

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: PETITION OF WED COVENTRY ONE, LLC, :
WED COVENTRY TWO, LLC, WED COVENTRY :
THREE, LLC, WED COVENTRY FOUR, LLC, : DOCKET NO. 4547
WED COVENTRY FIVE, LLC, and :
WED COVENTRY SIX, LLC :

ARBITRATOR'S DECISION

I. Petition

On January 20, 2015, WED Coventry One, LLC, WED Coventry Two, LLC, WED Coventry Three, LLC, WED Coventry Four, LLC, WED Coventry Five, LLC, and WED Coventry Six, LLC (collectively, Petitioners or WED), developers of distributed generation projects, filed a Petition for Dispute Resolution under The Narragansett Electric Company d/b/a National Grid's Standards for Connecting Distributed Generation, RIPUC No. 2078 (DG Interconnection Standards).¹ Having created six different limited liability companies, WED has proposed ten 1.5 MW wind projects which are in different stages of development, all in the Town of Coventry (COV1-COV6).

Petitioners alleged four violations by The Narragansett Electric Company d/b/a National Grid (National Grid or Company) under the DG Interconnection Standards: (1) that National Grid is overdue to issue its Impact Studies for all of the projects; (2) that National Grid is overdue to interconnect Coventry 1 and 2 pursuant to section 3.4 of the DG Interconnection Standards; (3) that National Grid is inappropriately and illegally charging Petitioners for the cost of System Upgrades benefitting other customers pursuant to section 5.4 of the DG

¹ Section 9 of the DG Interconnection Standards governs the dispute resolution process. The parties agreed to submit the matter to arbitration before PUC legal counsel, on the record, in an attempt to streamline the full review process in the event one party was dissatisfied with the arbitrator's decision. Tr. 3/4/15 at 12-13. The following capitalized terms have the same meaning as the terms in RIPUC 2078: Impact Study(ies), System Modifications, and Interconnection Service Agreement.

Interconnection Standards; and (4) that National Grid is unfairly and improperly administering the interconnection of distributed generation of renewable energy pursuant to various state and federal laws.²

Petitioners requested the Public Utilities Commission (PUC) order National Grid to (1) issue corrected Impact Studies and enter into Interconnection Service Agreements for COV1-COV6, (2) interconnect all of the projects within 150 days of receipt of the interconnection application for those projects or show cause why any of these projects have not, cannot or will not be interconnected or, in the alternative, allow the developer of the six projects to perform the work to complete the interconnection on his own schedule, (3) provide a reasonable estimate of the cost of interconnecting or, in the alternative, allow the developer to perform the work to complete the interconnection, and (4) not charge taxes related to interconnection. Petitioners also sought a determination as to whether National Grid is able to provide fair and reasonable administration of renewable interconnections in Rhode Island.³

II. National Grid's Answer

On February 13, 2015, National Grid filed an Answer disputing that it has not completed the impact studies in a timely manner and claiming that it has no current obligation to provide an executable interconnection agreement. National Grid asserted that it has the right to charge taxes associated with System Modifications. National Grid also maintained that there is no legal or factual basis to (1) order National Grid to allow developers to design the System Modification necessary for interconnection, or (2) require that National Grid interconnect customers within 150 days. National Grid also argued that there is no basis for opening an investigation into the

² Pet. at 1. Although having different technical meanings, point of interconnection and point of common coupling were used interchangeably by many of the participants in this proceeding. (See Tr. 3/5/15 at 113-24). For purposes of the analysis contained in this decision, the terms have the same meaning.

³ Pet. at 11-12.

fairness of National Grid's process for administering interconnections where the dispute resolution process is the appropriate forum.⁴

III. Agreed Statement of Facts

An Agreed Statement of Facts was submitted on February 26, 2015 as a joint exhibit which is attached hereto as Appendix A and incorporated by reference.

IV. WED Coventry Arbitration Package

On February 25, 2015, Petitioners submitted an arbitration package consisting of the pre-filed testimony and exhibits of Mark Depasquale, principal of Green Development, LLC d/b/a Wind Energy Development, LLC, David Colombo, principal of Power Engineers, LLC, an electric engineering company, and Theodore Peters, Head of Sales of VENSYS Energy, AG.⁵ In his testimony, Mr. Depasquale summarized the various renewable energy projects he is currently involved in developing. He alleged that National Grid has obstructed the efforts to connect the turbines that are the subject of this arbitration.

Mr. Depasquale declared that after the filing of an initial dispute resolution process, National Grid provided an Impact Study in which the interconnection costs skyrocketed and the timeline for interconnection "was set so as to preclude [Petitioners'] compliance with the distributed generation standard contract for COV1 and the price went from about \$270,000 for one turbine, to \$1.1 million for two, to almost \$13 million for seven."⁶ He maintained that throughout the process National Grid "never studied the simplest means of interconnection, opting instead for an interconnection plan that took far too long to develop and required

⁴ Answer at 2.

⁵ Petitioners also submitted the pre-filed testimony of Anthony Callendro, Chief Operating Officer of NEO Energy, LLC, a developer of renewable energy projects summarizing his company's experience with a particular interconnection in Rhode Island. That project was not part of the Petition. Therefore, Mr. Callendro's testimony was not admitted at the hearing because it was not relevant to the specific dispute between WED and National Grid. To the extent that the testimony was offered in an effort to make changes to the DG Interconnection Standards, the PUC has a pending docket for such review (Docket No. 4483). Tr. 3/4/15 at 6-11.

⁶ WED Arbitration Ex. 2A (Pre-filed Test. of Mark Depasquale) at 5-6.

rebuilding almost \$13 million of their system improvements.”⁷ He opined that the pressure of legislation and arbitration resulted in a much less costly interconnection option developed over a much shorter timeframe.⁸ He explained that the most recent Impact Study, provided in approximately thirty days, included a total cost of interconnection of \$5.4 million. However, the timeframe to construct, approximately 17-24 months, would result in the loss of two distributed generation contracts.⁹ Mr. Depasquale intimated that National Grid was intentionally thwarting Petitioners’ attempts to interconnect.¹⁰

Acknowledging that WED’s engineer originally proposed the interconnection plans to National Grid, Mr. Depasquale stated that “[o]nly National Grid has complete information about its distribution system and it is presumed that through the feasibility/impact study process, National Grid will determine the most effective and efficient means of interconnection.”¹¹ Mr. Depasquale alleged that, contrary to this presumption, National Grid did not study or propose the most effective means of interconnection, but rather, because of National Grid’s failure to properly maintain the distribution system, National Grid opted to propose costs to the developer of rebuilding the system.¹² He stated that this allegation was supported by WED’s engineer.¹³

Mr. Depasquale argued that the language of the DG Interconnection Standards requires a project to be interconnected within 150 days under the Standard Process. Noting that National Grid has disputed this interpretation of the tariff, Mr. Depasquale argued that National Grid’s proposed language change in a new proposed Interconnection Standards tariff to indicate that the 150-day deadline is for the supplying of an Impact Study is further evidence that it is trying to

⁷ *Id.* at 6.

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.* In his testimony, Mr. Depasquale stated, “[a]s Shakespeare wrote in Hamlet, “something is rotten in the State of Denmark.” *Id.*

¹¹ *Id.* at 6.

¹² *Id.* at 7-8.

¹³ *Id.* at 8.

obstruct the expeditious interconnection of distributed generation projects.¹⁴ As further indication of National Grid's delays, Mr. Depasquale cited requests for certain data on multiple occasions, the use of data provided for a different model of wind turbine in support of denial of interconnection, and a requirement that Petitioners' submit to an ISO-NE approval process for the entire project.¹⁵

Noting that National Grid had provided a new Impact Study on February 19, 2015 with lower costs, Mr. Depasquale stated that the interconnection schedule would not allow for the timely interconnection of the two projects that had been enrolled into the DG Standard Contracts program, resulting in their disqualification. He disputed National Grid's requirement to enter into a new Impact Study agreement. He also continued to question the application of the interconnection tax and the elements of the costs that should properly be assessed to the Petitioners' projects.¹⁶ Therefore, Mr. Depasquale indicated that WED seeks "a commitment to interconnect all ten turbines, a commitment to a reasonable schedule for the interconnection of the turbines, and a reasonable method for assessing and properly allocating the responsibility for the cost of system improvements."¹⁷

Finally, Mr. Depasquale stated that the process related to Petitioners' ten wind turbines raised questions about whether National Grid could fairly administer the interconnection process in light of the fact that "it supplies natural gas to residential customers" giving National Grid "a definite interest in maintaining the high price of natural gas."¹⁸ Noting that a proposal between WED and West Warwick would result in significant energy cost savings, he claimed that Petitioners' "proposal to provide power to the public sector far below market cost is clearly

¹⁴ *Id.* at 9.

¹⁵ *Id.* at 13-16.

¹⁶ *Id.* at 17.

¹⁷ *Id.* at 16.

¹⁸ *Id.* at 17-18.

threatening to National Grid’s business model.”¹⁹ Therefore, Mr. Depasquale requested the PUC judge whether this conflict of interest exists in the interconnection process exists.²⁰

Mr. Colombo, providing engineering design consultation to Petitioners, submitted a one-line diagram to National Grid as part of the Impact Study application for COV1-COV6. He stated that the proposal is a starting point for National Grid’s consideration and that National Grid may reconfigure the design as necessary to accomplish interconnection in a manner that will minimize the impact on the existing distribution system. Mr. Colombo noted that he is not privy to all of the information regarding the distribution system when he makes the proposal for interconnection. Therefore, as is customary, he proposed interconnection of the turbines at the closest existing point on the distribution system.²¹

He stated that the Impact Study was returned, allowing interconnection of only seven of the ten turbines to the two circuits closest to the projects and then, only with significant upgrades to the two substations, reconstruction of lines, and installation of a direct transfer trip. Mr. Colombo stated that National Grid did not study an alternate route, such as the extension of a higher voltage circuit back to the projects, but only reviewed the two circuits proposed in the Impact Study application.²² Mr. Colombo opined that had there been upgrades to the substations over time, much of the work would not be needed to accommodate the projects.²³ Addressing the February 2015 Impact Study assessing interconnection by extending a 23 kV subtransmission line, Mr. Colombo stated that “the estimated cost of the proposed overhead utility work appears to be similar to [his] experience with other projects based on a dollar per mile. The proposed

¹⁹ *Id.* at 18.

²⁰ *Id.* at 18-19.

²¹ WED Arbitration Ex. 2B (Pre-filed Test. of David Colombo) at 3-4.

²² *Id.* at 6-7.

