STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH

DOCKET NO. EMP-119, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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In the Matter of the Application of Macadamia Solar LLC for a Certificate of Public Convenience and Necessity APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR A MERCHANT PLANT

Macadamia Solar LLC ("Macadamia Solar" or the "Applicant"), by and through counsel, hereby applies to the North Carolina Utilities Commission (the "Commission") pursuant to G.S. § 62-110-1 and Commission Rule R8-63 for a Certificate of Public Convenience and Necessity authorizing construction of a solar photovoltaic ("PV") facility with a capacity of 484 megawatts ("MWac") to be located in Washington County (the "Facility"). In support of its application, Applicant provides the Commission the attached exhibits in compliance with Rule R8-63.

WHEREFORE, Applicant respectfully requests that the Commission issue a Certificate of Public Convenience and Necessity pursuant to G.S. § 62-110.1 and Commission Rule R8-63 for the Facility, as more specifically described herein.

Respectfully submitted this 30th day of August 2021.

FOX ROTHSCHILD LLP

Benjami L. Survede

Benjamin L. Snowden N.C. Bar No. 51745 434 Fayetteville Street, Suite 2800 Raleigh, North Carolina 27601 Telephone: (919) 755-8700 Email: bsnowden@foxrothschild.com *Attorney for Macadamia Solar, LLC*

Macadamia Solar LLC Application Exhibit 1 [R8-63(b)(1)]

(i) The full and correct name, business address, business telephone number, and electronic mailing address of the Applicant are:

Macadamia Solar LLC 1930 Abbott Street, Suite 402 Charlotte, NC 28203 (980) 237-7926 Donna.Robichaud@geenexsolar.com

(ii) <u>Description of Applicant</u>: Macadamia Solar LLC, formed April 15, 2015, is a North Carolina Limited Liability Company with its principal place of business located in Charlotte, North Carolina. A true and correct copy of Macadamia Solar's Limited Liability Company Articles of Organization is attached as <u>Schedule 1</u>. The principal participants of this Macadamia Solar entity are the two officers of Geenex Solar LLC ("Geenex Solar"): Georg Veit, Chief Executive Officer and Juergen Fehr, Managing Director.

Geenex Solar, the direct owner of Macadamia Solar, is a solar developer based in Charlotte, North Carolina. Geenex Solar is a Delaware limited liability company formed on July 18, 2013. Macadamia Solar LLC and Geenex Solar LLC are wholly-owned subsidiaries of the same parent company, Geenex Holding LLC ("Geenex Holding"). An organizational chart depicting the relationship among Macadamia Solar, Geenex Solar, and Geenex Holding is attached as <u>Schedule 2</u>.

Geenex Solar has been focused on solar development in the southeastern U.S. since 2012 and currently has more than 50 solar PV facilities in various stages of development in North Carolina, Virginia, Kentucky, Ohio, and Indiana. Geenex Solar has an aggregate pipeline of more than seven gigawatts ("GW") of additional projects in the United States

with the majority being PJM-interconnected projects.

Geenex-sourced projects are valued by the country's largest solar developers, investors, and utilities for their well-sited locations, their adherence to best-development practices, and standards that meet and usually exceed county and state requirements. Geenex Solar has proven experience to prepare a site for development as a solar facility. Its experts serve to lead important aspects of the development process including land acquisition, site analysis, environmental assessments, facility permitting, utility interconnection, and negotiation of power purchase agreements. Our partners and investors understand that our projects will be developed on-time, on-budget, and in accordance with all local, state, and federal permitting requirements. As mentioned in this application, Geenex Solar has developed or is developing over 50 solar facilities throughout the United States including projects in Kentucky, Virginia, Ohio, Indiana, and North Carolina. With the completion of these additional projects and the Project, Geenex Solar expects to develop over seven GWs of capacity across the United States. Geenex Solar's business model is ultimately to sell its solar projects to collaborating partners for construction and operation of the facilities.

