

PRE-FILED REBUTTAL TESTIMONY OF
DONNA ROBICHAUD
ON BEHALF OF MACADAMIA SOLAR LLC
NCUC DOCKET NO. EMP-119, SUB 0
NCUC DOCKET NO. EMP-119, SUB 1

INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A. My name is Donna Robichaud. I am senior vice president of development strategy for Geenex Solar LLC (“Geenex Solar”) based in Charlotte, North Carolina. The company’s address is 1930 Abbott Street, Suite 402, Charlotte, NC 28203.

Q. ARE YOU THE SAME DONNA ROBICHAUD THAT PROVIDED DIRECT TESTIMONY IN THESE CONSOLIDATED DOCKETS ON AUGUST 31, 2021 AND SEPTEMBER 13, AND SUPPLEMENTAL TESTIMONY ON OCTOBER 20, 2021?

A. I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The primary purpose of my rebuttal testimony is to respond to the testimony of the Public Staff’s witness, Jay B. Lucas, which was filed in these dockets on November 23, 2021. With regard to Macadamia Solar’s application for a Certificate of Public Convenience and Necessity (“CPCN”), I discuss the following issues: (1) the need for the Facility; (2) the Public Staff’s recommendation that the Commission delay issuance of a CPCN until further interconnection studies have been completed; (3) Macadamia Solar’s LCOT analysis; (4) the Affected System Upgrades that may be required on the Duke Energy Progress (“DEP”) system for the Macadamia project; (5) Mr. Lucas’s testimony regarding the potential system benefits of

1 upgrades to the tie-lines between the PJM and DEP systems; and (6) the Public Staff’s apparent
2 opposition to merchant plant development in Dominion Energy’s North Carolina service territory.

3 **NEED FOR THE FACILITY**

4 **Q. IN HIS TESTIMONY, DOES MR. LUCAS DISAGREE WITH MACADAMIA’S**
5 **DEMONSTRATION THAT THERE IS A NEED FOR THE FACILITY IN PJM?**

6 A. In his testimony (on pages 6-7) Mr. Lucas discusses the statement of need provided by
7 Macadamia. He does not dispute that Macadamia has demonstrated a need for the facility.

8 **THE PUBLIC STAFF’S RECOMMENDATION ON THE CPCN**

9 **Q. MR. LUCAS RECOMMENDS ON PAGE 22 OF HIS TESTIMONY THAT**
10 **THE COMMISSION HOLD THE RECORD IN THIS DOCKET OPEN UNTIL AFTER**
11 **PJM RELEASES ITS RETOOLING OF PJM CLUSTER AD1, AND DEP REVISES ITS**
12 **AFFECTED SYSTEM STUDY. WHAT IS YOUR RESPONSE TO THESE**
13 **RECOMMENDATIONS?**

14 A. I do not agree that it is necessary for the Commission to wait until these studies are
15 completed before it can rule on the CPCN Application. In my Direct and Supplemental Testimony,
16 I provided testimony regarding the range of plausible outcomes for PJM’s interconnection studies
17 for the AD1 cluster and a revised DEP Affected System Study, and the range of LCOT values that
18 each would represent. Even under the “worst-case” scenario (from the standpoint of reimbursable
19 Affected System Study costs assigned to Macadamia), the LCOT of reimbursable Affected System
20 Upgrade costs assigned to Macadamia would be only \$0.38/MWh, which is far lower than any of
21 the benchmark LCOT values the Commission and the Public Staff have found reasonable in past
22 proceedings.

1 Notwithstanding my view the Macadamia has already demonstrated that its reimbursable
2 Upgrade costs are reasonable under any plausible scenario, the Applicant does not object to the
3 Public Staff’s recommendation that the Commission hold the record open to allow for a retooled
4 PJM study and a revised DEP Affected System Study to be produced. PJM has indicated to
5 Macadamia that it currently working on its retooled studies, and a report is expected soon. A
6 revised Affected System Study is expected from DEP within 30-60 days.

7 Accordingly, Macadamia agrees that a brief delay of the evidentiary hearing to allow for
8 the production of these reports and supplemental testimony (if necessary) would be appropriate
9 and will engage with the Public Staff regarding an appropriate procedural motion.

10 If the Commission wishes to proceed with an evidentiary hearing, Macadamia would not
11 object to granting the CPCN subject to the alternative conditions suggested by the Public Staff,
12 requiring the Applicant to inform the Commission of any updates regarding upgrade costs assigned
13 under any ISA or ASOA, provided that the Commission offers guidance as to the circumstances
14 under which a “significant” change in interconnection costs would call into question the validity
15 of its CPCN.

