



WATKINS GLEN SOLAR ENERGY CENTER

Case No. 17-F-0595

1001.15 Exhibit 15

Public Health and Safety

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Figure 15-1. Public Health and Safety

Figure 15-2. Receptor Locations

Exhibit 15: Public Health and Safety

This Exhibit will track the requirements of Stipulation 15, dated February 21, 2020, and therefore, the requirements of 16 New York Codes, Rules and Regulations (NYCRR) § 1001.15. Commercial-scale solar arrays provide the means to harness solar energy for electricity production that is both clean and renewable. Through the development of solar energy technology, communities can maintain air quality with minimal, temporary emissions produced during construction activities, typical of any commercial construction site. Minimal air emissions associated with construction activities for this Project are further discussed in Exhibit 17.

As explained in Exhibit 10, solar energy significantly contributes to the New York State energy planning objectives of New York State's 2015 State Energy Plan (SEP) (amended in April 2020), promotes the objectives of the New York Public Service Commission's (NYPSC's) adopted Clean Energy Standard (CES), and helps achieve the aggressive renewable goals of the Climate Leadership and Community Protection Act (CL&CPA).

The New York State's 2015 SEP is designed to conserve the environment by reducing greenhouse gas (GHG) emissions and other air pollutants to provide New York with a clean, resilient, and affordable energy system. The plan is designed to promote solar energy technology and increase the amount of energy generated by renewable energy technologies in New York. The 2015 SEP was adopted by New York State with the goals of reducing statewide GHG emissions by 40% from 1990 levels and generate 50% of the State's electricity from non-GHG sources by 2030. Solar energy technology plays a significant role in reducing GHG emissions by providing clean energy, which successively improves the quality of the overall environment. Development of solar energy production will help move New York toward a more sustainable environment. Solar energy is a dependable source in the energy market that will improve public health by offsetting impacts from other energy sources and therefore, provide better air quality and water quality (New York State Energy Planning Board [NYSEPB], 2017).

The 2019 CL&CPA increases the State's renewable energy generation goal to 70% by 2030, with a specific goal of 6 gigawatts (GW) of solar generation by 2025. The CL&CPA also requires 100% carbon-free electricity in New York State by 2040 (The New York State Senate, 2019). The 2015 SEP was amended in April 2020 to incorporate the CL&CPA's renewables mandates.

15(a) Anticipated Gaseous, Liquid, and Solid Wastes Produced at the Project during Construction and Operation

Solar energy technology allows for production of electricity without creating any gaseous, liquid, or solid wastes during operation, and therefore, eliminates the need to treat, collect, transport, and dispose such waste in any significant amount. During the construction phase, the Project anticipates the disposal of minimal solid waste. Dumpsters will be located in construction staging areas for proper disposal of construction-related materials. Approximately five 40-yard dumpsters will be placed in areas nearest to construction activity producing waste material to later be disposed at approved local landfill facilities. Waste materials generated during construction are typical of construction projects and will include plastic, wood, cardboard, metal packing materials, construction scrap, debris from blasting (if applicable), and general refuse that will be properly disposed at local landfill facilities. Minimal construction material will accrue over the construction phase. Waste materials from facility construction are anticipated to be collected in on-site dumpsters and receptacles located at the laydown yards. It is anticipated that a local waste management company will be contracted to collect and properly dispose waste at a local waste disposal facility. During operation of the Facility, routine maintenance activities will generate small amounts of waste and will be disposed at the appropriate landfill facilities (e.g., cardboard, cleaning rags, and general refuse).

Gaseous and liquid waste will be limited to the operation of construction equipment that will be managed by the designated contractor. Construction equipment and vehicles will be fueled by unleaded gasoline and ultra-low sulfur diesel and will have maintained mufflers. During operation of the Project, personnel vehicles will be fueled and maintained off site, therefore gaseous and liquid waste generation are not anticipated.

During construction, it is anticipated that 1,900 cubic yards of concrete will be required. Concrete trucks will utilize concrete washout stations to collect concrete waste from equipment and prevent concrete from entering stormwater runoff or leaching into soils at the Project Area. The concrete truck washouts will generate small amounts of waste during construction. Concrete washout will be located near the foundation areas (at the Point of Interconnection [POI] facilities). The contractor will allow the concrete to harden within the washout facility prior to disposal. The contractor will be responsible for the removal and disposal of concrete at a licensed facility. Generation of concrete waste is not anticipated during the operation of the Project.

Tree clearing for access roads, solar panel placement, and to prevent shading of Project Components within forested areas will generate vegetative waste. The locations of tree clearing are shown on Sheets C-400 through C-408 of the Preliminary Design Drawings in Appendix 11-1. Approximately 91 acres of tree clearing will occur primarily during construction. Routine maintenance of trees and vegetation may result throughout operation of the Project to prevent shading of the solar arrays and damage to Project Components. Trees otherwise not claimed by the affected landowner will be cut, logged, and removed to local timber/firewood buyers. To reduce impacts to existing land uses, branch and brush debris, and tree stumps will be chipped in place and spread to a maximum depth of 3 inches in upland areas (safely away from water resources) on site, so as not to interfere with existing land use practices. Any wood that is chipped will be used as stabilization in accordance with the Project's Stormwater Pollution Prevention Plan (SWPPP) in Appendix 23-3 and any other regulatory requirements attached to this Project.

