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December 12, 2019

Ms. Kimberley A. Campbell, Chief Clerk  
North Carolina Utilities Commission  
430 N. Salisbury Street  
Raleigh, NC 27603

**RE: *Application for Certificate of Public Convenience and Necessity for Friesian Holdings, LLC to construct a 70-MW Solar Facility in Scotland County, North Carolina NCUC Docket No. EMP-105, Sub 0***

Dear Ms. Campbell:

On behalf of Friesian Holdings, LLC, we herewith submit the Rebuttal Testimony of Charles Askey in the above-referenced EMP docket.

Pursuant to Commission Rule R1-28(e), the Company plans to deliver 16 copies of its testimony and exhibits on December 13, 2019.

Should you have any questions concerning this testimony or exhibits attached thereto, please do not hesitate to contact me.

Sincerely,

*/s/ Karen M. Kemerait*

Karen M. Kemerait

skb

CC: All Parties of Record  
Enclosures

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**BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
FRIESIAN HOLDINGS, LLC  
DOCKET NO. EMP-105, SUB 0**

**PRE-FILED REBUTTAL TESTIMONY  
OF  
CHARLES ASKEY**

**December 12, 2019**

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

2 A. My name is Charles Askey. I am a Senior Project Manager in the Power  
3 Engineering & System Planning Group at Timmons Group Timmons Group. My  
4 business address is 610 East Morehead Street, Suite 250, Charlotte, North Carolina  
5 28202.

6 **Q. Did you previously file testimony in this docket?**

7 A. Yes. I filed supplemental testimony in this docket on November 26, 2019.

8 **Q. What is the purpose of your rebuttal testimony?**

9 A. The purpose of my rebuttal testimony is to respond to the testimony of Public  
10 Staff Witnesses Even D. Lawrence and Dustin R. Metz filed in this docket on  
11 December 6, 2019. Specifically, I will address (1) the Public Staff's assertion that  
12 the public benefits of the Friesian network upgrades are speculative because it is  
13 uncertain whether additional generation utilizing those upgrades is needed, (2) the  
14 relevance of the fact, relied on by the Public Staff, that the Friesian network  
15 upgrades are not referenced in the North Carolina Transmission Collaborative  
16 ("NCTPC"), and (3) the Public Staff's analysis of the reasonableness of the  
17 Friesian upgrade costs on the basis of the levelized cost of transmission  
18 ("LCOT").

19 **I. The benefits of transmission system improvements in southeastern**  
20 **North Carolina**

1 **Q. Do you agree with the Public Staff that the benefits of the Friesian upgrades**  
2 **are speculative because they might not be needed to accommodate additional**  
3 **generation in the southeastern portion of the state?**

4 A. No. It is clear that the Friesian network upgrades are necessary to accommodate  
5 the addition of new and needed grid resources in southeastern North Carolina. As  
6 I mentioned in my direct testimony, DEP has provided information that  
7 substantial network upgrades will be needed to accommodate the addition of a  
8 substantial amount of new grid resources (not limited to solar resources). The  
9 Friesian upgrades are the type of requisite network upgrades that will help to  
10 accommodate the interconnection of a substantial amount of additional  
11 renewable and other resources, including Duke Energy's 1235 MW Combined  
12 Cycle Plant in Cumberland County that is interdependent on the Friesian  
13 upgrades. Even if some of the generation shown in Duke's 2018 IRP and  
14 2019 IRP Update are not ultimately constructed, the Friesian upgrades are  
15 required to connect new generation resources in this area of the state.

16 **Q. Are the Friesian upgrades needed to support the goals of Duke's IRP?**

17 A. Yes. Duke Energy's 2018 IRP and 2019 IRP Update indicate that additional  
18 generation is needed to support load growth and resource portfolio improvements  
19 from renewable resources or other generation resources in southeastern North  
20 Carolina. In fact, DEP's 2019 IRP Update calls for load growth of 0.9% per  
21 year overall.

1           As I mentioned in my supplemental testimony, the Friesian upgrades are  
2 necessary to support new generation to DEP's transmission system separate and  
3 apart from the Friesian project. In addition to information contained in DEP's  
4 2019 IRP, Public Staff Witnesses Lawrence and Metz acknowledged the necessity  
5 of the Friesian upgrades to accommodate new generation to flow northwest to  
6 large load centers. On pages 14 and 15 of the Public Staff's testimony, the Public  
7 Staff provided testimony from DEP Witness Gary Freeman on November 19,  
8 2018 in Docket No. E-100, Sub 101. In that docket, DEP Witness Freeman  
9 stated:

10           DEP has determined that significant transmission network upgrades will  
11 be needed to interconnect additional generation in the southeastern North  
12 Carolina area of DEP East. These upgrades have been triggered by the  
13 cumulative amount of generation located in southeastern North Carolina,  
14 where the need for the increased generation to flow northwest toward the  
15 large load centers, such as Wake County, has caused several transmission  
16 line segments to now reach their power flow limits.  
17

