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1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: Tuesday, November 30, 2021
3 TIME: 10:00 a.m. - 11:42 a.m.
4 DOCKET NO: EMP-116, Sub 0
5 BEFORE: Commissioner Kimberly W. Duffley, Presiding
6 Chair Charlotte A. Mitchell
7 Commissioner Daniel G. Clodfelter
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11 IN THE MATTER OF:
12 Application of Juno Solar, LLC,
13 for a Conditional Certificate of Public
14 Convenience and Necessity to Construct a 275-MW
15 Solar Facility in Richmond County,
16 North Carolina
17

18 VOLUME 1
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NORTH CAROLINA UTILITIES COMMISSION

1 A P P E A R A N C E S:

2 FOR JUNO SOLAR, LLC:

3 Karen Kemerait, Esq.

4 Ben Snowden, Esq.

5 Fox Rothschild LLP

6 434 South Fayetteville Street, Suite 2800

7 Raleigh, North Carolina 27601

8

9 FOR THE USING AND CONSUMING PUBLIC:

10 Layla Cummings, Esq.

11 Robert B. Josey, Esq.

12 Public Staff - North Carolina Utilities Commission

13 4326 Mail Service Center

14 Raleigh, North Carolina 27699-4300

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NORTH CAROLINA UTILITIES COMMISSION

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P R O C E E D I N G S

COMMISSIONER DUFFLEY: Good morning. Let's come to order and, please, go on the record. I am Commissioner Kimberly W. Duffley, and with me today are Chair Charlotte A. Mitchell and Commissioner Daniel G. Clodfelter.

I now call for hearing Docket Number EMP-116, Sub 0, In the Application of Juno Solar for a Conditional Certificate of Public Convenience and Necessity to Construct a 275-MW Solar Facility in Richmond County, North Carolina.

On July 12th, 2021, Juno Solar, Juno or Applicant, filed the Application for a Certificate of Public Convenience and Necessity with confidential exhibits and confidential prefiled testimony of Piper Miller.

On July 27th, 2021, the Applicant filed revised prefiled direct testimony of Ms. Miller and a revised site plan as well as other supplemental confidential exhibits.

On July 27th, 2021, the Public Staff filed a Notice of Completeness as required by Commission Rule R8-63(d) with respect to the completeness of the Application. The Notice of Completeness also included

NORTH CAROLINA UTILITIES COMMISSION

1 a Motion to Stay which was denied.

2 On August 31st, 2021, the Commission issued
3 an Order Scheduling Hearings, Filing of Testimony,
4 Establishing Procedural Guidelines and Requiring
5 Public Notice.

6 On September 1st, 2021, the Commission staff
7 sent a letter to the State Clearinghouse requesting
8 comments on the Application. On October 4th 2021,
9 October 11th, 2021, and October 15th, 2021, the
10 Clearinghouse filed comments on the Application.

11 On September 14th, 2021, the Applicant filed
12 supplemental direct testimony of Piper Miller.

13 On October 15th, 2021, the Applicant filed
14 un-redacted copies of both the direct and supplemental
15 testimony of Piper Miller. Finally, on October 19th,
16 2021, the Applicant filed an exhibit entitled
17 "Statement of Need" originally filed as confidential
18 with the Application and testimony in un-redacted
19 form.

20 On October 12th, 2021, Duke Energy Carolinas
21 and Duke Energy Progress jointly filed a Petition to
22 Intervene, which was allowed.

23 On October 28th, 2021, the Public Staff
24 filed a motion to cancel public hearing, which was

1 granted.

2 On October 26th, 2021, the Public Staff
3 filed the testimony and exhibits of Dustin Metz,
4 Utilities Engineer in the Public Staff's Electric
5 Section.

6 On November 9th, 2021, the Applicant filed
7 rebuttal testimony and exhibit of Steven J. Levitas
8 and the rebuttal testimony and confidential attachment
9 A of Piper Miller.

10 In compliance with the State Ethics Act, I
11 remind all members of the panel of our duty to avoid
12 conflicts of interest, and inquire at this time as to
13 whether any member has a known conflict of interest
14 with respect to the matter coming before us?

15 (No response)

16 Let the record reflect no conflicts were
17 identified.

18 I will now call for appearance of counsel,
19 beginning with the Applicant.

20 MS. KEMERAIT: Good morning, Madam Chair and
21 Members of the Commission. My name is Karen Kemerait.
22 I'm an attorney with Fox Rothschild in Raleigh and I'm
23 here on behalf of the Applicant, Juno Solar, LLC.

24 COMMISSIONER DUFFLEY: Good morning.

1 MR. SNOWDEN: Good morning, Commissioners.
2 I'm Ben Snowden, also with Fox Rothschild, LLC, here
3 in Raleigh on behalf of the Applicant.

4 COMMISSIONER DUFFLEY: Good morning.

5 MS. CUMMINGS: Layla Cummings and Robert
6 Josey, Public Staff, on behalf of the Using and
7 Consuming Public.

8 COMMISSIONER DUFFLEY: Thank you. Good
9 morning. Do the parties have preliminary matters
10 before we begin?

11 MS. KEMERAIT: Yes, we have just one
12 preliminary matter that I wanted to make the
13 Commission aware of. Steve Levitas -- we are going to
14 be presenting Mr. Levitas and Ms. Miller as a panel,
15 and they are going to provide their direct and
16 rebuttal testimony at the same time. Mr. Levitas has
17 a flight where he's planning to leave here at 2:00.
18 I've made Ms. Cummings and Mr. Josey aware of that
19 schedule, and we don't think that it's going to be any
20 problem to have him -- his testimony concluded in time
21 for him to leave for his flight.

22 COMMISSIONER DUFFLEY: Okay. Thank you.
23 Any objection?

24 MS. CUMMINGS: No.

1 COMMISSIONER DUFFLEY: So allowed. Any
2 other preliminary matters?

3 MS. KEMERAIT: No.

4 COMMISSIONER DUFFLEY: As with respect to
5 the confidential information --

6 MR. JOSEY: Sorry. I do have some
7 confidential questions that I believe we can save
8 until the end, but just wanted to make the Commission
9 aware of that.

10 COMMISSIONER DUFFLEY: Okay. Thank you. So
11 indicate when you plan to ask your confidential --
12 questions with confidential information.

13 Hearing nothing further, you may call your
14 first witness.

15 MS. KEMERAIT: Okay. I'll begin by calling
16 a panel of Juno Solar's witnesses, and the panel will
17 consist of Piper Miller and Steve Levitas. And I'll
18 begin with Ms. Miller.

19 Ms. Miller, can you state your full name and
20 business address for the record?

21 MS. MILLER: Sure. My name is --

22 COMMISSIONER DUFFLEY: Actually, we need
23 to -- do you want to swear or affirm? Both witnesses,
24 which would you prefer?

1 MS. KEMERAIT: Do you have a preference,
2 Ms. Miller?

3 MS. MILLER: No.

4 PIPER MILLER and STEVEN J. LEVITAS,
5 as a Panel;
6 having been duly sworn,
7 testified as follows:

8 MS. KEMERAIT: Thank you.

9 DIRECT EXAMINATION BY MS. KEMERAIT:

10 Q Ms. Miller, I'll ask the question again. Can you
11 state by whom you are employed and in what
12 capacity?

13 A Sure. My name is Piper Miller. I am the Vice
14 President of Development for Pine Gate
15 Renewables.

16 Q And can you provide your business address for the
17 record?

18 A Yes. My business address is 130 Robert Street,
19 Asheville, North Carolina 28801.

20 Q And did you cause to be prefiled on July the 2nd
21 of 2021, 24 pages of direct testimony in the form
22 of question and answer and exhibits, and
23 specifically Exhibits 2(i) and 2(ii) and
24 Confidential Exhibit 1(iii) and 1(iv)?

1 A Yes.

2 Q If I were to ask you the same questions that
3 appear in your direct testimony today, would your
4 answers be the same?

5 A Yes.

6 Q And did you also cause to be prefiled on July the
7 26th of 2021, 24 pages of revised direct
8 testimony in the form of question and answer and
9 Exhibit 2(i) and Confidential Exhibit 2(i)(a)?

10 A Yes.

11 Q And if I were to ask you the same questions that
12 appear in your revised direct testimony today,
13 would your answers be the same?

14 A Yes, they would.

15 Q And did you also cause to be prefiled on
16 September the 14th of 2021, six pages of
17 supplemental direct testimony in the form of
18 question and answer?

19 A Yes.

20 Q And if I were to ask you the same questions that
21 appear in your supplemental direct testimony
22 today, would your answers be the same?

23 A Yes.

24 Q And then finally did you cause to be prefiled on

1 November the 9th of 2021, 18 pages of rebuttal
2 testimony in the form of question and answer?

3 A Yes, I did.

4 Q And if I were to ask you the same questions that
5 appear in your rebuttal testimony today, would
6 your answers be the same?

7 A Yes.

8 MS. KEMERAIT: At this time, I would move
9 that Ms. Miller's prefiled direct, revised direct,
10 supplemental direct and rebuttal testimony be copied
11 into the record as if given orally from the stand, and
12 that the exhibits to her testimony be marked for
13 identification and included in the record.

14 COMMISSIONER DUFFLEY: Any objection?

15 (Pause).

16 Hearing no objection, the testimony is
17 allowed.

18 (WHEREUPON, Miller Direct
19 Exhibits 2(i), 2(ii),
20 Confidential Exhibits 1(iii) and
21 1(iv), Revised Direct Exhibit
22 2(i) and Confidential Revised
23 Direct Exhibit 2(i)(a) are marked
24 for identification as prefiled

1 and received into evidence.)
2 (WHEREUPON, the prefiled direct,
3 revised direct, supplemental
4 direct and rebuttal testimony of
5 PIPER MILLER is copied into the
6 record as if given orally from
7 the stand.)
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**BEFORE THE
NORTH CAROLINA UTILITIES COMMISSION
JUNO SOLAR, LLC
DOCKET NO. EMP-116, SUB 0**

**PRE-FILED DIRECT TESTIMONY
OF
PIPER MILLER**

July 12, 2021

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1 performed land evaluation for large-scale solar energy project feasibility and
2 analyzed utility infrastructure and environmental and geographical constraints).
3 Prior to joining Pine Gate Renewables, I worked at the Office of Sustainability for
4 Leon County Government, where I collaborated on policy and program
5 development to craft innovative solutions to community sustainability barriers. I
6 was also responsible for the management of education and outreach programs to
7 promote energy and water conservation, waste reduction, and sustainability
8 throughout the County.

9
10 **Q. PLEASE SUMMARIZE YOUR CURRENT RESPONSIBILITIES WITH**
11 **PINE GATE RENEWABLES.**

12 A. As Vice President of Development for Pine Gate Renewables, I oversee
13 development strategy and execution for Pine Gate Renewables' portfolio of solar
14 projects in the Southeastern United States. My role is deeply integrated with
15 market strategy, regulatory policy, and project finance in order to identify new
16 opportunities for solar project development and successfully bring existing
17 projects to commercial operation.

18
19 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

20 A. No.

21
22 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

1 A. The purpose of my testimony is to demonstrate that Juno Solar's Application for a
2 Conditional Certificate of Public Convenience and Necessity ("CPCN") meets the
3 requirements of N.C. Gen. Stat. § 110.1 and Commission Rule R8-63.
4

5 **Q. PLEASE DESCRIBE JUNO SOLAR AND THE PARENT COMPANY OF**
6 **JUNO SOLAR.**

7 A. Juno Solar is a limited liability company incorporated in the State of North Carolina
8 since October 30, 2020. As mentioned previously, Juno Solar is wholly owned by
9 Birch Creek in collaboration with Pine Gate Renewables, which manages the
10 development of Juno Solar's proposed utility-scale solar PV generating facility.
11

12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15

16 **BACKGROUND AND PROJECT FINANCE**

17 **Q. PLEASE DESCRIBE BIRCH CREEK AND PINE GATE RENEWABLES'**
18 **PERSONNEL, TECHNICAL EXPERIENCE, AND FINANCIAL**
19 **CAPABILITY TO OWN AND OPERATE JUNO SOLAR.**

20 A. Birch Creek and Pine Gate Renewables have extensive experience in successfully
21 owning and operating solar PV facilities in North Carolina and across the United
22 States. Birch Creek and Pine Gate Renewables have placed more than 500

1 megawatts (“MW”) DC of solar generating capacity into service to date, with
2 approximately 440 MW DC of capacity currently in construction. Birch Creek and
3 Pine Gate Renewables are currently developing over 8,000 MW DC of solar
4 projects across the country.

5
6 Pine Gate Renewables is developing the Juno Solar project as a partner in Birch
7 Creek, and has extensive experience developing solar generating projects in North
8 Carolina and throughout the United States. Pine Gate Renewables has operating
9 solar projects in five states, but the majority of its operating projects are located in
10 North Carolina. Pine Gate Renewables has sophisticated in-house development
11 operations and project finance capabilities, and has closed on over \$2 billion in total
12 project capital raised in support of its solar project development. Pine Gate
13 Renewables’ affiliated engineering, procurement, and construction (“EPC”)
14 company, Blue Ridge Power, LLC, is the largest and most experienced EPC firm
15 in the Southeast.

16
17 Key personnel involved with the Juno Solar project are as follows:

18 Piper Miller – Vice President, Development. As Vice President of Development
19 for Pine Gate Renewables, Piper leads utility-scale solar project development and
20 market entry strategy for the company’s solar project footprint in the Southeastern
21 U.S. Overseeing a 5 GW pipeline of solar projects, Piper’s role is deeply integrated
22 with market strategy, regulatory policy, and project finance in order to identify new

1 opportunities for solar project development and successfully bring existing projects
2 to commercial operation. With more than six years in the renewable energy and
3 sustainability sector, Piper has spearheaded market and development opportunities,
4 analyzed regulatory policies, and advised on siting and off-take strategies for
5 portfolios of solar projects across more than ten states on the east coast.
6

7 Sean Andersen – Director, Project Management. Sean has more than six years of
8 experience in the solar industry, where his extensive knowledge of business
9 development and land origination has led teams in the development of utility-scale
10 solar sites. As Director of Project Management at Pine Gate Renewables, Sean
11 conducts due diligence and project analysis for solar PV projects in various states
12 while identifying high-level key project, interconnection, and access constraints.
13 While interfacing with engineering, finance, and construction to ensure effective
14 development of solar projects, he manages consultants, budgets, milestones, and
15 deliverables to ensure the success of projects.
16

17 Mak Nagle – Senior Vice President, Development. Mak is responsible for leading
18 strategic initiatives within the scope of Pine Gate Renewables' solar development
19 effort. Mak brings more than twenty years of experience in power marketing,
20 business development, market design, transmission operations, and planning. He
21 also provides guidance on technical issues and emerging technologies
22 (e.g., energy storage) while coming up with unique propositions for Pine Gate

1 Renewables' clients. For the past eight years, Mak has successfully negotiated
2 over 2 GW of purchase power agreements ("PPAs") with multiple utilities and
3 electric cooperatives, as well as with University of Richmond in Virginia. Prior
4 to entering the renewable space, Mak worked at Southwest Power Pool, where he
5 was responsible for developing their Day 2 energy market and running
6 transmission studies and planning groups. He has also spent more than six years
7 as a planning engineer in Entergy's Transmission Group, where he was involved
8 in restoring the electric grid after Hurricanes Katrina and Rita.

9
10 Steve Levitas – Senior Vice President, Regulatory & Governmental Affairs.

11 Steve leads Pine Gate Renewables' policy, regulatory, and government affairs
12 efforts, including its engagement in energy market reform and the expansion of
13 off-take opportunities for independently owned solar generation resources. He
14 previously served as Senior Vice President of Regulatory Affairs and Strategy for
15 Cypress Creek Renewables, where he led the company's regulatory and
16 government affairs activities and advised the company about the impact of public
17 policy on its commercial strategy. Prior to joining Cypress Creek, Steve served as
18 Vice President for Business Affairs and General Counsel for FLS Energy and
19 spent more than 20 years in private law practice, concentrating on renewable
20 energy project development and environmental regulatory matters. In 2015 he
21 was the recipient of The Charlotte Business Journal's Energy Leaders Award.
22

1 From 1993 through 1996, Steve served as Deputy Secretary of the North Carolina
2 Department of Environment, Health, and Natural Resources. Prior to his service in
3 state government, Steve was Director and Senior Attorney of the North Carolina
4 office of the Environmental Defense Fund, which he opened in 1988.

5
6 Tripp McSwain – Senior Vice President, Construction. Tripp has more than nine
7 years of experience as a construction professional in the solar industry. As Senior
8 Vice President of Construction, Tripp is responsible for
9 Pine Gate Renewable's construction planning, execution, and closeout. His
10 duties include overseeing all projects, providing guidance to project teams,
11 developing agreements with contractors, and creating strategies and processes to
12 ensure that budget, safety, and schedule goals are met. Tripp has overseen the
13 installation of numerous projects totaling over 1.5 GW of solar energy. He has a
14 Bachelor of Science degree in Construction Management and Appropriate
15 Technology from Appalachian State University and holds a NABCEP
16 certification.

17
18 Brian Taddonio – Vice President, Engineering. As the Vice President of
19 Engineering for Pine Gate Renewables, Brian has extensive knowledge of PV
20 engineering standards, NEC and utility regulatory compliance, and
21 project development and construction engineering processes with an emphasis on
22 quality control, maintaining project schedules and budgets, and cost

1 reduction. With twelve years of experience in solar development and EPC, Brian
2 has designed more than 300 MW of installed PV capacity, and has gained
3 substantial experience in utility scale PV development, engineering, and
4 construction. At Pine Gate Renewables, Brian leads the engineering team by
5 developing engineering standards and specifications, strategic alliances, and
6 initiatives for cost reduction and avoidance.

7
8 Jason Birn – Senior Vice President, Project Finance. Jason Birn has twenty years
9 of experience as a debt and equity project finance professional in the utility-
10 scale power and infrastructure sector, with a strong foundation in fundamental
11 credit, financial and industry analysis, origination, and commercial
12 execution. As Senior Vice President of Project Finance at Pine Gate Renewables,
13 Jason oversees raising of the requisite capital needed to construct Pine Gate
14 Renewables' entire solar project portfolio. Moreover, he oversees the building
15 and utilization of complex financial models to assess the economic viability of
16 projects, performs front-end valuation and debt sizing analysis, and quantifies all
17 sources of potential third-party capital throughout a project's life cycle.

18
19 Juno Solar and Birch Creek have the financial capability to own and operate the
20 Juno Solar project. Birch Creek's most recent balance sheet and income statement
21 are provided confidentially and under seal as Confidential Exhibit I(iii).

22

1 **Q. WHAT IS THE CONSTRUCTION TIMELINE FOR THE FACILITY?**

2 A. Construction for the Juno Solar facility is expected to begin in the second quarter
3 of 2023, and commercial operation is expected to occur in the third quarter of 2024.
4

5 **Q. WHAT IS THE EXPECTED SERVICE LIFE OF THE FACILITY?**

6 A. The expected service life of the Juno Solar facility is forty (40) years.
7

8 **Q. WHAT ARE THE ESTIMATED CONSTRUCTION COSTS FOR THE
9 FACILITY?**

10 A. The estimated construction costs for the Juno Solar facility are approximately
11 \$370,690,000.
12

13 **Q. DOES JUNO SOLAR, ITS PARENT COMPANY, BIRCH CREEK, OR
14 BIRCH CREEK'S AFFILIATE, PINE GATE RENEWABLES, HAVE
15 OWNERSHIP INTEREST IN AND/OR THE ABILITY TO CONTROL
16 GENERATING FACILITIES IN THE SOUTHEASTERN ELECTRIC
17 RELIABILITY COUNCIL ("SERC") REGION?**

18 A. Yes. Pine Gate Renewables has ownership interest in and/or the ability to control
19 through leases or contracts numerous solar PV generating facilities in the SERC
20 region. A list of solar PV generating facilities that Pine Gate Renewables owns or
21 controls through leases or contracts in the SERC region is provided confidentially
22 and under seal as Confidential Exhibit 1(iv).

SITE AND FACILITY DESCRIPTION

**Q. ONCE CONSTRUCTED, WHERE WILL THE JUNO SOLAR FACILITY
BE LOCATED?**

A. The Juno Solar site consists of twenty-five (25) parcels, or a portion thereof, collectively containing approximately two thousand five hundred eighty-six (2,586) acres of land, located along McFarland Road and Green Chapel Church Road in Marks Creek Township, Richmond County, North Carolina. The project will be in the location described above and as shown in the high-resolution color map attached hereto as Exhibit 2(i).

**Q. WHAT IS THE CURRENT LAND USE OF THE SITE AND THE
ANTICIPATED USE?**

A. The parcels for the project are zoned Agricultural Residential ("A-R") and Rural Residential ("R-R"), and they are currently being used for agricultural purposes. Juno Solar will lease approximately 2,600 acres of the parent parcels (that total approximately 2,586 acres) for the 275-MWAC solar PV facility that will generate solar energy. The area that is not included in the leased area will be able to continue to be used for agricultural purposes. No additional right-of-way is needed for the facility. The facility will have a minimum building setback of fifty (50) feet where abutting residential property, and a minimum setback of sixty-five (65) feet from public rights-of-way.

1

2 **Q. WHAT IS THE FACILITY'S ANTICIPATED ELECTRICITY**
3 **PRODUCTION CAPACITY?**

4 A. The nameplate generating capacity of the Juno Solar facility is 275 MWAC. The
5 facility's total dependable capacity is 68.75 MWAC.

6

7 **Q. PLEASE DESCRIBE THE BASIC COMPONENTS OF THE FACILITY.**

8 A. Juno Solar is a 275-MWAC PV array, and the source of its power is solar energy.
9 The facility will consist of a single-axis tracking solar array that is DC-coupled with
10 an energy storage system connected behind a single point of interconnection to the
11 Duke Energy Progress (DEP) Richmond-Laurel Hill 230 kV transmission line. The
12 solar array will consist of a maximum DC output of approximately 385 MWDC.
13 The energy storage system will have an aggregate power capacity of approximately
14 68.75 MW and 275 MWh (4-hour duration) subject to change during the design
15 process. A color map showing the proposed site boundary and layout, with all
16 major equipment, roads, electric facilities, and the point of interconnection ("POI")
17 is attached hereto as Exhibit 2(i).

18

19 **Q. PLEASE DESCRIBE THE TRANSMISSION FACILITIES TO WHICH**
20 **THE JUNO SOLAR FACILITY WILL INTERCONNECT AND HOW THE**
21 **PROJECT WILL BE INTERCONNECTED TO THE GRID.**

1 A. The Juno Solar facility will connect to the 230 kV 230 kV Richmond – Laurel Hill
2 Duke Energy Progress, LLC (“DEP”) transmission line located on-site. As the
3 proposed POI will be on-site, no additional facilities will be necessary beyond
4 the substation within Juno Solar’s site control area. A color map showing the
5 proposed site boundary, the proposed POI, and the proposed substation is
6 attached hereto as Exhibit 2(ii).

7

8

NEED FOR THE FACILITY

9 Q. PLEASE EXPLAIN THE NEED FOR THE JUNO SOLAR FACILITY.

10 A.

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[REDACTED]

[REDACTED]

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4 DEP. In its 2020 Integrated Resource Plan (“IRP”), DEP identifies six different
5 planning scenarios for its resource portfolio. All six scenarios result in increased
6 solar and storage capacity on the DEP system. For example, the “Base with Carbon
7 Policy” scenario would add approximately 5 GW of new solar capacity and
8 approximately 2 GW of storage capacity to the DEP system during the planning
9 period, with substantially more solar and storage called for in scenarios that would
10 achieve the objectives of the Governor’s Clean Energy Plan, which requires 70%
11 of the state’s electric generation to be sourced from clean energy resources by 2030.
12 Solely sourcing this energy from typical sub-100 MWAC solar projects and small
13 storage installations is likely to prove inefficient (if not infeasible). It is therefore
14 in the interest of meeting Duke’s and the State’s renewable goals to bring on-line
15 large, flexible clean energy-generating resources, like Juno Solar.

16
17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]

11

12 **Q. HAS JUNO SOLAR ENTERED INTO A LARGE GENERATOR**
13 **INTERCONNECTION AGREEMENT (“LGIA”) WITH DEP?**

14 **A.** No. The project has submitted an Interconnection Request and is expected to be
15 studied in the Duke Energy Transitional Cluster Study, which is anticipated to
16 begin in mid-2021. It is estimated that a LGIA will be executed in January 2023.

17

18 **REGULATORY APPROVALS AND PERMITS**

19 **Q. DOES THE RICHMOND COUNTY ZONING ORDINANCE APPLY TO**
20 **THE JUNO SOLAR PROJECT?**

21 **A.** Yes.

22

1 **Q. PLEASE DESCRIBE THE PERMITS AND APPROVALS YOU**
2 **ANTICIPATE WILL BE NECESSARY TO COMMENCE**
3 **CONSTRUCTION OF THE FACILITY.**

4 A. A Special Use Permit is required from Richmond County. In addition to the
5 Special Use Permit, Richmond County will require that Juno Solar obtain a
6 Building Permit from the County.

7
8 From the State of North Carolina, the facility will require a commercial driveway
9 permit from the North Carolina Department of Transportation, and a stormwater
10 permit and an erosion and sedimentation control plan from the NC Department of
11 Environmental Quality ("NCDEQ").

