# Sumac Solar LLC Application for a Certificate of Public Convenience and Necessity for a Merchant Plant Docket No. EMP-110, Sub 0

#### **Schedules**

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Schedule 2 – Organizational Chart

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

<u>Schedule 4</u> – Chart of Renewables Offtake Projections

<u>Schedule 5</u> – Estimated Construction Costs \*CONFIDENTIAL\*

<u>Schedule 6</u> – Site Plan

<u>Schedule 7</u> – Decommissioning Plan

# Schedule 1

Limited Liability Articles of Organization

#### C201521700463

EMP-110, Sub 0 Schedule 1

CORPORATIONS DIVISION

(Revised January 2014)

# State of North Carolina Department of the Secretary of State

SOSID: 1463304 Date Filed: 8/12/2015 10:59:00 AM Elaine F. Marshall North Carolina Secretary of State

C2015 217 00463

RALEIGH, NC 27626-0622

(Form L-01)

# Limited Liability Company ARTICLES OF ORGANIZATION

Pursuant to §57D-2-20 of the General Statutes of North Carolina, the undersigned does hereby submit these Articles of Organization for the purpose of forming a limited liability company.

1.	The name of the limited liability company is: Sumac Solar LLC							
2.	(See Item 1 of the Instructions for appropriate entity designation)  The name and address of each person executing these articles of organization is as follows: (State whether each person is executing these articles of organization in the capacity of a member, organizer or both. Note: This document must be signed by all persons listed.)							
	Juergen Fehr, Organizer _ 2410 Valencia Terrace, Charlotte, NC 28226							
	Juergen Fehr, Organizer  2410 Valencia Terrace, Charlotte, NC 28226  Geenex Solar LLC, Member/Organizer							
3.	The name of the initial registered agent is: Juergen Fehr							
4.	The street address and county of the initial registered agent office of the limited liability company is:							
	Number and Street 2410 Valencia Terrace							
•	City Charlotte State: NC Zip Code: 28226 County: Mecklenburg							
5.	The mailing address, if different from the street address, of the initial registered agent office is:  Number and Street							
	City State: NC Zip Code: County:							
6.	Principal office information: (Select either a or b.)							
	a. The limited liability company has a principal office.							
	The principal office telephone number:							
	The street address and county of the principal office of the limited liability company is:							
	Number and Street							
•	CityState:Zip Code:County:							

P.O. Box 29622

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	CityState:	Zip Code: County:	
	b. The limited liability company de	pes not have a principal office.	
7.	Any other provisions which the limited are attached.	liability company elects to include (e.g., the purpose of the entity)	
8.	cost when a document is filed. The e	e-mail address: -mail the business automatically at the address provided above at no-mail provided will not be viewable on the website. For more fered, please see the instructions for this document.	
9.	These articles will be effective upon f	iling, unless a future date is specified:	
he bo	·	Juergen Fehl, Organizer  Type or Print Name and Title  ganizer or member is listed in Item #2 above.	
Seene	ex Solar LLC		
luero	signature/ gen Fehr, Meruber	Signature	
	Type and Print Name and Title	Type and Print Name and Title	
	Signature	Signature	
	Type and Print Name and Title	Type and Print Name and Title	

CORPORATIONS DIVISION (Revised January 2014)

