

Open House Responses

Thank you for your participation in our virtual open house event held from June 12-26th, 2020. We received a number of questions and comments regarding the 60 MW Shepherd's Run Solar Project and have consolidated our responses and have provided additional responses to relevant questions/comments from other projects, which can be found below.

Hecate Energy's project managers look forward to meeting with the residents and business owners of Copake and the surrounding communities once COVID-19 gathering restrictions have been lifted by the Town and State.

1. What is the plan for the former railroad bed which runs through the property?

- a. We are working with relevant landowners and the Hudson Valley Rail Trail Association to ensure property that is within control of the project and in the proposed path of the Hudson Valley Rail Trail can be used to fill one of the final gaps in the planned trail. We think if the project is approved, it would be able to contribute land for 1 mile of trail.

2. Because of the visual impacts, the project should move to a different location.

- a. Hecate is performing visual studies to understand the potential visual impacts of the project. Once the visual studies have been finalized, which include leaf-on and leaf-off photos, a visual simulation will be produced. As part of construction, native vegetation will be used to screen areas with views that may be significantly impacted by the project.
- b. In addition, by preventing the degradation caused by other forms of electric generation (e.g. fossil emissions) and other non-agricultural use of the properties (e.g. housing development), the project will help to preserve the region's rural and agricultural character. By significantly contributing to the local tax base, the project also helps to hold the line on tax increases, which is critical to other large landowners such as farmers being able to keep their operations running. On projects such as this, Hecate also explores co-development opportunities that promote the character of the local community—consistent with local planning goals.

3. Responder wished to have the town taken off of the grid

- a. In order for an individual residence to be taken off the grid you can contact your local utility and request a disconnection. In order for the town to be removed from the grid entirely, the town would need to discuss this. A more broadly agreeable solution for the community may be to elect to become a Community Choice Aggregation ("CCA") Community. A CCA community can choose what sources generate its electricity. If Copake or Columbia County became a CCA they could contract with the project. The solar project will produce enough electricity to power about 1/3 of the households in Columbia County.

4. The project is too big for a town like Copake.

- a. Hecate always surveys and studies much more land than we will ultimately need for the final project design. This allows us to refine the design to accommodate community comments, potential flora and fauna impacts, visual impacts and other land constraints such as wetlands. We intend to design the best project we can on the land we have that

minimizes disturbance to the community and natural environment. Hecate is currently studying an area around 900 acres, as noted publicly, but the final footprint will be approximately half the size or less.

- b. Developing at large scale is essential in order for renewable energy to be competitive with fossil fuel generation. All communities will be affected by climate change and all communities can contribute to support the greater good.

5. The project should be situated in an even more rural setting than Copake

- a. Proximity to transmission is a main driver for power project siting. One of the primary reasons for this location is that the project is located near the Craryville substation and offers nearby transmission interconnection without the need to build new transmission lines.

6. What will this do to my real estate value?

- a. Solar projects have not been shown to adversely affect local property values

7. Situated as we are between New York City, Albany, and the Berkshires, Copake is a place people come to for peace, quiet, relaxation, outdoor activities and rural beauty. People come here to retire.

- a. Solar power is a quiet and emissions-free generation technology and supports a quiet retired lifestyle while recharging the soil for future generations. Solar projects are great neighbors: they are quiet, they are low profile and can be screened, and they substantially increase revenues to the community while using essentially no municipal services.