12
13 In regard to federal permits and approvals, Environmental Impact Assessment
14 ("EIA")-860 and EIA-923 are required. Also, a FAA Section 777.9 Notice has
15 been completed.

16

17 **COMMUNITY**

18 **Q. PLEASE DESCRIBE THE ANTICIPATED BENEFITS OF THE**
19 **FACILITY TO THE LOCAL COMMUNITY.**

20 A. The Juno Solar facility will bring a variety of financial benefits to Richmond
21 County. Juno Solar anticipates that the County will realize property and real
22 estate tax revenues. Also, the site's landowners will receive revenue in the form

1 of lease payments each year for the life of the facility, and this revenue will assist
2 them in maintaining agricultural operations on their land.

3
4 In addition to these financial benefits, Juno Solar will create community benefits.
5 Local contractors and businesses such as installation, fencing, landscaping, and
6 machine rental companies will receive sales opportunities from the facility's
7 construction and operations. During the construction process, the facility will
8 offer construction jobs.

9
10 **Q. WHAT ARE THE EXPECTED ENVIRONMENTAL IMPACTS OF THE**
11 **FACILITY?**

12 **A.** By design and by its nature as a solar PV facility, the facility will provide clean
13 renewable power with minimal environmental impacts. The facility will create no
14 air emissions and it will not create any noise impacts outside the fence line. The
15 facility will comply with the NCDEQ permits and exceed all state and local
16 requirements including those regulating erosion and sedimentation in the interest
17 of environmental protection. At the end of the facility's useful life, the facility's
18 materials can be recycled or sold for scrap, and the land can be returned to
19 agricultural use.

20

21

CONDITIONAL CPCN

1 **Q. HAS JUNO SOLAR SUBMITTED AN APPLICATION FOR A CPCN**
2 **WITH CONDITIONS?**

3 **A. Yes.**
4

5 **Q. PLEASE DESCRIBE THE REASONS THAT JUNO SOLAR IS**
6 **REQUESTING A CONDITIONAL CPCN.**

7 **A. As background to Juno Solar's Application for a Conditional CPCN, DEP and**
8 **Duke Energy Carolinas, LLC's (together, "Duke Energy") filed their proposed**
9 **revisions to Attachment J (Standard Large Generator Interconnection Procedures**
10 **("LGIP")) to their Joint Open Access Transmission Tariff with the Federal**
11 **Energy Regulatory Commission ("FERC") in Docket No. ER-21-1579-000 on**
12 **April 1, 2021 ("FERC Queue Reform Proposal"). In their filing, Duke Energy**
13 **requested that FERC approve its FERC Queue Reform Proposal by June 1, 2021**
14 **so that Duke Energy could immediately "reform" their generator interconnection**
15 **queueing, study process, and cost allocation process by transitioning to a**
16 **Definitive Interconnection Study Process, and align the FERC-jurisdictional LGIP**
17 **with queue reform revisions to the state-jurisdictional generator interconnection**
18 **procedures recently approved by the North Carolina Utilities Commission and the**

1 Public Service Commission of South Carolina. To date, FERC has not yet issued
2 a decision as to Duke Energy's FERC Queue Reform Proposal.¹

3
4 Once FERC approves Duke Energy's FERC Queue Reform Proposal and the
5 revised LGIP becomes effective, Juno Solar intends to enter the Transitional
6 Cluster in which Juno Solar and other Interconnection Customers will be grouped
7 together for the Transitional Cluster Study Process and will be able to share any
8 required System Upgrade costs. To be clear, Juno Solar will comply with all
9 applicable provisions and requirements of Duke's FERC Queue Reform Proposal
10 approved by FERC.

11
12 There are substantial financial security requirements for both "ready" and "non-
13 ready" Interconnection Customers to enter the Transitional Cluster and proceed
14 through the Transitional Cluster study process. The Transitional Cluster study
15 process involves a Phase 1 power flow and voltage study, a Phase 2 stability and
16 short circuit study, and a Facilities Study. To demonstrate readiness (or to
17 establish security in lieu of readiness) for Phase 1 of the Transitional Cluster, an
18 Interconnection Customer must provide one of the following:

¹ On May 26, 2021, FERC issued a deficiency letter to Duke Energy regarding its FERC Queue Reform Proposal. The issues raised in the deficiency letter are not germane to matters before the Commission in this proceeding.

1 a. Executed term sheet (or comparable evidence) related to a contract,
2 binding upon the parties to the contract, for sale of the Generating
3 Facility's energy, or the entire constructed Generating Facility, where the
4 term of sale is not less than five (5) years, or

5 b. Reasonable evidence that the Generating Facility is included in a
6 Resource Planning Entity's Resource Plan or Resource Solicitation

7 Process, or

8 c. An executed Provisional Large Generator Interconnection Agreement
9 filed with FERC that is not in suspension with 1) a commitment to
10 construct the facility, 2) a Commercial Operation Date no later than 2024
11 and 3) a security deposit in addition to amount required under Section
12 4.1.2 where the total security deposit represents a reasonable estimation of
13 the potential costs that could be ultimately allocated to the project in the
14 Transitional Cluster Study, or

15 d. Security equal to three million dollars (\$3,000,000). *See* Revised LGIP,
16 § 7.2.1.e.

17
18 There is significant, and increasing, security required for both "ready" and "non-
19 ready" Interconnection Customers progressing through Phase 1 and Phase 2 of the
20 Transitional Cluster study process. Duke Energy informed FERC that these
21 "meaningful" financial readiness requirements are intended to incent only ready
22 or near-ready projects to enter the Transitional Cluster. *See* Duke FERC Queue

1 Reform Proposal, p. 53. The total security required for the Transitional Cluster
2 study process if readiness is provided is as follows: (1) 1 times the Study Deposit
3 to enter Phase 1, and (2) \$3 million to enter Phase 2. The total security for the
4 study process if readiness is not provided is as follows: (1) 1 times the Study
5 Deposit, plus \$3 million to enter Phase 1, and (2) an additional \$2 million (for a
6 total of \$5 million) to enter Phase 2. *See* Revised LGIP, § 7.2.3. Therefore,
7 “ready” projects will have to pay in excess of \$3 million to enter the Phase 2
8 study, and “non-ready” projects will have to pay in excess of \$5 million to be
9 studied in Phase 2.

10
11 If an Interconnection Customer withdraws prior to Phase 2 of the Transitional
12 Cluster study process commencing, no Withdrawal Penalty is imposed and the
13 Interconnection Customer will only be assigned its allocated study costs.
14 However, as noted above, to enter Phase 2 of the Transitional Cluster, an
15 Interconnection Customer is required to either (a) make a significant financial
16 commitment of \$3 million and demonstrate definitive readiness, or (b) provide
17 significant additional security of \$2 million (for a total of \$5 million) if the
18 Interconnection Customer cannot demonstrate definitive readiness prior to Phase
19 2 commencing. If the Interconnection Customer withdraws after entering Phase 2
20 and prior to executing an LGIA, Duke Energy will use the security as payment for
21 (a) the final invoice for study costs and (b) the Withdrawal Penalty, after which
22 any remaining amount of security shall be returned to Interconnection Customer.

1 Therefore, an Interconnection Customer that enters Phase 2 of the Transition
2 Cluster process will be at significant financial risk in the event that they are
3 required to withdraw from the study process. Among the reasons that an
4 Interconnection Customer might need to withdraw from the study process is if the
5 Commission were to deny a CPCN application or revoke an issued CPCN. As
6 demonstrated by prior Commission decisions, the Commission could decide to
7 deny a CPCN where it believes that the Levelized Cost of Transmission
8 (“LCOT”) for any required System Upgrades assigned to the Interconnection
9 Customer (which under Duke Energy’s FERC-approved Open Access
10 Transmission Tariff and LGIA are reimbursed in part by North Carolina retail
11 customers) are too high.²

12
13 This situation creates a “catch 22” for FERC-jurisdictional Interconnection
14 Customers, like Juno Solar, that have to enter the Transitional Cluster (or the
15 eventual DISIS Study process) and, as discussed above, must make substantial
16 financial posting and face multi-million-dollar withdrawal penalties if they exit
17 the study process. If, based on Juno Solar’s LCOT, the Commission were to deny
18 or revoke Juno Solar’s CPCN after it enters Phase 2 of study, Juno Solar would be

² In the case of Friesian Holdings, LLC, the Commission denied a CPCN application on these grounds. *See Order Denying Certificate of Public Convenience and Necessity for Merchant Generating Facility*, issued on June 11, 2020 in Docket No. EMP-105, Sub 0. The Commission has also considered revoking CPCNs on similar grounds. *See Order Requiring Further Testimony*, issued on May 7, 2021 in Docket No. EMP-102, Sub 1; *Order Granting Motion, Reopening Record, Receiving Additional Evidence into the Record, Requiring Public Staff Recommendation, and Providing Notice of Timeline for Issuance of Final Order* issued on August 13, 2020 in Docket No. EMP-107, Sub 0.

1 required to forfeit millions of dollars. But Juno Solar cannot determine the
2 amount of its System Upgrade costs and its LCOT without first completing the
3 study process. The solution to this patently unfair and unreasonable situation,
4 which Pine Gate Renewables has discussed on multiple occasions with Duke
5 Energy and the Public Staff, is for the Commission to issue a Conditional CPCN
6 that will remain in effect so long as the LCOT for any required System Upgrades
7 assigned to Juno Solar is at or below an acceptable defined amount.

8
9 While Duke Energy has not yet studied whether any System Upgrades will be
10 required to interconnect Juno Solar and the other projects in the Transitional
11 Cluster, and if so, the System Upgrade costs that will be assigned to Juno Solar,
12 Juno Solar, in conjunction with a third-party engineering firm, has completed a
13 robust injection analysis of the project to identify any transmission overloads and
14 potential System Upgrade costs. The study modeled an array of planning and
15 dispatch scenarios, and found minimal System Upgrades needed under all but the
16 most conservative planning scenarios (*e.g.*, the full volume of the interconnection
17 queue coming into service). As previously stated, Juno Solar intends to enter the
18 Transitional Cluster and will go through the interconnection study process with
19 DEP to identify any specific System Upgrades needed to interconnect the project.
20 Juno Solar believes that the LCOT for any required System Upgrades assigned to
21 the project will be an amount that will be acceptable to the Commission (*i.e.*, no
22 greater than \$4.00 per MWh.) Therefore, Juno Solar is proposing a CPCN with a

1 condition that the LCOT for any assigned System Upgrades be no greater than a
2 specific defined amount of \$4.00 per MWh. With a Conditional CPCN, Juno
3 Solar will be able to enter the Transitional Cluster and incur the associated
4 financial exposure without an unacceptable level of uncertainty about whether the
5 issued CPCN will remain in effect.
6

7 **Q. WHAT CONDITIONS OF APPROVAL ARE JUNO SOLAR**
8 **REQUESTING BE MADE PART OF THE CPCN APPROVAL?**

9 A. Juno Solar is requesting that the Commission issue a CPCN with the following
10 conditions: (1) the LCOT for any required System Upgrades assigned to Juno
11 Solar will be no greater than \$4.00 per MWh; (2) if at any point in the study
12 process, Juno Solar is informed by Duke Energy that its allocated System
13 Upgrade costs are such that its LCOT will exceed \$4.00/MWh, Juno Solar shall
14 promptly file with the Commission a report documenting the cost of any assigned
15 System Upgrade costs and the LCOT for the System Upgrades; and (3) if the
16 LCOT for any required System Upgrades assigned to Juno Solar is greater than
17 \$4.00 per MWh, the CPCN will automatically terminate and be of no further force
18 and effect unless Juno Solar requests further proceedings to consider whether the
19 CPCN should not be terminated, in which case the CPCN will not be terminated
20 unless so ordered by the Commission.
21

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

1 A. Yes.

2

**BEFORE THE
NORTH CAROLINA UTILITIES COMMISSION
JUNO SOLAR, LLC
DOCKET NO. EMP-116, SUB 0**

**REVISED PUBLIC REDACTED PRE-FILED DIRECT TESTIMONY
OF
PIPER MILLER**

July 26, 2021

INTRODUCTION

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

A. My name is Piper Miller. I am Vice President of Development for Pine Gate Renewables, LLC ("Pine Gate Renewables"), and my business address is 130 Roberts Street, Asheville, North Carolina 28801. Juno Solar, LLC ("Juno Solar" or "Applicant") is wholly owned by Birch Creek Development, LLC ("Birch Creek") and operated in collaboration with Pine Gate Renewables, which manages the development of Juno Solar's proposed utility-scale solar photovoltaic ("PV") generating facility.

Q. PLEASE DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A. I obtained a Bachelor of Arts degree in Environmental Science and Policy, Summa Cum Laude, from Florida State University. I have worked with Pine Gate Renewables since 2017 and have held various positions, including: Vice President of Development; Director of Development; Market Lead (where I was responsible for spearheading market-entry and development strategy in the Northeastern United States and overseeing Pine Gate Renewables' pipeline of utility-scale and distributed generation solar projects in the region); Policy Lead (where I worked with Pine Gate Renewables' Vice President of Market Development to analyze and present new market opportunities for solar development with a focus on regulatory policy and power off-take strategy); and Origination Coordinator (where I

1 performed land evaluation for large-scale solar energy project feasibility and
2 analyzed utility infrastructure and environmental and geographical constraints).
3 Prior to joining Pine Gate Renewables, I worked at the Office of Sustainability for
4 Leon County Government, where I collaborated on policy and program
5 development to craft innovative solutions to community sustainability barriers. I
6 was also responsible for the management of education and outreach programs to
7 promote energy and water conservation, waste reduction, and sustainability
8 throughout the County.

9

10 **Q. PLEASE SUMMARIZE YOUR CURRENT RESPONSIBILITIES WITH**
11 **PINE GATE RENEWABLES.**

12 A. As Vice President of Development for Pine Gate Renewables, I oversee
13 development strategy and execution for Pine Gate Renewables' portfolio of solar
14 projects in the Southeastern United States. My role is deeply integrated with
15 market strategy, regulatory policy, and project finance in order to identify new
16 opportunities for solar project development and successfully bring existing
17 projects to commercial operation.

18

19 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

20 A. No.

21

22 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

1 A. The purpose of my testimony is to demonstrate that Juno Solar's Application for a
2 Conditional Certificate of Public Convenience and Necessity ("CPCN") meets the
3 requirements of N.C. Gen. Stat. § 110.1 and Commission Rule R8-63.
4

5 **Q. PLEASE DESCRIBE JUNO SOLAR AND THE PARENT COMPANY OF**
6 **JUNO SOLAR.**

7 A. Juno Solar is a limited liability company incorporated in the State of North Carolina
8 since October 30, 2020. As mentioned previously, Juno Solar is wholly owned by
9 Birch Creek in collaboration with Pine Gate Renewables, which manages the
10 development of Juno Solar's proposed utility-scale solar PV generating facility.
11

12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15

16 **BACKGROUND AND PROJECT FINANCE**

17 **Q. PLEASE DESCRIBE BIRCH CREEK AND PINE GATE RENEWABLES'**
18 **PERSONNEL, TECHNICAL EXPERIENCE, AND FINANCIAL**
19 **CAPABILITY TO OWN AND OPERATE JUNO SOLAR.**

20 A. Birch Creek and Pine Gate Renewables have extensive experience in successfully
21 owning and operating solar PV facilities in North Carolina and across the United
22 States. Birch Creek and Pine Gate Renewables have placed more than 500

1 megawatts (“MW”) DC of solar generating capacity into service to date, with
2 approximately 440 MW DC of capacity currently in construction. Birch Creek and
3 Pine Gate Renewables are currently developing over 8,000 MW DC of solar
4 projects across the country.

5
6 Pine Gate Renewables is developing the Juno Solar project as a partner in Birch
7 Creek, and has extensive experience developing solar generating projects in North
8 Carolina and throughout the United States. Pine Gate Renewables has operating
9 solar projects in five states, but the majority of its operating projects are located in
10 North Carolina. Pine Gate Renewables has sophisticated in-house development
11 operations and project finance capabilities, and has closed on over \$2 billion in total
12 project capital raised in support of its solar project development. Pine Gate
13 Renewables’ affiliated engineering, procurement, and construction (“EPC”)
14 company, Blue Ridge Power, LLC, is the largest and most experienced EPC firm
15 in the Southeast.

16
17 Key personnel involved with the Juno Solar project are as follows:

18 Piper Miller – Vice President, Development. As Vice President of Development
19 for Pine Gate Renewables, Piper leads utility-scale solar project development and
20 market entry strategy for the company’s solar project footprint in the Southeastern
21 U.S. Overseeing a 5 GW pipeline of solar projects, Piper’s role is deeply integrated
22 with market strategy, regulatory policy, and project finance in order to identify new

1 opportunities for solar project development and successfully bring existing projects
2 to commercial operation. With more than six years in the renewable energy and
3 sustainability sector, Piper has spearheaded market and development opportunities,
4 analyzed regulatory policies, and advised on siting and off-take strategies for
5 portfolios of solar projects across more than ten states on the east coast.

6
7 Sean Andersen – Director, Project Management. Sean has more than six years of
8 experience in the solar industry, where his extensive knowledge of business
9 development and land origination has led teams in the development of utility-scale
10 solar sites. As Director of Project Management at Pine Gate Renewables, Sean
11 conducts due diligence and project analysis for solar PV projects in various states
12 while identifying high-level key project, interconnection, and access constraints.
13 While interfacing with engineering, finance, and construction to ensure effective
14 development of solar projects, he manages consultants, budgets, milestones, and
15 deliverables to ensure the success of projects.

16
17 Mak Nagle – Senior Vice President, Development. Mak is responsible for leading
18 strategic initiatives within the scope of Pine Gate Renewables' solar development
19 effort. Mak brings more than twenty years of experience in power marketing,
20 business development, market design, transmission operations, and planning. He
21 also provides guidance on technical issues and emerging technologies
22 (e.g., energy storage) while coming up with unique propositions for Pine Gate

1 Renewables' clients. For the past eight years, Mak has successfully negotiated
2 over 2 GW of purchase power agreements ("PPAs") with multiple utilities and
3 electric cooperatives, as well as with University of Richmond in Virginia. Prior
4 to entering the renewable space, Mak worked at Southwest Power Pool, where he
5 was responsible for developing their Day 2 energy market and running
6 transmission studies and planning groups. He has also spent more than six years
7 as a planning engineer in Entergy's Transmission Group, where he was involved
8 in restoring the electric grid after Hurricanes Katrina and Rita.

9
10 Steve Levitas – Senior Vice President, Regulatory & Governmental Affairs.

11 Steve leads Pine Gate Renewables' policy, regulatory, and government affairs
12 efforts, including its engagement in energy market reform and the expansion of
13 off-take opportunities for independently owned solar generation resources. He
14 previously served as Senior Vice President of Regulatory Affairs and Strategy for
15 Cypress Creek Renewables, where he led the company's regulatory and
16 government affairs activities and advised the company about the impact of public
17 policy on its commercial strategy. Prior to joining Cypress Creek, Steve served as
18 Vice President for Business Affairs and General Counsel for FLS Energy and
19 spent more than 20 years in private law practice, concentrating on renewable
20 energy project development and environmental regulatory matters. In 2015 he
21 was the recipient of The Charlotte Business Journal's Energy Leaders Award.
22

1 From 1993 through 1996, Steve served as Deputy Secretary of the North Carolina
2 Department of Environment, Health, and Natural Resources. Prior to his service in
3 state government, Steve was Director and Senior Attorney of the North Carolina
4 office of the Environmental Defense Fund, which he opened in 1988.

5
6 Tripp McSwain – Senior Vice President, Construction. Tripp has more than nine
7 years of experience as a construction professional in the solar industry. As Senior
8 Vice President of Construction, Tripp is responsible for
9 Pine Gate Renewable's construction planning, execution, and closeout. His
10 duties include overseeing all projects, providing guidance to project teams,
11 developing agreements with contractors, and creating strategies and processes to
12 ensure that budget, safety, and schedule goals are met. Tripp has overseen the
13 installation of numerous projects totaling over 1.5 GW of solar energy. He has a
14 Bachelor of Science degree in Construction Management and Appropriate
15 Technology from Appalachian State University and holds a NABCEP
16 certification.

17
18 Brian Taddonio – Vice President, Engineering. As the Vice President of
19 Engineering for Pine Gate Renewables, Brian has extensive knowledge of PV
20 engineering standards, NEC and utility regulatory compliance, and
21 project development and construction engineering processes with an emphasis on
22 quality control, maintaining project schedules and budgets, and cost

1 reduction. With twelve years of experience in solar development and EPC, Brian
2 has designed more than 300 MW of installed PV capacity, and has gained
3 substantial experience in utility scale PV development, engineering, and
4 construction. At Pine Gate Renewables, Brian leads the engineering team by
5 developing engineering standards and specifications, strategic alliances, and
6 initiatives for cost reduction and avoidance.

7
8 Jason Birn – Senior Vice President, Project Finance. Jason Birn has twenty years
9 of experience as a debt and equity project finance professional in the utility-
10 scale power and infrastructure sector, with a strong foundation in fundamental
11 credit, financial and industry analysis, origination, and commercial
12 execution. As Senior Vice President of Project Finance at Pine Gate Renewables,
13 Jason oversees raising of the requisite capital needed to construct Pine Gate
14 Renewables' entire solar project portfolio. Moreover, he oversees the building
15 and utilization of complex financial models to assess the economic viability of
16 projects, performs front-end valuation and debt sizing analysis, and quantifies all
17 sources of potential third-party capital throughout a project's life cycle.

18
19 Juno Solar and Birch Creek have the financial capability to own and operate the
20 Juno Solar project. Birch Creek's most recent balance sheet and income statement
21 are provided confidentially and under seal as Confidential Exhibit 1(iii).

22

1 **Q. WHAT IS THE CONSTRUCTION TIMELINE FOR THE FACILITY?**

2 A. Construction for the Juno Solar facility is expected to begin in the second quarter
3 of 2023, and commercial operation is expected to occur in the third quarter of 2024.
4

5 **Q. WHAT IS THE EXPECTED SERVICE LIFE OF THE FACILITY?**

6 A. The expected service life of the Juno Solar facility is forty (40) years.
7

8 **Q. WHAT ARE THE ESTIMATED CONSTRUCTION COSTS FOR THE**
9 **FACILITY?**

10 A. The estimated construction costs for the Juno Solar facility are approximately
11 \$370,690,000.
12

13 **Q. DOES JUNO SOLAR, ITS PARENT COMPANY, BIRCH CREEK, OR**
14 **BIRCH CREEK'S AFFILIATE, PINE GATE RENEWABLES, HAVE**
15 **OWNERSHIP INTEREST IN AND/OR THE ABILITY TO CONTROL**
16 **GENERATING FACILITIES IN THE SOUTHEASTERN ELECTRIC**
17 **RELIABILITY COUNCIL ("SERC") REGION?**

18 A. Yes. Pine Gate Renewables has ownership interest in and/or the ability to control
19 through leases or contracts numerous solar PV generating facilities in the SERC
20 region. A list of solar PV generating facilities that Pine Gate Renewables owns or
21 controls through leases or contracts in the SERC region is provided confidentially
22 and under seal as Confidential Exhibit 1(iv).

SITE AND FACILITY DESCRIPTION

Q. ONCE CONSTRUCTED, WHERE WILL THE JUNO SOLAR FACILITY BE LOCATED?

A. The Juno Solar site consists of twenty-five (25) parcels, or a portion thereof, collectively containing approximately two thousand five hundred eighty-six (2,586) acres of land, located along McFarland Road and Green Chapel Church Road in Marks Creek Township, Richmond County, North Carolina. The project will be in the location described above and as shown in the revised high-resolution color maps attached hereto as Exhibits 2(i) and Confidential Exhibit 2(i)(a).

Q. WHAT IS THE CURRENT LAND USE OF THE SITE AND THE ANTICIPATED USE?

A. The parcels for the project are zoned Agricultural Residential (“A-R”) and Rural Residential (“R-R”), and they are currently being used for agricultural purposes. Juno Solar will lease approximately 2,516 acres of the parent parcels (that total approximately 2,586 acres) for the 275-MWAC solar PV facility that will generate solar energy. The area that is not included in the leased area will be able to continue to be used for agricultural purposes.

A color map showing the proposed site boundary, the proposed point of interconnection, and the proposed substation is attached hereto as Exhibit 2(ii)(a).

1 The color maps attached as Exhibit 2(i) and Confidential Exhibit 2(i)(a) have been
2 revised to eliminate sections of the facility that would require additional rights-of-
3 way. Therefore, no additional right-of-way is needed for the facility. The facility
4 will have a minimum building setback of fifty (50) feet where abutting residential
5 property, and a minimum setback of sixty-five (65) feet from public rights-of-
6 way.

7
8 **Q. WHAT IS THE FACILITY'S ANTICIPATED ELECTRICITY**
9 **PRODUCTION CAPACITY?**

10 A. The nameplate generating capacity of the Juno Solar facility is 275 MWAC. The
11 facility's total dependable capacity is 68.75 MWAC.

