



Hecate Energy Albany 1 LLC and Hecate Energy Albany 2 LLC

# **Coeymans Solar Farm**

**Case No. 17-F-0617**

**1001.20 Exhibit 20**

**Cultural Resources**

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## **EXHIBIT 20            CULTURAL RESOURCES**

This Exhibit addresses the requirements specified in Stipulation 20. Each subsection of this Exhibit aligns with the subsections contained in Stipulation 20.

Consistent with 16 New York Codes, Rules, and Regulations (NYCRR) § 1001.20; Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law of 1980; and the New York Archaeological Council's (NYAC) *Standards for Cultural Resource Investigations and Curation of Collections* (NYAC 1994; "NYAC Standards"), Hecate Energy Albany 1 LLC and Hecate Energy Albany 2 LLC (the Co-Applicants) have consulted with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) to develop the scope and methodology for cultural resources studies for the Coeymans Solar Farm (the Facility). Correspondence between the Co-Applicants and the OPRHP are provided in Appendix 20-A. To date, formal consultation with the OPRHP has included initiating Facility review, consultation, and submission of technical reports through the OPRHP's Cultural Resources Information System (CRIS) website.<sup>1</sup>

### **(a)    Impacts on Archaeological Resources**

#### **(1)    Summary of Archaeological Impacts and Avoidance or Mitigation Measures**

Tetra Tech, Inc. (Tetra Tech) was contracted by the Co-Applicants to conduct a Phase I Archaeological Resources Investigation for the Facility, which is proposed on an approximately 436-acre area in the town of Coeymans, Albany County, New York (the Facility Area). Tetra Tech initiated consultation with the OPRHP on March 22, 2018 (Appendix 20-A), which confirmed that a Phase I investigation was required. A Phase IA archaeological investigation was conducted, and the report was submitted to the OPRHP on March 22, 2018 (Appendix 20-B). No previously identified archaeological resources are located within the Facility Area. Due to the general cultural history of the region and the presence of favorable environmental features, however, the Facility Area is considered archaeologically sensitive for both historic and precontact archaeological sites, and, as a result, the Facility has the potential for adverse effects on archaeological resources.

A Phase IB archaeological survey was initiated December 17, 2018; however, the study was temporarily suspended due to inclement weather. Archaeological fieldwork resumed on April 22, 2019 and was completed on May 3, 2019. During the field work, two newly identified archaeological resources were recorded, both of which are precontact Native American sites, neither of which is recommended as eligible for the S/NRHP. The archaeological resources identified during the Phase IB survey are summarized in Table 20-1 and discussed in detail in the Phase IB Archaeological Resources Survey Management Summary, provided as Appendix 20-C.

Tetra Tech, with guidance from the OPRHP, determined the archaeological Area of Potential Effect (APE) for the Facility to consist of all areas of intensive ground disturbing activities, including approximately 25 acres of tree clearing areas, inverter pads, switching stations, and temporary laydown areas, and approximately 11 miles of trenching for subsurface transmission lines. No potentially significant archaeological resources were identified within the archaeological APE during the Phase IB investigation.

If unanticipated archaeological resources are encountered during construction, the Facility's Unanticipated Discovery Plan will include provisions to stop all work in the vicinity of the archaeological finds until those resources can be evaluated and documented by a Registered Professional Archaeologist (RPA). The

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<sup>1</sup>ORPHP's Cultural Resources Information System is accessible at: <http://www.nysparks.com/shpo/online-tools/>.

Unanticipated Discovery Plan is attached to this Exhibit as Appendix 20-D.

**Table 20-1. Summary of Archaeological Sites Identified During the Phase IB Survey**

Site Name	Description	Recommended Status
C28	Isolated Find	Not Eligible for S/NRHP; no further work
L2	Isolated Find	Not Eligible for S/NRHP; no further work

**(2) Phase IA Archaeological Resources Study**

Tetra Tech prepared a *Phase IA Archaeological Investigation Report* (Appendix 20-B), which was submitted through the CRIS website on March 22, 2018 and is summarized below. The purpose of the Phase IA archaeological investigation was to: 1) define the Facility’s APE relative to archaeological resources based on the anticipated area of disturbance for Facility components; and 2) determine whether previously identified archaeological resources are located within the APE. Following submission and approval of the Phase IA report by the OPRHP, a Phase IB archaeological survey was initiated following methodology developed in consultation with the OPRHP. The Phase IA report was prepared by professionals who satisfy the qualification criteria per the Secretary of the Interior’s Standards for Archaeology (36 Code of Federal Regulations [CFR] Part 61) and in accordance with the NYAC Standards (NYAC 1994) and applicable portions of the OPRHP’s *Phase I Archaeological Report Format Requirements* (OPRHP 2005).