Correspondence, documents, and filings regarding this application should be addressed as follows:

Donna Robichaud Geenex Solar LLC 1930 Abbott Street, Suite 402 Charlotte, North Carolina 28203 (980) 237-7926 Donna.Robichaud@geenexsolar.com

with copies to:

Benjamin L. Snowden Fox Rothschild 434 Fayetteville Street, Suite 2800 Raleigh, North Carolina 27601 (919) 755-8700 bsnowden@foxrothschild.com

(iii) A copy of Geenex Solar's most recent balance sheet and income statement
is attached as <u>Confidential Schedule 3</u>.

(iv) <u>Applicant's other affiliated generating facilities:</u> Geenex Solar has developed nine solar generating facilities currently operational in the Southeastern Electric Reliability Council ("SERC") region, with an aggregate system capacity of 651 MWac. These projects interconnect with Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina ("Dominion"), or Appalachian Power Company, d/b/a American Electric Power ("AEP"), as described in the following chart. Each of these projects has found offtake, either with Dominion Energy under a PURPA contract, or with a corporate purchaser through the PJM market.

Project	Location	System Size (MWac)	Interconnecting Utility	Offtaker	Commercial Operation Date
Halifax	Halifax County, NC	20	Dominion Distribution	Dominion	2014 (Sold)
HXNAIR	Halifax County, NC	5	Dominion Distribution	Dominion	2016 (Sold)
Gauss	Halifax County, NC	5	Dominion Distribution	Dominion	2018 (Sold)
Hemlock	Northampton County, NC	5	Dominion Distribution	Dominion	2016 (Sold)
Sunflower	Halifax County, NC	16	Dominion Distribution	Dominion	2017 (Sold)
Cork Oak	Halifax County, NC	20	Dominion Distribution	Dominion	2017 (Sold)

Geenex Solar Projects Operating in the SERC Region

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Northampton	3	Dominion	Dominion	2018 (Sold)
County, NC		Distribution		
Halifax	2	Dominion	Dominion	2018 (Sold)
County, NC		Distribution		
Northampton	75	Dominion	Facebook	2018 (Sold)
County, NC		Transmission	$(PJM)^1$	
Northampton	80	Dominion	Facebook	2019 (Sold)
County, NC		Transmission	$(PJM)^2$	
Halifax	80	Dominion	Facebook	2020 (Sold)
County, NC		Transmission	$(PJM)^3$	
Edgecombe	100	Dominion	Multiple	2020 (Sold)
County, NC		Transmission	Corporates	
			(PJM) ⁴	
Mecklenburg	80	Dominion	Facebook	2020 (Sold)
County, VA		Transmission	(PJM) ⁵	
Halifax	80	Dominion	Dominion	2021 (Sold)
County, VA		Transmission	(PJM) ⁶	
Campbell	80	AEP	Facebook	2021 (Sold)
County, VA		Transmission	(PJM) ⁷	
	651			
	Northampton County, NC Halifax County, NC Northampton County, NC Halifax County, NC Edgecombe County, NC Mecklenburg County, VA Halifax County, VA Campbell County, VA	Northampton County, NC3Halifax County, NC2Northampton County, NC75Northampton County, NC80Halifax County, NC80Edgecombe County, NC100Edgecombe County, NC100Mecklenburg County, VA80Mecklenburg County, VA80County, VA80County, VA80County, VA80County, VA651	Northampton County, NC3Dominion DistributionHalifax County, NC2Dominion DistributionNorthampton County, NC75Dominion TransmissionNorthampton County, NC80Dominion TransmissionNorthampton County, NC80Dominion TransmissionHalifax County, NC80Dominion TransmissionHalifax County, NC100Dominion TransmissionMecklenburg County, VA80Dominion TransmissionMecklenburg County, VA80Dominion TransmissionMalifax 	Northampton County, NC3Dominion DistributionDominion OminionHalifax County, NC2Dominion DistributionDominion DominionNorthampton County, NC75Dominion TransmissionFacebook (PJM)1Northampton County, NC80Dominion TransmissionFacebook (PJM)2Northampton County, NC80Dominion TransmissionFacebook (PJM)2Halifax County, NC80Dominion TransmissionFacebook (PJM)3Edgecombe County, NC100Dominion TransmissionMultiple (Corporates (PJM)4Mecklenburg County, VA80Dominion TransmissionFacebook (PJM)6Malifax County, VA80Dominion TransmissionFacebook (PJM)6Campbell County, VA80AEP TransmissionFacebook (PJM)76516515150