12
13 **Q. PLEASE DESCRIBE THE BASIC COMPONENTS OF THE FACILITY.**

14 A. Juno Solar is a 275-MWAC PV array, and the source of its power is solar energy.
15 The facility will consist of a single-axis tracking solar array that is DC-coupled with
16 an energy storage system connected behind a single point of interconnection
17 ("POI") to the Duke Energy Progress, LLC ("DEP") Richmond-Laurel Hill 230 kV
18 transmission line. Juno Solar will require two new substations: a new Juno Solar
19 substation constructed by Juno Solar, and a new DEP switchyard constructed by
20 DEP. The facility's substation and DEP switchyard will be located within the parcel
21 boundaries, as shown on Exhibit 2(i). The Juno Solar substation will be located
22 directly adjacent to the POI, and all connections to the substation will be

1 underground. The solar array will consist of a maximum DC output of
2 approximately 385 MWDC. The energy storage system will have an aggregate
3 power capacity of approximately 68.75 MW and 275 MWh (4-hour duration)
4 subject to change during the design process. Color maps showing the proposed site
5 boundary and layout, with all major equipment, roads, electric facilities, and the
6 POI is attached hereto as Exhibit 2(i) and Confidential Exhibit 2(i)(a).

7
8 Juno Solar plans to deploy Eos Znyth Gen 3.0 battery blocks for its battery storage
9 system, individually rated at 175 kW/700 kWh. The American-made Eos Znyth
10 battery energy storage technology is non-flammable in nature and features better
11 resiliency and longer life than competing battery storage technologies. To ensure
12 optimal performance and thermal stability of the batteries, the Eos Znyth units come
13 equipped with a closed-loop forced ambient-air thermal management system. Juno
14 Solar's battery storage system will be DC-coupled, with the blocks feeding into the
15 individual solar inverters. Annual cycles are not expected to exceed 365 per year
16 and the system will not charge from the grid. The single line diagrams and the EOS
17 Znyth Gen 3.0 battery blocks for the battery storage system are provided
18 confidentially and under seal as Confidential Exhibits 2(ii)(b), 2(ii)(b)(1), (2), and
19 (3).

20
21 Non-adjoining parcels will be connected via underground MV connections. Juno
22 Solar has made the decision to eliminate a non-adjoining section of the parcel

1 to the west from the facility in order to avoid having to acquire rights-of-way
2 through non-connected land. To reiterate, the facility will need no additional
3 rights-of-way in order to construct the facility.
4

5 **Q. PLEASE DESCRIBE THE TRANSMISSION FACILITIES TO WHICH**
6 **THE JUNO SOLAR FACILITY WILL INTERCONNECT AND HOW THE**
7 **PROJECT WILL BE INTERCONNECTED TO THE GRID.**

8 A. The Juno Solar facility will connect to the 230 kV 230 kV Richmond – Laurel Hill
9 Duke Energy Progress, LLC transmission line located on-site. As the proposed
10 POI will be on-site, no additional facilities will be necessary beyond the substation
11 within Juno Solar's site control area. A color map showing the proposed site
12 boundary, the proposed POI, and the proposed substation is attached hereto as
13 Exhibit 2(i).
14

15 **NEED FOR THE FACILITY**

16 **Q. PLEASE EXPLAIN THE NEED FOR THE JUNO SOLAR FACILITY.**

17 A. [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]

8
9 DEP. In its 2020 Integrated Resource Plan (“IRP”), DEP identifies six different
10 planning scenarios for its resource portfolio. All six scenarios result in increased
11 solar and storage capacity on the DEP system. For example, the “Base with Carbon
12 Policy” scenario would add approximately 5 GW of new solar capacity and
13 approximately 2 GW of storage capacity to the DEP system during the planning
14 period, with substantially more solar and storage called for in scenarios that would
15 achieve the objectives of the Governor’s Clean Energy Plan, which requires 70%
16 of the state’s electric generation to be sourced from clean energy resources by 2030.
17 Solely sourcing this energy from typical sub-100 MWAC solar projects and small
18 storage installations is likely to prove inefficient (if not infeasible). It is therefore
19 in the interest of meeting Duke’s and the State’s renewable goals to bring on-line
20 large, flexible clean energy-generating resources, like Juno Solar.

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]

17
18 **Q. HAS JUNO SOLAR ENTERED INTO A LARGE GENERATOR**
19 **INTERCONNECTION AGREEMENT (“LGIA”) WITH DEP?**

20 **A.** No. The project has submitted an Interconnection Request and is expected to be
21 studied in the Duke Energy Transitional Cluster Study, which is anticipated to begin
22 in mid-2021. It is estimated that a LGIA will be executed in January 2023.

REGULATORY APPROVALS AND PERMITS

**Q. DOES THE RICHMOND COUNTY ZONING ORDINANCE APPLY TO
THE JUNO SOLAR PROJECT?**

A. Yes.

**Q. PLEASE DESCRIBE THE PERMITS AND APPROVALS YOU
ANTICIPATE WILL BE NECESSARY TO COMMENCE
CONSTRUCTION OF THE FACILITY.**

**A. A Special Use Permit is required from Richmond County. In addition to the
Special Use Permit, Richmond County will require that Juno Solar obtain a
Building Permit from the County.**

From the State of North Carolina, the facility will require a commercial driveway
permit from the North Carolina Department of Transportation, and a stormwater
permit and an erosion and sedimentation control plan from the NC Department of
Environmental Quality ("NCDEQ").

In regard to federal permits and approvals, Environmental Impact Assessment
("EIA")-860 and EIA-923 are required. Also, a FAA Section 777.9 Notice has
been completed.

COMMUNITY

Q. PLEASE DESCRIBE THE ANTICIPATED BENEFITS OF THE FACILITY TO THE LOCAL COMMUNITY.

A. The Juno Solar facility will bring a variety of financial benefits to Richmond County. Juno Solar anticipates that the County will realize property and real estate tax revenues. Also, the site's landowners will receive revenue in the form of lease payments each year for the life of the facility, and this revenue will assist them in maintaining agricultural operations on their land.

In addition to these financial benefits, Juno Solar will create community benefits. Local contractors and businesses such as installation, fencing, landscaping, and machine rental companies will receive sales opportunities from the facility's construction and operations. During the construction process, the facility will offer construction jobs.

Q. WHAT ARE THE EXPECTED ENVIRONMENTAL IMPACTS OF THE FACILITY?

A. By design and by its nature as a solar PV facility, the facility will provide clean renewable power with minimal environmental impacts. The facility will create no air emissions and it will not create any noise impacts outside the fence line. The facility will comply with the NCDEQ permits and exceed all state and local requirements including those regulating erosion and sedimentation in the interest

1 of environmental protection. At the end of the facility's useful life, the facility's
2 materials can be recycled or sold for scrap, and the land can be returned to
3 agricultural use.

4
5 **CONDITIONAL CPCN**

6 **Q. HAS JUNO SOLAR SUBMITTED AN APPLICATION FOR A CPCN**
7 **WITH CONDITIONS?**

8 A. Yes.

9
10 **Q. PLEASE DESCRIBE THE REASONS THAT JUNO SOLAR IS**
11 **REQUESTING A CONDITIONAL CPCN.**

12 A. As background to Juno Solar's Application for a Conditional CPCN, DEP and
13 Duke Energy Carolinas, LLC's (together, "Duke Energy") filed their proposed
14 revisions to Attachment J (Standard Large Generator Interconnection Procedures
15 ("LGIP")) to their Joint Open Access Transmission Tariff with the Federal
16 Energy Regulatory Commission ("FERC") in Docket No. ER-21-1579-000 on
17 April 1, 2021 ("FERC Queue Reform Proposal"). In their filing, Duke Energy
18 requested that FERC approve its FERC Queue Reform Proposal by June 1, 2021
19 so that Duke Energy could immediately "reform" their generator interconnection
20 queueing, study process, and cost allocation process by transitioning to a
21 Definitive Interconnection Study Process, and align the FERC-jurisdictional LGIP
22 with queue reform revisions to the state-jurisdictional generator interconnection

1 procedures recently approved by the North Carolina Utilities Commission and the
2 Public Service Commission of South Carolina. To date, FERC has not yet issued
3 a decision as to Duke Energy's FERC Queue Reform Proposal.¹
4

5 Once FERC approves Duke Energy's FERC Queue Reform Proposal and the
6 revised LGIP becomes effective, Juno Solar intends to enter the Transitional
7 Cluster in which Juno Solar and other Interconnection Customers will be grouped
8 together for the Transitional Cluster Study Process and will be able to share any
9 required System Upgrade costs. To be clear, Juno Solar will comply with all
10 applicable provisions and requirements of Duke's FERC Queue Reform Proposal
11 approved by FERC.
12

13 There are substantial financial security requirements for both "ready" and "non-
14 ready" Interconnection Customers to enter the Transitional Cluster and proceed
15 through the Transitional Cluster study process. The Transitional Cluster study
16 process involves a Phase 1 power flow and voltage study, a Phase 2 stability and
17 short circuit study, and a Facilities Study. To demonstrate readiness (or to
18 establish security in lieu of readiness) for Phase 1 of the Transitional Cluster, an
19 Interconnection Customer must provide one of the following:

¹ On May 26, 2021, FERC issued a deficiency letter to Duke Energy regarding its FERC Queue Reform Proposal. The issues raised in the deficiency letter are not germane to matters before the Commission in this proceeding.

1 a. Executed term sheet (or comparable evidence) related to a contract,
2 binding upon the parties to the contract, for sale of the Generating
3 Facility's energy, or the entire constructed Generating Facility, where the
4 term of sale is not less than five (5) years, or

5 b. Reasonable evidence that the Generating Facility is included in a
6 Resource Planning Entity's Resource Plan or Resource Solicitation

7 Process, or

8 c. An executed Provisional Large Generator Interconnection Agreement
9 filed with FERC that is not in suspension with 1) a commitment to
10 construct the facility, 2) a Commercial Operation Date no later than 2024
11 and 3) a security deposit in addition to amount required under Section
12 4.1.2 where the total security deposit represents a reasonable estimation of
13 the potential costs that could be ultimately allocated to the project in the
14 Transitional Cluster Study, or

15 d. Security equal to three million dollars (\$3,000,000). *See* Revised LGIP,
16 § 7.2.1.e.

17
18 There is significant, and increasing, security required for both "ready" and "non-
19 ready" Interconnection Customers progressing through Phase 1 and Phase 2 of the
20 Transitional Cluster study process. Duke Energy informed FERC that these
21 "meaningful" financial readiness requirements are intended to incent only ready
22 or near-ready projects to enter the Transitional Cluster. *See* Duke FERC Queue

1 Reform Proposal, p. 53. The total security required for the Transitional Cluster
2 study process if readiness is provided is as follows: (1) 1 times the Study Deposit
3 to enter Phase 1, and (2) \$3 million to enter Phase 2. The total security for the
4 study process if readiness is not provided is as follows: (1) 1 times the Study
5 Deposit, plus \$3 million to enter Phase 1, and (2) an additional \$2 million (for a
6 total of \$5 million) to enter Phase 2. *See* Revised LGIP, § 7.2.3. Therefore,
7 “ready” projects will have to pay in excess of \$3 million to enter the Phase 2
8 study, and “non-ready” projects will have to pay in excess of \$5 million to be
9 studied in Phase 2.

10
11 If an Interconnection Customer withdraws prior to Phase 2 of the Transitional
12 Cluster study process commencing, no Withdrawal Penalty is imposed and the
13 Interconnection Customer will only be assigned its allocated study costs.
14 However, as noted above, to enter Phase 2 of the Transitional Cluster, an
15 Interconnection Customer is required to either (a) make a significant financial
16 commitment of \$3 million and demonstrate definitive readiness, or (b) provide
17 significant additional security of \$2 million (for a total of \$5 million) if the
18 Interconnection Customer cannot demonstrate definitive readiness prior to Phase
19 2 commencing. If the Interconnection Customer withdraws after entering Phase 2
20 and prior to executing an LGIA, Duke Energy will use the security as payment for
21 (a) the final invoice for study costs and (b) the Withdrawal Penalty, after which
22 any remaining amount of security shall be returned to Interconnection Customer.

1 Therefore, an Interconnection Customer that enters Phase 2 of the Transition
2 Cluster process will be at significant financial risk in the event that they are
3 required to withdraw from the study process. Among the reasons that an
4 Interconnection Customer might need to withdraw from the study process is if the
5 Commission were to deny a CPCN application or revoke an issued CPCN. As
6 demonstrated by prior Commission decisions, the Commission could decide to
7 deny a CPCN where it believes that the Levelized Cost of Transmission
8 (“LCOT”) for any required System Upgrades assigned to the Interconnection
9 Customer (which under Duke Energy’s FERC-approved Open Access
10 Transmission Tariff and LGIA are reimbursed in part by North Carolina retail
11 customers) are too high.²

12
13 This situation creates a “catch 22” for FERC-jurisdictional Interconnection
14 Customers, like Juno Solar, that have to enter the Transitional Cluster (or the
15 eventual DISIS Study process) and, as discussed above, must make substantial
16 financial posting and face multi-million-dollar withdrawal penalties if they exit
17 the study process. If, based on Juno Solar’s LCOT, the Commission were to deny
18 or revoke Juno Solar’s CPCN after it enters Phase 2 of study, Juno Solar would be

² In the case of Friesian Holdings, LLC, the Commission denied a CPCN application on these grounds. *See Order Denying Certificate of Public Convenience and Necessity for Merchant Generating Facility*, issued on June 11, 2020 in Docket No. EMP-105, Sub 0. The Commission has also considered revoking CPCNs on similar grounds. *See Order Requiring Further Testimony*, issued on May 7, 2021 in Docket No. EMP-102, Sub 1; *Order Granting Motion, Reopening Record, Receiving Additional Evidence into the Record, Requiring Public Staff Recommendation, and Providing Notice of Timeline for Issuance of Final Order* issued on August 13, 2020 in Docket No. EMP-107, Sub 0.

1 required to forfeit millions of dollars. But Juno Solar cannot determine the
2 amount of its System Upgrade costs and its LCOT without first completing the
3 study process. The solution to this patently unfair and unreasonable situation,
4 which Pine Gate Renewables has discussed on multiple occasions with Duke
5 Energy and the Public Staff, is for the Commission to issue a Conditional CPCN
6 that will remain in effect so long as the LCOT for any required System Upgrades
7 assigned to Juno Solar is at or below an acceptable defined amount.

8
9 While Duke Energy has not yet studied whether any System Upgrades will be
10 required to interconnect Juno Solar and the other projects in the Transitional
11 Cluster, and if so, the System Upgrade costs that will be assigned to Juno Solar,
12 Juno Solar, in conjunction with a third-party engineering firm, has completed a
13 robust injection analysis of the project to identify any transmission overloads and
14 potential System Upgrade costs. The study modeled an array of planning and
15 dispatch scenarios, and found minimal System Upgrades needed under all but the
16 most conservative planning scenarios (*e.g.*, the full volume of the interconnection
17 queue coming into service). As previously stated, Juno Solar intends to enter the
18 Transitional Cluster and will go through the interconnection study process with
19 DEP to identify any specific System Upgrades needed to interconnect the project.
20 Juno Solar believes that the LCOT for any required System Upgrades assigned to
21 the project will be an amount that will be acceptable to the Commission (*i.e.*, no
22 greater than \$4.00 per MWh.) Therefore, Juno Solar is proposing a CPCN with a

1 condition that the LCOT for any assigned System Upgrades be no greater than a
2 specific defined amount of \$4.00 per MWh. With a Conditional CPCN, Juno
3 Solar will be able to enter the Transitional Cluster and incur the associated
4 financial exposure without an unacceptable level of uncertainty about whether the
5 issued CPCN will remain in effect.
6

7 **Q. WHAT CONDITIONS OF APPROVAL ARE JUNO SOLAR**
8 **REQUESTING BE MADE PART OF THE CPCN APPROVAL?**

9 A. Juno Solar is requesting that the Commission issue a CPCN with the following
10 conditions: (1) the LCOT for any required System Upgrades assigned to Juno
11 Solar will be no greater than \$4.00 per MWh; (2) if at any point in the study
12 process, Juno Solar is informed by Duke Energy that its allocated System
13 Upgrade costs are such that its LCOT will exceed \$4.00/MWh, Juno Solar shall
14 promptly file with the Commission a report documenting the cost of any assigned
15 System Upgrade costs and the LCOT for the System Upgrades; and (3) if the
16 LCOT for any required System Upgrades assigned to Juno Solar is greater than
17 \$4.00 per MWh, the CPCN will automatically terminate and be of no further force
18 and effect unless Juno Solar requests further proceedings to consider whether the
19 CPCN should not be terminated, in which case the CPCN will not be terminated
20 unless so ordered by the Commission.
21

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

1 A. Yes.

2

**BEFORE THE
NORTH CAROLINA UTILITIES COMMISSION
JUNO SOLAR, LLC
DOCKET NO. EMP-116, SUB 0**

**PUBLIC / REDACTED
PRE-FILED SUPPLEMENTAL DIRECT TESTIMONY
OF
PIPER MILLER**

September 14, 2021

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

2 .A. My name is Piper Miller. I am Vice President of Development for Pine Gate
3 Renewables, LLC ("Pine Gate Renewables"), and my business address is 130
4 Roberts Street, Asheville, North Carolina 28801. Juno Solar, LLC ("Juno Solar"
5 or "Applicant") is wholly owned by Birch Creek Development, LLC ("Birch
6 Creek") and operated in collaboration with Pine Gate Renewables, which
7 manages the development of Juno Solar's proposed utility-scale solar
8 photovoltaic ("PV") generating facility.

9

10 **Q. Are there any network upgrades to DEP's or any affected system's**
11 **transmission system required to accommodate the operation of the**
12 **Applicant's proposed facility? If so, provide the amount of network upgrades**
13 **on DEP's or any affected system's transmission system, if any, required to**
14 **accommodate the operation of the Applicant's proposed facility.**

15 A. Juno Solar's Interconnection Request is currently on-hold due to interdependency
16 in Duke's Transmission Interconnection Queue. Juno Solar will participate in the
17 Transitional Cluster Study process approved by the Federal Energy Regulatory
18 Commission ("FERC") on August 16th, 2021. Because Juno Solar is not
19 expecting to receive study results from Duke until March 2022, Birch Creek
20 performed a steady-state load flow study utilizing a Summer Peak 2024 system
21 representation as provided by Duke Energy Progress, LLC ("DEP") and Duke
22 Energy Carolinas, LLC ("DEC") (together, "Duke") to determine the network

1 upgrades that would be required to accommodate the full output of the
2 interconnection request in DEP's transmission system. All Interconnection
3 Requests and Transmission Projects with firm transmission commitments were
4 subsequently modeled in the system representation, as well as active queue
5 projects currently in DEP's Transmission Interconnection Queue that could
6 potentially participate in the Transitional Cluster, were modeled and dispatched at
7 their respective nameplate capacity. Study results suggest that in order for the 275
8 MW Interconnection Request to reliably interconnect to Duke's transmission
9 system, it is estimated that approximately 17.56 miles of Duke's transmission
10 facilities would have to be upgraded to accommodate the full output of the
11 Interconnection Request amounting to approximately \$16.84M. The
12 Interconnection Request would only be allocated a portion of the total cost based
13 on its individual impact on the identified limiting elements. The rest of the
14 upgrade costs is going to be distributed amongst all the projects in the
15 Transitional Cluster that meet cost allocation criteria based on their individual
16 impact on the identified limiting elements. At this point it is still unknown which
17 projects will participate in the Transitional Cluster.

18
19 **Q. Provide any information and supporting documentation regarding the**
20 **proposed Levelized Cost of Transmission (LCOT) of \$4.00/MWh upon which**
21 **you ask the Commission to condition any CPCN granted in this case.**

1 A. A Levelized Cost of Transmission (“LCOT”) of \$4.00/MWh represents the
2 amount that Birch Creek believes to be a just and reasonable threshold which will
3 serve to facilitate the state and Duke’s renewable energy goals while not
4 burdening ratepayers with reimbursement of unduly high network upgrade costs.

5

6 In the Friesian Holdings, LLC (“Friesian”) CPCN hearing (Docket No. EMP-105,
7 Sub 0), Public Staff witnesses Evan Lawrence and Dustin Metz testified that a
8 2019 Lawrence Berkeley National Laboratory (LBNL) study examining solar
9 network upgrade costs found a \$1.56/MWh LCOT in MISO, a \$3.22 LCOT value
10 in PJM, and a \$2.21/MWh LCOT in the other locations studied, which are
11 presumably appropriate LCOT values for new solar projects at the time of the
12 study, which were contrasted with a \$62.94/MWh LCOT finding for Friesian.
13 Subsequent to the Friesian CPCN proceeding, transmission costs have generally
14 risen, due to 1) increasing materials and labor costs, and 2) the tendency of these
15 costs to increase with increased solar penetration on the system.

16

17 In line with these ranges and trends, Birch Creek believes that a \$4.00/MWh
18 LCOT cap is appropriate to allow for just and reasonable network upgrade costs.

19

20 **Q. Is there any interconnection study available for the proposed facility? If so,**
21 **provide any interconnection study received for the proposed facility. If the**

Applicant has not received a study, provide a date by when the study is expected to be completed.

A. Juno Solar is currently being studied in Duke's transition cluster study, with Phase I study results expected in March 2022, Phase II results expected in September 2022, and Facilities Study results expected in the first quarter of 2023.

In lieu of interconnection study results from Duke, Birch Creek has conducted its own injection studies seeking to replicate Duke's internal study methodology, as detailed in responses to questions 1 and 4.

Q. Is the Applicant aware of any system other than the studied system that is or will be affected by the interconnection? If yes, explain the impact and basis.

A. Due to the proximity of the interconnection facilities to PJM's service territory that ties DEP with Dominion Virginia Power, PJM is likely to be notified as a potential affected system during the study process. Once PJM is notified, the potential Transmission Owner in coordination with PJM will determine if further affected system studies are required.

Q. Is the Applicant proposing to sell energy and capacity from the facility to a distribution facility regulated by the Commission? If so, provide a discussion of how the facility's output conforms to or varies from the regulated utility's most recent integrated resource plan (IRP).

1 A. Birch Creek has no plans at this time to sell energy or capacity from the Juno
2 Solar facility to a distribution facility regulated by the Commission.

3
4 **Q. Is the Applicant proposing to sell energy and capacity from the proposed**
5 **facility to a purchaser who is subject to a statutory or regulatory mandate**
6 **with respect to its energy sourcing (e.g., a REPS requirement or Virginia's**
7 **new statutory mandate for renewables)? If so, explain how, if at all, the**
8 **proposed facility will assist or enable compliance with that mandate. In**
9 **addition, provide any contracts that support that compliance.**

10 A. Birch Creek has no plans at this time to sell energy or capacity from the Juno
11 Solar facility to a purchaser who is subject to a statutory or regulatory renewable
12 energy mandate.

13
14 **Q. Does the Applicant have a Power Purchase Agreement (PPA), REC sale**
15 **contracts or contracts for compensation for environmental attributes for the**
16 **output of the proposed facility? If so, provide any PPA agreements, REC sale**
17 **contracts, or contracts for compensation for environmental attributes for the**
18 **output of the facility.**

19 A. Juno Solar does not have a PPA, REC sale contract, or any such contract for
20 compensation for the output of the facility at this time in its development
21 lifecycle. [REDACTED]

22 [REDACTED]

1

2

3

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

5 **A. Yes, at this time.**

6

**BEFORE THE
NORTH CAROLINA UTILITIES COMMISSION
JUNO SOLAR, LLC
DOCKET NO. EMP-116, SUB 0**

**PRE-FILED REBUTTAL TESTIMONY
OF
PIPER MILLER**

November 9, 2021

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

2 **A.** My name is Piper Miller. I am Vice President of Development for Pine Gate
3 Renewables, LLC (“Pine Gate Renewables”), and my business address is 130
4 Roberts Street, Asheville, North Carolina 28801. Juno Solar, LLC (“Juno Solar” or
5 “Applicant”) is wholly owned by Birch Creek Development, LLC (“Birch
6 Creek”) and operated in collaboration with Pine Gate Renewables, which
7 manages the development of Juno Solar’s proposed utility-scale solar
8 photovoltaic (“PV”) generating facility.

9 **Q. Have you previously filed testimony in this docket?**

10 **A.** Yes. I filed direct testimony on July 12, 2021, revised direct testimony on July 26,
11 2021, and supplemental direct testimony on September 14, 2021 in this docket.

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

13 **A.** The purposes of my rebuttal testimony are to respond to testimony of Public Staff
14 Witness Dustin R. Metz filed in this docket on October 26, 2021 and to support the
15 requested Conditional Certificate of Public Convenience and Necessity (“CPCN”).

16 **Q. As a preliminary matter, in the Public Staff’s testimony, the Public Staff has**
17 **chosen not to acknowledge any benefits that North Carolina customers will**
18 **receive as a result of the Juno Solar facility. Please describe any such benefits**
19 **to the North Carolina customers.**

20 **A.** Importantly, Juno Solar provides a substantial benefit to Duke Energy Progress,
21 LLC (“DEP” or “Duke”) ratepayers that distinguishes it from the number of
22 merchant solar projects interconnecting in the Dominion PJM region of North

1 Carolina about which the Commission has recently expressed concern. In order to
2 “wheel” its output from its location in DEP territory to PJM, Juno Solar will have
3 to procure point-to-point transmission service across the DEP system. This
4 process is known and transparent, with current and forecasted rates being
5 published by Duke periodically. The current rate for firm point-to-point
6 transmission service across the DEP system is \$1,738 per MW-month. Reserving
7 transmission capacity of 250 MW would result in approximately \$5.2 million per
8 year in new point-to-point transmission revenues to DEP. These revenues
9 contribute towards DEP’s Annual Transmission Revenue Requirement
10 (“ATRR”), and are used by DEP to operate, maintain, and upgrade its
11 transmission system. By contributing substantial revenues toward the ATRR,
12 Juno Solar can be expected to reduce the burden for transmission spending that
13 would otherwise ultimately fall on DEP’s various load customers.

