

**BUCKSPORT INFRASTRUCTURE & PROPERTY COMMITTEE
MEETING
6:00 P.M., THURSDAY, SEPTEMBER 12, 2019
BUCKSPORT TOWN OFFICE**

- 1. Call meeting to order**
- 2. Roll Call**
- 3. SunDog Solar Proposal – old landfill**
- 4. Adjournment**

Committee Members:

**Robert Carmichael, Jr., Chair
Paul Bissonnette
Paul Gauvin**



Lessard, Susan <slessard@bucksportmaine.gov>

Solar Project/DEP

7 messages

Chuck Piper <chuck@sundog.solar>
To: slessard@bucksportmaine.gov

Wed, Aug 7, 2019 at 4:59 PM

Good evening Ms. Lessard,

I am reaching out to you and the town of Bucksport to see if there is any interest in developing a solar farm on the closed landfill property. I have attached a conceptual system design to begin the conversation.

The system will be free to the town yet will provide a number of valuable benefits including low cost electricity. I have spoken with the DEP and received confirmation that the towns closed landfill is an excellent location for a solar project. The DEP will support it.

I am available to meet with the council to review options and answer questions. I look forward to hearing from you.

Thank you!



Chuck Piper
207-505-5521
www.sundog.solar

 **helioscope_simulation_3601494_summary.pdf**
2538K

Lessard, Susan <slessard@bucksportmaine.gov>
To: Chuck Piper <chuck@sundog.solar>

Thu, Aug 8, 2019 at 5:27 PM

Thank you for your interest in a project in Bucksport. I will talk to the Town Council and see if I can set up a meeting with them for you to make your proposal.

Sue Lessard

Susan Lessard | Town Manager

Town of Bucksport, Maine | Incorporated June 25, 1792
50 Main Street | P.O. Drawer X | Bucksport, Maine 04416
207.469.7368, ext. 226 (office) | 207.469.7369 (fax)
slessard@bucksportmaine.gov | www.bucksportmaine.gov

Under Maine's Freedom of Access law, all email and email attachments received or prepared for matters concerning Town business are likely to be regarded as public records which may be inspected by any person upon request, unless otherwise made confidential by law. If you have received this message in error, please notify this office immediately by return email. Thank you in advance for your cooperation.

[Quoted text hidden]

Chuck Piper <chuck@sundog.solar>
To: "Lessard, Susan" <slessard@bucksportmaine.gov>

Thu, Aug 8, 2019 at 8:07 PM

Thank you Susan, I'll stand by.

Take care,
[Quoted text hidden]

Susan Lessard <slessard@bucksportmaine.gov>
To: Chuck Piper <chuck@sundog.solar>

Thu, Aug 8, 2019 at 8:21 PM

The council would like to hear more about your proposal. Are you available September 12th at 6 m to meet with the council's Infrastructure committee?
Sue Lessard

Sent from my iPhone
[Quoted text hidden]

Chuck Piper <chuck@sundog.solar>
To: Susan Lessard <slessard@bucksportmaine.gov>

Thu, Aug 8, 2019 at 8:53 PM

Great! Yes, I'm available. I'll see you then. Should I bring my own projector?

Thank you!
[Quoted text hidden]

Susan Lessard <slessard@bucksportmaine.gov>
To: Chuck Piper <chuck@sundog.solar>

Thu, Aug 8, 2019 at 9:00 PM

No, we have a projector that you can hook to your laptop or if you bring a thumb drive we can provide the laptop.
Sue

Sent from my iPhone
[Quoted text hidden]

Chuck Piper <chuck@sundog.solar>
To: Susan Lessard <slessard@bucksportmaine.gov>

Fri, Aug 9, 2019 at 8:04 AM

Excellent, see you on 9/12 at 6pm.

Take care,
[Quoted text hidden]