Frequently Asked Questions

> **What is the Shepherd's Run Solar Farm**

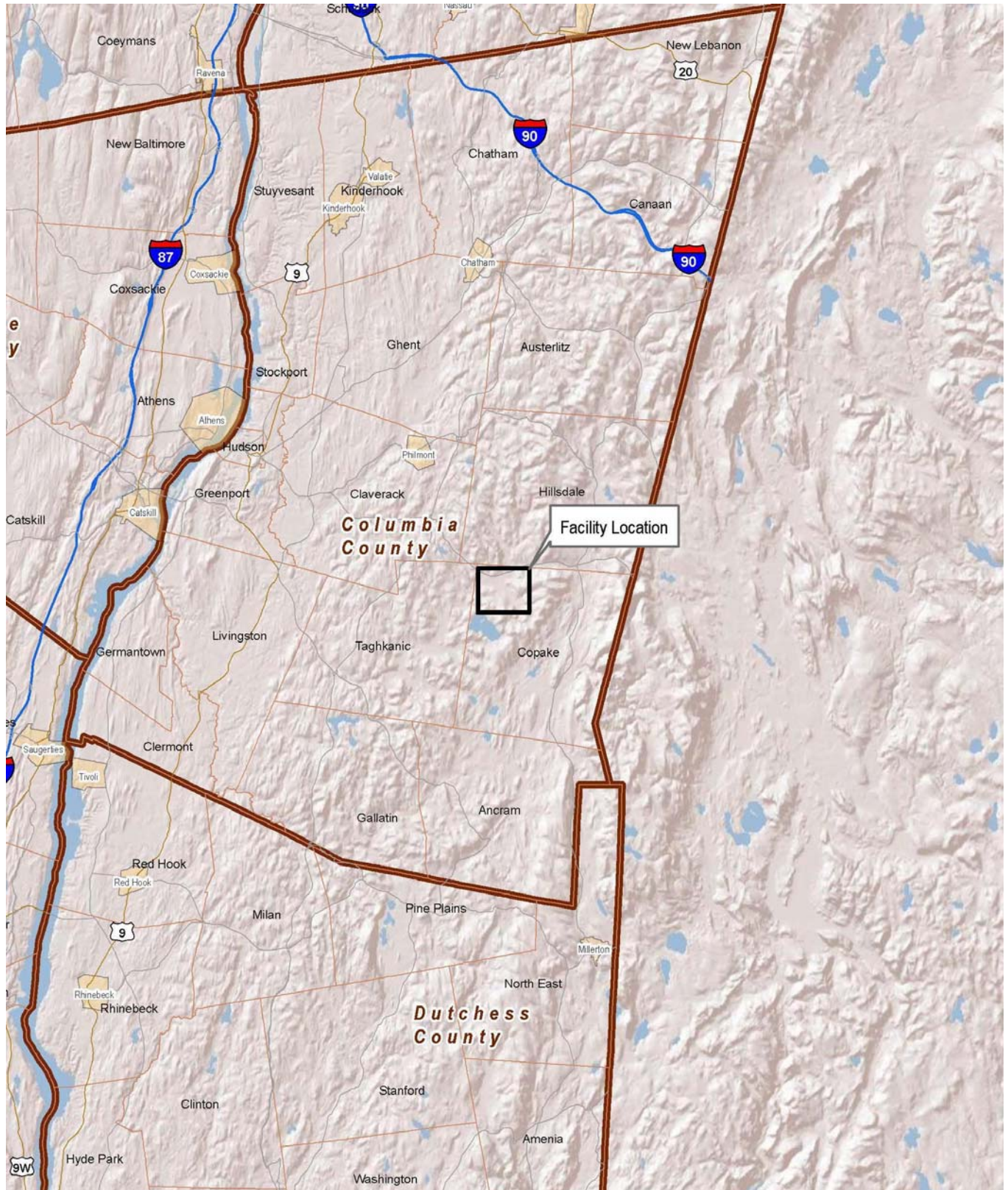
- The developing solar farm is a 60-megawatt (MW) photovoltaic (PV) solar energy generation facility in the Town of Copake, Columbia County, New York. It will consist of PV solar arrays, access roads, and electrical interconnection to the utility grid.

> **Who is proposing to build the Shepherd's Run Solar Farm?**

- Hecate Energy is proposing to build the Shepherd's Run Solar Facility. A developer of solar power plants, wind-power plants, and energy storage solutions, Hecate Energy has developed and contracted over 1,000 megawatts of solar projects across the US, including several projects in New York and the Northeast.

> **Where will the Shepherd's Run Solar Farm be located?**

- It will be built along Routes 23 and 7 in the hamlet of Craryville. The proposed site includes abutting but not-contiguous areas totaling approximately 700 acres. Hecate Energy anticipates that the final footprint of the solar farm will be smaller.



> **How much electricity will the Shepherd's Run Solar Facility generate?**

- The 60-MW solar farm is expected to annually generate approximately 110,000 MWh of energy -- enough to meet the average annual consumption of over 15,000 New York households.

