



WELCOME TO THE

# Big Tree Solar Project

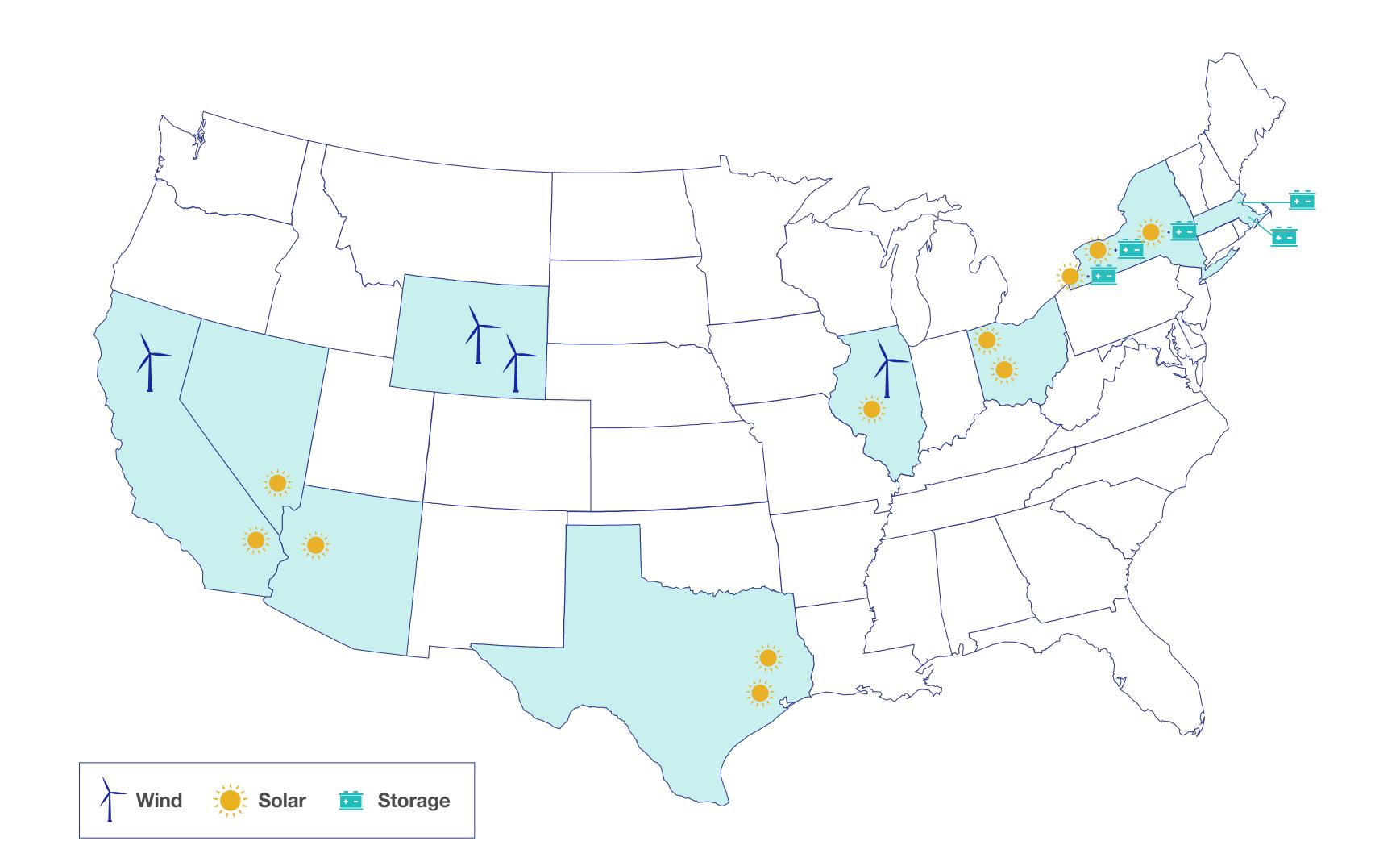
OPEN HOUSE MEETING

PLEASE SIGN IN



### About ConnectGen





Founded in 2018, ConnectGen is an independent renewable energy company focused on greenfield development of high quality wind, solar and energy storage projects across North America.

Based in Houston, Texas, our experienced team has developed, built and operated thousands of megawatts across North America.

ConnectGen is backed by Quantum Energy Partners. Founded in 1998, Quantum Energy Partners is a leading provider of private equity capital to the global energy industry, having managed together with its affiliates more than \$16 billion in equity commitments since inception. You can find more information about Quantum Energy Partners at: <a href="https://www.quantumep.com">www.quantumep.com</a>.



