LODESTAR ENERGY

OPERATIONS AND MAINTENANCE PLAN

1. Introduction

Upon completion of the proposed Project, Petitioner will enter into a third-party Operations and Maintenance contract with an experienced third-party operations and maintenance provider ("O&M Manager"). With a fleet of electricians, production analysts and vegetation management personnel, the O&M Manager works diligently to ensure the Project maintains peak performance, reliability and safety.

Prior to energization of the PV Project, the O&M contractor will perform a quality and safety inspection. This inspection is a detailed and site wide inspection to ensure all mechanical and electrical components are installed per manufacturer specifications and per site design. The O&M Manager will also provide detailed safety and emergency response training for Simsbury municipal employees.

Upon energization, the O&M Manager is responsible for the health and safety of the plant. The site will be continuously monitored (24/7/365 monitoring) remotely via a data acquisition system ("DAS"). The DAS has the ability to send alarms identifying communication, power generation or safety related issues. The O&M Manager has a team dedicated to on-call service dispatches to address immediate issues from its data acquisition center. In addition to its dedicated on-call team, the O&M Manager will perform detailed annual inspections and will perform routine vegetative management on the Site.

2. Scope of Work

a. **Daily Monitoring of Plant Operation:** For each solar Project, an O&M Manager monitors the Project continuously and receives data from the DAS of any performance or safety related issues. When an alert occurs, it is the responsibility of the O&M Manager to assess the severity of the alert and dispatch the on-call team if necessary. From there, the on-Site service technicians will assess the

severity and repair/replace equipment as required. The service details of the O&M Manager are as follows:

i. Monitoring Operations:
   1) Monitoring, 24 hours a day, 7 days a week, 365 days per year
   2) Alarm Notification
   3) Remote Corrective Diagnostics
   4) Remote Power Plant Operation

ii. Performance Optimization Services:
   1) Performance Trend Analysis
   2) Performance Engineering
   3) Data Storage

b. **Annual Inspection, Testing & Preventative Maintenance:** The O&M Manager is also responsible for performing an annual site wide inspection. This inspection is targeted towards securing the safety, performance and reliability of the solar Project. A full report is outputted from the results of the inspection. This inspection includes the following:

i. Aerial Thermal Imaging and Reporting:
   1) Full Site aerial inspection of all PV modules. UAV (drone) coupled with thermal imaging camera and Raptor Maps proprietary mapping and diagnosis software will identify module level inefficiencies and failures.

ii. PV Modules
   1) Module Inspection, front and rear
   2) Inspect front and rear of modules for broken glass, delamination, yellowing or browning, burnt or oxidized cells, or cracks in cells. Inspect module frames for cracks or bends. Inspect module conductors for tension and indicators of heat.

iii. Mounting System
   1) Mounting System, Support Structure
   2) Visually inspect support posts and structural components for evidence of rust, corrosion, settling, or tilt. Visually inspect mounting system hardware for tightness and evidence of rust or corrosion. Inspect and test rack grounding, check for torque levels, re-torque as necessary. Measure and record earth to ground resistance between rack and ground rod with low-resistance ohmmeter.

iv. DC Combiner

1) Inspect enclosure and devices for corrosion, heat distortion, moisture entry, insect and rodent infestation, and exterior damage. Confirm that all signage and labeling is in place. Inspect surge protection devices for indication of failure. Perform thermographic survey of all terminations and overcurrent protective devices.

v. DC/AC Raceway

1) Inspect all DC raceways for loose connections, missing sealant, corrosion and above-grade moisture intrusion.

vi. DC/AC Disconnect

1) Inspect enclosure and devices for corrosion, heat distortion, moisture entry, insect and rodent infestation, and exterior damage. Confirm that all signage and labeling is in place. Perform thermographic survey of all terminations and overcurrent protective devices.

vii. Inverter

1) Inspect enclosure, door seals, latches and door stops for signs of corrosion, heat distortion, moisture entry, insect and rodent infestation, and exterior damage in accordance with manufacturer's recommendations and requirements. Confirm that all signage and labeling is in place. Clean all ventilation plates, air ducts, screens, devices and seals in accordance with manufacturer's recommendations and requirements. Inspect Surge Protection Devices for indication of failure. If any single SPD indicates failure mode, replace all SPD modules. Perform thermographic survey of all terminations and overcurrent protective devices.

viii. Medium Voltage Transformer

1) Inspect enclosure and devices for corrosion, heat distortion, moisture entry, insect and rodent infestation, and exterior damage.