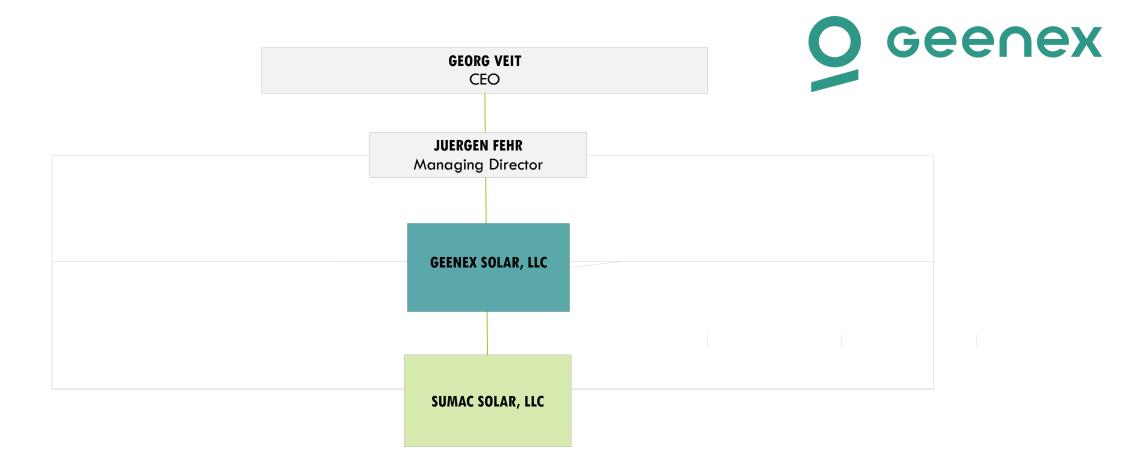
P.O. Box 29622

RALEIGH, NC 27626-0622 (Form L-01)

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# Schedule 2

Organizational Chart

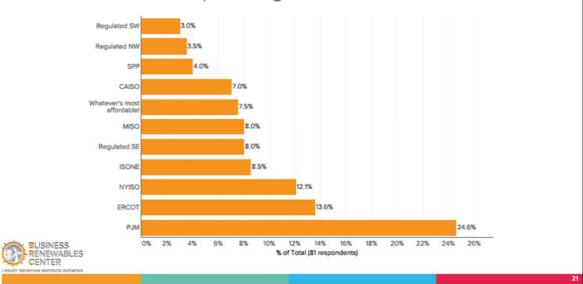


# SUMAC SOLAR ORGANIZATIONAL CHART

#### Schedule 4

### Renewables Offtake Projections





Source: Business Renewables Center

# Schedule 7

Decommissioning Plan

# **Sumac Solar LLC Decommissioning Plan**

#### 1. INTRODUCTION

#### 1.1 Project Background

This decommissioning plan is described herein for Sumac Solar LLC, a 120 MW AC solar photovoltaic facility ("Project") to be located near Windsor in Bertie County, North Carolina. The solar photovoltaic power array owned by Sumac Solar LLC ("Tenant"), is anticipated to operate for a period of no less than 20 years under a power purchase agreement from (<u>Utility/Commercial-Industrial Consumer</u>). It is anticipated that the Project will use the existing technology up to an additional (<u>twenty years</u>) for a total operating period of (<u>40</u>) years. At the completion of its operating life, the Project will either be redeveloped with modern equipment, or it will be decommissioned and removed from the site in accordance with this plan.

#### 1.2 Objectives

The objective of this Decommissioning Plan, ("Plan"), is to provide the requisite financial surety to guarantee the decommissioning of the Project.

#### 1.3 Plan Conditions:

Prior to commencing with any decommissioning activities in accordance with this Plan, Tenant will provide documentation to process the appropriate permit(s). If the Project is to be redeveloped, a new building plan permit will be processed before any installation of new equipment. Decommissioning the Project will allow for any parcels that were changed under the Project's local zoning to be returned to their original zone classifications and/or use.

#### 2. DECOMMISSIONING OF FACILITY AFTER CEASING OPERATION

#### 2.1 General Environmental Protection

During decommissioning and restoration activities, general environmental protection and mitigation measures will be implemented. Many activities during decommissioning will be comparable to the construction phase, including the use of heavy equipment on site, preparing staging areas, and restoring constructible areas.

#### 2.2 Pre-Decommissioning Activities

Prior to engaging in decommissioning activities, Tenant will provide documentation to process the appropriate permits in accordance with all relevant county, state and federal statutes in place at the time of decommissioning.

