

**Arche Solar Project**

**Case No. 20-0979-EL-BGN**



**Exhibit L**

**Decommissioning Plan**

# Decommissioning Plan

## Arche Solar

Gorham Township,  
Fulton County, Ohio

Prepared by:



Arche Energy Project, LLC  
a wholly-owned subsidiary of 7X Energy, Inc.  
3809 Juniper Trace, Suite 100  
Austin, TX 78738  
Contact: Cliff Scher, Director of Project Development  
Tel: 866.298.1632

With assistance from:



Environmental Design & Research,  
Landscape Architecture, Engineering & Environmental Services, D.P.C.  
217 Montgomery Street, Suite 1000  
Syracuse, New York 13202  
P: 315.471.0688  
F: 315.471.1061  
[www.edrdpc.com](http://www.edrdpc.com)

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## **Introduction**

Arche Energy Project, LLC (Arche) has prepared this Decommissioning Plan for the approximately 675-acre Arche Solar (the Facility) in Fulton County, Ohio. This Plan was prepared to ensure proper decommissioning of the Facility. This Plan provides a description of decommissioning and restoration of the Facility to meet the requirements of the Ohio Power Siting Board (OPSB).

## **Solar Farm Components**

The Facility components will include approximately 340,000 photovoltaic solar panels that will be mounted on a single-axis tracker system. Steel piles will be the foundation of the tracker system. Moreover, Facility components include approximately 33 inverters (all rated at 3.24 MW) and medium voltage transformers, underground and overhead electrical cabling and conduits, Facility substation, a short overhead transmission line, an operations and maintenance building, Supervisory Control and Data Acquisition (SCADA) system, control building, private access roads with gated ingress/egress points, and security fencing. Temporary facilities associated with construction will include a construction laydown yard and temporary office and bathroom trailers. The components of the Facility to be decommissioned are described in detail in the Application for a Certificate of Environmental Compatibility and Public Need.

## **Anticipated Facility Life**

Facility decommissioning will be initiated when the Facility reaches the end of its operational life. Arche Energy Project, LLC will be responsible for the decommissioning of the Facility. The operational life of the Facility is anticipated to be 30-40 years. At the end of the Facility's useful life, the panels and associated components will be decommissioned and removed from the Facility site. Arche will notify the OPSB at least 30 days prior to commencement of decommissioning.

## **Permitting**

Prior to the start of decommissioning, Arche will obtain all necessary permits, including, but not limited to:

- Compliance with Section 404 of the Clean Water Act.
- Stormwater Pollution Prevention Plan (SWPPP) in accordance with Ohio EPA General Construction Stormwater Permit.
- Fulton County building, road, or erosion control permits (as necessary).
- Fulton County Soil and Water Conservation District permit for activity that involves the crossing, modifying, or discharge of stormwater into a county drain.
- Ohio Department of Transportation Special Hauling Permits (as necessary).

## **Decommissioning Sequence**

Decommissioning activities will begin within 12 months of the Facility ceasing operation and are anticipated to be completed in three to six months. Monitoring and site restoration may extend beyond this period to ensure successful revegetation and rehabilitation. All the Facility components constructed above ground and any structures up to a minimum removal depth of three feet below grade will be removed offsite for disposal or recycling.

All required approvals will be obtained prior to the start of decommissioning. The following activities are anticipated to be carried out in the order described below, although overlap is expected.

1. Prepare the site for component removal, including strengthening to the access roads, if needed
2. Install temporary fencing and best management practices (BMPs) to protect sensitive resources
3. De-energize solar arrays, if not already de-energized
4. Dismantle panels and racking
5. Remove frame and internal components
6. Remove portions of structural foundations up to a minimum removal depth of three feet below the surface and backfill sites
7. Remove inverters and transformers
8. Remove electrical cables and conduits up to a minimum removal depth of three feet below the surface
9. Remove access and internal roads and grade site (unless requested to be kept in place by owner)
10. Drain tiles damaged during the decommissioning activities will be replaced with functional equivalent system as needed or as requested by the owner
11. Restore, and revegetate disturbed land to pre-construction conditions to the extent practicable

## Decommissioning Expenses and Financial Assurance

Prior to the start of construction, Arche will retain an independent and registered professional engineer to calculate the net decommissioning costs for the Facility as outlined in the plan. Cost estimates will be recalculated every five years over the life of the Facility. This calculation will include the total cost estimate for implementing the decommissioning plan, accounting for any unanticipated contingencies and estimates of salvage value of the Facility components. Arche will post and maintain a surety bond or similar financial assurance instrument in that amount for the removal of the Facility at least three years prior to the earlier of the termination of any Facility Power Purchase Agreement or the operational life of the Facility. If a subsequent calculation of the decommissioning cost increases, the financial assurance instrument will be increased to a higher amount.

## Decommissioning Cost Estimate

Decommissioning costs will be detailed in a format similar to Table 1 below, including labor and material expenses for removal of solar modules, tracking system, steel posts, transformers and inverters, access roads, perimeter fencing, and cabling (NYSERDA, 2020). Labor will be calculated based on full-time equivalent staff. Restoration activities include topsoil replacement, seeding, and the overall restoration of land. The below cost estimate for a 2 MW Facility is provided as an example. Prior to construction, Arche will engage an independent engineer to calculate net decommissioning costs for the final Facility design.

**Table 1. Example of Decommissioning Costs for 2 MW Project**

Task	Estimated Cost
Remove Rack Wiring	\$ 2,459
Remove Panels	\$ 2,450
Dismantle Racks	\$ 12,350
Remove Electrical Equipment	\$ 1,850
Breakup and Remove Concrete Pads or Ballasts	\$ 1,500

Remove Racks	\$ 7,800
Remove Cable	\$ 6,500
Remove Ground Screws and Power Poles	\$ 13,850
Remove Fence	\$ 4,950
Grading	\$ 4,000
Seed Disturbed Area	\$ 250
Truck to Recycling Center	\$ 2,250
<b>Current Total</b>	<b>\$ 60,200</b>
<b>Total After 20 Years (2.5% inflation rate)</b>	<b>\$ 98,900</b>

## References

NYSERDA. (2020). *Solar Guidebook for Local Governments, Decommissioning Solar Panel Systems*. Albany: NYSERDA.