Hecate Energy
Cider Solar Farm

Exhibit 23: Site Restoration and Decommissioning

Cider Solar Farm
Towns of Oakfield and Elba
Genesee County, New York

Matter No. 21-01108

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Glossary of Terms

Applicant	Hecate Energy Cider Solar LLC
Project	Refers to the proposed Cider Solar Farm, an up to 500-megawatt utility scale solar project that will be comprised of photovoltaic panels, inverters, access driveways, electrical collection lines, point of interconnection/substation, construction staging areas, fencing and plantings, located on private land in the towns of Elba and Oakfield, Genesee County, New York.
Project Area	Refers to the Project Site and surrounding/adjacent land totaling approximately 7,518 acres.
Project Footprint	Refers to the limit of temporary and permanent disturbance within the Project Site caused by the construction and operation of all components of the Project totaling approximately 2,452 acres.
Project Site	Refers to those privately owned parcels under option to lease, purchase, easement or other real property interests with the Applicant in which all Project components will be sited totaling approximately 4,650 acres.

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The content of Exhibit 23 is provided in conformance with Chapter XVIII, Title 19 of the New York Codes, Rules, and Regulations (NYCRR) § 900-2.24, as follows.

a) Decommissioning and Site Restoration Plan

The *Decommissioning and Site Restoration Plan* (Plan; Appendix 23-A of this Application), provides a description of the decommissioning and restoration phase of the Project. Start-of-construction is planned for mid-2022, with a projected Commercial Operation Date in the fourth quarter of 2023. The decommissioning phase will commence at the end of the useful life of the Project, which is expected to be 30 years, and will include the removal of the main Project components:

- Solar modules and associated above ground cabling
- Tracking system and steel piles
- Inverter/transformer stations
- Site access and internal roads
- Perimeter fencing
- Electrical cabling and conduits
- Project substation and electrical generation tie-in line

The Plan includes an overview of the primary decommissioning and restoration Project activities, including the dismantling and removal of facilities, and subsequent restoration of land. The summary statistics and estimates provided are based on a 500-megawatt alternating current Project array design.

1) Safety and the Removal of Hazardous Conditions

All decommissioning activities will be supervised and carried out by trained personnel familiar with the risks associated with decommissioning electrical and/or potentially hazardous materials. During decommissioning, all non-recyclable waste materials will be disposed of in accordance with state and federal law in an approved licensed solid waste facility.

2) Environmental Impacts

The Project is predominantly located on land currently utilized for agricultural purposes. A detailed description of the land on which the Project will be located can be found in Exhibit 3: *Location of Facilities and Surrounding Land Use* of this Application.

The areas of the Project that were previously utilized for agricultural purposes will be restored according to the Plan and applicable regulatory standards. If available, topsoil moved during construction of the Project will be utilized during site restoration.

Portions of the Project that have been excavated and backfilled will be graded to restore land contours as near as practicable to preconstruction conditions. Soils compacted during de-construction activities will be de-compacted, as necessary, to restore the land to pre-construction land use. If present, surface drainage structures, such as culverts, that have been damaged will be repaired or replaced to maintain appropriate

drainage. Topsoil will be placed on disturbed areas, as needed, and seeded with appropriate vegetation or in coordination with the current landowner, and in compliance with regulations in place at the time of decommissioning.

Project components are being sited to avoid wetlands, waterways, and drainage ditches to the extent practicable. Surface water conditions at the Project site will be reassessed prior to the decommissioning phase. Hecate will obtain the required water quality permits, and construction storm water permits prior to decommissioning. A Stormwater Pollution Prevention Plan (Appendix 13-C of this Application) has been prepared describing the protection needed to reflect conditions present at the time of decommissioning. Best management practices may include construction entrances, temporary seeding, permanent seeding, mulching (in non-agricultural areas), erosion control matting, silt fence, filter berms, and filter socks.

Additional potential impacts from decommissioning efforts include elevated sound levels; however, such activities will occur during daylight hours and will conform to any local sound limitations and applicable restrictions.

