

Section B: Community Solar Energy Project Description

Project Name: 905 Murray Rd, East Hanover, NJ

*This name will be used to reference the project in correspondence with the Applicant.

I. Applicant Contact Information

Applicant Com	pany/Entity Name:	Nautilus US Power H	oldco, LLC	
First Name: Eric		Last N	Last Name: Paul	
Daytime Phon	e: 415-517-0558	Email:	epaul@nautilussolar.com	
Applicant Mail	ing Address: 396 Sp	ringfield Ave., 2nd Flo	or	
Municipality:	Summit	County: Union	Zip Code: 07901	
Applicant is:	 ✓ Community Sol □ Property/Site C □ Agent (if agent) 	ar Project Owner)wner , what role is repres	Community Solar Developer/Facility Installer Subscriber Organization ented)	
II. Community	Solar Project Owner	r	· · · · · · · · · · · · · · · · · · ·	
Project Owner First Name: Er Daytime Phon Mailing Addre	Company/Entity Na ric e: 415-517-0558 ss: 306 Springfield Av	nme <i>(complete if kno</i> Last N Email: re., 2nd Floor	wn): Nautilus US Power Holdco, LLC Jame: Paul epaul@nautilussolar.com	
Municipality:	Summit	County: Union	Zip Code: 07901	

III. Community Solar Developer

This section, "Community Solar Developer," is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. In all other cases, this section is required.

Developer Company Name (optional, complete if applicable): EnterSolar				
First Name: Kevin	L	ast Name: Purdy		
Daytime Phone: 631-624-4	198 Er	nail: kpurdy@entersolar.com		
Mailing Address: 805 3rd Av	ve 20th floor			
Municipality: <u>NY</u>	County: NY	Zip Code: 10022		

The proposed community solar project will be primarily built by:

☑ the Developer □ a contracted engineering, procurement and construction ("EPC") company



If the proposed community solar project will be primarily built by a contracted EPC company, complete the following *(optional, complete if known)*:

If the EPC company information is left blank and the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program, the Applicant must inform the Board of the information below once the EPC company becomes known.

 EPC Company Name (optional, complete if applicable):
 EnterSolar

 First Name:
 Kevin
 Last Name:
 Purdy

 Daytime Phone:
 631-624-4198
 Email:
 kpurdy@entersolar.com

 Mailing Address:
 805 3rd Ave
 20th floor NY, NY 10022

 Municipality:
 NY
 County:
 NY
 Zip Code:
 10022

IV. Property/Site Owner Information

New Jersey's

V. Community Solar Subscriber Organization (optional, complete if known)

If this section, "Community Solar Subscriber Organization," is left blank and the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program, the Applicant must inform the Board of the information below once the Subscriber Organization becomes known.

 Subscriber Organization Company/Entity Name (optional, complete if applicable):

 First Name:
 Last Name:

 Daytime Phone:
 Email:

 Mailing Address:
 County:

 Zip Code:
 Zip Code:

VI. Proposed Community Solar Facility Characteristics

Community Solar Facility Size (as denominated on the PV panels): <u>1.907</u> MWdc *Any application for a system larger than 5 MWdc will be automatically eliminated. If awarded, projects will be held to the MWdc size indicated in this Application.

Community Solar Facility Locatio	n (Address): <u>905 Murray Rd, Ea</u>	ast Hanover, NJ 07396	
Municipality: East Hanover	County: Morris	Zip Code: 07396	
Name of Property (optional, com	plete if applicable): 905 Murra	y Rd, East Hanover, NJ	



Property Block and Lot Number(s): Lot 65.01 Block 96
Community Solar Site Coordinates: Longitude Latitude

Total Acreage of Property Block and Lots:9.5acresTotal Acreage of Community Solar Facility:3.75acres

Attach a delineated map of the portion of the property on which the community solar facility will be located in PDF format. The map must be provided in color. Note: Applications may be required upon request to submit a copy of the delineated map as a design plan in drawing file format (.dwg) or as a shapefile (.shp), in order to facilitate integration with Geographic Information System (GIS) software.

EDC electric service territory in which the proposed community solar facility is located: *(select one)*

- Atlantic City Electric
- Jersey Central Power & Light
- \Box Public Service Electric & Gas
- Rockland Electric Co.

Estimated time from Application selection to project completion* (*The Applicant should provide a good faith estimate of the date of project completion; however, this data is being collected for informational purposes only.*): <u>12</u> (month) <u>2021</u> (year) *Project completion is defined pursuant to the definition at N.J.A.C. <u>14</u>:8-9.3 as being fully operational, up to and including having subscribers receive bill credits for their subscription to the project. Projects must be fully operational within 12 months of receiving conditional approval by the Board (subject to change according to the proposed rule amendment described in the Terms and Conditions).

The proposed community solar facility is an existing project*

If "Yes," the Application will not be considered by the Board. See section B. XIII. for special provisions for projects having received a subsection (t) conditional certification from the Board prior to February 19, 2019.

*An existing project is defined in N.J.A.C. 14:8-9.2 as a solar project having begun operation and/or been approved by the Board for connection to the distribution system prior to February 19, 2019.

VII. Community Solar Facility Siting

1. The proposed community solar project has site control^{*} ⊻ Yes □ No If "Yes," attach proof of site control.

If "No," the Application will be deemed incomplete.

*Site control is defined as property ownership or option to purchase, signed lease or option to lease, or signed contract for use as a community solar site or option to contract for use as a community solar site. The site control must be specific to the project in this Application, and may not be contingent on the approval of another Application submitted in PY2.



If "Yes," the Application will not be considered by the Board.

*Preserved farmland is defined in N.J.A.C. 14:8-9.2 as land from which a permanent development easement was conveyed and a deed of easement was recorded with the county clerk's office pursuant to N.J.S.A. 4:1C-11 et seq.; land subject to a farmland preservation program agreement recorded with the county clerk's office pursuant to N.J.S.A. 4:1C-24; land from which development potential has been transferred pursuant to N.J.S.A. 40:55D-113 et seq. or N.J.S.A. 40:55D-137 et seq.; or land conveyed or dedicated by agricultural restriction pursuant to N.J.S.A. 40:55D-39.1.

If "Yes," the Applicant must attach special authorization from NJDEP for the site to host a community solar facility. The Board will not consider Applications for projects located, in part or in whole, on Green Acres preserved open space or on land owned by NJDEP, unless the Applicant has received special authorization from NJDEP and includes proof of such special authorization in the Application package.

*Green Acres preserved open space is defined in N.J.A.C. 14:8-9.2 as land classified as either "funded parkland" or "unfunded parkland" under N.J.A.C. 7:36, or land purchased by the State with "Green Acres funding" (as defined at N.J.A.C. 7:36).