- Relative to the potential for archaeological sites to be located within the 436-acre Facility Area, the results of the Phase IA archaeological investigation for the Facility can be summarized as follows: there are two previously reported archaeological sites located within 1 mile of the Facility, as summarized in Table 2 of the Appended Phase IA Archaeological Investigation Report:
  - NYSM 2785 / ACP ALBY35 (Unique Site Number [USN] 00102.000034) consists of a precontact camp site. The site has not been evaluated for S/NRHP eligibility. It is located 0.8 mile from the Facility Area and will not be impacted by any Facility-related activities.
  - Pictuay Road / NYSM 10913 (USN 00102.000554) consists of a precontact camp site. The site has not been evaluated for S/NRHP eligibility. It is located 1.0 mile from the Facility Area and will not be impacted by any Facility-related activities.
- Sensitivity for precontact Native American archaeology within the Facility Area is considered to be moderate to high. The Hudson Valley’s abundant hunting and fishing resources and numerous outcroppings of chert for stone tool manufacture made the area attractive for precontact populations to travel or settle in the area. The Facility also has the potential to contain rock outcrops or near-surface bedrock, which would have offered raw materials for stone tool manufacturing. Furthermore, the Hudson River is a major thoroughfare between the Atlantic Ocean and Canada via Lake George and Lake Champlain, as well as the interior of New York via the Mohawk River and numerous smaller waterways (i.e., Feuri-Spruyt Kill, Mosher Brook, and Coeymans Creek).
- Sensitivity for historic archaeology is considered to be high due to proximity to structures identified on historic maps (Figures 4-7 of the appended *Phase IA Archaeological Investigation Report* [Appendix 20-B]). Archaeological resources associated with these sites could include foundations, structural remains, artifact scatters, and/or other features.

In addition, the Phase IA report acknowledges that construction of the Facility will include ground-disturbing activities with the potential to impact archaeological resources. The APE for direct effects (i.e., archaeological resources) includes approximately 25 acres of soil disturbance associated with proposed

grading, inverter pads, switching stations, tree clearing, and laydown areas, and approximately 11 miles of trenching for subsurface transmission lines. Any archaeological sites located within the Facility Area, but not within the archaeological APE, will not be directly affected by the Facility.

### **(3) Phase IB Archaeological Resources Study**

On March 23, 2018, the OPRHP provided a response to the Phase IA Archaeological Investigation Report indicating that the proposed Facility location is considered archaeologically sensitive and that a Phase IB archaeological survey would be required (Appendix 20-A). The Phase IB survey was initiated December 17, 2018 to determine whether archaeological sites are located in areas of ground disturbance for the Facility. The Phase IB survey is being conducted under the supervision of an RPA in a manner consistent with NYAC Standards (NYAC 1994), and a Phase IB report will be prepared in accordance with the OPRHP's *Phase 1 Archeological Report Format Requirements* (OPRHP 2005). The primary methods used during the archaeological survey include shovel tests in hayfields, forest, and shrubland areas, and pedestrian reconnaissance in areas that are steeply sloped or inundated with water. The Phase IB survey is being completed in accordance with the fieldwork plan developed in consultation with the OPRHP.

Fieldwork took place from December 17 to 20, 2018, but was temporarily on December 21, 2018 due to seasonal inclement weather. Archaeological fieldwork resumed on April 22, 2019 and was completed on May 3, 2019. The completed field survey included more than 1,200 shovel test pits across approximately 32 acres of proposed ground disturbance and 11 miles of proposed electric cabling. Two precontact-period artifacts were identified, with none recommended as eligible for the S/NRHP. A management summary of the work completed is provided in Appendix 20-C. The complete Phase IB Archaeological Survey Report will be provided to OPRHP and the Siting Board upon its completion.

