STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2, SUB 1220

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Williams Solar, LLC, Complainant, v. Duke Energy Progress, LLC, Respondent.	))))))))	WILLIAMS SOLAR'S PROPOSED ORDER GRANTING COMPLAINT

HEARD: Tuesday, June 17, 2020, at 11:00 a.m., via WebEx Videoconference.

BEFORE: Commissioner Kimberly W. Duffley, Presiding; Chair Charlotte A. Mitchell; and Commissioners ToNola D. Brown-Bland, Lyons Gray, and Daniel G. Clodfelter, Jeffrey A. Hughes, and Floyd B. McKissick, Jr.

APPEARANCES:

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BY THE COMMISSION: On October 24, 2019, Williams Solar, LLC (Williams Solar or Complainant) filed a Verified Complaint against Duke Energy Progress, LLC ("DEP" or "Respondent").

On November 1, 2019, the Commission issued an Order Serving Complaint directing DEP to satisfy the demands of Complainant or to file an answer on or before November 27, 2019.

On November 27, 2019, DEP filed its Answer and Motion to Dismiss.

On December 2, 2019, the Commission issued an Order Serving Answer and Motion to Dismiss requesting the Complainant to advise the Commission whether the Answer is acceptable and, if not, whether the Complaint requests a hearing to present evidence or present oral argument.

On December 19, 2019, Williams Solar filed its Reply to Answer and Motion to Dismiss. In its Reply, among other things, Williams Solar asked the Commission to afford it the opportunity to conduct discovery followed by hearing and the opportunity to present evidence in support of its Complaint.

On January 24, 2020, the Commission issued its Order Scheduling Hearing setting the matter for hearing commencing May 27, 2020. In this same order, the Commission also set deadlines for the filing of direct and rebuttal testimony.

On April 14, 2020, Williams Solar filed a Consent Request for Approval of Revised Procedural Schedule citing the ongoing State of Emergency relating to COVID-19 and seeking an order canceling the evidentiary hearing and requiring the parties to file affidavits in lieu of the evidentiary hearing. On April 15, 2020, Williams Solar filed an Alternative Request for Extension of Time in which, as an alternative to its Consent Request for Approval of Revised Procedural Schedule, it sought brief extensions of the existing deadlines for the filing of Direct and Rebuttal Testimony.

On April 20, 2020, the Commission issued an order extending the time for filing of testimony.

On April 28, 2020, Williams Solar filed the Direct Testimony and Exhibits Jonathan Burke and Charles F. Bolyard, Jr.

On May 12, 2020, DEP filed the Direct Testimony and Exhibits of Kenneth Jennings and Stephen Holmes, Jack McNeill, and Scott Jennings.

On May 19, 2020, Williams Solar filed the Rebuttal Testimony of Jonathan Burke and Charles F. Bolyard, Jr.

On May 20, 2020, the Commission issued its Order Continuing Hearing continuing the hearing then-scheduled for May 27, 2020, pending further order in light of the ongoing State of Emergency relating to COVID-19.

On June 3, 2020, the Commission issued an Order Scheduling Remote Hearing in which it rescheduling the hearing to commence June 17, 2020, by remote means. Each party subsequently filed statements consenting to the Commission holding the hearing by remote means.

On June 9, 2020, DEP filed a motion to excuse witness Jack McNeill from appearing at the June 17, 2020 hearing and permitting his pre-filed testimony and exhibits to be received into the evidence and made part of the record.

On July 11, 2020, the Commission issued an order granting DEP's motion to excuse witness McNeill from attending the schedule hearing. In this order, the Commission also directed DEP to ensure that it produced a witness at the hearing that could address general questions about DEP's customs, practices, general outcomes and results, as well as comparability of projects in the queue; provide a comparison of how the increase in the System Impact Study and Facilities Study estimates for the interconnection and System Upgrade costs provided to Complainant compare to any increases in these estimates provided to other interconnection customers in DEP's interconnection queue during the same time period; and provide an explanation for the reasons for any disparities between the Complainant and other interconnection customers similarly situated.

This matter came on for the witness hearing on June 17, 2020. Williams Solar presented the testimony of Jonathan Burke and Charles F. Bolyard, Jr. DEP presented the testimony of Kenneth Jennings, Stephen Holmes, and Scott Jennings. The pre-filed testimony of each of these witnesses, together with the pre-filed testimony and exhibits of DEP witness Jack McNeill, was copied into the record as if given orally from the stand and their exhibits entered into evidence.

At the hearing, the Presiding Chair gave oral notice that DEP's Motion to Dismiss was denied, without prejudice. Tr. Vol. 1, p. 8.

DEP filed late-filed exhibits on June 25, 2020, in response to the Commission's requests at the hearing for additional information on DEP's company-wide experience with total actual construction cost, deviations between estimated and actual costs, and study costs assigned to Williams Solar.

On August 7, 2020, the Commission issued an order granting DEP's motion to extend the time to submit proposed orders and briefs until August 31, 2020.

On September 1, 2020, the Commission issued an order granting Williams Solar's motion to extent the time to submit proposed orders and briefs until September 14, 2020.

On September 14, 2020, proposed orders and briefs were filed by the parties.

INTRODUCTION

The Commission notes at the outset that the circumstances of this Complaint hearing are unusual, for a number of reasons. Although it has promulgated and modified the NC Interconnection Standard and heard evidence and arguments relating to those changes, the Commission generally is not involved in how the rules are applied.

In particular, the Commission has little insight into how the dispute process under the NC Interconnection Standard operates as a practical matter. The dispute process, although governed by the NC Interconnection Standard, typically involves interconnection customers, the regulated utilities, and, at times, the Public Staff. Very few disputes reach the Commission, and, to date, none have proceeded to a decision by the Commission after an evidentiary hearing. In this regard, this proceeding raises issues of first impression for the Commission.

The NC Interconnection Standard is designed to provide fair and predictable rules to govern the interconnection process in order to effectuate rights of Qualified Facilities under state and federal law while ensuring the integrity of the electric grid and protecting ratepayers from unnecessary or inappropriate expense. The Commission takes note of the fact that aspects of the interconnection process have the potential for unfairness given the imbalance of information and bargaining power between a Qualified Facility (QF) and the incumbent utility and the inherent preference by incumbent utilities for their own generation over that offered by a third party. *E.g.,* Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*,* Docket No. E-100, Sub 100, at p. 12 (Sept. 29, 2005) (Progress Energy pointing out that Commission's adoption of arbitration and complaint procedures to address concerns of unequal bargaining power between QFs and utilities). As acknowledged by FERC in its adoption of interconnection standards governing the interconnection of transmission facilities:

> Interconnection plays a crucial role in bringing much-needed generation into the market to meet the growing needs of electricity customers. Further, relatively unencumbered entry into the market is necessary for competitive markets. However, requests for interconnection frequently result in complex, time consuming technical disputes about interconnection feasibility, cost, and cost responsibility. This delay undermines the ability of generators to compete in the market and provides an unfair advantage to utilities that own both transmission and generation facilities. The Commission concludes that there is a pressing need for a single set of procedures for jurisdictional Transmission Providers and a single, uniformly applicable interconnection agreement for Large Generators. A standard set of procedures as part of the OATT for all jurisdictional transmission facilities will minimize opportunities for undue discrimination and expedite the development of new generation, while protecting reliability and ensuring that rates are just and reasonable.

Standardization of Generator Interconnection Agreements and Procedures, Docket No. RM102-1-000, Order No. 2003 (July 24, 2003), 104 FERC ¶ 61,103, at ¶ 11 (footnote omitted).

The present dispute concerns responsibility for costs incurred by the utility in connection with interconnection, as opposed to technical matters bearing directly on safety and reliability of the electric grid. In this regard, the Commission has previously determined that the interconnection customer should bear the costs of interconnection. *See, e.g.,* Order Approving Revised Interconnection Standard, Docket No. E-100, Sub 101 (June 14, 2019), at 18 ("The Commission also directs the Utilities, to the greatest extent possible, to continue to seek to recover from Interconnection Customers all expenses (including reasonable overhead expenses) associated with supporting the generator interconnection process under the NC Interconnection Standard."). This determination is not in issue here.

However the Commission is also mindful that the context in which costs are incurred and assessed raises particular regulatory concerns. Under the NC Interconnection Standard, the utility provides estimates of the costs of interconnection facilities and system upgrades necessary for interconnection, but does not require the utility to provide information to allow the Interconnection Customer to make its own estimates. *See, e.g.*, NC Interconnection Standard § 4.4.5. Work to construct interconnection facilities and system upgrades is done by the utility (or contractors selected by the utility, under contracts entered into by the utility). The present NC Interconnection Standard provides no mechanism for interconnection customers to oversee or control interconnection and upgrade costs. *See, e.g.*, Interconnection Agreement §§ 4.1.2, 4.2, 5.2, 6.1.2 (assigning unlimited cost responsibility to the Interconnection Customer). In this context, it is particularly important that interconnection customers are provided accurate projections, to the greatest extent possible, of costs to be incurred so that they may make informed decisions as to whether to proceed with a particular project.

Based upon consideration of the pleadings, testimony, and exhibits received into evidence at the hearings, and the record as a whole, the Commission makes the following:

FINDINGS OF FACT

1. The Complaint is properly before the Commission.

2. Williams Solar has been granted a certificate of public convenience and necessity by the Commission to construct a 5-MW solar facility to be located at approximately 8185 Harper House Road, Newton Grove, Johnston County, North Carolina.

3. On August 19, 2016, pursuant to the North Carolina Interconnection Procedures, Forms and Agreements (collectively referred to as the NC Interconnection Standard), Williams Solar submitted an interconnection request to DEP. Williams Solar signed a System Impact Study Agreement on September 8, 2016 and paid a study deposit of $25,000.00.

4. Williams Solar was issued queue number NC2016-02927 on October 17, 2016, and was initially identified as a "Project B" under the interdependency provisions in the North Carolina Interconnection Standard.

5. In November 2017, DEP finished the conversion of its project management software from Work Management Information System (WMIS)—which DEP had used to generate Facilities Study estimates for interconnection requests prior to November 2017—to Maximo, a widely used asset management software platform.

6. In December 2017, DEP notified Williams Solar that DEP was beginning the Williams Solar System Impact Study.

7. DEP became aware by the first quarter of 2018 that the experienced costs of constructing completed interconnection facilities and system upgrades coming online in the fourth quarter of 2017 had greatly exceeded the estimates provided to interconnection customers. At that point (by early 2018), DEP became aware of the need to update the tools and processes used to generate both System Impact Study estimates and Facilities Study estimates.

8. DEP began investigating cost discrepancies beginning in the first quarter of 2018, and the investigation continued throughout 2018 and into 2019.

9. By late 2018, DEP had developed a preliminary version of a new estimating tool to develop estimates in connection with Facilities Studies.

10. Since at least 2015, DEP has used a spreadsheet-based calculator to perform System Impact Study estimates. DEP did not revise or update the cost estimating data used to generate estimates in connection with System Impact Studies during at least the four years from January 2015 to December 2018.

11. On or about January 28, 2019, DEP transmitted to Williams Solar a System Impact Study Report ("SIS Report") dated December 20, 2018. In this Report, DEP notified Williams Solar that certain System Upgrades costing an estimated $774,000 and Interconnection Facilities costing an estimated $60,000 would be required in order to effectuate the requested interconnection (the "SIS Estimate").

12. Williams Solar considered the SIS Estimate to be slightly higher than, but generally in alignment with, its expectation for the costs of the identified System Upgrades and Interconnection Facilities.

13. Williams Solar understood that certain costs, such as certain sales taxes and overheads, were not included, and estimated that the total cost of interconnection could be as high as $1 million.

14. Based on the SIS Estimate, Williams Solar considered the project to be marginal but within the upper range of economically viable projects, and therefore determined to proceed with the project.

15. Williams Solar would not have proceeded with the project if DEP had notified Williams Solar that the estimated costs exceeded $1.5 million.

16. DEP intended that Williams Solar would rely on the SIS Estimate in formulating its business plans, including whether to invest additional funds in development of the project.

17. Williams Solar relied on the SIS Estimate in deciding to make additional investments in the project, including spending approximately $56,000 primarily in furtherance of obtaining certain property rights necessary for the project, and to incur charges for a Facilities Study.

18. DEP knew before it provided the SIS Estimate to Williams Solar that its methodology for estimating costs at the System Impact Study stage was not producing estimates consistent with actual billed costs on completed projects and, therefore, needed to be updated and revised. In fact, DEP's System Impact Study cost estimating tool had not been updated for at least four years at the time the SIS Estimate was provided to Williams Solar.

19. Nevertheless, DEP did not inform Williams Solar that DEP's recent experience showed that the actual costs incurred for interconnection construction projections were significantly higher than DEP's cost estimates; did not inform Williams Solar about DEP's investigation into such cost discrepancies or that DEP intended to revise its cost estimating methodology; and did not inform Williams Solar of the fact that DEP's System Impact Study cost estimating tool had not been updated for at least four years.

20. Between January 28, 2019, and July 30, 2019, DEP did not communicate to Williams Solar that DEP was preparing and intended to commence the use of a revised estimating tool.

21. DEP's failure to update the data underlying its System Impact Study cost estimates from 2015 to 2019 and its failure to notify Williams Solar that actual costs were expected to be much higher than the SIS Estimate were not consistent with industry practice.

22. On or about July 30, 2019, DEP transmitted to Williams Solar a Facilities Study Report ("FS Report"). In this Report, DEP notified Williams Solar that the System Upgrades identified in the System Impact Study would cost an estimated $1,388,274.26 and the Interconnection Facilities identified in the System Impact Study would cost an estimated $196,495.13 (the "FS Estimate").

