assistance Project, July 2015). WED's concern is that  
11 National Grid's proposed fee does not consider the benefits that scholars have  
12 documented. A fair rate structure would require these benefits be balanced against  
13 National Grid's costs. Beyond the practical, policy arguments against the access fee, we  
14 are also highly concerned about the direct impact it would have on our existing projects,  
15 the ceiling prices for the REG program and the financial implications for current and  
16 future net metered customers.

17 **Q. Describe more specifically your concern with imbalanced rates.**

18 A. It seems to WED that National Grid's proposal merely seeks to maintain the status quo  
19 with regard to the profile of our distribution grid and their role in operating and  
20 maintaining it. It appears to presuppose that the grid is big and will only get bigger with  
21 escalating cost of servicing customer needs. The distribution grid could actually bear  
22 considerably less burden with the introduction of more efficiency and renewables, and

1 the cost of operating and maintaining the distribution grid should be reduced accordingly.  
2 National Grid testifies that their cost of servicing DG facilities is driven by a grid  
3 designed to give them as much back-up service as they could possibly need during  
4 periods of peak demand. Our counsel has argued that this approach violates PURPA and  
5 FERC regulations. More fundamentally, it accentuates the burden of DG while not  
6 crediting its contributions. The assumption that all DG customers will demand  
7 emergency back-up service coincidentally and when the rest of the system is  
8 experiencing peak demand is not a rational or reasonable assumption upon which to base  
9 an assessment of cost. As the Regulatory Assistance Project concludes in its recent  
10 report, distributed generation only puts additional service strain on the distribution system  
11 at extremely high penetration rates, and that even then, those costs are more than offset  
12 by reduced generation, distribution and transmission costs. Karl Rabago's testimony  
13 addresses this concern directly.

14 **Q. What impact will the proposed access fee have on your projects?**

15 A. I have reviewed Mr. Jason Gifford's October 23 testimony and memorandum  
16 presented on behalf of the Office of Energy Resources which analyzed the economic  
17 impact of the access fee on DG projects, including ours. I would expand on that analysis  
18 by noting that imposing the proposed access fee on renewable energy projects would  
19 have significant unanticipated financial impact on our individual projects as well as the  
20 Rhode Island market as a whole. If the access fee were imposed our WED NK Green  
21 Turbine we would no longer be able to cover the loan payments with proceeds from the  
22 DG contract, forcing the turbine to default on its loan, and likely fall into bankruptcy.

1 The WED Coventry Two project is under contract with the Town of West Warwick. The  
2 Town issued a bond to fund the purchase of the three turbines based on the financial  
3 benefit calculated under the currently applicable net metering tariff. If this fee were  
4 imposed the payback period would be increased dramatically. WED has established  
5 relationships with banks based on the existing project economics for the additional seven  
6 turbines in Coventry. The debt was sized by the bank based on the anticipated revenue  
7 stream outlined in the contracts with the utility. If this access fee were imposed the  
8 financing for each of these projects will be put in jeopardy. In addition to these seven  
9 turbines it might impact our lenders willingness to work with us on future projects in  
10 Rhode Island.

11 **Q. Please explain your position on the access fee as applied to existing projects.**

12 A. We presented our position in the motion for summary disposition. It clearly violates  
13 the intent of the DG standard contracts program to set a ceiling price based on a set of  
14 project economics designed to generate a predictable rate of return and then come back to  
15 assess an additional fee that was not factored into the ceiling price calculations.

16 Applying the fee to projects enrolled in the RE Growth Program would also violate the  
17 spirit of that program for the same reason – those projects enrolled based on a certain set  
18 of economics that would be completely undermined by the introduction of this new fee.

19 Finally, existing net metering projects were also financed and developed based on  
20 specific understanding of project economics and to make such a fundamental change to  
21 those economic assumptions after project development simply makes those projects  
22 economically unsustainable. Furthermore the fundamental assumptions of investors of

1 renewable energy projects lies in their fixed predictable nature. Approval of a fee  
2 applicable to projects that have already secured financing would send a signal to current  
3 and potential future investors in Rhode Island projects that they cannot rely on a  
4 predictable set of economics for project development. Investors would likely either pull  
5 out of the market or demand a higher rate of return to account for the added risk.

