Conceptual Drawing Provided by Applicant

Environmental Assessment
Hanwha QCells
Project Redeemer

Department of Energy, Loan Programs Office
Title XVII Program

May 2024

DOE/EA-2257

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Acronyms and Abbreviations

AADT	annual average daily traffic
ACQC	auto clean quick coupler
Ag	silver
Al_2O_3	aluminum oxide
AlOx	aluminum oxide
APE	Area of Potential Effect
Applicant	Hanwha Qcells Georgia, Inc.
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COBALT	contact optimization by advanced laser technology
DOE	U.S. Department of Energy
EA	Environmental Assessment
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 2005
GHGs	greenhouse gases
GNAHRGIS	Georgia Natural, Archaeological, and Historic Resources GIS
GW	gigawatt
H_2O_2	hydrogen peroxide
HAPs	hazardous air pollutants
HCI	hydrochloric acid
HF	hydrofluoric acid
HNO_3	nitric acid
HVAC	heating, ventilation, and air-conditioning
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
KOH	potassium hydroxide
kV	kilovolt
LDSE	laser-doped selective emitters
LED	light-emitting diode
LOS	level of service
LPO	Loan Programs Office
monosilicon	monocrystalline silicon
MVA	megavolt ampere
N_2	nitrogen
N_2O	nitrous oxide

NAAQS	National Ambient Air Quality Standards
NATA	National Air Toxics Assessment
NEPA	National Environmental Policy Act
NH_3	ammonia
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
O_2	oxygen
O_3	ozone
PERC	passivated emitter and rear contact
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
polysilicon or P-Si	polycrystalline silicon
$POCl_3$	phosphoryl chloride
Project	Project Redeemer
Qcells	Hanwha Qcells Georgia, Inc.
SHPO	State Historic Preservation Office
SiH_4	silane
SO_2	sulfur dioxide
U.S.C.	United States Code
VOCs	volatile organic compounds

1. PURPOSE AND NEED

1.1 Introduction

Hanwha Qcells Georgia, Inc. (Qcells or Applicant), is a manufacturer of solar cells and modules. The company's objective is to expand its solar manufacturing capacity in the United States by building Project Redeemer (Project), a new 1.8-million-square-foot, fully integrated advanced passivated emitter and rear contact (PERC) bifacial solar panel production hub in White, Georgia. This solar panel production facility will be capable of producing solar ingots, wafers, cells, and modules with the annual capacity for 3.3 gigawatts (GW) of electricity using domestically sourced polycrystalline silicon (polysilicon or P-Si).

Qcells has applied for a loan guarantee pursuant to the U.S. Department of Energy (DOE) Title XVII Clean Energy Financing Program, as authorized by the Energy Policy Act of 2005 (EPAct), as amended. Under Title XVII, the Secretary of Energy is authorized to provide loan guarantees for projects that support clean energy deployment and energy infrastructure reinvestment in the United States.

The Title XVII Program is administered by DOE's Loan Programs Office (LPO). LPO originates, underwrites, and services loans and loan guarantees to eligible applicants for projects that accelerate commercial deployment of innovative energy technologies. DOE believes that commercial use of these technologies will help promote and sustain economic growth, produce a more stable and secure energy supply and economy for the U.S., and improve the environment. DOE published a Final Rule that establishes the policies, procedures, and requirements for the loan guarantee program (10 Code of Federal Regulations [CFR] Part 609). LPO has reviewed Qcells' application and determined that the project is eligible for a potential loan guarantee (10 CFR Parts 609.3 and 609.5).

The decision as to whether to provide a loan guarantee (federal financial assistance) constitutes a major federal action, which requires DOE to conduct an environmental review under the National Environmental Policy Act (NEPA). LPO has prepared this Environmental Assessment (EA) in accordance with NEPA (42 United States Code [U.S.C.] 4321 et seq.), the Council on Environmental Quality (CEQ) NEPA implementing regulations (40 CFR Parts 1500–1508), and the DOE NEPA implementing regulations (10 CFR Part 1021). LPO is using the NEPA process to inform its decision as to whether to issue a loan guarantee to Qcells in support of the Project.

1.2 Purpose and Need for Agency Action

The purpose and need for DOE's Proposed Action, the issuance of a Federal loan guarantee, is to implement DOE's authority under Title XVII of the EPAct, which authorizes the department to finance projects and facilities in the U.S. that employ new or significantly improved technologies that will work to avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases (GHGs) (42 U.S.C. 16513, as amended).

1.3 Background

Using private funds, Qcells has already completed overall site development activities by installing foundations, erecting buildings, and developing utility connection corridors. Qcells has applied to LPO's Clean Energy Financing Program for support in completing construction of its solar panel production facility—specifically, financial support for the purchase and installation of manufacturing equipment, associated general equipment, and mechanical systems in buildings; completion of final site development activities (e.g., landscaping); and startup of the facility. After its review, LPO determined that the application meets the goals of EPAct. Qcells has accepted and entered LPO's due diligence process.

1.4 Scope of Environmental Assessment

LPO is preparing this EA to evaluate DOE funding for completion of the Qcells solar panel production facility, specifically for the purchase and installation of the manufacturing equipment and associated general equipment and mechanical systems into the buildings, completion of final site development activities (e.g., landscaping), and startup of the facility. If no significant impacts are identified during preparation of this EA, DOE will issue a Finding of No Significant Impact. If potentially significant impacts are identified, DOE will prepare an environmental impact statement.

This section is organized as follows:

- Section 1.4.1 provides an overview of the Project and describes the Project site development and construction activities that have been completed; these activities are not the subject of federal financial support from LPO.
- Section 1.4.2 establishes the scope of the environmental review, given LPO's Proposed Action (a federal loan guarantee for the purchase and installation of manufacturing equipment, associated general equipment, and mechanical systems in buildings; completion of final site development activities [e.g., landscaping]; and startup of the facility); existing site conditions; and permit status. Based on the scope of the environmental review, the natural, physical, and socioeconomic resources that may be subject to potentially significant environmental issues are identified, as are resources that would not be subject to potentially significant environmental issues.

1.4.1 Project Overview and Development Status

Qcells is expanding its domestic manufacturing capacity by developing a 1.8-million-square-foot, fully integrated advanced PERC bifacial solar panel production hub (referred to as "Project Redeemer"), which will be capable of producing solar ingots, wafers, cells, and modules with the annual capacity for 3.3 GW of electricity. The Project site is located on 181 acres within an approximately 377-acre greenfield parcel at 751 Great Valley Parkway Northeast, White, Georgia (Bartow County), approximately 2 miles west of the town of White and approximately 6 miles north of Cartersville, Georgia (see Figure 1-1).

Qcells initiated construction of the Project in March 2023, before applying for DOE's Title XVII Clean Energy Financing Program. Construction activities within the approximately 181-acre site have included:

- Clearing and grading the entire site
- Establishing temporary erosion controls, roads, and construction work areas for parking, material/equipment storage, and a batch plant for concrete production
- Pouring concrete slabs and foundations for Project module, cell, and wafer/ingot buildings and the main office
- Installing basic building structures (i.e., steel supports, roofing, exterior skin) for Project module, cell, and wafer/ingot buildings and the main office.

In addition, the following development and construction activities have been initiated:

- Installation of concrete slabs and foundations, along with basic building structures (i.e., steel supports, roofing, exterior skin) for auxiliary buildings.
- Georgia Power is installing a 7.5-acre, 230-kilovolt (kV) substation in the northwest corner of the site.

The development and construction activities listed above are not subject to the federal financial support request under review by LPO. However, Qcells has obtained all applicable permits, consisting of a Land Disturbance Permit, Stormwater Pollution Prevention Plan, Mass Grading Permit, Foundation Permit, and Steel Erection Permit (see Appendix A). One cemetery (Mount Zion Baptist Church) is recorded east of the Project site. The cemetery will be avoided because of its distance from Proposed Action activities (approximately 450 to 500 feet).

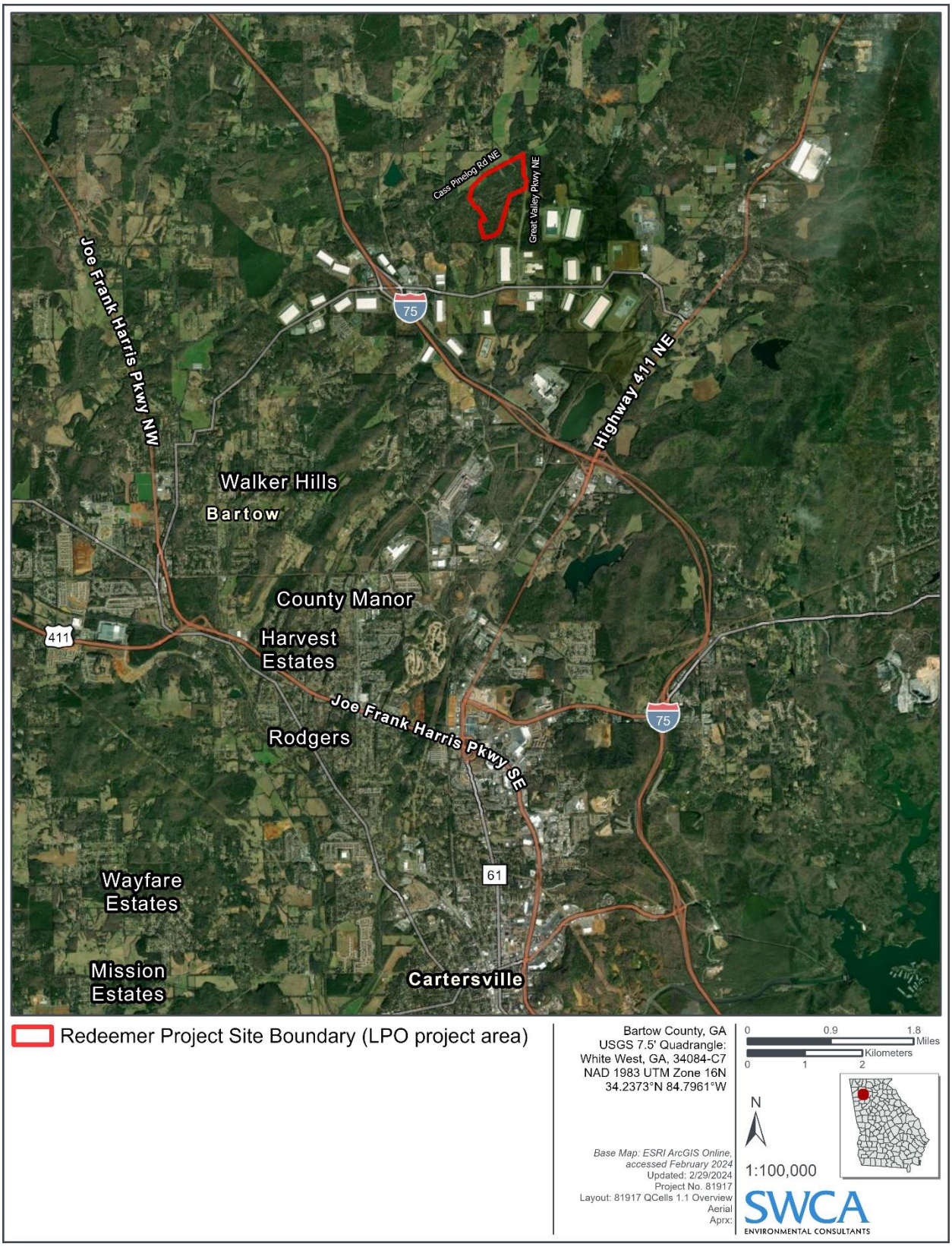

Figure 1-1. Project Location

Qcells is currently evaluating the possibility of future expansion west of the Project site. This future expansion is not subject to the federal financial support request under review by LPO but is considered as a cumulative impact in Section 3.10.

Site conditions as of March 2024 establish baseline conditions for the Project (see Exhibits 1-1 and 1-2 [aerial images of the Project site from January 2024]), which is the subject of the federal financial support request under review by LPO (i.e., the purchase and installation of the manufacturing equipment, associated general equipment, and mechanical systems in buildings; completion of final site development activities [e.g., landscaping]; and startup of the facility).

Exhibit 1-1. Overhead view of Project Redeemer as of January 31, 2024. The building at the bottom, right side of the image, and grading to the west are not associated with the Project.

Exhibit 1-2. View of Project Redeemer as of January 31, 2024, with wafer and ingot facility in foreground and module and cell facility in background. The buildings toward the top, to the right and past the tree line, are not associated with the Project.

1.4.2 Resources Considered

This EA evaluates LPO's Proposed Action (a loan guarantee for facility finalization, exterior site improvements, and initial operational activities) and its potential impacts on multiple resources. Given the scope of LPO's action, resources assessed in this EA include:

- Aesthetic and visual resources
- Air quality
- Cultural resources, including Native American interests
- Health and safety
- Noise
- Transportation
- Socioeconomics and environmental justice
- Waste management

These resources were identified as potentially being affected by the Proposed Action; therefore, each was assessed to determine the nature, extent, and significance of those impacts (see Section 3). The assessment combined desktop research and analysis of existing available information with select field studies, including site assessments related to wetlands and water bodies (Cardno 2022; Nelson Environmental, Inc. 2023); special-status species (Cardno 2022; Nelson Environmental, Inc. 2023); recognized environmental conditions, as established by a Phase I environmental site assessment (ECS Southeast, LLC 2013); and cultural resources (Stack 2023).

Notable permits and authorizations for LPO's Proposed Action include 1) State of Georgia air quality permits for the solar ingot, wafer, cell, and module facilities, 2) an industrial pretreatment permit, and 3) City of Cartersville building permits (see Appendix A for full list of permits and authorizations).

Table 1-1 provides a summary of resources for which impacts are not anticipated to be significant; therefore, they are not included in this EA or reviewed in Section 3, Environmental Consequences.

Table 1-1. Resources Review

Resource	Rationale for Removal from Detailed Review
Land use and recreation	The Proposed Action would be consistent with both land use zoning plans and county land use plans. No designated recreation sites are present on or near the Project site.
Biological resources	The site has been previously cleared. No new surface disturbance would occur as part of LPO's Proposed Action; therefore, impacts on vegetation, wildlife, migratory birds, or threatened and endangered species would not be significant. LPO has concluded that the Proposed Action would have no effect on threatened or endangered species or designated critical habitat, in accordance with Section 7 of the Endangered Species Act.
Aquatic and water resources, including wetlands, groundwater, and surface water	The site has been previously cleared. No jurisdictional wetlands were identified in field studies (Nelson Environmental, Inc. 2023). In addition, no new surface or subsurface disturbance would occur as part of LPO's Proposed Action. Therefore, impacts on aquatic and water resources would not be significant.
Floodplains	No floodplains are present on the Project site.
Geology, soils, and prime farmland	The site has been previously cleared. No new surface or subsurface disturbance would occur as part of LPO's Proposed Action. In addition, no conversion of prime farmland to other uses would occur. Therefore, impacts on geology, soils, and prime farmland would not be significant.

2. PROJECT DESCRIPTION

2.1 Overall Project Description

The Qcells manufacturing facility (Project Redeemer) consists of four manufacturing buildings for solar ingot, wafer, cell, and module production, along with a main office building, auxiliary buildings, a tank farm, parking lots, access roads and sidewalks, stormwater retention ponds, and landscaping. For context, Figure 2-1 provides the overall site plan for Project Redeemer. However, not all buildings and facilities on the site will be subject to federal financial support. LPO's Proposed Action is providing federal financial assistance to Qcells for the purchase and installation of manufacturing equipment, associated general equipment, and mechanical systems in buildings; completion of final site development activities (e.g., landscaping); and startup of Project Redeemer.

This chapter describes Project finalization and operational activities associated with the LPO's Proposed Action. For reader clarity, hereafter, the term "Project" or "Project Redeemer" is used to refer to the Project as a whole, while "Proposed Action" refers to actions specifically covered by LPO's federal loan guarantee.

2.1.1 Construction

Interior buildout activities subject to federal financing (LPO's Proposed Action) include:

- Installation of structural supports for internal walls and thermal/moisture protection systems, along with flooring systems, doors, elevators, millwork, finishes, and furniture.
- Installation of mechanical support systems, including heating, ventilation, and air-conditioning (HVAC), as well as manufacturing area–specific components such as scrubbers, process exhaust systems, and a dust collector system. This category also includes installation of a computer control system.
- Installation of all internal electrical systems.
- Installation of above- and belowground plumbing as well as mechanical and process piping.
- Installation of waste collection and treatment system (equipment/tanks).
- Installation of a Project-wide fire alarm, fire suppression system, and automatic sprinkler system throughout the main production facilities.
- Installation of all other equipment needed to support the manufacturing process, such as storage tanks and associated supply pumps; a Davit crane; control valves, flow meters, pressure transmitters, and gauges; boilers, ovens, stockers, and roll presses; lamination and testing equipment; stacking and packaging equipment; and associated conveyors.

Proposed exterior site improvement activities subject to federal financing (LPO's Proposed Action) include:

- Installation of lighting at the Project site. Exterior areas will be illuminated with pole-mounted light-emitting diode (LED) area lights approximately 40 to 50 feet above grade. Building-mounted LED wall packs will illuminate building entrances and walkways.
- Installation of bike racks and dock equipment.
- Installation of electric-vehicle chargers and associated infrastructure (underground conduits and steel support structures for solar panels) in parking lots and temporary power set up at the Project site.
- Asphalt paving and the installation of sidewalks, fencing/gates, and signage, all on previously developed and disturbed areas. Landscaping will include a mix of native groundcover, Georgia wildflowers, and native shrubs and trees across the entire site. A 50-foot-wide undisturbed buffer will be created and maintained along Cassville Pine Log Road Northeast.