14 These transmission rates are forecasted by Duke to rise substantially in the
15 coming years, and Birch Creek projects Juno Solar to spend over \$275 million on
16 point-to-point transmission over the life of the project. This is the only means by
17 which Juno can deliver power to the PJM marketplace. These costs, not in any
18 way reimbursable by ratepayers, will, under any reasonable assumptions, far
19 exceed the costs of network upgrades to which ratepayers might be subject. **Even**
20 **at the high end of a \$4/MWh LCOT, Juno Solar’s projected contribution of**
21 **point-to-point transmission revenues to DEP still exceeds its reimbursable**
22 **network upgrade costs by roughly a factor of five.** In Birch Creek’s view, the

1 magnitude of these new transmission revenues for DEP is a benefit entirely
2 sufficient to allay concerns over ratepayer exposure to interconnection and
3 affected system costs, and it is puzzling that the Public Staff chose to entirely
4 ignore this customer benefit in its testimony.

5 **Q. Public Staff Witness Metz states that Juno Solar's request that the**
6 **Commission issue a Conditional CPCN to the project will not solve the "Catch**
7 **22" problem noted in your Direct Testimony. (Public Staff Witness Metz**
8 **Testimony, pp. 5-6) Is the Public Staff's statement correct?**

9 **A.** No. While it would not eliminate all risk associated with interconnection, the
10 Commission's issuance of a CPCN to Juno Solar would appropriately mitigate the
11 substantial financial risk that Juno Solar would face if it had to withdraw from the
12 Transition Cluster Study if the Commission were to deny its CPCN Application.
13 Thus, with a Conditional CPCN, Juno Solar will be able to enter the Transitional
14 Cluster and incur the associated financial exposure without an unacceptable level
15 of uncertainty about whether the Commission will issue a CPCN for the facility.

16 **Q. Do you agree with the Public Staff's claim that Juno Solar would still be**
17 **subject to the same financial risk of withdrawal from the Transitional Cluster**
18 **Study even if the Commission issued a Conditional CPCN? (Public Staff**
19 **Witness Metz Testimony, pp. 5-6)**

20 **A.** No. DEP has not yet studied whether any Network Upgrades will be required to
21 interconnect Juno Solar and the other projects in the Transitional Cluster, and if so,
22 the Network Upgrade costs that will be assigned to Juno Solar. However, Juno Solar

1 has completed a detailed injection analysis of the project to identify any anticipated
2 transmission overloads and potential Network Upgrade costs. The study modeled
3 an array of planning and dispatch scenarios, and found modest Network Upgrades
4 needed under all but the most conservative planning scenarios (*e.g.*, the full volume
5 of the interconnection queue coming into service). Juno Solar has entered the
6 Transitional Cluster and will go through the interconnection study process with
7 DEP to identify any specific Network Upgrades needed to interconnect the project.
8 By way of Juno Solar's injection analysis of the project, Juno Solar believes that
9 the Levelized Cost of Transmission ("LCOT") for any required Network Upgrades
10 and Affected System Upgrades assigned to the project will be no greater than \$4.00
11 per MWh, and in all likelihood substantially lower than that value. With a CPCN
12 that is conditioned on the LCOT for any assigned Network Upgrades being no
13 greater than the specific defined amount of \$4.00 per MWh, Juno Solar will have
14 adequate assurance that it will not need to withdraw from the Transitional Cluster
15 Study and forfeit substantial sums as a withdrawal penalty.

16 **Q. The Public Staff also states that Juno Solar is attempting to "shift" the risk**
17 **from Juno Solar to the North Carolina ratepayers through the Conditional**
18 **CPCN Application. (Public Staff Witness Metz Testimony, p. 5) Is the Public**
19 **Staff's concern valid?**

20 **A.** No. Contrary to the Public Staff's assertion, the Commission's issuance of a
21 Conditional CPCN to Juno Solar would provide an appropriate solution for the
22 "Catch 22" problem that would in no way "shift" risk from Juno Solar to the North

1 Carolina ratepayers. Juno Solar has proposed a reasonable condition to the CPCN
2 to ensure that that the ratepayers will not have to provide reimbursement for
3 Network Upgrade costs and Affected System costs that are too high. Juno Solar's
4 proposed condition will ensure that the LCOT for any assigned Network Upgrade
5 costs and Affected System costs from the study processes will be no greater than
6 \$4.00 per MWh. The conditions to Juno Solar's CPCN Application are *designed*
7 to provide ample protection for the ratepayers from unreasonably high Network
8 Upgrade.

9 **Q. Do you believe that FERC-jurisdictional Interconnection Customers might be**
10 **dissuaded from entering Phase 2 of Duke's Cluster Study if they will face**
11 **million dollar withdrawal penalties if they exit the study process because their**
12 **CPCN is denied?**

13 **A.** Yes. I believe that the uncertainty of whether the Commission will grant a CPCN
14 to a merchant plant facility might dissuade FERC-jurisdictional Interconnection
15 Customers from entering Phase 2 of the Cluster Study due to the magnitude of the
16 withdrawal penalties. The Public Staff does not disagree. In response to Juno
17 Solar's Data Request No. 1 to the Public Staff, the Public Staff stated that "[t]he
18 Public Staff does not dispute the uncertainty regarding whether a CPCN would be
19 granted may lead a potential Interconnection Customer to decide not to enter the
20 Transitional Cluster Study." I believe that any policy that would discourage
21 merchant plants from even entering the Transitional Cluster Study—when there are

1 solutions to mitigate the financial risk, such as Juno Solar's proposed Conditional
2 CPCN—would be both inappropriate and unfair to merchant plant applicants.

3 **Q. Do you agree with the Public Staff's position that the Commission cannot**
4 **make a "fully informed" decision on Juno Solar's CPCN Application until**
5 **the interconnection studies have been completed? (Public Staff Witness Metz**
6 **Testimony, p. 6)**

7 **A.** No, the Public Staff's position is incorrect. The Commission will be able to make
8 a fully informed decision on Juno Solar's Conditional CPCN Application because
9 Juno Solar has proposed a binding and enforceable condition that the LCOT for
10 any assigned Network Upgrade costs and Affected System costs from the study
11 processes will be no greater than \$4.00 per MWh. Juno Solar's power flow
12 analysis shows that the Network Upgrade costs will most likely be around \$13
13 million, and would be closer to \$16.84 million in the worst-case scenario. The
14 worst-case scenario assumes that 100% of the Network Upgrade costs would be
15 assigned to Juno Solar and that none of those costs would be assigned to any other
16 project in the Transitional Cluster. Under both the likely scenario and the worst-
17 case scenario, Public Staff Witness Metz agrees that the costs are reasonable in
18 both magnitude and in LCOT. Therefore, the Public Staff's claim that the
19 Commission cannot make a "fully informed" decision about Juno Solar's CPCN
20 Application and impact to ratepayers is both misleading and incorrect.

21 **Q. The Public Staff notes that the Department of Natural and Cultural**
22 **Resources has recommended a comprehensive archaeological assessment of**

1 **the property. (Public Staff Witness Metz Testimony, pp. 9-10) Has the**
2 **archaeological assessment of the property been performed?**

3 A. Juno Solar has executed a proposal for the completion of an archaeological survey
4 as recommended by the Department of Natural and Cultural Resources. The
5 results of the study are expected within three to four months (February to March
6 2022).

7 Q. **The Public Staff expresses concern that the nameplate capacity for Juno**
8 **Solar might ultimately be reduced due to potential site constraints, and**
9 **therefore requested a more detailed site plan. (Public Staff Witness Metz**
10 **Testimony, pp. 8-9) Is the Public Staff's concern valid?**

11 A. No. Public Staff Witness Metz notes that “given my experience with the Public
12 Staff reviewing CPCN applications for solar facilities, it is not uncommon for
13 sites to have numerous modifications to the site layout and boundaries, and even
14 changes in nameplate capacity prior to project completion.” (Public Staff Witness
15 Metz, p. 8) We agree with the Public Staff that solar developers frequently make
16 modifications to the site layout and boundaries and sometimes revise the facility’s
17 nameplate capacity prior to project completion. However, prior to the Public
18 Staff’s testimony in this docket, the Public Staff had never suggested that the
19 Commission should not issue a CPCN simply because the project might undergo
20 site changes prior to project completion. Thus, the Public Staff’s position is not
21 only a novel position, but the Public Staff has singled out Juno Solar for its newly
22 expressed position.

1 In response to the Public Staff's request for a more detailed site plan, I
2 want to make it clear that Juno Solar filed a revised detailed site plan that shows
3 all significant site features, including the wetlands, on the property on July 26,
4 2021. On July 27, 2021, the Public Staff filed notice that Juno Solar's Conditional
5 CPCN Application, that includes the revised detailed site plan, is complete and
6 meets the requirements of Rule R8-63. Even though the Public Staff has
7 acknowledged that Juno Solar's Conditional CPCN Application is complete and
8 in compliance with Rule R8-63, Juno Solar is willing to file an even more detailed
9 site plan in the docket if material changes are made upon further refinement.

10 However, the Public Staff's suggestion that any possible modifications to
11 the site might make the site "incapable of supporting a facility that can produce
12 the total energy utilized in the initial calculation of the LCOT [and that] the true
13 LCOT may be substantially greater than what is being relied upon in determining
14 whether to grant the CPCN" is a flawed risk assessment. (Public Staff Witness
15 Metz Testimony, pp. 8-9) By the same token, a downsizing of the Juno Solar
16 facility could alleviate constraints on the system and materially reduce its
17 Network Upgrade costs (effectively the "numerator" in the LCOT calculation) as
18 readily as a reduction in generation (effectively the "denominator" of LCOT)
19 might materially increase LCOT. Indeed, preliminary internal analysis has
20 suggested this could be the case with a downsizing of the facility. This analysis is
21 inconclusive without knowing the composition of the Transitional Cluster, but

1 Birch Creek will once again study this dynamic once the full set of cluster
2 projects is known.

3 **Q. The Public Staff claims that Juno Solar cannot provide an accurate or useful**
4 **power flow analysis. (Public Staff Witness Metz Testimony, p. 13) Is the**
5 **Public Staff's opinion correct?**

6 **A.** Birch Creek's power flow analysis provides useful guidance and insight into the
7 potential costs and risks of Network Upgrade requirements associated with the
8 Juno Solar facility, and should be viewed as such. The study was performed with
9 conservative assumptions and the best information Birch Creek had available at
10 the time. As discussed in response to the previous question, Birch Creek
11 acknowledges that this study is not fully conclusive without knowing the
12 composition of the Transitional Cluster. This study will be updated as that
13 composition is determined, and Birch Creek is willing to brief the Public Staff on
14 any substantial changes to its findings. In any case, Birch Creek's results do not
15 hinder the Commission in issuing a CPCN conditional upon ultimate costs, and
16 Birch Creek's preliminary Network Upgrade cost findings reflect ample
17 headroom below what it believes are just and reasonable levels.

18 **Q. The Public Staff states that Juno Solar's power flow analysis should have**
19 **included a winter study and possibly a shoulder season study. (Public Staff**
20 **Witness Metz Testimony, p. 13) Do you agree with the Public Staff's opinion?**

21 **A.** The primary study hour for generation interconnection requests is 1 p.m. on a
22 summer peak day with customer load at 90% of peak and solar generation at

1 100%, due largely to significant solar generation in DEP. For projects that have
2 solar plus storage, DEP will perform a winter peak analysis in addition to the
3 summer peak analysis. Juno Solar is a closed loop solar plus storage project which
4 means that it is DC coupled and will not charge from the transmission grid. That
5 being said, Birch Creek performed a winter peak screening in addition to the
6 summer peak study to model the discharge of the interconnection request during
7 winter peak hour. Birch Creek did not identify new constraints during winter
8 peak. DEP does not outline or mention the use of shoulder season studies for
9 generation interconnection requests in their base case data dictionaries, nor there
10 are FERC 845 shoulder season cases available.

11 **Q. Please response to the Public Staff's concerns about the Affected System**
12 **studies and the Transitional Cluster Study. (Public Staff Witness Metz**
13 **Testimony, pp. 23-25)**

14 **A.** Juno Solar will agree not to seek reimbursement for any Duke Energy Affected
15 System Upgrade costs that may be incurred. Juno Solar's agreement thus removes
16 the Public Staff's source of concern around the Affected System evaluation
17 process, both from a study timing perspective and a ratepayer cost risk
18 perspective.

19 **Q. Does the Public Staff agree that PJM has identified a need for new**
20 **generation in terms of both energy and capacity? (Public Staff Witness Metz**
21 **Testimony, p. 29)**

1 **A.** Yes. The Public Staff clearly states that PJM has identified the need for new
2 generation and capacity. (Public Staff Witness Metz Testimony, p. 28)

3 **Q.** **Please summarize PJM’s most recent (2021) Load Forecast Report.**

4 **A.** The Public Staff agrees with Juno Solar that PJM’s 2021 Load Forecast Report
5 demonstrates the need for new generation for energy and capacity. As noted in my
6 initial testimony, Commercial and Industrial (“C&I”) demand for clean energy in
7 the PJM market is stronger than ever in the market’s history and continues to grow.
8 The year 2020 saw yet another increase in C&I demand for renewable energy,
9 despite the challenges of the Covid-19 pandemic. LevelTen Energy, which matches
10 renewable energy buyers and sellers and provides insight into nationwide
11 renewable PPA pricing, noted an increase in solar PPA prices in PJM over the past
12 two years, with a steady escalation in price from Q1 2019 to Q4 2020. As Birch
13 Creek cited previously in this docket, “The convergence of more challenging local
14 and state permitting regimes, prohibitively high grid upgrade costs, and a surge in
15 buyer demand has resulted in a PJM market that is short in project supply, which
16 has in turn led to rising PPA prices” observed Rob Collier, Vice President of
17 Developer Relations at LevelTen, in its Q4 2020 Energy PPA Price Index. The
18 report found PJM Solar PPA prices to be the highest of any ISO or RTO in the
19 country. This finding has held in subsequent reports, with the most recent (released
20 in October 2021) finding the highest 25th percentile price at \$37.50/MWh, and
21 noting that even this price was depressed by a clustering of projects in AEP-Dayton

1 Hub region, and that PJM's Dominion Hub is almost certainly experiencing higher
2 pricing.

3 Furthermore, the Public Staff reports that PJM is expecting peak load
4 growth of 0.3% for the next 10 years and 0.2% over the next 15 years, with a
5 summer forecasted peak of 153,759 MW in 2031 and winter forecasted peak of
6 135,568 MW in 2030/2031. Thus, the information and reports about future energy
7 needs in PJM relied upon by both Juno Solar and the Public Staff clearly
8 demonstrates the need for the Juno Solar facility.

9 **Q. Even though the Public Staff recognizes that PJM has a need for new**
10 **generation, does the Public Staff nonetheless conclude that Juno Solar has**
11 **not demonstrated a need for the facility? (Public Staff Witness Metz**
12 **Testimony, p. 28)**

13 **A.** Yes, the Public Staff makes a convoluted argument that there might not be a need
14 for the Juno Solar facility because the Public Staff finds it "doubtful" that PJM's
15 energy and capacity needs are solely dependent on the Juno Solar facility. (Public
16 Staff Witness Metz Testimony, p. 28) Juno Solar's burden to show the need for
17 the generating facility is not a complicated one. A merchant plant does not need
18 to show—and a merchant plant has never been required to show—that an
19 electric public utility's need for energy must be met solely by the proposed
20 merchant plant generating facility.

1 **Q. Other than the Friesian Holdings, LLC CPCN application and Juno Solar's**
2 **Conditional CPCN Application, has the Public Staff ever taken the position**
3 **that a merchant plant applicant has not demonstrated a need for the facility?**

4 **A.** No. Juno Solar has performed an analysis of merchant plant CPCN
5 dockets after the Commission adopted Rule R8-63 in the wake of its 1992
6 decision regarding Empire Power Company's merchant plant CPCN application.
7 *See Order on Motion to Dismiss*, issued on April 23, 1992 in Docket No. SP-
8 91. With the exception of the Public Staff's position in Friesian Holdings, LLC's
9 ("Friesian") CPCN application in Docket No. EMP-105, Sub 0 that Friesian had
10 not demonstrated a need for the generating facility, Juno Solar's analysis of
11 merchant plant CPCN dockets demonstrates that the Public Staff has taken the
12 position that the merchant plant CPCN applicant had not shown the need for the
13 facility in only two merchant plant CPCN proceedings. Those two merchant plant
14 dockets are Friesian's CPCN docket and now Juno Solar's Conditional CPCN
15 docket.

16 The Public Staff has confirmed Juno Solar's analysis. The Public Staff
17 responded to Juno Solar's Data Request No. 1 as follows:

18 Question No. 29. Has the Public Staff ever previously found that a
19 merchant plant has not demonstrated the need for the facility when PJM
20 has demonstrated the need for new generation, both energy and capacity?
21 If so, please provide the docket number for all merchant plant CPCN
22 applications in which the Public Staff has taken that position.

1 Response: See the response to Question No. 28 above. The Public Staff
2 has not taken that position in any recent docket other than the Friesian
3 CPCN application and given the time allowed to respond to this data
4 request, is not able to research the question beyond the last 24 months (as
5 provided in chart in response to Question No. 21). However, the Public
6 Staff has taken various positions in EMP dockets based upon
7 circumstances at the time it filed testimony in these dockets. These
8 positions have ranged from recommendations for approval with conditions
9 addressing updated networking upgrade costs to recommendations to hold
10 the application in abeyance until study costs are known. The Public
11 Staff's recommendation for the need for a generating facility is based on
12 many factors to include location, generating capacity, generation
13 technology, and commercial operation date.

14 **Q. In earlier testimony, you stated that Juno Solar was in the process of**
15 **attaining a PPA term sheet, which would serve to demonstrate the need for**
16 **the project. Has any progress been made?**

17 **A.** Yes. Juno Solar has executed a term sheet from a large, investment-grade retail
18 and wholesale energy provider in PJM, corroborating the need for renewable
19 energy in the Dominion region of PJM noted in the previously cited LevelTen
20 report and demonstrating need for this project. This PPA term sheet is provided as
21 Confidential Attachment A – PPA Term Sheet.

1 In Birch Creek's view, this term sheet represents an equal or greater
2 burden of proof than met in the course of recently approved CPCN documents,
3 including those of Fern Solar, LLC (Docket No. EMP-104, Sub 0), Halifax Solar,
4 LLC (Docket No. EMP-107, Sub 0), American Beech Solar, LLC (Docket No.
5 EMP-108, Sub 0), Sumac Solar, LLC (Docket No. EMP-110, Sub 0), and
6 Shawboro Solar, LLC (Docket No. EMP-117, Sub 0).

7 **Q. In light of the recent enactment of S.L. 2021-165 ("H.B. 951"), will there be**
8 **further need in North Carolina for non-carbon emitting generation on the**
9 **Duke Energy system to serve load to reduce emissions by 70% over 2005**
10 **levels by 2030?**

11 **A.** Yes. There will certainly be a substantial need for new non-carbon emitting
12 generation on the Duke Energy system both in the short-term and in the long-term
13 to serve load and reduce CO2 emissions.

14 **Q. Does the passage of H.B. 951 add a new dimension to the need for the Juno**
15 **Solar facility?**

16 **A.** Yes, it does. The 70% decarbonization by 2030 mandate established by the
17 General Assembly means that a massive amount of solar energy resources will
18 have to be added to Duke's system over the next nine years. Duke's Integrated
19 Resource Plan ("IRP") pending before the Commission shows that amount to be
20 at least 9 GW, although intervenors have put on evidence that would support a
21 much higher number. Duke's modified IRP filed in South Carolina suggests,
22 by Duke's own analysis, that the amount of required solar energy resources could

1 be closer to 11 GW. Thus, while the exact amount of solar additions will be
2 determined in the carbon reduction plan to be developed by the Commission next
3 year, it is highly likely that Duke will be adding a minimum of 1 GW, and
4 perhaps as much as 1.5 GW, of solar per year throughout the next decade. Under
5 H.B. 951, 55% of that amount will be owned by Duke and procured through
6 facility purchases from third parties or by self-development. In addition, there is
7 no size cap on Duke-owned solar, which means that the least-cost mandate of
8 H.B. 951 will almost certainly drive the procurement of larger facilities with
9 greater economies of scale. There are currently only five solar facilities in DEP
10 and DEC's combined interconnection queues with a capacity greater than 150
11 MW. In light of transmission and other development constraints, it is very likely
12 that Juno Solar would be one of the most cost-effective options for Duke to
13 achieve compliance with H.B. 951.

14 **Q. But should the Commission wait to grant a CPCN to Juno Solar until it is**
15 **determined whether Duke will in fact purchase the Juno Solar facility?**

16 **A.** No. As we have explained, the need for the immediate issuance of the
17 Conditional CPCN is to solve the Catch 22 problem presented by the recently
18 adopted Transitional Cluster Study rules. There is absolutely no harm to
19 ratepayers in issuing the conditional CPCN. Juno Solar is willing to accept an
20 additional condition to the CPCN that its CPCN will automatically terminate if
21 Juno Solar does not either contract for the sale of energy or the sale of the facility
22 during the life of the CPCN. As an aside, there is no risk that Juno Solar would

1 never construct the facility if it did not have a contract for the sale of the energy or
2 the sale of the facility. Juno Solar will not be able to obtain financing to construct
3 the facility unless it has either a contract for the off-take of the facility or a
4 contract to sell the facility to Duke.

5 **Q. Despite the enactment of HB 951, the Public Staff questions whether Juno**
6 **Solar will displace existing CO₂-emitting resources in PJM territory. (Public**
7 **Staff Witness Metz Testimony, pp. 25-26) Please describe how Juno Solar**
8 **will displace CO₂-emitting resources.**

9 **A.** The Public Staff's implication that Juno may not displace CO₂-emitting resources
10 in PJM, or must demonstrate through independent study that it will do so, is
11 puzzling. A basic understanding of economic dispatch in power markets and the
12 resource mix of PJM conveys it to be effectively impossible that Juno would not
13 displace a substantial amount of CO₂-emitting generation.

14 In PJM, broadly speaking, hours with locational marginal prices ("LMPs")
15 substantially greater than zero can be characterized as having gas- or coal-fired
16 generation setting the marginal clearing price, given its significant variable cost
17 per megawatt-hour (unlike zero- or low-marginal cost solar and wind
18 generation)¹. Adding solar generation onto the system will, by definition, displace
19 marginal generation, which in solar-generating hours overwhelmingly comes
20 from CO₂-emitting resources. Birch Creek finds a solar generation-weighted

¹ Nuclear generation typically carries a low variable cost, and is dispatched well before the marginal unit (base load) in the case of Juno Solar's projected operating hours in PJM.

1 average LMP for the Juno Solar facility of \$29.69/MWh for the past
2 approximately three years at its applicable SOUTH import point in PJM, the
3 result of CO₂-emitting natural gas and coal generation setting the marginal
4 clearing price in the extreme majority of these solar-generating hours², and found
5 no instances of a \$0 LMP (which would indicate a renewable or zero marginal
6 cost resource setting the margin) during a solar-generating hour, based on Juno
7 Solar's forecasted 8,760 operating profile.

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

9 **A. Yes.**

²In PJM's 2021 State of the Market Report, PJM's Independent Market Monitor found that natural gas generating units set the marginal clearing price in 68.7% of hours and coal units set the marginal clearing price in 16.8% of hours for the real-time market. The remaining marginal clearing prices are primarily set by wind and fall outside of Juno Solar's hours of operation.

1 BY MS. KEMERAIT:

2 Q And Ms. Miller, do you have a summary of your
3 testimony that you would like to present to the
4 Commission at this time.

5 A Yes, I do.

6 Q Please go ahead and read it.

7 A My name is Piper Miller and I am the Vice
8 President of Development for Pine Gate
9 Renewables. Juno Solar is wholly owned by Birch
10 Creek Development and operated in collaboration
11 with Pine Gate Renewables, which is managing the
12 development of Juno Solar's proposed
13 utility-scale solar photovoltaic generating
14 facility.

15 I filed direct testimony and
16 exhibits in this docket on July 12th and 13th,
17 2021, revised direct testimony and exhibits on
18 July 26th and 27th, 2021, supplemental direct
19 testimony on September 14th, 2021, and rebuttal
20 testimony and exhibits on November 9th, 2021.

21 The purpose of the summary of my
22 testimony is to demonstrate that Juno Solar's
23 Conditional CPCN Application meets all
24 requirements of North Carolina General Statute

1 § 62-110.1 and Commission Rule R8-63, and to
2 explain why the Commission should grant the CPCN
3 with the proposed conditions.