# ConnectGen's New York Experience

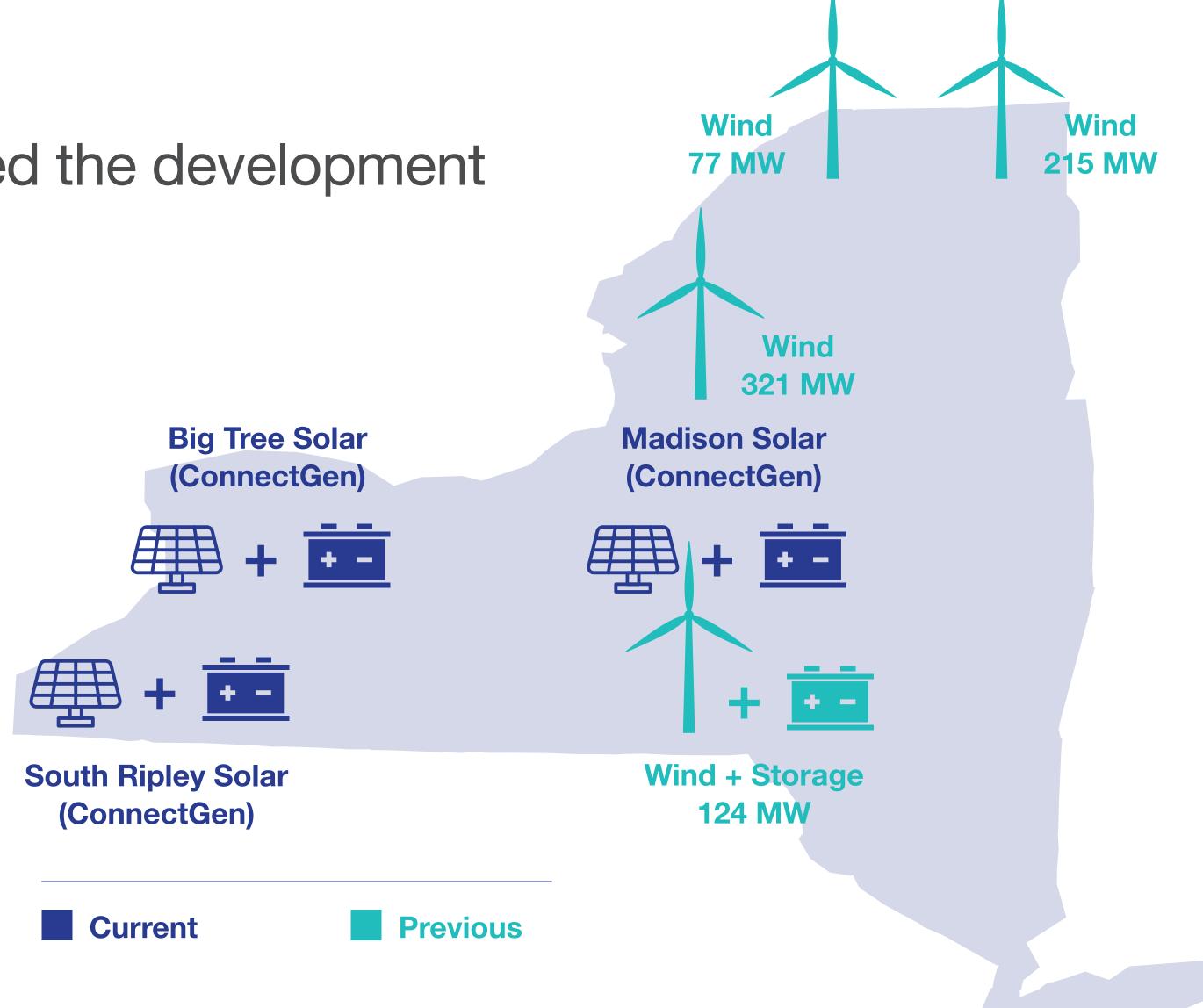


### **EXPERIENCE**

The ConnectGen team has previously managed and led the development of four utility-scale wind farms across New York, three of which are currently in operation.

#### **CURRENT DEVELOPMENT**

ConnectGen is in the process of developing three utility-scale paired solar / storage facilities in New York while also continuing to assess additional opportunities across the state.



### CONNECTING POWER, PROJECTS, AND PEOPLE

ConnectGen's experienced development team has a track record of successfully identifying, developing and constructing renewable energy projects. Our previous project successes have been built on a foundation of strong relationships with the landowners and communities hosting the projects. We are committed to working with landowners, neighbors, and all project stakeholders to safely and responsibly design and build projects that bring long-term benefits to the communities.