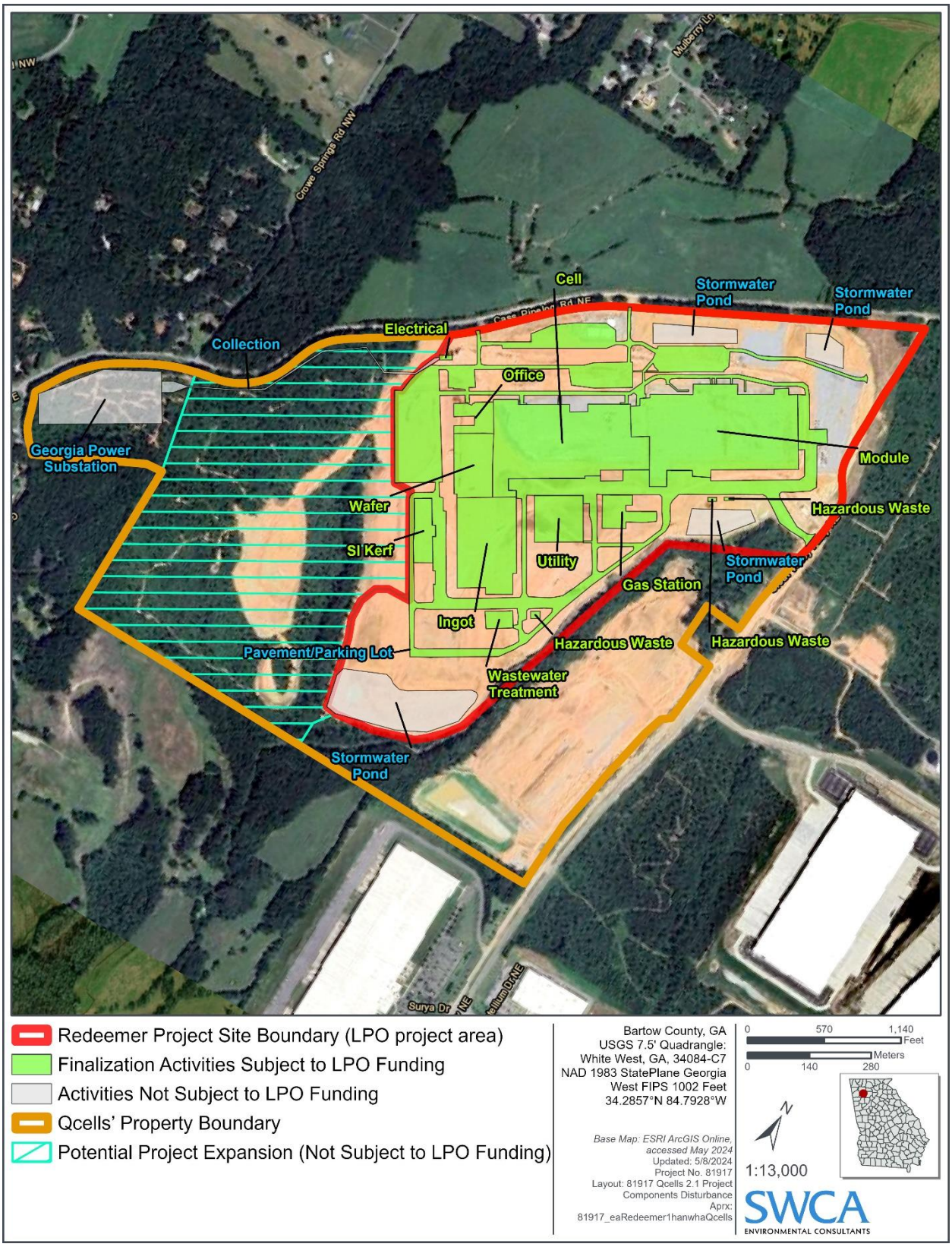

Figure 2-1. Project Activities Subject to LPO's Proposed Action

Qcells will also construct a tank farm for bulk chemical storage, including instrumentation to control tank level and pressure. The tank farm will also be equipped for secondary containment, leak detection, and gas blanketing. Wastewater will be treated on-site and managed using a spill prevention plan.

Qcells intends to construct the Project in phases. As shown in Exhibit 2-1, exterior module construction was completed in December 2023, with commercial operation anticipated for the second quarter of 2024. Ingot, wafer, and cell construction is anticipated to be completed in September or October 2024, with commercial operations starting in January 2025 or February 2025.

Exhibit 2-1. Project Redeemer Construction Phasing

During construction, Bartow County will supply all water needs, which are anticipated to range from 10,000 to 50,000 gallons per day, through the Cartersville Water Department. Wastewater generated during construction will be trucked to the Cartersville Water Department for treatment. Qcells is using existing electrical service at the Project site (two pole-mounted, utility-owned transformers near the northwest corner of the site along Cassville Pine Log Road Northeast) for temporary power during construction. This power originates from an existing off-site substation with the capacity for approximately 15 megavolt amperes (MVA).

No hazardous waste will be generated during the construction process. Non-hazardous construction waste (estimated to be up to 60,000 cubic yards in total volume) will be placed in roll-off trash bins and hauled to a local recycler (where applicable) or to the Bartow County landfill.

An estimated 908 workers will be needed for Project construction. All worker parking will be within designated parking areas at the Project site. Standard construction working hours are 7:00 a.m. to 5:30 p.m. Construction will take place 6 days a week. On average, 75 truck trips will be needed daily through July 2024 to deliver building materials and equipment to the Project site. The typical equipment to be used on-site during construction will include bulldozers, track hoes, dump trucks, cranes, water trucks, scissor lifts, forklifts, floor scrubbers, all-terrain vehicles, and boom lifts. During equipment installation, an average of 15 to 25 daily truck trips are anticipated. Trucks will travel from the port at Savannah, Georgia, to the Project site along Interstate (I) 75 to deliver module components (ingots, wafers, and cell equipment).

2.1.2 Operation

The Project involves a solar panel production facility, which is being designed to produce solar ingots, wafers, cells, and modules with the annual capacity for 3.3 GW of electricity. Operation of the facility will involve raw material receiving; cell, ingot, wafer, and module manufacturing; final product testing, storage, and shipping; and use of ancillary equipment and processes (e.g., heaters, generators, waste management and recovery systems, recycling facilities). An overview of the manufacturing process is provided in Section 2.1.2.1.

2.1.2.1 Manufacturing Process

Ingot Production

The first step in the manufacturing process is ingot production. Qcells will manufacture monocrystalline silicon (monosilicon) ingots using polysilicon as feedstock. Exhibit 2-2 outlines details regarding the ingot production process. The Project is designed with three ingot growing groups.

The ingot production process starts with loading poly-crystal silicon into a quartz crucible where it is melted at high temperatures and then dipped into a crystal-shaped cavity with an argon atmosphere. After growing into a single crystal ingot, the ingots are extracted and allowed to cool. The cooled ingots are first cropped into a cylindrical shape and then cut into a square shape. Any by-products generated after ingot processing, including the tops and tails of the ingots, are recycled back into the ingot production process. The surface of the ingot brick is ground. Finally, the bricks undergo a series of rigorous tests to ensure their quality.

Wafer Production

The Project will convert ingots into wafers. Exhibit 2-3 outlines details regarding the wafer production process. Each monocrystalline silicon brick (ingot) is cleaned and bonded with glue to a beam and loaded onto a feed unit. The unit feeds the ingot into a saw that slices it with a diamond wire on guide rollers. After slicing, lactic acid and detergent are applied to pre-clean the wafers, remove the glue, and dismount wafers from the beam. Then, potassium hydroxide (KOH), hydrogen peroxide (H_2O_2), and deionized water are applied as a final cleaning step. A wafer inspection system inspects the wafers after final cleaning.

Cell Production

Exhibit 2-4 outlines details regarding the cell production process. The cell manufacturing process begins with the surface of the wafer etched (textured) with KOH, H_2O_2, hydrofluoric acid (HF), and hydrochloric acid (HCl) to clean and correct for any damage to the surface. Textured wafers are then placed in a furnace with an atmosphere containing phosphoryl chloride ($POCl_3$), oxygen (O_2), and nitrogen (N_2) to create a semiconductor. Afterward, a laser beam is focused onto different areas of the wafer to create localized high concentrations of phosphorus diffusion and passivate on the surface. This is known as the laser-doped selective emitters (LDSE) creation process. Qcells uses a proprietary alkaline tungsten boride solution to etch the cell edges and remove phosphorus silicate glass. The trimmed cells are then oxidized to remove electrical defects and subjected to rear passivation using aluminum oxide (AlOx) to reduce rear-surface recombination and increase cell efficiency. An anti-reflective coating is applied to the front and back of the cells, and laser-created perforations are formed in the rear side layers. Silver (Ag) pastes are printed onto the front and rear of the cells. The cells are then fired in a belt furnace to cure. The cells then undergo the contact optimization by advanced laser technology (COBALT) treatment, which increases the active area of the cell and improves the cell fill factor.

Module Production

Completed cells will be used to assemble the photovoltaic modules as the last step in the production process. Exhibit 2-5 outlines details regarding the module production process. The Project is designed to have three module production lines.