In addition to the completed projects, Geenex Solar either has or had an ownership interest in, and is involved in developing, the following 16 solar generating facilities with an aggregate capacity of 2079 MWac in the SERC region. Each of these underdevelopment projects is expected to interconnect to Dominion, AEP, or East Kentucky

¹ Sold to Dominion Energy. See <u>https://www.dominionenergy.com/projects-and-facilities/solar-energy-facilities-and-projects/north-carolina-solar-projects</u>

² Sold to Dominion Energy. See <u>https://www.dominionenergy.com/projects-and-facilities/solar-energy-facilities-and-projects/north-carolina-solar-projects</u>

³ Sold to Dominion Energy. See <u>https://www.dominionenergy.com/projects-and-facilities/solar-energy-facilities-and-projects/north-carolina-solar-projects</u>

⁴ Corporate purchasers include Starbucks, Bloomberg, Cox Enterprises, Gap, Inc., Salesforce and Workday. <u>https://www.renewableenergyworld.com/solar/133-6-mw-fern-solar-project-coming-to-north-carolina/#gref</u>

⁵ Sold to Dominion Energy. See <u>https://www.dominionenergy.com/projects-and-facilities/solar-energy-facilities-and-projects/virginia-solar-projects</u>

⁶ https://www.williamsmullen.com/news/virginia-approves-prudency-80-mw-solar-ppa

⁷ https://www.apexcleanenergy.com/news/facebook-to-purchase-renewable-power-from-apexsaltavista-solar-project/

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Power Cooperative ("EKPC").

Project 1	Location	System	Development Status	COD	
		Size		(estimated)	
(MWac)					
		Interconnec	cted to Dominion		
Bluebird	Harrison County,	100	Local zoning permit secured; State	2023 (Sold)	
	KY		permit application process ongoing;		
			ISA executed		
American	Halifax County,	110	Local zoning permit secured; CPCN	TBD (Sold)	
Beech	NC		process ongoing (in abeyance); ISA		
			executed		
Sumac Solar	Bertie County,	120	CPCN process ongoing (in	TBD (Sold)	
	NC		abeyance); Interconnection studies		
			in progress		
Sweetleaf	Halifax County,	94	Local zoning permit secured; CPCN	TBD (Sold)	
Solar	NC		process ongoing (in abeyance)	1	
Monarch	Mecklenburg	80	In development; Interconnection	TBD (Sold)	
Butterfly	County, VA		Studies in progress		
Solar	•				
Cassius Blue	Sussex County,	394	In development; Interconnection	TBD	
Solar	VA		Studies in progress		
Perquimans	Perquimans	5	Local zoning permit and CPCN	2023 (Sold)	
Solar	County, NC		secured; Interconnection Agreement		
			executed, construction pending		
Interconnected to AEP					
Firefly Solar	Pittsylvania	150	In development; Interconnection	TBD	
	County, VA		Studies in progress	(Sold)	
Interconnected to EKPC					
Blue Moon	Harrison County	70	In development: Interconnection	TBD (Sold)	
Solar	KV	70	Studies in progress		
Humminghird	Fleming County	200	In development: Interconnection	TBD (Sold)	
Solar	KV	200	Studies in progress		
Northern	Marion County	96	State permit secured: ISA executed	2023 (Sold)	
Bobwhite	KV	70	State permit secured, 1577 executed	2025 (0014)	
Solar					
American	Barren County	120	In development: Interconnection	TBD (Sold)	
Robin Solar	KV	120	Studies in progress		
Grov	Clark County	250	In davalopment: Interconnection	TRD (Sald)	
Kinchind		330	Studies in progress		
Solar	ΝI		studies in progress		
Solar					