# Project Overview



# G Big Tree solar project

Project Owner: ConnectGen Erie-Wyoming LLC

Host Community: Towns of Bennington and Sheldon

Renewable Resource: Solar energy

Projected Capacity: Up to 175 MWac

New York Homes Powered: Up to 40,000

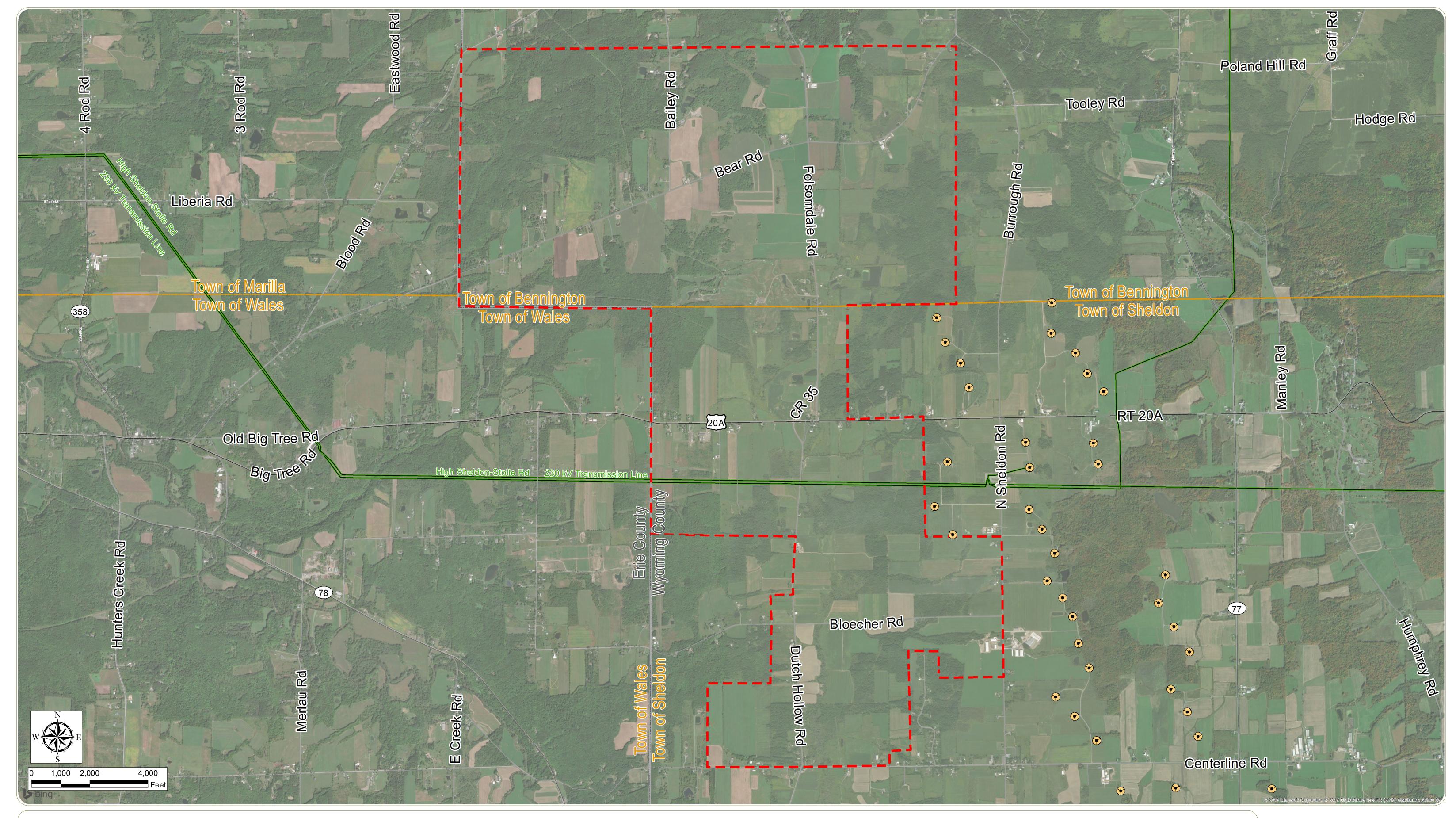
Projected Land Use: ~1,400 acres

Projected Completion Date: End of 2022 or 2023

Point of Interconnection: 230 kV NYSEG transmission line

Energy Storage: Potential battery energy storage component





# Big Tree Solar Project Towns of Sheldon and Bennington, Wyoming County, New York

### **Preliminary Facility Area**

Notes: 1. Basemap: Bing Maps aerial map service.
2. This map was generated in ArcMap on November 22, 2019. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data. High Sheldon Wind Turbine

**Transmission Line** 



Town Boundary

County Boundary





# Why did ConnectGen Choose Wyoming County, New York?





#### **State Renewable Goals**

• New York State has set a goal for the state's utilities to source 70% of their electricity from renewable energy by 2030 and for them to reach 100% zero carbon electricity by 2040.



#### **Article 10 Permitting**

• Article 10 provides for the siting review of new electric generating facilities in New York State by the Board on Electric Generation Siting and the Environment (Siting Board) in a unified proceeding instead of requiring a developer to apply for numerous state and local permits.



#### **Supportive Community**

- Wyoming County's has a historic interest in renewable energy development.
- The Town of Sheldon has supported the development of renewable energy.



#### **Existing Transmission**

• The Big Tree Solar Project will be located in close proximity to the existing 230 kV NYSEG transmission system, which has the available capacity to accommodate all electricity generated by the project.



#### **Available Suitable Land**

- Preliminary environmental review suggests high site suitability and limited development constraints.
- Minimal impacts to designated Prime Farmland are expected.
- Forest vegetation and topography in the area creates the potential for natural visual screening.

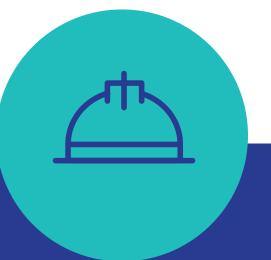
### Local Benefits



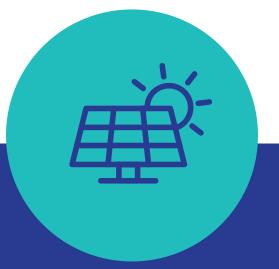
### Direct Benefits:



Up to \$10.5 million in increased revenue to the Towns of Bennington an Sheldon, Wyoming County, and the local school district