²³ *Id.* at 5.

time line is longer than expected.”²⁴ He questioned why National Grid had not proposed the alternate route and plan earlier in the review process.²⁵

Mr. Peters testified that during the interconnection process, he was asked to provide information about the load characteristics of the proposed VENSYS wind turbines so that National Grid could assess the effect on its distribution system. He stated that his company provided information about the power performance of the turbine in two reports dated June 14, 2013 and October 2014. He stated that “this information is real measured data from real turbines of the same model in operation and includes possible set points for power ramp ups and reaction times that can be programmed into each turbine.”²⁶ Mr. Peters subsequently responded to additional National Grid questions several times. Despite this, Mr. Peters stated that National Grid utilized wind data from a different type of wind turbine in the December 2014 Impact Study, resulting in incorrect effects on the distribution system. He maintained that had National Grid utilized the correct values for the VENSYS wind turbine, the Company would not have seen the same impacts on the distribution system.²⁷ He also questioned National Grid’s continued requests for an anti-islanding study where VENSYS would include a direct transfer trip device which would solve for the potential problem of the turbine sending current into a temporary island grid.²⁸

V. National Grid Arbitration Package

On February 26, 2015, National Grid submitted an Affidavit of John C. Kennedy, the Lead Technical Support Consultant – RI in the Technical Sales and Engineering Support group

²⁴ *Id.* at 8.

²⁵ *Id.* at 9.

²⁶ WED Arbitration Ex. 2C (Pre-filed Test. of Theodore Peters) at 3.

²⁷ *Id.* at 3-4.

²⁸ *Id.* at 4-5. He described islanding as situation where the local distribution grid becomes disconnected from the remaining grid by a tripping event at the substation. The turbine needs to be able to shut down in such a situation. The direct transfer trip device would allow for this to happen. *Id.*

for National Grid. He manages the interconnection process for distributed generation project developers in Rhode Island. Mr. Kennedy asserted that National Grid has timely provided all impact studies requested by WED for COV1-COV6, has no current obligation to provide an Interconnection Service Agreement, has estimated System Modification costs related solely to the interconnection of WED's turbines, is permitted to charge taxes to WED, has the obligation to perform the System Modifications to its system, and is not required under the DG Interconnection Standards to interconnect distributed generation projects within 150 days.²⁹

Mr. Kennedy outlined the process for providing a combined Impact Study for COV1 and COV2, and agreed to twelve days into the study timeframe for the COV1 project. Because of outstanding questions that arose during the study, which took over seven calendar months, National Grid provided the completed study using 26 business days.³⁰ The completed study was rejected by WED. He then outlined the process followed for the first Impact Study undertaken for COV1-COV6, setting forth each time National Grid found it needed additional information, and the date upon which the additional information was provided. According to Mr. Kennedy's calculations, the Impact Study, requested on August 15, 2014 and completed on December 18, 2014 was within the 90-day time period allowed in the DG Interconnection Standards because National Grid's time was tolled while awaiting additional information. Therefore, Mr. Kennedy calculated that National Grid only used 56 of the allowed 90 day period to complete the Impact Study.³¹ According to Mr. Kennedy, WED rejected the Impact Study because of the extent of System Modifications and associated costs indicated by the Impact Study.³²

²⁹ National Grid Arbitration Ex. 2 (Affidavit of John C. Kennedy) at ¶ 5.

³⁰ *Id.* at ¶¶ 8-13.

³¹ *Id.* at ¶¶ 15-21.

³² *Id.* at ¶ 22.

After several meetings between National Grid and WED, the parties agreed to perform an Impact Study that would study the connection of all ten turbines via extension of a sub-transmission line to a 23 kV circuit approximately seven miles from the project sites. The review would be of an overhead route and an underground route. Agreement was reached on January 30, 2015, an Impact Study agreement was fully executed, and on February 18, 2015 National Grid provided the overhead Impact Study. According to Mr. Kennedy, WED chose to wait for completion of the underground Impact Study to determine how to proceed.³³ Therefore, because WED has not accepted any of the cost estimates contained in the Impact Study, and in fact, has engaged in additional discussions regarding costs, according to Mr. Kennedy, National Grid is not yet obligated to provide WED with an Interconnection Service Agreement.³⁴

Next, Mr. Kennedy maintained that the System Modifications set forth in the Impact Studies provided by National Grid are only necessary if WED wind turbines are interconnected to the National Grid distribution system, noting that all customers on the circuits can be safely served without those modifications.³⁵ Therefore, under the DG Interconnection Standards, Mr. Kennedy stated that the costs National Grid has identified are those for which WED is responsible.³⁶ Likewise, with regard to taxes related to System Modifications, Mr. Kennedy stated that National Grid has proposed to charge the taxes in accordance with its policy, noting that this matter is being addressed by the PUC in Docket No. 4483.³⁷

Addressing construction responsibility for System Modifications, Mr. Kennedy noted that National Grid has the responsibility under the DG Interconnection Standards to complete the construction. He explained that National Grid has sole responsibility for the safety of its electric

³³ *Id.* at ¶¶ 24-28.

³⁴ *Id.* at ¶¶ 30-36.

³⁵ *Id.* at ¶¶ 37-39, 41.

³⁶ *Id.* at 43.

³⁷ *Id.* at ¶¶ 45-46.

system and therefore, needs to have control over all aspects of the process in order to ensure no undue disruption of other customers. He did state that “[i]n appropriate circumstances, National Grid evaluates whether private parties can safely provide value by performing some System Modification work” and in fact, in this case, National Grid has been working with WED to determine whether there is any work Petitioners could perform.³⁸ However, Mr. Kennedy asserted that it would be inappropriate for WED to have full control over the design, engineering and construction of the work.³⁹

Turning to timing, Mr. Kennedy stated that the DG Interconnection Standards do not require interconnection of DG projects to be completed in 150 days, but rather, it is the time period in which an Interconnection Service Agreement must be provided. In addition, according to Mr. Kennedy, the timeframes in the DG Interconnection Standards are subject to clock stoppages when delays are caused by the interconnecting customer. Furthermore, Mr. Kennedy maintained that it would be impossible for National Grid to interconnect large projects requiring System Modifications within a 150-day timeframe. Even if WED were correct in its assertion, Mr. Kennedy noted that WED has not even accepted an Impact Study and requested an Interconnection Service Agreement or provided payment for the System Modifications. Therefore, National Grid has not been able to move forward with interconnection. Finally, Mr. Kennedy noted that the filing of an interconnection application does not guarantee that a project will be able to interconnect.⁴⁰

In conclusion, Mr. Kennedy asserted that National Grid has been administering the distributed generation interconnections fairly, noting that as of December 31, 2014, the Company has interconnected a total of 456 projects in Rhode Island with a total nameplate capacity of 50.4

³⁸ *Id.* at ¶¶ 47-50, 52.

³⁹ *Id.* at ¶ 53.

⁴⁰ *Id.* at ¶¶ 54-63.

MW. He stated that National Grid has, to date, been able to successfully navigate “issues raised in the interconnection process with all customers other than WED,” and hoped to be able to resolve those issues as well.⁴¹

VI. Hearings

Hearings were held on March 4-5, 2015 at the PUC office in Warwick, RI. WED presented Mr. DePasquale, Mr. Colombo and Mr. Peters.

A. Mr. DePasquale (WED)

Mr. Depasquale summarized the COV1-COV2 Impact Study in line with his pre-filed testimony, noting that National Grid had originally completed an Impact Study showing that two turbines could be connected to a specific circuit, but when reviewing all ten turbines, the December 18, 2014 Impact Study showed that only one could connect to the circuit.⁴² That study found that not all ten turbines could interconnect on the two 12.4 kV circuits and used wind data from the Goldwind turbines in North Kingstown and Narragansett Bay Commission rather than VENSYS data in the study.⁴³

Mr. Depasquale agreed that the Impact Study was issued 123 days after the application was made.⁴⁴ With regard to the amount of time it took to complete the December 18, 2014 Impact Study, Mr. Depasquale conceded that under the DG Interconnection Standards, National Grid’s clock stops while they are awaiting additional information. He disputed that National Grid should have been allowed to stop the clock when awaiting revised one-line diagrams or when the Company asked for certain wind data on more than one occasion.⁴⁵ With regard to the wind data, Mr. Depasquale testified that National Grid had requested data that did not exist and

⁴¹ *Id.* at ¶¶ 64,67.

⁴² Tr. 3/4/15 at 28-30, 32.

⁴³ *Id.* at 39-40.

⁴⁴ *Id.* at 37.

⁴⁵ *Id.* at 70-8087-88..

had requested the same information multiple times for information already in the Company's possession.⁴⁶

National Grid gave WED the choice of amending the December 18, 2014 study or undertaking a new Impact Study looking at extending a 23 kV subtransmission line at a substation over seven miles away.⁴⁷ Mr. Depasquale agreed to the new Impact Study, but stated that he was reluctant to sign a new Impact Study Agreement because he had not chosen the circuits for the initial study where there was a less expensive and more efficient way to interconnect.⁴⁸ He noted that the second Impact Study was completed in approximately one month.⁴⁹ Addressing the February 18, 2015 Impact Study, described by Mr. Depasquale as a corrected study, his primary concern was the fact that the construction schedule for interconnection was an estimated schedule of 17 to 24 months which did not account for Verizon's timeframe or costs.⁵⁰ Mr. Depasquale explained that "without knowing when we can interconnect and how long National Grid's exact time would be, it's impossible to finance the project."⁵¹

With regard to the costs in the February 18, 2015 Impact Study, an interconnection using an overhead configuration, Mr. Depasquale questioned certain costs. Mr. Depasquale acknowledged that despite the age of the poles, National Grid believed that the distribution system in the area was adequately serving the customers in the area. He explained that the existing poles could not handle the added weight of the new 23 kV line but because of the age, which he characterized as being close to its life expectancy, he did not believe he should be

⁴⁶ *Id.* at 81-86.

⁴⁷ *Id.* at 103. There was testimony that National Grid was also studying an underground alternative, but that study had not yet been completed. *Id.* at 51.

⁴⁸ *Id.* at 38.

⁴⁹ *Id.* at 48.

⁵⁰ *Id.* at 34-35, 37, 47.