Geenex Solar Projects Under Development in the SERC Region

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Winton Winon	Madican Country	00	In developments Interconnection	TDD (Cald)
winter wren	Madison County,	90	In development: Interconnection	1 BD (Sold)
Solar	KY		Studies in progress	
Wood Duck	Barren County,	100	In development; Interconnection	TBD
Solar	KY		Studies in progress	
TOTAL		2079		

Macadamia Solar LLC Application Exhibit 2 [R8-63(b)(2)]

(i) <u>Nature of proposed generating facility:</u> Macadamia Solar is proposing to construct a solar PV Facility that will interconnect to Dominion's transmission system. The nameplate generating capacity of the Facility will be up to 484 MWac, with anticipated gross capacity of approximately 486 MWac and anticipated generation of 1237 GWh per year. If applicable, Macadamia Solar may consider downsizing the Facility to minimize the cost of network upgrades. Because solar power is subject to intermittent solar irradiance, Macadamia Solar's maximum dependable capacity is projected to be 0 MW during some hours of the day. The Facility construction is expected to begin in or around the fourth quarter of 2023, with an estimated date of commercial operation in the fourth quarter of 2025. An itemized estimate of the construction costs is included as **Confidential Schedule 4**.⁸ The expected service life of the facility is 35 useful years.

The Facility will install approximately 668 MWdc of mono- or poly-crystalline photovoltaic solar modules on single-axis trackers. These trackers will be installed on a north-south axis tilting in an east-west direction to enable the modules to follow the sun throughout the day. Trackers consist of galvanized steel and are anchored on H-shaped steel posts that are driven about 6 feet into the ground. The trackers do not have a concrete foundation. As currently configured, the Facility would include roughly 1,249,332 monocrystalline photovoltaic solar modules. These would be connected to 139 inverters, each with a capacity of 3.48 MWac, which will transform DC power generated by the solar modules into 486 MWac for gross capacity (484 MWac net capacity). One hundred and

⁸ Schedule 4 has been designated as confidential because the construction estimate contains confidential information within the scope of G.S. § 132.1.2. 125873168.1 08/30/2021 23:16:48 - 8/30/2021 7:24:18 PM

thirty-nine transformers will step the voltage of generated power up from 1,500 V at the inverters to 34.5 kV. Power from these 139 step-up transformers will be collected through 34.5 kV underground electrical collector circuits by two 270 MVA main power transformers, which will further increase voltage to 230 kV ("Substation"), so as to align with the voltage at the existing Dominion owned Trowbridge Substation. Note that this electrical configuration may change prior to construction due to factors such as changes in component characteristics and availability, as well as site engineering issues.

Because the land for the Facility consists of adjacent and non-adjacent parcels, individual blocks of trackers with solar modules will be connected through mediumvoltage cable runs between the parcels. These connections will be using either overhead poles or buried cable, installed in culverts or via directional boring. Where projects parcels are not immediately adjacent, easements with neighboring landowners have been secured to allow for installation of power lines.

There will be approximately 6.53 miles of 230 kV transmission line between the Facility's Substation located at the project site and the Trowbridge Substation. Macadamia Solar is filing a separate application for a Certificate of Environmental Compatibility and Public Convenience and Necessity for that transmission line, pursuant to Rule R8-62.

(ii) <u>Site plan</u>: A color site plan map ("Site Plan") showing the proposed site boundary and layout with all major equipment, planned and existing roads, and planned and existing electric facilities is attached as <u>Schedule 5</u>. As indicated on Schedule 5, the location of equipment is subject to change based on site conditions and engineering needs, within the area designated on the Site Plan as the "Buildable Area."