23. The difference between the FS Estimate and the SIS Estimate did not result from a change to the scope of work or any site-specific features of the Williams Solar project. Further, DEP presented no evidence that the difference resulted from "detailed engineering studies."

24. Using its asset management software, Maximo, DEP estimated that the System Upgrades identified in the System Impact Study would cost an estimated $679,419.31, including 4,580.43 labor hours and materials costs of $167,693.47, and the Interconnection Facilities identified in the System Impact Study would cost an estimated $61,246.82, including 213.69 labor hours and materials costs of $37,395.81. The total Maximo estimate was less than the SIS Estimate.

25. DEP created the FS Estimate by designing the necessary facilities and then generating associated work orders in Maximo, selecting compatible units, and performing an estimation step in Maximo, which output a preliminary estimate of labor hours and costs.

26. The labor hour and cost data output by Maximo were then entered manually into a spreadsheet based tool referred to as the "Revised Estimating Tool." DEP does not use such a tool to adjust estimates for its own projects. Instead, DEP uses Maximo for estimating costs for its own projects.

27. The Revised Estimating Tool (RET) was a spreadsheet prepared in-house by Duke personnel for the purpose of revising the output of Maximo to produce higher estimated costs.

28. The Revised Estimating Tool applied a series of upward adjustments to the Maximo output, including (1) increasing the estimated labor hours by one-third; (2) adding a vehicle cost factor; (3) applying a 6 percent inflation factor; (4)

increasing materials overheads from 17 percent to 48.75 percent; (5) applying a 20 percent contingency to the total of labor, vehicle, and materials costs (including materials overheads); and (6) applying a 25 percent overhead charge to all costs other than materials costs and materials overheads, but including the contingency on materials and materials overheads.

29. Since the implementation of the Revised Estimating Tool, DEP's estimates have on average exceeded actual costs.

30. The substantial increase in costs from the SIS Estimate to the FS Estimate is not attributable to a change in project scope or additional costs that were expected by Williams Solar.

31. The amount of the adjustments applied by the Revised Estimating Tool was not justified by any data produced or put in evidence by DEP.

32. In any event, the cost data supposedly underlying the adjustments applied by the Revised Estimating Tool do not represent reasonable actual costs but rather reflect the pass-through of uncontrolled charges to interconnection customers. By its own admission, DEP "only recently" developed tools to control the charges that will be passed on to interconnection customers during the construction process.

33. DEP's methodology for creating the FS Estimate is not consistent with industry practice or valid estimating methodology.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1-4, 6

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witness Burke, the testimony of DEP witness McNeill, and the entire record in this proceeding.

The basic facts of the Williams Solar project and the timing of its interconnection request are not in dispute. Williams Solar witness Burke described the relationship between Williams Solar and GreenGo Energy US, Inc. ("GreenGo"), explaining that GreenGo is a renewable power developer that is pursuing a portfolio of 2 to 5 MW_{AC} projects in North Carolina, of which the Williams Solar project is one. Tr. Vol. 1, pp. 19-21. Witness Burke described the Williams Solar project and the Williams Solar interconnection request in his direct testimony. Tr. Vol. 1, pp. 22-23. Mr. Burke's testimony regarding the Williams Solar certificate of public convenience and necessity is consistent with the Commission's records in Docket SP-8274, Sub 0. Mr. Burke's testimony regarding the timing of the Williams Solar interconnection request and DEP's undertaking the Williams Solar System Impact Study is consistent with the testimony of DEP Witness McNeill. Tr. Vol. 2, pp. 137-38.

With regard to whether the Complaint is properly before the Commission, Williams Solar witness Burke's direct testimony describes the interactions of the DEP and Williams Solar in the informal dispute process described in section 6.2 of the NC Interconnection Standard. Tr. Vol. 1, pp. 19-41; Burke Ex. JB-7, JB-8. The testimony and exhibits admitted into evidence show that the parties attempted to resolve their dispute in accordance with the informal dispute resolution process set forth in section 6.2 of the NC Interconnection Standard but were unable to resolve their dispute. Accordingly, the Complaint, which concerns a dispute about the interconnection process, was properly brought before the Commission pursuant to NC Interconnection Standard section 6.2.5.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 5

The evidence supporting the finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, the testimony of DEP witness S. Jennings, and the entire record in this proceeding.

DEP's conversion from WMIS to Maximo, completed in November 2017, was described by DEP in discovery responses provided in this case and attached to the testimony of Williams Solar witnesses Burke and Bolyard. Ex. JB-9, p. 9; JB-10, pp. 4, 13; Ex. CEB-6, p. 9; Ex. CEB-7, pp. 4, 13. DEP witness S. Jennings confirmed that, prior to November 2017, DEP used WMIS "for the same purposes" that Maximo has since been used. Tr. Vol. 2, p. 231.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 6

The evidence supporting the finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witness Burke and the entire record in this proceeding.

Williams Solar witness Burke describes the timeline of the Williams Solar interconnection request, from its beginning in 2016 through Williams Solar's receipt of a December 2017 notification from DEP that DEP was beginning the Williams Solar System Impact Study. Tr. Vol. 1, p. 23. DEP witness McNeill also describes this timeline, indicating that the Williams Solar System Impact Study was "delayed . . . in the fall of 2017" and "resumed in early 2018." Tr. Vol. 2, p. 137.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 7-8

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, the testimony of DEP witnesses McNeill, K. Jennings, and S. Jennings, and the entire record in this proceeding.

Williams Solar introduced DEP discovery responses into evidence in exhibits to its direct testimony showing that DEP was aware of, and began to

investigate, significant deviations between estimated costs and actual costs as reflected in Final Accounting Reports in the first quarter of 2018. According to these discovery responses, "[i]n Q1 2018," the General Manager of Distributed Energy Technology (DET) Renewable Integration and Operations, Gary Freeman, directed DET personnel "to further investigate observed discrepancies between estimated construction costs and actual construction costs for distribution interconnection projects coming online during Q4 2017." Ex. JB-9, pp. 24, 28; Ex. CEB-6, pp. 24, 28.

Williams Solar also introduced evidence that DEP began investigating this problem in Q1 2018, when DET employees, including Beckton James, compiled "generation interconnection cost data to investigate discrepancies between estimated construction costs and actual construction costs for distribution interconnection projects." Ex. JB-9, p. 25; Ex. CEB-6, p. 25. During Q1 2018, Mr. James "began development on an initial version of an updated distribution system upgrade cost estimating tool based on cost data . . . . The updated cost estimating tool was developed for potential use during distribution interconnection project facility studies conducted in DEP and DEC." Ex. JB-9, p. 25; Ex. CEB-6, p. 25.

These statements by DEP in its discovery responses are entitled to substantial weight as admissions of a party and are not contradicted by DEP's own pre-filed direct testimony. In his pre-filed direct testimony, DEP witness K. Jennings stated that DEP "first became aware of such cost exceedance during the first quarter of 2018". Tr. Vol. 2, p. 175. Mr. K. Jennings further indicated that by early 2018, DEP was aware not simply of "discrepancies," but was aware that actual interconnection costs were "substantially exceeding the estimates developed during the facilities study process." Tr. Vol. 2, pp. 174-75. In 2018, DEP identified "a growing trend of actual construction costs significantly exceeding initial study process estimates." Tr. Vol. 2, p. 176.

This testimony was confirmed by the direct testimony of DEP witness McNeill, who testified that "Duke became aware of a pattern of substantial cost discrepancies between Facilities Study cost estimates and actual construction costs in early 2018," and that it was this pattern that caused DEP to be aware of the need to make changes to *both* its System Impact Study and Facilities Study cost estimates. Tr. Vol. 2, pp. 132-33.

On cross-examination, witness K. Jennings offered a different version of this evidence. Asked whether DEP "knew that, as of the first quarter [of 2018], that there was a problem with the estimates", Mr. Jennings testified: "I don't know that. I'm not – I'm not fully aware that – I don't think I had enough information to actually be able to – to prepare a response to a developer who was in the process of interconnection." Tr. Vol. 3, p. 15. Mr. Jennings denial of knowledge, however, is contradicted by DEP's own discovery responses, Mr. Jennings' own direct testimony, and the testimony of DEP witness McNeill. It is also indirectly contradicted by his prior admission on cross-examination that DEP first added a

group to monitor differences between actual interconnection costs and cost estimates in 2017. Tr. Vol. 2, p. 309. In light of these contradictions and the otherwise clear and convincing evidence from DEP's own witnesses and their discovery responses, witness K. Jennings' disclaimer of knowledge on cross-examination is not credible.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 9

The evidence supporting this finding of fact and conclusions is contained in the testimony and exhibits of DEP witnesses K. Jennings and S. Jennings, and the entire record in this proceeding.

According to DEP witnesses K. Jennings and S. Jennings, some version of the cost estimating tool developed by Duke employee Beckton James—the Revised Estimating Tool (RET)—was developed "by the end of 2018." Tr. Vol. 2, pp. 174-76; Tr. Vol. 4, pp. 30-32. This evidence is uncontradicted and does not appear to be in dispute between the parties.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 10

The evidence supporting this finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, the testimony of DEP witness McNeill, and the entire record in this proceeding.

A copy of the spreadsheet-based tool ("SIS Estimation Tool Rev0") used to calculate System Impact Study Estimates, including the Williams Solar SIS Estimate, was included with the testimony of Williams Solar witness Bolyard, Ex. CEB-8, and was discussed in the testimony of witness Bolyard, and DEP witness McNeill, and the discovery responses provided by DEP. Tr. Vol. 2, pp. 51-54, 131-32; Ex. CEB-6, pp. 5, 8, 13-15; Ex. CEB-7, pp. 1-2, 6. The tool calculates estimates based on unit costs, the data for which DEP obtained from past interconnection projects. E.g., Ex. CEB-6, p. 8.

As discussed in the testimony of Williams Solar witnesses Burke and Bolyard, the discovery responses DEP provided in this case indicate that DEP did not update the underlying data used to generate System Impact Study estimates between January 1, 2015, and June 2019. Tr. Vol. 1, pp. 42-43 & Ex. JB-9, pp. 14-15; Tr. Vol. 2, p. 27 & Ex. CEB-6, pp. 14-15. DEP witness McNeill confirmed that the data were not updated from 2015 until June 2019. Tr. Vol. 2, p 132. This evidence is uncontradicted and does not appear to be in dispute between the parties.

The precise vintage of the data used to generate the SIS Estimate is not clear from the evidence presented. The evidence on this question was limited to indications that the data was generated in 2014 or earlier. *E.g.*, Ex. JB-9, p. 13.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 11

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, the testimony of DEP witness McNeill, and the entire record in this proceeding.

The facts regarding the delivery and contents of the SIS Report are not in dispute. Williams Solar witnesses Burke and Bolyard and DEP witness McNeill describe the delivery of the SIS Estimate to Williams Solar by e-mail on January 28, 2019. Tr. Vol. 1, p. 24 & Ex. JB-1; Tr. Vol. 2, p. 50 & Ex. CEB-3; Tr. Vol. 2 p. 138. The SIS Report identified certain System Upgrades costing an estimated $774,000 and Interconnection Facilities costing an estimated $60,000. Tr. Vol. 1, pp. 24-25 & Ex. JB-2, pp. 16-17; Tr. Vol. 2, pp 50-51 & Ex. CEB-3, pp. 16-17; Tr. Vol. 2, pp. 138-39. The System Upgrades included 2.5335 miles of line recoductoring; installation of three 50 A fuses, seven 25 A fuses, and 71 high fault tamers; removal of one 25 A fuse; relocation of a hydraulic recloser; and installation of a new recloser. Ex. JB-2, p. 16; Tr. Vol 2 pp. 50-51. DEP witness McNeill indicated that the SIS Report was actually completed on or around December 20, 2018. Tr. Vol. 2, pp. 138-39.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 12

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witness Burke, and the entire record in this proceeding.

Williams Solar witness Burke testified that the SIS Estimate was slightly higher than expected given the upgrades identified, driven primarily by a higher cost for line reconductoring work than Williams Solar's expectation of $200,000 to $250,000 per mile. Tr. Vol. 1, pp. 25, 102-03. Mr. Burke's testimony was based on experience with prior projects. Tr. Vol. 1, pp. 21, 64, 103-04.

This evidence is uncontradicted, and DEP did not elect to cross-examine Mr. Burke on this testimony.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 13

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witness Burke, the testimony and exhibits of DEP witness K. Jennings, and the entire record in this proceeding.

DEP witness K. Jennings, citing a GreenGo internal e-mail, argued in his direct testimony that Williams Solar witness Burke "was aware that taxes, overheads, metering and commissioning had not been included in the System Impact Study cost estimate but would be added to the total project costs." Tr. Vol. 2, p. 181 (*citing* Jennings/Holmes Ex. 4). However, Witness Burke testified that,

consistent with Jennings/Holmes Ex. 4, Williams Solar expected the additional taxes, overheads, metering, and commissioning costs could bring the total project interconnection costs to near $1 million. Tr. Vol. 1, pp. 60-61; *see* Tr. Vol. 2, p. 7. Witness Burke further testified that Williams Solar assumed that some overheads were included in the SIS Estimate. Tr. Vol. 2, pp. 6-7. He also testified that his analysis of the costs allowed for a 10 percent contingency. Tr. Vol. 1, p. 61; Tr. Vol. 2, p. 7. DEP did not cross-examine witness Burke on these issues.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 14-15

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witness Burke, DEP witness K. Jennings, and the entire record in this proceeding.