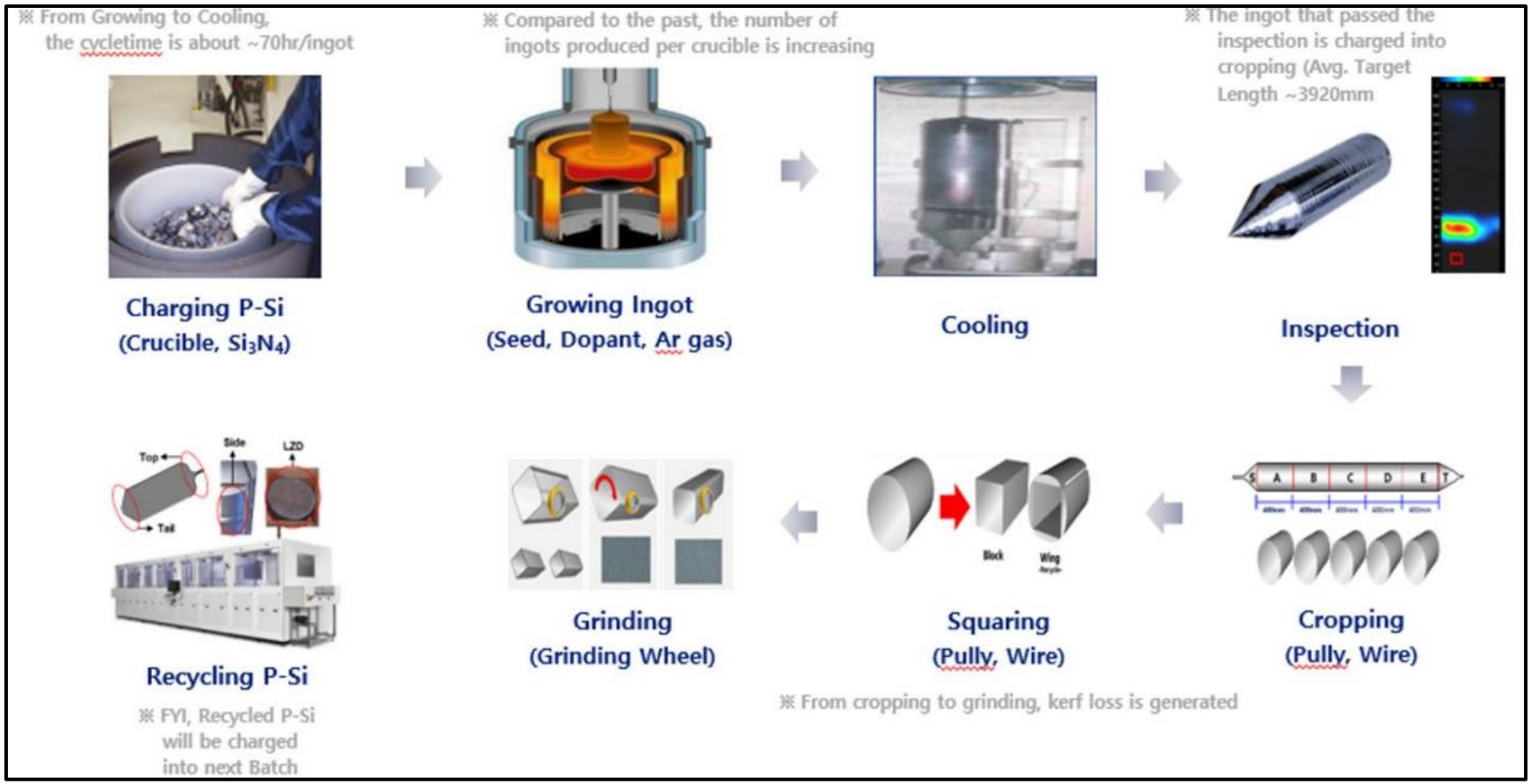

Exhibit 2-2. Ingot Production Process Overview

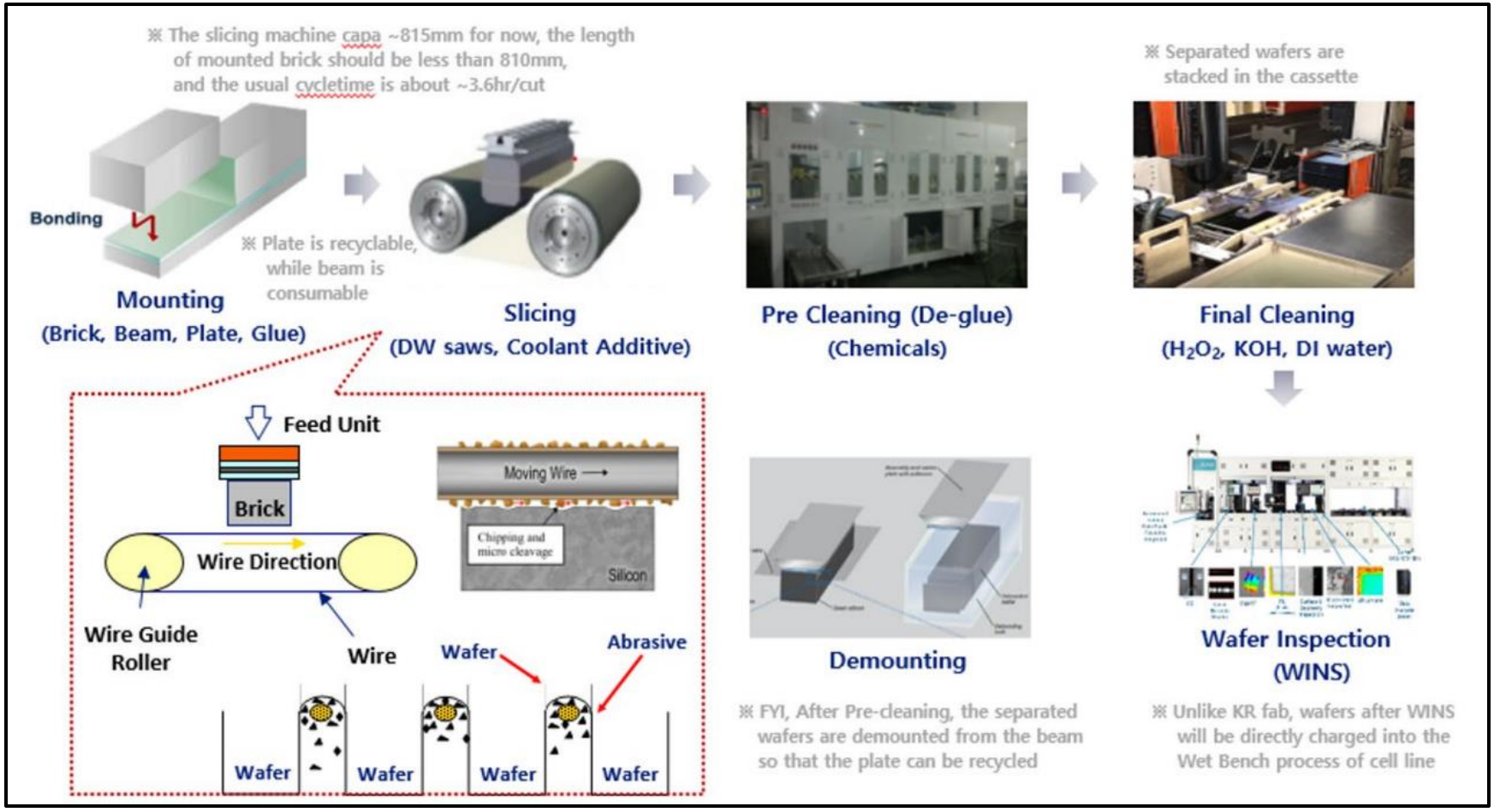

Exhibit 2-3. Wafer Production Process Overview

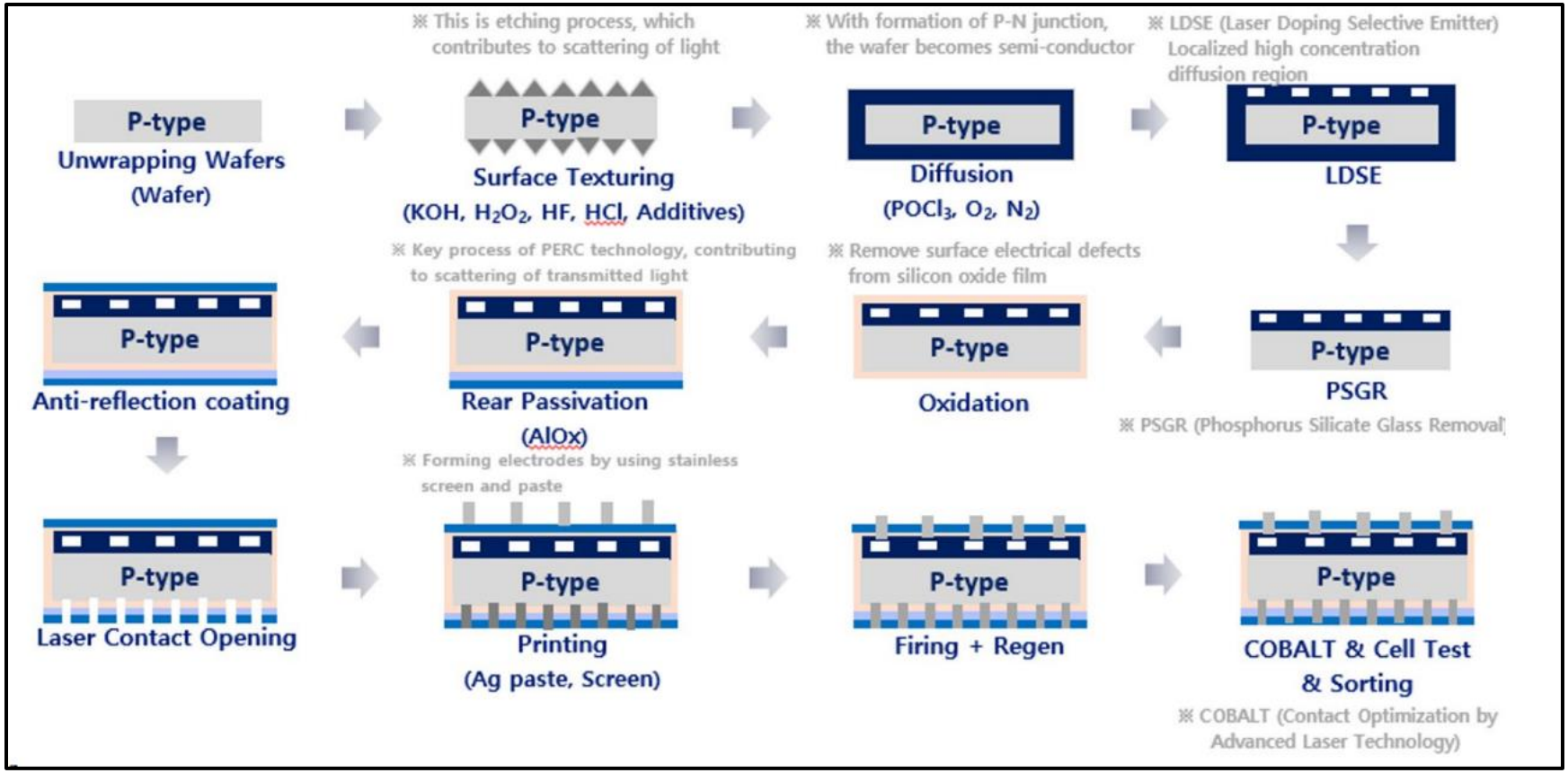

Exhibit 2-4. Cell Production Process Overview

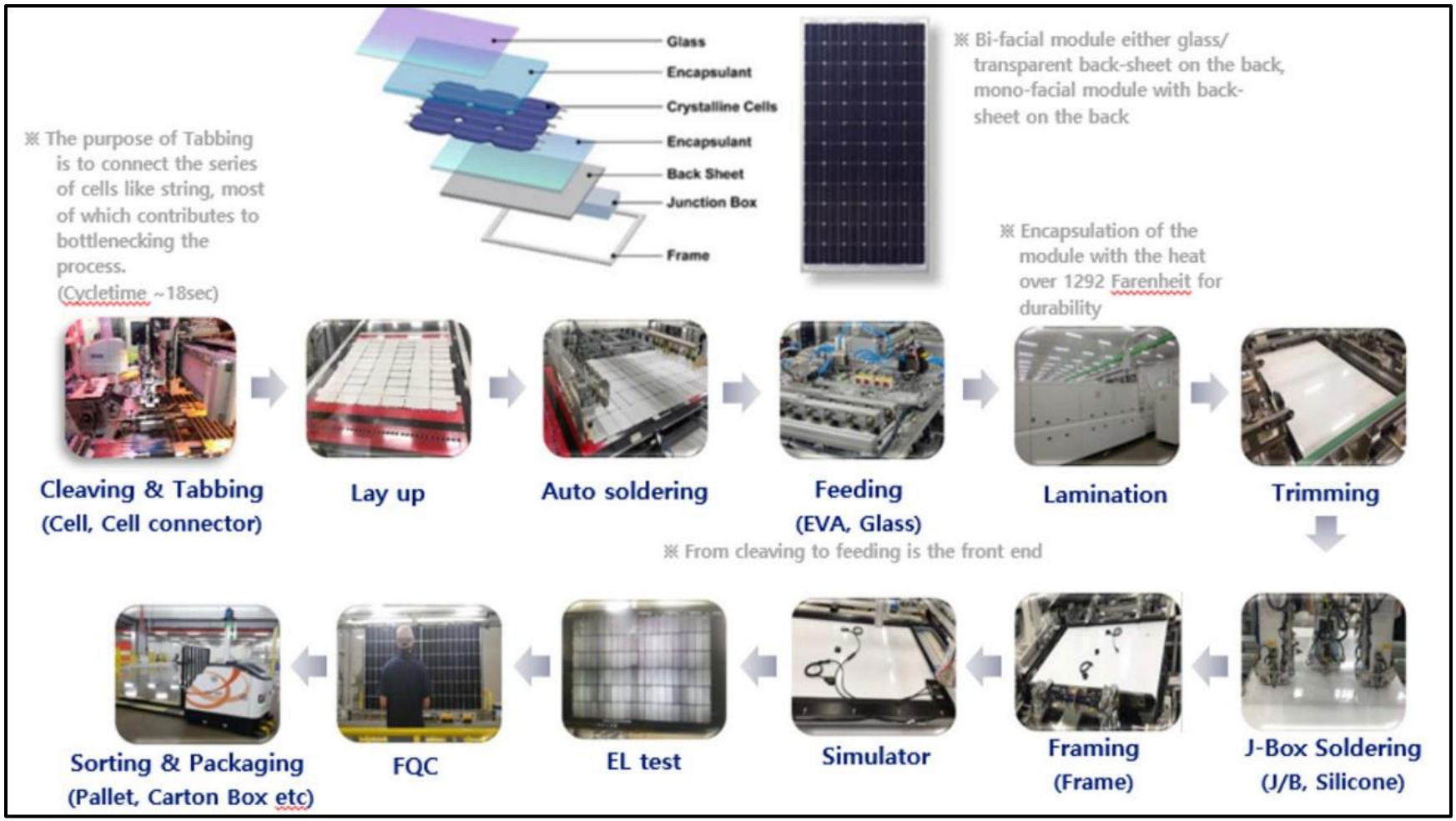

Exhibit 2-5. Module Production Process Overview

Module production starts by cleaving the cells in half and connecting them in series as part of a tabbing process. The strings are soldered together, and the resulting cell array is placed on a sheet of encapsulant. A second sheet of encapsulant is placed on the cell array. The encapsulant is then covered by a sheet of glass or a transparent polymeric backsheet. This assembly is then heated under pressure to create a laminate. After trimming the excess encapsulant from the edges of the laminate, junction boxes are soldered to the rear of the module. The module is then framed using silicone in aluminum frames, and potting silicone is applied to protect junction box components from corrosion. The silicone from the framing and potting processes undergoes a curing process at or near ambient temperature.

Finished modules are then subject to several stages of testing and quality control. Once the modules pass final quality control, they are sent for sorting and packaging in cartons and placed on pallets.

2.1.2.2 Utilities

Water

Project operational water and wastewater infrastructure will be tied into the existing municipal system. Bartow County will supply up to 3.8 million gallons per day of water and process the same amount of wastewater during Project operations through the Cartersville Water Department. Drains in the production area will be connected to a conveyance system that discharges to an on-site wastewater pre-treatment system. Wastewater treatment will occur at this on-site facility prior to discharge to the municipal sewer system using a county sewer line on the southeast side of the site. Discharge volumes and effluent concentrations will be in accordance with Qcells' industrial wastewater discharge permit.

Projected water use and wastewater discharge during ramp-up to full production is shown in Table 2-1.

Table 2-1. Water Use and Wastewater Discharge during Project Ramp-Up*

	2024							2025				2026
	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Water Use	0.4	1.0	1.3	1.7	2.6	3.3	3.5	3.5	3.5	3.5	3.5	3.5
Wastewater Discharge	0	0.4	0.5	0.7	1.1	1.5	1.6	1.6	1.7	1.7	2.2	3.6

**Units represent millions of gallons per day*

Electrical

Power during Project operations will be provided by an existing 25 kV underground electrical distribution network along Great Valley Parkway Northeast as well as a new on-site 230 kV substation that will be constructed by Georgia Power. The existing 25 kV network will provide enough power to support the module building as well as the ancillary buildings/equipment associated with the module building; all other Project buildings will be powered by the new Georgia Power substation.

Two 2.5 MVA generators, located inside of the Central Utility Plant, will provide an additional back-up power system. The generators will have a 24-hour fuel supply. The fuel tank system will be equipped with the required electrical controls, mechanical piping, and other safety features.

2.1.2.3 Waste Management

During operations, the Project will generate both hazardous and non-hazardous solid waste from the manufacturing process as well as routine building operations and maintenance. Table 2-2 provides a summary of the major sources of the anticipated waste to be generated during the manufacturing

process. Anticipated locations for waste disposal as well as the waste amounts represent best available estimates, based on Qcells' current manufacturing operations, but are subject to change.

An on-site incinerator will not be used. All waste will be collected on-site, categorized, and disposed of, or recycled, in accordance with applicable federal, state, and local environmental regulations. All waste going to the landfill will be tracked by weight. Furthermore, all waste will be analyzed for viable recycling streams and tracked monthly. Qcells will establish a facility-wide spill prevention, control, and countermeasure plan to address and properly dispose of any liquid waste generated during operation. Appropriate detection systems will be provided where hazardous gases and chemicals are used and stored.

Table 2-2. Major Waste Sources, Estimated Amounts and Disposal

Waste	Types of Waste Disposal	Amount (kilograms/month)*	Amount (tons/year)
Pot loss	Recycling	7,000	92
Ceramic (Al_2O_3) and quartz	Landfill	43,000	568
Dust (silicon oxide)	Landfill	11,000	145
HNO_3 and HF	Neutralized and discharged in wastewater	384,000	5,069
Bobbin	Recycling	18,000	238
Pully and wire	Recycling	7,000	92
Silicon kerf	Recycling	24,000	317
Paper, plastic, vinyl, cardboard, pallets, glue, Styrofoam, tape, bags	Recycling, reuse, or disposal by incineration (off-site)	611,000	8,065
Chemical and coolant containers	Disposal by incineration (off-site)	12,000	158
Urethane	Disposal by incineration (off-site)	5,000	66
Used beams	Disposal by incineration (off-site)	23,000	304
Fabric	Disposal by incineration (off-site)	8,000	106
Broken manufacturing products	Landfill and recycling	69,000	911
Scrap metal	Recycling	8,000	106
Silicon sludge	Recycling	500,000	6,600
Hazardous chemical waste (acid)	Neutralized and discharged in wastewater	1,229,000	16,223
Wastewater treatment sludge	Recycling	334,000	4,409
Silicon containers and waste	Disposal by incineration (off-site)	14,000	185
Aluminum frame	Recycling	5,000	66
Condensate wastewater	Recycling	6,000	79

**Represents maximum estimated amount if a range is possible. Amounts rounded up to the nearest 1,000.*

Al_2O_3 = aluminum oxide; HNO_3 = nitric acid; HF = hydrofluoric acid

Bulk chemicals will be stored on-site in a tank farm (see Table 2-3 for specifications). Bulk chemicals will be supplied to the site by over-the-road trucks and unloaded with use of a vendor-packaged auto clean quick coupler (ACQC) to ensure transfer without contamination from the shipping container to the storage vessel. The ACQC will include vendor-supplied valving, instruments, and pumps to control the filling,

discharging, and recirculation of bulk chemicals. As noted in Section 2.1.1, each bulk chemical storage vessel will be equipped for secondary containment, leak detection, and gas blanketing.

Table 2-3. Tank Farm Specifications

Chemical	# of Vessels	Vessel Size (gallons)	Total Storage* (gallons)
SiH_4	1	4,680	4,680
NH_3	1	8,525	8,525
N_2O	1	3,800	3,800
HF	3	10,000	30,000
HF	2	4,500	9,000
HF	2	200	400
HNO_3	2	6,000	12,000
HNO_3	2	450	900
HCl	2	6,000	12,000
HCl	2	1,500	3,000
KOH	5	10,000	50,000
KOH	2	3,500	7,000
KOH	2	150	300
H_20_2	2	10,000	20,000
H_20_2	2	1,500	3,000
H_20_2	2	150	300
Total	33		164,905

**Storage volume represents a minimum of 1 week of planned consumption of bulk chemicals during facility operation. SiH_4 = silane; NH_3 = ammonia; N_2O = nitrous oxide; HF = hydrofluoric acid; HNO_3 = nitric acid; HCl = hydrochloric acid; KOH = potassium hydroxide; H_20_2 = hydrogen peroxide*

2.1.2.4 Staffing and Operational Timeframe

Project manufacturing is expected to require four groups of staff members to cover two shifts per day, 7 days per week, 24 hours per day. The estimated total number of full-time employees is 1,952 (see Table 2-4), or an estimated 976 full-time employees per shift. During Project ramp-up, Qcells anticipates hiring an additional 300 to 400 temporary personnel. However, the total full-time employee count is anticipated to stabilize by the third or fourth quarter of 2025. The schedule for major maintenance will include 5 days per year for annual maintenance items and 1 day per month for scheduled downtime. This results in 348 days per year of total production time.

Qcells intends to implement a staffing process in which each building (e.g., ingot, wafer, cell, module buildings and ancillary facilities) will have its own dedicated team with a site manager, project manager, support site, and facility staff. In addition, Qcells will use the State of Georgia's Quick Start program, along with its own job-training program, to provide potential employment opportunities.

Table 2-4. Anticipated Site Staffing

Department	Engineers	Staff	Operators	Total
Ingot production	30	0	292	**322**
Wafer production	33	0	269	**302**
Cell production	57	0	332	**389**
Module production	34	0	428	**462**

Department	Engineers	Staff	Operators	Total
Utilities	35	0	84	**119**
Quality control	31	0	174	**205**
Administrative, information technology, logistics, and emergency, health, and safety support	40	61	52	**153**
TOTAL	**260**	**61**	**1,631**	**1,952**

2.1.2.5 Shipping and Receiving

During operations, raw materials will be delivered on a continuous (i.e., 24/7) basis via the Project's entrance off Great Valley Parkway Northeast. It is estimated that approximately 33 trucks will arrive daily from the port in Savannah via I-75 (12,000 feedstock drayage trucks annually), and approximately 30 trucks will arrive daily via I-75 from external warehouses (11,000 feedstock shuttle trucks annually).

3. ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

Sections 3.2 through 3.9 address specific resource areas with both qualitative and, where applicable, quantitative information to describe concisely the nature and characteristics of each resource that may be affected by the Proposed Action. The potential direct and indirect impacts on that resource, given Project controls, are also discussed. A conclusion regarding the significance of impacts is provided for each resource area.

Section 3.10 provides a review of the present and reasonably foreseeable federal and nonfederal actions that may contribute to a cumulative impact when added to the impacts of the Proposed Action. The impacts of past actions were reviewed and are included as part of the affected environment to establish the current condition of the resource (i.e., the baseline condition) that may be affected by the Proposed Action.

3.2 Aesthetic and Visual Resources

The Project site is currently cleared and graded. It contains basic building structures (e.g., steel supports, roofing, exterior skin) for the module, cell, and wafer/ingot buildings as well as the main office (see Exhibits 1-1 and 1-2). Facility heights vary but do not exceed 75 feet, in accordance with zoning ordinances. The viewshed surrounding the Project site is characterized by light industrial and commercial development, along with some residences. The landscape is gently rolling and has small forested patches, scattered trees, bushes, and open fields. The nearest residences are approximately 0.3 to 0.4 mile north and east of the facility. The residences do not have views of the facility because of distance and vegetative screening.

Facility finalization activities are not anticipated to alter existing aesthetic and visual resources because such activities would occur within previously constructed buildings. The Project site would be landscaped, with consideration of aesthetic views from surrounding land uses and facilities. Landscaping would include a mix of native groundcover, Georgia wildflower, and native shrubs and trees, which would be situated between mounds and berms to aid in water retention and prevent stormwater runoff. In addition, a 50-foot-wide undisturbed buffer would be maintained along Cassville Pine Log Road Northeast to minimize potential visual disturbance, including potential nighttime impacts due to illumination from exterior lighting.

Because the site is zoned for industrial uses, facilities are already present on the site, and landscaping would be incorporated into the design, impacts on aesthetics and visual resources as a result of the Proposed Action would not be significant.

3.3 Air Quality

The Clean Air Act (CAA) established the principal framework for national, state, and local air quality protection (42 U.S.C. 7401–7642). Under the authority of the CAA, the U.S. Environmental Protection Agency established the National Ambient Air Quality Standards (NAAQS). These standards represent the maximum allowable atmospheric concentrations for the six criteria pollutants that are key indicators of air quality: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), lead, and two categories of particulate matter (i.e., less than 10 microns in diameter [PM_{10}] and less than 2.5 microns in diameter [$PM_{2.5}$]).

The Project site is in Bartow County, Georgia, which is currently classified as being in attainment with respect to all criteria pollutants and designated as a maintenance area for the 2015 8-hour O_3 standard. Per the Project's air quality permit applications (Montrose 2022, 2023), the primary pollutants emitted

from the facility would be the volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) generated by manufacturing and assembly processes as well as the by-products of combustion from burning fuel. Table 3-1 shows estimated process emissions from module, ingot, wafer, and solar cell manufacturing as well as combustion emissions from space heating and an emergency generator.