4. The proposed community solar facility is located, in part or in whole, on (check all that apply):

- □ a landfill (see question 7 below)
- a brownfield (see question 8 below) ergy.com
- \Box an area of historic fill (see question 9 below)
- ☑ a rooftop (see question 10 below)
- $\hfill\square$ a canopy over a parking lot or parking deck
- \Box a canopy over another type of impervious surface (e.g. walkway)
- □ a water reservoir or other water body ("floating solar") (see question 11 below)
- \Box a former sand or gravel pit or former mine
- \Box farmland* (see definition below)
- □ other (see question 5 below): _

*Farmland is defined as land that has been actively devoted to agricultural or horticultural use and that is/has been valued, assessed, and taxed pursuant to the "Farmland Assessment Act of 1964," P.L. 1964, c.48 (C. 54:4-23.1 <u>et seq</u>.) at any time within the ten year period prior to the date of submission of the Application.

5. If you answered "other" to question 4 above, describe the proposed site and explain why it is appropriate for siting a community solar facility:



- 6. The proposed community solar facility is located, in part or in whole, on land located in:
 - □ the New Jersey Highlands Planning Area or Preservation Area
 - \Box the New Jersey Pinelands

If the project is a ground mounted project (i.e. not rooftop or canopy), and answered "Yes" to either of the options above, include a letter or other determination from the New Jersey Highlands Council or the New Jersey Pinelands Commission, as relevant, stating that the proposed project is consistent with land use priorities in the area.

- 7. If the proposed community solar facility is located, in part or in whole, on a landfill, provide the name of the landfill, as identified in NJDEP's database of New Jersey landfills, available at www.nj.gov/dep/dshw/lrm/landfill.htm:
- 8. If the proposed community solar facility is located, in part or in whole, on a brownfield, has a final remediation document been issued for the property? Yes No If "Yes," attach a copy of the Response Action Outcome ("RAO") issued by a Licensed Site Remediation Professional ("LSRP") or the No Further Action ("NFA") letter issued by NJDEP.

- 10. If the proposed community solar facility is located, in part or in whole, on a rooftop, has the Applicant verified that the roof is structurally able to support a solar system?
 ✓ Yes □ No If "Yes," attach substantiating evidence.
 If "No," the application will not be considered by the Board.
- 11. If the proposed community solar facility is located, in part or in whole, on a water reservoir or other water body ("floating solar"), is the facility located at a water treatment plant or sand and gravel pit that has little to no established floral and faunal resources?



If "Yes," provide supporting details and attach substantiating evidence if needed. *All proposed floating solar projects are required to meet with NJDEP's OPPN prior to submitting an Application. Applicants are responsible for contacting NJDEP with sufficient advance notice to ensure that a meeting will occur prior to the deadline to submit an Application. Please see section VIII Permits, Question 2 for more information.

- 12. The proposed community solar facility is located on the property of an affordable housing building or complex □ Yes ☑ No
- 14. The proposed community solar facility is located in an Economic Opportunity Zone, as defined by the New Jersey Department of Community Affairs ("DCA") □ Yes □ No
 If "Yes," attach proof that the facility is located in an Economic Opportunity Zone.
 *More information about Economic Opportunity Zones are available at the following link:

https://www.state.nj.us/dca/divisions/lps/opp_zones.html.

 ^{17.} Are there any use restrictions at the site? □ Yes ☑ No
 If "Yes," explain the use restriction below and provide documentation that the proposed community solar project is not prohibited.



18. The proposed community solar facility has been specifically designed or planned to preserve or enhance the site (e.g. landscaping, site and enhancements, pollination support, etc.) This represents site improvements beyond required basic site improvements□ Yes ▷ No If "Yes," explain below, and provide any substantiating documentation in an attachment. Explain how the proposed site enhancements will be made and maintained for the life of the project. If implementing pollination support, explain what type of pollination support, how this support is expected to help local ecosystems, and whether the proposed pollination support has received certifications or other verification.



19. This question is for informational purposes only, and will not impact the Application's score. The Board is interested in learning more about ways in which "dual use" projects may be implemented in the Pilot Program:

The proposed community solar facility is a "dual use" project: i.e. the project site will remain in active agricultural production throughout the life of the project (e.g. crop production under or between the panels, livestock grazing)..... *Wildflower planting or other pollination support is not considered dual use for purposes of this

If "Yes," explain what agricultural production will be maintained on the site and will be consistent with the presence of a solar system. Provide any substantiating documentation in an attachment.

question (pollination support is question 18).



VIII. Permits

The Applicant has completed the NJDEP Permit Readiness Checklist, and will submit it as an attachment to this Application..... Yes No
 No," the Application will be deemed incomplete. This requirement only applies to ground mounted and floating solar projects. Community solar projects located on a rooftop, parking lot, or parking structure are exempt from this requirement.

*Applicants are <u>not required</u> to submit the Permit Readiness Checklist to NJDEP prior to submitting an Application to the Board, except in the case of floating solar projects.

2. The Applicant has met with NJDEP's OPPN □ Yes ☑ No If "Yes," attach meeting notes or relevant correspondence with NJDEP's OPPN.

* If the Applicant met with OPPN or received comments from OPPN (formerly PCER) for this project as part of the Program Year 1 Application process, and if the details of the project and the site characteristics have remained the same, those comments remain valid. Please include those comments or meeting notes as an attachment to the Application.

*A meeting with NJDEP's OPPN is <u>not required</u> prior to submitting an Application. Exception: all floating solar projects are required to meet with NJDEP's OPPN prior to submitting an Application. Applicants with a floating solar project are responsible for contacting NJDEP with sufficient advance notice to ensure that a meeting will occur prior to the deadline to submit an Application.

3. The Applicant has received all non-ministerial permits* for this project *(optional)* □ Yes ⊡ No

*Receiving all non-ministerial permits is <u>not required</u> prior to submitting an Application. *A non-ministerial permit is one in which one or more officials consider various factors and exercise some discretion in deciding whether to issue or deny a permit. This is in contrast to a ministerial permit, for which approval is contingent upon the project meeting pre-determined and established standards. Examples of non-ministerial permits include: local planning board authorization, use variances, Pinelands or Highlands Commission approvals, etc. Examples of ministerial permits include building permits and electrical permits.

- 4. Please list all permits, approvals, or other authorizations that will be needed for the construction and operation of the proposed community solar facility pursuant to local, state and federal laws and regulations. Include permits that have already been received, have been applied for, and that will need to be applied for. These include:
 - a. Permits, approvals, or other authorizations from NJDEP (i.e. Land Use, Air Quality, New Jersey Pollutant Discharge Elimination System "NJPDES", etc.) for the property.
 - b. Permits, approvals, or other authorizations from NJDEP (i.e. Land Use, Air Quality, NJPDES, etc.) directly related to the installation and operation of a solar facility on this property.



c. Permits, approvals, or other authorizations other than those from NJDEP for the development, construction, or operation of the community solar facility (including local zoning and other local and state permits)

An Application that does not list all permits, approvals, or other authorizations that will be needed for the construction and operation of the proposed community solar facility will be deemed incomplete.