> **Why build a utility-scale solar project?**

- New York State's Climate Leadership and Community Protection Act (CLCPA) requires utilities to get 70% of their electricity from renewable energy by 2030. The law also requires the state to procure 6,000 MW solar energy by 2025.
- Currently, less than one-tenth of one percent of New York's power generating capacity is provided by utility-scale solar (31.5 MW of a total 39,000 MW).[1] As a consequence, more grid-connected solar is needed to meet New York's clean energy mandate.
- Utility-scale solar projects, such as Shepherd's Run, produce less expensive electricity than smaller, distributed installations. They save an estimated 40% in building costs compared to smaller projects – savings that reduce the price of the electricity they produce.[2]
- Shepherd's Run, like other utility-scale projects, employs tracking technology that follows the sun's path to optimize the amount of electricity it can produce and minimize the project's land requirements.
- Grid-connected projects can provide electricity consumers, local utilities and power system operators with inexpensive solar energy – during high-cost summer peak demand.

[1] 2019 Load and Capacity Report, New York Independent System Operator

(<https://www.nyiso.com/documents/20142/2226333/2019-Gold-Book-Final-Public.pdf/a3e8d99f-7164-2b24-e81d-b2c245f67904?t=1556215322968>)

[2] Utility-Scale Solar: The Path to High-Value, Cost-Competitive Projects, Smart Electric Power Alliance, April 2016.

(https://store.sepapower.org/CPBase__item?id=a12o00000JTZ1rAAH)

> **What financial benefits will the Shepherd's Run Solar Farm provide the community?**

- It will offer the community new, long-term dedicated tax revenue for schools and local government. It will generate municipal revenues during the operation. It will also create a new, dedicated revenue stream for the local fire department and ambulance service, supporting their missions while placing few demands on their services.
- In addition, economic activity during construction and operations will create jobs and benefit local building trades, restaurants, lodging, gas stations, and stores.

> **How will it affect farmland?**

- Shepherd's Run Solar Farm is intended to help sustain the farm on which it will be located.
- As Hecate Energy develops solar facilities, it works to preserve soil resources with an eye toward returning the land to agricultural use in the future.
- Solar facilities are among the least disruptive of any electricity-producing technologies. This project's impact on the soil will be limited to the spots where steel beams are driven into the ground to support the solar panel arrays and small concrete pads used to hold inverter stations and transformers. As a result, the land used by the solar facility can be returned to full agricultural production after the planned life of the project.
- By providing a productive, low-impact use for the land, the solar farm also prevents the land from being sold for much higher impact uses such as residential development which creates major impacts on schools, roads, utilities, municipal services and watersheds.

> **How will the vegetation at the solar farm be maintained?**

- Vegetation management will primarily be done with periodic mowing and trimming. Little or no chemical vegetation control is planned. If any is used, it will be far less than farms or golf courses typically use.
- Hecate is also exploring the incorporation of pollinator-friendly vegetation and other co-development opportunities.

> **How will the solar farm affect air quality?**

- Unlike conventional electricity generation facilities, the Shepherd's Run solar farm produces no emissions. Emission-free electricity from the solar farm offsets air pollution from burning fossil fuels. A carbon emissions equivalency analysis conducted using USEPA's Greenhouse Gas Equivalency Calculator indicates that an estimated 85,745 tons of carbon dioxide emissions would be offset by the electricity generated by Shepherd's Run – equal to taking 18,205 passenger cars of the road for a year. [1]

[1] U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator (<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>)

> **How else will the solar farm affect the community?**

- Solar farms are great neighbors. They operate quietly without emissions or water discharges and help to preserve open space.
- Hecate Energy is working with the community to explore co-development opportunities that promote the character of the local community -- consistent with local comprehensive planning goals.
- Community impacts will be rigorously studied in the siting process administered by New York State in conjunction with local stakeholders. Issues pertaining to community, wildlife or wetland impacts will need to be addressed as part of this comprehensive process.
- The community is highly encouraged to participate in this process (*See How can I participate? below*).

> **How will visual impacts be addressed?**

- As part of the comprehensive environmental assessment, Hecate Energy will evaluate the potential visual impacts of the project from a variety of locations surrounding the site. Closer views, (e.g. across the road) can be mitigated with vegetative screening. More distant viewshed impacts will be assessed with digital topography analyses.

> **Where will the solar farm's electricity go?**

- Shepherd's Run Solar Farm will connect to a new substation that will interconnect with the existing Craryville 115-kV substation, which is owned and operated by the local utility, New York State Electric & Gas (NYSEG). Electricity flows to the nearest local points of demand. The power must stay within NY State according to New York State Energy Research and Development Authority (NYSERDA).