Up to **115 jobs** anticipated during the peak of construction



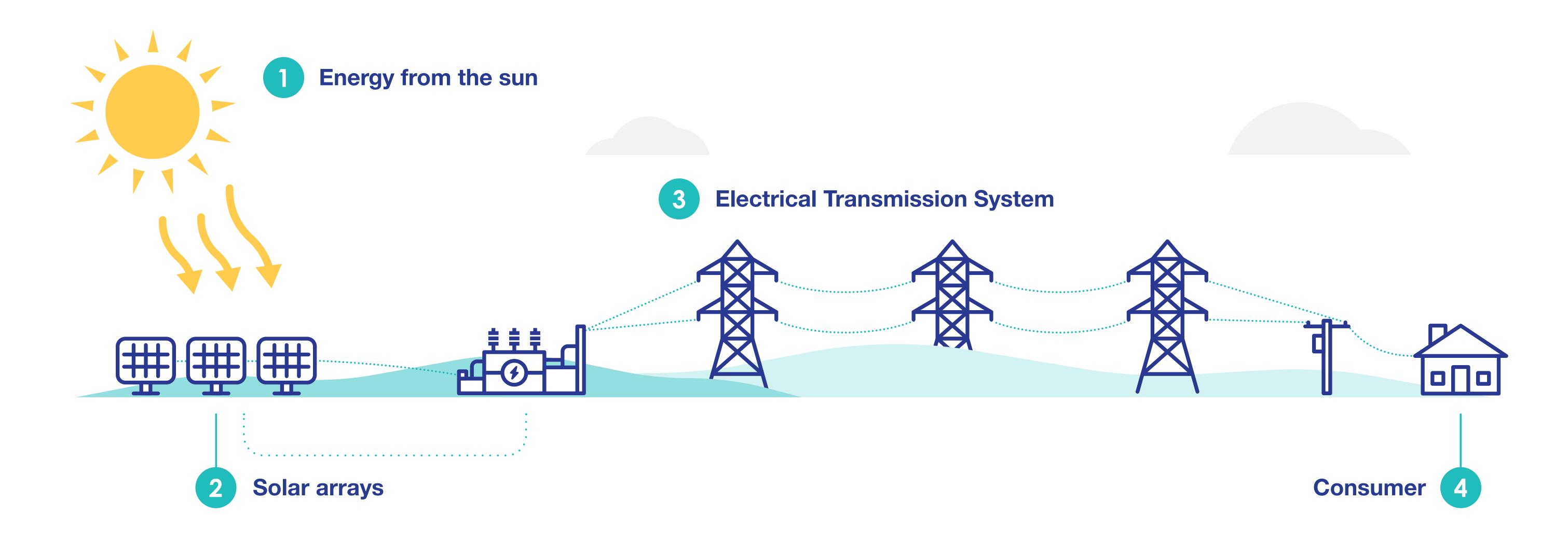
Up to \$32 million dollars in payments to local landowners in the form of solar leases, easement agreements, and good neighbor agreements through the life of the project

### Indirect Benefits:

- Revenue to local shops, hotels, restaurants, service and construction material suppliers during construction and operation
- Partnerships with local community groups, local sponsorships, and donations

# How Does Solar Energy Work?



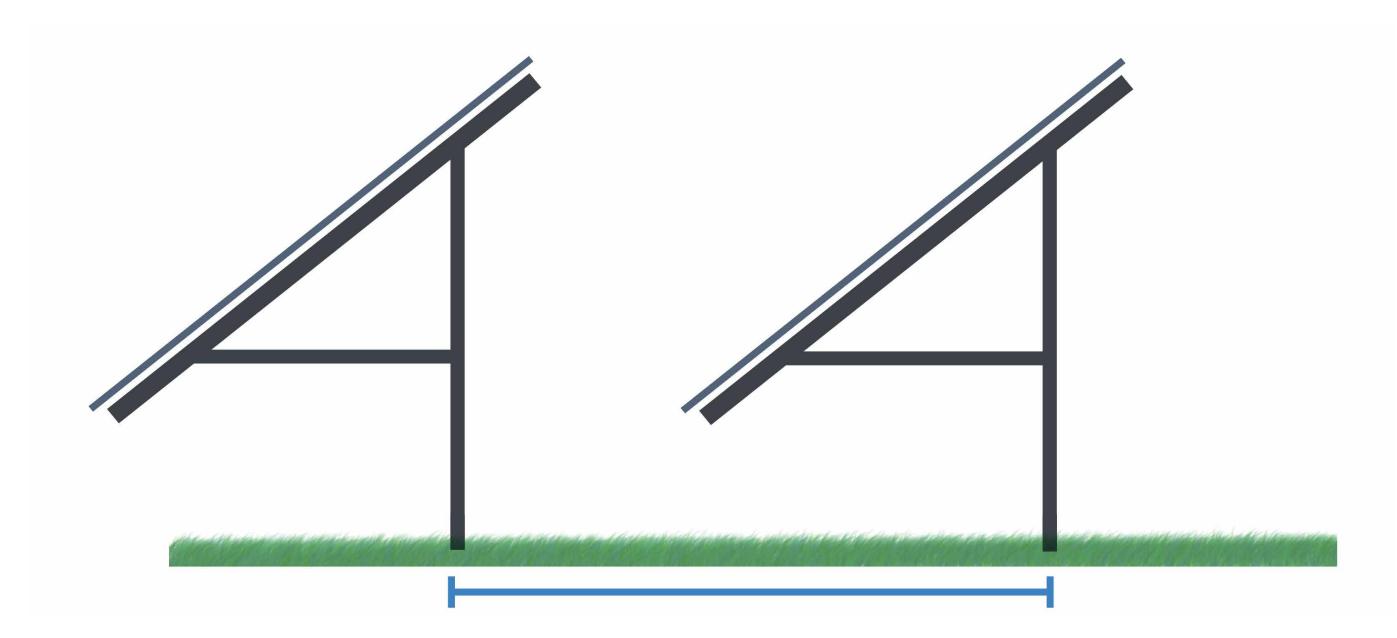


- Energy from the sun falls onto the earth's surface each day in the form of sunlight. The sunlight is absorbed by the solar panels, converting it into electricity.
- The absorbed sunlight is transformed into usable energy by way of an inverter that turns direct current (DC) energy into alternating current (AC) electricity. AC is the form of power used in homes and businesses.