Permit Name & Description	Permitting Agency/Entity	Date Permit Applied for <i>(if applicable) /</i> Date Permit Received <i>(if applicable)</i>
Building and Construction Permit	East Hanover	N/A
Electrical Permit	East Hanover	N/A
Interconnection Approval	JCP&L	N/A
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If a permit has been received, attach a copy of the permit.

5. The Applicant has consulted the hosting capacity map of the relevant EDC via the EDC's website (links are available on the NJCEP website) and determined that, based on the capacity hosting map as published at the date of submission of the Application, there is sufficient capacity available at the proposed location to build the proposed community solar facility Ves No

If "Yes," include a screenshot of the capacity hosting map at the proposed location, showing the available capacity.

If the hosting capacity map shows insufficient capacity, the Application will not be considered by the Board, unless the Applicant provides: 1) a letter from the relevant EDC indicating that the hosting capacity map is incorrect in that location, or 2) an assessment from the relevant EDC of the cost of the interconnection upgrade that would be required to enable the interconnection of the proposed system, and a commitment from the Applicant to pay those upgrade costs if the project were to be selected by the Board.

<u>Exception</u>: Projects located in PSE&G service territory for which the hosting capacity map shows insufficient capacity available at the planned location may be eligible for a waiver of this requirement. If this application is seeking to exercise this waiver, please check "Yes" below and attach the waiver requirements as described in the Board's Order: <u>https://www.njcleanenergy.com/files/file/CommunitySolar/FY21/8E%20-</u>%200RDER%20PSEG%20Interconnection.pdf.

This project is exercising the PSE&G hosting capacity map waiver: 🗌 Yes 🗌 No



IX. Community Solar Subscriptions and Subscribers

- Estimated or Anticipated Number of Subscribers (please provide a good faith estimate or range): 460
- 2. Estimated or Anticipated Breakdown of Subscribers (*please provide a good faith estimate or range of the kWh of project allocated to each category*):

 Residential: 100%
 Commercial: _____

 Industrial: _____
 Other: ______

 (define "other": ______)

- The proposed community solar project is an LMI project* ⊻ Yes □ No
 *An LMI project is defined pursuant to N.J.A.C. 14:8-9 as a community solar project in which a minimum 51 percent of project capacity is subscribed by LMI subscribers.
 - 4. The proposed community solar project has a clear plan for effective and respectful customer engagement process. ✓ Yes □ No If "Yes," attach evidence of experience on projects serving LMI communities or partnerships with organizations that have experience serving LMI communities.

If "Yes," what specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription are being passed through to their residents/tenants?



Additionally, the affordable housing provider must attach a signed affidavit that the specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription will be passed through to their residents/tenants.

If "No," please be aware that, if, at any time during the operating life of the community solar project an affordable housing provider wishes to subscribe to the community solar project as an LMI subscriber, it must submit a signed affidavit that the specific, substantial, identifiable, and quantifiable benefits from the community solar subscription will be passed through to its residents/tenants.

- 7. This project uses an anchor subscriber (optional) □ Yes □ No
 If "Yes," name of the anchor subscriber (optional): ______
 Estimated or anticipated percentage or range of the project capacity for the anchor subscriber's subscription: ______
- 8. Is there any expectation that the account holder of a master meter will subscribe to the community solar project on behalf of its tenants? □ Yes ☑ No
 If "Yes," what specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription are being passed through to the tenants?

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Additionally, the account holder of the master meter must attach a signed affidavit that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to the tenants.

If "No," please be aware that, if, at any time during the operating life of the community solar project the account holder of a master meter wishes to subscribe to the community solar project on behalf of its tenants, it must submit to the Board a signed affidavit that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to its tenants.

- 9. The geographic restriction for distance between project site and subscribers is: *(select one)*
 - \Box No geographic restriction: whole EDC service territory
 - Same county OR same county and adjacent counties
 - $\hfill\square$ Same municipality OR same municipality and adjacent municipalities

Note: The geographic restriction selected here will apply for the lifetime of the project, barring special dispensation from the Board, pursuant to N.J.A.C. 14:8-9.5(a).



10. Product Offering for LMI subscribers: (The Applicant must also complete and attach one or more product offering form(s) found in Appendix A. See Appendix A for exemptions.)

The subscription proposed offers guaranteed or fixed savings to subscribers ☑ Yes □ No If "Yes," the guaranteed or fixed savings are offered as:

- □ A percentage saving on the customer's annual electric utility bill
- $\ensuremath{\boxdot}$ A percentage saving on the customer's community solar bill credit

The subscription proposed offers subscribers ownership or a pathway to ownership of a share	
the community solar facility	🗌 Yes 🗹 No
If "Yes," include proof of a pathway to ownership of a share of the c	community solar facility offered
to the subscribers in Appendix A.	

11. Product Offering for non-LMI subscribers: (The Applicant must also complete and attach one or more product offering form(s) found in Appendix A. See Appendix A for exemptions.)

The subscription proposed offers guaranteed or fixed savings to subscribers If "Yes," the guaranteed or fixed savings are offered as:

□ A percentage saving on the customer's annual electric utility bill

- ☑ A percentage saving on the customer's community solar bill credit
- Other:

Other:

	- -



12. The list of approved community solar projects will be published on the Board's website. Additionally, subscriber organizations have the option of indicating, on this list, that the project is currently seeking subscribers.

If this project is approved, the Board should	indicate on its website that the project is currently
seeking subscribers	🗹 Yes 🗌 No
If "Yes," the contact information indicated on	the Board's website should read:
Company/Entity Name: <u>Nautilus Solar</u>	Contact Name: Eric Paul
Daytime Phone:	Email: info@nautilussolar.com

*It is the responsibility of the project's subscriber organization to notify the Board if/when the project is no longer seeking subscribers, and request that the Board remove the above information on its website.

X. Community Engagement

- The proposed community solar facility is located on land or a building owned or controlled by a government entity, including, but not limited to, a municipal, county, state, or federal entity
 Yes No
 - 2. The proposed community solar project is being developed by or in partnership or collaboration* with the municipality in which the project is located Yes No If "Yes," explain how and attach evidence of the project being developed by or in partnership or collaboration with the municipality in which the project is located.