4 In my testimony, I provide
5 information about the 275-MW Juno Solar facility
6 in Richmond County, North Carolina, and explain
7 (1) the need for the Juno Solar facility; (2) how
8 the Juno Solar facility with the associated
9 network upgrades will serve the public
10 convenience and necessity; (3) why a Conditional
11 CPCN is needed for the facility; and (4) how the
12 conditions to Juno Solar's CPCN Application will
13 provide ample protection for the North Carolina
14 ratepayers from unreasonably high network upgrade
15 costs.

16 In my testimony, I emphasize the
17 importance of the Juno Solar Application for the
18 State, especially in light of the recent
19 enactment of House Bill 951. Due to the mandate
20 in House Bill 951, there will be a substantial
21 need in North Carolina for new non-carbon
22 emitting generation on the Duke Energy Progress
23 and Duke Energy Carolinas system. I also explain
24 how the requested Conditional CPCN provides an

1 appropriate solution for an unintended problem
2 that the Duke Energy FERC Queue Reform Study
3 process created for Juno Solar, a
4 FERC-jurisdictional Interconnection Customer.

5 The Juno Solar site consists of 25
6 parcels, collectively containing approximately
7 2,586 acres of land, located along McFarland Road
8 and Green Chapel Church Road in Richmond County.
9 In both my supplemental direct and rebuttal
10 testimony, I provide substantial evidence of the
11 need for the Juno Solar facility. Juno Solar has
12 executed a preliminary term sheet from a large,
13 investment-grade retail and wholesale energy
14 supplier in PJM that demonstrates the need for
15 the renewable energy from the facility in the
16 Dominion region of PJM. This term sheet
17 represents equal or greater evidence of need than
18 was deemed sufficient for CPCN approval in
19 several recent proceedings, including those of
20 Fern Solar, Halifax Solar, American Beech Solar,
21 and Sumac Solar.

22 In addition to the executed term
23 sheet with the retail and wholesale energy
24 supplier in PJM, I provide information about the

1 need for the Juno Solar facility in the State and
2 the region. Commercial and Industrial demand for
3 clean energy in the PJM market is stronger than
4 ever in the market's history and continues to
5 grow. The year 2020 once again saw strongly
6 increasing C&I demand for renewable energy,
7 despite the challenges of the Covid-19 pandemic.
8 Level Ten Energy, which matches renewable energy
9 buyers and sellers and provides insight into
10 nationwide renewable PPA pricing, noted
11 increasing solar PPA prices in PJM over the past
12 two years in its energy PPA Price Index, which
13 has continued into 2021. PJM exhibits the
14 highest solar PPA prices of any organized market
15 in the country, with Level Ten finding a 25th
16 percentile PPA price of \$37.50 - a price likely
17 driven downward by clustering of PPAs at the
18 discounted AEP-Dayton Hub and higher at the
19 Dominion Hub at which Juno will settle,
20 underscoring the need for renewable energy in the
21 region. Level Ten Vice President of Developer
22 Relations Rob Collier stated in the company's Q4
23 2020 report "The convergence of more challenging
24 local and state permitting regimes, prohibitively

1 high grid upgrade costs, and a surge in buyer
2 demand has resulted in a PJM market that is short
3 in project supply, which has in turn led to
4 rising PPA prices". Is expecting peak load
5 growth of .3 percent for the next 10 years and .2
6 percent over the next 15 years, with a summer
7 forecasted peak of 153,759 MW in 2031 and a
8 winter forecasted peak of 135,568 MW in 2030 and
9 '21 -- 2031.

10 In my rebuttal testimony, I
11 provide further information about the need for
12 the facility in light of enactment of House Bill
13 951. Due to the mandate in House Bill 951, there
14 will be a substantial need in North Carolina for
15 non-carbon emitting generation on the Duke Energy
16 system to serve load to reduce emissions by
17 70 percent over 2005 levels by 2030. The
18 70 percent decarbonization by 2030 mandate means
19 that a massive amount of solar energy resources
20 will have to be added to Duke Energy's system
21 over the next nine years.

22 In the Commission's recent Order
23 in the Integrated Resource Plan proceeding issued
24 on November 19th, 2021, the Commission found Duke

1 Energy's 2020 IRPs, that show the amount of solar
2 additions to be at least 9 GW, to be adequate for
3 short-term planning purposes. Thus, while the
4 exact amount of solar additions will be
5 determined in the carbon reduction plan to be
6 developed by the Commission next year, it is
7 highly likely that Duke Energy will be adding a
8 minimum of 1 GW of solar per year throughout the
9 next decade. Under House Bill 951, 55 percent of
10 that amount will be owned by Duke Energy and
11 procured through facility purchases from third
12 parties or by self-development. In addition,
13 there is no size cap on the Duke Energy-owned
14 solar, which means that the least cost mandate of
15 H.B. 951 will almost certainly drive the
16 procurement of larger facilities with greater
17 economies of scale. There are currently only
18 five solar facilities in DEP and DEC's combined
19 interconnection queues with a capacity greater
20 than 150 MW. In light of transmission and other
21 development constraints, it is very likely that
22 Juno Solar would be one of the most
23 cost-effective options for Duke Energy to achieve
24 compliance with House Bill 951.

1 Also, in my rebuttal testimony, I
2 provide information that the Juno Solar facility,
3 along with the associated network upgrades, are
4 in the public convenience and necessity. I
5 discuss the substantial benefits that the
6 development of the Juno Solar facility will
7 provide to DEP ratepayers. These benefits
8 distinguish Juno solar from the other merchant
9 solar projects interconnecting in the Dominion
10 PJM region of North Carolina about which the
11 Commission has recently expressed concern. In
12 order to wheel its output from its location in
13 DEP territory to PJM, Juno Solar will have to
14 procure point-to-point transmission service
15 across the DEP system. This process is known and
16 transparent with current and forecasted rates
17 being published by Duke Energy periodically. The
18 current rate for firm point-to-point transmission
19 service across the DEP system is \$1,738 per
20 megawatt per month. Reserving transmission
21 capacity of 250 megawatts would result in
22 approximately \$5.2 million per year in new
23 point-to-point transmission revenues to DEP at
24 current rates. These revenues contribute

1 toward -- these revenues contribute towards DEP's
2 Annual Transmission Revenue Requirement, or ATRR,
3 and are used by DEP to operate, maintain, and
4 upgrade its transmission system. By contributing
5 substantial revenues towards the ATRR, Juno Solar
6 can be expected to reduce the burden for
7 transmission spending that would otherwise
8 ultimately fall on DEP's various load customers.

9 These transmission rates are
10 forecasted by Duke Energy to rise substantially
11 in the coming years. In my rebuttal testimony, I
12 projected that Juno Solar will spend over
13 \$275 million on point-to-point transmission over
14 the life of the project. This is the only means
15 by which Juno Solar can deliver power to the PJM
16 marketplace. These costs, not in any way
17 reimbursable by ratepayers, will, under any
18 reasonable assumptions, far exceed the costs of
19 network upgrades which ratepayers might be
20 subject to. Even at the end of a \$4.00 -- even
21 at the high end of a \$4.00/MWh Levelized Cost of
22 Transmission, Juno Solar's projected contribution
23 of point-to-point transmission revenues to DEP
24 still exceeds its reimbursable network upgrade

1 costs by roughly a factor of five. The magnitude
2 of these new transmission revenues for DEP is a
3 benefit entirely sufficient to allay any concerns
4 over ratepayer exposure to interconnection costs.

5 In addition, in my direct
6 testimony and rebuttal testimony, I explain the
7 reasons why the Commission should issue a
8 conditional CPCN to Juno Solar. As background,
9 the Federal Energy Regulatory Commission has
10 approved revisions to Duke Energy's Attachment J,
11 Standard Large Generator Interconnection
12 Procedures, to their Joint Open Access
13 Transmission Tariff. With FERC Queue Reform,
14 Duke Energy has reformed their generator
15 interconnection queuing, study process, and cost
16 allocation process by transitioning to a
17 Definitive Interconnection Study process. Juno
18 Solar has recently entered the Transitional
19 Cluster in which Juno Solar and other
20 interconnection customers will be grouped
21 together for the Transitional Cluster Study
22 process and will be able to share any required
23 network upgrade costs.

24 There are substantial and

1 increasing financial security requirements
2 required for both ready and non-ready
3 interconnection customers to enter the
4 Transitional Cluster and proceed through the
5 Transitional Cluster Study process. The total
6 security required for the Transitional Cluster
7 Study process if readiness is provided is as
8 follows: One times the study deposit to enter
9 Phase 1 and \$3 million to enter Phase 2. The
10 total security for the study process if readiness
11 is not provided is as follows: One times the
12 study deposit plus \$3 million to enter Phase 1,
13 and an additional \$2 million for a total of \$5
14 million to enter Phase 2. Therefore, ready
15 projects will have to pay in excess of \$3 million
16 to enter Phase 2 study, and non-ready projects
17 will have to pay in excess of \$5 million to be
18 studied in Phase 2.

19 If an interconnection customer
20 withdraws prior to Phase 2 of the Transition
21 (sic) Cluster Study process commencing, no
22 withdrawal penalty is imposed and the
23 interconnection customer will only be assigned
24 its allocated study costs. However, after the

1 commencement of Phase 2, the interconnection
2 customer runs the risk of having to pay a
3 withdrawal penalty equal to nine times its study
4 costs, which is likely to be \$1 to \$2 million or
5 potentially greater, in addition to losing the
6 study costs already paid. Among the reasons that
7 an interconnection customer might need to
8 withdraw from the study process is if the
9 Commission were to deny a CPCN Application. The
10 Commission could decide to deny a CPCN where it
11 believes that the LCOT for any network upgrades
12 are too high.

13 This situation creates a catch 22
14 for FERC-jurisdictional Interconnection
15 Customers, like Juno Solar, that have to enter
16 the Transitional Cluster and must make
17 substantial financial posting and face
18 substantial withdrawal penalties if they exit the
19 study process because the Commission were to deny
20 the CPCN. But Juno Solar cannot determine the
21 amount of its network upgrade costs and its LCOT
22 without first completing the study process. The
23 solution to this unfair situation is for the
24 Commission to issue a Conditional CPCN that will

1 remain in effect so long as the LCOT for any
2 required network upgrades assigned to Juno Solar
3 is at or below an acceptable defined amount.
4 Juno Solar has conducted a detailed injection
5 analysis of the project to identify anticipated
6 transmission overloads and potential network
7 upgrade costs. The study found that minimal
8 network upgrades will be required, and Juno Solar
9 believes that the LCOT for any required network
10 upgrades assigned to the project will be no
11 greater than \$4.00/MWh.

12 Finally, I explained in my direct
13 and rebuttal testimony that the Conditional CPCN
14 will ensure that the ratepayers are not subjected
15 to unreasonably high network upgrade costs. Juno
16 Solar has proposed a Conditional CPCN that will
17 both provide protection to the ratepayers and
18 allow Juno Solar to enter the Transitional
19 Cluster and incur the associated financial
20 exposure without an unacceptable level of
21 uncertainty about whether the CPCN will be issued
22 and whether the issued CPCN will remain in
23 effect.

24 Juno Solar has proposed the

1 following conditions to the CPCN to ensure that
2 there will be no unreasonable harm or risk to the
3 ratepayers: (1) the LCOT for any required
4 network upgrades associate -- assigned to Juno
5 Solar will be no greater than \$4.00 per megawatt
6 hour; (2) the Conditional CPCN will automatically
7 terminate if the LCOT for any required network
8 upgrades is greater than \$4.00 per megawatt hour;
9 (3) Juno Solar will agree not seek to
10 reimbursement for any Duke Energy Affected System
11 upgrade costs that may be incurred; and (4) Juno
12 Solar's CPCN will automatically terminate if Juno
13 Solar does not either contract for the sale of
14 energy or the sale of the facility during the
15 life of the CPCN.

16 This information concludes the
17 summary of my testimony.

18 BY MS. KEMERAIT:

19 Q Thank you, Ms. Miller.

20 MS. KEMERAIT: I'll now move on to Juno
21 Solar's second witness, which is Steve Levitas.

22 BY MS. KEMERAIT:

23 Q Mr. Levitas, can you state your full name and
24 business address for the record, please?

1 A I'm Steve Levitas. My business address is 130
2 Robert Street in Asheville.

3 Q By whom are you employed and in what capacity?

4 A I work for Pine Gate Renewables. I am the Senior
5 Vice President for Regulatory and Government
6 Affairs.

7 Q And Mr. Levitas, did you cause to be prefiled on
8 November the 9th of 2021, 18 pages of rebuttal
9 testimony in the form of question and answer and
10 one exhibit?

11 A I did.

12 Q And if I were to ask you the same questions that
13 appear in your rebuttal testimony today, would
14 your answers be the same?

15 A They would.

16 MS. KEMERAIT: At this time, I would move
17 that Mr. Levitas' prefiled rebuttal testimony be
18 copied into the record as if given orally from the
19 stand, and that the exhibit to his testimony be marked
20 for identification and included in the record?

21 COMMISSIONER DUFFLEY: Any objection?

22 (Pause).

23 The motion is allowed.

24 (WHEREUPON, Exhibit SJL-1 is

1 marked for identification as
2 prefiled and received into
3 evidence.)

4 (WHEREUPON, the prefiled rebuttal
5 testimony of STEVEN J. LEVITAS is
6 copied into the record as if
7 given orally from the stand.)
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**BEFORE THE
NORTH CAROLINA UTILITIES COMMISSION
JUNO SOLAR, LLC
DOCKET NO. EMP-116, SUB 0**

**REBUTTAL TESTIMONY
OF
STEVEN J. LEVITAS**

November 9, 2021

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** My name is Steven J. Levitas. My business address is 130 Roberts Street,
3 Asheville, North Carolina 28801.

4 **Q. WHAT IS YOUR OCCUPATION?**

5 **A.** I am the Senior Vice President for Regulatory and Government Affairs at Pine Gate
6 Renewables, LLC ("Pine Gate").

7 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
8 **EXPERIENCE.**

9 **A.** I received a B.A. from the University of North Carolina at Chapel Hill in 1976 and
10 a J.D. with Honors from Harvard Law School in 1982. After clerking for a federal
11 district court judge, I spent four and one-half years as a commercial litigator before
12 becoming Director and Senior Attorney in the North Carolina office of the
13 Environmental Defense Fund, a national public interest advocacy organization. In
14 1993, North Carolina Governor Jim Hunt appointed me to serve as Deputy
15 Secretary of the North Carolina Department of Environment, Health, and Natural
16 Resources. Following my four-year tenure in that position, I spent the next twenty
17 years as a partner in two private law firms where my practice was focused on
18 environmental and energy matters. During the last six of those years, a particular
19 emphasis of my practice was representing renewable energy companies.

20 In January of 2016, I became Vice President for Business Affairs and
21 General Counsel for FLS Energy, Inc. ("FLS"), a North Carolina-based utility scale
22 solar developer. At FLS, I was responsible for all legal, regulatory, and business

1 development activities of the company, including the negotiation of a wide variety
2 of contracts relating to our business. In January of 2017, following the acquisition
3 of FLS by Cypress Creek Renewables (“Cypress Creek”), I was appointed to the
4 position of Senior Vice President for Regulatory Affairs and Strategy at Cypress
5 Creek, a position I held until joining Pine Gate in September of 2019. At Cypress
6 Creek, I was responsible for and managed all aspects of policy, regulatory, and
7 government affairs activity.

8 **Q. PLEASE DESCRIBE PINE GATE.**

9 **A.** Pine Gate is a utility-scale solar development company headquartered in Asheville,
10 North Carolina, with experience developing and building solar projects throughout
11 the United States. We are currently developing projects in more than 20 states, but
12 the Carolinas remain our largest and most important market. We currently have 43
13 projects in operation in the Carolinas totaling 470 megawatts (“MW”) AC, 25 of
14 which totaling 172 MW AC are in North Carolina. Our national development
15 pipeline is over 10 gigawatts (“GW”), of which 3.2 GW are projects in the
16 Carolinas, including over 2.4 GW in North Carolina. Our past and currently
17 planned investment in North Carolina is in excess of \$4.8 billion.

18 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

19 **A.** I am testifying on behalf of Juno Solar, LLC (“Juno Solar”).

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
21 **PROCEEDING?**

1 **A.** The primary purposes of my testimony are to explain the importance of finding a
2 solution to the “Catch 22” problem for merchant plant projects described in Juno
3 Solar’s Conditional Certificate of Public Convenience and Necessity (“CPCN”)
4 application, and to rebut the Public Staff’s new position that the levelized cost of
5 transmission (“LCOT”) test might not be the appropriate test for determining the
6 reasonableness of network upgrade costs for merchant plant facilities.

7 **Q. ARE YOU SPONSORING ANY EXHIBITS?**

8 **A.** Yes. I am sponsoring Exhibit SJL-1.

9 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND**
10 **RECOMMENDATIONS.**

11 **A.** As previously recommended by the Public Staff and approved by the Commission,
12 the Commission should apply the LCOT test to Juno Solar’s Conditional CPCN
13 application to determine the reasonableness of the network upgrade costs and any
14 affected system costs. The Commission should also approve Juno Solar’s CPCN
15 with enforceable conditions that will ensure that North Carolina ratepayers will not
16 be subject to reimbursement for unreasonable network upgrade and affected system
17 costs, while at the same time not subjecting Juno Solar to enormous financial
18 penalties in the event of the denial of a CPCN application in the future.

19 **Q. PLEASE DESCRIBE YOUR INVOLVEMENT IN THE STAKEHOLDER**
20 **PROCESS FOR DUKE’S FERC QUEUE REFORM PROPOSAL.**

21 **A.** I was extensively involved in Duke Energy Progress, LLC’s and Duke Energy
22 Carolinas, LLC’s (together, “Duke”) FERC-jurisdictional queue reform

1 stakeholder process, as well as Duke's North Carolina-jurisdictional queue reform
2 process, as one of the primary spokespersons and drafters on behalf of the
3 Carolinas Clean Energy Business Association ("CCEBA"). I attended almost all
4 of the stakeholder meetings, I was intricately involved in developing and
5 negotiating solutions for issues that arose with respect to Duke's queue reform
6 proposal, and I drafted detailed comments on and revisions to the various
7 iterations of Duke's proposed modifications to the state and federal
8 Interconnection Procedures.

9 **Q. DURING THE STAKEHOLDER PROCESS, DID YOU IDENTIFY THE**
10 **"CATCH-22" PROBLEM PRESENTED BY THE PROPOSED**
11 **PROCEDURES FOR FERC-JURISDICTIONAL INTERCONNECTION**
12 **CUSTOMERS AS A RESULT OF THE COMMISSION'S PRECEDENTS**
13 **ON CPCN APPLICATIONS BY SUCH CUSTOMERS?**

14 **A.** Yes. During multiple stakeholder teleconferences, all of which I believe were
15 attended by representatives of the Public Staff, I explained the "Catch 22"
16 problem. I pointed out that a FERC-jurisdictional Interconnection Customer that
17 enters Phase 2 of the Transitional Cluster Study must make substantial
18 performance security payment and faces a withdrawal penalty well in excess of \$1
19 million if it exits the study process. Among the reasons that an Interconnection
20 Customer might need to withdraw from the study process is if the Commission
21 were to deny a CPCN application or revoke a CPCN. As demonstrated by the
22 Commission's decision for Friesian Holdings, LLC's ("Friesian") CPCN

1 application in Docket No. EMP-105, Sub 0,¹ the Commission could decide to
2 deny a CPCN where it believes that the LCOT for required network upgrades
3 assigned to the Interconnection Customer (which under Duke Energy's FERC-
4 approved OATT and Large Generator Interconnection Agreement are reimbursed
5 in part by North Carolina retail customers) are too high. However, the
6 Interconnection Customer cannot know its network upgrade costs and thus its
7 LCOT until it has been through the Transitional Cluster Study, and will not even
8 have an estimate of those costs from Duke until the end of Phase 1 of the study
9 process. Thus the "Catch 22."

10 **Q. WHY DOES THAT SITUATION PRESENT A PROBLEM FOR**
11 **INTERCONNECTION CUSTOMERS?**

12 **A.** In the Friesian CPCN application proceeding and in other proceedings, the
13 Commission has made it clear that it will deny a CPCN to a FERC-jurisdictional
14 Interconnection Customer based solely on the fact that FERC's crediting policy
15 requires the utility and its ratepayers to reimburse the customer for network
16 upgrade costs. In Friesian, the Commission adopted the position advanced by the
17 Public Staff—the Commission ruled that where it deems such reimbursable costs
18 to be unreasonable, it will find that the proposed project does not satisfy the
19 "public convenience" prong of the CPCN statute, N.C. Gen. Stat. § 62-110.1. In

¹ See Order Denying Certificate of Public Convenience and Necessity for Merchant Generating Facility issued on June 11, 2020 in Docket No. EMP-105, Sub 0.

1 other merchant plant dockets, the Public Staff and the Commission have
2 suggested that it might be appropriate to revoke a previously issued CPCN to a
3 merchant plant where reimbursable costs deemed unreasonable by the
4 Commission are identified after the issuance of the CPCN. Therefore, the Catch-
5 22 is as follows: (i) Duke cannot provide the finalized network upgrade costs of a
6 FERC-jurisdictional project in the Transitional Cluster Study until after
7 completion of the Phase 2 study, but (ii) if the Commission's CPCN decision for
8 the project is not made until after those costs have been determined in Phase 2
9 study (and the remainder of the study process) and the Commission denies the
10 CPCN because it deems such costs to be unreasonable, the customer runs the risk
11 of having to pay a withdrawal penalty equal to nine times its study costs, which is
12 likely to be \$1 to \$2 million.

13 That result would be manifestly unjust and would likely discourage
14 FERC-jurisdictional Interconnection Customers from participating in the
15 Transitional Cluster Study (or the Definitive Interconnection System Impact
16 Study), thereby reducing the potential to spread the very large cost of resolving
17 Duke Energy's significant transmission system constraints and to remove a major
18 impediment to achieving the goals of S.L. 2021-165 ("H.B. 951"). This
19 unacceptable outcome can be avoided with the Conditional CPCN approach
20 proposed by Juno Solar.

21 **Q. DID YOU PROPOSE ANY POTENTIAL SOLUTIONS TO THIS**
22 **PROBLEM DURING THE STAKEHOLDER PROCESS?**

1 **A.** Yes. On several occasions, I explained the problem in detail and then proposed
2 two potential solutions. The first solution was to modify the Interconnection
3 Procedures to allow a FERC-jurisdictional Interconnection Customer to withdraw
4 from the study process without penalty if the Commission were to deny its CPCN
5 application based on the network upgrade costs assigned to the project. Duke
6 made it clear that that it would not support this approach because any such
7 withdrawal might require restudy of the remaining projects in the study, which
8 would adversely affect those customers. My alternative proposed solution was
9 the one presented in Juno's CPCN application—that the Commission issue a
10 CPCN conditioned on its reimbursable network upgrade costs coming below a
11 specific and reasonable LCOT value.

12 **Q. DID DUKE, THE PUBLIC STAFF, OR ANY OTHER STAKEHOLDER**
13 **OBJECT TO YOUR ALTERNATIVE PROPOSAL?**

14 **A.** No. No stakeholder, including the Public Staff, raised any objection or concern
15 about this proposed solution to the "Catch 22" problem. In fact, even though the
16 Public Staff was well aware of CCEBA's significant concern about this issue, at
17 no time during any stakeholder meeting or in any separate communication did any
18 representative of the Public Staff express an objection to my proposal.

19 **Q. DO YOU AGREE WITH WITNESS METZ'S STATEMENT AT PAGES 5-**
20 **6 OF HIS TESTIMONY THAT THE CONDITIONAL CPCN SOUGHT BY**
21 **JUNO SOLAR DOES NOT SOLVE THE "CATCH-22" PROBLEM?**

1 A. No, I do not. Mr. Metz incorrectly states that even with a conditional CPCN,
2 Juno Solar would be subject to the same withdrawal penalty if its network
3 upgrade costs as determined in the Transitional Cluster Study exceed an LCOT of
4 \$4.00/MWh, resulting in termination of its CPCN. Like other participants in the
5 Transitional Cluster Study, Juno Solar will receive an initial estimate of its
6 allocated network upgrade costs after Phase 1 of the study process. If at this point
7 those costs result in an LCOT for Juno Solar that is greater than \$4.00/MWh, the
8 CPCN will terminate and Juno Solar can withdraw from the queue without
9 penalty. In addition, if in subsequent phases of study Juno Solar's network
10 upgrade costs as identified in Phase 1 increase by more than 25%, it can also
11 withdraw from the queue without penalty. If an increase of less than 25% in
12 Juno Solar's Phase 1 allocated network upgrade costs would cause its LCOT to
13 exceed \$4.00/MWh, Juno Solar will likely withdraw from the queue at that point
14 without penalty rather than risk the possibility that a subsequent increase in its
15 network upgrade costs could cause its CPCN to terminate.