6 **Q. What is your position regarding the imposition of this fee specifically on net**  
7 **metered projects?**

8 A. As presented in our motion for summary disposition, it is clearly illegal to impose an  
9 additional back up service charge on net metering customers that effectively treats their  
10 account differently than it would be treated if the same customer was not net metering.  
11 The net metering law requires net metering customer accounts to be treated just as if they  
12 were ordinary customers and thereby prohibits the implementation of this type of fee. It  
13 also expressly prohibits back-up service charges and National Grid has clearly described  
14 this fee as a charge to compensate for the provision of back-up service. Moreover, it is  
15 important to understand that only public entities are allowed to net meter from remote  
16 facilities. The law allows public entities more flexibility in siting and the ability to  
17 aggregate load from multiple facilities and benefit from economies of scale. This allows  
18 the public sector needed flexibility to reduce its electricity bills, given the extremely  
19 difficult budgets they face. This fee will have a disproportionate and extremely  
20 detrimental impact on the public sector.

21

1 **Q. What is your position on the proposed fee as it would apply to future RE**

2 **Growth projects?**

3 A. WED was actively involved in the development of the RE Growth Program where

4 National Grid's initially proposed to impose a fee on net-metered projects. We argued

5 vigorously that any such fee could only be based on a careful analysis of the costs and

6 benefits DG presents to the distribution system and to the ratepayers more generally.

7 This proposal is once again based solely on presumed costs to the distribution system

8 without taking any benefits into account. Moreover, there was concern raised about

9 National Grid's proposal to change the DG standard contract into a tariff-based program.

10 We were especially concerned that a tariff would not provide the same the same level of

11 price certainty that we had with the DG standard contract. DG stakeholders ultimately

12 agreed to the tariff-based program only in exchange for assurance that the tariff would

13 remain consistent and would not be subject to change. Section §39-26.6-6 gave us that

14 promise of permanence. However, this proposed access fee would upset that permanence.

15 We would not have agreed to the tariff form if we had known that National Grid's intent

16 was to introduce this access fee – we would have preferred a pre-negotiated twenty year

17 contract that would not have been subject to such renegotiation in the midst of its term.

18 The approval of this fee in the midst of implementing this tariff-based program would

19 send a signal to the development and finance communities that Rhode Island legislation

20 cannot be relied on and that there is no pricing certainty for projects in Rhode Island.

1 **Q. Would you take the same position even if any fee assessed to a future RE**  
2 **Growth Program project would be recovered in ceiling prices that were adjusted**  
3 **accordingly?**

4 A. Yes, we disagree with the proposition of imposing this fee on projects and then  
5 allowing it to be recovered in ceiling prices. First, the fee is not justified because any  
6 costs DG imposes on the distribution system are more than offset by the benefits DG  
7 provides to the grid and to customers more generally, as established in Mr. Rabago's  
8 testimony. It would make no sense to allow an unjustified fee just because it could be  
9 recovered in ceiling prices. Second, the fee would still lead to an unnecessary escalation  
10 of DG prices that would reflect negatively on the industry, thereby detracting from  
11 important policy initiatives and reducing DG's cost effectiveness.

12 **Q. What is your concern about resource imbalance for participation in dockets**  
13 **such as this?**

14 A. Resource imbalance issues undermine Petitioners' advocacy effort and sustain status  
15 quo interests in these docket proceedings to the detriment of Rhode Island and its  
16 ratepayers. Ratepayers fund National Grid staff and legal counsel, with a mark-up. In  
17 contrast, advocates like the Petitioners must fund their own advocacy. As John Farrell of  
18 the Institute for Local Self Reliance notes:

19 Many of the enabling statutes for state regulatory commissions expressly mention  
20 the preservation of the public interest. Despite this legal charter, in most states  
21 regulatory commissions tend to see themselves as arbiters between public interest  
22 advocates and utilities rather than an actual advocate for the public interest.  
23 Contesting utility interests is left to non-utility "intervenors" who must clear  
24 many hurdles: . . .

- 1 • utilities can use their customer revenue to finance their perspective  
2 before the Public Utilities Commission while independent intervenors  
3 typically have to self-finance several thousand dollars for their  
4 intervention. If independent intervenors do receive compensation for their  
5 work, it's always after the fact.