Table 3-1. Emissions Summary

Pollutant	Module Emissions (tons/year)	Ingot, Wafer, and Cell Emissions (tons/year)	Facility-wide Potential Emissions (tons/year)	Synthetic Minor Permit Limits Requested* (tons/year)	*de minimis* Thresholds for Maintenance Areas** (tons/year)
VOCs	63.6	4.5	68.0	< 100	100
Total HAPs	2.5	1.5	4.0	< 25	N/A
Individual HAP – formaldehyde	1.9	0.03	2.0	< 10	N/A
Individual HAP – hydrogen fluoride	0.3	0.5	0.8	< 10	N/A
CO	9.9	34.4	44.3	N/A	100
NO_x	11.7	41.4	53.2	N/A	100
SO_2	0.07	0.36	0.43	N/A	100
$PM/PM_{10}/PM_{2.5}$	1.1	3.1	4.2	N/A	100
CO_2e	14,013	48,317	62,330	N/A	N/A

Source: Montrose 2022, 2023
**An amended permit application was submitted to the Georgia Department of Natural Resources in February 2024; issuance of the permit is anticipated by the second or third quarter of 2024.*
***VOC de minimis threshold for areas outside an ozone transport area*
VOCs = volatile organic compounds; HAPs = hazardous air pollutants; CO = carbon monoxide; NO_X = nitrogen oxides; SO_2 = sulfur dioxide; PM = particulate matter; PM_{10} particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; CO_2e = carbon dioxide equivalent

Module emissions would be generated during tabbing, lamination, framing, and potting processes. Emissions may also be generated during junction box soldering because silicone would be applied during this step. In the ingot process, emissions would be generated during the recycling of polysilicon. In the wafer process, emissions would be generated during slicing, demounting, and cleaning operations. In the cell process, emissions would be generated from the wet benches, rear and anti-reflection layers, screen printers, and firing furnace, along with the storage tanks that would store the chemicals used in each step of the process. Process steps that generate emissions would be connected to scrubbers to control the emissions. Qcells would conduct daily inspections of emissions-generating equipment and replace any equipment that shows signs of excessive wear. Facility-wide monitoring of VOC and HAP emissions would occur once per month.

Qcells has received an air permit from the Georgia Department of Natural Resources (permit number 3674-015-0150-S-01-0) for operation of the photovoltaic module manufacturing facility. An amended air permit to include the ingot, wafer, and solar cell manufacturing process lines is under agency review.

The current permit establishes enforceable emission limitations for the facility as a synthetic minor source with respect to Title V, Prevention of Significant Deterioration of Air Quality and HAPs. The amended permit to include the ingot, wafer, and solar cell manufacturing process lines would not change overall facility status as a synthetic minor source. The current and pending permit also require compliance with all provisions of the Georgia Air Quality Act, Official Code of Georgia Annotated Section 12-9-1, et seq, as well as Georgia's Rules for Air Quality Control, Chapter 391-3-1, adopted and in effect under that act or any other condition of the permit. As shown in Table 3-1, emissions associated with the Project would not

exceed *de minimis* thresholds for maintenance areas, as established in 40 CFR 93.153(b)(2). Therefore, a general conformity determination is not required. Because the Project is considered a minor source and air quality emissions would be in compliance with state air permitting requirements and standards, which are protective of human health and the environment, impacts on air quality as a result of the Proposed Action are not anticipated to be significant.

3.3.1 Greenhouse Gas Emissions and Climate Change

The current science and study of the Earth's climate now shows with 95 percent certainty that human activity has been the dominant cause of observed global warming since the mid-twentieth century (Intergovernmental Panel on Climate Change [IPCC] 2013). Since the beginning of the industrial era, circa 1750, human activities have increased the concentration of GHGs, primarily carbon dioxide (CO_2), nitrogen oxides (NO_X), methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, in the atmosphere. The rising global temperatures have been accompanied by changes in weather and climate (e.g., changes in rainfall that result in more floods, droughts, or intense rain; rising sea levels; Artic Sea ice decline; more frequent and severe heat waves) (IPCC 2013). It is now well established that rising atmospheric GHG emission concentrations are significantly affecting the Earth's climate (CEQ 2016).

The magnitude of the potential annual reduction in the number of gallons of petroleum consumed would depend on the number of commercial firms using manufactured solar panels. At full capacity, the Project would produce solar ingots, wafers, cells, and modules with the annual capacity for 3.3 GW of electricity that would be deployed in the U.S. utility-scale market. This production would have the potential to offset 3.3 GW of electricity generated from fossil fuel in the U.S. annually throughout the lifetime of the Project.

Enabling the deployment of utility-scale photovoltaic modules with the annual capacity for 3.3 GW of electricity each year could offset 5,283,280 tons of CO_2 per year compared to the national grid energy generation GHG base case. Assuming the current module warranty average of 25 years, the potential offset over the 25-year period would be 132,082,000 tons of CO_2 for each 3.3 GW of photovoltaic production. In general, the potential benefits associated with reducing CO_2 emissions would result in a reduction in GHG concentrations and associated climate change impacts (e.g., increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of extreme weather events, rising sea levels).

3.4 Cultural Resources

A site, area, building, structure, district, object, or traditional cultural place that is included in or eligible inclusion in the National Register of Historic Places is defined as a "historic property" under the National Historic Preservation Act (NHPA), as amended (54 U.S.C. 300308). NHPA Section 106 requires that federal agencies consider the effects of their undertakings on historic properties (54 U.S.C. 306108).

The undertaking (LPO's Proposed Action) for cultural resources is limited to the purchase and installation of manufacturing equipment as well as associated general equipment and systems in buildings, completion of final site development activities (e.g., landscaping), and startup of the facility. Therefore, the 181-acre Area of Potential Effect (APE) for archaeology is defined as the footprint of eligible structures and surrounding grounds for proposed final site development. The 237-acre APE for historic architecture is defined as the footprint of eligible structures plus the adjacent viewshed. Because of intervening terrain and vegetation, primarily tree lines and rolling forested hills, the viewshed extends beyond the eligible structure footprint but only to the northwest, across Cassville Pine Log Road Northeast (Figure 3-1). These actions would occur on previously disturbed land; no new surface or sub-surface disturbance would occur.

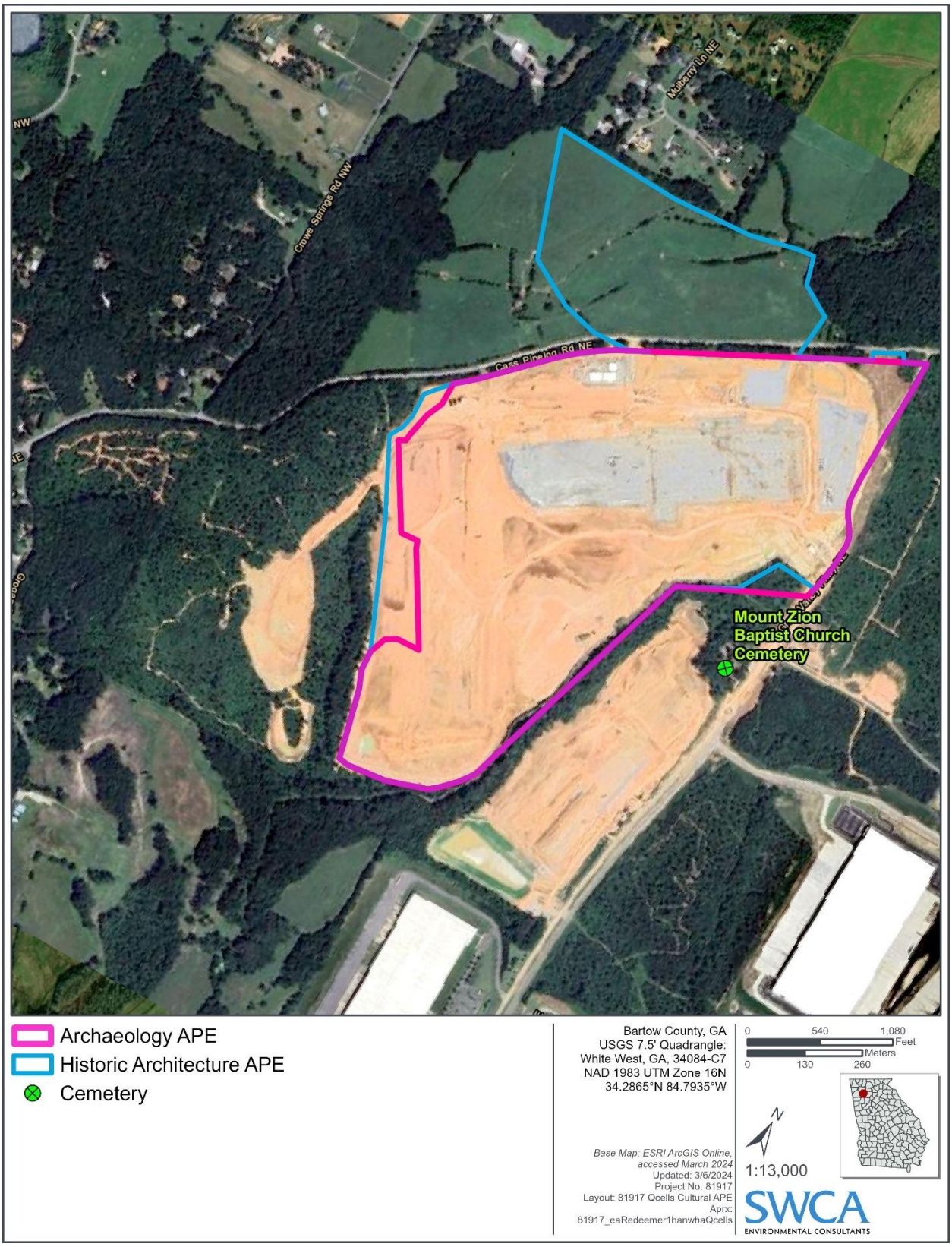

Figure 3-1. APE for LPO's Proposed Action

Approximately 45 acres of the 181-acre APE for archaeology and 51 acres of the 237-acre APE for historic architecture were previously surveyed as part of another agency's permitting process (*Cultural Resource Assessment Survey of the Project Redeemer Property, Bartow County, GA,* by Meg Stack, registered professional archaeologist with Stantec, February and May 2023). The February 2023 archaeological survey identified 14 sites (9BR1257 to 9BR1270). Two additional sites (9BR1276 and 9BR1277) were identified in the May 2023 survey. Seven of these sites are within the APE for archaeology for LPO's proposed undertaking (9BR1258, 9BR1259, 9BR1260, 9BR1261, 9BR1262, 9BR1263, and 9BR1270). All 16 sites were recommended as "not eligible" for the National Register of Historic Places (Stack 2023:i).

The Georgia Natural, Archaeological, and Historic Resources GIS (GNAHRGIS) database does not depict any recorded historic structures within the APE for historic architecture. However, one cemetery (Mount Zion Baptist Church) is recorded east of the Project site, approximately 450 to 500 feet outside the APE for historic architecture.

LPO consulted with the State Historic Preservation Office (SHPO) and, on April 10, 2024, received concurrence with LPO's determination that the Proposed Action would have no adverse effect on historic properties within the APE, as defined in 36 CFR Part 800.5(d)(1), because of the scope of work and previous ground disturbance (see Appendix B).

Because of the absence of adverse impacts on cultural resources within the APE, impacts on cultural resources as a result of the Proposed Action would not be significant.

3.4.1 Native American Interests

As part of the NEPA and NHPA Section 106 historic and archaeological review process, on February 22 and 26, 2024, LPO sent letters to potentially interested tribes, outlining the location and scope of the Project and providing an opportunity to comment and engage LPO through government-to-government consultation (see representative letter in Appendix B). The following federally recognized tribes and councils were contacted:

- Alabama-Coushatta Tribe of Texas
- Alabama-Quassarte Tribal Town
- Cherokee Nation
- Coushatta Tribe of Louisiana
- Eastern Band of Cherokee Indians

Responses to this request were received from one tribe, the Cherokee Nation, which requested a copy of DOE's Section 106 submittal, including supporting information, to the Georgia Historic Preservation Division.

Because of the low likelihood for traditional cultural properties occurring within the Project site, as evidenced by LPO tribal correspondence and SHPO concurrence (Appendix B); the disturbed nature of the site; and the controls in place to respond to an unanticipated discovery of cultural resource materials (see Section 3.3), impacts on cultural resources, including Native American interests, as a result of the Proposed Action would not be significant.

3.5 Health and Safety

General health and safety risks associated with facility finalization and operation include hazards related to equipment failure, employee and facility operator errors, and emergency or security situations. Qcells would operate in full compliance with all regulatory and statutory laws regarding environmental and

individual health and safety, including federal Occupational Safety and Health Administration regulations and state rules under the Georgia Occupational Safety and Health Act. Facility finalization activities would be completed in compliance with the construction subcontractor's safety orientation manual and emergency action plan. For operations, Qcells would follow the overarching safety plans it uses at its existing facility in Cartersville, Georgia, including emergency response plans and risk assessments. The Redeemer Project would also maintain individual safety plans, such as medical emergency plans, respiratory protection plans, and communication policies.

The use and transport of various chemicals in the solar ingot, wafer, cell, and module production processes also represent health and safety risks from operation of the facility. However, Qcells would establish a facility-wide spill prevention, control, and countermeasure plan to address and properly dispose of any chemicals used during operation or inadvertently released. Appropriate detection systems would be provided where hazardous gases and chemicals are used and stored.

Bulk chemicals would be supplied to the site by over-the-road trucks and unloaded with use of a vendor-packaged ACQC to ensure transfer without contamination from the shipping container to the storage vessel. The ACQC would include vendor-supplied valving, instruments, and pumps to control the filling, discharging, and recirculation of bulk chemicals. As noted in Section 2.1.1, each bulk chemical storage vessel would be equipped for secondary containment, leak detection, and gas blanketing.

Security-related concerns would also be addressed through permanent perimeter fencing and controlled entry to the site, along with nighttime security lighting.

Because of the measures to address health and safety, including compliance with federal, state, and local regulations and standards and the company's experience from the handling and use of the same hazardous materials, impacts associated with the health and safety of workers and the public as a result of the Proposed Action would not be significant.

3.6 Noise

Noise is generally defined as sound—more specifically, loud, unpleasant, unexpected, undesired, or unwanted sound that interferes with or disrupts normal activities. Such sound is intense enough to result in hearing damage and often considered annoying.

The Project site is within a parcel that has been zoned for industrial uses. I-75 runs northwest–southwest approximately 1 mile to the southwest. Nearby commercial and industrial developments include truck stops, hotels, and gas stations at the I-75 interchange and warehouses and manufacturing facilities to the east and south. There are no existing residences within the Project site; the nearest residences are approximately 0.3 to 0.4 mile north and east of the facility. The nearest hospital is approximately 5.5 miles to the south, and the nearest school is approximately 1.3 miles to the east.

Existing sources of noise at the Project site include vehicular traffic and equipment. Most facility operations would not add to ambient noise levels because manufacturing processes would be conducted within enclosed buildings. In addition, a 50-foot-wide undisturbed buffer would be created and maintained along Cassville Pine Log Road Northeast to minimize Project-related visual and noise-related disruptions.

The Project would generate long-term noise due to increased vehicular traffic, including truck traffic, from commuting personnel and material or equipment deliveries and shipments. However, because of the distance between noise-sensitive properties and Project-related noise sources, as well as the use of vegetative screening, impacts from noise as a result of the Proposed Action would not be significant.

3.7 Transportation

The Project site is bordered by Great Valley Parkway Northeast to the east and Cassville Pine Log Road Northeast to the north-northwest (Figure 2-1). Cassville Pine Log Road Northeast is a paved, rural two-lane road. Great Valley Parkway Northeast is a paved, four-lane double-divided road for 0.3 mile along the Project site's southeast corner; beyond that point, the road is currently under construction to provide improvements. I-75 runs northwest–southeast approximately 1 mile southwest of the Project site. Access to the Project site from I-75 is provided along Cassville White Road Northeast, which is scheduled for widening in 2024.

Annual average daily traffic (AADT) estimates from 2020 to 2022 at Cassville White Road Northeast, which runs south of the Project site and intersects with Great Valley Parkway Northeast, were 1,350 (2020), 1,440 (2021), and 1,470 in 2022 (Georgia Department of Transportation 2024). The 2022 AADT estimates for I-75 at the intersection with Cassville White Road Northeast range from 3,500 to 7,860 (Georgia Department of Transportation 2024).

During facility finalization and operations, truck trips and employee commuting would increase the volume of traffic on roads used for the Redeemer Project (Table 3-2). Trucks would deliver raw materials from ports or external warehouses via I-75 to Great Valley Parkway Northeast and Cassville White Road Northeast on a continuous basis (i.e., 24/7). The full-time staff of 1,952 would work two shifts per day, and operations would be conducted 7 days per week, 24 hours per day. Most traffic increases would be intermittent and short term in duration, associated primarily with shift changes (i.e., between 6:00 a.m. and 7:00 a.m. and again between 6:00 p.m. and 7:00 p.m.). Overlapping traffic should not occur between shifts because all incoming workers would be at the facility before the shift hour begins, and all outgoing workers would leave the facility after the shift hour ends.

Table 3-2. Project Operation Traffic Impacts

Daily Traffic Type	Interior Construction and Equipment Installation	Facility Operation	Increase over 2022 AADT on Cassville White Road Northeast	Increase over 2022 AADT on I-75
Employee vehicle trips	Not applicable	976 (per shift)	66%	12%–28%
Truck trips	Up to 75	Up to 63	5%	1%–2%

Based on the traffic analysis, Project intersections along Cassville Pine Log Road Northeast and Great Valley Parkway Northeast would maintain an acceptable level of service (i.e., LOS A to C), with negligible traffic delays during construction and operation (Stantec 2023). Cassville Pine Log Road Northeast and Great Valley Parkway Northeast would provide dedicated left-turn and right-turn lanes into the Project site, according to Bartow County minimum turn-lane storage lengths, to fully accommodate traffic with limited queueing (i.e., 5 to 30 feet) (Stantec 2023). Trucks and workers' vehicles would access the Project site from one of four internal driveways, which would reduce the potential for congestion during construction and operational activities.

Traffic analyses do indicate that Cassville White Road Northeast could experience an undesirable LOS for eastbound left turns and U-turns at the roundabout intersection of Cassville White Road Northeast and Great Valley Parkway Northeast during operations. However, although not part of the Proposed Action, the road improvements noted above for Great Valley Parkway Northeast and the widening of Cassville White Road Northeast would address issues associated with increased vehicle use and the number of trips in the general area (Stantec 2023).