18 **Q. Is this transmission capacity necessary to interconnect additional**  
19 **generation resources in southeastern North Carolina?**

20 **A.** Yes, it is clear that there must be transmission capacity in order to interconnect  
21 additional generation resources. The capacity of Duke's transmission system  
22 or, to be clear, its capability to transfer power from generation to load is  
23 assessed regularly through system planning studies for reliability and for the  
24 interconnection and delivery of generation and load. The identification of  
25 transmission system improvements and the need for the improvements are

1 identified in studies that are typically performed using future year power flow  
2 models that include approved assumptions of load growth and generation  
3 dispatch. Contingency events are modeled along with obligations to generation  
4 and load to determine if the system can deliver under a variety of potential  
5 system conditions. If in the course of the studies, facilities are loaded beyond  
6 their operational ratings or if there are voltage or stability issues, alternative  
7 options and their costs are studied to remedy the problem(s). The selection of  
8 the improvement option is usually based on lowest cost solution or best overall  
9 value for the system.

10 **II. Transmission line upgrades in the NCTPC**

11 **Q. Have you participated in the North Carolina Transmission Planning**  
12 **Collaborative?**

13 A. Yes. I represented four cooperative clients that are served either by DEP or Duke  
14 Energy Carolinas, LLC (“DEC”) in the NCTPC process. I participated early in  
15 the NCTPC process, including the inception of the process.

16 **Q. The Public Staff has noted that the Friesian network upgrades have not been**  
17 **identified in the Report on the NCTPC 2018-2028 Collaborative**  
18 **Transmission Plan (NCTPC Report). Does that fact imply that those**  
19 **upgrades will not serve the public interest?**

20 A. No. The fact that the Friesian network upgrades are have not been identified in  
21 the NCTPC Report says nothing about the need for those upgrades or whether  
22 they will serve the public interest. The NCTPC does not typically consider

1 upgrades for generation resources such as the Friesian facility unless and until  
2 they have executed interconnection agreements, as Friesian did earlier this year.  
3 As noted by the Public Staff, the transmission lines that will be upgraded to  
4 accommodate the Friesian project were not identified as needing upgrades in the  
5 NCTPC reports because the Friesian Large Generator Interconnection Agreement  
6 (“LGIA”) had not been executed at the time of the study evaluations. Since the  
7 LGIA has since been executed, I expect that the Friesian upgrades will be  
8 included in the NCTPC 2020 Transmission Plan.

9 Based on my participation in the NCTPC process, the primary issues that  
10 are considered are the reliability of the transmission system and the ability to  
11 transfer power between systems. In the NCTPC, DEP and DEC present results  
12 from their NERC Transmission Planning Standard (“TPL”) studies and the  
13 facility improvements that are needed from those studies. While generation  
14 assumptions are included in those studies, they are not designed to ensure the  
15 delivery of power from a specific generation location.

16 As stakeholder involvement has increased in the NCTPC process,  
17 stakeholder-suggested studies have been performed by the Planning Working  
18 Group (“PWG”). These studies have usually been hypothetical transfers between  
19 systems, such as a 500-MW transfer from DEC to Southern Company. The PWG  
20 will study a hypothetical transfer and report on whether improvements are needed  
21 to complete the transfer; but no obligations are made for transmission  
22 construction as the result of the study. In general, developers do not request that

1 specific generation resources be studied -- if a developer were to request that a  
2 specific point of interconnection (“POI”) be studied, the developer would be  
3 either disclosing the POI location or making competitive information available to  
4 other developers. The method that most generation resources use to determine  
5 transmission access is to either file a generation interconnection request and enter  
6 the interconnection queue, or hire a consultant like me to perform a confidential  
7 study of the transmission system impact prior to submitting the interconnection  
8 request.

9 **III. Evaluation of the benefits of the proposed network upgrades**

10 **Q. Do you agree with the Public Staff that comparing the LCOT for the**  
11 **Friesian network upgrades to the LCOT in the MISO, PJM, and EIA**  
12 **groups is a reasonable way to evaluate the public benefit of the upgrades?**

13 A. No, I do not. In addition to the fact that the Public Staff has failed to consider the  
14 significant additional generation that will utilize and benefit from the Friesian  
15 network upgrades (as discussed by Witness Wilson in her Rebuttal Testimony),  
16 there are significant differences that must be accounted for when comparing the  
17 LCOT for Friesian with the LCOT for projects in the MISO, PJM, and EIA  
18 groups; the Public Staff has failed to address those distinctions. MISO, PJM,  
19 SPP, and other Regional Transmission Organizations (“RTO”) are regulated by  
20 the Federal Energy Regulatory Commission (“FERC”), and they therefore do not  
21 operate under a regulatory compact with any state jurisdiction. Their participating  
22 utility members have those obligations and address those responsibilities, which