Williams Solar witness Burke described a rule of thumb used by GreenGo that would identify a 5 MW_{AC} project—like the Williams Solar project—as economical if interconnection costs, land acquisition costs, and right-of-way costs totaled less than approximately $1 million, and generally uneconomical if those costs totaled more than $1.5 million. Tr. Vol. 1, pp. 30-32; Tr. Vol. 2, p. 8. Applying this framework, Williams Solar considered the project to be marginally economically viable, given estimated interconnection costs of $834,000 (which Williams Solar expected could mean actual costs as high as $1 million). Tr. Vol. 1, pp. 31-32, 60-61; Tr. Vol. 2, p. 8. Witness Burke also testified that Williams Solar's consideration of the project would allow a ten percent contingency above the estimated costs. Tr. Vol. 1, p. 61.

Williams Solar witness Burke also testified that Williams Solar would not have proceeded with project development if the SIS Estimate had exceeded $1.5 million. Tr. Vol. 1, pp. 31-32, 35, 86; Tr. Vol. 2, pp. 6, 8.

The evidence presented by Williams Solar on this issue is uncontradicted, and DEP did not elect to cross-examine Mr. Burke on this testimony. The testimony of DEP witness K. Jennings and DEP's late-filed exhibit, which indicate that the actual costs for completed projects rarely exceeds $1 million, also support a conclusion that developers tend not to pursue distribution-connected projects for which costs are expected to exceed $1 million. Tr. Vol. 4, pp. 15-16.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 16-17

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witness K. Jennings, and the entire record in this proceeding.

Williams Solar witness Burke testified regarding the transmittal e-mail sent by DEP to convey the SIS Estimate to Williams Solar. Tr. Vol. 1, p. 8-9, 38-39. The transmittal e-mail states:

> The purpose of this e-mail is for a decision to be made whether or not to continue moving forward with the project for final costs or to withdraw.

Ex. JB-1, p.1; *see* Tr. Vol. 2, p. 39 (witness Burke stating that the SIS Estimate "is meant to be a decision-making tool"). Williams Solar witness Bolyard also testified that he understood this transmittal e-mail to indicate DEP's intent for Williams Solar to rely on the SIS Estimate. Tr. Vol. 2, p. 56.

DEP witness K. Jennings testified that he did consider that Williams Solar would rely on the SIS Estimate, and further stated, "I just don't feel like that System Impact Study is a critical decision point for developers." Tr. Vol. 4, pp. 37-38. However, witness K. Jennings also conceded that the decision "whether or not to move forward with the project" is a "pretty major decision." Tr. Vol. 4 pp. 32-33. Furthermore, in its reply comments in the 2018 proceeding regarding proposed changes to the NC Interconnection Standard in relation to the CPRE program, DEP argued that "it is reasonable to require an Interconnection Customer to take an affirmative financial step to demonstrate its intent to proceed based on [System Impact Study] estimated costs." DEP Reply Comments, Docket No. E-100, Sub 101, at p. 26 (Sept. 19, 2018). To the extent DEP or its witnesses contend that DEP was unaware that Williams Solar would rely on the SIS Estimate or that DEP did not intend Williams Solar to rely on that estimate, that contention is not credible.

DEP witness K. Jennings also testified that the "letter . . . that comes with the System Impact Study is very clear . . . about the amount of risk that's [e]mbedded in it." Tr. Vol. 4, pp. 38-39. However, the transmittal e-mail referred to was entered into evidence and undercuts Mr. Jennings's testimony because it indicates only two very specific risks that could lead to changes in the cost estimate: (1) terrain and (2) a project owner's decision to choose a different route of interconnection. Ex. JB-1, p. 1; *see* Tr. Vol. 1, p. 28. As Williams Solar witness Burke explained, Williams Solar did not propose to change its infrastructure route, Tr. Vol. 1, p. 28, meaning the only potential risk identified by DEP was related to the site-specific terrain. In contrast, the transmittal and the SIS Estimate itself include a description of specific fuses that need to be replaced and an estimate of the miles of line that would require reconductoring that is calculated to the ten-thousandths place (i.e., to within one foot), suggesting to the recipient substantial certainty about the work that would be needed to interconnect the project. Ex. JB-1, p. 1; Ex. JB-2, pp. 9-10, 16.

Williams Solar witness Burke further testified that Williams Solar did rely on the SIS Estimate in deciding whether to make additional investments in the project, including $56,213.80 in costs between January 28, 2019, and July 30, 2019. Tr. Vol. 1, pp. 25-26, 32, 35; Ex. JB-5. These costs were primarily spent in support of Williams Solar's request for a zoning variance from Johnston County, and its subsequent purchase of an option to purchase neighboring real estate necessary

for the project after the zoning variance was denied Tr. Vol. 1, pp. 32-33. Williams Solar also signed a Facilities Study Agreement, pursuant to which it would incur additional charges for the Facilities Study. Tr. Vol. 1, p. 32; Ex. JB-3.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 18-21

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses McNeill and K. Jennings, and the entire record in this proceeding.

As discussed above, DEP knew by the first quarter of 2018 that its estimates were "substantially exceeding the estimates developed during the facilities study process," Tr. Vol. 2, pp. 174-75, and had developed a tool to improve Facilities Study estimates by the end of 2018, Tr. Vol. 2, pp. 174-76; Tr. Vol. 4, pp. 30-32. DEP witness McNeill explained that while DEP focused its subsequent efforts on improving the accuracy of its Facilities Study cost estimates, Tr. Vol. 2, p. 133, DEP knew it would also need to adjust the tool used to generate System Impact Study cost estimates. Tr. Vol. 2, p. 134.

Williams Solar witness Bolyard testified that utility industry practice is for a person providing an estimate to provide the recipient notice if the estimator is aware that the estimate may be subject to significant increases because the cost data on which the estimate is based is out of date. Tr. Vol. 2, pp. 86-87, 89. Witness Bolyard's testimony on this point is unrebutted.

Williams Solar witness Burke explained that DEP did not indicate that the SIS Estimate should not be relied on. Tr. Vol. 1, p. 56. Witness Burke explained that DEP did not notify Williams Solar that the SIS Estimate was unreliable or inaccurate prior to July 30, 2019. Tr. Vol. 4, p. 109. Witness Burke further testified that DEP did not raise any issues relating to estimates with the Technical Standards Review Group (TSRG). Tr. Vol. 2, p. 35-36. DEP witness K. Jennings testified that he contacted solar developers in early 2019 "about cost estimating issues between Interconnection Agreement and final account . . . reports." Tr. Vol. 2, p. 299. On cross-examination, witness K. Jennings stated that DEP "had [internal] discussions" after the SIS Estimate was provided to Williams Solar regarding how to communicate about the inaccuracy of prior DEP estimates. Tr. Vol. 4, pp. 35-36. However, when asked if DEP had done anything to put Williams Solar on notice that the SIS Estimate might be substantially inaccurate, witness K. Jennings was able to identify only the transmittal e-mail itself, Tr. Vol. 4, p. 38-39, and further stated he was not aware that DEP did anything before providing the FS Estimate to Williams Solar to let Williams Solar know that its SIS Estimate was inaccurate. Tr. Vol. 4, p 73.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 22

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses S. Jennings and K. Jennings, and the entire record in this proceeding.

Williams Solar witness Burke described the delivery of the Facilities Study results, including the FS Estimate, by e-mail on July 30, 2019. Tr. Vol. 1, pp. 33-34 & Ex. JB-4. The System Upgrades identified in the System Impact Study were estimated to cost $1,388,274.26 and the Interconnection Facilities identified in the System Impact Study were estimated to cost $196,495.13. Williams Solar witness Bolyard and DEP witness and S. Jennings describe the same principal facts. Tr. Vol. 2, pp. 58, 245-46.

These facts are not in dispute.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 23

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses S. Jennings and K. Jennings, and the entire record in this proceeding.

As described by Williams Solar witnesses Burke and Bolyard and shown in the FS Report transmittal e-mail and subsequent communications between Williams Solar and DEP, the scope of work identified in the Williams Solar System Impact Study for interconnection of the project did not change in the Facilities Study. Tr. Vol. 1, pp. 34, 36, 83; Tr. Vol. 2, p. 60; Ex. JB-4; Ex. JB-6 pp. 3-4. DEP witnesses S. Jennings and K. Jennings confirmed that the scope of work did not change. Tr. Vol. 4, pp. 40-42.

When Williams Solar inquired as to the cause of the cost increase, DEP responded that the scope of work had not changed and that “the reasons for the increase in cost” were the application of “a new formula to ensure that the upfront costs more closely align with the final true up numbers.” Exhibit JB-6, pp. 3-4.

On cross-examination, DEP witness S. Jennings suggested that some of the change in costs from the SIS Estimate to the FS Estimate could have been the result of engineering considerations. Tr. Vol. 3, pp. 24-27. However, witness S. Jennings testimony lacks specificity concerning its application to Williams Solar, is unsupported by documentary evidence, and is not credible in light of other evidence in the case.

First, while witness S. Jennings suggested that certain items *could* cause cost increases, Tr. Vol. 3, pp. 24-27, his testimony made clear that this testimony was generalized and hypothetical, and not reflective of the actual cause of change to the estimates provided to Williams Solar. *E.g.*, Tr. Vol. 3, pp. 27 (“[T]he location where that equipment needs to be installed *may* be along the side of the road, it *may* be very easily to access and install that, or it *may* be in somebody's back yard.

We *may* have to have a larger crew and *may* have to climb a pole in somebody's back yard. It *may* have a transformer that's not up to current specifications and requires additional retrofit work to be able to install that Fault Tamer, and that $400 unit cost that we used in the System Impact Study very quickly becomes $2,000. And that is a very real-world situation that we deal with going from System Impact Study to Facility Study." (emphases added)). Witness S. Jennings did not identify any engineering-related changes that led to the increased costs with regard to the Williams Solar project specifically.

Second, when confronted about the significant deviation from the SIS Estimate by Williams Solar immediately upon receiving the FS Estimate, DEP did not identify any such "engineering considerations" that were the case of the discrepancy. Ex. CEB-11, p. 3. Instead, it confirmed that there was not change in "scope" between the SIS Estimate and FS Estimate. *Id.*

Third, in response to Williams Solar's notice of dispute, DEP indicated that the changed estimate "is a product of the more detailed engineering . . . performed as part of the Facilities Study," but does not identify any engineering factors that increased the estimate. Ex. JB-8, p. 2. Instead, DEP's response goes on to explain that the revised estimate was "informed by DEP's extensive recent experience" and that DEP "utilized . . . actual cost data to refine the Upgrade cost estimates to ensure that such estimates better reflect actual costs being incurred in the field," including escalating "labor and equipment costs." *Id.*

Fourth, the FS Estimate itself does not contain any indication of "engineering considerations" that supposedly increased costs. Ex. JB-4, pp. 1-2; Ex. CEB-10, pp. 1-2. On the contrary, the revised estimating tool description DEP produced in discovery indicates that the Maximo estimate (which would have included any detailed engineering considerations impacting the estimated costs) was actually slightly less than the SIS Estimate. Ex. JB-13, pp. 7-8; Ex. CEB-12, pp. 7-8.

Finally, the Commission expects that if there had been any such engineering studies that explained the cost discrepancy, DEP would have provided those studies in response to Williams Solar's informal inquiry, its formal discovery requests, or in its Direct Testimony in this proceeding. Although DEP's witnesses referred to engineering considerations being part of the Facilities Study estimate process, they identified no engineering considerations specific to the Williams Solar project that resulted in the increased estimate. E.g., Tr. Vol. 2, pp. 166-68 (DEP witnesses K. Jennings and Holmes), 228-30 (DEP witness S. Jennings)

For all these reasons, the Commission concludes that the testimony on cross-examination of S. Jennings implying that the discrepancy between the SIS Estimate and the FS Estimate was caused by "engineering considerations" is not credible, falls short of actually asserting that engineering considerations were the

cause of the discrepancy, is unsupported by any other evidence in the record, and, accordingly, is entitled to no weight.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 25-26

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses S. Jennings and K. Jennings, and the entire record in this proceeding.

As described in the testimony of Williams Solar witness Bolyard, DEP developed the FS Estimate by first estimating costs through its Maximo software platform. Tr. Vol. 2, 60. Witness Bolyard explained that Maximo is an IBM asset management tool that "can be used to initiate work orders for maintenance, repair, or replacement of existing assets, as well as for acquiring and installing new assets." Tr. Vol. 2, p. 60. DEP witness S. Jennings explained that the project design and cost estimating process in Maximo, and DEP's prior asset management platform, WMIS, involves the selection of "compatible unit" costs for materials and labor. Tr. Vol. 2, p. 231-33. After all of the relevant compatible units are selected, an estimation step is performed that "calculates the total material and labor costs for the design." Tr. Vol. 2, p. 232. Maximo also calculates the total number of labor hours required. Tr. Vol. 2, p. 233.