Because an acceptable LOS (LOS A to C) would be maintained, even with the increase in traffic; Great Valley Parkway Northeast and Cassville White Road Northeast would be improved and widened to address any increase in traffic, and Qcells would design the Project so as to manage traffic flows, impacts on transportation as a result of the Proposed Action would not be significant.

3.8 Socioeconomics and Environmental Justice

3.8.1 Socioeconomics

The Project site is located in Bartow County, Georgia. According to the 2022 American Community Survey, Bartow County had a population of 112,816 (U.S. Census Bureau 2022a). Cartersville is the nearest population center with a significant labor pool. Other significant population centers include Rome, Canton, and Marietta; the nearest major city is Atlanta. Hartsfield-Jackson Atlanta International Airport is the closest major airport, about 60 miles to the south. The trip from the airport to the Project site by car takes just over 1 hour. Table 3-3 lists the nearby labor pools, including distance from the Project site and the population.

Table 3-3. Labor Pools near Project Site

Labor Pool	Distance from Project Site (miles)	Population
Cartersville	10	23,187
Canton	25	33,056
Rome	28	37,713
Marietta	35	60,972
Atlanta	53	498,715

The median household income in Bartow County is $84,590. The percentage of people below the poverty line in Bartow County is 9.6 percent, which is less than the 12.7 percent for Georgia and the 12.6 percent for the nation as a whole (U.S. Census Bureau 2022b and 2022c).

Operation of the Project would generate approximately 1,952 jobs by the third or fourth quarter of 2025, with up to an additional 300 to 400 temporary jobs during ramp-up. Beneficial socioeconomic impacts would occur from increased employment opportunities, tax revenue generation, and direct and indirect spending in the local economy. Most of the Project workforce is anticipated to be hired from Bartow and adjacent counties in Georgia, with Qcells leveraging partnerships with local academic institutions and community organizations.

White, Cartersville, and other nearby population centers have ample housing available, as well as associated infrastructure and services (e.g. housing, schools, health care), to support the potential population influx associated with the new jobs created by the Project. In addition, the Cartersville Water Department has the capacity needed to supply and process all Project water and wastewater.

Given the jobs that would be created during operation of the facility and the availability of housing and public services in the greater Bartow County area, no significant adverse socioeconomic impacts as a result of the Proposed Action are expected.

3.8.2 Environmental Justice

LPO's review of environmental justice (EJ) issues focuses on Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; the National-Scale Air Toxics Assessment (NATA) cancer risk and respiratory hazard index, as defined in the

U.S. Environmental Protection Agency's (EPA's) EJ screening tool; and population centers near the Project site (e.g., schools, day-care centers).

Executive Order 12898 directs federal agencies to address environmental and human health conditions in minority and low-income communities. The evaluation of EJ is dependent on determining if high and adverse impacts from the Proposed Action would disproportionately affect minority or low-income populations in the affected community.

In accordance with EPA's EJ guidelines, minority populations should be identified when either 1) the minority population of the affected area exceeds 50 percent or 2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population, or other appropriate unit of geographic analysis. Similarly, low-income populations should be identified when the percentage of individuals below the U.S. Census Bureau poverty threshold in the affected area is equal to or greater than the low-income population percentage in the general population, or other appropriate unit of geographic analysis.

The ethnic and racial composition of Bartow County and the state are presented in Table 3-4. Minority populations make up less than 50 percent of the population in Bartow County, which is lower than minority population percentage in the state. In the census block-group where the Project site is located, no minority populations are present (see Table 3-5).

The percentage of persons below the poverty threshold is 3 percent lower in Bartow County (9.6 percent) than in the rest of the state (12.7 percent) (see Table 3-4). In the EPA's EJ screening tool, however, the low-income population at the census block-group level is 40 percent, which is higher than the state average of 34 percent (62nd percentile) and 9 percentage points higher than the U.S. average of 31 percent (69th percentile) (Table 3-5).

Table 3-4. Population, Ethnicity, and Poverty

	Bartow County	State of Georgia
Total population	112,816	10,912,876
Race/ethnicity		
White	74.5%	49.6%
Black or African American	11.5%	30.7%
American Indian and Alaska Native	< 0.1%	0.1%
Asian	1.4%	4.4%
Native Hawaiian and other Pacific Islander	0%	0.1%
Hispanic or Latino	10.4%	10.4%
Poverty	9.6%	12.7%

Note: All population and ethnicity data were gathered from the U.S. Census Bureau web page (accessed December 13, 2023).

Table 3-5. EPA's EJ Screen Report

	Block Group	State Average	Percentile in State	U.S. Average	Percentile in U.S.
NATA* cancer risk (lifetime risk per million)	30	35	2	25	52
NATA* respiratory hazard index	0.4	0.44	6	0.31	70
People-of-color population	0%	48%	0	39%	0
Low-income population	40%	34%	62	31%	69

Notes: Selected Variables – Block Group: 130159601052, Georgia, EPA Region 4. Approximate Population: 1,768.
**More information on the NATA can be found at https://www.epa.gov/national-air-toxics-assessment*

EPA's NATA cancer risk and respiratory hazard indices disclose how local residents compare to residents of the state and the U.S. as a whole. For the NATA respiratory hazard index and the NATA cancer risk index (i.e., lifetime risk per million), the Project site is in an area that is in the 52nd to 70th percentile in the U.S. Although these NATA percentiles are higher in comparison to the rest of the U.S., facility emissions were reviewed by the Georgia Environmental Protection Division for Qcells' Synthetic Minor Air Permit Application (Montrose 2022, 2023), as discussed in Section 3.3, *Air Quality*. The permitted emission levels for criteria pollutants and hazardous air pollutants are considered to be protective of human health and the environment. In addition, based on the permit, controls would be implemented during operation to minimize emissions and potential air quality impacts.

Given the 1,952 full-time permanent jobs created, the Project would benefit the regional economy. There are no anticipated effects that could give rise to disproportionate impacts on minority or low-income populations in the affected area; therefore, EJ impacts as a result of the Proposed Action would not be significant.

3.9 Waste Management

During construction activities associated with facility finalization, no hazardous waste would be generated, and all non-hazardous solid waste would be managed and transported to a recycler (where applicable) or landfill in accordance with all federal, state, and local regulations.

During operations, hazardous and non-hazardous solid waste and wastewater would be collected, characterized, and disposed of by recycling, incinerating, or reusing in accordance with all applicable federal, state, and local environmental regulations (see Table 2-2 for details and estimated volumes). Qcells would establish a facility-wide spill prevention, control, and countermeasure plan to address and properly dispose of any liquid waste generated during operation.

The Cartersville Water Department would process up to 3.8 million gallons per day of wastewater during Project operations. Wastewater treatment would occur on-site prior to discharge to the municipal sewer system through a county sewer line on the southeast side of the site. Discharge volumes and effluent concentrations would be in accordance with Qcells' industrial wastewater discharge permit.

Because of planned waste management practices, which include a recycling program, and the solid and liquid waste authorizations and controls that would be in place, impacts from waste management activities as a result of the Proposed Action would not be significant.

3.10 Cumulative Impacts

Cumulative impacts are potential effects on the environment from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (federal or nonfederal) or persons (40 CFR Part 1508.1 [g]).

LPO reviewed active project lists and planning documents from federal, state, and local agencies to identify projects that may have effects on the same resources analyzed for the Proposed Action and, therefore, result in cumulative impact.

3.10.1 Future Qcells Expansion

Qcells has applied for a permit from the Department of the Army, pursuant to Section 404 of the Clean Water Act, for a proposed 380-acre project located west of and immediately adjacent to the Redeemer Project. The project would expand operations and involve two buildings, stormwater infrastructure, parking, site access, external support infrastructure (e.g., aboveground storage tanks), and other attendant features. An estimated 2,239 linear feet of intermittent stream, 513 linear feet of ephemeral stream, and 2.2 acres of wetland are jurisdictional. To offset the loss in aquatic function associated with the proposed impacts on aquatic resources, Qcells is proposing to purchase 13.20 legacy wetland credits or 1.65 2018 Standard Operating Procedure wetland credits from an approved mitigation bank. A total of 13,475.70 legacy stream credits or 1,871.63 non-perennial 2018 Standard Operating Procedure stream credits would also be purchased from an approved mitigation bank to offset stream impacts.

In addition to wetland impacts, construction of the proposed expansion would result in short- to long-term adverse impacts related to air quality, noise, transportation, and visual resources. Specifically, these would be associated with the emissions and noise generated by equipment and vehicles, the waste generated, the additional volume of traffic on area roads, and the views of construction and facility operation. However, this expansion would be in compliance with all local, state, and federal regulations. It would also generate long-term beneficial impacts from increased employment opportunities, tax revenue, and direct and indirect spending in the local economy.

The Proposed Action would contribute additional air emissions, traffic and traffic-related noise, waste, and health and safety risks during operation, but these impacts would be minimized through the use of Project controls, including compliance with all local, state, and federal regulations. Therefore, the Proposed Action, when considered together with this proposed expansion, would not have the potential to result in significant cumulative resource impacts.

3.10.2 Other Planned Projects

The Bartow County land use plan (Northwest Georgia Regional Commission 2023) was adopted in 2023. It includes plans for the following actions through 2028:

- Road Improvements: Many roads are slated for improvement, including Cassville White Road Northeast, which is to be widened from two to four lanes from Busch Drive to Great Valley Parkway Northeast in 2025; Cassville White Road Northeast is the access point for the Project site.
- Highland 75 Business Park: Bartow County is developing an industrial area at Grassdale Road and I-75 north of Cartersville. Bartow County and Cartersville would install utilities and road networks and provide incentives at the business park through 2027 to support future industrial and commercial development.

Per the Cartersville-Bartow County Department of Economic Development (2024), the following are also large projects, as announced in 2023 for upcoming development:

- Hyundai Motor Group has selected a site in Bartow County for a new electric-vehicle battery manufacturing facility that would supply Hyundai Motor Group's plants in the U.S. This would be one of the largest economic development projects in state history. Stakeholders estimate that it would create more than 3,500 new jobs through approximately $4 to 5 billion of investment in Bartow County.

- Yakult U.S.A., a Japanese probiotic beverage company, would build its second U.S. facility in Bartow County, creating more than 90 jobs and investing $305 million.
- Switch KEEP 2.0 is planning to build its Atlanta North Campus in southern Bartow County, which would represent a nearly $8.5 billion investment in Bartow County.

Development of these planned activities would result in short- to long-term adverse impacts related to air quality, noise, transportation, and visual resources. Specifically, these would be associated with the emissions and noise generated by equipment and vehicles, the waste generated, the additional volume of traffic on area roads, and the views of construction and facility operation. These developments would also generate beneficial impacts from increased employment opportunities, tax revenue, and direct and indirect spending in the local economy. Road improvements would also improve traffic flow and area road conditions in the long term. All development projects are assumed to be developed in compliance with all local, state, and federal regulations to avoid or minimize adverse impacts.

The Proposed Action, when considered together with most planned activities, would not have the potential to result in significant cumulative resource impacts because of the geographic distance and/or the lack of construction or operational overlap to create an incremental impact. The Proposed Action would lead to an incremental increase in overall traffic; however, no significant adverse cumulative effects on the region’s overall transportation network are anticipated.

4. DRAFT FINDING

Based on this EA, DOE has determined that providing a federal loan guarantee to Hanwha Qcells Georgia, Inc., to construct and operate a PERC production hub in Bartow County, Georgia, will not have a significant effect on the human environment. Preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

This Finding of No Significant Impact should not be construed as a final decision about issuance of a loan guarantee.

_____ _____

Todd Stribley Date
NEPA Compliance Officer
DOE Loan Programs Office

5. LIST OF AGENCIES CONTACTED

The agencies and Native American tribes contacted during preparation of this EA are listed below.

5.1 Federal Agencies

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

5.2 State, County, and Local Agencies

- Georgia Department of Natural Resources
  - Georgia Environmental Protection Division
- Georgia Department of Community Affairs
  - Georgia Historic Preservation Division
- Georgia Department of Transportation
- Bartow County

5.3 Native American Tribes

- Alabama-Coushatta Tribe of Texas
- Alabama-Quassarte Tribal Town
- Cherokee Nation
- Coushatta Tribe of Louisiana
- Eastern Band of Cherokee Indians

6. LIST OF PREPARERS

6.1 Department of Energy

Name	Project Role	Years of Experience
Todd Stribley	Director, Environmental Compliance	31
Molly Cobbs	NEPA Document Manager	21

6.2 Applicant

Name	Project Role	Years of Experience
Sue Wilmot, Ph.D.	SWCA Environmental Consultants	20
Kari Chalker, M.A.	SWCA Environmental Consultants	18
Allison McKenzie, M.S.	SWCA Environmental Consultants	13
Matt Jorgenson, M.A.	SWCA Environmental Consultants	29
Jennifer Gonzalez, B.S.	SWCA Environmental Consultants	16
Jason Kainer, B.A.	SWCA Environmental Consultants	8

7. LITERATURE CITED

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APPENDIX A PERMITS AND APPROVALS

Permit*	Submission by Qcells	Review by Authorities	Approval Date	Approval Authority	Approval Number
Air Emission Permit: Module*	1/24/2023	Completed	4/28/2023	Georgia Department of Natural Resources	3674-015-0150-S-01-0
Air Emission Permit: Cell, Ingot and Wafer, Other Buildings*	7/27/2023	Ongoing	Second to third quarter of 2024	Georgia Department of Natural Resources	Pending
Land Disturbance Permit	2/14/2023	Completed	3/17/2023	City of Cartersville	2307
Storm Water Pollution Prevention Plan, NOI	2/14/2023	Completed	2/28/2023	State of Georgia	GAR18A1AA-V1
Mass Grading Permit	3/14/2023	Completed	3/28/2023	City of Cartersville	2307
Foundation Permit: Module	4/17/2023	Completed	5/30/2023	City of Cartersville	PRFO202300321-BD1
Foundation Permit: Cell	6/5/2023	Completed	6/14/2023	City of Cartersville	PRFO202300369-BD1
Foundation Permit: Ingot and Wafer	6/26/2023	Completed	7/12/2023	City of Cartersville	PRNR202300437-BD1
Foundation Permit: Other Buildings (Main Office, Utility Building, Electrical Building, Hazmat Storage, Silicon Kerf, Wastewater Treatment)	7/14/2023 to 1/5/2024	Completed	7/26/2023 to 1/5/2024	City of Cartersville	PRFO202300475-BD1; PRFO202300482-BD1; PRFO202300594-BD1; PRFO202300616-BD1; PRFO202300619-BD1; PRBD202300701
Steel Erection Permit: Module	4/17/2023	Completed	5/30/2023	City of Cartersville	PRFO202300321-BD1
Steel Erection Permit: Cell	6/5/2023	Completed	6/14/2023	City of Cartersville	PRFO202300369-BD1
Steel Erection Permit: Ingot and Wafer	6/26/2023	Completed	7/12/2023	City of Cartersville	PRNR202300437-BD1
Building Permit: Module*	4/17/2023	Completed	9/1/2023	City of Cartersville	PRFO202300321-BD1
Building Permit: Cell*	6/20/2023	Completed	6/27/2023	City of Cartersville	PRFO202300369-BD1
Building Permit: Ingot and Wafer*	7/24/2023	Completed	12/22/2023	City of Cartersville	PRNR202300437-BD1
Building Permit: Utility Building*	8/4/2023	Completed	12/22/2023	City of Cartersville	PRFO202300482-BD1
Building Permit: Wastewater Treatment*	11/9/2023	Completed	12/29/2023	City of Cartersville	PRBD202300701
Industrial Pretreatment Permit	2/14/2023	Ongoing	Anticipated August 2024	City of Cartersville	Pending

**Denotes permit that is applicable to LPO's Proposed Action.*

APPENDIX B AGENCY AND TRIBAL CORRESPONDENCE

Copies of the items shown in bold in Tables B-1 and B-2 are included in this appendix.

Table B-1. Federal, State, County, and Local Agencies Contacted

U.S. Army Corps of Engineers	**03/12/2024 Initiation letter delivered via email**
U.S. Fish and Wildlife Service	02/26/2024 Outreach to Georgia Ecological Services re: informal consultation 02/29/2024 Phone call between LPO and Georgia Ecological Services Office to discuss Project and LPO's approach to ESA Section 7; confirmed no further documentation needed for "no effect" determinations
Georgia Department of Natural Resources (DNR), Environmental Protection Division (State Clearinghouse)	**02/16/2024 Initiation letter delivered via email** **03/14/2024 Comments from Air Protection Branch received via email**
DNR, Coastal Resources Division	02/05/2024 Initial outreach re: Coastal Zone Management Act (CZMA) 02/06/2024 Confirmation from state that CZMA is not applicable
DNR, Wildlife Resources Division	02/16/2024 Cc'ed on State Clearinghouse initiation letter
Georgia Department of Community Affairs, Georgia Historic Preservation Division	**03/11/2024 NHPA Section 106 consultation package submittal (attachments withheld to protect sensitive information)** **04/10/2024 Georgia Historic Preservation Division concurrence received**
Georgia Department of Transportation	02/16/2024 Cc'ed on State Clearinghouse initiation letter
Bartow County Commissioner's Office	**02/20/2024 Initiation letter delivered via email**
Bartow County Administrator	02/20/2024 Cc'ed on County Commissioner’s initiation letter

Table B-2. Native American Tribes Contacted

Alabama-Coushatta Tribe of Texas	**02/22/2024 Initiation letter delivered via email** 04/08/2024 Follow-up email sent 04/10/2024 Attempted follow-up by phone 04/17/2024 Attempted follow-up by phone
Alabama-Quassarte Tribal Town	**02/22/2024 Initiation letter delivered via email** 04/08/2024 Follow-up email sent 04/10/2024 Attempted follow-up by phone 04/17/2024 Attempted follow-up by phone
Cherokee Nation	**02/22/2024 Initiation letter delivered via email** 02/22/2024 Cherokee Nation requested information re: 106 process 02/27/2024 LPO committed to sharing 106 information when available 03/12/2024 LPO delivered 106 initiation package to Cherokee Nation 04/10/2024 LPO delivered GA HPD's concurrence with 106 findings to Cherokee Nation 04/22/2024 LPO followed up with Cherokee Nation by phone (voicemail) 05/06/2024 Cherokee Nation requested confirmation on lead agency for the future Qcells expansion 05/07/2024 LPO confirmed that USACE is lead agency for the expansion
Coushatta Tribe of Louisiana	**02/22/2024 Initiation letter delivered via email** 04/08/2024 Follow-up email sent 04/10/2024 Attempted follow-up by phone 04/17/2024 Attempted follow-up by phone

Eastern Band of Cherokee Indians	**02/26/2024 Initiation letter delivered via email** 04/08/2024 Follow-up email sent 04/10/2024 Attempted follow-up by phone 04/17/2024 Attempted follow-up by phone

Department of Energy
Washington, DC 20585

March 12, 2024

ATTN: CESAS-RD
Regulatory Branch Chief
U.S. Army Corps of Engineers
Savannah District
100 West Oglethorpe Ave, Savannah, GA 31401-3604

SUBJECT: The U.S. Department of Energy's (DOE's) intent to Prepare an Environmental Assessment (EA) for a proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc.