⁵¹ *Id.* at 34.

responsible for removal costs of the existing poles. He conceded that if any of the existing poles which were found to be “rotted” upon removal, WED would not be charged for those poles.⁵² Mr. Depasquale’s concern was that he would be charged for approximately 300 poles up front and credited after the fact without any input into which poles need replacing absent the addition of the 23 kV circuit.⁵³ However, despite the age of the poles in the area, when Mr. Kennedy and Mr. Depasquale drove through the area where construction was to occur, according to Mr. Depasquale, Mr. Kennedy purportedly stated, “[m]y system is working. It looks fine.”⁵⁴ Mr. Depasquale testified that “[t]he system was running that day and is up and running right now.”⁵⁵

In order to satisfy his concerns about construction time and cost, Mr. Depasquale stated that he had studied designing, engineering, and constructing both an overhead and underground route. While not completing review of the overhead process, he maintained that the underground configuration could be done in six months for a cost of \$3.4 million for construction, design, permitting, easement work, and legal. The cost did not include inspections or taxes. He stated that when reviewing the overhead route, he got estimates from approved emergency vendors in Rhode Island.⁵⁶

In Mr. Handy’s opening statement, he asserted that “these projects will show sufficient evidence that this process needs supervision to resolve what has become a gatekeeping function for National Grid...administered by an adverse, basically interest and ensure fair treatment and a shared interest in timeliness and cost effectiveness of interconnection.”⁵⁷ On direct examination, Mr. Depasquale testified that the construction timeline of 16 to 24 months for the interconnection

⁵² *Id.* at 52-54, 94-95.

⁵³ *Id.* at 110.

⁵⁴ *Id.* at 96-97.

⁵⁵ *Id.* at 97.

⁵⁶ *Id.* at 58-60.

⁵⁷ *Id.* at 15.

of COV1-COV2 was such that even if the Impact Study had been issued the day it was applied for, there was no way WED could meet the deadline to satisfy the distributed generation standard contract, thus disqualifying the project. He agreed with counsel that “that Impact Study effectively killed the DG contract for Coventry 1”.⁵⁸ He stated that he relied on a statement made by National Grid at a May 1, 2014 meeting that if WED “upgrade[s] the substation for future projects, [WED] would have the capacity and [WED was] given capacity numbers between 10 and 15 megawatts.”⁵⁹ However, there was no written confirmation of such a statement and Mr. Depasquale agreed that he knew an Impact Study would need to be completed.⁶⁰ On another issue, Mr. Depasquale testified that National Grid only made WED aware of potential ISO-NE OP-14 requirements in November 2014, whereas, on cross examination, the first email notification was made on September 11, 2014, the day of the kickoff meeting between National Grid and WED.⁶¹ Mr. Depasquale, discussing the Shakespeare quote from his pre-filed testimony, expressed his frustration with the time to study, the cost of system modifications, the timeframe to construct, and the rejection of his offer to construct the facilities on National Grid’s side of the points of interconnection.⁶² He opined it was only his dispute resolution petition and legislative action that led to the February 18, 2015 Impact Study finding a more cost effective interconnection.⁶³

⁵⁸ *Id.* at 31.

⁵⁹ *Id.* at 31, 66-67.

⁶⁰ *Id.* at 67-69.

⁶¹ *Id.* at 41. Mr. Depasquale later testified that National Grid had attempted to influence ISO-NE to make findings that would add more burden to WED. However, further testimony from Mr. Colombo on the ISO-NE requirements was not allowed after WED’s attorney confirmed that it will be ISO-NE and not the PUC that determines whether the ISO-NE OP-14 requirements apply to the COV1-COV6 projects. *Id.* at 41-45, 139-45.

⁶² *Id.* at 62-63.

⁶³ *Id.* at 54-56.

B. Mr. Colombo (WED Engineer)

Mr. Colombo noted that the review process for the COV1-COV6 projects resulted in a higher number of information requests from National Grid than usual, maybe in part of the complicated nature of the project or because of the nature of the utility system.⁶⁴ He questioned the need for additional one-line diagrams requesting pole numbers during the process noting that the originals contained GPS coordinates which are typically sufficient for the utility. He also indicated that although scaled drawings had been provided, National Grid had subsequently requested the one-line drawings to include distances, something atypical for one-lines.⁶⁵

Noting that as an outside engineer, he does not have the level of knowledge about National Grid's system as the utility, as the engineer for the project, he includes in the application "a best case assumption of where the project will tie in."⁶⁶ He explained that in the majority of cases, that point is the closest point on the distribution system "to minimize any impacts and costs and schedule for the project."⁶⁷ The remainder of the application for interconnection is to show all of the necessary customer-side equipment, protection devices and metering.⁶⁸ He stated that when originally submitting the application, WED "wouldn't propose to interconnect to a circuit that's five or eight miles away from a project site. That can make a project initially economically unfeasible for the developers. We would propose the closest point in the distribution system as the first point."⁶⁹

⁶⁴ *Id.* at 117.

⁶⁵ *Id.* at 117-18.

⁶⁶ *Id.* at 119.

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.* at 123-24. He later stated that the closest point of interconnection is "[I]logical in the sense that it would be the simplest and least cost and least impact on the system and least upgrades for the developer, yes." *Id.* at 146.

With regard to the December 18, 2014 Impact Study, Mr. Colombo noted that it did not meet the customer's needs, thus leading to additional conversations with National Grid.⁷⁰ He did express surprise that all ten turbines could not be interconnected on the 12.4 kV circuits because it appeared the \$1.2 million substation upgrades to put in high side voltage protection would be one-time expenses and based on high level discussions with National Grid's engineers, he believed that an Impact Study would find that interconnecting ten turbines would be feasible, with some additional substation and circuit upgrades.⁷¹ He stated that in his experience, when an Impact Study produces results that do not meet the customer's needs, typically, the utility would consider other alternatives, so the lack of alternatives was surprising. However, he later testified that some utilities will provide alternative Impact Studies while others will require new Impact Studies to be initiated, particularly where "the first study required the project to change significantly."⁷²

During subsequent discussions between WED and National Grid, "it became pretty clearly evident that [extending the 23 kV circuit] would be a much more attractive solution to the project."⁷³ Mr. Colombo noted that the distribution system in the area is consistent of the vintage that it was installed with poles over 30 years old, but could not definitively testify that if upgrades had been performed, the system upgrades would not be needed.⁷⁴ He denied advising Mr. Depasquale that much of the electric system needed to be upgraded in the area.⁷⁵ He stated

⁷⁰ *Id.* at 122. While agreeing that the costs of connecting distributed generation may not be linear, the costs were in excess of what WED had expected. However, he acknowledged that there was some substation work that WED had not expected. More surprising was seeing a later impact study based on more dynamic modelling disallowing the same number of turbines to connect as in a prior impact study where WED could have gone forward and interconnected those two after the April 2014 impact study. *Id.* at 126-27, 132-35, 148, 170.

⁷¹ *Id.* at 136-38.

⁷² *Id.* at 138, 164-65.

⁷³ *Id.* at 125.

⁷⁴ *Id.* at 129-30. Mr. Colombo stated that there probably would have been fewer pole replacements and possibly less substation work required for the 12.4 kV circuit interconnection. *Id.* at 130.

⁷⁵ *Id.* at 156.

that he had no knowledge of whether the Coventry substation needed to be upgraded to provide safe and reliable service to current customers.⁷⁶

With regard to the overall nature of the interconnection process, Mr. Colombo stated that he has been involved in distributed generation interconnections in Rhode Island as well as Massachusetts. He pointed out that there has been significantly more distributed generation installed in Massachusetts. He stated that the process with National Grid in Rhode Island is as expected.⁷⁷ He testified, “I think with any process the developers would like it to be quicker and cheaper to interconnect to bring it to market and satisfy the requirements.”⁷⁸ Noting that Rhode Island has a small sample size at this time, he stated that this WED project has taken longer than average to get to the current status, explaining that the interconnection of the WED North Kingstown wind turbine “progressed a lot more smoothly.”⁷⁹

C. Mr. Peters (VENSYS wind turbine manufacturer)

Mr. Peters testified that his manufacturer had never before been asked for site specific behavior of a turbine on a specific turbine and date. He explained that using data from another turbine with a different operating logic will produce different results.⁸⁰ Mr. Peters stated that the load characteristic data had been provided to WED in spring 2014. Mr. Peters explained that the load generation data is important to show how the turbine can ramp up and ramp down and how it will affect the system when the turbine starts up. He noted that there is normally one clarifying round of questions from utilities, but not repeated questions as in this case.⁸¹

⁷⁶ *Id.* at 160.

⁷⁷ *Id.* at 167-69.

⁷⁸ *Id.* at 168.

⁷⁹ *Id.* at 168-69.

⁸⁰ *Id.* at 176.

⁸¹ *Id.* at 182.

Upon cross examination, Mr. Peters explained that once he understood what National Grid was attempting to do, after receipt of the December 18, 2014 Impact Study, he and WED were able to apply the VENSYS load generation data to the Goldwind turbine data where there was an overvoltage issue and the turbine shut down. However, as he did not know what National Grid needed the information for, he did not recommend such an evaluation earlier. It appeared to Mr. Peters that before the issuance of the December 18, 2014 Impact Study, there was a miscommunication between National Grid, WED and the manufacturer.⁸²

D. Mr. Kennedy (National Grid)

National Grid presented Mr. Kennedy who explained the interconnection process and maintained that WED's application for COV1-COV2 was handled the same as others. He asserted that after the April 17, 2014 Impact Study was released and WED chose not to proceed due to timelines and cost, discussion ensued regarding expansion of the projects.⁸³ During the review of the April 17, 2014 System Modification costs, there were multiple meetings to discuss the projects. While at a high level, it appeared the substation transformers would be able to handle interconnection of ten turbines, Mr. Kennedy stated that no representations were made that an Impact Study would definitely confirm those assumptions.⁸⁴ He later testified that National Grid did not originally study the 23 kV circuit because of its distance from the project and prior to performing the Impact Study on the 12.4 kV circuits, National Grid had no reason to believe interconnection of the projects would be infeasible.⁸⁵ He stated that National Grid

⁸² *Id.* at 176-192.

⁸³ Mr. Kennedy denied that he advised WED that the construction timelines would disqualify COV1 from the DG contract into which it had entered in order to "rub it in" or say "[w]e got you." Tr. 3/5/15 at 87-88.

⁸⁴ Tr. 3/5/15 at 7-11, 60-63.