> **What about electromagnetic fields?**

- Electromagnetic fields (EMF) are largely associated with high voltage transmission lines and are not an issue with solar facilities.
- EMF occurs in all electrical equipment, including household appliances (televisions, microwaves, toasters, etc.) Solar facilities generate EMF comparable to household appliances.
- Health-related EMF issues have been extensively studied in peer reviewed publications and no links have been found between EMF and human health.

> **How would severe weather like tornadoes affect the project?**

- The solar tracking arrays are built to robust ASCE engineering standards. In the event of extreme weather and high winds, operational procedures will be implemented to stow the trackers in a direction to best withstand high winds.

> **How long is the solar farm expected to remain in operation?**

- Solar panel manufacturers provide 25-year warranties for their product and solar panels have been shown to outperform their warranties. This solar facility is expected to have a useful life of 25-35 years.
- This long-lasting technology is being deployed with the expectation that it will provide significant and sustainable benefit to the local community and electricity customers for decades.
- The project's economics provide assurance of its long-term operation. Most of the project costs are incurred in developing, siting, and building the facility. Once the solar facility is up and running, maintenance costs are relatively minor. To recover start-up costs and earn a profit requires that the facility produce power for the full term of the 25-35 years of its planned life.
- Solar-produced electricity is increasingly competitive in power markets, so it is expected to become one of the lowest priced electric generation sources. After its planned life, the technology could be updated, or the site returned to agricultural use, depending on the wishes of the landowner.

> **What will happen when the solar facility ends its operating life?**

- The project's decommissioning plan is an integral part of the permitting process. Based upon landowner preferences, the land will be restored to agricultural use unless circumstances at the time of decommissioning indicate that another use is more appropriate.

> **What type of solar technology will be built at the Shepherd's Run Solar Farm?**

- It will be configured as a ground-mounted solar facility with PV panels on galvanized steel tracker racking structures. It will include rows of single-axis trackers, oriented in a north-south direction, that rotate the PV panels from east to west following the sun's daily path.
- The tracker structure is low-profile -- about 10 feet high above grade at the tallest point (about the height of field corn stalks). We will design and install the project with utility-standard safeguards.
- The solar panels planned for this project are the crystalline type commonly used for rooftop residential systems. They contain the same materials (glass, aluminum, plastic) used in many household products.

> **Is solar photovoltaic (PV) technology well established?**

- Solar panels are non-hazardous and have been deployed in over 1 million residential home across the United States.
- The PV technology planned for deployment on this solar facility has been in use and continually refined since it was invented in 1954.
- More than 69,000 MW of solar power capacity is currently installed in the U.S. Another 15,000 MW of solar power capacity is expected to be installed annually over the next five years. [1]

[1] U.S. Solar Market Insight, Solar Energy Industries Association, September 2019. (<https://www.seia.org/us-solar-market-insight>)

> **How does solar power work?**

- Photovoltaic (PV) panels use the sun's energy to produce direct current (DC) electricity that flows to on-site electrical inverters that turn DC electricity to alternating current AC electricity, which then flows to the electrical grid for consumers to use.

> **How can I participate?**

Hecate Energy is working to ensure that development, construction, and operation of the Shepherd's Run Solar Facility benefits the community and the environment. We refine our project design based on community feedback. We encourage the public to provide feedback on how we may potentially improve our project concept by participating in one of the following ways:

- Contact us directly
 - Call Toll-free: 833-529-6597
- Attend our open house meetings. Please check back on our website for the schedule, which is yet to be determined.
- Request a project briefing for your group or organization
- Contact the New York State Department of Public Service (DPS), which has a "Public Information Coordinator" to assist and advise interested parties.
 - Toll-free Opinion Line: (800) 355-2120
 - Email: secretary@dps.ny.gov
 - Or contact
Hon. Michelle L. Phillips, Secretary of the Siting Board
New York State Board on Electric Generation Siting and the Environment
3 Empire State Plaza
Albany, NY 12223-1350
 - Visit: <http://www.dps.ny.gov/SitingBoard>

ABOUT SHEPHERD'S RUN SOLAR FARM

Shepherd's Run Solar Farm is a 60-megawatt photovoltaic (PV) solar facility under development by Hecate Energy. It will provide new, renewable energy to protect and preserve clean air, water quality and soil resources.

☎ 833-529-6597

ABOUT HECATE ENERGY

Hecate Energy is a leading developer, owner, and operator of solar, wind, natural gas, and energy-storage projects. Our experienced team of energy professionals provides best-in-class processes, technical designs, and financing structures for next generation energy resources.

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