16 **Q. DO YOU AGREE WITH WITNESS METZ'S STATEMENT AT PAGE 33**
17 **OF HIS TESTIMONY THAT THE POTENTIAL WITHDRAWAL OF**
18 **JUNO SOLAR FROM THE QUEUE IN THE CASE OF HIGH UPGRADE**
19 **COSTS HAS THE POTENTIAL TO UNDERMINE THE TRANSITIONAL**
20 **CLUSTER STUDY PROCESS?**

21 A. No, I do not. As I just explained, Juno Solar will make the decision whether to
22 remain in the Transitional Cluster Study process at the end of Phase 1, just like all

1 other participants in the study. Duke has repeatedly stated that many participants
2 may withdraw at this stage in the process and has designed the Transitional
3 Cluster Study to accommodate that eventuality. Juno Solar is certainly not unique
4 in this regard. I should also note that if Juno Solar were to participate in the
5 Transitional Cluster Study without a conditional CPCN—and accept the
6 unreasonable burden of a massive withdrawal penalty in the event of CPCN
7 denial—the disruption to the study process from its subsequent withdrawal would
8 be far greater.

9 **Q. PLEASE EXPLAIN LCOT.**

10 **A.** LCOT is a metric utilized in the utility industry for evaluating the network
11 upgrade costs of a generation project in light of the expected output of the project
12 over its anticipated useful life. LCOT is calculated by dividing the project's
13 network upgrade costs in dollars by its presumed lifetime production in megawatt
14 hours.

15 **Q. WHY HAS JUNO SOLAR PROPOSED A CPCN CONDITIONED ON A**
16 **REASONABLE LCOT VALUE?**

17 **A.** Both the Public Staff and the Commission have identified LCOT as the test for
18 evaluating the reasonableness of reimbursable network upgrade costs for FERC-
19 jurisdictional Interconnection Customers. Specifically, in the Friesian Order
20 issued on June 11, 2020, the Commission noted: “Public Staff witnesses
21 Lawrence and Metz argued that a levelized cost of transmission (LCOT)
22 analysis provides a tool to evaluate the reasonableness of the upgrade costs

1 associated with certain generating technologies. They cited to a 2019 study by
2 Lawrence Berkeley National Laboratory (LBNL Study) that reviewed
3 interconnection cost studies for renewable energy facilities on a nationwide
4 basis, doing so by calculating LCOT value.” (Friesian Order, p. 15) The
5 Commission proceeded to state that “the Commission views the LCOT
6 analysis performed by the Public Staff as a benchmark of the reasonableness
7 of the network upgrades relative to other similar transmission investments
8 made to interconnect generating facilities in North Carolina.” (Friesian Order,
9 p. 23)

10 In addition, in the Commission’s November 13, 2020 Order granting a
11 CPCN to the proposed Edgecombe Solar, LLC merchant plant in Docket No.
12 EMP-101, Sub 0, the Commission again used the LCOT metric to assess the
13 reasonableness of upgrades required to the DEP system by the project. The
14 Commission concluded that an LCOT of \$6.00 per MWh for such upgrades (plus
15 the cost of unreimbursed upgrades in PJM) was “not unreasonably out of line with
16 the 2019 Lawrence Berkeley National Laboratory interconnection cost study
17 (LBNL Study), on which the Commission has relied to place LCOT calculations
18 in perspective with data from other balancing authorities.” The Commission
19 further concluded that “[i]n view of the total cost of the Facility, ... the siting of
20 the Applicant’s facility in this area is not inconsistent with the Commission’s
21 obligation under N.C. Gen. Stat. § 62-110.1(d) for the provisions of ‘reliable,
22 efficient and economical service’ in the state.” (*See Order Issuing Certificate for*

1 *Merchant Generating Facility*, Docket No. EMP-101, Sub 0 (Nov. 13,
2 2020).) The Commission also relied on an LCOT analysis to determine the
3 reasonableness of upgrade costs in orders granting a merchant CPCN in Docket
4 No. EMP-114, Sub 0 (*Order Issuing Certificate for Merchant Generating Facility*
5 (Oct. 8, 2021)) and renewing a merchant plant CPCN in Docket No. EMP-92, Sub
6 0 (Aug. 3, 2021). In none of these instances did the Commission consider the cost
7 of upgrades that might be associated with other proposed projects, except to note
8 where upgrade costs might be shared with such projects.

9 **Q. HAVE YOU PERSONALLY BEEN INVOLVED IN CONVERSATIONS**
10 **WITH THE PUBLIC STAFF REGARDING THE REASONABLENESS OF**
11 **FERC-JURISDICTIONAL NETWORK UPGRADE COSTS?**

12 **A.** Yes. On multiple occasions prior to this proceeding, I asked the Public Staff to
13 confirm their position about the reasonableness test for FERC-jurisdictional
14 network upgrade costs. On all of those occasions, the Public Staff confirmed the
15 position that they took in the Friesian proceeding—that reasonableness should be
16 determined based on a comparison of the project’s LCOT to industry benchmarks.
17 Exhibit SJL-1 is a true copy of one such communication on this subject that I
18 received from Layla Cummings, attorney for the Public Staff.

19 **Q. IS THE PUBLIC STAFF SEEKING IN THIS PROCEEDING TO MODIFY**
20 **ITS PRIOR POSITION ON THE REASONABLENESS TEST?**

21 **A.** It appears that the Public Staff is attempting to fundamentally change its position
22 in this proceeding. The primary basis for the Public Staff’s objection to Juno

Solar's Conditional CPCN application is that it would enable the Commission to accept a specific LCOT value as being reasonable for this particular project. The Public Staff seeks to prevent the Commission from determining a reasonable LCOT value for Juno Solar by arguing for the first time that even if the LCOT for a FERC-jurisdictional customer's reimbursable network upgrade costs are reasonable by industry standards, it might nevertheless be appropriate for the Commission to deny a CPCN for the project. Specifically, the Public Staff is suggesting that it might be appropriate to deny Juno's CPCN application if either (i) the total cost of its assigned network upgrades or (ii) the total cost of reimbursable network upgrades for all FERC-jurisdictional projects in the Transitional Cluster are deemed to be unreasonably high (by some undefined standard). (See Public Staff Witness Metz Testimony, pp. 6, 18, 20)

Q. DO YOU AGREE WITH THE PUBLIC STAFF'S POSITION ON THIS ISSUE?

A. No. In addition to being a complete reversal of the position it has repeatedly taken in the past, I question whether the Public Staff's position can be legally justified. The Public Staff has repeatedly acknowledged that the Commission may not, consistent with FERC's crediting policy, deny CPCNs to all FERC-jurisdictional projects simply because any reimbursement of network upgrade costs by ratepayers would be required. Rather, the Public Staff has advocated that the Commission must apply some rational and reasonable test (*i.e.*, LCOT) in making such decisions. The effect of the Public Staff's new position would be

1 that the Commission could arbitrarily deny CPCNs to larger merchant plant
2 projects relative to smaller projects, even if the required upgrade costs were
3 reasonable by industry standards, or the Commission could impose an arbitrary
4 limit on the number of permissible FERC-jurisdictional projects because of their
5 aggregate impact. In my opinion, neither outcome is constitutionally permissible.

6 **Q. APART FROM THE PUBLIC STAFF'S ATTEMPT TO CHANGE THE**
7 **REASONABLENESS TEST, HAS THE PUBLIC STAFF ARTICULATED**
8 **A RATIONAL BASIS FOR DENIAL OF THE CONDITIONAL CPCN**
9 **REQUESTED BY JUNO SOLAR?**

10 **A.** No, they have not. As a procedural matter, the Public Staff seems to have some
11 vague concern about whether Juno Solar can be held to the agreed-upon
12 conditions of the CPCN, even though Juno Solar has expressly proposed and
13 agreed to them. But the Public Staff has failed to articulate any legal basis to
14 substantiate their concern that the conditions might not be enforceable. More
15 substantively, the Public Staff seems to be concerned that the issuance of a
16 Conditional CPCN based on an LCOT cap could effectively establish a bright-line
17 LCOT value. However, given the unique nature of each merchant plant project,
18 the Commission could certainly make it clear, as it has done in other contexts, that
19 the acceptance of a particular LCOT cap in this case has no precedential value for
20 other merchant plant CPCN applications.

21 **Q. DO YOU AGREE WITH THE PUBLIC STAFF THAT THE ISSUANCE**
22 **OF A CONDITIONAL CPCN SHIFTS RISK TO THE RATEPAYERS?**

1 **A.** No, I do not. As an initial matter, I would note that the Public Staff uses the
2 concept of risk shifting in an ambiguous and inconsistent way. At page 5 of Mr.
3 Metz’s testimony, he asserts that “the Applicant is seeking to shift risk from itself
4 to ratepayers,” but does not explain what that risk is or how it is being shifted.
5 Because of this lack of clarity, Juno Solar tendered a data request to the Public
6 Staff asking for an explanation of the allegation of risk shifting. The Public
7 Staff’s primary response did not address risk shifting at all but referred to the *cost*
8 shifting that necessarily results from FERC’s crediting policy. As previously
9 noted, and as the Public Staff itself has acknowledged, the Commission may not
10 lawfully refuse to certificate *all* FERC jurisdictional projects to which the
11 crediting policy would apply. So the mere fact of the cost allocation resulting
12 from the crediting policy without more cannot be the basis for denying Juno
13 Solar’s CPCN. The Public Staff then offers a second explanation: the risk to
14 ratepayers is that the total cost of upgrades for all FERC-jurisdictional projects in
15 the Transitional Cluster Study could be a high number. But that is not a risk
16 caused by Juno Solar or its Conditional CPCN application or one for which Juno
17 Solar can be held accountable. Finally, at pages 8-9 and 33 of his testimony, Mr.
18 Metz suggests another form of risk—that due to changes in project design, Juno
19 Solar’s LCOT could increase during the design or construction process.

20 However, that issue is a red herring: under the CPCN that Juno seeks, if
21 its calculated LCOT ever exceeds \$4.00/MWh at any time before execution of an
22 interconnection agreement, the CPCN would automatically terminate. (It is

unclear whether the Public Staff is suggesting that a CPCN for a FERC-jurisdictional project should be revocable after construction on the project begins or after the project has commenced commercial operation due to changes in LCOT, but such a policy would be unprecedented and unreasonable in the extreme.)

Contrary to the Public Staff's assertion, Juno Solar has proposed a reasonable condition to the CPCN to ensure that the ratepayers will not have to provide reimbursement for unreasonably high network upgrade costs and affected system costs. Juno Solar's proposed condition will ensure that the LCOT for any assigned network upgrades and affected system costs from the study processes will be no greater than \$4.00 per MWh. Thus, with a Conditional CPCN, Juno Solar will be able to enter the Transitional Cluster and incur the associated financial exposure without an unacceptable level of uncertainty about whether the issued CPCN will remain in effect, and the conditions to Juno Solar's CPCN application will provide ample protection for the ratepayers from unreasonable network upgrade and affected system costs being passed onto them.

Q. DOES PUBLIC STAFF WITNESS METZ IMPLY THAT THE JUNO SOLAR PROJECT HAS BEEN IMPRUDENTLY SITED?

A. It appears so. At page 33 of his testimony, Mr. Metz states, with apparent criticism, that the Juno Solar project has been sited "in a known transmission constrained area of the DEP system, and high network upgrade costs are likely."

Q. HOW DO YOU RESPOND TO THAT STATEMENT?

1 **A.** Juno Solar was sited at its proposed location for the express purpose of seeking to
2 help solve what is arguably the biggest impediment to large-scale solar
3 development in the state and, in my opinion, the biggest obstacle to achieving the
4 carbon-reduction mandate of H.B. 951. The need for significant network
5 upgrades to the DEP system in Southeastern North Carolina has been well
6 documented, and Duke has confirmed the importance of these upgrades to its
7 overall system planning. In the wake of the Commission's denial of the Friesian
8 CPCN application, I had numerous conversations with representatives of the
9 Public Staff and Duke about an alternative approach for solving this problem. All
10 parties agreed that the most promising solution was to try to get as many
11 megawatts as possible from projects dependent on these upgrades into the
12 Transitional Cluster Study process so that the cost could be spread as broadly as
13 possible. While it was understood that this would likely involve a mix of state-
14 jurisdictional and FERC-jurisdictional projects, such that FERC's crediting policy
15 would still come into play, the hope was, and remains, that, as a result of the cost
16 spreading and absorption of costs by state-jurisdictional projects, the LCOT for
17 the FERC-jurisdictional projects would be reasonable. Based on these
18 conversations, Pine Gate and its development partners have actively sought to
19 identify and develop projects like Juno Solar that could participate in this cost
20 sharing.

21 **Q. DO YOU AGREE WITH PUBLIC STAFF WITNESS METZ'S**
22 **STATEMENT AT PAGES 14-15 OF HIS TESTIMONY THAT THE**

PUBLIC STAFF'S POSITION IN THE FRIESIAN PROCEEDING WAS THAT ISSUANCE OF THE CPCN IN THAT CASE "WOULD RESULT IN COSTLY OVERBUILDING AND INEFFICIENT PLANNING OF THE TRANSMISSION SYSTEM"?

A. No, I do not. The Public Staff's position in that case was that FERC's crediting policy would result in an unacceptably high cost to North Carolina retail ratepayers. While the Public Staff argued that the applicant, even with supporting statements from Duke, had not met its burden of proving the network upgrades in question were essential to advancing the public interest objectives claimed by the applicant, the Public Staff did not argue, let alone put on any supporting evidence, that the network upgrades at issue there were unneeded or inefficient.

Q. WHAT IS THE PUBLIC STAFF'S FINAL RECOMMENDATION TO THE COMMISSION?

A. The Public Staff's final recommendation is that the Commission should deny Juno Solar's Conditional CPCN, without prejudice, and allow Juno Solar to refile its application once the interconnection studies have been completed. (Public Staff Testimony, p. 35)

Q. DO YOU AGREE WITH THE PUBLIC STAFF'S FINAL RECOMMENDATION?

A. No. As I have explained, Juno Solar would face extreme prejudice and hardship if it were required to withdraw from the queue due to denial of its CPCN application after becoming subject to a withdrawal penalty well in excess of \$1

1 million. Even with the payment of that penalty, Juno's withdrawal would be
2 disruptive to the Transitional Cluster Study process and other Interconnection
3 Customers. Juno Solar has proposed a reasonable solution that presents
4 absolutely no risk to ratepayers. What is really going on in this proceeding is that
5 the Public Staff is seeking to advance a new onerous and unlawful test for CPCN
6 issuance for FERC-jurisdictional Interconnection Customers. Rather than
7 accepting the LCOT test previously advanced by the Public Staff and adopted by
8 the Commission—and that the Public Staff has repeatedly stated is the applicable
9 test—it now contends that the Commission can and should deny a CPCN to a
10 single FERC-jurisdictional project where the aggregate costs of multiple FERC-
11 jurisdictional projects is deemed to be excessive. I urge the Commission not to
12 adopt that unreasonable and unlawful policy.

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

14 **A.** Yes.

1 MS. KEMERAIT: So, Ms. Miller and
2 Mr. Levitas are now available for cross examination.

3 THE WITNESS: (MR. LEVITAS) I do have a
4 summary.

5 MS. KEMERAIT: Oh, excuse me. Let me
6 back-up.

7 BY MS. KEMERAIT:

8 Q Mr. Levitas, do you have a summary that you would
9 like to read to the Commission?

10 A As a matter of fact, I do.

11 Q Okay. Thank you.

12 A Good morning, Commissioners. My name is Steve
13 Levitas. I'm Senior Vice President for
14 Regulatory and Government Affairs at Pine Gate
15 Renewables. Filed rebuttal testimony and an
16 exhibit in this docket on November 9th, 2021.

17 The purpose of my -- of the
18 summary of my testimony is first to explain the
19 importance of finding a solution to the catch 22
20 problem for merchant plant projects seeking a
21 Certificate of Public Convenience and Necessity,
22 such as Juno Solar; second, to provide
23 information that the Commission should follow its
24 precedent by applying the Levelized Cost of

1 Transmission, or LCOT, test to Juno Solar's
2 Conditional CPCN Application to determine the
3 reasonableness of the network upgrade costs;
4 third, to explain that the Public Staff is
5 fundamentally changing its position in this
6 proceeding about the appropriate tests of
7 determining the reasonableness of network upgrade
8 costs; and fourth, to demonstrate that the
9 proposed conditions to Juno Solar's CPCN
10 Application will provide ample protection for the
11 North Carolina ratepayers from unreasonably high
12 network upgrade costs, while at the same time not
13 subjecting Juno Solar to huge financial penalties
14 in the event of the denial of the CPCN
15 Application in the future.

16 In my testimony, I first discuss
17 the catch 22 problem for FERC's Jurisdictional
18 Interconnection Customers, such as Juno Solar
19 that wish to enter into the Transitional Cluster
20 Study process but must make substantial financial
21 postings and face substantial withdrawal
22 penalties if they are required to exit the study
23 process solely because the Commission denies a
24 CPCN for the facility. I explain that I was

1 extensively involved in Duke Energy Progress and
2 Duke Energy Carolinas FERC-jurisdictional Queue
3 Reform Stakeholder process as one of the primary
4 spokespersons and drafters on behalf of Carolinas
5 Clean Energy Business Association. I attended
6 almost all of the stakeholder meetings, I was
7 intimately involved in developing and negotiating
8 solutions for issues that arose with respect to
9 Duke's Queue Reform proposal, and I drafted
10 detailed comments on and revisions to the various
11 iterations of Duke's proposed modifications to
12 the State and Federal Interconnection Procedures.

13 During multiple stakeholder
14 conferences, these were mostly teleconferences,
15 all of which I believe were attended by
16 representatives of the Public Staff, I explained
17 the catch 22 problem for FERC-jurisdictional
18 Interconnection Customers. I pointed out that a
19 FERC-jurisdictional Interconnection Customer that
20 enters Phase 2 of the Transitional Cluster Study
21 must make a substantial performance security
22 payment and subject itself to a substantial
23 withdrawal penalty well in excess of a million
24 dollars and perhaps more like \$2 million if it

1 exits the study process. Among the reasons the
2 interconnection customer might need to withdraw
3 from the study process is if the Commission were
4 to deny a CPCN Application or revoke a CPCN.

5 In the Friesian Holdings CPCN,
6 that was Docket Number EMP-105, Sub 0, the
7 Commission made clear that it will in some
8 circumstances deny a CPCN for a
9 FERC-jurisdictional Interconnection Customer
10 where it believes that the LCOT for required
11 network upgrades assigned to that interconnection
12 customer, which under Duke's FERC-approved OATT
13 and Large Generator Interconnection Agreement are
14 reimbursed in part by North Carolina retail
15 customers, are deemed to be too high. However,
16 the interconnection customer cannot know its
17 network upgrade costs and thus its LCOT until it
18 has been through the Transitional Cluster Study,
19 and will not even have an estimate of those costs
20 from Duke until the end of Phase 1 of the study
21 process.

22 Thus, the catch-22 is as follows:
23 Duke cannot provide the finalized network upgrade
24 costs of a FERC-jurisdictional project in the

1 Transitional Cluster Study until after completion
2 of the Phase 2 study, but if the Commission's
3 CPCN decision for the project is not made until
4 after those costs have been determined in Phase 2
5 study, and the remaining phases of the study
6 process, and the Commission then denies the CPCN
7 because it deems such costs to be unreasonable,
8 the customer runs the risk of having to pay a
9 withdrawal penalty equal to nine times its study
10 costs, which is likely to be, I believe I said in
11 my testimony \$1 to \$2 million, I think it's
12 likely to exceed \$2 million. That result would
13 be unjust and would likely discourage
14 FERC-jurisdictional Interconnection Customers
15 from participating in the Transitional Cluster
16 Study, thereby reducing the potential to spread
17 the very large cost of resolving Duke's
18 significant transmission system constraints and
19 removing a major impediment to achieving the
20 goals of House Bill 951.

21 On several occasions during the
22 stakeholder process, I explained the problem and
23 then proposed two solutions. The first solution
24 was to modify the Interconnection Procedures to

1 allow a FERC-jurisdictional Interconnection
2 Customer to withdraw from the study process
3 without penalty if the Commission were to deny
4 it's CPCN Application based on the network
5 upgrade costs assigned to the project. Duke made
6 it very clear they it would not support this
7 approach, understandably, because any such
8 withdrawal might require restudy of the remaining
9 projects in the cluster study, which would
10 adversely affect those customers. My alternative
11 proposed solution was the one presented in Juno's
12 CPCN Application, that the Commission issue a
13 CPCN conditioned on its reimbursable network
14 upgrade costs coming below a specific and
15 reasonable LCOT value. No stakeholder, including
16 the Public Staff, at any time raised any
17 objection or concern about the Conditional CPCN
18 solution that I proposed.

19 In my testimony, I explained that
20 both the Public Staff and the Commission have
21 identified LCOT as the test for evaluating the
22 reasonableness of reimbursable network upgrade
23 costs for FERC-jurisdictional Interconnection
24 Customers. Specifically, in the Friesian Order

1 issued on June 11th, 2020, the Commission noted,
2 I'm quoting: "Public Staff witnesses Lawrence
3 and Metz argued that a Levelized Cost of
4 Transmission analysis provides a tool to evaluate
5 the reasonableness of the upgrade costs
6 associated with certain generating technologies.
7 They cited to a 2019 study by Lawrence Berkeley
8 National Laboratory that reviewed interconnection
9 cost studies for renewable energy facilities on a
10 nationwide basis, doing so by calculating an LCOT
11 value". The Commission proceeded to state that,
12 and I quote again, "the Commission views the LCOT
13 analysis performed by the Public Staff as a
14 benchmark of the reasonableness of the network
15 upgrades relative to other similar transmission
16 investments made to interconnect generating
17 facilities in North Carolina".

18 In addition, in the Commission's
19 November 13th, 2020 Order granting a CPCN to the
20 proposed Edgecombe Solar merchant plant, Docket
21 Number EMP-101, Sub 0, the Commission again used
22 the LCOT metric to assess the reasonableness of
23 upgrades required to the DEP system by the
24 project. The Commission concluded that an LCOT

1 of \$6.00 per megawatt hour for such upgrades,
2 plus the cost of unreimbursed upgrades in PJM,
3 was not unreasonably -- sorry, quoting here, "not
4 unreasonably out of line with the 2019 Lawrence
5 Berkeley National Laboratory Interconnection Cost
6 Study, on which the Commission has relied to
7 place LCOT calculations in perspective with data
8 from other balancing authorities". The
9 Commission further concluded that "in view of the
10 total cost of the Facility ... the siting of the
11 Applicant's facility in this area is not
12 consistent with the Commission's obligation under
13 N.C. General Statute § 62-110.1(d) for the
14 provisions of reliable, efficient and economical
15 service in the state". The Commission also
16 relied on an LCOT analysis to determine the
17 reasonableness of upgrade costs in order granting
18 a merchant CPCN in Docket Number EMP-114, Sub 0,
19 and renewing merchant plant CPCN -- a merchant
20 plant CPCN in Docket Number EMP-92, Sub 0. In
21 none of these instances did the Commission
22 consider the cost of upgrades that might be
23 associated with other proposed projects, except
24 to note where upgrade costs might be shared with

1 such projects.

2 Furthermore, during several
3 conversations I have had with the Public Staff, I
4 have asked them directly what their test is for
5 CPCN issuance to FERC-jurisdictional projects,
6 and they have repeatedly confirmed the position
7 that they took in the Friesian proceeding - that
8 reasonableness of network upgrade costs should be
9 determined based on a comparison of the project's
10 LCOT to industry benchmarks. Exhibit 1 to my
11 testimony is an April 22nd, 2021, email from the
12 Public Staff that states "As we have discussed
13 before and stated in testimony, we consider the
14 LCOT a benchmark for reasonableness of network
15 upgrade costs."

16 In my testimony, I note that the
17 Public Staff is attempting to fundamentally
18 change its position and the Commission's position
19 in this proceeding. The Public Staff seeks to
20 prevent the Commission from determining a
21 reasonable LCOT value for Juno Solar by arguing
22 for the first time that even if the LCOT for a
23 FERC-jurisdictional customer's reimbursable
24 network upgrade costs are reasonable by industry

1 standards, it might nevertheless be appropriate
2 for the Commission to deny a CPCN for the
3 project. Specifically, the Public Staff is
4 suggesting that it might be appropriate to deny
5 such an application if either the total cost of
6 the project's assigned network upgrades or the
7 total cost of reimbursable network upgrades for
8 all FERC-jurisdictional projects in the
9 Transitional Cluster are deemed to be
10 unreasonably high by some undefined standard.

11 The Public Staff's position is a
12 complete reversal of the position it has
13 repeatedly taken in the past. The Public Staff
14 has repeatedly acknowledged that the Commission
15 may not, consistent with FERC's crediting policy,
16 deny CPCNs to all FERC-jurisdictional projects
17 simply because any reimbursement of network
18 upgrade costs by ratepayers would be required.
19 Rather, the Public Staff has advocated that the
20 Commission must apply some rational and
21 reasonable tests such as LCOT in making such
22 decisions. The effect of the Public Staff's new
23 position would be that the Commission could
24 arbitrarily deny CPCNs to large merchant plants

1 relative to smaller projects, even if the
2 required upgrade costs were reasonable
3 by industry standards, or the Commission could
4 impose an arbitrary limit on the number of
5 permissible FERC-jurisdictional projects because
6 of their aggregate impact. In my opinion,
7 neither outcome is constitutionally permissible.

