



55 Greens Farms Road, 200-78  
Westport, CT 06880  
203 557 5554

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## OPERATIONS & MAINTENANCE PLAN & ANNUAL INSPECTION PROTOCOL

### INTRODUCTION

Citrine Power, LLC ("Citrine") and its affiliates, CP Middletown Solar I, LLC and CP Middletown Solar II, LLC, will enter into a third-party Operations and Maintenance Contract conterminous with the term of the lease with our landlord, with a reputable solar third-party operations and maintenance contractor ("O&M Contractor"). The O&M Contractor works diligently to ensure that any concerns are addressed quickly to minimize any downtime of the proposed PV Facilities. For each Facility, an owner's Operations Project Manager will be assigned responsibility for all operations and maintenance activities required at that Site to ensure that the PV Facilities continue operating as expected.

Prior to beginning operation of each PV Facility, our O&M Contractor and the Operations Project Manager for the overall project will conduct detailed training on system emergency procedures for both Middletown and Middlefield for both municipalities' public safety personnel and first responders.

Our O&M Contractors maintains staff and a fleet of vehicles supplied with tools and equipment. They also maintain and stock replacement parts in warehouse facilities. In addition, we enter into extended warranty programs. At project completion, Citrine will present the municipalities with sets of as built drawings for each of the completed installations. Although Citrine will be responsible for ongoing operations of the equipment, we will train local maintenance personnel on the equipment that has been installed and where it is located. We will also train staff on the actions to take in the event of an emergency.

In addition, Citrine enters into extended warranty programs, and contracts. This provides our customers with long-term, worry-free service and assurance that the PV Facilities will be in continuous operation. Each PV Facility will be installed with an internet-based data acquisition system (DAS). The DAS will have the capability to send alarms identifying communication and power generation issues.

### SERVICES

During the operation of the PV Facilities, our O&M Contractor shall perform the following services on each PV Facility:

- On Call System Service → Per request
- Annual Full System Electrical Inspection and Maintenance → One time a year
- Vegetation Management & Landscaping → Minimum once per year
- Module Washing → Optional (maximum once per year)



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## SCOPE OF WORK

### Daily Monitoring, Annual Inspection and Preventative Maintenance

To maintain the PV Facilities at optimal operation, our team and our O&M Contractor and our Operations Project Manager manage the following:

- **Daily Monitoring; Responsiveness to Service Alerts and Alarms:** For each project, assigned O&M Contractor and Operations Project Manager receive alerts, alarms, and reports from the DAS, notifying the manager of any fault(s) or performance problems. When an alert from the DAS occurs, the Operation Project Manager assesses the cause and severity of the alert – dispatching, as required, service technicians or engineers to access the on-site problem and repair or replace equipment.
- **Annual Inspection and Maintenance:** The Operations Project Manager is also responsible for scheduling the annual evaluation and preventative maintenance of the PV Facility. We will require our O&M Contractor conduct a full system electrical inspection once a year. This procedure will include the following:
  - Electrical Inspection
    - Perform a visual inspection of PV modules and array wiring, strain relief, mounting system, trackers, inverters, switchgear, transformers, combiner boxes, wireways and conduit, data acquisition system, weather sensors and outdoor lighting.
    - Check pyranometers and reference cells.
    - Record operational data from inverters and meters.
    - IR Thermography may be used as part of the visual inspection process.
  - Inspect External and/or Internal DC Disconnects and Combiner Boxes
    - Ensure all Imp testing is performed on all DC strings, and values are logged
    - Spot check torque values and tighten loose electrical connections
  - Inverter and Transformer
    - Clean out all electrical enclosures
    - Clean inverter air filters
    - Perform Preventive Maintenance per manufacturer protocol as required to maintain inverter manufacturer's warranty.
  - AC Disconnects
    - The technician will check for proper operation.
  - DAS
    - Verify with Citrine before leaving site that the DAS system is functioning properly.
  - Fencing, Gates, Civil
    - Annual visit will include a visual inspection of any fences, gates, equipment pads, etc.
  - Service Report
    - A report must be filed with Citrine noting results of the annual inspection.



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- **Vegetation Management & Landscaping:** The Site shall be inspected for evidence of erosion and rilling in any slopes. Any such conditions shall be noted in the annual report for re-vegetating and depending on the severity of erosion and rilling, the area will be repaired as soon as practicable. Growth of trees or other vegetation resulting in shade impact on the arrays should be noted in the annual report. Vegetation growth (saplings, bush, large weeds etc.) within any array fences or inverter enclosures shall be removed.

During PV Facility operation, Citrine will maintain the vegetation within the leased areas, consisting of mowing at least one (1) time(s) per growing season, depending on yearly conditions.

- **Module Washing & Snow Removal:** Module washing and snow removal are only required if system outputs dictate, i.e. pollen build up or excessive amount of snow reduce power output. At a maximum, modules might be washed once per year with clean water and no chemicals or additives will be used.

#### **CONTACT INFORMATION**

Cela Sinay Bernie  
Managing Partner  
Citrine Power, LLC  
55 Greens Farms Road, Westport, CT 06880  
203 557 5554 / 917 345 8371

Our final O&M Contractor's information will be provided after the Systems are operational.



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## **EMERGENCY RESPONSE PROCEDURE**

### **PV Facility in Middletown and Middlefield CT**

1. Ascertain the Nature of the Emergency
  - Police
    - Trespassing
    - Theft
    - Vandalism / Physical Damage
    - Other Crime
  - Fire
    - Injury
    - Fire
    - Smoke
    - Electrical Arcing
    - Hazardous Materials
  - Electrical
    - Damaged Wires
    - Damaged Inverters
    - Damaged Transfers
    - Grid Related Issues
2. Contact appropriate responder below
3. Notify Middletown and Middlefield Police Departments and Citrine Power, LLC
4. If required initiate emergency shutdown with the assistance of Police and Fire Department representatives

### **Contact Information**

#### **Police**

Middletown Police Department: 222 Main Street Middletown, CT 06457  
Emergency Contact: 911 ( 860-638-4000)

Middlefield Police Department: 405 Main St, Middlefield, CT 06455  
Emergency Contact: 911 ((860) 349-9685)

#### **Fire**

1. Contact Middlefield Fire Department: 860 349 7124 (406 Jackson Hill Road, Middlefield, CT 06455)
2. Contact Westfield (Middletown) Fire Department: 911 (653 East Street, Middletown, CT 06457)



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**Electrical**

Eversource CT  
800-286-2000  
24-Hour Assistance

**Owner's Contact Information**

Citrine Power, LLC  
55 Greens Farms Road Suite 200-78  
Westport, CT 06880  
Phone: 203 557 5554  
Email: [cela@citrinepower.com](mailto:cela@citrinepower.com)

**O&M Provider**

To be provided when selected

**Emergency Shut Down Procedure**

3. Open visible disconnect located in array field next to the solar inverter equipment
4. Turn the DC disconnects located at the inverters to the off position
5. Contact Middlefield Fire Department: 860 349 7124 (406 Jackson Hill Road, Middlefield, CT 06455)
6. Contact Westfield (Middletown) Fire Department: 911 (653 East Street, Middletown, CT 06457)
7. Citrine Power LLC at (203) 557-5554