### **(4) Phase II Archaeological Site Evaluations**

As no sites meeting or potentially meeting criteria for listing in for the S/NRHP were identified through the Facility's Phase IB survey, avoidance measures and Phase II evaluations are not required for the Facility.

### **(5) Statement on Handling of Recovered Archaeology Material**

In accordance with state guidelines, all precontact artifacts encountered during the Phase IB survey was collected. As previously noted, Tetra Tech collected two precontact artifacts, both lithic reduction flakes identified during initial shovel testing. When artifacts were encountered in the field, Tetra Tech archaeologists recorded standard provenience information and collected each artifact in sealed plastic bags per standard archaeological field practices. Any recovered materials found was washed, dried, and cataloged per standard archaeological laboratory procedures. Pending identification of a permanent curation facility, all artifacts are being stored temporarily in 4-mil<sup>2</sup> polyethylene bags at Tetra Tech's laboratory in Buffalo, New York. Recovered artifacts will be described to a level of detail sufficient to prepare an artifact inventory for inclusion in the Phase IB Archaeological Investigation Report, which will include descriptions of each artifact's material, temporal or cultural/chronological associations (when possible to ascertain), style, and function. In addition, a selection of representative artifacts will be photographed for inclusion in the report.

The Co-Applicants understand that all artifacts recovered during this contract are the property of the landowner from which the artifacts were recovered. The Facility's cultural resources consultant will curate the recovered artifacts in a manner consistent with professional standards, such as the NYAC Standards (NYAC 1994).

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<sup>2</sup> A 'mil' is an imperial unit of measurement that refers to 0.001 inch.

## **(6) Unanticipated Discovery Plan**

An Unanticipated Discovery Plan is attached to this Exhibit as Appendix 20-D. The Unanticipated Discovery Plan identifies the actions to be taken in the unexpected event that resources of cultural, historical or archaeological importance are encountered during Facility construction. The plan includes a provision for work stoppage upon the discovery of possible archaeological or human remains. Evaluation of such discoveries, if warranted, will be conducted by an RPA, qualified according to the NYAC Standards (NYAC 1994).

## **(b) Historic Resources and Potential Impacts**

Tetra Tech has prepared a *Historic Resources Survey Report*, which was submitted through the CRIS website on March 5, 2019 so that the OPRHP can review the results of the historic resources survey and make determinations of eligibility for the properties identified (Appendix 20-E). The purpose of this survey is to define the Facility's indirect APE relative to historic architectural resources; determine whether previously identified historic architectural resources are located within the indirect APE; identify historic architectural resources within the indirect APE; evaluate their eligibility for the S/NRHP; and assess the potential effect of the Facility on those resources. The *Historic Resources Survey Report* (Appendix 20-E) defined the indirect APE as the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character of or use of historic properties, if any such properties exist" (36 CFR § 800.16(d)) (CFR 2014b). No historic properties are located within the APE for direct effects. Tetra Tech identified eight historic properties within the APE for indirect effects:

- One previously identified property eligible for listing in the S/NRHP is located within the APE for indirect effects.
- Two newly identified historic properties were also determined to be S/NRHP-eligible,
- Two properties were found to be not eligible for the S/NRHP,
- Three properties lacked sufficient data to make an eligibility recommendation; however, these properties will not be impacted directly or indirectly by Facility construction and operation.

A copy of all OPRHP correspondence related to the historic resources survey is attached as Appendix 20-A to this Article 10 Application.

The Facility will have no direct impact on any historic architectural resources (i.e., no historic structures will be damaged or removed as a result of Facility construction or operation). The Facility's potential effect on a historic property would be a change in said property's visual setting resulting from the introduction of solar arrays and the removal of vegetation. The APE for visual effects on historic resources must include those areas where Facility components (including solar arrays and substations) could be visible and, therefore, there is a potential for an indirect visual effect.

