

# **SR Litchfield, LLC Solar Facility Decommissioning Plan**

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## Attachment

- A Project Decommissioning Schedule
- B First Solar Module Recycling Process

## **1. Introduction**

### **1.1. Background**

As a condition of approval of the Connecticut Siting Council (“CTSC”) Declaratory Ruling, CTSC required SR Litchfield, LLC (“SR Litchfield”), a wholly-owned subsidiary of Silicon Ranch Corporation, to submit a Decommissioning Plan for the SR Litchfield Solar Facility for review and approval. The Decommissioning Plan is required to include a detailed plan with time frames or milestones after termination of operations for restoring the property to the conditions that existed prior to the plant construction.

The useful life of the solar plant is expected to be 40 years or more. At the end of useful life, or upon termination of the Power Purchase Agreement, SR Litchfield will suspend operations and decommission the plant including necessary demolition and site reclamation.

### **1.2. Plan Purpose**

The purpose of this document is to establish a detailed plan for decommissioning and reclamation activities after the useful life of the project has ended. Refinement of these activities will be required to reflect the future best practices or improvements are discovered by the solar industry during the life of the project. It will be necessary to update and finalize this demolition and reclamation plan.

In addition to the detailed plan, a general schedule for the performance of the decommissioning with specific milestones is provided as Attachment A. We have assumed that the planning process would be initiated one or two years prior to the anticipated end of commercial operation. The final plans will be developed in consultation with the CTSC and/or other applicable agencies that have jurisdiction of activities in the decommissioning process.

## **2. Decommissioning Project Elements and Milestones**

The key tasks of the project are divided into related activities that represent milestones in the process. We describe the activities in each of the tasks in more detail below. The decommissioning schedule presents the conceptual timing of the milestones and overall process.

The key Project components to be affected by decommissioning activities are discussed below. In general, decommissioning would attempt to maximize the recycling of all facility components. Specific opportunities for recycling are discussed below in the context of various site components. The individual Project components to be decommissioned will be recycled to the maximum extent practicable or removed from the site and disposed of at an appropriately

licensed disposal facility. The general decommissioning approach would be the same whether a portion of the Project or the entire Project would be decommissioned.

## **2.1. Planning**

The activities involved in the facility closure will depend on the expected future use of the site. Certain facility equipment and features may be left in place for future uses, such as transmission facilities, roads, and drainage features. At the time of decommissioning, a plan will be submitted to the CTSC and/or other authority having jurisdiction proposing the equipment that will be removed and, if applicable, equipment that will remain, based on expected future use of the site.

Pre-closure activities, include final closure and reclamation planning, that identifies measures to be taken to restore the site to near pre-construction conditions or compatible with surrounding land and land use that may have evolved during the period the plant is in service. This includes several activities:

- Set up and document a site-specific health and safety plan and determine the specific sequence and procedures to be followed.
- Complete an analysis of the project materials and their composition to identify those specific components that may be recycled, scrapped, or sent to disposal sites. Identify specific recycling facilities and disposal sites for materials.
- Coordinate with local officials to develop plans for the transportation of materials and equipment to and from the site.
- Develop specifications for demolition and reclamation, which will serve as the basis for contractor bids for the decommissioning project and establish the scope of demolition and reclamation, including developing reclamation plans in compliance with local, state, and federal regulations.
- Develop training for the personnel who will manage and perform the actual work. Document the performance or training.

## **2.2. Permitting**

During the planning process Silicon Ranch will brief CTSC and other applicable agencies on the decommissioning process and plans. The permits and approvals required for the decommissioning will be identified and permits will be obtained prior to commencing operations.

### **2.3. Site Preparation for Decommissioning**

The first step in the decommissioning process would be to assess existing site conditions and prepare the site for demolition. Site decommissioning and equipment removal is expected to take a year. Therefore, access roads, fencing, some electrical power, and other facilities will temporarily remain in place for use by the decommissioning workers until no longer needed. Demolition debris will be placed in temporary onsite storage area(s) pending final transportation and disposal and/or recycling according to the procedures listed below.

A plan for de-energizing portions of the facility to allow safe decommissioning and formal lock out and tag out procedures will be implemented. This will ensure all electrical components are placed and maintained in a safe condition for demolition activities prior start of work.

### **2.4. Disassembly and Demolition**

#### **PV Module and Tracker Removal and Recycling**

During decommissioning, Project components that are no longer needed would be removed from the site and recycled or disposed of at an appropriately licensed disposal facility. The first operation is to disconnect and remove modules from the tracker assemblies. Modules are segregated for transportation to the manufacturer's nearest storage facility.

After modules are removed, the disassembly of the tracker and mounting structures, DC wiring materials, and combiner boxes will occur. The material will be segregated for disposal or salvage. Steel piles that support the PV racking system will be removed. Below ground portions of the supports will either be removed or cut off at least two feet below ground surface and left in place.

The demolition debris and removed equipment may be cut or dismantled into pieces that can be safely lifted or carried with the onsite equipment being used. The debris and equipment will be processed for transportation and delivery to an appropriately licensed disposal facility or recycling center. Modules will be recycled or disposed of in accordance with applicable laws at the time of decommissioning.