16 **THE PUBLIC STAFF’S CONCERNS ABOUT AFFECTED SYSTEM UPGRADES**

17 **Q. WHAT CONCERNS DOES MR. LUCAS EXPRESS CONCERNING**
18 **AFFECTED SYSTEM UPGRADES?**

19 A. Mr. Lucas first expresses concern that FERC may direct DEP to reimburse PJM
20 interconnection customers for the cost of Affected System Upgrades triggered on DEP’s system.
21 He speculates that the approximately 7500 MW of generation in the PJM interconnection queue
22 in Dominion’s North Carolina service territory “could trigger hundreds of millions of dollars of
23 affected system upgrades.” (p. 10-11) Second, Mr. Lucas expresses the concern that DEP might

1 construct affected system upgrades that would “go unused for extended periods of time because
2 some interconnection projects withdraw from the interconnection queue late in the review
3 process.” Third, Mr. Lucas testifies to his concern that “If network upgrades on DEP’s
4 transmission system are necessitated by the Facility, the upgrades could soon be inadequate due to
5 the needs of future facilities in PJM’s North Carolina queue.” Finally, Mr. Lucas testifies that a
6 re-tooling by PJM of the AD1 cluster study could require DEP to re-evaluate the effect of this
7 cluster on its transmission system and develop a new affected system study.

8 **Q. HOW DO YOU RESPOND TO MR. LUCAS’S CONCERNS?**

9 A. While I acknowledge the Public Staff’s concerns with the allocation of costs for
10 Affected System Upgrades to DEP customers, Mr. Lucas’s statement that merchant generation
11 could trigger “hundreds of millions of dollars” in Affected System Upgrades to be speculative and
12 unrealistic, for several reasons.

13 As an initial matter, in response to data requests the Public Staff acknowledged that this
14 assessment is based on two factors alone: “(1) the total MWs in PJM’s interconnection queue
15 located in North Carolina, and (2) the available capacity on existing transmission infrastructure is
16 not infinite.” See **Exhibit A** (response to DR-5(a)). The Public Staff indicates that it is most
17 concerned with the AF1 cluster, and in particular with a 1210 MW project that could trigger
18 billions of dollars of upgrades in PJM, including a new 500kV rebuild in central to northern
19 Virginia. However, none of the costs of such an upgrade in PJM would ever be allocated to DEP
20 customers, and in any event it is highly unlikely that if that project were to trigger such upgrades
21 it would ever be built. Nor in my view is it appropriate to afford any weight to speculative future
22 upgrades, the costs of which would not be allocated to North Carolina ratepayers, in Macadamia’s
23 CPCN proceeding.

1 Speaking more generally, PJM is currently undergoing its own queue reform process, one
2 of the goals of which is to reduce the number of speculative projects in PJM’s queue. As of now,
3 the effective date of the transition to the new process is expected to be October 1, 2022.¹ It is likely
4 that process will significantly reduce the number of projects in the PJM queue (and the cost of
5 potential upgrades), in part by increasing the financial commitments required for projects that
6 trigger large upgrades. This includes projects in the AE1 and later clusters.

7 **Q. MR. LUCAS EXPRESSES CONCERN THAT “AN AFFECTED SYSTEM**
8 **SUCH AS DEP COULD BUILD NETWORK UPGRADES THAT GO UNUSED FOR**
9 **EXTENDED PERIODS OF TIME BECAUSE SOME INTERCONNECTION PROJECTS**
10 **WITHDRAW FROM THE INTERCONNECTION QUEUE LATE IN THE REVIEW**
11 **PROCESS.” WHAT IS YOUR RESPONSE?**

12 A. It is hard to reconcile Mr. Lucas’s claim that DEP might construct upgrades that
13 ultimately will not be needed with the Public Staff’s concerns about the large amount of generation
14 in the PJM queue. This is also inconsistent with PJM studies that show overloads on the DEP-PJM
15 seam in several clusters. In any event, the Public Staff has confirmed in response to data requests
16 that this is “a general statement regarding DEP upgrades to the seam with DENC,” and does not
17 relate to the specific upgrades that might be associated with Macadamia. See **Exhibit B** (Response
18 to DR 6).

19 **Q. MR. LUCAS ALSO TESTIFIES THAT ANY AFFECTED SYSTEM**
20 **UPGRADES “COULD SOON BE INADEQUATE DUE TO THE NEEDS OF FUTURE**
21 **FACILITIES IN PJM’S NORTH CAROLINA QUEUE,” AND THAT THEY WOULD**

¹ A December 7, 2021, update on the PJM proposal may be found at <https://www.pjm.com/-/media/committees-groups/task-forces/iprtf/2021/20211207/20211207-item-03a-transition-proposal.ashx>.

1 **NEED TO BE REPLACED PRIOR TO THE END OF THEIR NORMAL SERVICE LIFE.**

2 **HOW DO YOU RESPOND?**

3 A. Again, the Public Staff has confirmed in response to data requests that this
4 statement is based on general concerns about affected system upgrades and does not relate
5 specifically to any Macadamia upgrades. See **Exhibit C** (Response to DR 7). I have reviewed the
6 system impact studies for all existing PJM clusters, and all associated DEP Affected System
7 studies, and I have seen no indication in those studies that the Everett's-Greenville 230 kV facility
8 would be replaced prior to the end of normal service life due to future need of PJM interconnection
9 customers. This concern is simply not applicable here.