*Partnership or collaboration with the municipality is defined as clear and ongoing municipal involvement in the approval of the design, development, or operation of the proposed community solar project (e.g. project is located on a municipal site, municipality facilitating subscriber acquisition, municipal involvement in defining the subscription terms, etc.). Examples of evidence may include a formal partnership, a municipal request for proposals or other public bidding process, letter describing the municipality's involvement in the project or meeting minutes. Documentation must be specific to the project described in this Application; "generic" documentation of support that applies to multiple projects submitted by the same Applicant will not be accepted.

3. The proposed community solar project is being developed by or in partnership or collaboration* with one or more local community organization(s) and/or affordable housing providers in the area in which the project is located □ Yes □ No



If "Yes," explain how and attach evidence of the project being developed by or in partnership or collaboration with the local community organization(s) and/or affordable housing providers. *Partnership or collaboration is defined as clear and ongoing involvement by the local community organization(s) and/or affordable housing providers in the approval of the design, development, or operation of the proposed community solar project (e.g. community organization owns the proposed site, community organization is facilitating subscriber acquisition or was involved in the design of the community solar product offering, etc.). Documentation must be specific to the project described in this Application; "generic" documentation of support that applies to multiple projects submitted by the same Applicant will not be accepted.

4. The proposed community solar project was developed, at least in part, with support and in consultation with the community in which the project is located* Yes No If "Yes," please describe the consultative process below.
*A community consultative process may include any of the following: letter of support from municipality and/or community organizations and/or local affordable housing provider demonstrating their awareness and support of the project; one or more opportunities for public intervention; and/or outreach to the municipality and/or local community organizations and/or affordable housing provider.

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XI. Project Cost

This section, "Project Cost," is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. In all other cases, this section is required.

1. Provide the following cost estimates and attach substantiating evidence in the form of an unlocked Excel spreadsheet model:

Applicants are expected to provide a good faith estimate of costs associated with the proposed community solar project, as they are known at the time the Application is filed with the Board. This information will not be used in the evaluation of the proposed community solar project.



Net Installed Cost (in \$)	
Net Installed Cost (in \$/Watt)	
Initial Customer Acquisition Cost (in \$/Watt)	
Annual Customer Churn Rate (in %)	
Annual Operating Expenses (in c/kWh)	
Levelized Cost of Energy ("LCOE") (in c/kWh)	

2. Pursuant to N.J.A.C. 14:8-9.7(q), "community solar projects shall be eligible to apply, via a onetime election prior to the delivery of any energy from the facility, for SRECs or Class I RECs, as applicable, or to any subsequent compensations as determined by the Board pursuant to the Clean Energy Act." Consistent with the Clean Energy Act of 2018, the Board is no longer accepting applications for the SREC Registration Program ("SRP"). Projects granted conditional approval to participate in PY2 will be eligible to apply for the TI Program.

For indicative purposes only, please indicate all local, state and federal tax incentives which will be applied to if the proposed community solar project is approved for participation in the Community Solar Energy Pilot Program:



- 1. The proposed community solar facility will be paired with storage □ Yes ☑ No If "Yes," please describe the proposed storage facility:
 - a. Storage system size: _____ MW _____ MWh
 - b. The storage offtaker is also a subscriber to the proposed community solar facility

*Community solar credits will only be provided to community solar generation; credits will not be provided to energy discharged to the grid from a storage facility (i.e. no "double counting").

2. The proposed community solar facility will be paired with one or more EV charging stations

If "Yes," how many EV charging stations: <u>4</u>

Will these charging stations be public and/or private? private

Please provide additional details:

PowerFlex is an EDF Renewables company using proprietary Adaptive Charging Network (ACN) technology. This system enables site hosts to maximize delivery of electricity to EVs while reducing or eliminating the need for costly utility upgrades by managing charging based on drivers' demand, building load, onsite generation, and other variables. After receiving approval from the property owner and the tenants at the property after engineering to confirm the viability of the location, the plan would be to install the EV charging stations as identified.



Another EDF Renewables company, Dalkia helps enterprises reduce energy, improve environmental performance, and realize positive business outcomes. Dalkia is a team of energy professionals that will identify the right strategies and technologies, implement them across a portfolio of sites, and operate them on an ongoing basis, all while bundling financing options to reduce or eliminate upfront capital expenditures. We are proposing to conduct energy audits and

4. The proposed community solar project will create temporary or permanent jobs in New Jersey

..... 🗹 Yes 🗌 No

If "Yes," estimated number of temporary jobs created in New Jersey: 25

If "Yes," estimated number of permanent jobs created in New Jersey: 1

If "Yes," explain what these jobs are:

Engineering, construction, electrical installation, asset management and O&M jobs in the state of NJ

BPU 5 The proposed community solar project will provide job training opportunities for local solar

The proposed community solar project will provide job training opportunities for local solar
trainees 🗆 Yes 🗆 No
If "Yes," will the job training be provided through a registered apprenticeship? Yes No
If "Yes," identify the entity or entities through which job training is or will be organized (e.g.
New Jersey GAINS program, partnership with local school):

XIII. Special Authorizations and Exemptions

Is the proposed community solar project co-located with another community solar facility (as defined at N.J.A.C. 14:8-9.2)?
 If "Yes," please explain why the co-location can be approved by the Board, consistent with the provisions at N.J.A.C. 14:8-9



- 2. Does this project seek an exemption from the 10-subscriber minimum? □ Yes □ No If "Yes," please demonstrate below (and attach supporting documents as relevant):
 - a. That the project is sited on the property of a multi-family building.
 - b. That the project will provide specific, identifiable, and quantifiable benefits to the households residing in said multi-family building.

3. Specific sections throughout the Application Form are identified as optional only if: 1) the Applicant is a government entity (municipal, county, or state), and 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. Is the Applicant a government entity that plans to select the developer via such bidding process?

If "Yes," attach a letter describing the proposed bidding process and a copy of the request for bids (RFP, RFQ, or other bidding document) that is ready to be issued if the project is granted conditional approval by the Board. The Applicant must further commit to issuing said RFP, RFQ, or other bidding process within 90 days of the proposed project being approved by the Board for participation in the Community Solar Energy Pilot Program. The Applicant will be required to provide the information contained in those optional sections to the Board once it becomes known.

- 4. Has the proposed community solar project received, in part or in whole, a subsection (t) conditional certification from the Board prior to February 19, 2019? □ Yes □ No If "Yes," the project may apply to participate in the Community Solar Energy Pilot Program if it commits to withdrawing the applicable subsection (t) conditional certification immediately if it is approved by the Board for participation in the Community Solar Energy Pilot Program. Attach a signed affidavit that the Applicant will immediately withdraw the applicable subsection (t) conditional certification if the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program.
- 5. The Board has proposed an amendment to the Pilot Program rules, which, if approved, would allow municipally-owned community solar projects to submit an application for a project that requests an exemption from the provisions at N.J.A.C. 14:8-9.10(b)(1) mandating subscriber enrollment via affirmative consent (i.e. an opt-out community solar project). Projects that intend

to utilize opt-out subscriber enrollment if the proposed rule amendment is approved by the Board must indicate such intent below. If the Application is selected but the proposed rule amendment is not approved by the Board, the project will be required to proceed using affirmative consent (i.e. "opt-in") subscriber enrollment rules, as currently provided for in the Pilot Program rules at N.J.A.C. 14:8-9.10(b)(1).