#### **Internal Power Collection System**

The combiner boxes that convey DC power generated from the solar arrays will be dismantled. The inverters that convert the DC power to AC power and the transformers that convert the output of the inverter and convey the power to the point of interconnection will also be dismantled and removed. The underground cable/collection lines that are installed at a depth of 4 feet or shallower will be removed from the site. The cast-in-place concrete foundations of the transformer and inverter skids and switchgear will be broken up, removed, and recycled.

Any overhead portions of the collection system will be removed. Overhead conductors will be removed from the poles, and the poles and pole foundations will be removed. Aluminum from the conductors will be recycled or removed from the site to an appropriately licensed disposal facility. If not planned for other use, the utility interconnection will be deactivated and restored to the extent agreed upon with the local utility or to the point of change of ownership.

Medium voltage collector system electrical components will be electrically disconnected and made safe for removal. The switches will be disassembled and removed from the site. The underground conduit and metal dead-end structures will also be disassembled and removed. Concrete foundations for equipment will be broken up and removed from the site, as will the grounding grid and aggregate rock. Steel, aluminum, copper, and other materials will be temporarily stockpiled at or near a designated processing location pending transport to an appropriate offsite recycling facility. All metals will be recycled to the extent practical given the recycling options available at the time of decommissioning.

**Roads**

Onsite access roads will remain in place to accomplish decommissioning at the end of the Project's life. At the time of decommissioning, if the roads will be beneficial for future use of the site, those roads may remain after decommissioning. Roads that will not remain will be restored during contouring operations at the end of the process.

**Fencing**

Project site perimeter fencing will be removed at the end of the decommissioning project unless it may be utilized for future use of the site. Since the project site was not originally fenced, this includes removal of all posts, fencing material, gates, and any other ancillary material in order to return the site to pre-project condition.

**2.5. Transportation and Clean up**

During the disassembly and demolition process materials are segregated and temporarily placed in gathering areas for transportation. The various materials including concrete, steel, aluminum, copper, and other materials will be temporarily stockpiled at or near a designated processing location pending transport to an appropriate offsite recycling facility. All such materials will be transported from the site to approved designated facilities for recycling, scrapping, or disposal. All metals will be recycled to the extent practical given the recycling options available at the time of decommissioning. Modules will be collected and transported to storage sites for final recycling in accordance with the selected module manufacturer's standard process for module recycling.

Clean up of soils and site, if identified will be completed to ensure that clean closure is accomplished.

## **2.6. Re-contouring and vegetation**

In general, the decommissioning will be undertaken using traditional heavy construction equipment including but not limited to front end loaders, cranes, track mounted and rubber-tired excavators, bull dozers, and scrapers. Where excavation is required those areas of removal will be backfilled with natural material and compacted. Any voids left from the removal of foundations will be backfilled with surrounding subsoil and topsoil and fine graded to ensure suitable drainage and reclamation of natural grades.

Soil management and re-contouring operations will be conducted so as to minimize the surface area disturbance and implement the activities in the safest and most efficient manner and in accordance with applicable local requirements. The site will be left as grades established during initial project construction and major earthwork is not anticipated during the decommissioning phase of the project.

To provide for post-decommissioning dust control on the site, areas of exposed soils will be revegetated, consistent with the expected future use of the site. For example, if future site use is expected to be agricultural, a revegetation approach will be implemented that will not conflict with the expected agricultural use. The native dry grass vegetation will be re-established to prevent the spread of weeds and long-term monitoring will be conducted to confirm reclamation and weed control are successful. Mulching or other suitable measures may be used for temporary dust control until vegetation is established.

## **2.7. Monitoring Site Restoration**

Upon completion of the decommissioning process a restoration monitoring period of an anticipated one year will begin. Monitoring will ensure that grading and drainage implemented is successful in stabilizing water flow patterns and that the cover vegetation (native dry grass vegetation or other depending on land use) will be reestablished to prevent the spread of weeds. Corrective actions will be implemented if such monitoring determines adverse conditions are present as a result of an inadequate restoration.

## **2.8. Project Quality Control and Documentation**

During the entire decommissioning process, from planning to site monitoring, the project will be subject to quality control and documentation. Silicon Ranch will ensure the effective execution of the decommissioning and reclamation plan through project oversight and quality assurance. In addition, we will document implementation of the plan and compliance with all applicable regulatory and environmental requirement.

# **3. Decommissioning Project Schedule**

A schedule for the performance of the decommissioning with specific milestones is provided as Attachment A. Refinement of these activities will be required to reflect the future best practices

or improvements are discovered by the solar industry during the life of the project. It will be necessary to update and finalize this demolition and reclamation plan and our proposed schedule.

We have assumed that the planning process would be initiated one or two years prior to the anticipated end of commercial operation. Planning for the decommissioning activities and the associated permitting is scheduled far in advance to allow for meaningful consultation with the CTSC and/or other applicable agencies. Permitting will be finalized prior to the start of onsite activities.

The actual disassembly and decommissioning, followed by transporting materials offsite, and recontouring of the site, should require about a year, after which a monitoring process will continue for an additional year. The entire process will require as much as four years to complete.