In addition, construction materials, chemicals, debris, waste, shall be managed, handled, and disposed in accordance with the Project SWPPP.

15(b) Anticipated Volumes of Waste to be Released to the Environment at the Project during Construction and Operation

No additional volume of waste beyond that addressed in Section 15(a) will be released to the environment by the Project during construction or operation. A manufacturer's specification sheet for the typical type of crystalline silicon solar panel is included in Appendix 2-1.

15(c) Treatment Processes to Eliminate or Minimize Waste Released to the Environment

No treatment process to eliminate or minimize waste will be necessary as no additional volume of waste beyond that addressed in Section 15(a) will be released to the environment by the Project during construction or operation.

15(d) Collection, Handling, Storage, Transport, and Disposal for Wastes Retained

Collection, handling, storage, transport, and disposal procedures are addressed in Section 15(a).

15(e) Wind Power Facility Impacts

Impacts specific to wind powered facilities will not be addressed in the Application as they are not applicable to the Project.

15(f) Study Area Maps and Analysis

Figure 15-1 shows the relation of the Project Area and Study Area (area within a 2-mile buffer of the currently proposed Project boundary) to public water supply resources; community emergency response resources and facilities including police, fire, and emergency medical response facilities and plans; emergency communications facilities; hospitals and emergency medical facilities; existing known hazard risks including flood hazard zones; dams, bridges, and related infrastructure; gas transmission pipelines; explosive or flammable materials transportation or storage facilities; contaminated sites; and other local risk factors.

Designated evacuation routes, storm surge zones, areas of coastal erosion hazard, landslide hazard areas, and areas of geologic, geomorphic, or hydrologic hazard (aside from flood hazard) are not applicable to the Project.

15(g) Significant Impacts on the Environment, Public Health, and Safety

No significant impact on the environment, public health, and safety were determined through the many studies performed to prepare this Application.

Based on the weight of scientific evidence and the design measures incorporated into the proposed Project design, the Project will not have any adverse impact on public health or safety. No short-term, long-term, or cumulative receptor impacts are anticipated. This includes issues surrounding audible sound, low frequency noise, glare, ambient air, potable water, or other quality of life issues. Evaluations of these issues are discussed in the respective exhibits. The glare analysis (Appendix 24-2) is discussed below and in Exhibit 24.

In addition, based on the weight of scientific evidence of the peer-reviewed literature on solar farms and health, no significant impacts on public health or safety are anticipated from the designed Project. To the contrary, public health can be positively influenced as a result of renewable energy technology and its contribution to displace harmful emissions from other fossil fuel generation technologies. The total potential human health benefit depends on the amount of emissions a generation facility is capable of displacing and its capacity factor; therefore, the larger the facility, the greater the potential human health benefits (Buonocore et al., 2015). The expected Project capacity factor has been calculated at 26% (annually), which is on the higher end of the projected New York capacity factors for solar generation facilities in a study completed by the

New York State Research and Development Authority (NYSERDA, 2012). See Exhibit 8 for further discussion of calculated capacity factors.

15(h) Adverse Impacts on the Environment, Public Health, and Safety

There are no adverse impacts on the environment, public health, and safety anticipated from the construction or operation of the Project that cannot be avoided. A glare analysis is available in Appendix 24-2, which indicates that no glare is predicted as a result of the Project.

All workers will be trained and familiar with the Watkins Glen Solar Emergency Response Plan (ERP) (Appendix 18-2). The Beaver Dams Volunteer Fire Department and Watkins Glen Fire Department were consulted regarding the preliminary site layout and their comments have been incorporated into the ERP in Appendix 18-2. The ERP contains contact details for emergency workers, fire, ambulance, and police/sheriff, as well as the location of closest hospitals. In addition, in the unlikely event that hazardous materials or environmental contaminants are encountered, the protocol in the ERP will be followed. The ERP will be updated, refined, and filed with the Secretary post-certification once a contractor is selected by the Applicant.

Construction impacts are short-lived. Noise associated with Project construction is expected to be minimal, and the Complaint Resolution Plan (Appendix 12-3) details the procedure the public can follow if they would like to record a complaint. Long-term unavoidable impacts associated with operation and maintenance of the Project includes varying degrees of panel visibility and loss of forest land. As evaluated through site-specific environmental and ecological analyses, which are presented in Exhibits 4, 22, and 23 of the Application, these impacts are not considered significant, have been minimized to the maximum extent practicable (e.g., through vegetative screening and a comprehensive Landscaping Plan - See Appendix 11-1), and are outweighed by the benefits of providing a source of clean, renewable energy. Thus, by adding electricity from a renewable energy source to the power grid, the Project will have an incremental and long-term beneficial impact on climate and air quality.