- B. The proposed opt-out project will be owned and operated by the municipality for the duration of the project life (excluding a possible period of temporary third-party, tax-credit investor ownership to maximize the financeability of the opt-out project, subject to appropriate contractual provisions that maintain the municipality's ultimate control of the proposed opt-out project)...... □ Yes □ No

If "Yes," the municipality name is: _

If "No," the project will not be considered for eligibility as an opt-out community solar project.

- C. The proposed opt-out project has been authorized by municipal ordinance or resolution
- If "Yes," attach a copy of the municipal ordinance or resolution allowing the development, ownership, and operation an opt-out community solar project, contingent on the proposed rules being approved by the Board.

If "No," the project will not be considered for eligibility as an opt-out community solar project.

- E. Describe the process by which the municipality will identify the customers that will be automatically enrolled in the proposed opt-out project: ______

F. The municipal applicant has reviewed the proposed rule amendment allowing for opt-out projects, and agrees to adhere to the proposed rules and any subsequent modification if they are approved by the Board. The applicant understands that any approval for the project to operate as an opt-out community solar project is contingent on the proposed rule amendment being approved by the Board. The applicant understands that, if the proposed rule amendment is not approved by the Board, the project, if approved, will be required to







Project Owner Certification

The undersigned warrants, certifies, and represents that:

- 1) I, Jeffrey Cheng
 (name) am the President
 (title) of the

 Project Owner Nautilus US Power Holdco, LLC
 (name) and have been authorized to file this

 Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
- 5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 6) I acknowledge that submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.

Signature:

Date: 2

Print Name: <u>Jeffrey Cheng</u> Title: President

Company: Nautilus US Power Holdco, LLC

Signed and sworn to before me on this _____ day of _

Signature

Name

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness, accuracy, or validity of that document. State of California, County of Santa Clave A Subscribed and sworn to (or affirmed) before me on this 240 day Feb 2021 10ftrez by proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me. Signature (seal) JESSICA KO Commission No. 2298970 NOTARY PUBLIC-CALIFORNIA

Program Year 2, Application Period 1

My Comm. Expires

SANTA CLARA COUNTY

JULY 27, 2023



Section C: Certifications

Instructions: Original signatures on all certifications are required. All certifications in this section must be notarized; instructions on how to submit certifications will be provided as part of the online application process. Certifications must be dated after October 3, 2020: PY1 certifications may not be reused in PY2.

Applicant Certification

The undersigned warrants, certifies, and represents that:

- 1) I, Jeffrey Cheng
 (name) am the President
 (title) of the Applicant Nautilus US Power Holdco, LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
- 5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 6) I acknowledge that submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.

Signature:

Date: 2

Print Name: Jeffrey Cheng Title: President

Company: Nautilus US Power Holdco, LLC

Signed and sworn to before me on this _____ day of _____, 20___ Signature ______ CALIFORNIA COMPLIANT NOTARY CERTIFICATE ATTACHED

State of California)
County of Santa Clara	s.s.
Subscribed and sworn to (or affirmed) before me or	n this <u>3</u> rd day of <u>Feb</u>
20 21, by Jeffrey Cheng	gner (1)
Name of Signer (2)	, proved to me on the basis of
satisfactory evidence to be the person(s) who appe	ared before me.
Signature of Notary Public Jessica Ko, Notary Public	JESSICA KO Commission No. 2298970 NOTARY PUBLIC-CALIFORNIA SANTA CLARA COUNTY My Comm. Expires JULY 27, 2023
For other required information (Notary Name, Commission No. etc.)	Seal
Although the information in this section is not required by law, it cou this jurat to an unauthorized document and may prove useful to per-	ATION — Id prevent fraudulent removal and reattachment of sons relying on the attached document.
Description of Attached Document	Additional Information Method of Affiant Identification
CLEAN Energy Program	Proved to me on the basis of satisfactory evidence: \mathbf{X} form(s) of identification \bigcirc credible witness(es)
Certificate	Notarial event is detailed in notary journal on: Page # Entry # Notary contact: <u>408-531-1444</u>
ontaining pages, and dated _02/03/202/	

Project Developer Certification

This Certification "Project Developer / Installer" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process. In all other cases, this Certification is required.

The undersigned warrants, certifies, and represents that:

- 1) I, <u>Kevin Purdy</u> (name) am the <u>Business Development Director</u> (title) of the Project Developer <u>EnterSolar, LLC</u> (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
- 5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 6) I acknowledge that submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.

Signature: Print Name: M Title: Duginess Company:

day of February, 2021 Signed and sworn to before me on this $\underline{3}$

Signature

ALICE M GAMBINO Notary Public - State of New York No. 01GA6394127 Qualified in Queens County My Commission Expires July 01, 2023

Name

Page 28 of 38

Program Year 2, Application Period 1

New Jersey Board of Public Utilities



Property Owner Certification

The undersigned warrants, certifies, and represents that:

- 1) I, <u>Bassam Mhich</u> (name) am the <u>VP Asset Management</u> (title) of the Property <u>UE New Hanover Public Warehousing LLC (905 Murray Rd)</u> (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package pertaining to siting and location of the proposed community solar project has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) My organization or I understand that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 4) I acknowledge that submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.

Signature: Date: 2/5/2021 Print Name: Bassam Mhich Title: VP Asset Management Company: UE Property Management LLC

Signed and sworn to before me on this 5th day of February 2021

Signature

Cheisea Reeves

Name

Chelsea L. Reeves I.D. No. 50104493 NOTARY PUBLIC, State of New Jersey Commission Expires May 6, 2024



Section D: Appendix

Appendix A: Product Offering Questionnaire

Complete the following Product Offering Questionnaire. If there are multiple different product offerings for the proposed community solar project, please complete and attach one Product Offering Questionnaire per product offering. Variations in any product offering require a separate Product Offering Questionnaire. Applicants are expected to provide a good faith description of the product offerings developed for the proposed community solar project, as they are known at the time the Application is filed with the Board. If the proposed project is approved by the Board, the Applicant must notify the Board and receive approval from the Board for any modification or addition to a Product Offering Questionnaire.

Exception: This "Product Offering Questionnaire" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process.