(iii) Locational information: The Macadamia Solar's Facility is made up of

portions of land owned by six (6) different landowners who in total own 5,543.6 acres of privately-owned land outside Plymouth in Washington County, North Carolina. The Facility is located at and around the intersection of Highway 32 and Highway 99 outside Plymouth, North Carolina. The Facility will include approximately 4,813 fenced acres of this privately-owned land. The remaining land outside the fence line will be used for screening and other project needs. The GPS coordinates of the approximate center of the facility are latitude 35.751548°; longitude -76.698616°. The Facility's Substation location will be located on Parcel No. 6784-55-4393, which is approximately 0.5 miles southeast of the intersection of SR 99 and SR 32. The GPS coordinates of the Substation are latitude 35.751548°; longitude -76.698616°. There will be approximately 10 access points located off the main roads for the Facility. The Facility has not yet been assigned an e911 address by Washington County.

(iv) The Facility is not a natural gas-fired facility.

(v) <u>Required approvals</u>: The following is a list of all necessary federal, state, and local approvals related to the Facility and the site and the status of such approval or a copy thereof, if obtained.

Federal:

- Macadamia Solar submitted a wetland delineation study to the U.S. Army Corps of Engineers ("Corps") and received a Preliminary Jurisdiction Determination on June 5, 2019, as included in <u>Schedule 6</u>. As currently designed Macadamia Solar's Facility would not impact regulated wetlands. If design requirements change, Macadamia Solar would coordinate with the Corps to obtain the appropriate approvals.
- 2. Macadamia Solar completed a preliminary habitat assessment for the Facility area in 2018.

There are no federally listed species under the Endangered Species Act ("ESA") that are likely to occur in terrestrial habitats within the facility area and no known USFWSdesignated species' critical habitat within or directly surrounding the facility area.

- Prior to commencing operation, Macadamia Solar may apply for Market-Based Rate Authorization from the Federal Energy Regulatory Commission ("FERC"), pursuant to Sections 205 and 206 of the Federal Power Act.
- 4. Macadamia Solar may seek to self-certify with FERC as an Exempt Wholesale Generator pursuant to the Public Utility Holding Company Act of 2005.
- 5. Macadamia Solar completed a glare study for the Facility pursuant to Federal Aviation Administration ("FAA") requirements. The FAA issued a Determination of No Hazard to Air Navigation on May 24, 2019 an extension of the determination on December 7, 2020 that expires June 7, 2022 included as <u>Schedule 7.</u>

State:

- Macadamia Solar will require a Certificate of Environmental Compatibility and Public Convenience and Necessity in accordance with N.C. Gen. Stat. Ch. 62 Art. 5A and Rule R8-62 for a privately-owned 230 kV transmission line. Approximately 6.53 miles of rights of way will be needed between the Facility's Substation and the existing Trowbridge Substation. The rights of way needed are sited with easement agreements and purchase options obtained or are in the process of being obtained through good faith negotiations with voluntary landowners.
- Macadamia Solar will likely require the approval of an erosion and sedimentation control plan for its construction activities from the North Carolina Department of Environmental Quality ("NCDEQ").

- Aug 30 2021
- Macadamia Solar submitted a request to NCDEQ to determine the applicability of the Tar-Pamlico Riparian Buffer Rules (15A NCAC 02B.0259). NCDEQ determined that the Facility was not subject to these rules as indicated in <u>Schedule 8.</u>
- Macadamia Solar will require a driveway permit from the North Carolina Department of Transportation ("NCDOT").