6  
7 *Beyond Utility 2.0*, supra, p. 20. National Grid has thrown its every available resource at  
8 this proceeding – presenting many, many experts in support of its position throughout  
9 dockets 4545 and 4568. WED has made a significant investment in presenting the expert  
10 testimony of Karl Rabago out of absolute necessity, because we have determined that no  
11 other expert would be both qualified to contest and would contest National Grid's  
12 position that distributed generation presents a net cost (rather than benefit) to the  
13 distribution grid. However, neither WED nor any other opponents to this proposal  
14 (including the Office of Energy Resources) can afford to dedicate the same level of  
15 resources to these proceedings that National Grid does, at ratepayer expense. Such  
16 imbalance fundamentally favor existing interests at the cost of our ratepayers and to the  
17 detriment of Rhode Island energy policy.

18 **Q. What does WED recommend with regard to administration of the distribution**  
19 **system moving forward?**

20 A. We ask the Commission to consider and implement an oversight structure that  
21 ensures independent and neutral administration of the distribution system. National  
22 Grid's incentives still are unaligned with federal and state policy. The same "reluctance  
23 to purchase power from, and sell power to, nontraditional facilities" cited by Justice  
24 Marshall in 1983, grips National Grid today. American Paper Inst., Inc. v. American

1 Electric Power Services, et als., 461 U.S. 402, 404-5 (1983). John Farrell summarizes the  
2 current dynamic this way:

3 Utilities have made battlegrounds out of nearly 20 states, fighting their own  
4 customers about installing rooftop solar and other measures. They continue to  
5 invest in the infrastructure – power plants and power lines – for a 20<sup>th</sup> century,  
6 centralized electricity system, assets that may be stranded by the exponential  
7 growth of on-site power generation, distributed energy storage, and electric  
8 vehicles. They struggle to retain control and ownership of the electricity system  
9 even as technology increasingly lends itself to decentralized control and  
10 ownership. . . Their strategies are wide-ranging, from constraining when and how  
11 projects connect to the grid, capping the amount of customer-owned projects, or  
12 substantially reducing compensation for customer-owned power generation.

13 *Beyond Utility 2.0*, supra, p. 2, 27. We are in the midst of a transformative new energy  
14 economy. In the old energy economy,

15 . . . both the technology of the original electricity system and its ownership were  
16 large and centralized. Vertically-integrated utility companies owned everything,  
17 from the power plant to the meter outside a home or business. In an era when  
18 cost-effective power generation came from coal or nuclear – with massive  
19 economies of scale – centralized ownership was the key to raising the capital for  
20 power generation. Utilities were rewarded with public monopolies and guaranteed  
21 rates of return to attract low-cost capital and drive down costs. . .

22  
23 Id. at p. 6. But, now, “[t]he new technologies of power generation no longer require the  
24 same scale or centralization of ownership.” Id. at p. 7. This transition benefits customers,  
25 but not the utility.

26 The flattening of electricity demand and rise in distributed renewable energy are  
27 causing tension in the utility business. Utilities continue to make investments in  
28 the grid as though these changes are not already happening, largely because their  
29 financial incentives remain tied to a Utility 1.0 business model. As former utility  
30 executive Karl Rabago says, ‘utilities simply do not think things they do not own  
31 or control can be resources. . .’

32 Id. Some States, including Rhode Island, have tried to correct this misalignment of

1 incentives through policies like decoupling. However:

2 While revenue decoupling can reduce the pressure to increase sales, incentives to  
3 build new power plants and power lines are often stronger. . .As noted by  
4 Commission staff in New York: '[Rate of return] regulation may...encourage the  
5 utility to over-invest in capital spending, because earnings are directly tied to rate  
6 base. . .regulators in New York warn that while decoupling makes utilities  
7 indifferent to sales losses from energy efficiency and distributed generation, it  
8 does not shield ratepayers from the risk of widespread revenue loss should  
9 distributed generation grow substantially.

10 Id. at p. 19, 31.<sup>1</sup> This age-old conflict of interest manifests itself most clearly in a central  
11 issue raised in this docket, how to fund the transition in the role of the distribution grid.