This Q	uestionnaire is Product Offering number 1 of 1 (total number of product offerings).
This Pr	oduct Offering applies to:
	LMI subscribers
	non-LMI subscribers
	☑ both LMI and non-LMI subscribers
1.	Community Solar Subscription Type (examples: kilowatt hours per year, kilowatt size, percentage
	of community solar facility's nameplate capacity, percentage of subscriber's historical usage, percentage of subscriber's actual usage): Percentage savings on the customer's bill credit.
2.	Community Solar Subscription Price: (check all that apply)
	\Box Fixed price per month
	✓ Variable price per month, variation based on: Value of bill credits, less discount
	\Box The subscription price has an escalator of% every (interval)
3.	Contract term (length): months, or years OR 🗹 month-to-month
4.	Fees
	Sign-up fee: None
	Early Termination or Cancellation fees: <u>None</u>
	Other fee(s) and frequency:
5.	Does the subscription guarantee or offer fixed savings or specific, quantifiable economic benefits to the subscriber? \checkmark Yes \Box No



If "Yes," the savings are guaranteed or fixed:

- \Box As a percentage of monthly utility bill
- \square As a fixed guaranteed savings compared to average historic bill
- ☑ As a fixed percentage of bill credits
- □ Other: ______
- 6. Special conditions or considerations:

Nautilus will offer subscribers a fixed discount on the bill credit value provided to customers, guaranteeing the customers savings each month. There is no sign up.









Gate of Heaven A Cemetery & Mausoleum



PGA TOUR Superstore

Milipany Mil

HomeGoods

East Hanover Plaza ᅌ

The Funplex

Bed Bath & Beyond

10

PetSmart

F

Kam Man Market

Novartis Pharmaceuticals Corp

10

Ridgedale Ave

Line

Rd

Hanover Commons

905 Murray Rd. East Hanover NJ 07396



2021-02-03 Max Roof (HW 430, SE 120KUS) v2 Urban Edge (905) - East Hanover - NJ, 905

Murray Rd, East Hanover, New Jersey

🖋 Report	
Project Name	Urban Edge (905) - East Hanover - NJ
Project Address	905 Murray Rd, East Hanover, New Jersey
Prepared By	Romer Beato rbeato@entersolar.com

Jul System Met	rics
Design	2021-02-03 Max Roof (HW 430, SE 120KUS) v2
Module DC Nameplate	1.91 MW
Inverter AC Nameplate	1.44 MW Load Ratio: 1.32
Annual Production	2.297 GWh
Performance Ratio	80.4%
kWh/kWp	1,204.6
Weather Dataset	TMY, NJ_EastHanover_v3.4, null (custom)
Simulator Version	e9797176e3-26bae4867f-5bc78c5b42- ef3b5eabf6





Sources of System Loss



7 Annual			
	Description	Output	% Delta
	Annual Global Horizontal Irradiance	1,416.6	
	POA Irradiance	1,498.3	5.8%
Irradiance	Shaded Irradiance	1,473.5	-1.7%
(kWh/m²)	Irradiance after Reflection	1,422.7	-3.4%
	Irradiance after Soiling	1,353.4	-4.9%
	Total Collector Irradiance	1,353.4	0.0%
	Nameplate	2,599,282.7	
	Output at Irradiance Levels	2,552,898.6	-1.8%
	Output at Cell Temperature Derate	2,439,764.2	-4.4%
	Output After Mismatch	2,437,854.1	-0.1%
Energy (kWh)	Optimizer Output	2,403,621.2	-1.4%
()	Optimal DC Output	2,394,412.3	-0.4%
	Constrained DC Output	2,379,354.9	-0.6%
	Inverter Output	2,343,541.8	-1.5%
	Energy to Grid	2,296,670.7	-2.0%
Temperature	Metrics		
	Avg. Operating Ambient Temp		14.3 °C
	Avg. Operating Cell Temp		24.6 °C
Simulation M	etrics		
		Operating Hours	4722
		Solved Hours	4722

Sentersolar

Annual Production Report produced by Romer Beato

Condition Set	2											
Description	10 De	0 Degree ballast roof NJ: East Hanover (2.9mi) Newark Soiling losses										
Weather Dataset	TMY, N	VJ_Eastl	Hanove	er_v3.4	1, nul	l (cust	om)					
Solar Angle Location	Projec	t Lat/Lr	ng									
Transposition Model	Perez	Model										
Temperature Model	Diffus	ion Mo	del									
	Rack Type					U _{const}			Uwind			
Temperature Medel	Fixed Tilt					20			0			
Parameters	Flush	Mount					15			0		
	East-V	Vest					20			0		
	Carpo	Carport					29			0		
Soiling (%)	J	F	м	Α	м	J	J	A	S	0	Ν	D
	14	14	9	3	3	3	3	3	3	3	3	11
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	0% to	1.5%										
AC System Derate	2.00%											
Module	Modu	le				Uploaded By Ch		Char	Characterization			
Characterizations	Q.PEA (Hanv	K DUO vha Q C	L-G8.2 cells)	430		Enter	rSolar	Qcells_QPEAK_DUO_L- G8.2_430_Rev1.PAN, PAN				
Component Characterizations	Device	e	Upl	oaded	Ву			Chara	cteriza	tion		

🖨 Compo	onents	
Component	Name	Count
Inverters	SE120KUS (SolarEdge)	12 (1.44 MW)
Strings	10 AWG (Copper)	127 (50,928.1 ft)
Optimizers	P860 (SolarEdge)	2,275 (1.96 MW)
Module	Hanwha Q Cells, Q.PEAK DUO L- G8.2 430 (430W)	4,434 (1.91 MW)

🔒 Wiring Zo	nes								
Description Combiner Poles			String Size		Stringing Strategy				
Wiring Zone		•		32	-35	Along Rad	king:]
III Field Segr	nents								
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	10°	219.518°	1.2 ft	1x1	4,434	4,434	1.91 MW

Oetailed Layout



STRICTLY PRIVATE AND CONFIDENTIAL



Nautilus Solar Energy, LLC SOQ

Low-to-Moderate Income Subscriber Experience

February 2021



Strictly Private and Confidential Nautilus Solar Energy LMI Subscriber Experience



Strictly Private and Confidential

Description:			

3. SGC Power Maryland Community Solar Portfolio



905 MURRAY ROAD, EAST HANOVER, NJ

SITE CONTROL AUTHORIZATION FOR SOLAR PROJECT

February 5, 2021 ("Effective Date")

By and between UE New Hanover Public Warehousing LLC (the "OWNER") and

EnterSolar, LLC of 805 Third Avenue, Floor 20, New York, NY 10022 a business of EDF Renewables ("ES")

UE New Hanover Public Warehousing LLC owns and controls Tax Parcel No. Lot 65.01 Block 96 and the improvements thereon also known as 905 Murray Road, East Hanover, NJ with a rooftop area of approximately 194,100 sf (the **"Project Site"**), with the building on the Project Site referred to as the **"Building"**.