Local:

- 1. Macadamia Solar requires a special use permit ("SUP") from Washington County. Macadamia Solar obtained its SUP approval on August 13, 2019 by the Washington County Board of Adjustment and an extension on June 30, 2021. The Certificate of Zoning Compliance and SUP Approval are included as <u>Schedule 9</u>. Consistent with local zoning requirements, the Facility site will be buffered from view from most roadways by natural vegetative buffering and continuing farm operations, and significant setbacks and buffering consideration has been given to neighboring landowners. Each landowner's site control agreement also includes a decommissioning plan, which was filed with local zoning authorities and is attached as <u>Schedule 10</u>. The decommissioning plan provides that at the end of the Facility's useful life, the Facility site will be stabilized and restored in such a manner to ensure it is clean, safe, and environmentally stable.
- 2. Macadamia Solar will submit an application for a stormwater permit to Washington County and will need to confirm that the Facility has satisfied all of the requirements for a stormwater permit application.
- 3. Macadamia Solar will require a Building Permit from Washington County.
- Macadamia Solar will require an Electrical Permit from Washington County. <u>Other:</u>

- 1. Macadamia Solar will register as a Generator-Owner with the SERC Reliability Corporation ("SERC").
- (vi) Description of transmission facilities: The Macadamia Solar Facility will interconnect with the transmission grid owned by Dominion Energy North Carolina and has been assigned interconnection request numbers AD1-074 (300 MWac), AD1-075 (75 MWac), and AD1-076 (109 MWac) for a total of 484 MWac. The Facility will interconnect with the PJM transmission system at the Trowbridge Substation via an approximately 6.53 mile long 230 kV gen-tie line. A color map showing the location of the interconnection points and transmission facilities is included in the Site Plan attached as <u>Schedule 5.</u> Geenex Solar is obtaining the rights of way needed with easement agreements and purchase options obtained or in the process of being obtained through good faith voluntary negotiations with landowners or has rights to acquire the real estate interest.

Macadamia Solar, LLC Exhibit 3 [R8-63(b)(3)] Description of the need for the facility in the state and/or region

Macadamia Solar and its collaborator on this Facility, Geenex Solar, expect the Facility to benefit North Carolina and its surrounding region by satisfying a growing demand for renewable power in the region, and by providing economic development and other benefits in Washington County. The Macadamia Solar Facility will interconnect with Dominion's transmission grid, affording it access to the PJM Interconnection ("PJM"), a Regional Transmission Organization ("RTO") in which Dominion participates. PJM is an RTO that coordinates the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia.

The Applicant anticipates contracting the sale of energy, capacity, and Renewable Energy Credits ("RECs") through PJM. Geenex Solar has substantial experience with offtake in the PJM market and the expectations for power purchase from the PJM market in the southeast United States are strong. Geenex Solar, with its partners/investors, has previously secured and is actively negotiating for over 6300 MW of offtake within the PJM market, and is using this experience to secure offtake for the Macadamia Solar Facility. Geenex Solar is actively fielding inquiries from investors interested in Macadamia Solar's purchase and/or offtake.

Load growth for the PJM RTO as a whole, and more specifically for the Dominion power zone, which serves parts of Eastern North Carolina and Virginia, is expected to increase over the next ten to fifteen years as described below for both winter and summer months. Summer peak load in PJM is expected to grow by 0.3% per year over the next ten years, and by 0.2% over the next 15 years.⁹ For the Dominion zone, summer peak load growth is expected to grow by 0.9% per year over the next ten years, and 0.9% per year over the next fifteen years.¹⁰ The anticipated ten-year summer peak load growth in the Dominion zone represents 0.3% decline over the January 2020 load forecast report.¹¹

Winter peak load growth in PJM is projected to average 0.3% per year over the next 10- year period, and 0.2% over the next 15-years.¹² Winter peak load growth for the Dominion zone is expected to grow by 0.9% per year over the ten years, and 0.9% per year over the next nine to fifteen years.¹³ The anticipated ten-year winter peak load growth in the Dominion zone represents 0.9% decline over the January 2020 load forecast report.¹⁴ The PJM service area of North Carolina has slightly higher projected load growth than Virginia. North Carolina is expected to average between 0.5 and 0.9% per year over the next 10 years versus the PJM RTO load growth projections to average between 0.3% Summer Peak and 0.2% Winter Peak over the next ten years.¹⁵

There are several opportunities to sell the output (i.e., offtake) and services from the Facility into PJM, including (1) the PJM Interconnection wholesale market, (2) ancillary services sales under the PJM tariffs; and (3) Corporate Agreements. These are discussed in turn below.