No Maximo work orders and estimates for the Williams Solar project were available to be put in evidence because DEP did not produce them to Williams Solar in discovery. Ex. JB-9; Ex. JB-10. In place of those documents, Williams Solar witnesses Burke and Bolyard refer to a document created by DEP and produced in discovery, which describes certain outputs DEP indicates were taken from Maximo. Ex. JB-13; Ex. CEB-12. For System Upgrades, Maximo estimated the facilities required to interconnect the Williams Solar project would require 4,580.43 hours, labor costs of $336,854, materials costs of $143,327.75, materials overheads of $24,365.72, flagging costs of $1,451.52, and other overheads of $173,419.31, for a total of $679,419.31. Ex. JB-13 at 7; Ex. CEB-12 at 7. For Interconnection Facilities, Maximo estimated 213.69 hours, $15,712.13 in labor costs, $31,962.23 in materials costs, $5,433.58 in materials overheads, and $8,138.88 in additional overheads, for a total of $61,246.82. Ex. JB-13 at 8; Ex. CEB-12 at 8. Thus, according to DEP, the total combined Maximo estimate was approximately $741,000—approximately 11% *lower* than the $834,000 total in the SIS Estimate. Therefore, it is clear that engineering or design concerns were *not* responsible for the change in the estimate.

The output from Maximo—total labor hours and materials costs—were then entered into the RET. Tr. Vol. 4, p. 11. As summarized by DEP witness S. Jennings, and described in more detail below, the RET applied a series of mathematical adjustments to the labor hours and materials costs output by Maximo, resulting in higher estimated costs. Tr. Vol. 4, p. 11. It was these mathematical adjustments, and not any site-specific conditions or engineering

considerations related to the Williams Solar project, that lead to the increase in costs from the SIS Estimate to the FS Estimate.

The testimony of Williams Solar witnesses Burke and Bolyard, and the discovery responses provided by DEP, make clear that DEP does not use a tool to adjust Maximo estimates for DEP's own projects. Tr. Vol. 1, pp. 50-51; Ex. CEB-6, pp. 49-50; Ex. CEB-7 pp. 12-13. Rather, DEP uses Maximo unadjusted output for its own projects.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NO. 27-29

The evidence supporting these findings of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses Holmes and K. Jennings, and the entire record in this proceeding.

DEP described the development of the RET, which began in the first quarter of 2018, in its responses to discovery in this case. Ex. JB-9, p. 24-29; Ex. CEB-6, p. 24-29. The RET was developed in response to DEP's realization that actual interconnection costs were "substantially exceeding the estimates developed during the facilities study process," Tr. Vol. 2, pp. 174-75, and "a growing trend of actual construction costs significantly exceeding initial study process estimates." Tr. Vol. 2, p. 176. DEP witness K. Jennings explained that DEP thinks of the difference between its estimates—which are the basis for deposits paid by interconnection customers upon signing an Interconnection Agreement—and actual costs "as exposure, because if we don't collect the money up front, we don't get it." Tr. Vol. 3, p. 45-47.

A copy of at least one iteration of the RET was submitted to the Commission as CEB Exhibit 13, Tr. Vol. 2, p. 62, and resubmitted in more complete form as CEB Rebuttal Exhibit 1. *See* Tr. Vol. 4, pp. 60, 155. The RET is a spreadsheet tool. As described above, a user can put data output by Maximo (labor hours, labor costs, materials costs, and overheads) into the RET. The RET then makes a series of adjustments to the Maximo output to create a higher estimate:

- Labor hours are increased by one-third from the Maximo estimate by dividing by a 75 percent "productivity rate"[1];
- Vehicle costs are added to the estimate based on the number of estimated labor hours;
- Inflation of 6 percent is added to labor costs, material costs, vehicle costs, and flagging costs;
- A contingency of 20 percent is added to labor costs, material costs, vehicle costs, flagging costs, and any additional costs;

[1] Effective 12/1/2019, DEP increased the productivity rate to 90 percent, so that Maximo labor hours would be adjusted upward by only one-ninth, rather than one-third. Ex. CEB-12, p. 2.

- Overheads of 48.75 percent are added to materials costs (whereas Maximo applies a 17 percent overhead rate); and
- Overheads of 25 percent are added to labor costs, vehicle costs, and flagging costs, and to the contingency on materials overheads.

Ex. CEB-12, pp. 1-5; *see also* Tr. Vol. 2, p. 59 & Ex. CEB-6 pp. 6-7. The total effect of all these adjustments is to increase the Maximo estimate.

DEP witnesses Holmes and K. Jennings explained that after implementation of the RET, DEP's actual costs for interconnection have averaged 10 percent less than the RET estimates. Tr. Vol. 4, p. 67.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 30

The evidence supporting this finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses K. Jennings, Holmes, and S. Jennings, and the entire record in this proceeding.

As discussed, Williams Solar witness Burke testified that, based on costs Williams Solar knew had been excluded from the SIS Estimate, the ultimate interconnection costs could be as high as $1 million. Tr. Vol. 1, pp. 60-61.

The RET increased the Interconnection Facilities estimate from $60,000 to $196,495.13, consisting of construction costs (including contingencies and overheads) of $116,419.10; metering costs of $24,791.30; additional overhead costs of $20,000; commissioning costs of $24,000; and taxes of $11,284.73. Exhibit JB-4, p. 1; Ex. CEB-12, p.8[2]. The RET increased the System Upgrades estimate from $774,000 to $1,388,374.26, consisting of $676,704 in labor and vehicle costs; $203,011.20 in overheads on labor; $151,927.41 in material costs; $74,064.61 in materials overheads; $180,539.20 in contingencies on labor and material costs; $11,299.60 in overheads on the contingencies applied to direct material costs and materials overheads; and $90,828.22 in taxes. Ex. CEB-12, pp. 3-4, 7; *see* Tr. Vol. 2, p. 64 (witness Bolyard calculation of overheads relating to System Upgrades).

DEP witness K. Jennings testified that approximately half of the increased cost estimate arose from "contingency, taxes, overheads, metering, and commissioning," Tr. Vol. 2, pp. 180-81, and that "Witness Burke and GreenGo was aware, that taxes, overheads, metering and commissioning had not been included in the [SIS Estimate] but would be added to the total project costs." Tr. Vol. 2, p. 181. Although mathematically accurate, this testimony is misleading and the Commission does not find it to be persuasive. In his testimony, Williams Solar

[2] Errors in the data set forth in the table at page 8 of Exhibit CEB-12 are corrected at pages 5-6 of Exhibit CEB-7.

witness Burke explained that he believed some overheads were included in the SIS Estimate, Tr. Vol. 2, p. 7, and that the final estimate may include "a little bit more of . . . overheads." Tr. Vol. p. 60. The evidence shows that there was no expectation on the part of Williams Solar that more than $300,000 of overheads had not been accounted for in the SIS Estimate. As to contingencies, while DEP witness Holmes conceded that an estimate like the SIS Estimate would typically have a contingency built into it, Tr. Vol. 4, pp. 8-9, the SIS Estimate in fact included no contingency and DEP did not inform Williams Solar of that fact, Tr. Vol. 3, p. 119. Accordingly, Williams Solar would have had no reasonable expectation that additional contingency of nearly $200,000 had been excluded from the SIS Estimate. As to taxes, Williams Solar would reasonably have expected something less than $70,000 total (i.e., 7 percent of $1 million or less, assuming all costs were subject to North Carolina sales tax), and perhaps less than $60,000 (i.e., 7 percent of $834,000), not something in excess of $100,000.[3] In this light, Williams Solar could reasonably have expected additional expenses of approximately $120,000 above the SIS Estimate—reflecting commissioning costs, metering costs, taxes of approximately $60,000, and a "little bit" of overheads. In fact, this matches Williams Solar's estimate that total interconnection costs could be near $1 million.

In short, the substantial increase in costs from the SIS Estimate to the FS Estimate was not reasonably foreseeable to Williams Solar.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 31

The evidence supporting this finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses K. Jennings and S. Jennings, and the entire record in this proceeding.

According to DEP witness K. Jennings, DEP developed the RET based upon "accounting data documenting cost differences between estimates developed during Facilities Study and actual interconnection construction costs for a substantial number of vintage 2015-2018 commercially operating distribution interconnection projects in DEP and DEC." Tr. Vol. 2, p. 177; *see* Ex. JB-9, p. 29 (same); Ex. CEB-6, p. 29 (same). DEP witness S. Jennings testified that all of the adjustments applied by the RET were derived from a "multivariate analysis" of data from interconnection projects completed in the 2015 to 2018 timeframe. Tr. Vol. 3, pp. 67-68; *see* Ex. CEB-6, p. 29. DEP witnesses K. Jennings and S. Jennings each relied upon the other to explain the details of the "multivariate analysis" in their direct testimony, but neither did so. Tr. Vol. 2, pp. 177, 248.

At the hearing, witness S. Jennings further explained,

[3] The Commission notes that Williams Solar disputes DEP's assessment of sales tax on interconnection facilities and upgrade work. Williams Solar Post-Hearing Memorandum of Law, at n. 9. This issue is not ripe for resolution in this proceeding.

> [W]hat we have done, is, again, taking these estimates down to their individual components, as you've stated: material, labor, equipment, et cetera. Taking a sampling, grouping of completed projects and, you know, averaging those results to understand, on average, what kind of variation we were seeing between Maximo estimate and cost actuals on those projects.

Witness S. Jennings explained that the "multivariate analysis" was led by Duke employee Beckton James, but witness S. Jennings (1) did not know if Mr. James has any statistical expertise, (2) did not know what statistical method was applied except that "the type of analysis that was performed is not incredibly complex," and (3) did not know whether there was any analysis done regarding the statistical significance of the "multivariate analysis." Tr. Vol. 3, pp. 68-70.

DEP presented none of the data on which the "multivariate analysis" was based and did not present the analysis itself for review or scrutiny.

The Commission also observes that, while DEP's witnesses have provided a general explanation of various adjustments made in the RET, they have not provided any data demonstrating that the adjustments correspond to differences between Maximo's output and DEP's actual costs. Rather, as pointed out by Williams Solar witness Bolyard in his rebuttal testimony, the evidence shows that DEP is using the adjustments as "dials" to move the total estimate upward as desired, rather than reflecting actual cost differences owing to each discrete cost category, Tr. Vol. 4, p. 158.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 32

The evidence supporting this finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witnesses Burke and Bolyard, DEP witnesses K. Jennings and S. Jennings, and the entire record in this proceeding.

Williams Solar witness Burke raised the question whether DEP has incentive to exercise control over the costs for solar developer interconnection requests. Tr. Vol. 1, p. 33; Tr. Vol. 4, pp. 115-16. Williams Solar witness Bolyard explained in his rebuttal testimony that cost estimates should be used for cost control purposes. Tr. Vol. 4, p. 153. Witness Bolyard points out that DEP's explanation regarding the origin of the RET—that DEP realized its actually experienced costs were exceeding its estimates *after* completing certain projects—suggests that DEP has not been using the estimates to control costs. Tr. Vol. 4, pp. 153-54. DEP's witnesses did not rebut witness Bolyard's critique.

On the contrary, when asked how DEP tracks spending on interconnection construction projects against budgeted amounts, DEP witness K. Jennings explained that DEP "just recently developed tools for that" and that actually

monitoring the costs is "still a challenge" because of the short project life cycle. Tr. Vol. 4, pp. 76-77. Witness K. Jennings also explained that DEP is working with NCCEBA regarding cost controls. Tr. Vol. 3, p. 36. The testimony of witness K. Jennings therefore supports a conclusion that the 2018 and earlier costs used to develop the RET may have been DEP's actual costs, but they do not represent *reasonable* costs of construction. Rather, the costs relied upon by DEP in developing the RET represent *uncontrolled* costs.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 33

The evidence supporting this finding of fact and conclusions is contained in the testimony and exhibits of Williams Solar witness Bolyard, DEP witnesses Holmes and S. Jennings, and the entire record in this proceeding.

In his direct testimony, Williams Solar witness Bolyard testified regarding a number of critiques regarding the methodology used by DEP to generate the FS Estimate.

Witness Bolyard contrasted the use of Maximo to generate estimates—which he indicated was consistent with industry practice—with the use of the RET—which is not an industry standard tool—to increase the estimate produced by Maximo. Tr. Vol. 2, pp. 61-62. Witness Bolyard characterized the RET as "plussing up" the Maximo estimate using "blunt-force multipliers." Tr. Vol. 2, p. 62. Witness Bolyard indicated that the validity of the use of Maximo is dependent on whether the underlying analysis of labor effort, equipment, and materials resources is current. Tr. Vol. 2, p. 65. However, DEP internal communications indicate that the costs data in Maximo were not current. Tr. Vol. 2, pp. 65-66 & Ex. CEB-19. Moreover, the assumption implied by the existence of the RET is that the Maximo output were *not* reliable. Tr. Vol. 2, pp. 65-66, 70. Witness Bolyard testified that, in his extensive experience in estimating, he has never seen" an estimate produced by generating an estimate using an industry standard tool such as Maximo and then multiplying that estimate by factors derived from "some sort of 'multivariate analysis.'" Tr. Vol. 2, pp. 69-70.

Witness Bolyard further criticized the RET's application of overheads after the application of contingencies as inconsistent with industry practice, and specifically identified DEP's apparent application of overheads to contingencies on materials overheads as problematic. Tr. Vol. 2, pp. 71-72.

Witness Bolyard also criticized the 20 percent contingency factor applied by DEP as excessive in light of the level of engineering design used in preparing the estimate and in light of DEP's significant recent experience in constructing such projects. Tr. Vol. 2, pp. 72-73.

At the hearing, DEP elected not to cross-examine witness Bolyard on his direct testimony. Tr. Vol. 2, p. 80.