Confirm that all signage and labeling is in place. Inspect anchorage and alignment.

ix. SCADA/DAS System

1) Inspect devices and enclosures for physical damage. Clean as needed. Check tightness of electrical connections. Inspect weather station and all sensors for proper alignment.

x. Vegetative Maintenance:

1) Maintenance within the array is typically performed (3) times annually during the growing season. During this time, the site is inspected for evidence of erosion and vegetation health. Vegetative growth exterior to the array is analyzed annually for shade impacts on the array. Any vegetative or site concerns are noted within the

annual report. No pesticides or herbicides will be used in the vegetative maintenance of the site. Grass will be cut 2-3 times per year depending on the growing season. Mechanical devices (String Trimmers) are used where mowers cannot reach so that no chemicals will be used.

xi. Module Washing and Snow Removal:

1) Module washing and snow removal is performed on an as needed basis. Due to the tilt of the modules included within the proposed design, soiling effects due to snow build up, pollen or dust is naturally removed from the module surface. In the event the modules require cleaning, commercially-sourced clean water with no chemicals or additives will be used.

xii. Landscape Buffer Maintenance

1) Maintenance within the landscape buffer is typically performed (3) times annually during the growing season along with the facility vegetative maintenance. During this time, the landscaping is inspected for evidence of erosion and vegetation health. Dead landscape buffer plantings will be replaced as necessary for the life of the project.
2) For the first year after planting, the landscape buffer will be watered per supplier requirements with commercially-sourced water with no chemicals or additives.

c. **Emergency Response:**

i. Simsbury Police Department:

1) 933 Hopmeadow Street
2) Simsbury, CT 06070
3) Phone: (860) 658-3100

ii. Simsbury Fire Department:

1) 871 Hopmeadow Street
2) Simsbury, CT 06070
3) Phone: (860) 658-1971

iii. Utility Contact Information:

1) Eversource CT
2) (800) 286 -2000

iv. Owner Contact information:

1) LSE Lynx LLC
2) 18 North Main Street, 2nd Floor

3) West Hartford, CT 06107
4) Phone: (410) 274-2716
5) Email: jmacel@lodestarenergy.com

v. O&M Provider Contact Information:

1) Ameresco
2) Phone: (800) 916 -8066
3) Email: ROC@ameresco.com

vi. Shutdown Sequence:

1) If it is determined the site must be shut down, the following emergency shutdown procedure should be conducted in conjunction with representatives of police and fire department:
    a. Open AC disconnect located on equipment pad
    b. Turn off DC disconnects on all inverters located on equipment pad
    c. Turn off all DC disconnects on DC combiners located throughout array
    d. Contact the Simsbury Fire Department and Police Department if not already present.

3. Spill Prevention Control Plan

Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill to avoid possible impact to nearby habitats.

A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.

The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.

a. Restrictions and Procedures

i. Petroleum and Hazardous Materials Storage and Refueling

1) Refueling of vehicles or machinery shall occur within the Construction Laydown Area ONLY and shall take place on an impervious pad with secondary containment designed to contain fuels. This area must be a minimum of 100 feet from wetlands or watercourses and the aquifer protection area on the Site.

2) Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.

ii. Initial Spill Response Procedures

1) Stop operations and shut off equipment.
2) Remove any sources of spark or flame.
3) Contain the source of the spill.
4) Determine the approximate volume of the spill.
5) Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby waterways or wetlands.
6) Ensure that fellow workers are notified of the spill.

iii. Spill Clean Up & Containment

1) Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
2) Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.
3) Isolate and eliminate the spill source.
4) Contact the appropriate local, state and/or federal agencies, as necessary.
5) Contact a disposal company to properly dispose of contaminated materials in accordance with all local, state and federal regulations.

iv. Reporting

1) Complete a spill incident report. A blank copy is attached for reference.
2) Submit a completed spill incident report to the Connecticut Department of Environmental Protection, municipal officials, Connecticut Siting Council and other applicable local, state and federal officials, the Owner, and O&M Provider.

v. Spill Prevention Plan Contact Information:

Contractor/Spill Coordinator

LSE Lynx LLC
18 North Main St, 2nd Floor
West Hartford, CT 06107
Phone: (410) 274-2716
Email: jmacel@lodestarenergy.com

Simsbury Police Department

933 Hopmeadow Street

Simsbury, CT 06070
Phone: (860) 658-3100

Simsbury Fire Department
871 Hopmeadow Street
Simsbury, CT 06070
Phone: (860) 658-1971

O&M Provider
Ameresco
Phone: (800) 916-8066
Email: ROC@ameresco.com

Connecticut DEEP (Spill Reporting Line, Emergency Response Unit)
Phone: (860) 42403338 or toll free +1 (866) 337-7745, 24 hours/day. Should these number become unavailable for any reason, call (860) 424-3333.