3) Aesthetics

All Project-owned aboveground features will be removed. The areas of the Project that were previously utilized for agricultural purposes will be restored according to the Plan and as required by applicable regulations. Disturbed areas will be seeded using native plant material and seed mixes appropriate for the area. After site restoration, the site will resemble the aesthetic character of the site prior to Project construction.

4) Recycling

Components of the Project such as the solar panels could be sold in the wholesale market for reuse or refurbishment. As efficiency and power production of the panels decrease due to aging and/or weathering, the resale value will decline accordingly. Secondary markets for used solar components include other utility scale solar facilities with similar designs that may require replacement equipment due to damage or normal wear over time, or other buyers (e.g., developers, consumers) that are willing to accept a slightly lower power output in return for a significantly lower price point when compared to new equipment.

Components with no wholesale value will be salvaged and sold as scrap for recycling or disposed of at an approved offsite licensed solid waste disposal facility. Most of the materials to be removed have salvage value, although there are some components that will likely have none at the time of decommissioning. All recyclable materials, salvaged and non-salvage, will be recycled to the extent possible. All other non-recyclable waste materials will be disposed of in accordance with state and federal law in an approved licensed solid waste facility.

At the time of decommissioning, module components in working condition may be refurbished and sold in a secondary market yielding greater revenue than selling as salvage material. Electronic components and internal electrical wiring will be removed and salvaged. The supports, tracking system, and piles contain salvageable materials which will be sold to provide revenue to offset decommissioning costs. Depending on condition, the equipment may be sold for refurbishment and re-used. If not re-used, they will be

salvaged or disposed of at an approved solid waste management facility. The Plan assumes that all underground cabling will be removed and salvaged. The substation transformers may be sold for re-use or salvage. Components of the substation that cannot be salvaged will be transported off-site for disposal at an approved waste management facility.

5) Potential Future Uses for the Site

The areas of the Project that were previously utilized for agricultural purposes will be restored according to the Plan and applicable regulations, thereby resuming the site uses that occurred prior to construction. Restoration measures will be carried out in accordance with landowner agreements and as described in the New York State Department of Agriculture and Markets Guidelines for Agricultural Mitigation for Solar Energy Projects.

6) Funding

The decommissioning security requirements of 19 NYCRR §§ 900-2.24(c), 900-6.6(b) differ from the decommissioning security requirements of the Zoning Law of the Town of Elba. There are no applicable decommissioning security requirements under Town of Oakfield law.

The Applicant has committed to decommissioning and restoring the Project Footprint to the substantive requirements set forth in the Zoning Law of the Town of Elba, which are stricter than those under 19 NYCRR Part 900. The Applicant has committed to provide a financial guarantee, in the form of a bond, equal to 125% of the gross decommissioning and site restoration estimate to the Towns of Elba and Oakfield, with an escalator of two percent (2%) annually for the life of the Project. In accordance with the Zoning Law of the Town of Elba, the Plan and amount of financial security shall be updated every fifth year thereafter specifying changes to the estimated cost of decommissioning the Project.

7) Schedule

Decommissioning activities will begin within 12 months of the Project ceasing operation. Town of Elba regulations require that decommissioning be completed within 12 months of Project termination. Duration of each activity listed below will be determined by the decommissioning contractor chosen; however, all activities will be completed within the 12-month timeframe. Monitoring and site restoration may extend beyond this period to ensure successful revegetation and rehabilitation. The anticipated sequence of decommissioning, removal, and restoration of facilities is described below; however, overlap of activities is expected:

- Reinforce access roads, if needed, and prepare site for component removal
- Install temporary fencing and utilize best management practices to protect sensitive resources
- De-energize solar arrays
- Dismantle panels and above ground wiring
- Remove tracking and piles
- Remove inverter/transformer stations, along with support piers and piles
- Remove electrical cables and conduits located below the ground surface

- Remove access and internal roads and grade site
- Remove project substation and generation tie-in line, if decommissioned
- De-compact subsoils (as needed), restore and revegetate disturbed land to pre-construction land use to the extent practicable

b) Site Restoration and Decommissioning on Land Owned by Others

All Project components will be located on private land under lease, option, or easement agreements with the landowners and all such agreements contain a provision on decommissioning and site restoration. Decommissioning will involve the removal of all above ground Project components and below ground components 4 feet (48 inches), consistent with the Plan. Foundations, steel piles, and below ground electrical cabling and conduit will be removed. Access roads may be left in place if requested and/or agreed to by the landowner.