8 In my testimony, I emphasize that
9 Juno Solar has proposed reasonable conditions to
10 the CPCN to ensure that the ratepayers will not
11 have to provide reimbursement for unreasonably
12 high network upgrade costs and any affected
13 system costs. Juno Solar's proposed condition
14 will ensure that the LCOT for any assigned
15 network upgrades from the study process will be
16 no greater than \$4.00/MWh. Thus, with a
17 Conditional CPCN, Juno Solar will be able to
18 enter the Transitional Cluster Study process and
19 incur the associated financial exposure without
20 an unacceptable level of uncertainty about
21 whether the issued CPCN will remain in effect,
22 and the conditions to Juno Solar's CPCN
23 Application will provide ample protection for
24 ratepayers from unreasonable network upgrade and

1 affected system costs being passed onto them.
2 This is a reasonable solution that presents
3 absolutely no risk to ratepayers.

4 This concludes the summary of my
5 testimony.

6 Q Thank you, Mr. Levitas.

7 MS. KEMERAIT: Ms. Miller and Mr. Levitas
8 are now available for cross examination.

9 MS. CUMMINGS: Thank you. Good morning,
10 Mr. Levitas, Ms. Miller. My name is Layla Cummings.
11 I'm an attorney with the Public Staff. Today, Robert
12 Josey and I, my colleague, both plan on asking you
13 both questions. I'm mainly going to direct my
14 questions at Mr. Levitas though, and Mr. Josey will
15 direct his questions to Ms. Miller. And I'm going to
16 go ahead and start off, knowing the time limits we
17 have for Mr. Levitas -- with Mr. Levitas.

18 Before we start though, I think it might be
19 easiest, we passed out a packet of cross exhibits
20 everyone should have, if I can go ahead and mark those
21 cross exhibits for identification. On top of the
22 packet is Attachment J to the Duke OATT. This is the
23 Standard Large Generator Interconnection Procedures.
24 I would request that this be marked for identification

1 as Public Staff Levitas Cross Exhibit Number 1.

2 COMMISSIONER DUFFLEY: So marked.

3 (WHEREUPON, Public Staff Levitas
4 Cross Exhibit 1 is marked for
5 identification.)

6 MS. CUMMINGS: The second one in the packet
7 should be Duke's filing in FERC Docket ER21-1579 filed
8 on April 1st, 2021. This is the Interconnection Queue
9 Reform filing at FERC. I would ask that this be
10 marked as Public Staff Levitas Cross Exhibit Number 2.

11 COMMISSIONER DUFFLEY: So marked.

12 (WHEREUPON, Public Staff Levitas
13 Cross Exhibit 2 is marked for
14 identification.)

15 MS. CUMMINGS: The next document is the
16 direct testimony of Kenneth J. Jennings, which is from
17 the same FERC Docket ER21-1579 also filed on April 1st
18 2021. I request this be marked as Public Staff
19 Levitas Cross Exhibit Number 3.

20 COMMISSIONER DUFFLEY: So marked.

21 (WHEREUPON, Public Staff Levitas
22 Cross Exhibit 3 is marked for
23 identification.)

24 MS. CUMMINGS: The next document is comments

1 in support of the Queue Reform filing also filed in
2 the same docket, FERC Docket ER21-1579 filed on April
3 19th, 2021. This is comments in support of Pine Gate
4 Renewables. I would ask that this be marked as Public
5 Staff Levitas Cross Exhibit Number 4.

6 COMMISSIONER DUFFLEY: So marked.

7 (WHEREUPON, Public Staff Levitas
8 Cross Exhibit 4 is marked for
9 identification.)

10 MS. CUMMINGS: The next document is Motion
11 for Leave to Answer and Answer of the North Carolina
12 Utilities Commission in the Edgecombe Solar Complaint
13 docket, FERC Docket Number EL21-73 filed on June 30th,
14 2021. I request that this be marked as Public Staff
15 Levitas Cross Exhibit Number 5.

16 COMMISSIONER DUFFLEY: So marked.

17 (WHEREUPON, Public Staff Levitas
18 Cross Exhibit 5 is marked for
19 identification.)

20 MS. CUMMINGS: You should also have a
21 presentation entitled Transitional Cluster Phase 1
22 Customer Engagement Meeting dated November 29th, 2021.
23 We request --

24 MR. LEVITAS: Ms. Cummings, I do not have

NORTH CAROLINA UTILITIES COMMISSION

1 that document.

2 MR. JOSEY: Sorry about that.

3 MS. CUMMINGS: Does everyone else have that?

4 COMMISSIONER DUFFLEY: Ms. Cummings, do you
5 have one for the back table?

6 MS. CUMMINGS: We'll get some more printed.
7 We are short.

8 COMMISSIONER DUFFLEY: Okay. Thanks.

9 MS. CUMMINGS: I apologize. We ask that
10 that document be marked Public Staff Miller Cross
11 Exhibit Number 6.

12 COMMISSIONER DUFFLEY: So marked.

13 (WHEREUPON, Public Staff Miller
14 Cross Exhibit 1 is marked for
15 identification.)

16 MS. MILLER: I also do not have that
17 attachment, Robert, if you have it.

18 MR. LEVITAS: We can share.

19 MS. MILLER: Thank you.

20 MS. CUMMINGS: And last you should have a
21 copy of Responses to Public Staff Data Request Number
22 2 dated October 4th, 2021. We request that be marked
23 as Public Staff Miller Cross Exhibit Number 7.

24 COMMISSIONER DUFFLEY: Ms. Cummings, should

1 we remark these as Public Staff Miller Cross Exhibit
2 Number 1 and then the second exhibit Public Staff
3 Miller Cross Exhibit Number 2?

4 MS. CUMMINGS: Yes, Presiding Commissioner
5 Duffley, that makes sense. Thank you.

6 COMMISSIONER DUFFLEY: So marked. Yes,
7 clear for the record.

8 (REPORTER'S NOTE: Public Staff
9 Miller Cross Exhibit 6 is renamed
10 to Public Staff Miller Cross
11 Exhibit 1.)

12 (WHEREUPON, Public Staff Miller
13 Cross Exhibit 2 is marked for
14 identification.)

15 MS. CUMMINGS: And just to note on that last
16 one, Public Staff Miller Cross Exhibit 2, there is an
17 Attachment that's marked confidential but that
18 confidentiality has been waived, so it's not
19 confidential.

20 COMMISSIONER DUFFLEY: Thank you.

21 CROSS EXAMINATION BY MS. CUMMINGS:

22 Q Good morning, Mr. Levitas. How are you doing
23 today?

24 A Good. Good morning to you.

1 Q So, let me start with your rebuttal testimony,
2 and you only filed rebuttal testimony, so to the
3 extent I refer to your testimony that's what I'm
4 referring to.

5 A Understood.

6 Q On page 3 of your testimony, beginning on lines
7 16 through 17, you state that Juno is at risk of
8 incurring enormous financial penalties in the
9 event of the denial of a CPCN in the future?

10 A Right.

11 Q And on page 4, license 18 through 19 of your
12 rebuttal testimony, you state that the withdrawal
13 penalty will be in excess of \$1 million if Juno
14 exits the study process after entering Phase 2;
15 is that correct?

16 A Correct.

17 Q If the project is studied in Phase 1 and
18 withdraws after receiving the final system impact
19 study for Phase 1, the Phase 1 report, what are
20 the withdrawal penalties if any under Section 7
21 of the Large Generator Interconnection
22 Procedures, which I have marked as Public Staff
23 Cross Exhibit Number 1?

24 A Sorry. If the project withdraws after Phase 1?

1 Q Before Phase 2.

2 A There's not a penalty exactly. There's
3 a requirement that the project pay its applicable
4 study costs. The study deposit is \$250,000,
5 presumably that represents a reasonable estimate
6 by Duke of what those costs will be. Although I
7 believe those could be for the entire study
8 process so there may well be a refund after Phase
9 1 if the project were to withdraw. The problem
10 comes up after Phase 1.

11 Q In the Duke FERC filing that is marked as Public
12 Staff Levitas Cross Exhibit Number 2, Duke states
13 that as part of the TCS they have provided a
14 second customer engagement window at the end of
15 Phase 1 giving interconnection customers time to
16 decide whether to make the more significant
17 financial commitments to proceed through Phase 2
18 of the Transitional Cluster and to meet the
19 increasing readiness milestones. Is that your
20 understanding?

21 A Yes.

22 Q And in the same filing, Duke states that the
23 Transitional Cluster Study process was designed
24 to incent any speculative projects to withdraw

1 after Phase 1 or before the utility undertakes
2 more detailed and time intensive Phase 2 study
3 process.

4 A I'm going to take your word for that. I don't
5 know where in the document.

6 Q I'm happy to point you to it.

7 A I'll take your word for it.

8 Q And in the same FERC filing, the testimony of Ken
9 Jennings which is marked Public Staff Levitas
10 Cross Exhibit Number 3, Ken Jennings filed
11 testimony on behalf of Duke. If you will turn to
12 page 23 of that testimony.

13 A I'm there.

14 Q In this section of the testimony, Mr. Jennings is
15 describing the Transitional Cluster Study
16 process. And on lines 7 through 8, he states
17 that *Interconnection Customers withdrawing after*
18 *Phase 1, will only be required to pay actual*
19 *study costs and will not subject to penalties?*

20 A That's right. That's what I just confirmed.

21 Q And on lines 10 through 12, he says *a customer*
22 *withdrawing beyond the Phase 2 customer*
23 *engagement window will be obligated to pay*
24 *withdrawal penalties.*

1 Then in the last paragraph,
2 starting on page 16 (sic), he states that *the*
3 *downside of this approach is that it will likely*
4 *result in restudy, but that was a compromise that*
5 *resulted in overwhelming consensus with*
6 *stakeholders and support for filings made with*
7 *state Commissions in North and South Carolina.*
8 And do you agree with that assessment?

9 A Yes. I was a party to that consensus.

10 Q So starting on page 7 of your rebuttal testimony,
11 you rebut Witness Metz' assertion. So, I'm on
12 page 7, line 19, beginning with that question and
13 going on to the next page, page 8. You rebut
14 Witness Metz' assertion that a Conditional CPCN
15 will not solve the problem you describe as catch
16 22. Specifically, you describe that Juno will
17 receive an initial estimate at the end of Phase
18 1, at which time if it is above the \$4.00 LCOT
19 condition, it will withdraw. You then state that
20 the Large Generator Interconnection Procedures
21 allows a project to withdraw if they go over
22 25 percent of the upgrade costs identified in
23 Phase 1.

24 A Correct.

1 Q And here you are referring to Section 4.7.1 of
2 the Large Generator Interconnection Procedures,
3 which provides that 25 percent exception to
4 withdraw penalties past Phase 1 into Phase 2?

5 A Subject to check on the section number.

6 Q And I'm happy to point you to that in the Exhibit
7 1 if you'd like.

8 A No, I'll take your word for it.

9 Q Okay. In Ken Jennings testimony, he describes
10 the additional circumstances the customer may
11 withdraw without penalty. So this is page 43 of
12 that Cross Exhibit 3 we were just looking at.

13 A I'm sorry. Which page?

14 Q Forty-three.

15 A Okay. I'm there.

16 Q He states that there are a number of
17 circumstances where a withdrawal penalty would
18 not be imposed. And that includes if the project
19 elects to withdraw from the interconnection
20 project, and the withdrawal does not have a
21 negative impact on other interconnection
22 customers, and where the withdrawing
23 interconnection customers assigned to some
24 upgrade costs did not significantly increase

1 between phases of the study?

2 A Correct.

3 Q So returning to your rebuttal testimony in that
4 section I was just on regarding the LCOT, you say
5 at page 8, lines 11 through 15, you say *if an*
6 *increase of less than 25 percent in Juno Solar's*
7 *Phase 1 allocated network upgrade costs would*
8 *cause its LCOT to exceed \$4.00/MWH, Juno would*
9 *likely withdraw from the queue at that point*
10 *without penalty rather than risk the possibility*
11 *that a subsequent increase in its network upgrade*
12 *costs could cause the CPCN to terminate.*

13 A That's my testimony. Yes.

14 Q And just to be clear on that point, if Juno
15 receives a Phase 1 report in excess of \$3.20, it
16 will likely withdraw?

17 A I think there is a high likelihood of withdrawal
18 in that circumstance, because should there be an
19 increase in excess -- by the way, I didn't do the
20 math but I think your math is right -- should
21 there be an increase that is less than
22 25 percent, Juno would not be able to withdraw
23 without penalty but would be subject to
24 revocation of its CPCN.

1 Now, there's that other offramp
2 that you referenced relating to no impacts on
3 other projects but that is, in my opinion, very
4 unlikely to come into play with Juno given the
5 interdependencies in southeastern North Carolina.

6 Q So you've mentioned it in your summary and in
7 your testimony, you're familiar with the LBNL
8 Study that the Public Staff has referenced in the
9 Friesian case and the Commission has referenced
10 in several EMP cases. And do you recall that in
11 that study the PJM average LCOT was \$3.22?

12 A That sounds right. I haven't looked at it in
13 awhile.

14 Q I can point you to that if you'd like. And the
15 Commission uses this study or has in the past as
16 a benchmark of reasonableness as you've also
17 described.

18 A Yes.

19 MS. CUMMINGS: At this time, Presiding
20 Commissioner Duffley, I'd ask that we take judicial
21 notice of the Friesian Order and the 2019 LBNL Study
22 of reference therein?

23 COMMISSIONER DUFFLEY: Any objection?

24 MS. KEMERAIT: No objection.

1 COMMISSIONER DUFFLEY: Without objection,
2 we'll take judicial notice. Thank you.

3 BY MS. CUMMINGS:

4 Q Mr. Levitas, if the Commission or the Public
5 Staff were in the future to look to a more
6 up-to-date cost information study, something
7 along the lines of the LBNL Study but with more
8 recent data, do you believe given the trends you
9 have witnessed in PJM that those costs would stay
10 the same or go up or go down?

11 A Well, I don't hold myself out as an expert on
12 interconnection costs but I do have a fair amount
13 of exposure to that issue and read the trade
14 press a lot, and it certainly appears that those
15 costs are going up. I don't know if that answers
16 your question.

17 But I will say in response to your
18 question just to be clear about my testimony and
19 position, I have no objection to the idea that
20 the market benchmarks that I refer to and that
21 you and the Commission have referred to, they
22 change over time. And so, that's why we have
23 kind of accepted the Public Staff's point of view
24 that there shouldn't be written in the rule a

1 bright-line standard that's universally
2 applicable, and that a decision should be made on
3 a case-by-case basis but that they should be made
4 on the best information that's available at the
5 time.

6 Q Thank you. That does answer my question.
7 Turning now to page 6 of your testimony, in a
8 Transitional Cluster Study, a withdrawing
9 interconnection customer would be subject to a
10 significant withdrawal penalty you state of nine
11 times the total study cost after Phase 1.

12 A (Nods head in agreement).

13 Q That's pursuant to Section 7.2.6 of the LGIP,
14 correct?

15 A Correct.

16 Q Except as the offramps described earlier?

17 A Right.

18 Q And down further on page 6, you state the
19 possibility of this penalty will discourage
20 projects from participating in transition or a
21 definitive Interconnection System Impact Studies.
22 For Juno, if you elected to participate in the
23 first definitive Interconnection Study, do you
24 know what the withdraw penalty is for withdrawing

1 after Phase 2?

2 A I haven't checked that but I'm pretty sure it is
3 significantly lower than the Transitional Cluster
4 Study penalty.

5 Q The study deposit are three times the actually
6 allocated cost of the study project of Phase 2
7 and five times at Phase 3.

8 A Yes. I will say that there are significant
9 public interest considerations in my judgment for
10 moving this project through the Transitional
11 Cluster Study rather than waiting for DISIS.

12 Q Turning now to the stakeholder process, you
13 discuss beginning on page 7, on line 1, you state
14 that during multiple stakeholder conferences you
15 described what you'd call a catch 22 and you
16 proposed two solutions. In discovery when asked
17 for the dates of those meetings, you said those
18 meetings were likely in February and March of
19 2021.

20 A That's right. I don't have any contemporaneous
21 records of those calls. I know one of them I
22 took while driving down I-40. I do have the
23 email documentation that would help kind of frame
24 those, and I'm sure Duke has a record of when

1 those calls occurred and who participated.

2 Q These were meetings 15 and 16 of the Queue Reform
3 Stakeholder Group and the two meetings held prior
4 to the FERC filing but after the North Carolina
5 filing for Queue Reform, and they were held on
6 February 3rd and March 16th. Does that sound
7 correct?

8 A It sounds right.

9 Q And there's been a total of 17 Queue Reform
10 meetings?

11 A That's right.

12 Q So this proposal was pretty far down the road in
13 the Queue Reform process -- stakeholder process.
14 Is that fair to say?

15 A Which proposal?

16 Q Your two proposals to solve the catch 22.

17 A Do you mean did I present them late in the
18 process?

19 Q (Nods head affirmatively).

20 A No, I think I first identified them early in the
21 process. Certainly, well while we were working
22 on the state jurisdictional Queue Reform it was
23 Duke's decision, understandable decision, to work
24 on the state proceedings before making a filing

1 at FERC. It was sequential but we were certainly
2 contemplating the FERC procedures at the time
3 that we were working on the state procedures in
4 large part, because I think there was a
5 recognition that solving this pressing problem of
6 relieving transmission constraints on the Duke
7 system was going to likely require a mix of state
8 and FERC-jurisdiction projects, so I anyway, and
9 I think others, were thinking about how the two
10 interconnected.

11 I did go back and -- last night to
12 try to see if I had any other email records
13 beyond the one that's Exhibit 1 and I did find
14 one set of email exchanges between myself and you
15 and Mr. Dodge that dated back to November 23rd,
16 2020, and we appear to have had a conference call
17 on December 4th, I believe. So, I think these
18 issues were on my mind as early as then.

19 Q And if your counsel doesn't mind, can we get a
20 copy of those communications?

21 A Sure.

22 Q You state in your testimony that the Public Staff
23 did not at any stakeholder meeting express
24 objection but you raised your concern. Can you

1 say whether any stakeholder echoed your concern?

2 A I can't say for sure about that. I was the major
3 spokesperson for the development community on
4 many of these calls and so I was typically
5 speaking for a larger group than just myself.

6 My recollection is that on the
7 second call I specifically addressed the Public
8 Staff and -- with the intent of trying to confirm
9 that there was not an objection or a problem from
10 the Public Staff side with respect to what the
11 problem that we were trying to solve.

12 Q And on that second call, do you recall if any
13 Public Staff attorney was on the line?

14 A I don't know. I'm pretty sure on all the calls
15 there was Public Staff representation but I
16 couldn't say for sure.

17 Q Those two meetings, meeting 15 and 16,
18 February 3rd and March 16th, the topic of those
19 meetings was to discuss changes, draft changes to
20 the LGIP and the LGIA; is that correct to your
21 recollection?

22 A That's correct.

23 Q Did you add any of your concerns to the agenda
24 for those meetings?

1 A I don't know that I was given an opportunity to
2 provide agenda items. I don't recall that I did
3 that. I was having conversations throughout this
4 time as indicated by the email traffic, not only
5 with the Public Staff but with Duke, because
6 we -- I personally was very committed to trying
7 to get Queue Reform approved. It was an
8 extremely time consuming, difficult, complicated
9 process, and there was quite a lot of
10 disagreement of opinion about the concept
11 generally and the details of the proposals within
12 the solar development community. I think it's
13 fair to say that I was the most active
14 participant in trying to work with Duke to
15 achieve consensus and to make this important
16 transition, the way the queue is managed, in
17 Duke's service territory. So, towards that end,
18 I was -- it was the highest priority thing that I
19 was working on at that period of time, and I was
20 talking to lots of people and trying to find
21 common ground.

22 And, in particular, with respect
23 to the FERC procedures, this problem that we're
24 dealing with, this so-called catch 22, as I

1 described there were two possible solutions. One
2 solution would have required that the FERC rules,
3 the FERC procedures be changed. And Duke was
4 actively seeking our support for what they were
5 going to file at FERC. So, what was on my mind
6 at the time and what I communicated was if we're
7 going to support these changes at FERC then we
8 need to have a solution to this problem, because
9 if it's going to be Plan A, which is a withdrawal
10 right, that would need to be written into the
11 FERC procedures. On the other hand, the
12 Conditional CPCN solution was within the control
13 of the Commission and wouldn't require any change
14 to the procedures. So, I was very concerned that
15 we have an understanding about how we were going
16 to solve this problem. Because, if the answer
17 was we've got to change the FERC procedures, then
18 I needed to know that before I put my name on a
19 document supporting those procedures. And as
20 I've testified, Duke in my opinion understandably
21 did not think the no-penalty withdrawal option
22 was in the public interest or a good idea, which
23 left us with the Conditional CPCN solution.

24 Q When you proposed these two solutions, did

1 you interpret the lack of objection from the
2 Public Staff as approval?

3 A I certainly had the expectation, particularly
4 when I had indicated what I just said that our
5 support for these procedures was contingent on
6 developing the solution. I had the expectation
7 that if the Public Staff had a problem with what
8 I was proposing that you would let me know.

9 Q And did the Public Staff give any explicit or
10 written feedback to your proposed solution?

11 A I don't recall that occurring in the calls that
12 we were just referring to. I do think that in
13 some of the calls, and there were many, I feel
14 like we did have some explicit conversations
15 about the contingent CPCN. I think the -- I'm
16 not sure if it is in Exhibit 1 or this other
17 email that I discovered last night, but -- give
18 me a second. In Exhibit 1 to my testimony, you
19 will see that that began with an email to you and
20 Mr. Josey of April 2021. And in the initial
21 email that I wrote to you I did explicitly refer
22 to the Conditional CPCN Application and I say *of*
23 *the sort we have discussed some -- of the sort we*
24 *have discussed.* So, it's an indication to me

1 that as of April 21st we had been talking about
2 this idea and I'm quite sure that you had not
3 communicated an objection to me to the concept.

4 Q But do you assert that there was any communicated
5 approval?

6 A I can't make that assertion. No.

7 Q And for these stakeholder meetings, Duke
8 solicited feedback in all its stakeholder
9 meetings via an email inbox that's set up and
10 posted responses to those requests for feedback
11 on its OASIS website. Did you submit a request
12 along the lines of these proposals?

13 A No. I'll have to plead technological
14 incompetence. I had countless, countless
15 communications with Duke and other stakeholders
16 about these procedures. I did not use that
17 portal as a vehicle for those communications.
18 There's all kinds of emails and other
19 communications.

20 Q And other than a connection with this EMP
21 application, have you made any filings before
22 this Commission or FERC detailing CCEBA's
23 position or Pine Gate's position that a
24 Conditional CPCN would be needed to accommodate

1 projects entering a cluster study?

2 A I don't believe so.

3 Q At the time the FERC filing was made by Duke in
4 April of 2021, Pine Gate filed comments in
5 support of Queue Reform. This is our Exhibit 4.
6 Is that correct?

7 A That's right. Duke was I think encouraging that
8 other parties weigh in in support in the hope
9 that we would be able to expedite approval at
10 FERC.

11 Q Pine Gate supported Queue Reform even after the
12 meetings in which the Public Staff did not
13 respond to concerns you raised?

14 A That's right. As I said, my assumption at the
15 time was that the solution to the problem that I
16 had identified was that we were going to be able
17 to utilize a Conditional CPCN procedure, not --
18 and not need to modify the FERC procedures. So,
19 we were comfortable supporting the procedures on
20 that basis.

21 Q Okay. Turning to a different topic. On page 5
22 of your testimony, you state that this Commission
23 will deny a CPCN based quote, unquote, solely on
24 the fact that FERC's crediting policy requires

1 the utility to reimburse the customer for network
2 upgrade costs; is that correct?

3 A For network upgrade costs that are deemed to be
4 unreasonably high by industry standards.

5 Q And that's a qualification you're making now and
6 not in your testimony?

7 A Can you point me to what page in my testimony?

8 Q Sure. Page 5, line 14.

9 A Yes. That appears to be sort of an abbreviation
10 or a shorthand for what follows later, because I
11 think elsewhere and throughout my testimony I
12 make clear that what the Commission has actually
13 utilized is a reasonableness test based on LCOT.
14 So, it's not my intention to suggest that the
15 Commission has denied or suggested it would deny
16 a CPCN solely because there are reimbursable
17 costs and, to the contrary I've suggested I think
18 it would be unlawful for them to do so.

19 Q Understood. But you with your qualification
20 earlier, you believe they would solely deny a
21 CPCN such as Juno's based on the cost?

22 A Based on the LCOT.

23 Q I would like to turn to what I premarked as
24 Public Staff Levitas Cross Exhibit Number 5.

1 That's the North Carolina Utilities Commission
2 Motion for Leave and Answer filed in the
3 Edgecombe Solar Complaint, FERC Docket EL21-73.
4 Do you have a copy of that?

5 A I do. I never -- I have not seen this before
6 today.

7 Q Are you familiar with the Edgecombe complaint at
8 FERC?

9 A I'm aware of it, yes.

10 Q On page 4 of this exhibit, the Commission
11 states -- and this is under the headline B, the
12 third sentence, *the NCUC has not adopted any*
13 *rule, guidance, or practice that would require*
14 *denial of a CPCN simply because the costs of*
15 *network upgrades would be allocated in part to*
16 *retail customers.*

17 A I'm sorry. Where are you?

18 Q I'm on the third sentence under B.

19 A I see that.

20 Q And further down --

21 A And I don't disagree with that.

22 Q Further down, when discussing the Friesian Order,
23 the Commission says that it can consider all
24 costs as -- and this is the last sentence of that

1 page -- as one of the many factors to be weighed
2 when determining whether generating resources
3 needed as appropriately sited at the location
4 proposed by the CPCN Applicant.