⁸⁵ *Id.* at 42-43, 66-67.

concluded that the 23 kV option was the better one when the February 18, 2015 Impact Study was completed.⁸⁶

Addressing concerns raised about the process followed for the combined Impact Study sought on August 15, 2014, Mr. Kennedy stated that at the September 11, 2014 kick-off meeting, revised one-line drawings were requested because the originals had not shown effectively grounded systems and impedance information of grounding banks.⁸⁷ Other data was also requested at the September 11, 2014 meeting. According to Mr. Kennedy, WED began providing data to National Grid and although it was not complete, National Grid began integrating the information into the study.⁸⁸ On November 15, 2014, National Grid requested additional one-line diagrams because WED had requested a change to the pole area, had indicated it was going to install underground feeders, and would change the points of common coupling, all of which would change the costs.⁸⁹

With regard to the wind data being sought, according to Mr. Kennedy, National Grid was not seeking information for any specific windy day, but a generic variable windy day for use in a long-term dynamic analysis to address issues of voltage quality on the circuits.⁹⁰ Prior to releasing the December 18, 2014 Impact Study, Mr. Kennedy stated that National Grid provided WED with the long-term dynamic modeling report for their review in advance so WED could have the opportunity to provide additional information or comments to assist in the analytical process. WED provided no additional technical information or comment on the appropriateness of the modelling prior to release of the December 18, 2014 impact study.⁹¹ Mr. Kennedy

⁸⁶ *Id.* at 63-64.

⁸⁷ *Id.* at 15.

⁸⁸ *Id.* at 16.

⁸⁹ *Id.* at 17-18.

⁹⁰ *Id.* at 18-19.

⁹¹ *Id.* at 24-25.

confirmed that after the December 18, 2014 Impact Study, there was a joint effort with VENSYS, WED and National Grid to perform the conversion of data using data from the two Goldwind turbines and from the VENSYS specifications in the manner explained by Mr. Peters during his testimony.⁹² He denied that the December 18, 2014 Impact Study was inadequate or based on incomplete information. According to Mr. Kennedy, the study was based on the information in National Grid's possession at the time as provided by WED.⁹³

With regard to the adequacy of the 12.4 kV circuits, Mr. Kennedy stated that his team has not reviewed the circuits, but rather, relied on the inspection and maintenance department which inspects the feeders on a five-year cycle. He stated that during a visual inspection with WED, he did not see any indication that there was work required to serve the existing load “[a]nd contrary to what’s been stated, the system works fine at this present time to serve all of those customers.”⁹⁴ He supported this statement, indicating that during the performance of an Impact Study, his department confers with the distribution engineering planning department to determine whether there are any scheduled upgrades over the upcoming five year period.⁹⁵ He later added that there are no real reliability issues present in the area that need to be addressed.⁹⁶

According to his information, Mr. Kennedy stated that the 12.4 kV circuit to which WED was seeking to connect to is not a part of the current plans for necessary system upgrades.⁹⁷ In the event a National Grid design engineer subsequently determines that there is equipment such as poles, which are in need of replacement in the short term, Mr. Kennedy explained that the costs would be credited to the developer.⁹⁸ This level of analysis is not done during the Impact

⁹² *Id.* at 20-21.

⁹³ *Id.* at 45-51.

⁹⁴ *Id.* at 28-29.

⁹⁵ *Id.* Mr. Kennedy had no direct knowledge of when the circuits had most recently been inspected. *Id.* at 153.

⁹⁶ *Id.* at 174.

⁹⁷ *Id.* at 29-30.

⁹⁸ *Id.* at 131, 148.

Study, but post-interconnection service agreement. This is when the design engineer will look at each pole to determine whether it is in a condemned state. Because the costs in the Impact Study are +/- 25 percent, National Grid does not expend the resources to do that level of detailed analysis until they advance to the work management design phase.⁹⁹

Mr. Kennedy confirmed that in his experience Impact Studies do not contain an alternatives analysis. He stated that National Grid studies the proposed project and as was done on December 19, 2014, provides options after.¹⁰⁰ He stated that “[i]t’s been my experience that when dealing with other DG developers that when presented with options, they make a decision and we proceed accordingly.”¹⁰¹ Mr. Kennedy stated that while National Grid is not bound to the customer-proposed point of interconnection, it is always the starting point. National Grid may move that point to a different pole in the vicinity, but would not move it even a quarter mile away.¹⁰² On National Grid’s side of the project, Mr. Kennedy agreed that the Company is responsible for ensuring that the design is as efficient as possible. Therefore, if there are multiple circuits in the same location, National Grid may move the interconnection to one of those circuits.¹⁰³ National Grid only studies one point of interconnection per Impact Study because National Grid does not know the results of the study until it is completed. Mr. Kennedy could not point to tariff language that explains that it is only one study and not multiple studies until something fits into the system. However, if an Impact Study determines that an interconnection is not feasible, National Grid requires a new study.¹⁰⁴

⁹⁹ *Id.* at 149-50.

¹⁰⁰ *Id.* at 130.

¹⁰¹ *Id.* at 142.

¹⁰² *Id.* at 154-55.

¹⁰³ *Id.* at 163, 165.

¹⁰⁴ *Id.* at 165-167.

Turning to the second Impact Study, Mr. Kennedy noted that WED had chosen to have National Grid study the extension of the 23 kV circuit rather than revise the December 18, 2014 study of the 12.4 kV circuits. Mr. Kennedy indicated that National Grid and WED entered into another Impact Study agreement despite Mr. Depasquale's questioning of the requirement. Mr. Kennedy stated that the requirement was necessary to ensure that all National Grid customers are treated the same under the tariff. However, in this case, National Grid agreed to allow payment of the Impact Study fees to be incorporated into the costs within a future interconnection service agreement.¹⁰⁵ He clarified that National Grid agreed to move forward with the new Impact Study without receiving payment up front.¹⁰⁶ He denied that WED was being charged twice for one Impact Study.¹⁰⁷ He also denied that the filing of the Petition in this docket or the threat of legislation from Mr. Depasquale was the reason the 23 kV option was identified.¹⁰⁸

However, Mr. Kennedy testified that National Grid made a business decision based on the Petition before the PUC, threats of litigation, legislative action, and complaints to various executives at National Grid, to expedite this project "which meant dedicating one full resource all of his time with extended periods of time, nights and weekends to deliver the 23 kV Impact Study" in 60 days.¹⁰⁹ He stated that the goal all along has been to get WED connected and denied that this kind of pressure "is what it takes to get [National Grid's] time and interest aligned with a project like this."¹¹⁰ Nonetheless, even if WED had accepted the February 18, 2015 Impact Study and requested an Interconnection Service Agreement, the construction schedule for the overhead route would be 17 to 20 months, a timeframe that would again likely

¹⁰⁵ *Id.* at 27, 31-34.

¹⁰⁶ *Id.* at 54-55, 77. Mr. Kennedy testified that National Grid began reviewing the 23 kV circuit as of the December 19, 2014 meeting with WED in order to make a good faith effort to find a way to interconnect the projects. *Id.* at 77-78.

¹⁰⁷ *Id.* at 54-55.

¹⁰⁸ *Id.* at 64-66.

¹⁰⁹ *Id.* at 84.

¹¹⁰ *Id.* at 85-86.

disqualify WED projects from completing their requirements under the DG standard contract provisions. He denied that National Grid “planned” that outcome.¹¹¹

National Grid had agreed to study an overhead route and an underground route. The February 18, 2014 Impact Study showed the results of the overhead route. As of the date of the hearing, the underground route had not been completed because, according to Mr. Kennedy, National Grid was waiting for WED’s confirmation of a change in the configuration, something which was raised on March 2, 2015. According to Mr. Kennedy, the agreement between National Grid and WED, dated January 30, 2015, was that National Grid would study the line extension along Flat River Road. However, WED just recently proposed in a conversation, the possibility of bringing the line down the bike path in the area. Therefore, National Grid had just requested confirmation of the change. Additionally, as of the date of the hearing, Mr. Kennedy stated that National Grid was still waiting for WED to provide a revised site plan for the West Log Ridge Road projects, something that was detailed in a January 30, 2015 email.¹¹²

Addressing WED’s proposal to construct the underground route, Mr. Kennedy stated that WED would be allowed to provide a design for the manhole duct system, to procure all that equipment per National Grid’s specifications, and to install that with National Grid’s supervision. However, WED would not be allowed to perform any overhead line work and National Grid would not allow WED to install any underground cable and/or associated equipment.¹¹³ Therefore, Mr. Kennedy agreed that the schedule would be dependent upon

¹¹¹ *Id.* at 92-93.

¹¹² *Id.* at 32-35.

¹¹³ *Id.* at 36-37, 104-05. During his testimony on March 4, 2015, Mr. Depasquale had testified that Michael Ryan, Director of Government Affairs for National Grid in Rhode Island, told him that WED would be allowed to put in the underground duct and volt system from the 23 kV line to the site and perform that work on its own to expedite it. He then stated that the parties were going to look at both prices and take the least expensive option for the material. Either WED would be allowed to purchase the materials or National Grid would match the price and WED would be allowed to install the whole system and then National Grid would interconnect it at the substation. Tr. 3/4/15 at

National Grid's procurement schedule.¹¹⁴ He was unable to say what the schedule would be for seven miles of underground cable as the Impact Study was not complete.¹¹⁵

Mr. Kennedy explained that National Grid's position is consistent with how developers of industrial parks or commercial developments would be treated.¹¹⁶ Mr. Kennedy did not have direct knowledge of the procurement process and struggled to answer questions of why WED could not attempt to procure materials approved by National Grid or from vendors approved by National Grid.¹¹⁷ He stated that there are situations where National Grid allows third-party vendors to run lines or work on the distribution system, such as for very large projects, whether they be overhead or underground. National Grid has an approved contractor list for these instances. While questioning whether WED could have the work done at a faster pace utilizing one of the approved contractors, Mr. Kennedy could only testify that he had been advised by those in a higher position at the Company that it would not be allowed. Mr. Kennedy did express concern that there may be an issue with labor agreements or vendor agreements in this scenario.¹¹⁸

VII. Arbitrator's Findings

For the reasons set forth below, none of the requested relief should be ordered by the PUC because WED did not meet its burden of proof on any of the allegations.

108-09. Mr. Kennedy testified that in his position, Mr. Ryan has not authority to make decisions regarding the interconnection processes with proposed interconnecting customers. Tr. 3/5/15 at 37, 41-42.

¹¹⁴ *Id.* at 99-100.

¹¹⁵ *Id.* at 101-02.

¹¹⁶ *Id.* at 168-69.

¹¹⁷ *Id.* at 169-70.

¹¹⁸ *Id.* at 170-72, 175.

A. National Grid is not overdue to issue its impact studies for any of the projects nor is there any basis for ordering corrected studies at this time.