Portions of the Project Footprint that have been excavated and backfilled will be graded as previously described to restore land contours as near as practicable to preconstruction conditions. Soils compacted during de-construction activities will be de-compacted, as necessary, to restore the land to pre-construction land use. If present, drain tiles that have been damaged will be repaired or replaced to maintain appropriate drainage. Topsoil will be placed on disturbed areas, as needed, and seeded with appropriate vegetation or in coordination with the current landowner, and in compliance with regulations in place at the time of decommissioning.

The Applicant will communicate with the appropriate agencies having jurisdiction to coordinate the repair of public roads damaged or modified during the decommissioning and reclamation process.

The Plan and financial security shall be updated every fifth year thereafter, specifying changes to the estimated cost of decommissioning the Project.

c) Decommissioning and Site Restoration Estimate

The decommissioning security requirements of 19 NYCRR §§ 900-2.24(c), 900- 6.6(b) differ from the substantive decommissioning security requirements of the Zoning Law of the Town of Elba.[1] The Applicant has committed to decommissioning and restoring the Project Site according to the applicable substantive requirements set forth in the Zoning Law of the Town of Elba, which, as described herein, are stricter than those described in 19 NYCRR Part 900. Therefore, in particular, the Applicant requests that the New York State Office of Renewable Energy Siting grant a waiver from the less stringent requirements of 19 NYCRR §§ 900-2.24(c), 900- 6.6(b) with regard to the calculation of the amount of decommissioning security, and instead apply the Town of Elba's decommissioning security requirements.

Pursuant to 19 NYCRR § 900-6.6(b), the Applicant may calculate the total amount of financial security based on a net decommissioning cost, which is "the overall decommissioning and site restoration estimate plus a fifteen (15) percent contingency cost less the total projected salvage value of facility components." In contrast, the Town of Elba requires security in the amount of "125% of the cost of

[1] Town of Elba, Zoning Law §§ 413(F)(5)(c), 413(F)(2)(m).

removal of the Tier 3 Solar Energy System and restoration of the property with an escalator of 2% annually for the life of the Solar Energy System."[2] In addition, the Town of Elba's revised local law requires the financial security to be updated every 5 years specifying changes to the estimated cost of implementing the decommissioning plan. The Town of Elba disallows netting salvage value for the purpose of establishing the amount of security and uses a higher contingency cost factor (125%) than the 94-c requirement (115%). In all material respects, the requirements for decommissioning (excepting the security posting requirements) are consistent between the Zoning Law of the Town of Elba and 19 NYCRR §§ 900-2.24, 6.6. In fact, the Town of Elba requires that additional measures be taken to (1) bury disturbed soils with at least 6 inches of native topsoil that is free of large rocks; (2) ensure that distributed soils be stabilized within 2 weeks with a perennial grass stabilization mix using New York State Department of Environmental Conservation erosion and sediment control methods; and (3) update the plan as new strategies or technologies are developers or as new regulations or guidelines are put in place over the lifespan of the array.[3]

The Town of Oakfield's Zoning Ordinance[4] does not contain decommissioning or decommissioning security requirements for solar or any other public utility use. If the Solar Ordinance were effective, the Project meets the decommissioning and decommissioning security positing requirements of the Solar Ordinance in all material respects. The Solar Ordinance requires a decommissioning plan that ensures "the site will be restored to a useful, nonhazardous condition without delay, including but not limited to, the following:

> (i) Removal of aboveground and below-ground equipment, structures and foundations.
>
> (ii) Restoration of the surface grade and soil after removal of equipment.
>
> (iii) Revegetation of restored soil areas with native seed mixes, excluding any invasive species.
>
> (iv) The plan shall include a time frame for completion of site restoration work. Plans shall include an estimated cost schedule and a decommissioning security in the form of bonds to guarantee the availability of funds for the system removal. The bond amount equals the decommissioning and reclamation costs for the entire system. The bond must remain valid until the decommissioning obligations have been met. Therefore, the bond must be renewed or replaced if necessary to account for any changes in the total decommissioning cost. A licensed professional engineer shall estimate decommissioning cost of the system. The cost schedule shall take into account a reasonable rate of inflation."