In response to Commissioner questions, witness Bolyard testified that he has seen other utilities use a 20 percent contingency where "the scope of work is very much undefined." Tr. Vol. 2, p. 102. Witness Bolyard further testified that the use of a proprietary cost estimation tool is not unusual, but that use of such tools is still guided by Association for the Advancement of Cost Engineering International ("AACE") recommended practices. Tr. Vol. 2, pp. 103-04. Witness Bolyard also indicated that, in his opinion, a reasonable contingency at the Facilities Study stage would be 10 percent. Tr. Vol. 2, pp. 91-92.

DEP witness Holmes testified regarding the AACE framework for cost estimation ("AACE Framework"). Tr. Vol. 2, pp. 168-70. The AACE Framework sets out five estimation classes based upon the maturity level of project definition deliverables, and includes guidance for the expected accuracy range of each class of estimates, along with factors that would increase or decrease those predicted accuracy ranges. Tr. Vol. 2 pp. 169-70; K. Jennings/Holmes Ex. 1. With regard to the SIS Estimate, witness Holmes characterized the estimate as a Class 5 estimate with potential variation from actual costs of up to 100 percent. Tr. Vol. 2, pp. 171, 269. Witness Holmes testified that the FS Estimate "in most cases" would be considered a Class 3 estimate under this framework, with an expected variation from actual costs of up to 30 percent, and that "in some cases" it would be "closer to a Class 4 estimate." Tr. Vol. 2, pp. 171-72. Witness Holmes also testified that the estimate accuracies under the AACE Framework are based upon estimates including contingencies. Tr. Vol. 2, pp. 172-173. Finally, witness Holmes testified that "[r]easonable experts can certainly reach different conclusions regarding the proper classification of the cost estimates in this case and even the precise amount of contingency to include in any given cost estimate." Tr. Vol. 2, p. 173.

DEP witness S. Jennings testified that the 20 percent contingency used in the RET is based on "the potential for unforeseen events." Tr. Vol. 2, p. 240. DEP's witnesses did not provide any justification for the particular level of 20 percent used for contingency in the RET. DEP witnesses K. Jennings and S. Jennings also testified that further engineering and design work would be undertaken after execution of an Interconnection Agreement. Tr. Vol. 2, pp. 167, 229. Witness S. Jennings also testified that DEP determined to use the RET rather than adjusting cost information within Maximo, primarily because making changes to Maximo would be time and resource intensive. Tr. Vol. 2, pp. 238-39. Witness S. Jennings indicated that DEP has made updates to Maximo's direct labor costs since the issuance of the Williams Solar FS Estimate. Tr. Vol. 2, pp. 239-40.

In his rebuttal testimony, witness Bolyard disagreed with DEP witness Holmes's opinion regarding the appropriate AACE Framework classification for both the SIS Estimate and the FS Estimate. Tr. Vol. 4, pp. 147-48. Witness Bolyard opined that, given the level of detail and project definition in the Williams Solar System Impact Study, and the experience of DEP in constructing interconnection projects, he would expect the SIS Estimate to be a Class 4

estimate with a likely accuracy range of -15 percent to 20 percent of actual costs. Tr. Vol. 4, pp. 148-50. With regard to the FS Estimate, witness Bolyard opined that the appropriate AACE classification was "at a minimum Class 2," with an appropriate contingency in the range of 5 to 10 percent. Tr. Vol. 4, pp. 152-53.

Witness Bolyard also disagreed with the contentions of DEP witnesses K. Jennings and S. Jennings that significant engineering and design work occurs after the signing of an Interconnection Agreement, pointing out that if there was significant engineering design effort, that would be—but in fact is not—reflected in the FS Estimate. Tr. Vol. 4, pp. 150-151.

Witness Bolyard also testified that the testimony of DEP's witnesses did not alter his conclusion that DEP's application of the RET was unreliable and unreasonable. Tr. Vol. 4, pp. 154-62. Specifically, witness Bolyard noted that DEP's witnesses failed to produce evidence of the "multivariate analysis" supporting the RET. Tr. Vol. 4, p. 156. Witness Bolyard testified that estimates like the FS Estimate should be generated from the "bottom up" by matching components of a project to a database of equipment costs, labor rates, expected labor time, taxes, and overheads—such as the process used by Maximo—and that if costs change, the database (Maximo) should be changed. Tr. Vol. 4, p. 156. In contrast, witness Bolyard testified that DEP's RET methodology reflects a "top down" approach designed to achieve a higher estimate without reference to the needs of a specific project. Tr. Vol. 4, pp. 156-57. Witness Bolyard testified that there is no way to evaluate the statistical or logical validity of the RET because DEP has provided no information showing whether the adjustments made by the RET are tied to specific differences between actual costs and estimated costs. Tr. Vol. 4, pp. 157-58. Witness Bolyard points out that DEP was using a 10 percent contingency adder for Facilities Study estimates as recently as June 19, 2019. Tr. Vol. 4, p. 159 & CEB Rebuttal Exhibit 2.

On cross examination, witness Bolyard clarified that although DEP included a line item for engineering and design work in the RET description DEP produced in discovery (Ex. CEB-12), that line item is not supported by the calculations made by the RET and "the only way that those engineering and design line items appear on page 6 [of Ex. CEB-12] is because somebody arbitrarily made a number to stick in there." Tr. Vol. 4, p. 178-80. On redirect, witness Bolyard confirmed that the RET in fact makes no calculation of engineering or design costs, and that the table on page 6 of Exhibit CEB-12 was not actually produced by the RET. Tr. Vol. 4, pp. 181-82 & CEB Rebuttal Ex. 2.

The Commission finds the testimony of Williams Solar witness Bolyard persuasive and entitled to significant weight. The Commission notes that witness Bolyard and DEP witness Holmes agree that the AACE Framework is appropriately applied to the estimates provided by DEP under the NC Interconnection Standard. The Commission recognizes witness Holmes's testimony that there can be reasonable disagreement on the appropriate classification of the System Impact

Study and Facilities Study estimates under that framework. The Commission is persuaded that the 20 percent contingency applied by DEP in the FS Estimate is excessive in light of DEP's understanding of the scope of work required to interconnect the Williams Solar project.

More generally, the Commission is persuaded that the adjustments applied by the RET are untethered from DEP's understanding of the system upgrades and interconnection facilities necessary to interconnect the Williams Solar project. DEP presented extremely limited testimony, but no actual data, regarding the "multivariate analysis" that supposedly underlies the RET. In this regard, the Commission notes that the adjustments applied by the RET—6 percent for inflation, 7 percent for taxes, 48.75 percent for materials overheads, 20 percent for contingencies, and 25 percent for overheads—appear to be round numbers unlikely to have been generated by a statistical analysis. While the inflation and tax adjustments have a clear basis, the other adjustments do not. Witness Bolyard's testimony that the adjustments applied by the RET are arbitrary adjustments designed simply to inflate DEP's Facilities Study estimates is supported by the testimony of DEP witness Holmes and K. Jennings that after implementation of the RET, DEP's actual costs for interconnection have averaged 10 percent less than the RET estimates. Tr. Vol. 4, p. 67. In other words, the RET appears designed to exceed actual costs rather than to produce an accurate estimate. The excess of the estimates is troubling in light of our conclusion that the costs experienced by DEP appear to be uncontrolled costs.

The Commission is not insensitive to the tradeoff between estimating accuracy and study costs discussed by DEP witness K. Jennings. Tr. Vol. 2, pp. 173-74. Nevertheless, the Commission is persuaded that the use of the RET, while apparently relatively expedient in comparison to updating Maximo, is not consistent with industry practice.

Furthermore, taking due consideration of the limited testimony of DEP's witnesses with regard to existence of a "multivariate analysis," the Commission finds that the testimony of Williams Solar's witnesses called into question the good faith and reasonableness of the DEP's development and use of the RET, including the validity of that analysis. Without substantial detail regarding the source of the adjustments applied by the RET—including any evidence of the "multivariate analysis" itself—the Commission is left with no basis for finding that the adjustments applied by the RET are reasonable.

The Commission is also troubled by witness Bolyard's correct characterization of the RET as a "top down" estimating approach. The RET's starting assumption—that Maximo's output is wrong—is an issue better addressed by updating Maximo, which the Commission notes is also used to generate estimates for DEP's own projects—projects for which ratepayers may ultimately be responsible.

In sum, the Commission is persuaded that DEP's methodology for creating the FS Estimate was not consistent with industry standards.

CONCLUSIONS OF LAW

I. DEP owed Williams solar a duty of good faith in rendering construction estimates.

Williams Solar alleges that DEP failed to meet its obligation to provide the SIS Estimate and FS Estimate in good faith.

The Commission has not had an opportunity to examine whether DEP owes an interconnection customer a general duty of good faith. For the reasons stated below, the Commission concludes that DEP owes interconnection customers like Williams Solar a duty to produce System Impact Study estimates and Facilities Study Estimates in good faith.

The relationship between DEP and Williams Solar is governed by the NC Interconnection Standard and the agreements between the parties thereunder, including the System Impact Study Agreement and Facilities Study Agreement entered into by DEP and Williams Solar.

The NC Interconnection Standard does not explicitly create a duty of good faith with regard to the estimates provided in a System Impact Study or a Facilities Study. *See, e.g.*, NC Interconnection Standard §§ 4.3.5-.6 (requiring a System Impact Study to include a Preliminary Estimated Upgrade Charge and a Preliminary Estimated Interconnection Facilities Charge); 4.4.4 (requiring a Facilities Study report to estimate the "cost of the equipment, engineering, procurement and construction work . . . needed to implement the System Impact Studies"). However, explicit duties to provide good faith estimates appear in multiple sections of the NC Interconnection Standard. *Id.*, §§ 2.2.1.2 (requiring good faith estimate of cost of construction for 20 kW inverter process interconnections), 3.2.2.2 (requiring good faith estimate of construction costs for fast track process interconnections), 3.2.2.5 (same). We see no basis for concluding that the omission of similar language in 4.3.5, 4.3.6 and 4.4 creates a negative connotation that good faith is not required in providing those estimates. To the contrary, if anything it is even more important in the context of larger interconnections proceeding under the standard study process outlined in section 4 that the utility provide good faith estimates given the larger investment at issue.

This conclusion is buttressed by the fact that the obligation to act in good faith is amplified in the regulatory setting, where public utilities are granted certificates to act in the public interest and convenience. Given this, the Commission expects that public utilities subject to its jurisdiction will discharge their obligations under Commission orders with earnest diligence, especially under circumstances such as presented here where the orders and regulations in issue

are essential to effectuating rights and responsibilities under state and federal law. *See* The Public Utilities Regulatory Policies Act of 1978, 16 U.S.C. § 2601, *et seq.* (as amended, "PURPA"); and G.S. 62-156. The Commission expects that utilities will honor the letter and spirit of its regulations and not simply feign compliance or go through the motions in such a way that undermines the reason for the regulation in the first place. Accordingly, the Commission concludes that the NC Interconnection Standard is properly read to confirm that the Commission expects that DEP will manage the interconnection process—including any associated construction estimates—in good faith

Further, under North Carolina law, "[e]very contract in our State contains an implied covenant of good faith and fair dealing which works to prevent any party to a contract from doing anything to destroy or injure the right of the other party to receive the benefits of the contract." *Howse v. Bank of Am., N.A*., 255 N.C. App. 22, 37, 804 S.E.2d 552, 562 (2017) (citing *Maglione v. Aegis Family Health Ctrs*., 168 N.C. App. 49, 56-57, 607 S.E.2d 286, 291 (2005)). The Commission has not been presented any cognizable basis for declining to extend this implied duty to the System Impact Study Agreement and Facilities Study Agreement adopted by the Commission for use in the interconnection process. To the contrary, the agreements each are expressly subject to North Carolina law, which would include the obligation of good faith. Accordingly, we conclude that the implied duty associated with contracts under North Carolina is an independent basis for finding that DEP was subject to an obligation of good faith.

Williams Solar further argues that the duty of good faith required here is analogous to that established for fiduciaries under North Carolina law. Specifically, under North Carolina law,

> A fiduciary relationship exists in all cases where there has been a special confidence reposed in one who in equity and good conscience is bound to act in good faith and with due regard to the interests of the one reposing confidence. . . . Only when one party figuratively holds all the cards—all the financial power or technical information, for example—have North Carolina courts found that the special circumstance of a fiduciary relationship has arisen.

S.N.R. Mgmt. Corp. v. Danube Partners 141, LLC, 189 N.C. App. 601, 613, 659 S.E.2d 442, 451 (2008) (quotations and citations omitted). Williams Solar points to several elements of the relationship between utilities and solar interconnection customers that are in the nature of a fiduciary relationship under North Carolina law. For example, the incumbent utility providing the cost estimates has vastly superior information about the facts relating to the interconnection. The utility has a literal monopoly over interconnection to its distribution system, subject to statute and oversight by the Commission, and is only required to provide sufficient information to would allow the interconnection customer to generate an independent estimate under limited circumstances. *See* NC Interconnection

Standard § 4.4.5. The utility performs or contracts for the work necessary to achieve interconnection. For contracted work, the utility selects the contractor and has sole control over the contractor's performance of the required work. The solar customer is simply provided an invoice created by the utility for the work after it has been done. These facts do support a conclusion that the utility "holds all the cards" in the relationship, *S.N.R. Mgmt. Corp. v. Danube Partners 141, LLC*, 189 N.C. App. at 613, 659 S.E.2d at 451, subject to Commission oversight or judicial review. Accordingly, the Commission agrees with Williams Solar that this case law relating to obligations of fiduciaries is directly analogous to the present situation and further supports the finding of the existence of a duty of good faith under the circumstances here.