Prior to any decommissioning or removal of equipment, staging areas will be delineated as appropriate. At the end of the Project's useful life, it will first be de-energized and isolated from all external electrical lines. All decommissioning activities will be conducted within designated areas; this includes ensuring that vehicles and personnel stay within the demarcated areas. Work to decommission the collector lines and Project-owned transmission lines will be conducted within the boundaries of the municipal road allowance and appropriate private lands.

#### 2.3 Equipment Decommissioning and Removal

The basic components of the Project are photovoltaic (PV) modules, mechanical racking system, electrical cabling, inverter racks, transformers and concrete pads as described below.

- **Modules:** The modules will be removed by hand and placed in a truck to be retuned for recycling or disposal as described below in section 2.4.
- **Mechanical racking system**: will be removed with an excavator with a demolition thumb. The recyclable metal will be loaded on trucks and hauled away in accordance with section 2.9.
- **Inverters Racks and Inverters:** The inverters and its racks will be removed by hand and loaded on trucks for recycling in compliance with section 2.5.
- **Transformers:** Transformers will be removed in compliance with section 2.5 and then loaded on to a truck with a crane and sent for recycling.
- Concrete pads: The equipment will be disconnected and transported off site by truck. The concrete foundations and support pads will be broken up by mechanical equipment (backhoe-hydraulic hammer/shovel, jackhammer), loaded onto dump trucks and removed from the site. Smaller pre-cast concrete support pads and/or pre-manufactured metal skids will be removed intact by cranes and loaded onto trucks for reuse, or will be broken up and hauled away by dump trucks.

#### 2.4 PV Module Collection and Recycling

All modules will be disconnected, removed from the trackers, packaged and transported to a designated location for resale, recycling or disposal. Any disposal or recycling will be done in accordance with applicable laws and requirements. The connecting underground cables and the junction boxes will be deenergized, disconnected, and removed. The mechanical racking system supporting the PV modules will be unbolted and dismantled by laborers using standard hand tools, possibly assisted by small portable cranes. All support structures will be completely removed by mechanical equipment and transported off site for salvage or reuse. Any demolition debris that is not salvageable will be transported by truck to an approved disposal area. Other salvageable equipment and/or material will be removed for the site for resale, scrap value or disposal.

#### 2.5 Electrical Equipment and Inverters

All decommissioning of electrical devices, equipment, and wiring/cabling will be in accordance with local, state and federal laws. Any electrical decommissioning will include obtaining required permits, and following applicable safety procedures before de-energizing, isolating, and disconnecting electrical devices, equipment and cabling.

Decommissioning will require the removal of the electrical equipment, including inverters, transformers, underground/aboveground cables and overhead lines. Equipment and material may be salvaged for resale or scrap value depending on the market conditions.

#### 2.6 Roads, Parking Area

All access roads and the parking area will be removed to allow for the complete rehabilitation of these areas unless the landowner provides written consent to retain these features. Typically, the granular base covering of these areas will be removed using a wheel loader to strip off the material and dump trucks to haul the aggregate to a recycling facility or approved disposal facility. The underlying subsoil, if exhibiting significant compaction (more likely for the site entrance road than the interior access roads), will then be diced using a tractor and disc attachment to restore the soil structure and to aerate the soil. Clean topsoil will be imported on site by dump truck, replaced over the area and leveled to match the existing grade.

#### 2.7 Other Components

Unless retained for other purposes, removal of all other facility components from the site will be completed, including but not limited to surface drains, access road cross-culverts, and fencing. Anything deemed usable shall be recovered and reused elsewhere. All other remaining components will be considered as waste and managed according to local, state, and federal laws. For safety and security, the security fence will be dismantled and removed from the site after all major components, PV modules, tracker system and foundations have been removed.

#### 2.8 Site Restoration

The following activities will be undertaken to restore the site to substantially its previous condition;

- Site cleanup, re-grading to original contours and, if necessary, restoration of surface drainage swales and ditches.
- Any trenches/drains excavated by the Project will be filled with suitable materials and leveled.
- Any road, parking area will be removed completely, filled with suitable sub-grade material and leveled.
- Any compacted ground will be tilled, mixed with suitable sub-grade materials and leveled.
- Topsoil will be spread as necessary to ensure suitable conditions for vegetation re-growth and reseeded with native seed mix to promote vegetation.