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[2] *Id.* § 413(F)(5)(c).
[3] *Id.* § 413(F)(2)(m).
[4] As discussed in depth in Exhibit 24: *Local Laws and Ordinances* of this Application, in 2018, the Town of Oakfield sought to enact a Solar Ordinance. There is no record that the Town Board of Oakfield published the Solar Ordinance either in its minutes or in a required publication. The Applicant conducted a diligent search for such records and does not believe that the Solar Ordinance was properly enacted and, thus, does not believe the Solar Ordinance is effective.

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The Plan incorporates these requirements, which are either consistent with or less stringent than the 19 NYCRR Part 900 requirements.

Though the Project is planned to be located in the towns of Elba and Oakfield, the Applicant will calculate its decommissioning security amount for the entire Project using the more stringent requirements imposed by the Town of Elba and will ensure agreed-upon assurance is posted with each town. The Applicant has committed to provide financial security, in the form of a bond, equal to 125% of the cost of removal of the Project and restoration of the property (the gross decommissioning and site restoration estimate), with an escalator of 2% annually for the life of the Project. In accordance with the Zoning Law of the Town of Elba, the Plan and amount of financial security shall be updated every fifth year thereafter, specifying changes to the estimated cost of decommissioning the Project.

Excluding the substation, 61.7% of the facilities are located in the Town of Elba, and the other 38.3% is located in the Town of Oakfield. The Project allocates costs to each town, then adds the cost of the substation removal, to calculate the total amount of each town's respective financial security, which will be discussed and agreed upon with the respective jurisdictions.

Expenses associated with decommissioning and site restoration at the Project are as follows:

Table 23-1: Estimated Decommissioning Expenses

Activity	Unit	Number	Cost per Unit	Total
Overhead and management (includes estimated permitting required)	Lump Sum	1	[redacted]	[redacted]
Solar modules; disassembly and removal	Each	1,340,200	[redacted]	[redacted]
Tracking system disassembly and removal	Each	16,546	[redacted]	[redacted]
Steel pile/post removal	Each	183,770	[redacted]	[redacted]
Inverter/transformers stations	Each	147	[redacted]	[redacted]
Remove buried cable	Linear Feet	400,224	[redacted]	[redacted]
Access road excavation and removal	Lump Sum	1	[redacted]	[redacted]
Topsoil replacement and rehabilitation of site (including access road restoration)	Lump Sum	1	[redacted]	[redacted]
Perimeter fence removal	Lineal Foot	278,105	[redacted]	[redacted]
Public road repair	Percent/Total	1	[redacted]	[redacted]
Electrical generation tie-In line removal	Linear Mile	0.09	[redacted]	[redacted]
Substation removal (two transformers)	Lump Sum	1	[redacted]	[redacted]
Total estimated decommissioning cost prior to contingency fund				[redacted]

Table 23-2a and Table 23-2b represent the total estimated net decommissioning costs with applicable contingency funds applied per 19 NYCRR Part 900 and the Zoning Law of the Town of Elba, respectively.

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Table 23-2a: Net Decommissioning Summary (19 NYCRR Part 900 Requirement)

Item	Cost/Revenue
Decommissioning Expenses	[redacted]
Contingency Fund (15%)	[redacted]
Total Estimated Decommissioning Cost Including 15% Contingency Fund	[redacted]
Potential Revenue – salvage value of panel components and recoverable materials	[redacted]
Net Decommissioning Cost	[redacted]

Table 23-2b: Net Decommissioning Summary (Town of Elba Zoning Law Requirement)

Item	Cost/Revenue
Decommissioning Expenses	[redacted]
Contingency Fund (25%)	[redacted]
Total Estimated Decommissioning Cost Including 25% Contingency Fund (No Salvage Value Included)	[redacted]