The Facility's APE relative to historic architectural resources includes the areas of potential Facility visibility based on the viewshed of the Facility. This area represents a conservative, "worst case" assessment of potential Facility visibility, and includes, at the request of the OPRHP, the three undetermined properties mentioned above, which are not within the viewshed of the Facility, but are within approximately 600 feet of the Facility Area.

The field review conducted as part of the historic resources survey indicated that the topography, forested lots, existing buildings, street trees, yard vegetation, utility poles, and other objects obstruct distant views

from the Towns of Coeymans, Ravena, Selkirk, and South Bethlehem. Due to rolling topography and abundant surrounding vegetation, there are no potential views of the Facility from these towns, and the Facility is not expected to have any effect on the visual setting associated with historic resources in villages and hamlets located near the study area.

At the request of the OPRHP, a review of previously recorded properties was conducted within a one-mile radius of the proposed Facility. As summarized in Table 20-2, one S/NRHP-listed property, seven properties previously determined to be S/NRHP-eligible, and seven properties whose S/NRHP eligibility was previously undetermined are located within one mile of the Facility. Only one S/NRHP-eligible property is located within the Facility's APE for indirect (visual) effects and was identified by Tetra Tech using the CRIS database (USN 00103.000217). The other six S/NRHP eligible properties do not have potential views of the Facility. A second property within the APE whose S/NRHP-eligibility is currently undetermined was also identified using the CRIS database (USN00103.000325). The sole S/NRHP-listed property located within the one-mile study area for the Facility is the circa 1750 Tobias C. Ten Eyck House and Cemeteries (USN 00103.000330). In addition to the residences, the S/NRHP-eligible properties within the one-mile study area include a church (USN 00102.000753).

**Table 20-2. S/NRHP-Eligible and Listed Resources Within One Mile of the Facility Area**

OPRHP #	Name/ Address	Description	Municipality	Determination of S/NRHP Eligibility (OPRHP)	Distance from Facility	Potential Facility Visibility
00103.000217	Kinley Farm	Farmhouse; 4 barns, 2 silos	c. 1870	Eligible	6 m (20 ft) S	Visible
00103.000330	Waldron-Long Stone House	Single-family residence	c. 1790	Eligible	0.6 km (0.3 mi) S	Not Visible
00103.000011 94NR00750	Tobias C. Ten Eyck House and Cemeteries	Farmstead and cemetery	c. 1750	Listed	1.2 km (0.7 mi) E	Not Visible
00102.000653	P. Niver House/Farm	Farmstead	c. 1810	Eligible	1.2 km (0.8 mi) N	Not Visible
00102.000753	South Bethlehem Methodist Church	Church	1845	Eligible	1.3 km (0.8 mi) NW	Not Visible
00102.000661	John Baumes House	Single-family residence	1815	Eligible	1.3 km (0.8 mi) NW	Not Visible
00102.000655	395 Bridge St.	Single-family residence	N/A	Eligible	1.3 km (0.8 mi) N	Not Visible
00102.000651	373 Bridge St.	Single-family residence	N/A	Eligible	1.3 km (0.8 mi) N	Not Visible

Historically significant properties are defined herein to include buildings, districts, objects, structures, and/or sites that have been listed on the S/NRHP, as well as those properties that the OPRHP has formally determined are eligible for listing on the S/NRHP. Under criteria set forth by the National Park Service for evaluating historic properties (36 CFR § 60.4), a historic building, district, object, structure or site is significant (i.e., eligible for listing on the S/NRHP) if (per CFR 2004a):

“The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (B) that are associated with the lives of persons significant in our past; or
- (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (D) that have yielded, or may be likely to yield, information important in prehistory or history” (NPS 1990).

The historic resources survey included a review of previous historic architectural surveys within the study area (described above and in Section 3.2 of the Historic Resources Survey Report attached as Appendix 20-E), consultation with the OPRHP (described above and in Section 1.2 of the Historic Resources Survey Report), site visits to identify and evaluate potential historic resources within the study area, and supplemental research on specific historic properties (as necessary). All historic resources fieldwork was conducted by qualified architectural historians who meet the Secretary of Interior’s Standards for Historic Preservation Projects (36 CFR Part 61).