1. December 18, 2014 Impact Study

WED has alleged that National Grid is overdue to issue impact studies for all of the projects and requested the PUC order National Grid to provide corrected Impact Studies. The issue in this matter is primarily about the combined Impact Studies for COV1-COV6.¹¹⁹ The first question was whether the Impact Study provided on December 18, 2014 and ultimately rejected by WED, was timely provided. The evidence in the record shows that it was. The Impact Study was requested on August 15, 2014 for the COV1-COV6 projects. A kick-off meeting was held on September 11, 2014 during which, National Grid requested certain information of WED.¹²⁰ Some of the requested information was provided to National Grid on October 9, 2014.¹²¹ Additional information was requested by National Grid at various points in time, stopping the clock, resulting in their calculation of time showing that the Impact Study provided on December 18, 2014 took 56 of the 90 days.¹²²

While conceding that the tariff allows for stoppage of National Grid's study clock when the Company is awaiting additional information, WED disputed whether all of the additional information was either truly required to complete the Impact Study or of the type that should stop the clock.¹²³ However, although not proven, even if the clock never stopped legitimately, National Grid provided the Impact Study for COV1-COV6 in 91 business days, excluding

¹¹⁹ The issue of the COV1 and COV2 projects was the subject of dispute resolution in Docket No. 4483. In Docket No 4483, there was disagreement over the charges for the impact study for COV2 which was not resolved until February 18, 2014. Additionally, certain data allowing National Grid to perform an anti-islanding study was not provided until January 2014, almost six months from the date of the request. (Docket No. 4483 Mediation/Non-Binding Arbitration Summary and Recommendations, pp. 12-13). This Impact Study was rejected by WED on the basis of cost and time. It is not subject to review under this docket.

¹²⁰ Joint Ex. 2 (Agreed Statement of Facts) at ¶ 46.

¹²¹ National Grid Ex. 2 (Exhibit I to Affidavit).

¹²² National Grid Ex. 2 at ¶ 21.

¹²³ Tr. 3/4/15 at 75-77, 80.

holidays, from August 15, 2014. Therefore, because there was at least some legitimate stopping of the clock, National Grid met the time frames set out in Part 3.4 of the DG Interconnection Standards.¹²⁴

Based on the testimony of Mr. Colombo, it might be somewhat questionable whether National Grid reasonably stopped the clock when it requested revised one line diagrams to include pole numbers.¹²⁵ However, on further review, the revised one line diagrams seeking pole numbers was part of the same request to show effectively grounded systems and impedance information of grounding banks, something that was not previously included.¹²⁶ An email from Mr. Colombo showed that the revised one-lines requested on October 15, 2014 and provided on October 29, 2014 reflect not only the new pole area, but also the installation of underground feeders by WED.¹²⁷ Therefore, there is no evidence that National Grid was unreasonable in its request nor that it was in violation of the DG Interconnection Standards by stopping the review clock.

Similarly, based on the testimony of Mr. Peters, it is somewhat concerning that National Grid appears to have made multiple requests for wind data related to the COV1-COV6 Impact Study issued December 18, 2014 when in the subsequent Impact Study, the Company ultimately used wind data that had been provided early on in the process.¹²⁸ On this point, Mr. Peters and Mr. Depasquale testified that National Grid was seeking specific wind information for a specific day whereas the written evidence in the record only shows that National Grid was seeking

¹²⁴ Sheet 17 of RIPUC 2078 provides the time frames in calendar days. However, it also refers to Table 1 which makes clear that the days are business days, in order to read both provisions of the tariff consistently, calendar days refers to National Grid's business days. For example, on September 12, 2014, National Grid requested information about the turbines, flicker data, and revised one line diagrams to show effectively grounded systems and impedance information of grounding banks.

¹²⁵ Tr. 3/4/15 at 117-18.

¹²⁶ National Grid Ex. 2 (Exhibit H to Affidavit).

¹²⁷ National Grid Ex. 2 (Exhibit K to Affidavit).

¹²⁸ Tr. 3/4/15 at 176, 178-183.

information about the turbines on a variable windy day, consistent with Mr. Kennedy's testimony. It seems Mr. Peters was correct that there was a miscommunication somewhere in the process about the information being sought and the purpose. What is not clear is between whom the miscommunication occurred. National Grid stopped the review clock for a period of time because the Company reasonably believed it did not have the necessary information to perform the wind analysis and thus, was reasonable in stopping the clock.

WED argued that the Impact Study was flawed because National Grid applied wind data from two turbines from a different manufacturer in the study rather than the data for the VENSYS turbines that will be installed. WED requested the PUC order corrected studies be performed. There was no definitive evidence in the record of whether use of this data was the sole reason National Grid determined that only seven of the ten turbines could be connected to the circuits and substations studied.¹²⁹ Rather than requiring National Grid to revise the study, the parties agreed to a new study which would not utilize the same circuits. In retrospect, while National Grid appears to have had the information it needed to do the proper analysis in time for the December 18, 2014, it was not until meetings that took place after the issuance of the December 18, 2014 Impact Study that Mr. Peters, finally understanding what National Grid wished to do with the information, provided the logic to National Grid to allow them to appropriately utilize the actual wind data from the North Kingstown and NBC turbines in the Impact Study. Therefore, there does not appear to be any intent by National Grid to

¹²⁹ Regardless, even if the analysis was flawed and was the sole factor in finding that only seven turbines could interconnect, the substation work, including the direct transfer trip installation, and reconductoring of the two 12.4 kV circuits still would have been necessary and it is clear from the record that WED was not going to pay the System Upgrade costs associated with the December 18, 2014 impact study. Therefore, for purposes of these projects, the wind analysis would have had little to no impact on the decision whether or not to accept the December 18, 2014 Impact Study.

mischaracterize the effects of the turbines on the distribution system.¹³⁰ Having rejected the December 18, 2014 Impact Study, in its Petition, WED requested the PUC require National Grid to provide corrected impact studies, presumably to fix the wind data. However, at this time, there is no basis to order “corrected impact studies” for the projects.¹³¹

2. February 18, 2015 Impact Study

Per an agreement between WED and National Grid to study a different route rather than revise the December 18, 2014 Impact Study, on February 18, 2015, National Grid provided an Impact Study to connect COV1-COV6 via a subtransmission line. There is no dispute that this Impact Study for an overhead route to connect the turbines to a 23 kV subtransmission line located seven to eight miles from the project site was timely provided. In addition, at the hearing, National Grid’s witness testified that he was still awaiting data from WED to complete an Impact Study using an underground route.¹³²

Mr. Depasquale questioned whether a new Impact Study agreement should have been executed and paid for. He testified that he believed that the second Impact Study should have been a continuation of the first one. WED’s engineer testified that in his experience, a utility might provide an alternative in a study or may require a new study to be initiated where the first study required the project to change significantly. In this case, the December 18, 2014 Impact Study would have changed the project from ten turbines to seven. Furthermore, the subsequent study was to be a study of a completely different circuit, classified as a subtransmission line,

¹³⁰ Tr. 3/4/15 at 144. Mr. Kennedy stated that National Grid had not been asked to revise the December 18, 2014 impact study using VENSYS data.

¹³¹ Mr. Depasquale referred to the February 18, 2015 impact study as a corrected study after WED chose to have National Grid study the extension of the subtransmission line. Because the extension of the 23 kV line resulted in lower costs, revising the December 18, 2014 impact study using VENSYS wind data would be a waste of resources.

¹³² Tr. 3/5/15 at 34-35.

several miles away. Therefore, requiring the initiation of a new study in this instance to restart the clock appears reasonable.¹³³

3. The DG Interconnection Standards do not require the study of multiple options within each study

A related issue was whether the December 18, 2014 Impact Study should have studied more than one circuit given the substantial cost differential between that study and the February 18, 2015 Impact Study. Ultimately, interconnecting at the two 12.4 kV circuits closest to the projects was more than twice as expensive as extending the 23 kV subtransmission line that ends approximately seven miles from the project. There were many questions in the record about why National Grid only studied the two circuits originally proposed by WED in the application rather than assessing all reasonable points of interconnection in one Impact Study, with the question about whether, in doing so, National Grid complied with the DG Interconnection Standards.¹³⁴

Mr. Kennedy explained that each circuit or set of circuits studied constitutes one Impact Study. This means that if the results of an Impact Study show that interconnection will be very costly or infeasible a new Impact Study would be required in order to study interconnection on a different circuit. He stated that National Grid does not know until the end of the Impact Study whether or not there will be substantial System Modifications required or whether the project will even be able to interconnect. That is the purpose of the Impact Study. Furthermore, he

¹³³ Regardless, R.I. Gen. Laws § 39-26.3-4(c) provides that “[t]o the extent that an impact study fee established under this section does not cover the reasonable cost of an impact study for a given non-residential project that commences operation, the balance of such costs shall be recovered from such applicant through billings after the project is online.” Furthermore, National Grid has agreed to recover the additional impact study costs through the payment plan for System Modifications. Therefore, regardless of whether a new impact study agreement was initiated, the actual costs of the total impact study process would be recoverable from WED.

¹³⁴ The cost to connect to the two 12.4 kV circuits was estimated at \$12,759,544 for the interconnection of only seven of the ten turbines. The cost to run the new 23 kV line in an overhead configuration was \$5,366,600. This estimate does not include costs that may be involved if pole work takes place in a Verizon Maintenance Area. The estimated timeframe to complete the project was 17 to 20 months and was contingent upon Verizon’s work schedule, the customer’s ability to obtain easements and required permitting for work that takes place on private property and to secure roadway construction of the expansion of West Log Bridge Road. National Grid Ex. 2 (Exhibit B to Affidavit), National Grid Ex. 2 (Exhibit C to Affidavit), pp. 5-6.

testified that the work from one Impact Study cannot be transferred to another study on another circuit.¹³⁵ While the DG Interconnection Standards could be more clearly stated to explain this to a customer, Mr. Kennedy's explanation is reasonable and does not constitute a violation of the DG Interconnection Standards nor does it constitute obstruction of WED's project.

This case illustrates Mr. Kennedy's points very well. At the time the Impact Study commenced, at a high level, interconnection of the ten turbines on the 12.4 kV circuits appeared feasible. It was undisputed that in the majority of cases, the closest point to the project on the utility's system will be the least expensive point of interconnection. WED's engineer and Mr. Kennedy both testified to that. While Mr. Colombo accurately stated that National Grid has better knowledge of its system than he does, testimony from both parties indicated that studying a point of interconnection over seven miles from a project is not a place either engineer would believe to be the obvious starting point.

Mr. Colombo stated that National Grid is not bound to a developer's initial suggested point of common coupling or point of interconnection. Mr. Kennedy explained that there have been times when the Company has adjusted the point of interconnection to a more convenient pole or a different circuit if there is more than one available on the same street. However, based on the fact that in the majority of cases, the closest points of interconnection are the least expensive, the Company would not study a point of interconnection seven miles away.