Interconnection customers are entitled by the NC Interconnection Standard, the System Impact Study Agreement, and the Facilities Study Agreement to obtain estimates from DEP regarding the cost of interconnection. Interconnection customers must pay a substantial deposit—$25,000 in the case of Williams Solar—to obtain these estimates. The purpose of these estimates is to allow the interconnection customer first (with respect to the SIS Estimate), to decide whether to proceed past the initial phase of the project, and second (with respect to the FS Estimate), to decide whether to pursue interconnection and become liable for all reasonable costs of interconnection, as the Interconnection Agreement requires. DEP is therefore required to act in accordance with good faith and fair dealing in providing the System Impact Study and Facilities Study estimates.

In sum, because the duty of good faith is implied from the NC Interconnection and from general North Carolina law, the Commission holds that DEP is under a duty to provide the System Impact Study and Facilities Study estimates in good faith.

The parties offer various interpretations of this standard. DEP witness S. Jennings testified that he understands "good faith" to mean "those efforts that are reasonable in light of the totality of the circumstances and consistent with the overall structure of the arrangement." Tr. Vol. 2, p. 163. Witness K. Jennings further opined that "[g]ood faith efforts do not require perfection" and that "good faith" is the opposite of "bad faith," which he contends "typically involves some level of intentionality—a specific intent or motive to harm or deceive." Tr. Vol. 2, p. 198. On the other hand, Williams Solar witness Bolyard offered a definition of the term from *Black's Law Dictionary*. Tr. Vol. 4, p. 162-63.

The Commission interprets the duty of good faith consistent with North Carolina law. "Good faith" is defined as:

> [a] state of mind consisting in (1) honesty in belief or purpose, (2) faithfulness to one's duty or obligation, (3) observance of reasonable commercial standards of fair dealing in a given trade or business, or

(4) absence of intent to defraud or to seek unconscionable advantage.

Evans v. Neill, 217 N.C. App. 195, 719 S.E.2d 255, 2011 WL 5542875 at *2 (2011) (unpublished) (quoting *Black's Law Dictionary* (7th ed.1999)). By contrast, "'[bad faith] implies a false motive or a false purpose, and hence it is a species of fraudulent conduct. Technically, there is, of course, a legal distinction between bad faith and fraud, but for all practical purposes bad faith usually hunts in the fraud pack.'" *Shannon v. Testen*, 243 N.C. App. 386, 390, 777 S.E.2d 153, 156 (2015) (quoting *Bundy v. Commercial Credit Co.,* 202 N.C. 604, 163 S.E. 676, 677 (1932)).

This Commission perceives no reason to deviate from, or amplify, the good faith standard adopted by North Carolina courts.

Turning to Williams Solar's claims, we consider whether the SIS Estimate and the FS Estimate were provided in good faith.

II. The SIS Estimate was not provided in good faith.

The Commission concludes, based on the weight of the evidence in the record, that DEP did not provide the SIS Estimate to Williams Solar consistent with its obligation of good faith. This conclusion is supported by findings of fact numbers 2 to 21 and the entire record in this case.

By way of background to this conclusion, the Commission takes note of the following provisions of the NC Interconnection Standard and the System Impact Study Agreement.

When DEP delivered the SIS Estimate to Williams Solar, the NC Interconnection Standard provided:

> 4.3.4 The System Impact Study report will provide the Preliminary Estimated Upgrade Charge, which is a preliminary indication of the cost and length of time that would be necessary to correct any System problems identified in those analyses and implement the interconnection.
>
> 4.3.5 The System Impact Study report will provide the Preliminary Estimated Interconnection Facilities Charge, which is a preliminary non-binding indication of the cost and length of time that would be necessary to provide the Interconnection Facilities.

The System Impact Study Agreement entered into by Williams Solar likewise provided:

12.0 The System Impact Study will provide the Preliminary Estimated Upgrade Charge, which is a preliminary indication of the cost and length of time that would be necessary to correct any System problems identified in those analyses and implement the interconnection.

13.0 The System Impact Study will provide the Preliminary Estimated Interconnection Facilities Charge, which is a preliminary indication of the cost and length of time that would be necessary to provide the Interconnection Facilities.

When the SIS Estimate was delivered, the NC Interconnection Standard included the following definitions:

> Preliminary Estimated Interconnection Facilities Charge - The estimated charge for Interconnection Facilities that is developed using unit costs and is presented in the System Impact Study report and Interim Interconnection Agreement. This charge is not based on field visits and detailed engineering cost calculations.
>
> Preliminary Estimated Upgrade Charge - The estimated charge for Upgrades that is developed using unit costs and is presented in the System Impact Study report and Interim Interconnection Agreement. This charge is not based on field visits and detailed engineering cost calculations.

As concluded above in Section I, DEP was obligated by the System Impact Study Agreement and the NC Interconnection Standard itself to prepare and provide the SIS Estimate in good faith.

In defense of its conduct here, DEP places great reliance and emphasis on the language of Section 4.3.4 of the NC Interconnection Standard noting that the Preliminary Estimated Upgrade Charge is a "preliminary indication"; the language of Section 4.3.5. of the NC Interconnection Standard noting that the Preliminary Estimated Interconnection Facilities Charge is a "preliminary non-binding indication" of the cost; and the definition of "Preliminary Estimated Interconnection Facilities Charge" which notes that the estimate is not based on "field visits and detailed engineering cost calculation."

The Commission takes note of the fact that the SIS Estimate is intended to be preliminary in nature and that it is provided without the benefit of field visits and detailed engineering cost calculations. However, even "preliminary" or "non-binding" estimates must be rendered in good faith, using reasonable diligence based on information DEP reasonably believes to be reliable. Moreover, as discussed above in Finding of Fact Nos. 16 and 17, DEP intended that Williams

Solar rely on the SIS Estimate, and Williams Solar did rely, to its detriment, on the estimate by incurring additional expense that it would not have incurred had DEP provided an estimate more in line with the revised estimate.

With regard to the fact that the SIS Estimate was not based on "field visits and detailed engineering cost calculations," the Commission notes that this fact would present a valid defense if there was evidence that the difference between the initial and revised estimate resulted from such additional information. However, as discussed in Finding of Fact Nos. 23 and 30-31, there is no such evidence. To the contrary, as the Commission has found, all evidence indicates that the difference between the estimates resulted entirely from the introduction of a new cost estimating tool by DEP, not from any additional information about the Williams Solar project. In this regards, the Commission notes that the DEP's arguments about "field visits and detailed engineering cost calculations" are misleading at best.

Similarly, DEP contends that the SIS Estimate transmittal e-mail warned of potentially substantial deviations from the SIS Estimate and that, therefore, Williams Solar should have been on notice that the estimate was not reliable. This argument is not persuasive. As discussed above in Finding of Fact Nos. 16-17, the transmittal e-mail warns of specific risks, none of which apply to this case. Similarly, DEP's contention that Williams Solar was aware of specific costs that would significantly increase the FS Estimate above the SIS Estimate are likewise not persuasive for the reasons discussed above in Finding of Fact No. 30.

The facts relating to the preparation and delivery of the SIS Estimate are straightforward, largely uncontroverted, and unmistakably support a conclusion that DEP breached is duty of good faith.

First, the undisputed facts show that DEP did not update the SIS cost estimation tool from 2015 through June 2019. *See* Finding of Fact Nos. 10 and 18-19. The Commission is persuaded by the expert testimony of witness Bolyard that this failure departed from industry norms and practices. *See* Finding of Fact No. 21. In this regard, the Commission is troubled by the fact that DEP was providing estimates, even if preliminary, to solar developers based on data that was not being kept updated. The record is not clear as to whether DEP intentionally adopted a policy that it would not update its records or whether its update policies lapsed due to negligence and inattention. In either case, the solar interconnection customers had the right to expect that estimates were based on reasonably accurate information, and DEP failed in this regard.

Second, the evidence demonstrates that DEP knew by early 2018 that its actual costs were exceeding the estimates provided to interconnection customers and, as DEP witness McNeill testified, DEP realized in 2018 that DEP needed to make changes to both its System Impact Study and Facilities Study cost estimation processes. *See* Finding of Fact No. 18; Tr. Vol. 2, pp. 132-133. However, DEP did

not did not inform Williams Solar of DEP's concerns regarding the SIS Estimate or its estimates generally at any time from the delivery of the SIS Estimate in January 2019 through the end of July 2019. *See* Finding of Fact No. 19-20. The Commission is persuaded by the testimony of Williams Solar witness Bolyard that following industry practice regarding estimation would have led DEP to disclose these concerns about the validity of the SIS Estimate to Williams Solar. *See* Finding of Fact No. 21. However, the undisputed evidence is that DEP did not provide any indication that Williams Solar should not trust the SIS Estimate. *Id.*

DEP makes several additional arguments in defense of its initial estimate.

DEP argues that in its overall management of solar interconnection in North Carolina, DEP has acted in good faith, and, therefore, Williams Solar's specific claims in this case should be denied. Tr. Vol. 2, p. 161. Of course, the issue in this proceeding is whether DEP acted in good faith with respect to its provision of construction estimates to Williams Solar, not whether DEP is doing an adequate job managing solar interconnection in North Carolina. Further, the Commission agrees with Williams Solar that DEP cannot have it both ways. The company does have substantial experience with solar interconnection such that North Carolina is among the leading states in the deployment of solar generation. Given this, it can hardly claim that it was writing on a blank slate when preparing Williams Solar's construction estimates. To the contrary, one would expect that DEP would have been well situated to render highly accurate estimates.

DEP also leans heavily on its suggestion that its initial estimate was little more than a "back-of-the-envelope" calculation. But the evidence offered at the hearing establishes that the construction estimate DEP provided to Williams Solar with the System Impact Study Report was, at least, a "Class 4" estimate as defined by the AACE International Cost Estimating Framework, not a "Class 5" estimate as DEP now argues. Accordingly, DEP had an obligation to ensure that the estimate met certain standards of accuracy, an obligation that it ultimately breached. This conclusion is supported by the 21-page System Impact Study Report (Burke Ex. JB-2), which indicates that DEP had, in fact, undertaken substantial analysis of the project's siting (id. at 6-7) and technical requirements (id. at 9-17), and it had identified in great detail what equipment would be required to make the proposed upgrades (id. at 9-10). Indeed, the Report itself indicates that it took more than four months to prepare (id. at 20). On its face, the System Impact Study estimate is not a "back-of-the-envelope" estimate intended for initial "ballparking" purposes.

In summary, the essential facts found by the Commission are that (1) DEP knew since early 2018 that its actual costs were significantly higher than its estimated costs; (2) DEP began developing a tool to improve its Facilities Study estimates in early 2018 and knew that it would also need to correct its System Impact Study estimating methodology; (3) DEP did not update its cost data from January 1, 2015, through January 28, 2019, when the SIS Estimate was provided

to Williams Solar; (4) DEP did not disclose its investigation into its estimating inaccuracies or otherwise inform Williams Solar that DEP believed the SIS Estimate could be substantially inaccurate; (5) DEP intended Williams Solar to rely on the SIS Estimate and knew that Williams Solar would do so; and (6) Williams Solar reasonably relied on the SIS Estimate to its detriment on the understanding that the estimate was reasonably accurate, including by expending funds that Williams Solar otherwise would not have spent.

These findings amply support a conclusion that DEP breached its duty of good faith because it failed to act with "honesty in belief or purpose, (2) faithfulness to one's duty or obligation, (3) observance of reasonable commercial standards of fair dealing in a given trade or business, or (4) absence of intent to defraud or to seek unconscionable advantage," as required by North Carolina law. *Evans*, 217 N.C. App. 195, 719 S.E.2d 255, 2011 WL 5542875 at *2.On cross-examination, DEP witness K. Jennings conceded that, if DEP knew the estimate was wrong and sent it anyway, that would constitute bad faith. Tr. Vol. 3, p. 41. Based on the record evidence described above, DEP knew that the SIS Estimate was wrong even before the estimate was sent to Williams Solar.

In sum, the SIS Estimate was not provided in good faith, and DEP breached its duty to Williams Solar.

III. The FS Estimate was not provided in good faith.

The Commission concludes, based on the weight of the evidence in the record, that DEP did not provide the FS Estimate to Williams Solar consistent with its obligation of good faith. This conclusion is supported by findings of fact numbers 5, 7 to 9, and 22 to 32, and the entire record in this case.

By way of background to this conclusion, the Commission takes note of the following provisions of the NC Interconnection Standard and the Facility Study Agreement.

The NC Interconnection Standard provides:

> 4.4.4 The Facilities Study Report shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the System Impact Studies and to allow the Generating Facility to be interconnected and operated safely and reliably.

Similarly, the Facilities Study Agreement entered into by Williams Solar and DEP provides:

> 4. The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction

> work (including overheads) needed to implement the conclusions of the system impact studies. The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Utility's Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the construction time required to complete the installation of such facilities.

See Ex. JB-3, p. 2.

As concluded above in Section I, DEP was obligated by the Facilities Study Agreement and the NC Interconnection Standard itself to prepare and provide the FS Estimate in good faith.

DEP offers several arguments in support of its use of the RET tool to supplement the Maximo output in connection with the preparation and delivery of the FS Estimate to Williams Solar.

First, DEP implies that the difference between the initial and revised estimates was due to "field studies and more detailed engineering studies" conducted at the Facilities Study stage. As discussed above in connection with the Commission's conclusion that the SIS Estimate was not provided in good faith, the Commission has not found this contention to be persuasive or supported by competent evidence. We will not belabor this issue further.