12 The distribution system, rather than the transmission system, is likely to be the  
13 hub of the 21<sup>st</sup> century electricity system, acting as a two-way network between  
14 power producers and consumers. Unfortunately, this system is aging badly. The  
15 American Society of Civil Engineers estimates that utilities will have to spend  
16 \$20 billion annually over the next several years just to replace aged distribution  
17 infrastructure and that, 'America will see an investment gap in distribution  
18 infrastructure of \$57 billion by 2020.' Not only that, but 'the majority of the  
19 spending on distribution in recent years has been targeted at hardening the system  
20 against weather-related outages,' and not in preparing for a two-way grid to  
21 support lots of distributed renewable energy systems. On the other hand, utility  
22 spending on new and upgraded transmission lines has increased steadily since  
23 2007(not long after the 2005 Energy Policy Act increased the ease and financial  
24 return for doing so). 'Investor-owned utilities plan to spend an additional \$54.6  
25 billion on transmission infrastructure [between late 2013 and] 2015.'

26 Id. at p. 6-7, 16.<sup>2</sup> Both financial incentives and regulatory proceedings like this one drive  
27 resource prioritization.

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<sup>1</sup> Citing Fisher, George. Utility Equity Research In The 21st Century Part 1: Regulatory Environment, ROIC,WACC, Hurdle Rate. (Seeking Alpha, 9/29/14). Accessed 10/1/14 at <http://bit.ly/1vuUHXu>; Reforming the Energy Vision. (NYS Department of Public Service, Staff Report, 4/24/14). Accessed 10/20/14 at <http://cl.ly/OC0V0T2j2u30>.

<sup>2</sup> Citing Lacey, Stephen. America Gets a D+ in Energy Infrastructure. (GreentechMedia, 4/1/13). Accessed 11/7/14 at <http://bit.ly/1tQRinV>; Transmission & Distribution Infrastructure. (Harris Williams & Co., Summer 2014) Accessed 12/3/14 at <http://bit.ly/11Ucm1E>; Lewis, Craig. It's Time for Grid Planners to Put Distributed Resources On Par With Transmission (Greentech Media, 11/13/13), Accessed 8/11/14 at <http://bit.ly/1ujkvs6>.

1 . . . Not only is it difficult for non-transmission options to share costs, but utilities  
2 frequently receive federal incentives for high voltage transmission lines that cross  
3 state boundaries. . . the federal overseers of transmission projects don't consider  
4 any non-grid benefits that would weight a decision toward a transmission  
5 alternative for serving grid needs. . . Local economic benefits are a key omission  
6 in both federal and state regulatory bodies. . . While states would prefer to make  
7 evaluations of new grid infrastructure on these broad energy and economic values,  
8 most regulatory bodies focus narrowly on benefits to utilities and utility  
9 ratepayers.

10  
11 Id. at p. 22-23. Ultimately, this Commission can only serve the interests of its customers  
12 (distributed generation and otherwise) by providing for independent and neutral operation  
13 of the distribution system.

14 In other words, removing the conflict of interest that causes incumbent  
15 utilities to prefer building new infrastructure to conservation, efficiency,  
16 or local power from competitors or even utility customers. . . 'This new  
17 kind of distribution system needs a new kind of management'. . .  
18 separating utility financial health from energy sales (a concept typically  
19 called decoupling) and separating utility profits (for investor-owned  
20 utilities) from building and owning infrastructure.

21 Id. at 20-21.<sup>3</sup> In the absence of such new management, National Grid cannot be expected  
22 to properly separate its own divergent, economic interests from the equitable and efficient  
23 administration of distribution to serve Rhode Island's energy policy. This proceeding is  
24 important to WED because it is not time to assess additional fees on the distributed  
25 generation that actually promises to reduce the cost of our distribution service; it is time  
26 to realign priorities, make the right investments to facilitate those cost savings and  
27 allocate any such costs equitably based on a true and balanced causation analysis.

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<sup>3</sup> Citing Aggarwal, Sonia, et al. Trending Topics in Electricity Today: the Distribution System Operator.  
(American's Power Plan, 9/23/14). Accessed 10/29/14 at <http://bit.ly/1wEoPRM>.

1 **Q. Does the fact that your testimony focuses on the proposed access fee indicate that**  
2 **WED supports the other elements of National Grid's proposal in this docket?**

3 A. No, WED does not support the rest of National Grid's proposal. We firmly believe  
4 the proposed tiered customer charge is bad policy but as it does not have a significant  
5 impact on our projects we are not able to invest significant capital in fighting it.

6 **Q. Does this conclude your testimony?**

7 Yes.

8