15(i) Irreversible and Irretrievable Commitment of Resources

There are a number of resources that will be committed to the Project for construction and operation.

During the Article 10 Application phase, there are significant human and financial resources committed to the Project. This includes an irretrievable investment by the Applicant and its

partners in preparing the necessary studies and evaluations required for the Application. However, through proper design and the proposal of mitigation measures, it is assumed that the Application will be successful, and the Project will proceed to construction and operation. In addition, it is recognized that State of New York agencies, Schuyler County, and the Town of Dix will be expending human resources on the review of the Application.

During the construction phase of the Project, a number of manufacturing materials, construction materials, and building supplies will be committed to the Project. This includes the material required for physical components of the solar panels, gravel, concrete, steel, cables, etc. that will be dedicated for the life of the Project. Where possible, these materials will be recovered and reused at the end of the useful economic life of the Project. Details on this reclamation are provided in Exhibit 29.

15(j) and (k) Proposed Minimization and Mitigation Measures

The Applicant is committed to minimize the commitment of resources to the Project and any potential adverse impacts on the environment, public health, and safety. The Applicant is consistently striving to achieve efficiencies throughout the development and operational phases of solar projects.

The Project has been designed according to industry standards. The mitigation measures contained in the Application together with the proposed setbacks will provide that there is no risk to public health and safety, while also serving to minimize annoyance to local residents. The solar arrays are also located on leased private property. Therefore, public access to the Project is limited.

Compliance with Article 10 regulations assures that public and agency comments are solicited and appropriately addressed. The Applicant intends to propose certificate conditions based upon applicable best management practices and other mitigation measures adopted by the Siting Board and NYPSC. The Project will comply with applicable federal, state, and substantive local regulations (that are not unreasonably burdensome – see Exhibit 31) pertaining to the construction and operation of the proposed Project. This compliance will also serve to minimize adverse impacts. Construction activities and Project engineering will comply with applicable state, and substantive local building codes (that are not unreasonably burdensome), and federal Occupational Safety and Health Administration guidelines in order to protect the safety of workers and the public. The implementation of a state-approved State Pollutant Discharge Elimination

System permit for construction-related stormwater runoff will protect all water resources. The Spill Prevention, Control, and Countermeasure Plan will protect against inadvertent spills during construction and operation. Road use and repair and traffic control will be coordinated at the local level to assure that safety, congestion, and damage to roadways in the area are avoided, minimized, or repaired through a Road Use Agreement to be negotiated with the Town of Dix.

15(l) Proposed Impact Monitoring

Baseline sound monitoring has already been conducted in the Study Area (Exhibit 19). Upon operation, Watkins Glen Solar Energy Center, LLC will undertake a post-construction sound-monitoring program that is detailed in Exhibit 19, which will ensure sound levels are in compliance with certificated levels.

In addition, the Applicant has provided a Complaint Resolution Plan (Appendix 12-3). The objective of this plan is to establish a consistent method and procedure by which the Applicant will address public complaints during the construction and operation of the Project. The Complaint Resolution Plan outlines the numerous ways an individual can file a complaint, how the Applicant will investigate and attempt to resolve the complaint, and the dispute resolution procedure. Exhibit 5 will address the Operation and Maintenance Plans and Exhibit 18 will address emergency response and contingency plans.

To provide compliance with the Article 10 certificate conditions and other applicable regulations, the Applicant will provide funding for an Environmental Monitor to oversee Project construction and restoration activities.

15(m) Receptor Locations

Receptors have been identified by the Applicant via field review along public roads, public outreach, and review of aerial photos and tax records. Residential receptors have been differentiated between “full-time” or “seasonal,” and have been categorized conservatively – in that if there was uncertainty as to whether it was full-time or seasonal, in many instances it was conservatively identified as full-time. Additionally, all receptors identified by the Applicant have been further divided to participating and nonparticipating receptors, based on whether they have entered a lease agreement with the Applicant. Receptor locations are shown on multiple Figures as part of the Application, including Figure 15-2. This information will assist in the determinations of operational sound impacts that exceed applicable standards as a result of the Project. Should

operational sound impacts occur, receptors are encouraged to notify the Applicant as indicated in the Complaint Resolution Plan in Appendix 12-3.

15(n) Glare Analysis

A glare analysis was prepared to determine the extent and assess the significance of glare from the Project (see Appendix 24-2). As discussed above, no glare is expected from the Project.

References

- Buonocore, J.J., P. Luckow, G. Norris, J.D. Spengler, B. Biewald, J. Fisher, & J. Levy, 2015. Health and Climate Benefits of Different Energy-Efficiency and Renewable Energy Choices. *Nature Climate Change*. <https://www.nature.com/nclimate/>. Accessed 2019.
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