Second, DEP argues that the RET was the product of a "multivariate analysis" relating to actual costs and that, therefore, the revised estimate better approximated true expected costs. This could have been a valid and convincing argument if DEP had produced competent evidence supporting this contention, but DEP did not. DEP did not produce a witness that was directly involved with its creation, Tr. Vol. 3, pp. 47, 65-68, and neither witness K. Jennings nor witness S. Jennings provided any evidence substantiating the connection between the RET multipliers, any analysis of "actual" costs, or any connection between the Williams Project and these "actual" costs. *See* Finding of Fact No. 31. Surprisingly, both witnesses stated in their testimony that the other witness would explain the purported "multivariate analysis" demonstrating how the RET related to true actual costs, but neither did. *Id.* Given this evidentiary failure, the Commission takes this into consideration in evaluating the weight to be given to these witnesses' conclusory and unsupported statements. *See Brooks v. Austin Berryhill Fabricators, Inc*., 102 N.C. App. 212, 219, 401 S.E.2d 795, 799 (1991) (holding that "conclusory testimony [was] insufficient to establish" factual contention). The Commission is not required to assume evidence not presented, and DEP's failure to substantiate the basis for this tool is notable and significant.

Nonetheless, despite these findings, the Commission is left with the question whether DEP's adoption and use of the RET as to Williams Solar was appropriate and consistent with its obligation of good faith. The Commission acknowledges that there are a variety of approaches to cost estimation that would be permissible, and, to date, the Commission has not prescribed any particular approach. Such approaches would include methods that are based on actual cost data and demonstrated to generate estimates within expected ranges given the level of information available to DEP at this stage of the process. However, the Commission is unable to conclude that the RET is one of these acceptable methods.

First, the Commission is persuaded that DEP's two-step estimating process—first, using Maximo, then adjusting Maximo's output using the RET—is inconsistent with utility industry estimating practices. *See* Finding of Fact No. 33. DEP's witnesses were unable to provide any evidentiary support for use of estimation approach that takes properly developed cost estimates and then subjects those estimates to a series of mathematical multipliers. On its face, such an approach appears designed to generate higher outputs, without regard to the particular characteristics of the particular project in issue.

Second, the Commission is not persuaded that the RET was developed to produce accurate estimates. When viewed in light of (1) DEP's concerns about "exposure" relating to uncollected payments, (2) the lack of cost controls to keep actual costs in line with estimated costs, and (3) DEP witness Holmes's testimony that the RET is, on average, overestimating the costs of interconnection facilities and system upgrades, the Commission is persuaded by Williams Solar witness Bolyard's testimony that the RET was designed not to provide reliable estimates but to provide *high* estimates. DEP has not provided any data or analysis to justify the overheads, contingencies, or labor hour adjustments applied by the RET. The Commission is unable to discern any principled basis for the addition of more than $300,000 of "overhead" costs in the FS Estimate, and DEP has not provided any such basis. *See* Finding of Fact No. 30. The Commission is also persuaded by witness Bolyard's testimony that the contingency of 20% applied by DEP is excessive in light of the detailed knowledge DEP possesses regarding the facilities needed to interconnect the Williams Solar project. *See* Finding of Fact No. 33. The Commission notes in this regard that DEP itself used the 10 percent contingency level proffered by witness Bolyard as recently as June 2019. *Id.*

Third, the Commission is troubled by the fact that DEP uses Maximo's output, without alteration, for its own projects, but it uses Maximo "plussed up" by the RET for the projects of solar developers. *See* Finding of Fact No. 26. DEP has offered no cogent explanation for this discriminatory treatment. DEP argues that solar interconnection projects encounter different costs than DEP's own projects because of the kinds of work typically involved, but did not explain. Without such an explanation, the Commission is forced to conclude that either DEP

is seeking to drive up the cost estimates for solar projects or it is unwilling or unable to control costs for solar projects in the same manner that its controls costs for its own projects. Either explanation is unsatisfactory and supports a conclusion that DEP's estimation practices for solar projects are inconsistent with industry standards.

Fourth, although of only tangential relevance here, the Commission is also deeply troubled by DEP's admission that it has not implemented measures to control costs incurred in connection with solar interconnection projects. *See* Finding of Fact No. 32. As previously recognized, DEP's relationship with solar interconnection customers can be analogized to that of a fiduciary relationship given the vastly superior knowledge, information and control held by the utility. It is inconsistent with such a relationship to not properly oversee projects to be paid by the interconnection customer to ensure that work is being done efficiently and on a least cost basis. There is no basis under this record to believe that DEP has exercised such oversight—which calls into question what are true "actual costs." Given that DEP is willing to accept Maximo for its own projects but applies an RET-generated multiplier for third party projects, on its face there appears to be one set of costs for DEP and another, higher set of costs for third parties. This result, would be anticompetitive and inappropriate with the basic standards by which DEP is expected to manage the interconnection relationship.

In sum, the essential facts found by the Commission are that (1) DEP recognized in 2018 that its actual costs of interconnection were exceeding its estimates; (2) DEP identified exposure in that it believed it could not collect costs that were not deposited by interconnection customers before construction; (3) DEP did not impose cost controls to limit its exposure from cost overruns; (4) instead, DEP used uncontrolled cost data to create the RET for the purpose of adjusting the cost estimates produced by Maximo upward; (5) DEP provided no supporting data for the analysis underlying the RET or the multipliers and other adjustments its applies; (6) the adjustments made by the RET do not conform to good estimating practice, including because of the inappropriately large contingency applied by DEP; and (7) by DEP's own admission, the RET, on average, overestimates actual costs. In short, rather than attempt to produce an accurate estimate, DEP's RET seems designed for the purpose of overestimating the costs experienced by DEP. These facts, combined with DEP's admission that its costs are essentially uncontrolled, support Williams Solar's contention that the RET merely provides an inflated estimate exceeding what DEP anticipates it will attempt to charge the interconnection customer, not what the necessary interconnection facilities and system upgrades would cost with the implementation of reasonable cost control measures.

These facts amply support a conclusion that DEP breached its duty of good faith. This is not a case where DEP worked in good faith to develop an estimation tool and the parties differ on whether the details of the tool produce a sufficiently accurate result. Rather, the issue here is whether the tool itself was designed and

intended, consistent with industry norms and standards, to produce accurate results within an expected range. As stated, the evidence shows that RET was inconsistent with industry standards and was intended merely to produce higher cost estimates, not produce more accurate results. In other words, the RET was designed and intended to thwart Williams Solar's ability to "receive the benefits of the contract" entered into with DEP regarding preparation and delivery of the FS Estimate. *See Howse v. Bank of Am., N.A*., 255 N.C. App. at 37, 804 S.E.2d at 562; *Evans v. Neill*, 217 N.C. App. 195, 719 S.E.2d 255, 2011 WL 5542875 at *2. Such conduct shows a lack of good faith.

In light of the foregoing, the Commission concludes that the FS Estimate provided to Williams Solar was not prepared and provided in good faith.

IV. Overhead Costs

Finally, the Commission addresses various arguments raised by the parties concerning the inclusion of overhead costs in the estimates provided to Williams Solar.

The parties have raised a number of issues relating to overheads that may be charged by DEP and collected from interconnection customers, and, in particular, they disagree over the proper treatment of administrative overheads. Citing the Commission's *Order Approving REPS and REPS EMF Riders and REPS Compliance,* at 18, Docket No. E-2, Sub 1109 (Jan. 17, 2017), and the Commission's *Order Approving Revised Interconnection Standard*, Docket No. E-100, Sub 101 (June 14, 2019), DEP contends that the Commission ordered DEP to collect all administrative overheads from interconnection customers. E.g., Tr. Vol. 2, pp. 184-90. Williams Solar contends that the Commission's Order requires DEP to obtain Commission approval before charging certain overheads to interconnection customers, e.g., Tr. Vol. 4, pp. 123-27, and that DEP is contractually restricted in the type of overhead costs that it may assess. Specifically, pointing to the language of then Facilities Study Agreement and the then-existing language of the NC Interconnection Standard, Williams Solar argues that DEP is permitted only to assess overheads for construction work, and not for other costs such as "equipment, engineering, [or] procurement."

As pointed out by DEP, in its most recent order revising the NC Interconnection Standard, the Commission has generally directed DEP to recover its "reasonable overhead expenses" from interconnection customers. *See* Commission's *Order Approving Revised Interconnection Standard*, Docket No. E-100, Sub 101 (June 14, 2019), at 18. However, as the qualifier "reasonable" indicates, this direction is not without boundaries as any such assessment must be supported by reference to actual costs incurred by DEP and allocated using a methodology that is reasonable in this specific context.

Further, any assessment of overhead charges must be consistent with the contractual agreement between the parties. Given that this agreement governs the economics of the interconnection arrangement, as to which the interconnection customer is basing its business decisions, the agreement has particular significance and the terms cannot be unilaterally disregarded by DEP. In this regard, Williams Solar notes that Section 4 of the Facilities Study Agreement executed by the parties states: "The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact studies." Burke Ex. JB-3 (emphasis added). This language, of course, is consistent with the NC Interconnection Standard in existence at that time. *See* 2015 NC Procedures at 5 ("The Facilities Study specifies and estimates the cost of the equipment, engineering, procurement and construction work (including overheads) . . ."); id. § 4.4.4 (same).

Under well settled canons of interpretation recognized under North Carolina law, the parenthetical "including overheads" applies only to "construction work," not to the other items in the preceding list. *See HCA Crossroads Residential Centers, Inc. v. N. Carolina Dep't of Human Res., Div. of Facility Servs., Certificate of Need Section*, 327 N.C. 573, 578, 398 S.E.2d 466, 469 (1990) ("By what is known as the doctrine of the last antecedent, relative and qualifying words, phrases, and clauses ordinarily are to be applied to the word or phrase immediately preceding and, unless the context indicates a contrary intent, are not to be construed as extending to or including others more remote."). Applying that doctrine here, DEP has been authorized by the Commission, for the purposes of the agreements in issue here, to assess overheads only for construction work, and not for "equipment, engineering, [or] procurement." DEP can point to no Commission order purporting to override the terms of the agreement entered into between the parties nor specifically approving its overhead charges in issue here in its estimates. This conclusion provides further basis for the Commission's conclusion *infra* in Section III that DEP's FS Estimate was not prepared or provided in good faith, as that estimate includes overhead charges for items unrelated to actual construction work.

Except as stated above, the Commission concludes that the issue of DEP's ability to assess administrative overheads in connection with interconnection and upgrade work goes beyond the scope of the current dispute, which concerns estimated costs. However, the Commission is concerned with the level of administrative overheads charged by DEP, including, for instance, the imposition of a $3,000 administrative overhead charge for a project that entailed only $242.50 in actual costs. Tr. Vol. 4, p. 137. Further the Commission notes that DEP's assessment of overhead charges raises issues of equity vis-à-vis developers and ratepayers that remain unresolved by the Commission. *E.g.,* DEP's Report on Interconnection Cost Allocation Procedures, Docket No. E-100, Sub 101, Sub 1109, and E-7, Sub 1131 (March 1, 2017). Finally, the Commission agrees with Williams Solar that the Commission's prior orders did not authorize DEP to

unilaterally impose administrative overhead charges without Commission approval. However, given the limited scope of this proceeding, other than as discussed below, the Commission will not address the appropriateness of any administrative overheads here. The Commission encourages DEP, to the extent it seeks to charge administrative overheads to interconnection customers, to present the basis for such charges to the Commission prior to implementing those charges.

REMEDIES

Having found that DEP breached its duty of good faith to Williams Solar, the Commission must decide the appropriate remedies.

As an initial matter, the Commission observes that DEP is a large, sophisticated company owing, as discussed above, duties to its interconnection customers that are in analogous to fiduciary duties given DEP's vastly superior information and ability to control virtually every critical aspect of the relationship between it and its interconnection customers. The Commission expects that DEP will conduct itself in these relationships with diligence and integrity and the evidence in this case demonstrates conclusively that DEP has failed to meet these expectations. DEP's interconnection customers should not be forced to bear the burden of the time and expense associated with bringing and prosecuting a contested complaint proceeding to force DEP to satisfy is most basic obligations to these customers. In fact, it could be reasonably inferred from the evidence in this proceeding that DEP's lack of diligence with regards to its obligations to its interconnection customers was at least in part driven by this imbalance in the relationship and its understanding and belief that interconnection customers will likely lack the resources to enforce their rights in the interconnection process given the costs involved.

Williams Solar has requested the following relief to remedy DEP's violations of its obligation of good faith:

- A declaration that all upgrade estimates must be provided in good faith, which includes a requirement that any estimate of costs be based on commercially reasonable actual cost data (Tr. Vol. 1, pp. 52-53);

- A declaration that DEP failed to provide a good faith cost estimate to Williams Solar (*id.*; Verified Compl. at 9-10);

- An order requiring DEP to refund all charges incurred by Williams Solar in connection with the Facilities Study and an order accounting for all monetary losses caused by Respondent's breach of its obligation of good faith (Verified Compl. at 9-10);

- An order requiring DEP to promptly render a revised facilities study estimate capped at DEP's initial SIS estimate, adopting a rebuttable presumption that any actual costs exceeding 110% of the revised estimate are unreasonable, requiring DEP to provide an executable interconnection agreement with a projected in-service date within six months after posting of required funds, and requiring DEP to provide Williams Solar with a standard offer Power Purchase Agreement subject to preservation of the economic benefits of the entire 15-year term afforded by HB 589 (Tr. Vol. 1, pp. 52-53); and

- Issuance of a penalty against DEP pursuant to N.C. Gen. Stat. § 62-310(a) (*id.*; Verified Compl. at 9-10).