10 **THE BENEFITS OF UPGRADES ON THE DEP-PJM SEAM**

11 **Q. MR. LUCAS TESTIFIES THAT UPGRADES TO THE TIE LINES**
12 **BETWEEN DEP AND PJM CARRY "LITTLE OR NO BENEFIT" TO DEP**
13 **RATEPAYERS. DO YOU AGREE?**

14 A. No. In my direct and supplemental testimony, I discussed at some length the benefit
15 of more robust inter-ties between these systems including portions of tie-lines not funded by DEP
16 rate payers. In addition, these issues are discussed in greater depth in the Rebuttal Testimony of
17 Sami Abdulsalam, a Senior Consulting Engineer with Siemens Power Technologies International,
18 which is being filed today.

19 **Q. WILL THE MACADAMIA PROJECT FUND UPGRADES TO THE DENC**
20 **SYSTEM THAT WILL BENEFIT DEP RATEPAYERS, WITHOUT RECEIVING**
21 **REIMBURSEMENT?**

22 A. Yes. Based on re-tooled studies for other projects in the AD1 cluster, it appears
23 that Macadamia will be allocated a portion of the cost of an upgrade to the DENC-owned portion

1 of the Everetts-Greenville 230 kV line, which ties together the DEP and PJM systems. The
2 Everetts-Greenville 230 kV line is approximately 22 miles long. Over 90% of that line is owned
3 by DENC and the remaining portion is owned by DEP. The DENC portion is being upgraded at
4 a cost over approximately \$31 million and funded by Sumac Solar, Sweetleaf Solar and
5 Macadamia Solar with no reimbursements. DEP rate payers will get the benefits from this upgrade
6 without cost them since it is part of the tie-line between PJM and DEP.

7 **Q. THE PUBLIC STAFF BELIEVES THAT MERCHANT PLANTS DO NOT**
8 **CREATE BENEFITS TO NORTH CAROLINA RATEPAYERS AND THAT THEY**
9 **SHOULD BE SUBJECT TO A MORE STRINGENT APPROVAL STANDARD FOR**
10 **OBTAINING CPCNS. DO YOU AGREE?**

11 A. I do not, for several reasons. First, the Public Staff agrees that there is huge demand
12 for renewable energy in PJM. Much of this demand will be satisfied by renewable projects in
13 Southern Virginia or in North Carolina, which are extremely favorable for solar development. The
14 development of merchant projects in North Carolina provides significant tax revenues to local
15 economies and is a major driver for economic development in North Carolina. Billions of dollars
16 in investment may flow into the state as a result of merchant plant development. Not only North
17 Carolina project, but also Virginia solar projects can and will trigger upgrades on DEP system,
18 with no direct benefits to the state of North Carolina (other than those that in my view do result
19 from upgrading the DEP-PJM ties). Driving merchant development out of North Carolina and into
20 Virginia will not protect DEP ratepayers from the impacts of upgrades, but it will ensure that VA
21 receives all the tax and economic development benefits of those projects. Additionally, as stated
22 above, rate payers receive benefits from the upgrades to DENC's portion of the tie-line, which will
23 be funded (without reimbursement) by Macadamia and other projects in the AD1 cluster.

1 A. The Public Staff does not say one way or the other whether the cost of Upgrades
2 associated with Macadamia is reasonable. While acknowledging that the Commission has
3 approved LCOT as a benchmark for the reasonableness of upgrade costs associated with merchant
4 generating facilities, Mr. Lucas opines that LCOT “is just one factor to be considered in
5 determining whether to grant a CPCN to a merchant generating facility[.]”

6 Mr. Lucas does not say what other factors should be considered. However, he goes on to
7 express concern about the total amount of merchant generating capacity in PJM’s interconnection
8 queue, stating that “the cumulative capacity could still trigger hundreds of millions of dollars’
9 worth of affected system upgrades that DEP’s customers would have to fund.” Mr. Lucas also
10 claims that the benefits of Affected System Upgrades to DEP’s customers are “very limited.”

11 **Q. HOW DO YOU RESPOND TO MR. LUCAS’S CONCERNS?**

12 A. I agree that LCOT is only one of a number of factors that must be considered in
13 evaluating a CPCN application. However, with regard to the reasonableness of Upgrades costs,
14 LCOT is the metric that the Commission has approved, and the Public Staff has not provided any
15 other basis on which the reasonableness of Upgrade costs may be evaluated. And even in
16 absolute terms, the costs of the reimbursable Affected System Upgrades that might be triggered
17 by Macadamia (depending on the results of the PJM re-tool and any Affected System Study) are
18 not unreasonable.

19 With regard to Mr. Lucas’s concerns about the upgrades that might be triggered by the
20 “cumulative capacity” of other projects in later the PJM queue, I have already discussed the fact
21 that Mr. Lucas’s concerns are largely speculative. And whatever the Public Staff’s concerns about
22 future merchant plant development, Macadamia is one of a finite number of merchant projects that

1 is now seeking Commission approval, and it would be inappropriate and unfair to deny
2 Macadamia's CPCN based on concerns about other projects that may be developed in the future.

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A. Yes.**