1 means that utility system planning for delivery to native load and regional  
2 transmission planning for system transfers and access to generation are being  
3 coordinated by two different entities. The utilities perform their own NERC  
4 Transmission Planning Standard (“TPL”) Studies and identify the improvements  
5 to solve any contingency loading or voltage issues identified in the process. They  
6 also identify any additional transmission resources that are needed to serve load in  
7 their load zone. These identified improvements are then combined with the other  
8 utilities’ projects throughout the RTO to help create the Regional Transmission  
9 Plan. For example, in PJM, the plan is called the Regional Transmission  
10 Expansion Plan (“RTEP”), MISO has the Midwest Transmission Expansion Plan  
11 (“MTEP”), and SPP has the SPP Transmission Expansion Plant (“STEP”). The  
12 costs for projects associated with the transmission expansion plans are rate-based  
13 by the utility where the project is located. These are commonly referred to as  
14 “Baseline” projects.

15 **Q. You point out relevant differences between when comparing how**  
16 **transmission upgrades are assigned and MISO, PJM, and EIA. How do**  
17 **the differences you describe apply to cost allocation?**

18 The RTOs conduct the Large Generation Interconnection Process (“LGIP”)  
19 Studies associated with their Open Access Transmission Tariff (“OATT”). The  
20 RTOs usually perform these LGIP studies in generation queue clusters that are  
21 accumulated approximately every six months. During these cluster studies,  
22 transmission facility improvements are identified to solve problems associated

1 with delivery of the queued generation under contingency conditions. The costs  
2 associated with upgrading the system to accommodate the new generation are  
3 typically one of three following categories:

- 4 • Directly assigned costs. These are costs paid directly by the generation  
5 resource.
- 6 • Network improvements. These are costs that are socialized by the projects that  
7 contribute to the problem. This cost socialization varies by RTO, but can take  
8 up to five years for the contributions to be assigned.
- 9 • Baseline upgrades. For Baseline upgrades, the RTO can determine that a  
10 system improvement that is necessary to address a system deficiency is not  
11 being caused by the generation interconnection queue. When this occurs, the  
12 RTO assigns the problem to the utilities where the problem exists to perform a  
13 study and create a project to resolve the issue. The project(s) that result from  
14 this study are rate-based by the utility responsible and become part of the  
15 Regional Transmission Expansion Plan.

16 Because project costs are in three separate groupings, it is difficult to determine  
17 the direct transmission cost for a generation facility to connect to the system in an  
18 RTO. In addition, the RTO is the only entity that could effectively coordinate the  
19 calculation of the LCOT, but probably cannot break out the Baseline project costs  
20 that are captured in the utilities' cost of service.

1 **Q. What is the value of using LCOT as a means for evaluating the benefits of the**  
2 **network upgrades associated with the Friesian project?**

3 A. In my opinion, calculating the LCOT for the network upgrades associated with the  
4 Friesian project does not provide any discernable value for decision-making  
5 regarding the public benefits of those upgrades. The Friesian upgrades are needed  
6 to resolve a major transmission constraint in southeastern North Carolina. The best  
7 way to assess whether any particular solution to that problem serves the public  
8 interest is to evaluate all potential options to resolve the problem, and such an  
9 analysis always includes a “do nothing” option.

10 DEP has already performed a full study of the transmission options  
11 available to solve the identified transmission issues, and that is the source of the  
12 identified network upgrades. I have not reviewed their studies or the cost estimate  
13 for the upgrades which I understand contains a contingency amount; however, I  
14 understand the cumulative upgrades comprise the lowest cost solution to the  
15 problem.

16 Witnesses Wilson and Bednar discuss in their Direct Testimony the costs of  
17 the “do nothing” option. This would entail a continued moratorium on new  
18 generation in the southeastern portion of the state. As discussed by other witnesses,  
19 the consequences of that moratorium are (i) the likely inability to realize the savings  
20 to ratepayers of the Synapse solar + storage IRP scenario; (ii) a limitation on  
21 Duke’s ability to reduce carbon emissions and the likely inability to achieve  
22 Governor Cooper’s and Duke’s decarbonization goals; (iii) a resulting substantial

1 increase in health care costs; and (iv) a loss of economic development opportunity  
2 in some of the state's poorest counties. Additionally, the "do nothing" scenario will  
3 leave DEP's transmission system in southeastern North Carolina in a "maxed out"  
4 state. While technically NERC-compliant, the grid will be far more vulnerable to  
5 disruption than it would be if the Friesian upgrades are built. Comparing these  
6 costs, or conversely the benefits provided if the Friesian upgrades are built, to the  
7 cost of the upgrades is a far better way to evaluate whether those upgrades are in  
8 the public interest than an LCOT analysis.

9 **Q. Does this conclude your rebuttal testimony?**

10 A. Yes.

11

12