Finally, the Impact Study reviews a point of interconnection on a circuit (or two circuits in the case of WED's December 18, 2014 combined Impact Study). Extending a 23 kV circuit from where it ends over seven miles from the project is a much different study from two 12.4 kV circuits going into two different substations. The work from one study could not be transferred

¹³⁵ Tr. 3/5/15 at 165-67, 182, 188. Mr. Kennedy noted that the WED project was the first in the three years of doing these studies that a project could not be connected. Tr. 3/5/15 at 173.

to the other. This is much different from expecting National Grid to choose to study interconnection at a different pole or on a different circuit in the area where there are two or three choices on the same poles. For all of these reasons, it would be unreasonable to read the DG Standards or the Distributed Generation Interconnection Act¹³⁶ to require multiple studies within a limited timeframe until interconnection could be achieved.

B. National Grid is not overdue to connect Coventry 1 and 2

Because Petitioners rejected the COV1 and COV2 impact studies, and did not choose to enter into an Interconnection Service Agreement, National Grid currently has no obligation to interconnect the projects and thus, is not overdue to interconnect the projects as alleged by Petitioners.

C. There is no statutory or regulatory requirement that all DG projects be interconnected in 150 days from Application. National Grid has shown cause why COV1-COV6 have not been interconnected and do not currently have a timeline for interconnection where WED has not accepted an Impact Study nor requested an Interconnection Service Agreement.

WED alleged that National Grid violated the DG Interconnection Standards by not interconnecting the projects within 150 days of submitting an application for interconnection. The Distributed Generation Interconnection Act does not require interconnection of projects within 150 days of submission of an application for interconnection.¹³⁷ The DG Interconnection Standards are less clear, but cannot reasonably be read to require interconnection in 150 days. Finally, as a practical matter WED has chosen not to enter into an Interconnection Service Agreement for COV1-COV6 following the February 18, 2015 Impact Study, but rather chose to

¹³⁶ R.I. Gen. Laws §§ 39-26.3-1-6.

¹³⁷ R.I. Gen. Laws §§ 39-26.3-1-6.

await the results of a study using an underground route rather than an overhead route.¹³⁸ Therefore, National Grid has no current obligation to interconnect these projects. Thus, National Grid has shown cause why these projects have not been interconnected nor have a timeline for interconnection.

R.I. Gen. Laws § 39-26.2-1 states: “[t]he general assembly hereby finds and declares that the expeditious completion of the application process for renewable distributed generation is in the public interest.” The completion of the application process is set forth in R.I. Gen. Laws § 39-26.2-3(b)-(d):

(b) An applicant for a renewable distributed generation interconnection must submit an application to the electric distribution company for an impact study, including a request for an estimate of the cost of interconnecting the renewable distributed generation resource to the distribution system. The applicant may request a feasibility study prior to requesting an impact study, but the applicant is not required to do so and may submit an application for an impact study without having obtained a feasibility study. The distribution company shall follow the schedule below for all applications.

(c) Upon receipt of a completed application requesting a feasibility study and receipt of the applicable feasibility study fee, the electric distribution company shall provide a feasibility study to the applicant within thirty (30) days.

(d) Upon receipt of a completed application requesting an impact study and receipt of the applicable impact study fee, the electric distribution company shall provide an impact study within ninety (90) days.

Addressed in these subsections are the timeframes required from application to the issuance of studies. There is no requirement that National Grid interconnect customers within 150 days of application for interconnection. In fact, the statute does not even address the signing of an Interconnection Service Agreement. Therefore, there is no statutory basis for requiring interconnections within 150 days of application for interconnection.

The DG Interconnection Standards are a bit more confusing as to the timeframes. A plain reading of Section 3.3 and paragraph 3 of Section 3.4 could lead a customer to believe that the

¹³⁸ It was unrefuted that as of March 5, 2015, National Grid was awaiting site plans and had just been made aware of a proposed change in the underground route. It would be unreasonable to expect National Grid to perform a study without those necessary pieces of information.

maximum timeframe applies to the entire interconnection process through the Certificate of Completion and authorized interconnection. However, a closer review of Table 1 – Timeframes (Note 1) and the Explanatory Notes to table one clarifies that the times apply through to the delivery of an executable Interconnection Service Agreement. Therefore, National Grid has not violated the DG Interconnection Standards by not interconnecting the projects within 150 days.¹³⁹ However, this is something that should be clarified in the DG Interconnection Standards.

As a practical matter, extending a subtransmission circuit over seven miles would likely be impossible to interconnect in 150 days from application unless National Grid was to prioritize this project ahead of all other work. In reality, National Grid would only have about 60 days to complete the work from the time the Impact Study was issued. And this assumes that all permits were in place at the outset, Verizon schedules could be coordinated, and weather was favorable. Such a timeline is shorter than even that testified to by Mr. Depasquale referencing the use of outside contractors.¹⁴⁰

D. WED did not prove that National Grid has miscategorized costs within the System Modifications section of the Impact Studies and attempted to inappropriately charge WED for additions to the Company’s electric power system in violation of Section 5.4 of the DG Interconnection Standards.

WED alleged that in the December 18, 2014 Impact Study, National Grid was charging WED for costs under the category of System Modifications which were inappropriate because they are upgrades that benefit other customers. There was no evidence in the record to support the allegation that upgrades to the distribution system would have been needed absent the

¹³⁹ Again, it is worth noting that WED has never requested an Interconnection Service Agreement requiring interconnection.

¹⁴⁰ While up to the developer to decide on the appropriate time to apply for interconnection and the appropriate time to enroll in various distributed generation programs, without an impact study in hand, it may be difficult to predict when commercial operation is practical. Therefore, developers may want to consider this when deciding in which enrollment to participate.

interconnection of WED's wind turbines.¹⁴¹ Therefore, the allegation is unsupported. Furthermore, the December 18, 2014 Impact Study has been abandoned and therefore, the issue with regard to that Impact Study is moot.

System Modifications are “modifications or additions to distribution-related Company facilities that are integrated with the Company [electric power system] for the benefit of the Interconnecting Customer.”¹⁴² There is no dispute that the extension of the 23 kV subtransmission line is necessary solely to interconnect COV1-COV6. National Grid's witness confirmed that \$4 million of the \$5.3 million cost estimate is the running of the new 23 kV line. WED's engineer testified that the costs associated with the System Modifications are similar to what he would expect to see based on other projects on a dollar per mile comparison.

Under the DG Interconnection Standards, if National Grid includes “additions to the Company's [electric power system] to serve other customers,” those costs are not to be charged to the Interconnecting Customer.¹⁴³ While WED's witnesses opined that certain substation upgrades in the December 18, 2014 Impact Study may not have been necessary and that there probably would have been fewer pole replacements if recent capital projects had been performed in the Coventry area, only National Grid's witness testified that the existing customers could be

¹⁴¹ The standard of whether something is a System Modification or additions to serve other customers is different from whether there would be any benefit to other customers from the System Modifications. While other customers may ultimately benefit from replacement of poles before they are condemned or from the increased sizing of a circuit, if that cost need not be incurred presently to serve those customers, ratepayers on the distribution system should not have to contribute to those costs presently. National Grid inspects the circuits on a five-year basis and works that information into the infrastructure, safety, and reliability plan reviewed by the PUC annually. This plan prioritizes projects and the addition of projects not necessary at the present time for the safety and reliability of the system would either add costs to the program or cause a reprioritization which may result in a less reliable system. A review of the FY2016 Infrastructure, Safety, and Reliability Plan shows SCADA work to be performed at the Hopkins Hill substation, but no major upgrades nor any major capital work on the feeders identified in the December 18, 2014 Impact Study in the next five years. Currently, there is no planning document that considers where distributed generation is most needed or cost effective for the distribution system. On March 31, 2015, as part of its consideration of National Grid's FY2016 Infrastructure, Safety, and Reliability Plan, the PUC ordered National Grid to include consideration of distributed generation in its 10-year Long Range Plans that are being developed.

¹⁴² RIPUC 2078 (Section 1.2).

¹⁴³ RIPUC 2078 (Sections 1.2, 5.3 and 5.4).

served by the current facilities (circuits and substations) in the area without additions to the electric power system.¹⁴⁴ Even Mr. Depasquale testified that the Coventry system is currently serving customers in the area. Despite Mr. Depasquale's representations of Mr. Colombo's opinion of the distribution system in Coventry, Mr. Colombo never stated in any of his testimony that "if National Grid had properly maintained and upgraded its distribution system, the huge bill for system improvements associated with the interconnection would not have been required." At the hearing, Mr. Colombo denied advising Mr. Depasquale that much of the distribution system in the area needed to be upgraded.¹⁴⁵

WED disputes whether it is reasonable for all of the utility poles to be included in the System Modification costs and whether WED should be responsible for the "cost of removal."¹⁴⁶ In this case, WED is the sole cause of the removal of poles being replaced at this time. There is a cost to the Company to remove the poles. It is undisputed that these poles are adequately serving customers in the Coventry area and as such, are not being removed for the benefit of ratepayers in general. Thus, ratepayers should not have to pay costs incurred because of the addition of these projects. Mr. Kennedy stated that if poles replaced during the interconnection process are found to be those which have been condemned, WED will be credited those costs. This makes sense because if the poles are found to be inadequate for the current use or are already slated for replacement, the cost should shift to all ratepayers.¹⁴⁷ Consequently, there is no evidence that National Grid has attempted to shift ratepayer costs onto Petitioners' projects under the category of System Modifications.

¹⁴⁴ Tr. 3/15/15 at 174. While Mr. Kennedy was unaware of the specific planning documents that may exist regarding the inspection cycle, he did testify that those conducting the impact study do interact with the distribution planning and engineering group to determine if there is any work planned on the affected circuits. Tr. 3/5/15 at 150.

¹⁴⁵ Tr. 3/4/15 at 156.

¹⁴⁶ Tr. 3/4/15 at 52-53.

¹⁴⁷ Mr. Kennedy pointed out that the cost estimates are +/- 25 percent and therefore, are subject to adjustments based on further detailed construction review. Tr. 3/5/15 at 146-51.

E. Construction of the Interconnection

There was no evidence that National Grid's estimated costs in the February 18, 2015 Impact Study were unreasonable. Therefore, the next issue is whether National Grid should be required to allow WED to perform the construction on the Company-side of the project. National Grid is solely responsible for the safety and reliability of its distribution system for all customers and the DG Interconnection Standards require National Grid to perform the System Modifications. National Grid's witness testified that the Company will allow WED to submit a design to perform excavation and ductwork in an underground configuration consistent with what National Grid allows to subdivision or industrial park developers.¹⁴⁸ However, WED desires to design, engineer and construct the interconnection using an underground configuration, including installing the cable.