5 A Was there a question?

6 Q Does that -- do you think the Commission has
7 taken a different position than that in any
8 docket?

9 A Well, I note above that that this filing says
10 that the NCUC Orders speak for themselves. And I
11 do think the Friesian Order speaks for itself and
12 I don't think that what's cited below is what the
13 Friesian Order says.

14 Q On pages 10 through 12 of your rebuttal
15 testimony, you argue that the Public Staff is
16 changing its position by suggesting the
17 Commission consider the total cost of network
18 upgrades for one project, or the total cost of
19 network upgrades for the Transitional Cluster.
20 Has the Public Staff before considered a CPCN
21 Application for an EMP to your knowledge that is
22 participating in a Transitional Cluster Study?

23 A No. There hasn't been a Transitional Cluster
24 Study. I will say on that point, in terms of my

1 testimony regarding the Public Staff's position,
2 I have been persistent over a two-year period in
3 trying to ascertain the Public Staff's position
4 as to the applicable test for merchant plant
5 certification. And, as evidenced in my Exhibit 1
6 to my testimony the most -- one of the more
7 recent times where I put that question to you, in
8 response -- and I feel like you may have been
9 getting a little bit understandably impatient
10 with me because I kept asking the question so
11 many times -- what you said to me on April 22nd
12 of this year is, as we have discussed before many
13 times, that's my word many times, stated in
14 testimony, we consider the LCOT a benchmark for
15 reasonableness.

16 So yes, it is my testimony that if
17 you're now asserting that there is a different
18 test for reasonableness that that is a change in
19 position and a departure from what you have
20 communicated to me on multiple occasions.

21 Q On page 12 (sic) of your rebuttal testimony, you
22 state that *as a procedural matter, the Public*
23 *Staff seems to have some vague concern about*
24 *whether Juno Solar can be held to the agreed-upon*

1 *conditions of the CPCN, even though Juno Solar*
2 *has expressly proposed and agreed to them.*

3 Can I ask what the basis of this
4 assertion is?

5 A Yes. I think we responded to that in response to
6 a data request. And I was reminded as we were
7 responding to your data request that that was
8 communicated in a conversation that we had I
9 think in connection to trying to understand the
10 nature of the Public Staff's concern or
11 opposition, and so it certainly does not appear
12 in Mr. Metz' testimony. And if that issue is
13 sort of irrelevant or inappropriate for
14 consideration here, I don't need to pursue that
15 or I'll have to talk to my lawyers about striking
16 it. But I didn't -- at the time we were
17 preparing the testimony, I was conflating things
18 that Mr. Metz had said with things that had been
19 said elsewhere. That was said in a phone
20 conversation.

21 Q I think it's, from our perspective, appropriate
22 just to clarify that that's not based on anything
23 in the record.

24 A Fair enough.

1 Q On page 16 of your rebuttal testimony, can you
2 read the first sentence starting on line 1?

3 A Beginning Juno Solar?

4 Q Yes.

5 A *Juno Solar was sited at its proposed location for*
6 *the express purpose of seeking to help solve what*
7 *is arguably the biggest impediment to large-scale*
8 *solar development in the state and, in my*
9 *opinion, the biggest obstacle to achieving the*
10 *carbon-reduction mandate of House Bill 951.*

11 Q And just to explore that a little, Juno was
12 purposely sited in this area to resolve the
13 congestion associated in the southeastern area of
14 the state?

15 A To help do so, yes.

16 Q Are you in that assertion speaking to the
17 Friesian upgrades?

18 A To the upgrades that were the subject of the
19 Friesian proceeding, yes, that are -- that would
20 serve many projects besides Friesian. Yes.

21 Q But you're speaking to --

22 A The southeast -- the significant transmission
23 constraints on Duke's system in southeastern
24 North Carolina and northeastern South Carolina.

1 Q Okay. You go on on page 16, lines 6 and 7, to
2 say that *Duke has confirmed the importance of*
3 *these upgrades to its system planning*. Can you
4 explain how Duke has confirmed these upgrades
5 are important to system planning?

6 A I think we provided in response to your data
7 request references to and perhaps copies of the
8 Duke comments that were filed in the Friesian
9 proceeding where I think they made statements to
10 that effect.

11 Q Are these upgrades to your knowledge needed for
12 reliability purposes?

13 A I'm not a reliability expert. And I believe
14 there may be testimony suggesting that they're
15 not needed in some sense for reliability
16 purposes. My own view is that when not a single
17 megawatt can be added to a significant portion of
18 the grid serving two states that there's probably
19 a need to upgrade that portion of the grid for
20 reliability purposes. But I'm not an expert on
21 reliability.

22 Q On pages -- on the same page, lines 18 through
23 20, you say *Pine Gate and its development*
24 *partners have actively sought to identify and*

1 develop projects like Juno Solar that could
2 participate in the cost sharing. Can you tell
3 what other projects are in the TCS owned and
4 being developed by Pine Gate and its partners?

5 A I would need for Ms. Miller to respond to that
6 question.

7 A (Ms. Miller) At this point, I would just say that
8 we have several projects in the Transitional
9 Cluster across the DEP system. There are
10 probably too many to name individually, but we
11 could file an exhibit after the fact if helpful.

12 And, you know, not necessarily all
13 of those are specifically for the express purpose
14 of those costs. Some of them are just to help
15 serve both the needs we're expecting through
16 House Bill 951 and a lot of the renewable energy
17 mandates. And we feel that solar siting in the
18 DEP system is easier and less complicated than
19 the DEC system or it is much more challenging to
20 site projects of that size.

21 A (Mr. Levitas) And if I could add, Ms. Cummings,
22 I've been on something of a mission for the last
23 several years to try to solve what I believe is
24 one of the most significant problems facing our

1 state today, which are these transmission
2 constraints in the southeast part of the state,
3 because I believe as someone who's worked for a
4 long time in the solar industry that we cannot
5 achieve the Governor's goals of decarbonization
6 without getting these upgrades built.

7 Friesian Solar came before this
8 Commission with one possible solution for that
9 several years ago, which was to allow a federal
10 project to go forward there would be
11 reimbursement of the upgrades, other projects
12 would benefit; that proposal was rejected.
13 Understood.

14 Once that occurred, I then said
15 well now what do we do, and I said that to
16 members of the Public Staff. And the solution to
17 how we solve this problem was to move forward
18 with a cluster study process with Queue Reform,
19 which is a large reason why I devoted so much of
20 my time for over a year to Queue Reform, so we
21 could get Queue Reform procedures in place, get a
22 cluster study process in place, get as many
23 megawatts into that cluster study as possible to
24 spread those costs, some combination of state and

1 federal projects, so we could finally break this
2 log jam and move the state forward. And we
3 talked about that many times. And the Public
4 Staff specifically said to me, I asked the
5 question, this is what I'm going to go do now.
6 Plan A didn't work. Do you agree that that's the
7 right approach to solving this problem? And I
8 was repeatedly told, yes, that's what we think
9 should happen, let's have a large cluster, spread
10 the megawatts as much as we can. And it was
11 understood there would be, unlike the Friesian
12 case where a Friesian -- a federal project was
13 going to get reimbursed for all those costs. In
14 Plan B there would be a mix of state and federal
15 projects that would participate in funding those
16 upgrades. Yes, the federal projects would be
17 subject to the crediting policy, but there would
18 be a lot of state megawatts in there that would
19 significantly reduce the impact to ratepayers
20 resulting from the crediting policy.

21 So, that's what I've been trying
22 to make happen now for a couple of years. And
23 having this project participate in the
24 Transitional Cluster Study, in my belief, is

1 essential to that strategy having a chance at
2 working.

3 Q It is possible though that this log jam created
4 in this particular area could be solved in
5 subsequent clusters?

6 A It's -- it is theoretically possible, but there's
7 several problems with that. One is time. So
8 we're going to lose a year in coming up with a
9 solution and that means costs are likely going to
10 go up, achieving the goals of 951 are going to be
11 impaired, but we also don't know how that may
12 complicate things. And I think, you know, I
13 think in the Friesian proceeding Duke's comments
14 indicated that if we could just get this problem
15 solved everything becomes so much easier. And
16 not wait a year or two years to solve it but find
17 a way to get it solved now, and that's what I've
18 been trying to make happen.

19 Q Turning to page 17 of your testimony, lines 10
20 through 11, you're speaking to the Friesian case
21 which of course you participated in, you say that
22 *the Public Staff did not argue, let alone put on*
23 *any supporting evidence, that the network*
24 *upgrades at issue were unneeded or inefficient;*

1 is that correct?

2 A I did say that.

3 Q And you are, of course, familiar with Mr. Metz,
4 who's a witness today, and Mr. Lawrence's joint
5 testimony in that proceeding?

6 A I am. I haven't gone back and looked at that
7 lately so I probably was going on memory for
8 that.

9 MS. CUMMINGS: Presiding Commissioner
10 Duffley, I would ask at this time that we take
11 judicial notice of Lawrence/Metz joint testimony in
12 Docket EMP-105?

13 COMMISSIONER DUFFLEY: Without objection,
14 that is allowed.

15 MS. CUMMINGS: Thank you.

16 BY MS. CUMMINGS:

17 Q On page 14 of your testimony, you say *under the*
18 *CPCN that Juno seeks, if its calculated LCOT ever*
19 *exceeds \$4.00/MWh at any time before the*
20 *execution of an Interconnection Agreement, the*
21 *CPCN would automatically terminate.*

22 A Correct.

23 Q How frequently will Juno update the Commission on
24 its LCOT calculation?

1 A I'm glad you're asking that question. We've been
2 talking about that a lot and want to be sure
3 we're very clear about that. And Ms. Miller may
4 want to add to this. But we think it would be
5 appropriate for there to be a condition on this
6 CPCN that requires Juno to provide updated
7 information in realtime immediately upon receipt
8 of any updated information, both with respect to
9 the total interconnection costs and the LCOT
10 calculation using the Public Staff's methodology,
11 which you provided with us -- provided to us so
12 that that occurs in realtime and that would
13 result in the CPCN automatically terminating.

14 I would just also note and I think
15 it's in Ms. Miller's rebuttal testimony, we --
16 when we made the initial filing, we proposed the
17 idea of not quite so automatic a termination and
18 that perhaps we could come into the Commission
19 and say well it was just a little bit over \$4.00,
20 maybe you should give us a break and reconsider.
21 And we've withdrawn that request, so we're now
22 proposing the \$4.00/MWh as a bright-line test
23 with no avenue for relief.

24 Q Thank you for that clarification. The CPCN, if

1 it automatically terminates, does it do that by
2 its own terms or will that require an Order from
3 the Commission, in your view?

4 A Well, I would leave that to the Commission.
5 There might be some value in having that in the
6 record for interested parties to know that that
7 CPCN had terminated, but it would be ministerial
8 we make the filing. There's no debate about
9 whether it should happen, it just would happen.

10 Q And has Juno determined that if the LCOT goes
11 over \$4.00 whether it would, even say if the CPCN
12 terminates just as you described, would it
13 continue in the Transitional Cluster Study
14 process?

15 A Again, Ms. Miller may have some thoughts about
16 that. I don't think so. I think, if the CPCN is
17 not issued or terminates, it's going to be very
18 difficult for this project to go forward because
19 of the uncertainty about it, its certification
20 status. And I think at that point, Ms. Miller
21 talked about the 951 compliance, I think it
22 becomes a lot more likely, it may be somewhat
23 likely today, but it becomes a lot more likely
24 that this project becomes a Duke-acquired project

1 under 951.

2 Q And Duke, obviously they'll file a carbon plan
3 and this Commission will determine -- will
4 approve that plan after stakeholder input. But,
5 in your opinion or how you, you know, might
6 represent Pine Gate or CCEBA going forward,
7 does -- do your organizations think there will be
8 competitive solicitations in the nature of CPRE
9 going forward for PPAs and asset
10 acquisition-type -- how this facility might fall
11 under a utility owned?

12 A Yes. I can tell what I think as somebody who's
13 spent a lot of time working on House Bill 951.
14 First of all, there will have to be different
15 procurement, maybe somewhat similar but different
16 procurement because of the different ownership
17 structure created by 951, PPAs will no longer be
18 competing with utility-owned projects, so there
19 will be silos or separate procurement of those
20 two types of assets. The bill is -- the bill
21 does not speak in the same way that HB589 did
22 with respect to competitive procedures, but it
23 does have a least-cost requirement which leads me
24 to believe that it's likely that there will be

1 competitive procurement. Again, PPAs being
2 procured in one bucket and utility-owned assets
3 being procured in another. None of that, of
4 course, has been established or defined yet. And
5 I don't think there's anything in the legislation
6 that prevents Duke from going out tomorrow and
7 saying we need to get to work and buying a
8 project like Juno.

9 Q One thing that may be preventing Duke from doing
10 that is there's not a carbon plan yet developed.

11 A That's true. I'll leave it to Duke to decide how
12 they interpret the bill. But, I mean, the one
13 thing I will say is it's just hard to overstate
14 the time urgency if this goal is to be achieved,
15 because there has to be an enormous amount of
16 procurement that occurs in a very tight timeframe
17 to have any chance of achieving the Governor's
18 goals and the Legislature's goals.

19 Q And these silos, as you envision it, Juno could
20 probably only compete in a solicitation for the
21 utility owned.

22 A That's right. There's an 80-MW cap for PPA
23 projects. There is no such cap for utility-owned
24 projects. That's good for ratepayers because

1 larger projects will almost certainly be able to
2 be delivered at lower costs.

3 MS. CUMMINGS: I'll turn it over now to my
4 colleague Robert Josey. He has questions for
5 Ms. Miller. Thank you.

6 MR. JOSEY: Thank you very much.

7 CROSS EXAMINATION BY MR. JOSEY:

8 Q Good morning, Ms. Miller. How are you?

9 A Good morning. Good.

10 Q I am going to try to keep my questions kind of in
11 subject matter groups, so I may jump back and
12 forth between your revised direct testimony, your
13 supplemental testimony, and your rebuttal
14 testimony. So, if you have any questions on
15 which one I'm referring to, just let me know.

16 A Okay.

17 Q So, on page 23 of your revised direct testimony,
18 you mention that Pine Gate performed a power flow
19 analysis; is that correct?

20 A Yes, that is correct.

21 Q And in your supplemental testimony, page 2, you
22 discuss that the projects modeled in the power
23 flow study -- you modeled different projects in
24 the power flow study; is that correct?

1 A Correct.

2 Q Okay. Was there two power flow analyses done or
3 was it just one?

4 A Just one.

5 Q Just one. And when was that power flow analysis
6 done?

7 A I believe it was conducted right around the time
8 when we first mentioned it and I can't recall if
9 it was first mentioned in the direct testimony or
10 the supplemental testimony.

11 Q But in July?

12 A Correct.

13 Q So it was July?

14 A Yeah, so it was pre-close of the Transitional
15 Cluster.

16 Q Pre-close, yes. Thank you.

17 A So before October.

18 Q Before October 31st.

19 A Correct.

20 Q Yes. And obviously before today which is the
21 last day that projects can drop out of the
22 Transitional Cluster before the power flow study
23 begins, correct?

24 A That's correct.

1 Q Thank you. And you state in your testimony that
2 the power flow analysis that resulted, it
3 resulted in a \$13 million upgrade if it were on a
4 conservative basis and a \$16.84 million upgrade
5 scenario on page 6 of your testimony; is that
6 correct?

7 A That's correct.

8 Q Yeah. And -- but Duke must complete its own
9 study in order to come up with the final analysis
10 of what the upgrades will be?

11 A That is correct.

12 Q And those results will be what is used to
13 determine the cost of Juno's final upgrades,
14 correct?

15 A Yes.

16 Q Thank you. I'm going to switch over to
17 discussing, I think Mr. Levitas hit a little bit
18 on this, but I just want to kind of follow up on
19 some milestone payments and withdrawal penalties.

20 On page 9 of your revised direct
21 testimony you state that the estimated
22 construction cost of the facility is
23 approximately \$370,690,000; is that correct?

24 A That is correct.

1 Q And we heard from Mr. Levitas earlier that the
2 study deposit for Juno was \$250,000.

3 A That's right, around \$250,000.

4 Q And so the LGIA Section 7.2.6 states that the
5 penalty is nine times the interconnection request
6 total study cost imposed.

7 A That's correct. So, it would be around
8 \$2.25 million for Juno if the full study costs
9 were allocated.

10 Q And subject to check my math, \$2.25 million would
11 be approximately .6 percent of the total
12 projected construction cost of the Juno facility,
13 correct?

14 A That is correct. You may be getting at this
15 point, but there -- from a development
16 perspective, we do and see that development
17 expenditures for an earlier stage facility to be
18 at risk and a question of risk exposure when
19 there are still potential binary risks
20 outstanding for the project that could ultimately
21 kill the project or stop it from proceeding.

22 So, that \$2.25 million could be
23 \$2.25 million absolutely lost for the facility as
24 opposed to the construction costs for the

1 facility, which ultimately at that point we would
2 likely have a financial counter-party lined up
3 that have obtained the construction loan for
4 those costs, and at that point have obtained all
5 necessary permits and approvals to build and
6 operate the facility.

7 So, we would consider that all
8 risks to be eliminated or be fully de-risked to
9 that point. So, we do view a difference of
10 at-risk exposures in the early stage of the
11 development process versus the construction funds
12 which are procured through a construction lender.

13 Q Understood. And is it your understanding that
14 the purpose of the Transitional Cluster was to
15 remove speculative projects from the queue in
16 order for the cluster study to move forward in an
17 expeditious manner?

18 A It's my understanding that the Transitional
19 Cluster was intended for projects that had
20 already been in queue for a while and were
21 serious projects that intended to move forward.

22 Q You state on page 5 of your rebuttal testimony
23 that you believe the uncertainty of whether the
24 Commission will grant a CPCN to a merchant

1 facility might dissuade FERC-jurisdictional
2 Interconnection Customers from entering Phase 2
3 of the study process due to the magnitude of the
4 withdrawal penalties.

5 A Correct.

6 Q And I would like to refer you to Miller Cross
7 Exhibit 1, which I believe is entitled the
8 "Transitional Cluster Phase 1 Customer Engagement
9 Meeting". Do you have that in front of you?

10 A I do, yes.

11 Q I would like you to turn to page 7, 8 and 9,
12 slides 7, 8 and 9, please, and particularly slide
13 9. The -- this is the list of DEP Transitional
14 Cluster projects. And I believe, if you can look
15 through and correct me if I'm wrong, but all the
16 FERC-jurisdictional projects are, within the
17 Transitional Cluster, are listed on page 3, slide
18 9 of the Queue Report?

19 A Most of them, correct. It appears so.

20 Q And, subject to check, there appear to be eight
21 FERC-jurisdictional queued projects in the
22 Transitional Cluster.

23 A Correct. I believe there may be one more
24 further -- there is one additional FERC project

1 that's actually a battery page 6, but otherwise
2 that appears to be correct.

3 Q Thank you. And of those eight on page 3, five of
4 them are in North Carolina?

5 A Correct, they appear so.

6 Q And two are solar projects?

7 A I believe there -- oh, two in North Carolina.

8 Q Two in North Carolina are solar projects?

9 A Correct.

10 Q And the first one is a 275-megawatt project in
11 Richmond County?

12 A Correct, that is Juno Solar.

13 Q That would be Juno. And the other one is a
14 69.9-megawatt project in Scotland County?

15 A Correct. That is Friesian Solar.

16 Q And that is Friesian. So, those are the only two
17 North Carolina FERC-jurisdictional solar projects
18 in the Transitional Cluster?

19 A Correct.

20 Q And Pine Gate has a development interest in both?

21 A Correct. We are responsible for the development
22 of both facilities.

23 Q And FERC, or excuse me, Friesian has already had
24 a denied CPCN.

1 A Correct. I believe it is currently going through
2 the appeal process. But looking to Steve Levitas
3 to confirm.

4 A (Mr. Levitas) I'm sorry.

5 A (Ms. Miller) If needed. I don't think we need
6 you right now but just in case.

7 Q And on page 23 of your testimony you say that the
8 solution to the patently unfair and unreasonable
9 situation is for the Commission to issue
10 Conditional CPCNs?

11 A Correct. We believe so.

12 Q And that patently unfair and unreasonable
13 situation you're referring to is that Juno can't
14 find out its system upgrade costs until it
15 completes the study process?

16 A It's the -- the problem statement is the
17 significant financial exposure that a
18 FERC-jurisdictional project like Juno would be
19 subject to to proceed in the Transitional Cluster
20 process without knowing its interconnection
21 system costs until quite far into that process
22 once significant financial payments are made.

23 Q Have projects in the past or other jurisdictions
24 ever completed the study process without a CPCN?

1 A I am not sure I can speak to that accurately, but
2 typically you do obtain a CPCN early on in the
3 study process from my experience.

4 Q But it is possible to complete the CPCN -- or the
5 study process without a CPCN?

6 A I think it is possible but the question of
7 whether that is considered good business practice
8 based on the risk exposé is a different
9 question.

10 Q Okay. And you're aware that the study process
11 along with the milestone payments and the
12 withdrawal penalties were developed through a
13 lengthy stakeholder process as we've discussed
14 here today?

15 A Correct.

16 Q And that the NCIP changes reflect those changes
17 to the study process and were approved by this
18 Commission?

19 A Correct.

20 MR. JOSEY: I would like the Commission to
21 take judicial notice of its Order in E-100, Sub 101,
22 the Queue Reform Approval Order, on October 15th,
23 2020.

24 COMMISSIONER DUFFLEY: Without objection,

1 the Commission will take judicial notice.

2 MR. JOSEY: And judicial notice that --
3 excuse me.

4 BY MR. JOSEY:

5 Q And you are aware that FERC also approved this
6 process as well --

7 A Correct.

8 Q -- in the LGIP? Okay.

9 MR. JOSEY: And I'd like to take judicial
10 notice of FERC's Order Accepting Tariff Revisions in
11 ER21-1579-00 and ER21-1579-001 issued on August 6th,
12 2021.

13 COMMISSIONER DUFFLEY: Without objection,
14 the Commission will take judicial notice.

15 A I would like to point out on that point that I
16 believe it was in Steve Levitas' test -- or
17 rebuttal testimony that we did acknowledge this
18 situation and potential issue for
19 FERC-jurisdictional projects during that process.
20 And it was our understanding, after discussions
21 with the Public Staff, that a Conditional CPCN
22 could be one way based on LCOT to solve that
23 problem. So, I believe in some ways there was
24 reliance on prior discussions that that would be

1 solved.

2 Q And on page 3 of your rebuttal testimony, you
3 state that a Conditional CPCN would not eliminate
4 all risks associated with the interconnection.
5 The Commission's issuance of a Conditional CPCN
6 to Juno would appropriately mitigate the
7 substantial financial risk that Juno would face
8 if it has to withdraw from the Transitional
9 Cluster Study, correct?

10 A Correct.

11 Q And so is it your contention that we -- that the
12 Commission must weigh the financial risk of
13 Applicants when determining whether to grant a
14 CPCN?

15 A I think it's our hope that the Commission and the
16 Public Staff will seek to find a -- what we would
17 all consider a reasonable solution to an
18 unintended problem.

19 Q And on page 5 of your rebuttal testimony, you
20 state that the Conditional CPCN with a \$4.00 LCOT
21 is designed to provide ample protection of
22 ratepayers -- for ratepayers from unreasonably
23 high network upgrade costs, correct?

24 A Correct.

1 Q Is it your contention that anything over \$4.00 is
2 unreasonable in this situation?

3 A I don't believe that we've contemplated that or
4 that we're taking a position necessarily on what
5 would be unreasonable beyond that threshold, but
6 \$4.00 is what we believe is a reasonable
7 threshold for Juno Solar specifically.

8 Q And would an LCOT over \$4.00 be unreasonable in
9 any situation?

10 A I think it's up to the Commission and the Public
11 Staff to view it on a case-by-case basis and
12 determine what is justified for an individual
13 merchant facility since they are, each facility
14 of course, is unique.

15 MR. JOSEY: Madam Presiding Chair, at this
16 time I would like to ask some questions that may touch
17 on confidential information.

18 COMMISSIONER DUFFLEY: Okay. Do we -- we
19 need to clear the courtroom of anyone that has not
20 signed a confidentiality agreement. And, John, we're
21 going to need to stop broadcasting.

22 MR. McCOY: Okay. Right now?

23 COMMISSIONER DUFFLEY: Yes. And actually,
24 we're going to go off the record and give the court

1 reporter a break. And we'll take a -- so, let's go
2 off the record, Ms. Mitchell.

3 (A RECESS WAS TAKEN FROM 11:42 A.M. UNTIL 12:00 P.M.)
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C E R T I F I C A T E

I, KIM T. MITCHELL, DO HEREBY CERTIFY that
the Proceedings in the above-captioned matter were
taken before me, that I did report in stenographic
shorthand the Proceedings set forth herein, and the
foregoing pages are a true and correct transcription
to the best of my ability.

Kim T. Mitchell

Kim T. Mitchell