The project fence and existing fire access roads may remain in place upon written consent of the landowner.

#### 2.9 Management of Wastes and Excess Materials

All waste and excess materials will be disposed of in accordance with local, state and federal laws. Waste that can be recycled under municipal programs will be done accordingly. Waste that requires disposal will be disposed of in a state licensed facility by a state licensed hauler.

#### 2.10 Emergency Response and Communications Plans

During decommissioning, <u>Tenant</u> will coordinate with local authorities, the public, and others as required to provide them with information about the ongoing activities. Besides regular direct/indirect communication, signs will be posted at the Project facility to give information to the local public and visitors. The <u>Tenant</u> contact information (telephone number, email and mailing address) will be made public for those seeking more information about the decommissioning activities and/or reporting emergencies and complaints. All inquiries will be directed to the Tenant Representative who will respond to any inquiry. In the event of an emergency, Tenant will mobilize its resources to the site to respond to the event. Personnel involved in decommissioning will be trained in the emergency response and communications procedures. Emergency response procedures will be prepared prior to decommissioning.

#### 3. PROJECT DECOMMISSIONING COST ESTIMATE

#### 3.1 Cost Estimate:

Tenant shall provide a detailed Decommissioning Cost Estimate, prepared by a North Carolina Licensed Engineer, prior to the issuance of building permits, which shall include the following:

- a) the gross estimated cost to perform Decommissioning as set forth in Section II above ("Gross Cost"):
- b) an increase of the Gross Cost by 10% in order to eliminate any discrepancy in cost estimation techniques ("**Contingency**");
- the estimated resale and salvage values associated with the Project equipment ("Salvage Value");

d) a reduction from the Salvage Value by 10% such that only 90% of the Salvage Value can be used as a credit against the Gross Cost and Admin Factor. The Salvage Value multiplied by 90% is the ("Salvage Credit").

Thus the Decommissioning Cost Estimate formula is:

Gross Cost + Contingency -Salvage Credit = the "Decommissioning Cost Estimate".

The Decommissioning Cost Estimate shall be an amount equal to at least \$500 per acre.

The Decommissioning Cost Estimate shall include a table allocating the net cost estimate across the Project area, based on the percentage of generating capacity in megawatts (MW) on each property ("Allocation Areas"). The Allocation Areas will be divided based upon the lease areas, however Allocation Areas will reference the underlying land, in case ownership of the underlying land changes control during the life of the Project.

#### 3.2 Security:

Tenant will provide an amount equal to the Decommissioning Cost Estimate (as determined by a North Carolina Licensed Engineer, per section 3), ("**Decommissioning Security**"). Decommissioning Security shall be provided by Tenant prior to the Commercial Operation Date and shall be increased every five years based on an assumed 2.5% annual inflation rate.

The Decommissioning Security may be in one of the following forms: (i) cash to be held in escrow by the County Treasurer or a bank or title company, or (ii) a letter of credit from a financial institution reasonably acceptable to the County which shall be irrevocable unless replaced with cash or other form of security reasonably acceptable to County (each a form of "Acceptable Credit Support").

In the event that security similar to the Decommissioning Security is required by any governmental entity, such security shall be credited against the Decommissioning Security, and Tenant shall deposit the higher amount as Acceptable Credit Support, which deposit may be split into more than one deposit to the extent reasonably required under the circumstances.

Tenant, Landlord, and, if applicable, the applicable governmental entity and bank or title company shall enter into an escrow agreement to govern the review of the work required hereunder and the disbursement of the Decommissioning Security consistent with this decommissioning plan. If the governmental entity requires, the escrow shall be administered by such governmental entity, and if not so required, shall be administered by a bank or title company reasonably determined by Tenant.