- Solar cells are small, square-shaped silicon semiconductors. Each solar cell is connected into a network of many other solar cells to create a PV (Photovoltaic) module or panel. A solar facility is comprised of thousands of panels.
- Electricity generated travels through transmission/distribution lines to homes and businesses.

### The Basics of Solar





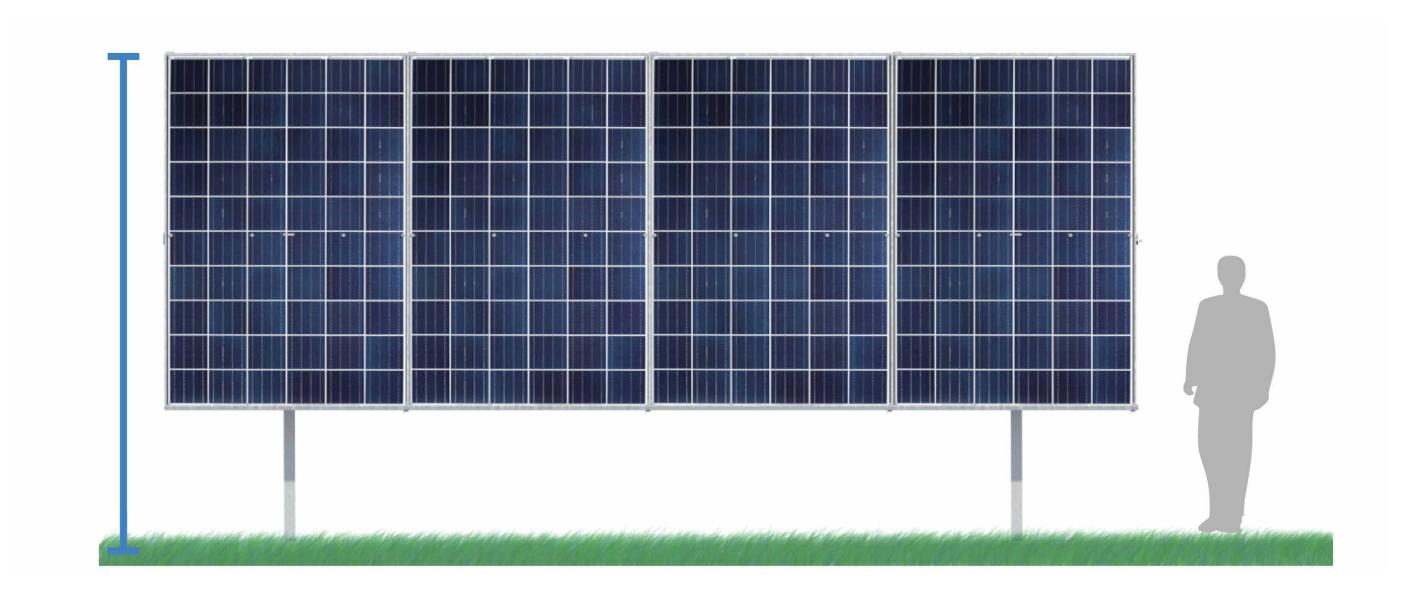
Typical Solar Module Spacing: at least 12 feet

### Solar panels are safe

- PV panels meet strict electrical safety standards
- PV panels are designed to ensure no release or leakage of panel material into the surrounding environment
- PV panel arrays are typically fenced to ensure safety and security

### Solar panels produce minimal glare

 PV panels are designed to absorb light, not reflect light, and therefore produce minimal glare



Typical Solar Module Height: 12 feet

### Solar panels are quiet

- Solar photovoltaic (PV) panels make little or no sound
- Associated electrical equipment creates minimal sound
- Limited required equipment maintenance such as mowing or access road upkeep would be conducted during the day

### Solar panels do not pollute

- No combustion, emissions, or odors
- No water discharges or use of neighboring water bodies for heating or cooling

# Energy Storage



# The Project project may include up to 20 megawatts of 4 hour duration energy storage in the form of batteries co-located with the point of interconnection

#### WHAT BENEFITS DOES ENERGY STORAGE BRING?

 Energy storage allows the project to save energy during low load times and discharge onto the grid when people need power.

### WHAT TECHNOLOGY IS USED?

- Most utility scale energy storage options utilize
   Lithium-ion batteries the same technology used in electric vehicles.
- ConnectGen will continue to evaluate the best technologies on the market prior to construction.