4. Incident Report Form

Any accidents or injuries should be reported through an Incident Report Form and sent to the Connecticut Department of Environmental Protection, municipal officials, Connecticut Siting Council and other applicable local, state and federal officials, the Owner, and O&M Provider. A blank copy is attached for reference.

Spill Incident Report Form

Project: _____

Date of Spill: _____

Spill Description:

Location of spill: _____ Time of Day: _____ Day of Week: _____

Vehicle No. or Type: _____ Were police called? _____ Police Report No.: _____

Describe any equipment or environmental damage/estimate cost:

WITNESSES: (attach written statements)

Name: _____ Job Title: _____ Telephone: _____

Name: _____ Job Title: _____ Telephone: _____

Name: _____ Job Title: _____ Telephone: _____

Incident Report Form

ACCIDENT INVESTIGATION REPORT

Project: _____

Date of Accident: _____

Accident Description:

Location of accident: _____ Time of Day: _____ Day of Week: _____

Vehicle No. or Type: _____ Were police called? _____ Police Report No.: _____

Describe any equipment or environmental damage/estimate cost:

WITNESSES: (attach written statements)

Name: _____ Job Title: _____ Telephone: _____

Name: _____ Job Title: _____ Telephone: _____

Name: _____ Job Title: _____ Telephone: _____

INJURY INVESTIGATION REPORT

Department/Division: _____ Project: _____

Injured Employee's Name: _____ Date of Injury: _____

Sex: Age: Employment Status: Full Time Part Time Seasonal Temporary

___ ___ ___ ___ ___ ___

Regular assigned position: _____

Length of time in this position: _____

Was employee performing regular job duty? _____ If not, explain: _____

Was employee working overtime? _____ If yes, explain: _____

Does employee work a rotating shift? _____ Was there a recent change in the shift? _____

Explain: _____

Location of accident: _____ Time of Day: _____ Day of Week: _____

Body part injured: _____

Type of injury: _____

Severity of injury:

First Aid Dr. Visit Emergency Care Restricted Duty Lost Time Near Miss

___ ___ ___ ___ ___ ___

Vehicle No. or Type: _____ Were police called? _____ Police Report No.: _____

Describe in detail what happened: _____

_____

_____

_____

_____

_____

Has this employee received training in the prevention of this type of injury? _____ Date: _____

Describe any equipment damage/estimate cost: _____

_____

WITNESSES: (attach written statements)

Name:	Job Title:	Telephone:	
Name:	Job Title:	Telephone:	
Name:	Job Title:	Telephone:	

ROOT CAUSE ANALYSIS

Use this listing as an aid in identifying the factors that contributed to this event

STEP 1 – CONTRIBUTING FACTORS

PROCEDURES	**COMMUNICATION**
Not Developed ☐	Insufficient Planning for Tasks ☐
Developed – Not Communicated ☐	Lack of Worker Communication ☐
Developed – Not Understood ☐	Lack of Supervisor Instruction ☐
Developed – Not Followed ☐	Work Team Breakdown ☐
Lack of Disciplinary Policy ☐	Confusion After Communication ☐
Other ☐	Other ☐
HAZARD(S)	**TRAINING**
Unidentified ☐	Deficient Orientation Training ☐
Known But Not Corrected ☐	Deficient Job-Specific Training ☐
Created by External Factors ☐	Insufficient for New Conditions ☐
Documented But Not Repaired ☐	Lack of Follow-Up Reinforcement ☐
Condition Changes Not Conveyed ☐	Lack of Supervisor Training ☐
Repaired Deficiently ☐	Hazards Overlooked in Training ☐
Unforeseen Emergency ☐	Tool(s) Used Incorrectly ☐
Other ☐	Other ☐
PRODUCTION FACTORS:	**WORK BEHAVIOR**
Heavy Workload ☐	Shortcuts taken ☐
Tight Schedule ☐	Required PPE Not Used ☐
Long/Unusual Working Hours ☐	PPE Not Used Properly ☐
Falsely Perceived Need to Hurry ☐	Tool/Equipment Used Incorrectly ☐
Co-worker Competition ☐	Over-exertion/Fatigue ☐
Lack of Teamwork ☐	Distraction ☐
Changes in Production ☐	Drug/Alcohol Use/Influence ☐
Other ☐	Other ☐
FACILITIES/EQUIPMENT	**ENVIRONMENT**
Poor/Faulty Equipment Design ☐	Weather, Temperature ☐
Corrosion/Wear	Poor Housekeeping