¹⁴ Id.

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⁹ 2020 PJM Load Forecast Report (January 2021), available at https://www.pjm.com/-/media/library/reports-notices/load-forecast/2021-load-report.ashx., at 35-44.

 $^{^{10}}$ *Id*.

 $^{^{11}}$ *Id.* at 40.

¹² *Id.* at 47-48.

 $^{^{13}}$ *Id*.

¹⁵ PJM, 20120 North Carolina State Infrastructure Report (January 1, 2020 – December 31, 2020), April 2021, 21, available at <u>https://www.pjm.com/-/media/library/reports-notices/state-specific-reports/2020/2020-north-carolina-state-infrastructure-report.ashx</u>

In regard to (1) above, PJM Interconnection wholesale markets provide opportunities to sell output through the energy and capacity market. Through the energy markets, low-cost solar resources compete to meet the demand throughout the PJM footprint. The PJM capacity market provides opportunities to sell capacity.

In regard to (2) above, FERC Rate Schedule No. 1 sets forth the cost-based revenue requirements for the provision of Reactive Supply and Voltage Control from Generation Source Service under Schedule 2 of PJM's Open Access Transmission Tariff. Multiple solar projects have applied and are now eligible to receive revenue under this provision. Other solar projects aggregating to approximately 400 MW of capacity have already qualified for Tariff filings. Geenex Solar expects Macadamia Solar also to qualify for this tariff and to generate revenue from the sale of reactive power and voltage control services.

For Corporate Agreements, according to the Renewable Energy Buyers Alliance ("REBA"), Corporate buyers led over 10.6 GW of renewable energy purchases in 2020 and the trend continues to escalate.¹⁶ According to the *Wall Street Journal*, this effort is led by large tech companies, which face significant pressure to demonstrate that despite their investments in power-hungry data centers, they are reducing overall emissions¹⁷. Given the robust demand for corporate purchases, solar projects in PJM's southern portion with higher solar resources are uniquely positioned to attract buyers and many similar projects have secured agreements. Geenex Solar expects this trend to continue.

Demand for renewable power is expected to increase in the Southeast over the expected lifetime of the Facility. The American Council for Renewable Energy

¹⁶ <u>https://rebuyers.org/deal-tracker/</u>

¹⁷ https://www.wsj.com/articles/amazon-and-other-tech-giants-race-to-buy-up-renewableenergy-11624438894

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("ACORE") recently published a paper, "*Expectations for Renewable Energy Finance in 2021-2024*" (attached as <u>Schedule 11</u>), based on surveys of professions who represent companies that actively finance or develop projects in the renewable energy sector which show the trend for renewables is accelerating. PJM tops the list of the most attractive for Renewable Investment or Deployment in 2021-2014 in the ranking of U.S. Regional Power Markets. This paper also notes other new drivers for growth including: (1) the U.S. reentering the Paris Climate Agreement; (2) the Biden Administration's announced target of adding 30 GW of offshore wind along with supporting tax credits; and (3) President Biden's American Jobs Plan, announced on March 31, 2021. The Applicant believes that these healthy market conditions will create sustainable offtake for its production. Projections from PJM indicate that the demand for power, particularly in the Southeast, will increase as described below.