### WHAT DO THESE BATTERIES LOOK LIKE?

 Batteries are typically installed in 40 ft x 8 ft enclosures, similar to shipping containers, with builtin fire suppression systems.



https://www.solarpowerportal.co.uk/news/gore\_street\_clinches\_160mw\_ireland\_battery\_storage\_portfolio

### Construction



#### SITE PREPARATION

- Clear and grade land as required
- Construct site entrances and access roads
- Create temporary laydown yards

### PILE/FOUNDATION INSTALLATION

- Install piles to hold panel racking system
- Final pile length dependent on slope and soil type
- Common steel pile types: Driven piles, ground screws, helical anchors (no concrete expected)
- Pour concrete pads for inverters and high voltage equipment

### RACK ASSEMBLY AND PV INSTALLATION

- Install panel racks on piles, then install solar modules on panel racks
- Panel racks and modules typically up to 12 feet tall
- Install inverters on pads located near or in between racks of panel modules, and connect to high voltage substation

### CONCLUSION OF CONSTRUCTION

- Remove all construction equipment
- Clear laydown yards
- Restore disturbed land



# Operation & Removal



#### SITE MANAGEMENT

- Limited upkeep is required during the life of the facility.
- Most common maintenance activities are associated with vegetation management such as mowing.
- It is also common to seed the field with low growing native grasses or plants to minimize the need to mow frequently.

### EQUIPMENT MAINTENANCE

 The project facilities will be designed for a minimum 30-year lifespan. Should a panel or other piece of project infrastructure be damaged or malfunction, the system's modular design allows for simple repair or replacement.

### **DECOMMISSIONING**

- ConnectGen is responsible for the decommissioning and removal of project infrastructure at the end of the project's useful life.
- NY State will require a decommissioning fund as part of the state permitting process.
- Ensures funds will be available to dismantle and remove facility components at the end of their useful lives.
- After decommissioning, ConnectGen will strive to return the property to as close to the condition it was in prior to the project.



# Next Steps for ConnectGen



DEVELOPMENT 24 – 36 MONTHS CONSTRUCTION
9 - 18 MONTHS

OPERATION 30 – 43 YEARS

### COMMUNITY ENGAGEMENT AND LAND ACQUISITION

- Coordinate with landowners to introduce the project
- Execute lease agreements
- Engage elected town officials and other community leaders in an effort to inform the broader community

#### 2019/2020 NYSERDA RENEWABLE ENERGY STANDARD RFP

Secure long term contract for the sale of renewable energy credits with the State of New York

### ENVIRONMENTAL STUDIES AND PRELIMINARY DESIGN

Complete desktop and field studies to identify environmental sensitivities in the project area

### ELECTRIC GRID INTERCONNECTION STUDIES

Undergo technical studies completed by the local utility and NY grid operator to secure the right to connect to the electrical grid

### REGULATORY REVIEW & PERMITTING

- Stakeholder engagement and environmental impact assessment through the New York State Article 10 process
- Secure all federal, state, and local permits necessary for construction and operation of the project
- Negotiate tax agreements with local and state taxing authorities