Design2 Bucksport, transfer station rd. bucksport, me

Report

Project Name Bucksport

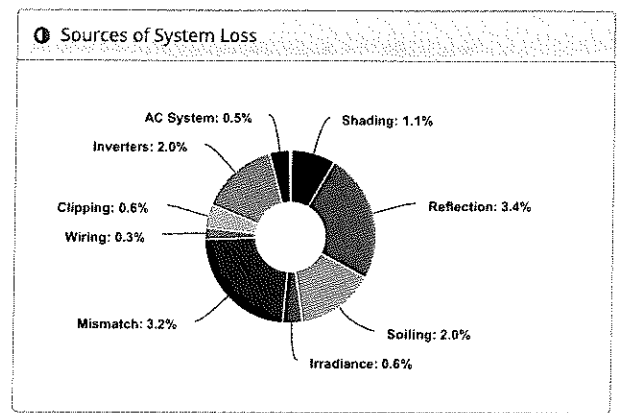
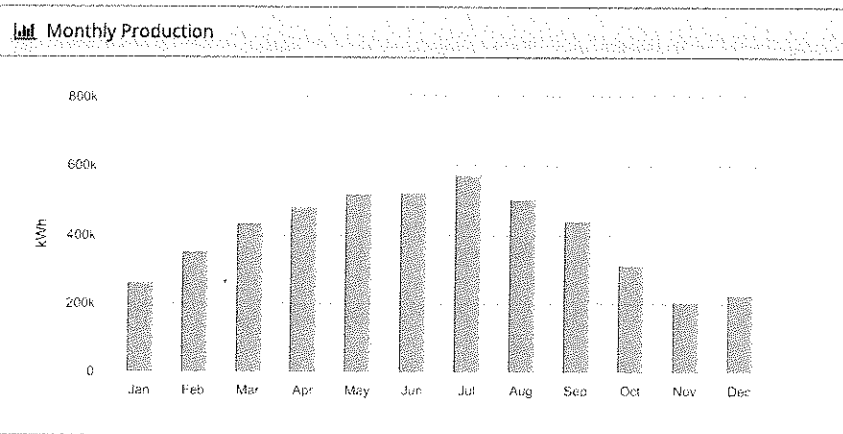
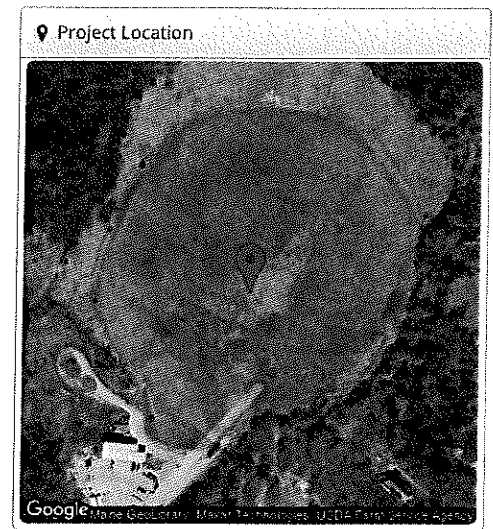
Project Address transfer station rd. bucksport, me

Prepared By Chuck Piper
chuck@sundog.solar



System Metrics

Design	Design2
Module DC Nameplate	3.57 MW
Inverter AC Nameplate	2.86 MW
Load Ratio	1.25
Annual Production	4,849 GWh
Performance Ratio	87.1%
kWh/kWp	1,358.4
Weather Dataset	TMY, 10km Grid (44.55,-68.75), NREL (prospector)
Simulator Version	efd8fcfae9-e4b4e10a0d-347b1c6edf-f3ea2b8b2e



Annual Production

Description	Output	% Delta
Irradiance (kWh/m²)		
Annual Global Horizontal Irradiance	1,373.3	
POA Irradiance	1,559.6	13.6%
Shaded Irradiance	1,542.0	-1.1%
Irradiance after Reflection	1,490.3	-3.4%
Irradiance after Soiling	1,460.5	-2.0%
Total Collector Irradiance	1,460.4	0.0%
Energy (kWh)		
Nameplate	5,210,518.4	
Output at Irradiance Levels	5,179,633.1	-0.6%
Output at Cell Temperature Derate	5,182,965.4	0.1%
Output After Mismatch	5,019,126.6	-3.2%
Optimal DC Output	5,004,159.9	-0.3%
Constrained DC Output	4,974,108.1	-0.6%
Inverter Output	4,873,440.0	-2.0%
Energy to Grid	4,849,080.0	-0.5%
Temperature Metrics		
Avg. Operating Ambient Temp		9.6 °C
Avg. Operating Cell Temp		17.1 °C
Simulation Metrics		
Operating Hours	4643	
Solved Hours	4643	

Condition Set

Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (44.55,-68.75), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters												
Rack Type	a	b	Temperature Delta									
Fixed Tilt	-3.56	-0.075	3°C									
Flush Mount	-2.81	-0.0455	0°C									
Soiling (%)												
	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations												
Module	VSM.72.370.05 (1500V) (Vikram Solar)								Characterization			
									Spec Sheet Characterization, PAN			
Component Characterizations												
Device	Sunny Tripower 24000TL-US (SMA)								Characterization			
									Modified CEC			

Components		
Component	Name	Count
Inverters	Sunny Tripower 24000TL-US (SMA)	119 (2.86 MW)
Strings	10 AWG (Copper)	595 (94,304.5 ft)
Module	Vikram Solar, VSM.72.370.05 (1500V) (370W)	9,648 (3.57 MW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	5-18	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	15°	180°	12.0 ft	4x1	2,412	9,648	3.57 MW