Dear Regulatory Branch Chief:

Title XVII of the Energy Policy Act of 2005 established a federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Hanwha QCells Georgia, Inc. (Applicant) has applied for a loan guarantee pursuant to DOE's Title XVII Clean Energy Financing Program. DOE is evaluating whether to provide a federal loan guarantee to the Applicant to support the development of a solar panel component manufacturing facility in Bartow County, Georgia (Project).

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility.

DOE is using the National Environmental Policy Act (NEPA) process to assist in determining whether to issue a loan guarantee to support completion of the Project. The DOE Loan Programs Office (LPO) is preparing an EA to evaluate and inform DOE's consideration of providing a federal loan guarantee to complete construction of the facility. The decision to prepare an EA was made in accordance with the requirements of NEPA, the Council on Environmental Quality regulations for implementing the

procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The DOE NEPA regulations require the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. The Georgia Environmental Protection Division was notified of DOE's NEPA review on February 16, 2024. We will also notify your office when the Draft EA is available for review.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process, please contact me in the DOE Loan Programs Office at 240-687-7266, or email at LPO_Environmental@hq.doe.gov.

Sincerely,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.03.12 08:43:52 -04'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Cc:
Amy Egoroff, Lead Biologist and Project Manager, USACE Piedmont Branch

Attachments
Figure 1 Project Location

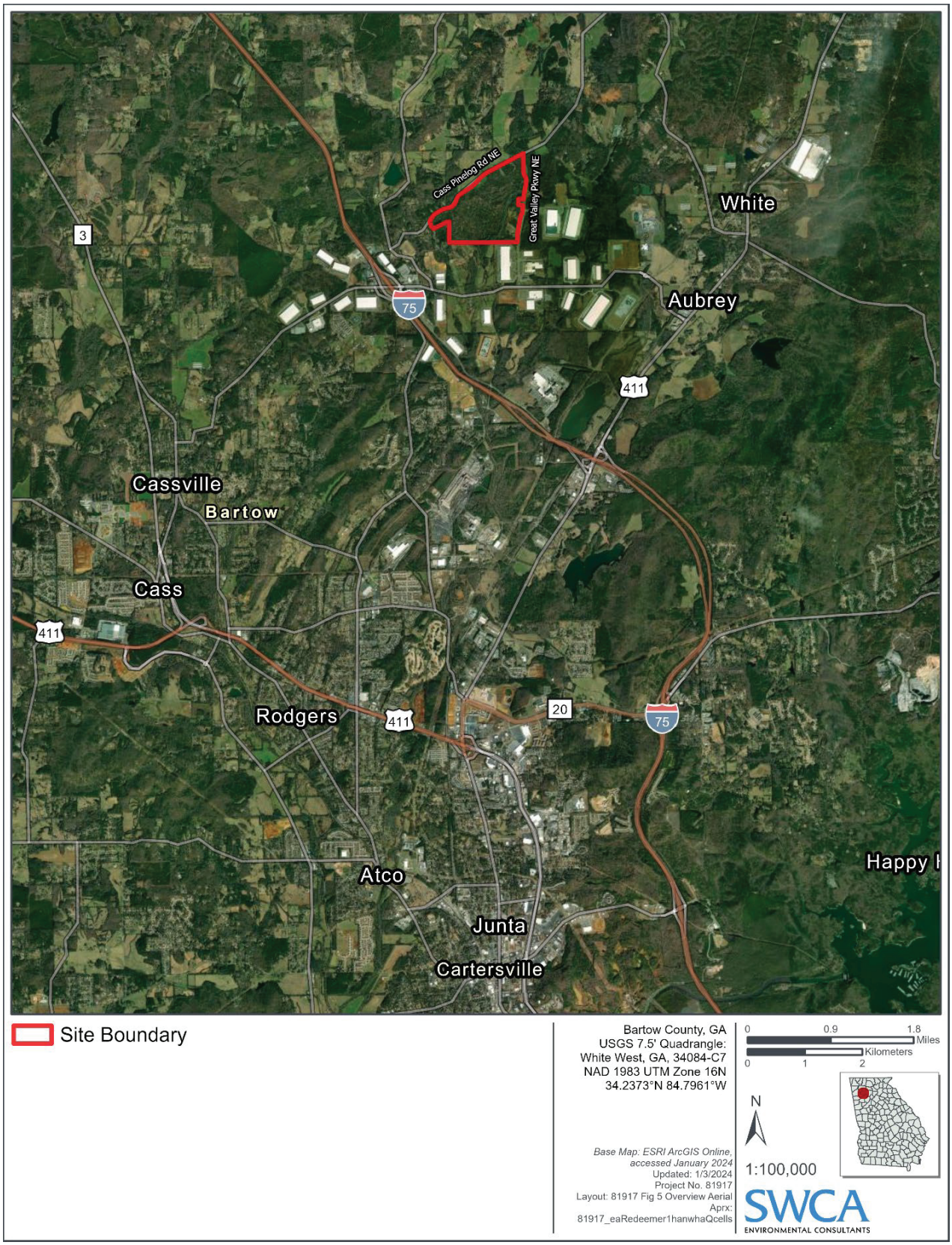

Figure 1: Project Location

Department of Energy
Washington, DC 20585

February 16, 2024

Shelly Stancil
Director, Environmental Protection Division
Georgia Department of Natural Resources
Suite 1456, East Tower 2 Martin Luther King, Jr. Dr.
Atlanta, GA 30334

SUBJECT: The U.S. Department of Energy's (DOE's) intent to Prepare an Environmental Assessment (EA) for a proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc.

Dear Director Stancil,

Title XVII of the Energy Policy Act of 2005 established a federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Hanwha QCells Georgia, Inc. (Applicant) has applied for a loan guarantee pursuant to DOE's Title XVII Clean Energy Financing Program. DOE is evaluating whether to provide a federal loan guarantee to the Applicant to support the development of a solar panel component manufacturing facility in Bartow County, Georgia (Project).

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The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility.

DOE is using the National Environmental Policy Act (NEPA) process to assist in determining whether to issue a loan guarantee to support completion of the Project. The DOE Loan Programs Office (LPO) is preparing an EA to evaluate and inform DOE's consideration of providing a federal loan guarantee to complete construction of the facility. The decision to prepare an EA was made in accordance with the requirements of NEPA, the Council on Environmental Quality regulations for implementing the

procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication. LPO will provide the draft EA for your review and comment.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process, please contact me in the DOE Loan Programs Office at 240-687-7266, or email at LPO_Environmental@hq.doe.gov.

Sincerely,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.16 14:00:08 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachments
Figure 1 Project Location

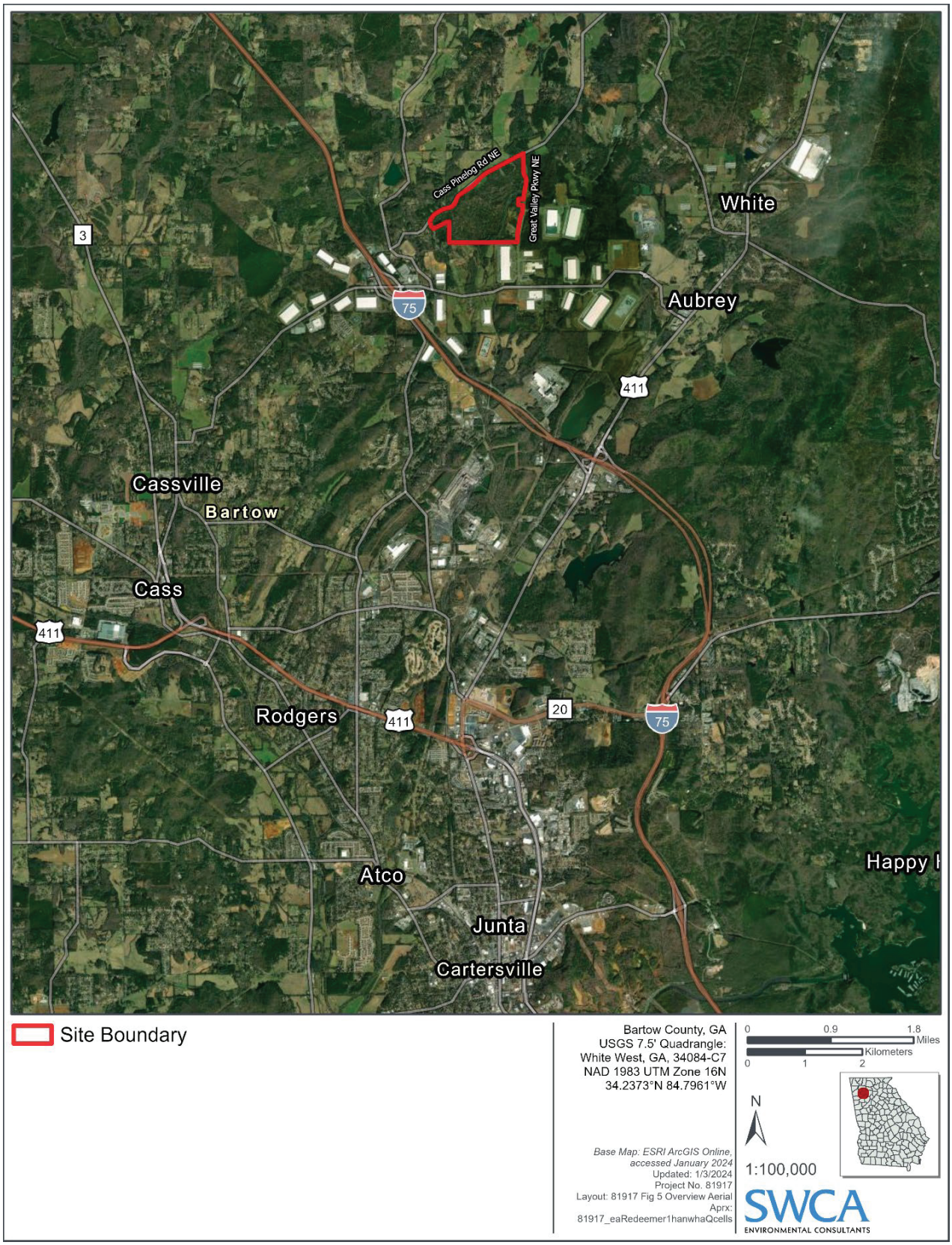

Figure 1: Project Location

From:	Munsey, Elisabeth
To:	Cobbs, Molly
Cc:	Oser, DeAnna; Boylan, James; Aponte, Anna; Helms, Laura
Subject:	[EXTERNAL] RE: Intent to Prepare an Environmental Assessment for a Proposed Federal Loan to Hanwha Qcells Georgia, Inc.
Date:	Thursday, March 14, 2024 7:43:22 PM
Attachments:	image003.png 1_State_Initiation_GA_EPD.pdf

Good evening Ms. Cobbs,

The proposed project for the construction of a solar panel manufacturing facility referenced in the attached document is located in Bartow County, Georgia which is subject to general conformity rules. General conformity requires federal agencies to ensure that emissions caused by activities they propose will not interfere with a State or Tribe's ability to attain and maintain the NAAQS, specifically when the federal assistance required is to fund, permit or license, or approve activities that are subject to the conformity requirements.

Because of this, Georgia EPD would like to request a copy of the environmental assessment for our review. The environmental assessment should include an estimate of the emissions from the project so we can determine whether the emissions exceed the de minimis thresholds established in EPA's general conformity regulations. Once we review the environmental assessment, we may have further questions relating to your project.

Please feel free to contact Laura Helms who I have copied above with any additional questions that you may have.

Thank you.
Elisabeth

Elisabeth Munsey
Manager, Planning & Support Program
Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, GA 30354
(o)470-251-4736
E-mail: Elisabeth.Munsey@dnr.ga.gov

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

From: LPO_Environmental <lpo_environmental@hq.doe.gov>
Sent: Tuesday, February 27, 2024 11:25 AM
To: Cown, Jeff <Jeff.Cown@dnr.ga.gov>
Subject: Intent to Prepare an Environmental Assessment for a Proposed Federal Loan to Hanwha Qcells Georgia, Inc.

Dear Director Cown,

We previously addressed and delivered this notice to the incorrect contact (see trailing message). Please accept our apologies.

If you or your team have any questions about the attached letter, please let me know.

Thanks,
Molly

From: LPO_Environmental
Sent: Friday, February 16, 2024 2:11 PM
To: shelly.stancil2@dnr.ga.gov
Cc: james.boylan@dnr.ga.gov; anna.truszczynski@dnr.ga.gov; katie.oshields@dnr.ga.gov; daley.duffy@dnr.ga.gov; sbarrow@dot.ga.gov
Subject: Intent to Prepare an Environmental Assessment for a Proposed Federal Loan to Hanwha Qcells Georgia, Inc.

Dear Director Stancil,

Please see the attached letter notifying your office of the U.S. Department of Energy's intent to prepare an Environmental Assessment for a proposed Federal loan to Hanwha Qcells Georgia, Inc. The proposed loan would support final construction of a solar panel manufacturing facility in Bartow County, Georgia. Our office will consult directly with the Georgia Historic Preservation Division regarding National Historic Preservation Act Section 106 compliance.

Thank you,
Molly

Molly R. Cobbs
Loan Programs Office
U.S. Department of Energy
molly.cobbs@hq.doe.gov
240-687-7266 (Eastern time)

Department of Energy
Washington, DC 20585

March 11, 2024

Jennifer Dixon, Division Director
State Historic Preservation Officer
Georgia Historic Preservation Division
60 Executive Park South, NE
Atlanta, GA 30329

SUBJECT: U.S. Department of Energy, Project Redeemer in White, Georgia; National Historic Preservation Act Section 106 Initiation

Dear Director Dixon:

Pursuant to its authority under Title XVII of the Energy Policy Act of 2005, which established a Federal loan guarantee program, the U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide a Federal loan guarantee to Hanwha Qcells Georgia, Inc. (Qcells or Applicant) to finalize development of Project Redeemer, a solar panel component manufacturing facility (Project), in White, Georgia (DOE's proposed action and undertaking). The Project is located at 751 Great Valley Parkway, White, Georgia (Attachment 1).

The purpose of this letter is to initiate consultation with the Georgia Historic Preservation Division (GAHPD) under Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), present the DOE undertaking, present the archaeological and architectural areas of potential effects (APEs), and seek your concurrence with DOE's finding of No Historic Properties Affected for this project.

DOE is using the National Environmental Policy Act (NEPA) process to assist in determining whether to issue a loan guarantee to support completion of the Project. The DOE LPO is preparing an Environmental Assessment to evaluate and inform DOE's consideration of providing a federal loan guarantee to complete construction of the facility. DOE notified the Director of the Georgia Environmental Protection Division of the pending NEPA review in late February 2024.

DOE Undertaking and APE

DOE's undertaking is the issuance of the proposed Federal loan guarantee to Qcells to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility. Activities subject to DOE funding would occur on previously disturbed land; no new surface or sub-surface disturbance would occur as a

result of the federal loan guarantee. A list of activities proposed for DOE funding is included in Attachment 2.

The Applicant's project includes activities that are and are not subject to DOE LPO funding (Attachment 3). Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors (Attachment 4).

The archaeological Area of Potential Effect (APE) is limited to DOE's proposed action area and is defined as the 181-acre footprint of structures subject to DOE funding and exterior areas for proposed final site development activities. The 237-acre APE for historic architecture is defined as the footprint of structures subject to DOE funding plus adjacent viewshed. Due to intervening terrain and vegetation, primarily tree lines and rolling forested hills, the viewshed extends beyond the structure footprints only to the northwest across Cass Pine Log Road NE. The APEs are shown in Attachment 5. These APE descriptions and the attached map are intended to address GAHPD Environmental Review Form Section IV.B. requirements.

Current DOE Section 106 Activities

In accordance with Section 106, DOE has identified and contacted Native American Tribes with a known an interest in the project area. DOE has notified the Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Cherokee Nation, Coushatta Tribe of Louisiana, and Eastern Band of Cherokee Indians to see if they have an interest in the project. On February 22, 2024, the Cherokee Nation requested additional information regarding the Section 106 initiation for the Project. A copy of this letter will be shared with the Cherokee Nation. No other consulting parties have been identified for the Project.

A portion of the archaeology APE was previously subjected to two Phase 1 archaeological surveys (*Cultural Resource Assessment Survey of the Project Redeemer Property, Bartow County, GA* by Meg Stack, RPA of Stantec; February 2023 and May 2023); however, these surveys were conducted when the lead federal agency was presumed to be the U.S. Army Corps of Engineers. The February 2023 archaeological survey identified 14 sites (9BR1257 to 9BR1270). Two additional sites (9BR1276 and 9BR1277) were identified in the May 2023 survey. Seven of these sites are located within the archaeology APE for DOE's proposed undertaking (9BR1258, 9BR1259, 9BR1260, 9BR1261, 9BR1262, 9BR1263, and 9BR1270) (Attachment 5). All 16 sites are recommended as not eligible for the National Register of Historic Places (Stack 2023:i).