Enter Solar, LLC, a business of EDF Renewables, is a solar developer in the business of designing, developing, building and commissioning solar projects. ES has performed preliminary investigations and believes that the rooftop of the Building would be suitable for installing and operating (the "**Project**") a Solar Photovoltaic System (the "**System**"), with such System participating in the NJ Community Solar Program.

In consideration of the mutual covenants herein set forth and for other good and valuable consideration, the receipt and sufficiency are acknowledged, for a period of one hundred and eighty (180) days from and after the Effective Date (the **"Review Period"**) OWNER hereby authorizes ES at ES's sole cost and expense, to undertake and continue its Project design and development efforts, including, without limitation, engineering, design, utility interconnection feasibility for the System, assessment of building(s) and roof conditions for the Building, and the applicability of available tax and other potential incentives for the Systems and the Project. and pursue acceptance of the System, the Project and Project Site into the NJ Community Solar Program (the **"Work**").

Each party agrees to cooperate with the other, in good faith, throughout the Review Period to pursue acceptance and participation of the System and the Project in the NJ Community Solar Program and, if successful in acceptance, to further negotiate, in each party's sole discretion, a lease of the rooftop of the Building on the Project Site for the installation of the System thereon (a **"Rooftop Solar Lease"**). The terms and existence of this authorization, and any nonpublic information about the Project , the Project Site and the Work obtained by ES in performance of the Work throughout the Review Period (**"Owner Information"**) are confidential, and, other than disclosure to ES financing partners, consultants and affiliates (each, a **"Representative"**) necessary to implement the Project and to the New Jersey Board of Public Utilities in connection with the application for acceptance into the NJ Community Solar Program, ES may not disclose Owner Information to any third party without OWNER'S prior written consent, which may be withheld in OWNER'S sole discretion. **"Owner Information"** shall not include any data that is publicly available through no fault of ES or any ES Representative. Notwithstanding the foregoing, ES may only disclose Owner Information to those Representative that are bound to maintain the confidentiality thereof by written agreement.

OWNER represents and warrants that it has not retained a broker or agent with respect to this SITE CONTROL AUTHORIZATION and that no commission or payment is due to any person retained by OWNER with respect to the SITE CONTROL AUTHORIZATION, the Project, or the Project Site. ES agrees to defend, indemnify and hold OWNER harmless from and against any claims for fees, commission or compensation arising out of any conversations or negotiations by ES with any broker with respect to this SITE CONTROL AUTHORIZATION, the Project Site, or the Project.

Except with respect to OWNER's authorization for ES to perform the Work throughout the Review Period, the confidentiality provisions and indemnity above, this letter is non-binding and is not intended to create any agreement for a Rooftop Solar Lease or other agreement for the installation, maintenance or operation of a solar array at the Project Site and imposes no duty on either party to enter into or conclude negotiations therefor.

During the Review Period, OWNER will not grant to any person, other than ES, a right to install or operate a solar project on the Rooftop of the Building or to otherwise exclusively occupy or use the rooftop of the Building on the Project Site for the installation or operation of a solar project.

The parties intend that neither shall have any contractual obligations to the other with respect to a Rooftop Solar Lease unless and until a definitive agreement has been fully executed and delivered by the parties.

IN WITNESS WHEREOF, the parties have caused this SITE CONTROL AUTHORIZATION to be executed by their respective authorized representatives as of the Effective Date.

UE NEW HANOVER PUBLIC WAREHOUSING LLC

By: UE Property Management LLC its Manager and Authorized Signatory

By: Name (Print): Title: Date:

ENTERSOLAR, LLC

By:	10	
Name	e (Print): Raphael Declerco	
Title:	President	
Date:	February , 2021	

Feasibility Structural Analysis of Building for a Proposed Rooftop Solar PV System

For the Project: 905 Murray Road East Hanover, NJ

Presented to:





Ashutosh Patel, PE

February 04, 2021

THE PARTY OF





Table of Contents

02/04/21 Sheet 1.1 Prepared by CG Checked by AP

Executive Summary	1.1
Chandrad Canditians for Easting Convision on Evisting Chaustones	
Standard Conditions for Engineering Services on Existing Structures	2.1 - 2.2
Codes and Design Criteria	3.1
Analysis	4.1
Conclusion	5.1



02/04/21 Sheet 1.1 Prepared by CG Checked by AP

Executive Summary

A (PV) Solar Array is proposed to be installed with modules mounted to a ballasted and/or mechanically attached racking system and supported on the rooftop of the subject building. Pure Power has performed a structural analysis and determined the following:

- Existing building is feasible for PV solar system.
- Reserved capacity for the existing roof: (See last page)
 Reserve capacity = 4.0 PSF
 Maximum system weight= 500,000 lbs

Note: Racking manufacturer shall select the racking system such that it satisfies both the above specified uniform load reserve capacities and the maximum allowable downward, uplift and shear loads on the roof deck.

Existing Structure

The building under consideration has a metal deck with no ceiling. The structural framing is composed of 30'-0" long, 20" deep Steel Joists that are spaced every 7'-0". The joists span between W21 and W24 steel wide flange hung girders with a span of 50'-0". The girders are supported on columns which are W8 steel wide flange sections.



Standard Conditions for Engineering Services on ExistingStructures

• The analysis is based on the information gathered from the field and/or information provided to Pure Power Engineering and is assumed to be current and accurate.

• Unless noted otherwise, the structure and the foundation system are assumed to be in good condition, free of defects, and can achieve theoretical strength.

 It is assumed that the structure has been properly maintained and shall be properly maintained during its service. The superstructure and the foundation system are assumed to be designed with proper engineering practice and fabricated, constructed and erected in accordance with the design documents.
 Pure Power will accept no liability which may arise due to any existing deficiency in design, material, fabrication, erection, construction, etc. or lack of maintenance.

• The analysis results are only applicable for the proposed additions and alterations specified in this report. Any deviation of the proposed equipment and placement, etc., will require Pure Power to generate an additional structural analysis.

• The analysis does not include the design of the racking system or the ballast it requires. The analysis is performed to verify the capacity of the main structural system. Connections are assumed to have the capacity of the main structural members.

• Pure Power assumes that the existing building has NOT been modified or altered from its original design. Building landlord/client shall inform PPE with any kind of modification and/or alteration that may have been done to the existing building during its lifetime.

Proposed PV-Panels and Preliminary Design

- PV solar panels shall be installed on the roof as arrays on a ballasted racking system and/or mechanically
 attached racking system. A typical ballasted racking system is designed to resist wind uplift and sliding by
 placing concrete blocks (ballast) as counterweight on the racks. The system does not increase uplift on the
 building because the ballast should be designed to resist the additional uplift in order to provide the code
 required factor of safety.
- It is assumed that the panels will be approximately 12 inches above the rooftop at the high end.
- It is assumed that the average design weight includes the weight of the panels, racking system and all required assemblies.