### FINAL ENGINEERING & DESIGN

Complete final engineering and design in preparation for construction

### Article 10

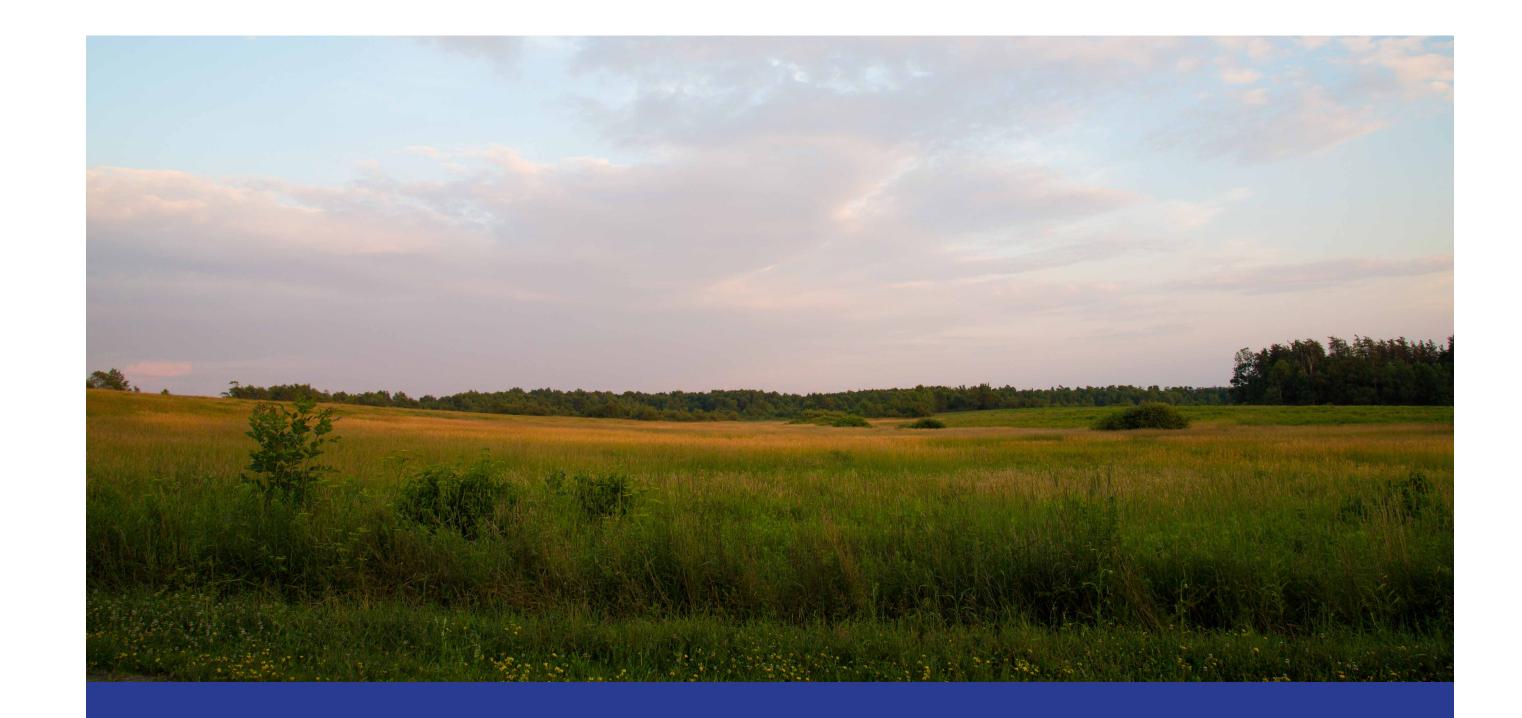


New York State requires that major electric generation facilities (25 megawatts or more), including solar projects, undergo a rigorous state permitting process, under Public Service Law Article 10, prior to construction and operation.

Article 10 requires the New York State Board on Electric Generation Siting and the Environment (Siting Board) to issue a Certificate of Environmental Compatibility and Public Need (Certificate) authorizing the construction and operation of major electric generating facilities.

The Siting Board consists of five permanent members and two project-specific local ad hoc members who are appointed specifically to provide a local voice in each proceeding. The New York State Senate Majority Leader and the Speaker of the New York State Assembly each appoint one ad hoc member from a list of candidates submitted by the host Town and County.

For more information on the Article 10 process, visit the New York State Department of Public Service's Siting Board home page.



Under the Article 10 permitting process, utility scale solar developers are required to:

- Incorporate extensive public input
- Engage a wide range of local stakeholders
- Evaluate environmental, public health, and public safety impacts of development
- Establish comprehensive strategies for safe operation, project maintenance, and end of life decommissioning

## Pre-Application



The Public Involvement Program (PIP) is the first document filed as part of the project's progress through the Article 10 Application process. The PIP Plan identifies the project's stakeholders, the methods by which stakeholders will be notified and consulted throughout the Article 10 process, and activities ConnectGen will engage in to encourage stakeholder participation.



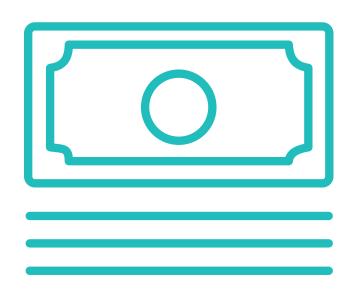
The Preliminary Scoping Statement (PSS) provides a description of the proposed project, details the studies that will be performed to evaluate potential impacts, and outlines the steps that will be taken to avoid and minimize impacts. The PSS can be filed 150 days following the filing of the PIP and at least 90 days before filing an Application. The PSS must be provided to state and municipal agencies, state and local officials, and local libraries. A notice summarizing the PSS must also be placed in newspapers. There is a 21-day period for the public to comment on the PSS, and ConnectGen will have 21 days to respond to all comments received. Agreements on the scope and methodology of studies (i.e., proposed Stipulations) occur after the PSS. The major components of the PSS include:

- Proposed facility and environmental setting
- Potential significant, adverse environmental and health impacts
- Visual simulations showing potential visual impacts
- Proposed studies to evaluate potential impacts
- Measures to avoid or mitigate adverse impacts
- Reasonable alternatives
- Information and plans for decommissioning

- Socioeconomic impact studies
- State and Federal requirements

# Intervenor Funding





Under Article 10, ConnectGen is required to provide funds for intervenor participation.

\$350/MWac

AT THE TIME THE PUBLIC SCOPING STATEMENT (PSS) IS FILED

\$1,000/MWac

IN ADDITION AT THE TIME
THE PROJECT ARTICLE 10
APPLICATION IS FILED

- Following the PSS and Application submissions, funds are distributed to parties making a request to cover expenses toward participating in the review and providing feedback on project materials
- At least 50% of the funding is reserved for municipalities
- For more information on intervenor funding, please consult the project website.