The Georgia Natural, Archaeological, and Historic Resources Geographic Information System database does not depict any recorded historic structures within the architectural APE. One cemetery (resource 1675) is recorded east of Project Redeemer, approximately 450 to 500 feet outside the historic architecture APE (Attachment 5).

After reviewing the surveys and given that DOE's actions would occur on previously disturbed land and no new surface or sub-surface disturbance would occur, DOE is issuing a finding of No Historic Properties Affected for this undertaking and seeks the concurrence of the GAHPD and the Cherokee Nation on this finding.

Requesting your Concurrence and Next Steps

As part of the Section 106 process, DOE requests your concurrence on the archaeological and architectural APEs and our proposed determination of "no historic properties affected" as described in 36 CFR §800.4(d)(1). Additionally, we welcome any comments you may have on the proposed action.

We look forward to consulting with your office throughout the Section 106 process. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (240) 687-7266, or email at LPO_Environmental@hq.doe.gov.

Respectfully,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.03.11 15:51:54 -04'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Cc:
Elizabeth Toombs, Tribal Historic Preservation Officer, Cherokee Nation

Attachments
Attachment 1 Project Location Map
Attachment 2 List of Activities Proposed for DOE Loan Guarantee (LPO scope)
Attachment 3 Project Site Map Showing Activities Subject to DOE Funding
Attachment 4 Site Photos and Photo Key
Attachment 5 Areas of Potential Effect and Recorded Sites

April 10, 2024

Molly Cobbs
Loan Programs Office
U.S. Department of Energy
1000 Independence Avenue Southwest
Washington, D.C. 20585

RE: Construct Manufacturing Facility, 751 Great Valley Parkway, White
Bartow County, Georgia
HP-240311-006

Dear Ms. Cobbs:

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project, including the draft report entitled, *Cultural Resource Assessment Survey of the Project Redeemer Property, Bartow County, GA,* prepared by Stantec and dated May 2023. Our comments are offered to assist the U.S. Department of Energy (DOE) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project consists of constructing a solar panel manufacturing complex on the vacant Bartow County parcel C123-0001-002 located at 751 Great Valley Parkway in White including constructing two (2) buildings of unknown height and design, an unknown number of ground storage tanks of unknown size and height, and roadway, parking, drainage, and utility infrastructure on the project site. It is HPD's understanding that project activities, specifically land clearing and construction activities, began between June 2022 and June 2023. HPD previously reviewed the project (HP-240305-002) with the U.S. Army Corps of Engineers (USACE) as the lead federal agency and concurred with the USACE that, within the USACE permit area, no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) would be affected by the project. HPD was notified on March 11, 2024, that the lead federal agency has changed from USACE to the DOE. HPD would like to note that it is not within our role under Section 106 of the NHPA to comment on projects that have already begun since the undertaking may already have affected historic properties. In order to complete the Section 106 process in such circumstances, the federal agency and the Advisory Council on Historic Preservation may consider foreclosure and/or the applicability of Section 110k of the NHPA (54 U.S. Code § 306113). Such consideration by the federal agency can lead to significant project delays.

However, in order to move this project forward and based on the information provided and desktop research, HPD notes that archaeological site 9BR23 and historic resources BR-152/Five Forks and Spring Place, BR-154/Mansfield Road and Simpson Road, BR-156/201 Spring Place Road, BR-173/Simpson Road, BR-174/Crowe Springs Road, BR-181/550 Cass-White Highway, BR-190/White-Cassville Road, BR-191/White-Cassville Road, and BR-198/Gaines Road, noted in the above-referenced report, are not located withing the proposed project's area of potential effect (APE). Additionally, HPD concurs that archaeological sites 9BR1275, 9BR1258, 9BR1259, 9BR1260, 9BR1261, 9BR1262, 9BR1263, 9BR1264, 9BR1265, 9BR1266, 9BR1267, 9BR1268, 9BR1269, 9BR1270, 9BR1276, and 9BR1277 and Isolated Finds 1 and 2, by definition, within the project's APE, are not eligible for listing in the NRHP. Furthermore, HPD concurs that BR-188/GNAHRGIS resource 1675/Mt. Zion Baptist Church Cemetery is of unknown eligibility for listing for the NRHP and finds multiple other historic resources within the proposed project's APE, some of which may be eligible for listing in the NRHP. However, it is HPD's

opinion that the subject project, as proposed, will have **no adverse effect** to historic properties within its APE, as defined in 36 CFR Part 800.5(d)(1), due to the scope of work and previous ground disturbance.

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic properties are adequately considered in project planning.

Please refer to project number **HP-240311-006** in any future correspondence regarding this project. If we may be of further assistance, please contact Olivia Kendrick, Environmental Review Historian, at Olivia.Kendrick@dca.ga.gov or (404) 486-6425 or Noah Bryant, Compliance Review Archaeologist, at Noah.Bryant@dca.ga.gov or (404) 679-0649.

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

SMR/olk

cc:

Amy Egoroff, USACE
Julianne Meadows, Northwest Georgia Regional Commission
Patrick Vickers, DCA Regional Services, Region 1

Department of Energy
Washington, DC 20585

February 20, 2024

Steve Taylor
County Commissioner
Bartow County
135 W. Cherokee Ave., Ste. 251
Cartersville, GA 30120

SUBJECT: The U.S. Department of Energy's (DOE's) intent to Prepare an Environmental Assessment (EA) for a proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc.

Dear Commissioner Taylor,

Title XVII of the Energy Policy Act of 2005 established a federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Hanwha QCells Georgia, Inc. (Applicant) has applied for a loan guarantee pursuant to DOE's Title XVII Clean Energy Financing Program. DOE is evaluating whether to provide a federal loan guarantee to the Applicant to support the development of a solar panel component manufacturing facility in Bartow County, Georgia (Project).

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility.

DOE is using the National Environmental Policy Act (NEPA) process to assist in determining whether to issue a loan guarantee to support completion of the Project. The DOE Loan Programs Office (LPO) is preparing an EA to evaluate and inform DOE's consideration of providing a federal loan guarantee to complete construction of the

facility. The decision to prepare an EA was made in accordance with the requirements of NEPA, the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication. LPO will provide the draft EA for your review and comment.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process, please contact me in the DOE Loan Programs Office at 240-687-7266, or email at LPO_Environmental@hq.doe.gov.

Sincerely,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.20 15:52:55 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachments
Figure 1 Project Location

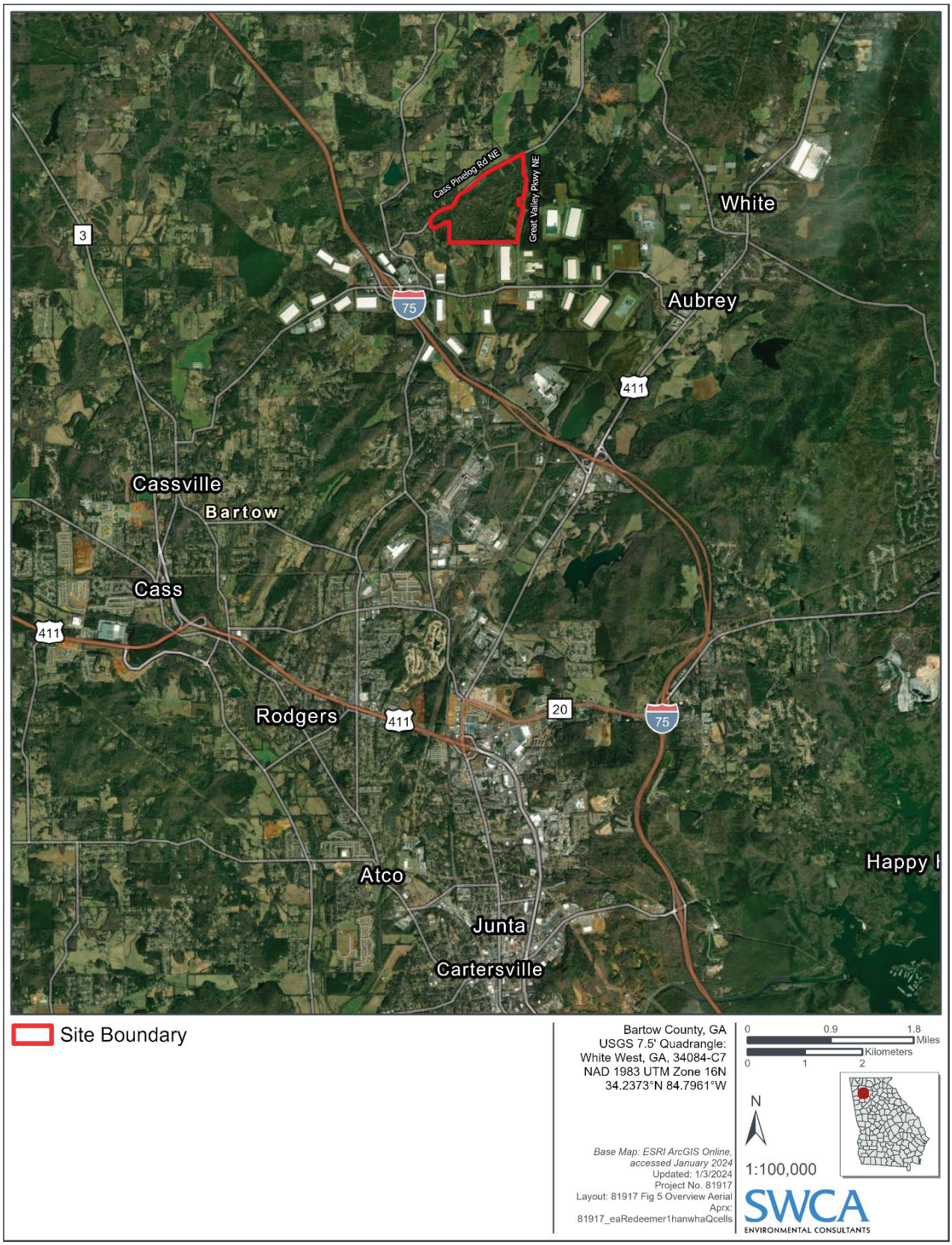

Figure 1: Project Location

Department of Energy
Washington, DC 20585

February 22, 2024

Delvin Johnson
Tribal Historic Preservation Officer
571 State Park Rd. 56
Livingston, TX 77351

SUBJECT: U.S. Department of Energy's Proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc. in White, Georgia (Bartow County); NEPA and NHPA Invitation to Consult

Dear Delvin Johnson:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to determine whether to issue a Federal loan guarantee to Hanwha Qcells Georgia, Inc. (Applicant), to finalize construction of a new solar panel component manufacturing facility in White, Georgia (Bartow County). DOE has determined that issuance of this loan guarantee constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of the environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility. The Area of Potential Effect (APE) includes the Applicant's 312-acre property, of which 204 acres were previously developed by the Applicant.

This letter is intended to notify you of the proposed federal action/undertaking (a federal loan guarantee), identify if you have an interest in the proposed project site in White, Georgia, and provide you with the opportunity to comment and/or engage DOE in government-to-government consultation on the proposed undertaking. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities.

I would greatly appreciate notification if you do or do not have an interest in the project site, as well as any comments or concerns you may have within thirty (30) days of receipt of this letter. If you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email to LPO_environmental@hq.doe.gov. I can also be reached by telephone at 240-687-7266.

Respectfully,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.22 14:00:40 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachment

Figure 1: Project Location

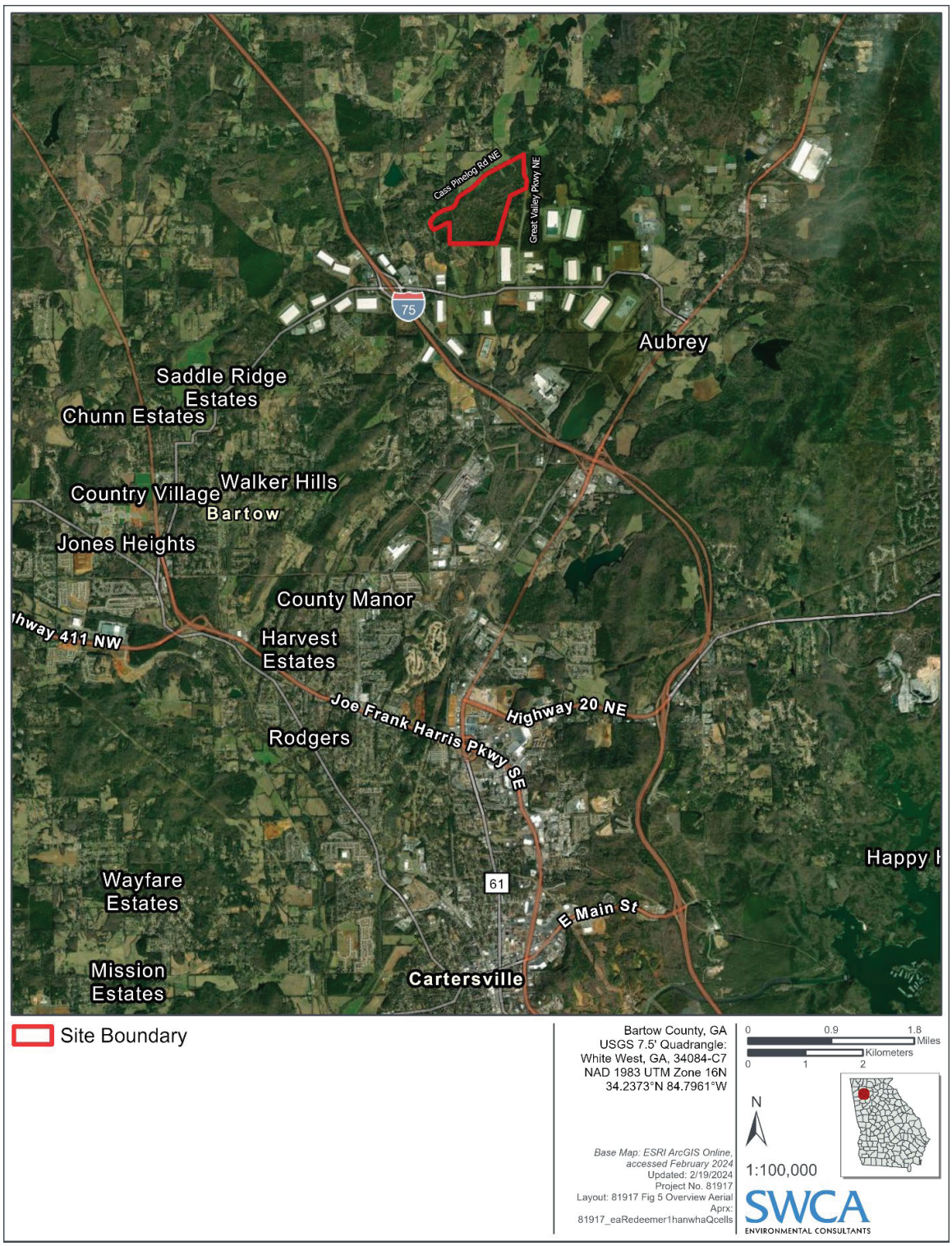

Figure 1: Project Location

Department of Energy
Washington, DC 20585

February 22, 2024

Brina Williams
Tribal Historic Preservation Officer
P.O. Box 187
Wetumka, OK 74883

SUBJECT: U.S. Department of Energy's Proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc. in White, Georgia (Bartow County); NEPA and NHPA Invitation to Consult

Dear Brina Williams:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to determine whether to issue a Federal loan guarantee to Hanwha Qcells Georgia, Inc. (Applicant), to finalize construction of a new solar panel component manufacturing facility in White, Georgia (Bartow County). DOE has determined that issuance of this loan guarantee constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of the environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility. The Area of Potential Effect (APE) includes the Applicant's 312-acre property, of which 204 acres were previously developed by the Applicant.

This letter is intended to notify you of the proposed federal action/undertaking (a federal loan guarantee), identify if you have an interest in the proposed project site in White, Georgia, and provide you with the opportunity to comment and/or engage DOE in government-to-government consultation on the proposed undertaking. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities.

I would greatly appreciate notification if you do or do not have an interest in the project site, as well as any comments or concerns you may have within thirty (30) days of receipt of this letter. If you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email to LPO_environmental@hq.doe.gov. I can also be reached by telephone at 240-687-7266.