Existing Build

• Pursuant to International Existing Building Code section 807.4, any existing gravity load-carrying structural element for which additions and/or alterations cause an increase in design gravity load of no more than 5 percent, shall be permitted to remain unaltered, thus considered to be code-compliant and adequate. Any existing gravity load- carrying structural element for which additions and/or alterations cause an increase in design gravity loads exceeding 5 percent is checked against the applicable Code criteria for new structures.

• Pursuant to International Existing Building Code Sections 807.5, any existing lateral load-carrying structural element whose demand-capacity ratio with the addition and/or alteration considered is no more than 10 percent greater than its demand-capacity ratio with the addition and/or alteration ignored shall be permitted to remain unaltered, thus considered to be Code-compliant and adequate. If the demand-capacity ratio increase is more than 10 percent, the subject structural element is checked against the applicable Code criteria for new structures.

• Pursuant International Building Code section 1607.12.5.1, where PV panels are installed on building roof, it is not necessary to include roof live load in the area(s) covered by the panels when these area(s) are inaccessible, or signs are posted prohibiting storage under the panels. Therefore, Pure Power has applied the roof live/snow load in all areas that are still accessible and subject to foot traffic, maintenance workers, storage, etc., but not directly under the modules.



20.0 psf

Codes and References

2018 International Building Code

Minimum Design Loads for Buildings and Other Structures, ASCE 7-16

AISI \$100-16

Design Criteria

Snow Load (Service)	
Ground Snow Load:	30 psf
Risk Category:	l
Snow Exposure: C _e :	1.0
Snow Load Important Factor I _s :	1.0
Thermal Factor C _t :	1.0
Flat Roof Snow Load:	21.0 psf
Minimum Flat Roof Snow Load:	20.0 psf

Roof Live Load (Service)

Note: The racking manufacturer/the racking manufacturer's structural engineer shall be responsible to verify the design criteria when designing the racking system.



Analysis Assumptions for Existing Roof

The existing construction documents of this building was not available, PPE has performed a site visit to this site on 01/13/2021. The following loads have been assumed based on our site visit and our experience with similar type of buildings:

Snow Load	20.0 psf	
	20.0 psi	
Live Load	20.0 pcf	
Total Roof DL =	8.0 psf	
MEP & Misc	3.0 psf	
Metal Deck	2.0 psf	
Roofing & Insulation	3.0 psf	

Total Roof Load =

PPE understands that the area where the clear space between the panels and rooftop is not more than 12 in.

Therefore, as per the current state code (section 1607.12.1), roof live load does NOT need to be considered on areas where the proposed PV system will be installed.

The proposed PV system is to weigh a maximum 4.0 psf

Therefore, the proposed loading, including the weight of the PV system is as follows:

Existing roof Load =	29.0 psf
<u>Weight of PV system =</u>	<u>4.0 psf</u>
Total roof load =	33.0 psf

The structural framing has steel joists framing into wide flange hung girders supported on columns. The field information was used to model the joist in RAM elements. The joists were analyzed as completely braced by the deck. The data obtained from the RAM model was used to analyze the girder system. The girders were modelled in RAM elements. The reactions from the girder were then used to analyze the columns in ENERCALC. The yield strength of all elements is taken as Fy =36ksi.



Conclusion

Based on our experience and engineering analysis of the information available at the time of this writing, it is the opinion of this organization that the added stresses due to the weight of the proposed PV modules are considered acceptable and will not exceed the capacity of the existing roof structure. The proposed PV modules may be installed under the conditions outlined in the body of this report.

Solar panels may not be supported within 5 feet of all existing rooftop mechanical equipment. These areas typically result in shadow zones and may not be suitable for solar panels anyway.

Do not stage pallets on roof unless staging plan drawing is provided by PPE.

This report does not represent an approval of the proposed PV system design. It is the racking designer's responsibility to ensure any proposed racking system is within the limits stated in this report and their system is designed in accordance with the requirements in the governing building code. PPE can review the existing framing adequacy for anchorage reaction loads upon request and if the racking design are supplied to PPE by the racking designer.

Sincerely,

Ashutosh Patel, PE





O Detailed Layout



AVAILABLE RESERVE CAPACITY: 4 psf

GENERAL NOTES 1. ANALYZED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE 2. IF ANY FIELD CONDITIONS ARE NOT IN COMPLIANCE WITH THESE DRAWINGS AND/OR CONDITIONS SPECIFIED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH THE AFFECTED WORK. **3. BUILDING OCCUPANCY CATEGORY: I** 4. ROOF SNOW LOAD: **GROUND SNOW LOAD, PG = 30 PSF** SNOW EXPOSURE, CE = 1.0 SNOW LOAD IMPORTANCE FACTOR, IS = 1 **THERMAL FACTOR, CT = 1.0** FLAT ROOF SNOW LOAD PF = 0.7*PG*CE*CT*IS = 21 PSF MINIMUM FLAT ROOF SNOW LOAD = 20*IS = 20 PSF

FIGURE 1 - LOCATION FOR SOALR PANELS VS. AVAILABLE RESERVE CAPACITY

(Please see report for additional requirements)





February 5, 2021







February 3, 2021

New Jersey Board of Public Utilities 44 South Clinton Avenue, 7th Floor Post Office Box 350 Trenton, New Jersey 08625-0350 Attn: Office of Clean Energy, Community Solar Energy Pilot Program

Confidentiality Affidavit for 905 Murray Rd, East Hanover, NJ Application Re:

Dear NJBPU:

Nautilus US Power Holdco, LLC ("Nautilus") is submitting a Community Solar Energy Project located at 905 Murray Rd, East Hanover, NJ. Nautilus has chosen to redact certain proprietary and confidential information from our public application. This information, marked as confidential, includes sensitive information around project costs, customer acquisition strategies, and site host contact information.

Sincerely,

Nautilus US Power Holdco, LLC

By:

Name: Jeffrey Cheng Title: President

Signed and sworn to befo	pre me on this <u>J</u> day of <u>Feb.</u> , 2021
	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Signature	State of California, County of <u>JQN+A (I Ar A</u> Subscribed and sworn to (or affirmed) before me on this <u>3rd</u> day of <u>FCb</u> <u>.282.1 by JEFFYEU</u> Cheng proved to me on the basis of satisfactory evidence to be the person(a) who appeared before me.
Name	(sear)
	JESSICA KO Commission No. 2298970 NOTARY PUBLIC-CALIFORNIA SANTA CLARA COUNTY My Comm. Expires JULY 27, 2023