The Commission, of course, possesses "such general power and authority to supervise and control the public utilities of the State as may be necessary to carry out the laws providing for their regulation, and all such other powers and duties as may be necessary or incident to the proper discharge of its duties." G.S. 62-30. Further, the Commission has the "full power and authority to administer and enforce the provisions of [the Public Utilities Act], and to make and enforce reasonable and necessary rules and regulations to that end." G.S. 62-31. Additionally, when acting in its judicial capacity as it is in this proceeding, the Commission "shall be deemed to exercise functions judicial in nature and shall have all the powers and jurisdiction of a court of general jurisdiction as to all subjects over which the Commission has or may hereafter be given jurisdiction by law." G.S. 62-60. Together, these grants provide the Commission broad power and authority to fashion appropriate relief in this proceeding given that it arises in the context of a complaint proceeding involving the Commission's judicial capacity, against a public utility, and involves the administration of rules and regulations duly adopted by the Commission to effectuate rights granted by the General Assembly under state law and delegated to this Commission under federal law.

Fashioning an appropriate remedy for DEP's breach of its obligation of good faith is complicated by the findings in issue: DEP has failed to provide a cost estimate that satisfies basic obligations of good faith and DEP has failed to control costs in such a way that actual observed costs cannot be assumed to be reasonable costs. The first estimate was prepared using a methodology that should produce a valid estimate but was reliant on data that had not been updated and was inconsistent with actual costs observed by DEP. The revised estimate was the product of a flawed methodology that was intended primarily to generate a higher estimate—not to more fairly estimate costs. Williams Solar is entitled to the benefit of its "bargain"—i.e., an estimate prepared using basic standards of good faith—but the evidence does not clearly indicate what amount that would be. Moreover, given DEP's acknowledgement that it has failed to implement cost control measures, the evidence suggests strongly that DEP is not currently capable of providing an estimate that meets this standard.

Given these factors, the only estimate that was generated using a valid methodology was the SIS Estimate. Moreover, the evidence in this case shows that the SIS Estimate was the substantially similar to the estimate produced by Maximo—the tool used by DEP for its own internal purposes. Under these circumstances, the Commission concludes that DEP should be bound by the SIS Estimate. Since DEP has failed to discharge its obligation to produce a good faith estimate and has failed to implement basic safeguards to ensure that actual costs are no higher than are reasonable, fairness dictates that Williams Solar should receive the benefits of its reasonable expectations; Duke's own laxity will not be used to justify higher charges to Williams Solar. Moreover, the evidence indicates that Williams Solar relied on the SIS Estimate in incurring additional charges associated with the project.

While the Commission acknowledges that the evidence shows that Williams Solar understood that certain additional costs would be charged over and above the initial estimate, and Williams Solar in its Complaint sought an order capping cost at 110% of the initial estimate, for the reasons discussed above, the Commission concludes DEP should be held to its initial estimate. This relief best balances DEP's culpability for failing to discharge its most basic obligations to Williams Solar with Williams Solar's responsibility for payment of cost its causes DEP to incur.

With regard to Williams Solar's request for refund and repayment of costs incurred in reliance on the initial estimate provided by DEP, while the Commission may not order money damages, we may mandate the payment of money in order to enforce Commission rules. *State ex rel. Utilities Comm'n v. Thrifty Call, Inc.*, 154 N.C. App. 58, 70, 571 S.E.2d 622, 631 (2002) (Commission may order the payment of money owed under a Commission-approved tariff in order to enforce the tariff); *State ex rel. Utilities Comm'n v. S. Bell Tel. & Tel. Co.*, 88 N.C. App. 153, 173, 363 S.E.2d 73, 84–85 (1987) (Commission may condition operation as a public utility upon making payments to compensate a local carrier for revenue lost through the improper routing of calls).

Furthermore, under N.C. Gen. Stat. § 62-314,

> If any public utility doing business in this State by its agents or employees shall be guilty of the violation of the rules and regulations provided and prescribed by the Commission, and if after due notice of such violation . . . *ample and full recompense for the wrong or injury done thereby to any person as may be directed by the Commission* shall not be made within 30 days from the time of such notice, such public utility shall incur a penalty for each offense of five hundred dollars ($500.00).

N.C. Gen. Stat. § 62-314 (emphasis added). Under this authority, in addition to the Commission's general authority cited above, the Commission is permitted to

fashion remedial relief to "recompense for the wrong and injury done." Given that DEP failed to render a valid estimate to Williams Solar, it is reasonable that Williams Solar should not bear costs associated with rendering the invalid estimates. With regards to Williams Solar's request for an order requiring DEP to repay the costs incurred in reliance on the validity of the initial estimate, the Commission concludes that this relief is appropriate to restore Williams Solar to the position it would have been in had DEP discharged its obligation in good faith in the event that Williams Solar elects not to proceed with this project.

DEP argues that Williams Solar's request for recoupment of certain expenses incurred in reliance on the SIS Estimate is beyond what may be recovered under section 6.13 of the NC Interconnection Standard. We disagree. First, the recoupment of limited additional investment costs sought by Williams Solar is expressly authorized under N.C. Gen. Stat. § 62-314 (allowing "ample and full recompense for the wrong or injury done"), and is not "damages" as that term is used in the law. *Cf. Thrifty Call*, 154 N.C. at 70, 571 S.E.2d at 631; *S. Bell Tel. & Tel. Co.*, 88 N.C. App. at 173, 363 S.E.2d at 84–85. Second, on the facts of this case, where DEP expressly recognized that the purpose of the SIS Estimate was "for a decision to be made whether or not to continue moving forward with the project," GreenGo's decision to make reasonable continued investment in the project on the basis of that estimate is sufficiently "direct": the costs incurred by GreenGo go to the very heart of the value of the SIS Estimate. For that reason, the Commission is not persuaded that recoupment of these costs here renders the limitation of liability provision meaningless.

With regard to Williams Solar's request for imposition of a penalty, N.C. Gen. Stat. § 62-310 provides:

> Any public utility which violates any of the provisions of this Chapter or refuses to conform to or obey any rule, order or regulation of the Commission shall, in addition to the other penalties prescribed in this Chapter forfeit and pay a sum up to one thousand dollars ($1,000) for each offense, to be recovered in an action to be instituted in the Superior Court of Wake County, in the name of the State of North Carolina on the relation of the Utilities Commission; and each day such public utility continues to violate any provision of this Chapter or continues to refuse to obey or perform any rule, order or regulation prescribed by the Commission shall be a separate offense.

Such penalties are authorized "for willful conduct in defiance of a Commission rule, order or regulation." *In Re Quality of Serv. Objectives for Local Exch. Tel. Companies*, Docket No. P-100, Sub 99, 2002 WL 31991560 (Dec. 27, 2002). DEP argues that there is a lack of evidence of willfulness in this case. However, with regard to the SIS Estimate, the record shows that DEP knew the SIS Estimate was inaccurate before it was provided, and that DEP considered communicating about that inaccuracy but ultimately failed to do so. With regard to the FS Estimate, DEP

appears to have been aware of appropriate estimating methodologies, but took a "short cut" in order to produce estimates that are, on average, higher than DEP's actual, uncontrolled costs. In light of these facts, DEP's failure to provide estimates in good faith was willful.

The Commission does not impose penalties lightly. However, there are several aggravating factors here which make DEP's conduct particularly egregious. First, the evidence is clear that DEP did not inform Williams Solar, the developer community, or, for that matter, the Commission, of its concerns with its estimation processes. DEP had ample opportunity to work with Williams Solar and other developers about the problem that it discovered in early 2018, but DEP purposefully chose to keep that information secret. Second, DEP has failed to implement measures to control the costs that are passed on to solar developers. Ensuring that actual costs are reasonable and prudently incurred is a critical aspect of the interconnection process. Without cost controls, even if it had adopted a reasonable methodology for estimating costs, the output of this methodology would be inherently unreliable.

This conduct further supports the Commission's finding that knowingly and intentionally provided inaccurate estimates to Williams Solar, while intending that Williams Solar rely to its detriment on those estimates. Collectively, this behavior does not meet the Commission's expectations for how public utilities such as DEP should engage with their stakeholders and discharge their obligations under the Commission's regulations.

Additionally, Williams Solar has requested a declaratory ruling that DEP is required to review and process all interconnection requests in accordance with the Interconnection Procedures and in good faith, where good faith requires that any estimate of costs be based on commercially reasonable actual cost data. DEP contends that the requested declarations are inappropriate based on DEP's contention that it acted in good faith. Because we have found otherwise, the Commission rejects DEP's contention. The Commission notes that DEP "is not opposed" to the Commission ordering DEP to "review and process all interconnection requests in accordance with the NC Procedures and in good faith, using commercially reasonable actual cost data." Tr. Vol. 2, p. 212.

Finally, Williams Solar has requested that DEP render it a standard offer Power Purchase Agreement subject to preservation of the economic benefits of the entire 15-year term afforded by N.C. Sess. Law 2017-192 (House Bill 589). Under Section 1.(c) of Session Law 2017-192, qualifying small power production facilities are eligible for grandfathered treatment under Docket No. E-100, Sub 140, but the "term of a power purchase agreement eligible for such rate schedules and terms and conditions pursuant to this section shall commence on September 10, 2018, and shall end on the date that is 15 years after the commencement date." Williams Solar seeks relief from this provision given DEP's conduct here, which has impaired Williams Solar's ability to achieve timely interconnection in

accordance with the time frame established by House Bill 589. On the other hand, DEP argues that such relief is prohibited by House Bill 589 and that the Commission is without authority to deviate from the term prescribed by the General Assembly. The Commission acknowledges the superficial appeal of DEP's argument, however the Commission does not read Section 1.(c) of House Bill 589 as a bar to the Commission's remedial authority. DEP, of course, has the authority under state and federal law to enter into power purchase agreements with provisions that deviate from those required by law. Similarly, the Commission has the authority under law to fashion relief to effectuate the purpose of state and federal law. Here, it is apparent that DEP's failure to comply with its obligations has impaired Williams Solar's ability to take advantage for the benefits established by the General Assembly in creating the grandfathered eligibility in the first place. DEP cannot, on the one hand, intentionally fail to comply with its obligations to interconnect with Williams Solar and then, on the other hand, argue that DEP's failure terminates benefits to interconnection established by the General Assembly. For these reasons, the Commission concludes that such relief is within the scope of the Commission's remedial authority and appropriate in this case.

In light of our conclusion that DEP failed to meet its duty to provide the SIS Estimate and FS Estimate in good faith, the Commission finds it appropriate to award relief to Williams Solar to undo the harm caused by DEP's actions.

IT IS, THEREFORE, ORDERED AND DECLARED as follows:

1. All interconnection facility and upgrade cost estimates prepared under the NC Interconnection Standard must be prepared and provided in good faith, with any estimate of costs based upon commercially reasonable, actual cost data and any assessment for overhead costs separately stated.

2. DEP failed to provide the System Impact Study estimate to Williams Solar consistent with its obligation of good faith.

3. DEP failed to provide the Facilities Study estimate to Williams Solar consistent with its obligation of good faith.

4. DEP shall not charge Williams Solar any amount for the System Impact Study or Facilities Study. DEP shall refund the entire $25,000 deposit paid by Williams Solar.

5. Within fifteen days of this order, DEP shall deliver to Williams Solar a revised Facilities Study report reflecting total System Upgrade costs of $774,000 and total Interconnection Facilities costs of $60,000, as stated in the System Impact Study report. Assuming no change in project scope, actual construction costs for System Upgrades and Interconnection Facilities chargeable to Williams Solar, including overheads and taxes, shall be capped at $774,000 for System Upgrades and $60,000 for Interconnection Facilities.

6. Within thirty days of this order, DEP shall tender to William Solar a power purchase agreement allowing Williams Solar to sell power to DEP at DEP's avoided cost rate as set forth in House Bill 589 for a period of fifteen years from the commencement of the delivery of electricity to DEP.

7. DEP is hereby assessed a penalty of $1,000 per day, commencing on January 28, 2019, and continuing to today, for violation of DEP's duty of good faith with regard to the SIS Estimate.

8. DEP is hereby assessed a penalty of $1,000 per day, commencing on July 30, 2019, and continuing to today, for violation of DEP's duty of good faith with regard to the FS Estimate.

9. In the event that Williams Solar elects not to proceed with the project, in addition to the other relief granted herein, DEP shall remit to Williams Solar the sum of $56,213.80, which represents the costs incurred by Williams Solar after receipt of the System Impact Study report.

10. Within sixty days of this Order, DEP shall file for approval in Docket No. E-100, Sub 101, an updated cost estimation methodology that is compliant with this Order.

11. Within sixty days of this Order, DEP shall file for approval in Docket No. E-100, Sub 101 a report on its efforts to establish cost control measures to ensure that Interconnection Facilities and System Upgrade costs assessed on Interconnection Customers are limited to reasonable and prudently incurred costs, including its plan for providing detailed cost substantiation documentation to interconnection customers.

12. Within sixty days of this Order, DEP shall file for approval in Docket No. E-100, Sub 101, any administrative overhead charges that it seeks to charge Interconnection Customers.

This ____ day of _____, 2020.

NORTH CAROLINA UTILITIES COMMISSION

Certificate of Service

I hereby certify that a copy of the foregoing *Williams Solar Proposed Order* has been served this day upon counsel for all parties of record in this proceeding by electronic mail.

This the 14th day of September, 2020.

BROOKS, PIERCE, MCLENDON,
HUMPHREY & LEONARD, LLP