Respectfully,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.22 14:04:33 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachment

Figure 1: Project Location

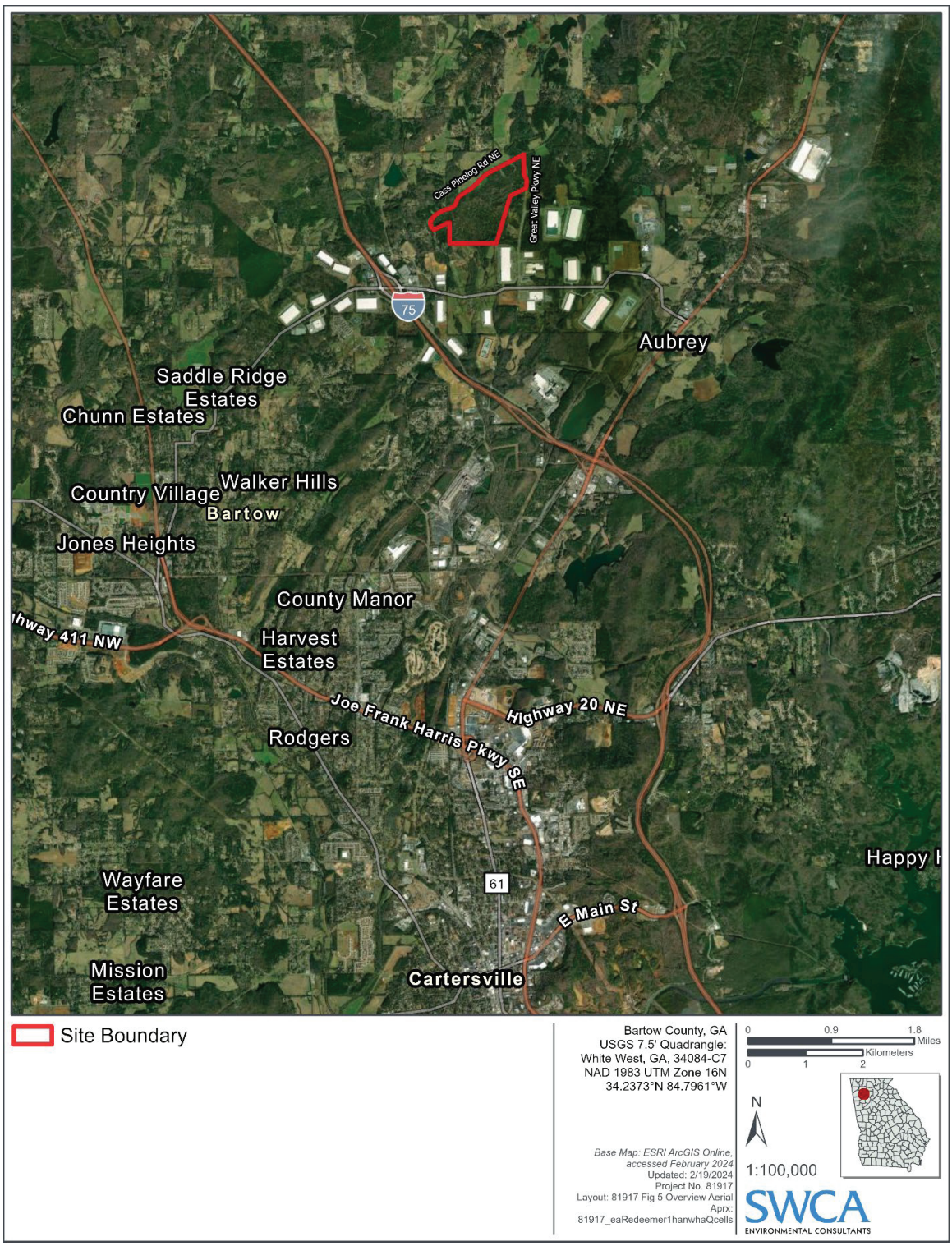

Figure 1: Project Location

Department of Energy
Washington, DC 20585

February 22, 2024

Elizabeth Toombs
Tribal Historic Preservation Officer
P.O. Box 948
Tahlequah, OK 74465

SUBJECT: U.S. Department of Energy's Proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc. in White, Georgia (Bartow County); NEPA and NHPA Invitation to Consult

Dear Elizabeth Toombs:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to determine whether to issue a Federal loan guarantee to Hanwha Qcells Georgia, Inc. (Applicant), to finalize construction of a new solar panel component manufacturing facility in White, Georgia (Bartow County). DOE has determined that issuance of this loan guarantee constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of the environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility. The Area of Potential Effect (APE) includes the Applicant's 312-acre property, of which 204 acres were previously developed by the Applicant.

This letter is intended to notify you of the proposed federal action/undertaking (a federal loan guarantee), identify if you have an interest in the proposed project site in White, Georgia, and provide you with the opportunity to comment and/or engage DOE in government-to-government consultation on the proposed undertaking. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities.

I would greatly appreciate notification if you do or do not have an interest in the project site, as well as any comments or concerns you may have within thirty (30) days of receipt of this letter. If you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email to LPO_environmental@hq.doe.gov. I can also be reached by telephone at 240-687-7266.

Respectfully,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.22 13:57:26 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachment

Figure 1: Project Location

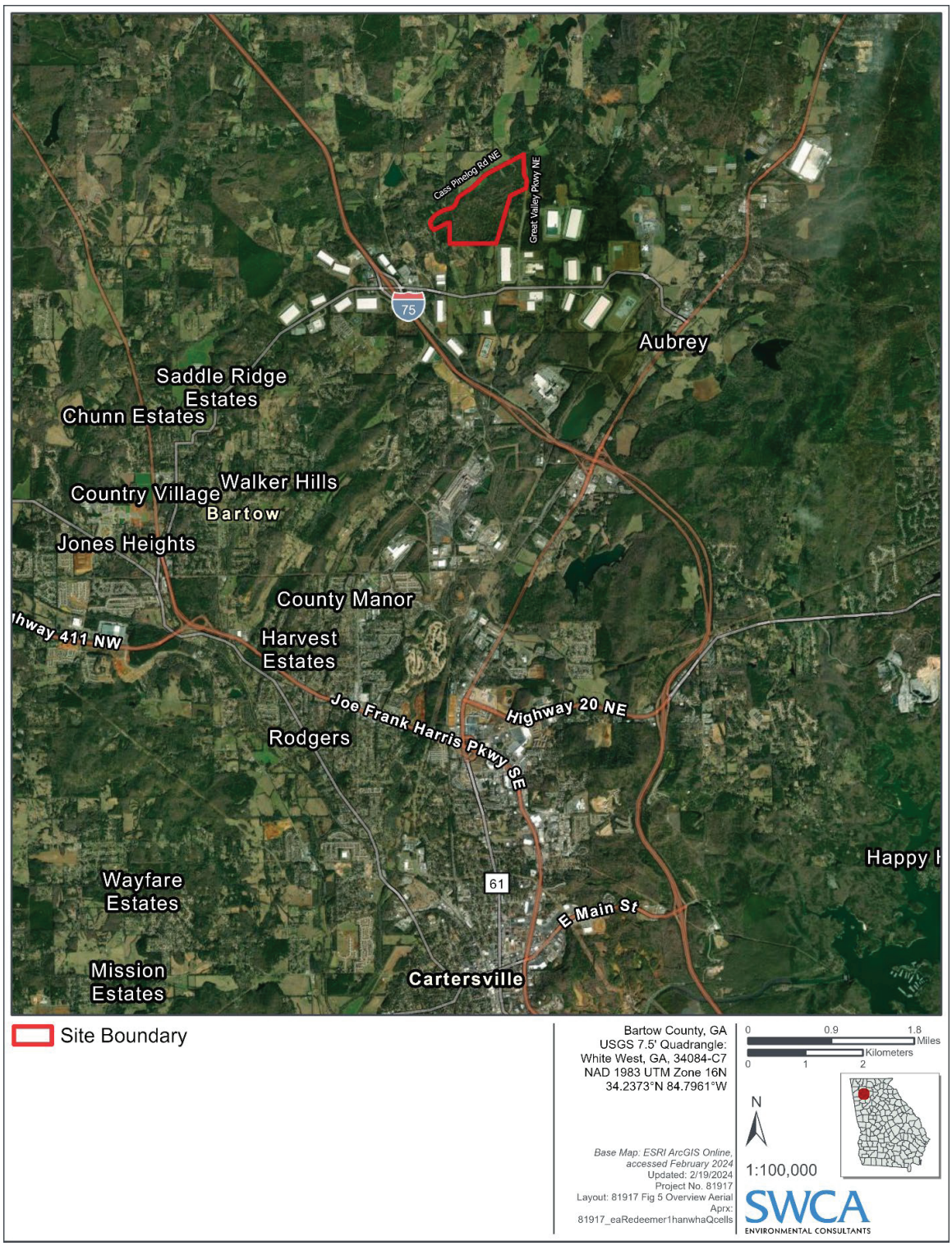

Figure 1: Project Location

Department of Energy
Washington, DC 20585

February 22, 2024

Kristian Poncho
Tribal Historic Preservation Officer
P.O. Box 10
Elton, LA 70532

SUBJECT: U.S. Department of Energy's Proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc. in White, Georgia (Bartow County); NEPA and NHPA Invitation to Consult

Dear Kristian Poncho:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to determine whether to issue a Federal loan guarantee to Hanwha Qcells Georgia, Inc. (Applicant), to finalize construction of a new solar panel component manufacturing facility in White, Georgia (Bartow County). DOE has determined that issuance of this loan guarantee constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of the environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility. The Area of Potential Effect (APE) includes the Applicant's 312-acre property, of which 204 acres were previously developed by the Applicant.

This letter is intended to notify you of the proposed federal action/undertaking (a federal loan guarantee), identify if you have an interest in the proposed project site in White, Georgia, and provide you with the opportunity to comment and/or engage DOE in government-to-government consultation on the proposed undertaking. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities.

I would greatly appreciate notification if you do or do not have an interest in the project site, as well as any comments or concerns you may have within thirty (30) days of receipt of this letter. If you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email to LPO_environmental@hq.doe.gov. I can also be reached by telephone at 240-687-7266.

Respectfully,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.22 13:53:56 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachment

Figure 1: Project Location

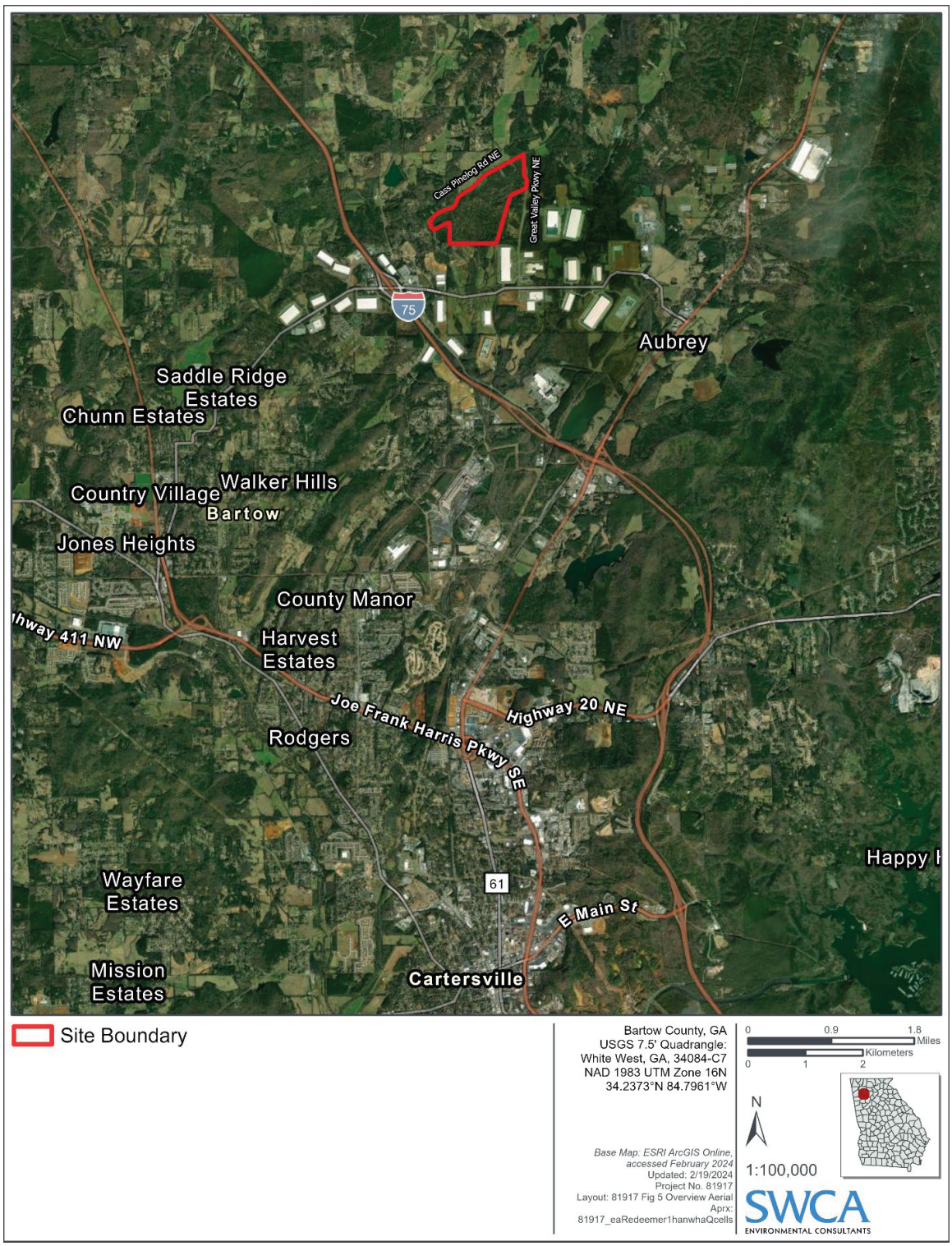

Figure 1: Project Location

Department of Energy
Washington, DC 20585

February 26, 2024

Stephen Yerka
Tribal Historic Preservation Officer
P.O. Box 455
Cherokee, NC 28719

SUBJECT: U.S. Department of Energy's Proposed Federal Loan Guarantee to Hanwha QCells Georgia, Inc. in White, Georgia (Bartow County); NEPA and NHPA Invitation to Consult

Dear Stephen Yerka:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to determine whether to issue a Federal loan guarantee to Hanwha Qcells Georgia, Inc. (Applicant), to finalize construction of a new solar panel component manufacturing facility in White, Georgia (Bartow County). DOE has determined that issuance of this loan guarantee constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of the environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The Applicant's solar panel component manufacturing facility is located at 751 Great Valley Parkway, White, Georgia (Figure 1). The approximately 2.0 million square foot facility will produce 3.3 gigawatts of ingots, wafers, cells, and modules per year, and create approximately 2,000 jobs during operation. Using private funds that are not subject to the federal loan guarantee under review by DOE, the Applicant has already completed overall site development activities, installed foundations, erected buildings, and developed utility connection corridors.

The Applicant has applied to DOE's Clean Energy Financing Program for financial support (a federal loan guarantee) to complete construction of the facility, specifically installation of the manufacturing equipment and associated general building equipment and systems, final site development activities, and startup of the facility. The Area of Potential Effect (APE) includes the Applicant's 312-acre property, of which 204 acres were previously developed by the Applicant.

This letter is intended to notify you of the proposed federal action/undertaking (a federal loan guarantee), identify if you have an interest in the proposed project site in White, Georgia, and provide you with the opportunity to comment and/or engage DOE in government-to-government consultation on the proposed undertaking. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities.

I would greatly appreciate notification if you do or do not have an interest in the project site, as well as any comments or concerns you may have within thirty (30) days of receipt of this letter. If you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email to LPO_environmental@hq.doe.gov. I can also be reached by telephone at 240-687-7266.

Respectfully,

Molly R. Cobbs

Digitally signed by Molly R. Cobbs
Date: 2024.02.26 13:35:40 -05'00'

Molly R. Cobbs
NEPA Document Manager
Loan Programs Office

Attachment

Figure 1: Project Location

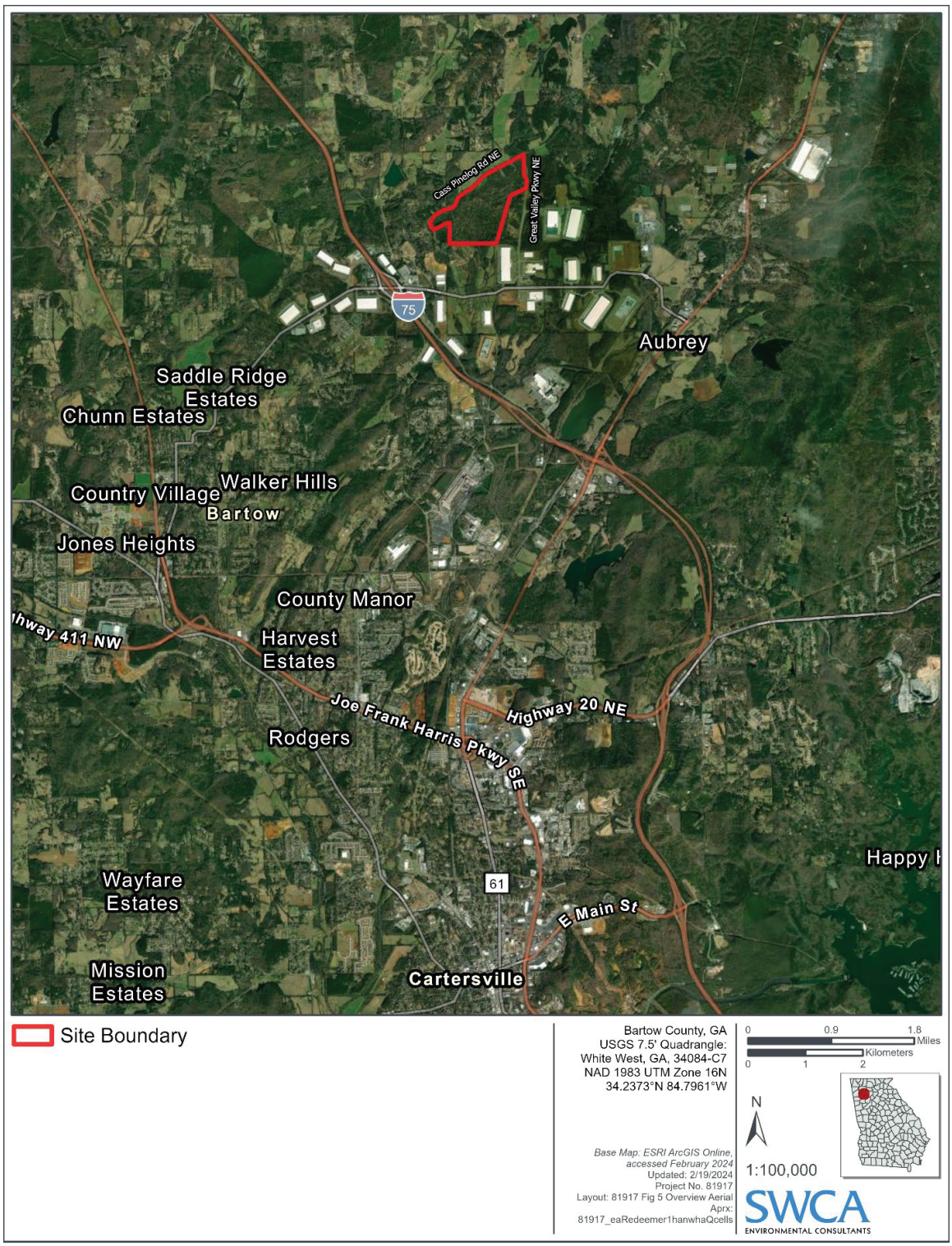

Figure 1: Project Location