A site visit was conducted on May 8, 2018. When sites were identified that were not previously surveyed but appeared to satisfy S/NRHP-eligibility criteria and/or viewshed impacts, Tetra Tech’s architectural historian documented the existing conditions of the property. This documentation included photographs of the building(s) (and associated structures or properties when necessary) and field notes describing the style, physical characteristics and materials (e.g., number of stories, plan, external siding, roof, foundation, and sash), condition, physical integrity, and other noteworthy characteristics for each resource. Tetra Tech’s evaluation of historic resources within the study area focused on the physical condition and integrity (with respect to design, materials, feeling, and association) to assess the potential architectural significance of each resource.

Note that the condition and integrity of all resources were evaluated based solely on the visible exterior of the structures. No inspections or evaluations requiring access to the interior of buildings were conducted as part of this assessment. Based on consultation with the OPRHP, buildings less than 50 years in age were not included in or documented during the survey. Resources older than 50 years in age that lacked architectural integrity or that were evaluated by Tetra Tech’s architectural historians as lacking historical or architectural significance were only documented if they were in the viewshed of the Facility.

Properties inventoried and evaluated as part of the historic architectural survey included resources that had been identified in previous architectural surveys in the study area and resources newly identified during this survey. The locations of all properties surveyed (including previously surveyed and newly identified properties) are listed in Table 3 and shown on Figure 8 of the *Historic Resources Survey Report*, attached

as Appendix 20-E. Photographs of all properties surveyed are included in Attachment A of the report.

Two previously identified properties (i.e., properties already included in the OPRHP CRIS database as either S/NRHP-eligible or whose eligibility for the S/NRHP has not been formally determined) were re-visited and evaluated as part of the survey. In addition, Tetra Tech identified six properties within the APE for indirect impacts that had not been previously surveyed, for a total of eight resources evaluated in this survey (Table 20-3). Two of these newly surveyed properties are S/NRHP-eligible, as recommended by Tetra Tech, and three properties were not evaluated for S/NRHP-eligibility due to lack of any adverse effects (direct or indirect) from the Facility. Two were recommended by Tetra Tech to be not eligible for the S/NRHP due to lack of significance or integrity. All eight resources are comprised of private residences.

**Table 20-3. Results of Historic Resources Study**

<b>Name (USN)/ Address</b>	<b>Distance from Facility Area</b>	<b>Date of Construction</b>	<b>Potential Impacts Assessment</b>	<b>Recommendations</b>
Jolly Farm/ 276 CR-101	340 ft	Pre-1830	Viewshed changes east of the property due to tree clearing and solar arrays	NRHP-eligible; Tetra Tech recommends vegetative screening.
Shafer- Schmerhorn Farm/ 402-408 CR-101	Within Facility Area	Pre-1854	Viewshed changes east of the property due to tree clearing and solar arrays	Tetra Tech recommends property is not eligible for listing in the NRHP due to lack of integrity.
Rowe Farm (00103.000325)/ 470 CR-101	60 ft	c. 1820	Viewshed changes east and north of the property due to tree clearing and solar arrays	NRHP-eligible; Tetra Tech recommends vegetative screening.
Kinley Farm (00103.000217)/ Kinley Rd.	20 ft	c. 1870	Viewshed changes north and west of the property due to tree clearing and solar arrays	NRHP-eligible; Tetra Tech recommends vegetative screening.
Behuniak Farm/ 102 Kruger Rd.	473 ft	c. 1880	Property is at the base of a slope below Facility with no view of Facility Area	Insufficient data to make eligibility recommendation; however, no adverse effects anticipated.
Keel Farm/ 275 CR-101	794 ft	1911	Existing vegetation obscures view of the Facility	Insufficient data to make eligibility recommendation; however, no adverse effects anticipated.
Drevojan House/ 361 CR-101	68 ft	Pre-1927	Viewshed changes east of the property due to tree clearing and solar arrays	Tetra Tech recommends the property lacks remarkable design and is not a significant representation of architectural type or style that would warrant NRHP nomination under Criterion C. No additional investigation recommended.
Kolodiychik House/ 262 CR-101	654 ft	c. 1951	Existing vegetation obscures view of the Facility	Insufficient data to make eligibility recommendation; however, no adverse effects anticipated