Equipment Not Guarded	☐	Poor Lighting	☐
Awkward Workspace Design	☐	Poor Visibility	☐
Lack of Preventive Maintenance	☐	Air Quality	☐
Other	☐	Other	☐

STEP 2- MAJOR CAUSE

- ☐ **Procedures**
- ☐ **Production Factors**
- ☐ **Communication**
- ☐ **Work Behavior**
- ☐ **Hazard**
- ☐ **Training**
- ☐ **Facilities/Equipment**
- ☐ **Environment**

STEP 3 – ANALYSIS OF MAJOR CAUSE(S):

List out 5 reasons why major cause(s) happened to get to root cause:

1.

2.

3.

4.

5.

Corrective steps for contributing factors:

Corrective steps for major cause:

Incident Report Form

ACCIDENT INVESTIGATION REPORT

Project: _____

Date of Accident: _____

Accident Description:

Location of accident: _____ Time of Day: _____ Day of Week: _____

Vehicle No. or Type: _____ Were police called? _____ Police Report No.: _____

Describe any equipment or environmental damage/estimate cost:

WITNESSES: (attach written statements)

Name: _____ Job Title: _____ Telephone: _____

Name: _____ Job Title: _____ Telephone: _____

Name: _____ Job Title: _____ Telephone: _____

INJURY INVESTIGATION REPORT

Department/Division: _____ Project: _____

Injured Employee's Name: _____ Date of Injury: _____

Sex: ___ Age: ___ Employment Status: Full Time ___ Part Time ___ Seasonal ___ Temporary ___

Regular assigned position: _____ Length of time in this position: _____

Was employee performing regular job duty? _____ If not, explain: _____

Was employee working overtime? _____ If yes, explain: _____

Does employee work a rotating shift? _____ Was there a recent change in the shift? _____

Explain: _____

Location of accident: _____ Time of Day: _____ Day of Week: _____

Body part injured: _____ Type of injury: _____

Severity of injury:

First Aid ___ Dr. Visit ___ Emergency Care ___ Restricted Duty ___ Lost Time ___ Near Miss ___

Vehicle No. or Type: _____ Were police called? _____ Police Report No.: _____

Describe in detail what happened: _____

_____

_____

_____

_____

_____

Has this employee received training in the prevention of this type of injury? _____ Date: _____

Describe any equipment damage/estimate cost: _____

_____

WITNESSES: (attach written statements)

Name:	Job Title:	Telephone:	
Name:	Job Title:	Telephone:	
Name:	Job Title:	Telephone:	

ROOT CAUSE ANALYSIS

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STEP 1 – CONTRIBUTING FACTORS

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Other ☐	Other ☐
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Unidentified ☐	Deficient Orientation Training ☐
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Created by External Factors ☐	Insufficient for New Conditions ☐
Documented But Not Repaired ☐	Lack of Follow-Up Reinforcement ☐
Condition Changes Not Conveyed ☐	Lack of Supervisor Training ☐
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Co-worker Competition ☐	Over-exertion/Fatigue ☐
Lack of Teamwork ☐	Distraction ☐
Changes in Production ☐	Drug/Alcohol Use/Influence ☐
Other ☐	Other ☐
FACILITIES/EQUIPMENT	**ENVIRONMENT**
Poor/Faulty Equipment Design ☐	Weather, Temperature ☐
Corrosion/Wear	Poor Housekeeping

Equipment Not Guarded	☐	Poor Lighting	☐
Awkward Workspace Design	☐	Poor Visibility	☐
Lack of Preventive Maintenance	☐	Air Quality	☐
Other	☐	Other	☐

STEP 2- MAJOR CAUSE

☐ Procedures	☐ Production Factors
☐ Communication	☐ Work Behavior
☐ Hazard	☐ Facilities/Equipment
☐ Training	☐ Environment

STEP 3 – ANALYSIS OF MAJOR CAUSE(S):

List out 5 reasons why major cause(s) happened to get to root cause:

1. _____

2. _____

3. _____

4. _____

5. _____

Corrective steps for contributing factors: _____

_____

_____

_____

Corrective steps for major cause: _____

_____

_____

_____