WED did not meet its burden of showing that it had, in fact, designed an underground route, provided an engineering study, and had vendors who were ready, willing, and able to construct the facilities to the point of interconnection. Nor did WED produce sufficient evidence supporting its contention that it could do all of this work to National Grid's specifications at a lower cost and in a more timely manner. However, National Grid did not provide sufficient evidence to support its denial of WED's proposal under the following specific circumstances: (1) that WED provide a design and engineering plans that meet National Grid's safety specifications; (2) that WED can procure materials that meet National Grid's specifications from vendors on National Grid's approved vendor list at a lower cost; (3) that WED can contract for construction with vendors on National Grid's approved vendor list at a lower cost and on a more expedited timeline; and (4) that WED's contractor submits to all necessary inspections. Therefore, WED did not meet its burden to move forward with its proposal. National Grid did

¹⁴⁸ Tr. 3/5/15 at 168-69.

not adequately rebut WED's proposal under the limited set of circumstances enumerated in this paragraph.

F. The tax issue has been addressed by the PUC in Docket No. 4483

Finally, with regard to WED's request that National Grid not be allowed to charge taxes to the developer, that issue has been addressed by the PUC in Docket No. 4483 and is not appropriate for this arbitration.

G. ISO-NE Operating Procedures

The applicability of ISO-NE Operating Procedure 14 (OP-14) requirements is outside of the scope of this arbitration. While these projects have been set up as six separate projects to each develop between 1.5 MW and 3 MW with six points of common coupling, they will, in the aggregate, have a nameplate capacity of 15 MW on one circuit. Output from at least some of these projects will end up in the wholesale market in some fashion.¹⁴⁹ Whether or not it is National Grid's or WED's responsibility to comply with various ISO-NE requirements, it should be one of them. If National Grid has the responsibility, compliance will most likely require, at the very least, wholesale cooperation by WED in the process. Either way, it is not unreasonable nor a clear intent to obstruct the project for National Grid to ensure compliance with all ISO-NE requirements.

VIII. Conclusion

In his pre-filed testimony, Mr. Depasquale stated that National Grid has a conflict of interest in administering interconnections of distribution generation because "National Grid supplies natural gas to power plants in this region that are in direct competition with renewable energy in the evolution of our new energy economy. The Company also supplies natural gas to

¹⁴⁹ Power purchased by National Grid from a project enrolled in a distributed generation standard contract, is sold into the wholesale energy market.

residential customers throughout the region and, therefore, have [sic] a definite interest in maintaining the high price of natural gas.” Mr. Depasquale then stated that his business plan, to develop 150 MW of renewable power in Rhode Island will depress that price, “clearly threatening National Grid’s business model.”¹⁵⁰ It is difficult to understand how National Grid has an interest in maintaining high gas prices when as the gas distribution company in Rhode Island, it does not profit from commodity cost of gas. Because National Grid has an interest in customers using natural gas, and high gas prices would cause customers not to use gas (or switch to other alternatives), it would be illogical for the Company to encourage high gas prices. Therefore, there is no inherent conflict of interest in National Grid’s gas distribution company business plan and the appropriate administration of the distributed generation interconnections.

In fact, as of December 31, 2014, National Grid had interconnected a total of 456 projects in Rhode Island totaling 50.4 MW of nameplate capacity. This suggests that overall National Grid is performing the work necessary to interconnect distributed generation projects. Within the distributed generation program, the largest project currently operating is a 3.7 MW solar installation, and shows National Grid’s ability to perform the interconnection. WED’s projects total 15 MW in an area that has not experienced significant load growth requiring upgrades to the system in many years. Therefore, it is a unique project compared to others which have submitted applications for interconnection in Rhode Island.

What has become apparent over the past fifteen months throughout various dockets is that while attempting to cooperate, the relationship between these two parties has become strained at best and adversarial at worst. The scope of these projects has evolved over time as more information has been assessed. There have been miscommunications between the parties. However, I find no indication that one party or the other has intentionally misled the other nor

¹⁵⁰ WED Ex. 1A at 18.

have I found any indication that National Grid has, in any way, attempted to sabotage Mr. Depasquale's attempt to install the distributed generation projects in Coventry. Mr. Depasquale is in the unenviable position of being the first developer in Rhode Island to propose a large multi-project installation of distributed generation. He has chosen an area that has not seen load growth requiring upgrades in recent history. There are bound to be unexpected challenges.

The December 18, 2014 Impact Study unfortunately did not meet WED's needs. National Grid then dedicated an engineer full time, plus overtime, to perform a second study on a completely different circuit over seven miles away. Not even WED's engineer argued that this would have logically been the first point studied. Twenty/twenty hindsight can be misleading as we all realize later what we could have done before. However, focusing on the "could've, should've and would've" arguments detracts from reaching constructive results. Litigation and threats of legislation take personnel away from the work of reaching a constructive result. While the arbitration process is potentially more efficient and cost effective than litigation, it takes resources away from the department performing the Impact Studies and should be used only when the parties reach an impasse. It is not clear that the parties were at an impasse given the fact that as of March 5, 2015, WED was still working on the design of a new underground configuration. This arbitration has revealed that the parties have each invested significant time and resources into trying to find solutions as the project has evolved, and is still continuing to evolve, with the results of each study performed.

Because of the evolving nature of these projects, this arbitration process has been largely about sorting out the issues as they relate to each project. Hopefully, the parties will be able to enter into an Interconnection Service Agreement allowing National Grid to commence work and allowing WED to interconnect and begin producing renewable power without the necessity of a

third dispute resolution process. The Renewable Energy Growth tariff was just approved for the first year. With the goal of enrolling 160 MW of nameplate capacity over the next four years, there will be many more projects on the horizon for National Grid to process and the Company will need the ability to engage its available resources to adequately respond to the needs of each one in order.

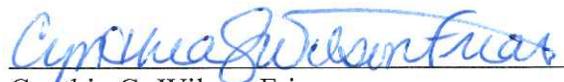
A. Recommendations

I recommend two possible solutions for consideration. First, National Grid should review its personnel resources within the Technical Sales and Engineering Support Group to determine whether it can be organized such that when a developer submits an interconnection application for a project of a certain size, location, or complexity, a project manager can be assigned to that project without adversely impacting all of the other smaller projects already in the interconnection queue. Second, the interconnection standards should have a provision for flexibility under this scenario such that timelines are not extended indefinitely, but are the result of a negotiated process at the beginning of the process to lay out the expectations of both the developer and National Grid to ensure that all information is available and that there will be no clock stopping except in the event of unexpected circumstances. The agreement should be reduced to writing between the parties.

B. Next Steps

Section 9.2.k of the DG Interconnection Standards states: If the Parties accept the neutral's recommendation, the Dispute Resolution Process ends here." Section 9.2.1 states: "If one or both Parties do not accept the neutral recommendation and there is still no agreement, the dispute proceeds to Step 9.3." Section 9.3 of the tariff provides for adjudication by the PUC at the request of one or both of the parties, in writing. There is no deadline in the section for

requesting adjudication. For clarity, because this has been presented as a recommendation to the PUC, the parties should advise the PUC within fourteen (14) days from the date of this recommendation regarding the recommendations they will accept and those which they do not.



Cynthia G. Wilson-Frias,
Deputy Chief of Legal Services
April 2, 2015

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION**

IN RE: PETITION OF WED COVENTRY ONE,)	
LLC, WED COVENTRY TWO, LLC, WED)	
COVENTRY THREE, LLC, WED COVENTRY)	Docket No. 4547
FOUR, LLC, WED COVENTRY FIVE, LLC, and)	
WED COVENTRY SIX, LLC)	

AGREED STATEMENT OF FACTS

Petitioners WED Coventry One, LLC, WED Coventry Two, LLC, WED Coventry Three, LLC, WED Coventry Four, LLC, WED Coventry Five, LLC, and WED Coventry Six, LLC (collectively, WED) and Respondent National Grid¹ hereby stipulate and agree to the following facts:

I. OVERVIEW OF PROPOSED WED PROJECTS

1. WED intends to construct and interconnect 10 separate 1.5MW turbines in the area. The full scope of the project now includes six separate points of interconnection for the ten turbines:

ENTITY	TURBINES
WED Coventry One, LLC	COV-1 – 1.5MW
WED Coventry Two, LLC	COV-2 – 1.5MW COV-2A – 1.5 MW COV-2B – 1.5 MW
WED Coventry Three, LLC	COV-3 – 1.5 MW
WED Coventry Four, LLC	COV-4 – 1.5 MW
WED Coventry Five, LLC	COV-5 – 1.5 MW
WED Coventry Six, LLC	COV-6 – 1.5 MW COV-6A – 1.5 MW COV-6B – 1.5 MW

¹ The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

2. WED Coventry One, LLC intends to construct its 1.5 megawatt (MW) wind turbine at 210 Piggy Lane – RI Plat 310, Lot 9 in Coventry, Rhode Island (“COV 1”).

3. WED Coventry Two, LLC intends to construct its three 1.5MW turbines on separate property off of Piggy Lane in Coventry (COV2, 2A and 2B).

4. WED Coventry Three, LLC intends to construct its 1.5MW wind turbine on property located at 5555 Flat River Road in Coventry (COV3).

5. WED Coventry Four, LLC intends to construct its 1.5MW turbine on property located at 000 Flat River Road in Coventry (COV4).

6. WED Coventry Five, LLC intends to construct its 1.5MW turbine on property located at Assessors Plat Map 304, Lot 2 in Coventry (COV5).

7. WED Coventry Six, LLC intends to construct its three 1.5MW turbines on property located at 00000 Victory Highway (Assessors Plot 303, Lot 003) (COV6), 00000 Perry Hill Road (Assessors Plat 310, Lot 018) (COV6A) and 2301 Victory Highway (Assessors Plat 304, Lot 003) (COV6B) all in Coventry.

II. ORIGINAL INTERCONNECTION APPLICATIONS FOR COV1 and COV2

8. WED Coventry One, LLC originally applied to National Grid for interconnection of COV1 on January 8, 2013.

9. WED Coventry Two, LLC originally applied to National Grid for interconnection of COV2 on January 8, 2013.

10. National Grid completed a feasibility study for COV 1 on March 5, 2013, estimating an interconnection cost of \$270,502 to interconnect COV 1 to Defendant’s distribution system.