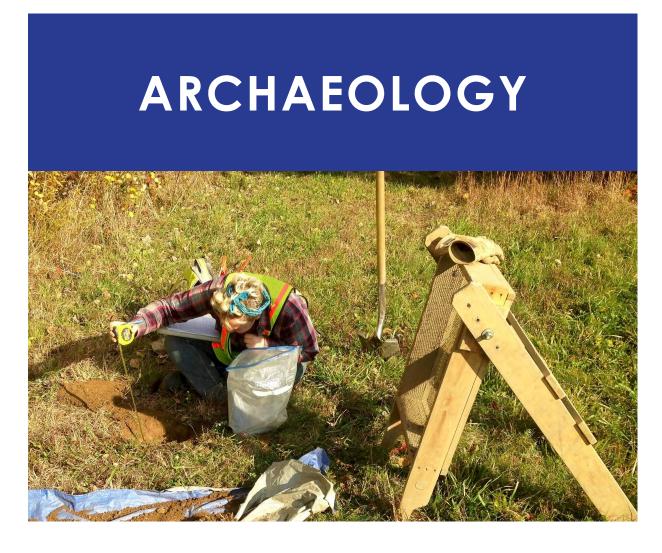
### **Environmental Considerations**

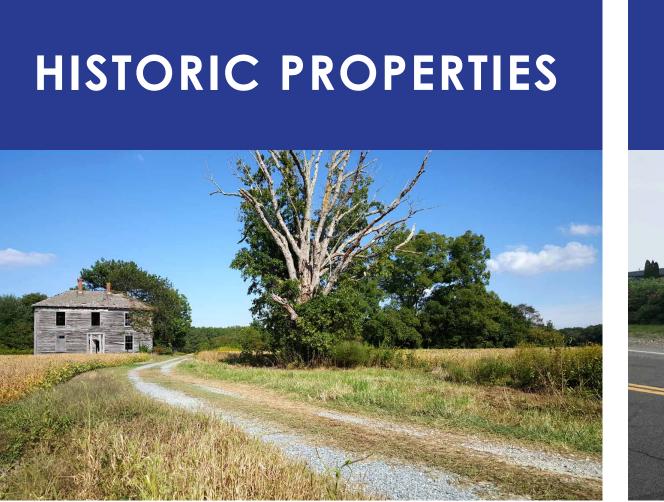


ConnectGen will consult with many agencies and stakeholders, including: the NYS Department of Public Service, NYS Department of Environmental Conservation, NYS Department of Agriculture and Markets, State Historic Preservation Office, and other stakeholders to ensure that potential environmental impacts are fully considered. Studies to help avoid and minimize potential impacts include the following:











Review of U.S. Army Corps of Engineers and New York State Department of Environmental Conservation Wetland mapping

Field investigations to identify and delineate wetlands and streams

Coordination with NYSDEC, USFWS, and natural resource management entities

Field investigations to identify potential habitat or species presence

Coordination with the
New York State Historic
Preservation Office, Native
American Tribes, and
regional advocacy groups

Research and field investigations to identify previously known or unidentified archeological sites

Research, consultation with State Historic Preservation Office and regional historical groups

Historic properties are evaluated to determine their eligibility for listing on the State and National Registers of Historic Places

Evaluate potential visual effect on historic properties

Identification of Visually Sensitive Resources

Viewshed mapping of areas with potential Project visibility

Coordination with stakeholders and preparation of visual simulations to illustrate what the facility will look like when completed

# Application



Application: Once ConnectGen has completed the Pre-Application phase of the Article 10 Process and all environmental studies identified in the PSS, we will be ready to file an official Article 10 Application for Certification of Environmental Compatibility and Public Need (Application). The Application must include major project information including but not limited to:

- A project description
- A summary of all public involvement activity
- Evaluation of expected environmental and health impacts, environmental justice issues, and reasonable alternatives
- Facility and community safety plans

Following the Application submittal, the state Siting Board will set a schedule for public hearings and review of the Application materials.

**Siting Board Decision:** The Siting Board must make explicit findings about the nature of the environmental impacts related to construction and operation of the facility and related facilities. Specifically, the Board will consider impacts to:

- Statewide electrical capacity
- Ecology, air, ground and surface water, wildlife, and habitat
- Public health and safety
- Cultural, historical, and recreational resources
- Transportation, communication, utilities, etc.
- Cumulative emissions on the local community according to environmental justice regulations

The Board will determine that the facility is a "beneficial addition or substitute for" generation capacity, that construction and operation are in the public interest, that adverse environmental effects will be minimized or avoided, and that the project is in compliance with state laws and regulations.

### Article 10 Process Timeline



PRE-APPLICATION

**APPLICATION** 

**HEARINGS & DECISION** 

COMPLIANCE & CONSTRUCTION

HOW CONNECTGEN IS INVOLVED File Public Involvement
Plan to start the Article
10 process

File Public Scoping
Statement and post
initial intervenor funding

Engage in stipulations with Stakeholders

File Article 10
Application and post second intervenor funding

DPS to determine if Application is complete

Public Hearings Date set for public input to

Siting Board

Siting Board has one year from completed Application to issue Certificate

Siting board issues
a Certificate which
often includes
conditions concerning
decommissioning,
compliance filings

HOW YOU CAN GET INVOLVED \$350/MW of intervenor funding is available to local groups and municipalities

Stakeholders may participate in stipulations

Request to become a
Party to the Application
Proceedings

\$1000/MW of intervenor funding is available to local groups and municipalities

Persons who have been granted Party stats can:

**Submit Information Requests** to ConnectGen

Prepare testimony and identify issues to litigate during hearings

Provide comments to compliance filings

Stay up to date on project milestones and ask questions by visiting our project website



# How can you get involved?

### Big Tree Solar Project Contact:

Jimmy Moreland
Development Associate
ConnectGen LLC

(800) 338-8916 www.BigTreeSolar.com info@bigtreesolar.com

### State DMM:

https://tinyurl.com/big-tree-solar-article-10 Case Number: 19-F-0591

### Local Document Repositories:



Town of Sheldon
Town Clerk's Office

1380 Centerline Road Strykersville, NY 14145



Town of Bennington
Town Clerk's Office

905 Old Alleghany Road Attica, NY 14011



Stevens Memorial Community Library

146 Main Street Attica, NY 14011



**Aurora Town Library** 

550 Main Street, East Aurora, NY 14052



**Marilla Free Library** 

11637 Bullis Road Marilla, NY 14102