In addition, on May 1, 2020, Dominion filed a 15-year Integrated Resource Plan ("IRP") which almost quadruples the amount of solar in its planned generation portfolio, from 4400 MWac in its 2019 IRP to 15,900 MWac. Dominion has also issued a request for proposal soliciting bids for up to 1,000 MWac of solar and onshore wind generation. Dominion's commitment is consistent with state-level policy set by the Virginia General Assembly, which affirmed the growing importance of renewable energy generation in passing the Grid Transformation and Security Act of 2018 (the "GTSA"), signed into law by Governor Ralph Northam on March 9, 2018. The GTSA finds that up to an additional 5,000 MWac of utility-scale electric generating facilities powered by solar and wind energy is in the public interest, along with up to an additional 500 MWac of non-utility scale solar or wind generating facilities, including rooftop solar installations. In addition, on March 6,

2020 the Virginia General Assembly passed Virginia SB 851, which dramatically accelerates and increases the need for solar power facilities in that state.¹⁸ The law calls for Dominion and the smaller Appalachian Power Company to supply 30 percent of their power from renewables by 2030, and to close all carbon-emitting power plants by 2045 for Dominion and by 2050 for Appalachian. These laws will ensure a robust market for renewable resources in PJM territory over the lifetime of the Facility.

https://www.greentechmedia.com/articles/read/virginia-100-clean-energy- by-2050-mandatelaw; Gregory S. Schneider, "Virginia passes sweeping law to mandate clean energy amid questions about cost," Mar. 6, 2020, available at https://www.washingtonpost.com/local/virginiapolitics/virginia-dominion-energy-bill/2020/03/06/4524cd20-5fc1-11ea-b29b-

9db42f7803a7_story.html

¹⁸ See Jeff St. John, Virginia Mandates 100% Clean Power by 2045, The Clean Economy Act will drive utility Dominion to procure gigawatts of solar, offshore wind and energy storage," Mar. 6, 2020, Greentech Media, available at

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Macadamia Solar LLC Application for a Certificate of Public Convenience and Necessity for a Merchant Plant Docket No. EMP-119, Sub 0 Schedules

Schedule 1 – Limited Liability Articles of Organization

Schedule 2 - Organizational Chart

Schedule 3 - Balance Sheet and Income Statement for Geenex Solar *CONFIDENTIAL*

Schedule 4 – Estimated Construction Costs *CONFIDENTIAL*

Schedule 5 – Site Plan

Schedule 6 - U.S. Army Corps of Engineers - Preliminary Jurisdiction Determination

Schedule 7 - FAA Determination of No Hazard to Air Navigation & Extension Letter

Schedule 8 – NCDEQ Tar-Pamlico Riparian Buffer Rules – Not Applicable Letter

Schedule 9 – Certificate of Zoning Compliance and CUP Approval

Schedule 10 – Decommissioning Plan

Schedule 11 - ACORE - Expectations for Renewable Energy Finance in 2021-2024

VERIFICATION

STATE OF North Caroling COUNTY OF Mecklenburg

Signature of Owner's Representative or Agent

SR. VP Strate Title of Representative or

Typed or Printed Name of Representative or Agent

The above named person personally appeared before me this day and, being first duly sworn, says that the facts stated in the foregoing application and any exhibits, documents, and statements thereto attached are true as he or she believes.

WITNESS my hand and notarial seal, this 30 day of Agy 5+ , 20 21.

My Commission Expires: Une 6, 2022

Signature of Notary Public

Brett Moultow Name of Notary Public - Typed or Printed



This original verification must be affixed to the original application, and a copy of this verification must be affixed to each of the copies that are also submitted to the Commission.

CERTIFICATE OF SERVICE

This is to certify that the undersigned has this day served the foregoing APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR A MERCHANT PLANT upon the following by electronic mail as follows:

follows:

Christopher Ayers, Esq. Executive Director - NC Public Staff <u>Chris.Ayers@psncuc.nc.gov</u>

Zeke Creech NC Public Staff - Legal Division zeke.creech@psncuc.nc.gov

Reita Coxton NC Public Staff - Legal Division Reita.Coxton@psncuc.nc.gov

This the 30th day of August, 2021.

Isl Benjamin L. Snowden

Benjamin L. Snowden