11. WED Coventry One, LLC competed for a Distributed Generation Standard Contract (DG Contract) for the sale of electricity, renewable energy credits (RECs) and capacity from COV1 pursuant to R.I. Gen. Laws §39-26.2-1, et seq (the Act).

12. The Rhode Island Public Utilities Commission (PUC) ordered National Grid to enter into a DG Contract with WED Coventry One, LLC for COV1. *See* PUC Docket 4277/4288, Order 21087.

13. On August 2, 2013, WED Coventry One, LLC and Respondent executed a DG Contract for COV1 (the Contract).

14. The Contract required Plaintiff to pay a non-refundable Performance Guarantee Deposit of \$46,905, as required by the Act.

15. The Contract required that COV1 must achieve an hourly generation rate that supported its Proposed Hourly Output level of 1,500 kWh (the Output Demonstration) within eighteen months of execution of the Contract, or else the Contract would be terminated and WED Coventry One, LLC would forfeit its Performance Guarantee Deposit to ratepayers, pursuant to the Act.

16. On March 11, 2013, WED Coventry One, LLC signed an impact study agreement for COV1 with National Grid. National Grid received the required Impact Study fee of \$10,000 from WED Coventry One, LLC on June 21, 2013.

17. On April 3, 2014, WED Coventry Two, LLC signed an Impact Study Agreement for COV2, which National Grid had provided to WED Coventry Two, LLC on September 23, 2013. WED Coventry Two, LLC paid the \$10,000 Impact Study fee to National Grid on April 8, 2014.

18. On July 3, 2013, after WED paid the impact study fee for COV1, National Grid representatives met with WED representatives at the site of COV1 and COV2. At that meeting, National Grid and WED collectively determined that National Grid would perform a single impact study for both COV1 and COV2, and would provide a single cost estimate from that impact study for both projects. National Grid informed WED at this time that WED would need to sign a separate impact study agreement and pay a separate impact study fee for COV2 for National Grid to perform this joint study.

19. Three weeks later, on July 22, 2013, National Grid told WED that it would need voltage flicker data to be able to conduct and complete the impact studies for COV1 and COV2.

20. On August 9, 2013, National Grid informed WED that the National Grid engineer assigned to the project was on vacation and that it would provide an impact study agreement for COV2 once the engineer returned. National Grid also informed WED that the impact study fee for COV2 would exceed \$10,000.

21. Subsequently, on September 23, 2013, National Grid provided the impact study agreement for COV2.

22. It was not until April 4, 2014 that WED provided a signed impact study agreement for COV2.

23. Only two weeks later, on April 17, 2014, National Grid sent WED a joint Impact Study for COV1 and COV 2.

24. National Grid had determined that it was feasible to interconnect COV 1 and COV2 to the 12.47kV distribution system at the Coventry 54 substation.

25. \$907,000 of the quoted interconnection cost of COV1 and COV2 was for "System Modifications to the Company EPS" including "Engineering, design, construction and testing for

revenue metering, feeder modifications, reclosers, disconnect switches, and remote stations modifications."

26. \$22,400 of the quoted interconnection cost was for "Interconnecting Customer Interconnection Facilities" including "engineering review and acceptance, and compliance verification of the ICIFs including all required drawings and equipment spec reviews, relay settings, and construction."

27. \$197,140 of the quoted interconnection cost was for taxes.

28. WED Coventry One, LLC and WED Coventry Two, LLC cannot operate COV1 and COV2 until the projects are interconnected.

29. WED was dissatisfied with this impact study, and representatives from National Grid and WED met to discuss WED's proposed wind energy projects on May 1, 2014.

30. National Grid offered to separate COV1 and COV2 and provide separate impact studies. WED, however, declined, and instead indicated its intention to pursue building as many as 9 turbines at once.

31. After receiving the combined Impact Study for COV1 and COV2, WED resolved to develop eight additional turbines in Coventry.

III. STUDY OF COV1-6

32. Following the May 1, 2014 meeting, WED has been pursuing a plan to develop at least 7 turbines simultaneously.

33. By July 1, 2014, it became clear that WED intended to construct and interconnect 10 separate 1.5MW turbines in the area. The full scope of the project now includes six separate points of interconnection for the ten turbines.

34. WED Coventry One, LLC submitted a revised application for interconnection of COV1 on August 6, 2014.

35. WED Coventry Two, LLC submitted a revised application for interconnection of COV2 on August 6, 2014.

36. WED Coventry Two, LLC applied to National Grid for interconnection of COV2A and 2B on August 4, 2014, and then submitted a revised application on August 6, 2014.

37. WED Coventry Three, LLC applied to National Grid to interconnect COV3 on August 27, 2013, and then submitted a revised application on August 6, 2014.

38. WED Coventry Three, LLC applied for and received a DG Standard Contract for COV3, which includes an Output Demonstration deadline of June 17, 2016.

39. On December 11, 2014, WED Coventry Three, LLC paid the performance guaranty deposit to enroll COV3 in the distributed generation standard contract program.

40. WED Coventry Four, LLC applied to National Grid to interconnect COV4 on September 13, 2013, and then submitted a revised application on August 6, 2014.

41. WED Coventry Four, LLC applied for and received a DG Standard Contract for COV4, which includes an Output Demonstration deadline of June 17, 2016.

42. On December 11, 2014, WED Coventry Four, LLC paid the performance guaranty deposit to enroll COV4 in the distributed generation standard contract program.

43. WED Coventry Five, LLC applied to National Grid to interconnect COV5 on July 29, 2014.

44. WED Coventry Six, LLC applied to National Grid to interconnect COV6 on August 4, 2014.

45. Thereafter, on August 15, 2014, WED signed an Impact Study Agreement with National Grid for the combined study of COV1, COV2, COV2A, COV2B, COV3, COV4, COV5, COV6, COV6A and COV6B, and also signed a Letter of Understanding concerning the Combined Impact Study. National Grid received full payment of the \$50,000 Impact Study fee for this Combined Impact Study on August 29, 2014.

46. During the combined study kick-off meeting on September 11, 2014, National Grid requested certain data specific to the newly proposed turbines, including additional voltage flicker data that it needed to complete the impact study.

47. National Grid representatives met with WED representatives on at least three occasions between October 15, 2014 and November 14, 2014, and also held a separate phone call with WED's principal on December 8, 2014. During these meetings and this phone call, National Grid and WED had open dialogue about additional steps that needed to be taken on both sides to complete the impact study and facilitate the interconnection of the ten turbines.

48. On December 11, 2014, John Kennedy of National Grid, sent Petitioners an email saying:

Thank you again for the real time wind speed/generation information captured from the NK Green wind interconnection, it was critical to perform the long term dynamic modeling that was needed to accurately understand the impact of the proposed project to other customers fed from the electric distribution system in the area. The results showed significant voltage issues with all 15MW's of wind generation operating as currently proposed and showed that the wind generation cannot be fed from the existing electric distribution system in the area, without extensive mitigation in the form of significant conductor size upgrades or a brand new sub-transmission circuit brought to the wind turbine PCCs.

Based on today's review, our engineers are now working to complete the Impact Study by Tuesday, end of business so that we can review results with your team on Wednesday of next week if you are available. We are still running additional models to complete the study and I will provide for your review in advance of meeting as soon as I am able to. To further study the interconnection of the 15MWs and all 6 points of interconnection we would need to advance to a

Detailed Study as provided within the tariff and will review this option when we meet next week also. This additional study can incorporate any new generation data (at a fixed ramp rate) based on expected wind speed (from the NK Green data) if the manufacturer of the wind turbines is able to provide. This new data could potentially assist in mitigating the voltage concerns we are finding.

49. On December 18, 2014, National Grid issued its Combined Impact Study for the interconnection of all ten turbines in COV1-6 to National Grid's 12.47kV circuit.

50. The new impact study estimated a cost of \$5,166,918 to interconnect three turbines to Coventry substation 54 and \$7,592,626 to interconnect four turbines at Coventry substation 63, for a total of \$12,759,544.

51. WED was dissatisfied with the results of the combined impact study for the ten turbines. Since National Grid issued the ten-turbine impact study, National Grid and WED have been in regular contact – through phone calls and in-person meetings – discussing ways to facilitate the interconnection of all ten turbines at the least cost to WED. These meetings and discussion also have included representatives from the turbine manufacturer – Vensys.

52. WED has proposed to design, engineer and construct the interconnection of the ten proposed turbines at its own cost, including the installation of approximately twelve miles of conduit and the construction of a new substation that it would then give to National Grid.

53. Since then, National Grid has remained in contact with WED regarding the progress of the study, as well as about WED's communications with ISO-NE.² National Grid also has communicated with WED about ways in which WED can reduce the cost of System Modifications and is willing to work with WED in this regard, so long as any proposed cost-reduction measures (such as WED performing excavation work for an underground circuit) do not conflict with National Grid's legal obligations.

² On February 4, 2015, National Grid informed WED that it had initiated the transmission planning study per WED's request.

54. On February 18, 2015, National Grid delivered to WED an impact study for the interconnection of all 10 WED turbines to National Grid's 23kV circuit via a sub-transmission cable on overhead lines. When National Grid delivered that study, it provided WED with the option to proceed to Interconnection Service Agreements, or wait for National Grid to complete a study for an underground interconnection.

55. WED has paid a total of \$85,000 in application and study fees for COV1-6. COV1 has paid \$2,500 in application and feasibility study fees and \$10,000 in Impact Study fees. COV2 has paid \$2,500 in application and feasibility study fees and \$20,000 in Impact Study fees. COV3 has paid \$2,500 in application and feasibility study fees and \$10,000 in Impact Study fees. COV4 has paid \$2,500 in application and feasibility study fees and \$10,000 in Impact Study fees. COV5 has paid \$2,500 in application and feasibility study fees and \$10,000 in Impact Study fees. COV6 has paid \$2,500 in application and feasibility study fees and \$10,000 in Impact Study fees.

56. WED has proposed to design, engineer and construct the interconnection of the ten proposed turbines at its own cost, including the installation of approximately twelve miles of conduit and the construction of a new substation that it would then give to National Grid.

Respectfully submitted,

**The Narragansett Electric Company d/b/a
National Grid,**

By its Attorney,

/s/ Adam M. Ramos

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Dated: February 26, 2015

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above document was distributed to the Service List for Docket 4547 via email on February 26, 2015.

Docket No. 4547 IN RE: PETITION OF WED COVENTRY ONE, LLC, WED COVENTRY TWO, LLC, WED COVENTRY THREE, LLC, WED COVENTRY FOUR, LLC, WED COVENTRY FIVE, LLC, and WED COVENTRY SIX LLC

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