

Sustainability Committee Meeting Minutes

March 27, 2023

- Minutes.
 - Keith will take notes. Attendees:
 - Gary Martin
 - Holly Langer
 - Marc Aronson
 - Patrick Canonica
 - Keith Sampson
- Solar Update
 - Marc investigated a buyout with Nico from RadianGen.
 - Mark also looked at the contract and reviewed with Nico
 - Regular Scheduled Testing
 - Section 4.2- Estimated Annual production
 - Contract is to deliver 90% of estimated annual production:

EXHIBIT C

ESTIMATED ANNUAL PRODUCTION

Estimated Annual Production commencing on the Commercial Operation Date with respect to the applicable System under the Agreement shall be as follows:²

Contract Year	Production (kWh)
1	1,376,313
2	1,369,431
3	1,362,584
4	1,355,771
5	1,348,992
6	1,342,247
7	1,335,536
8	1,328,858
9	1,322,214
10	1,315,603
11	1,309,025
12	1,302,480
13	1,295,967
14	1,289,487
15	1,283,040
16	1,276,625
17	1,270,242
18	1,263,890
19	1,257,571
20	1,251,283

- Marc and Keith met with Matt, Brendan, and Kathleen in February to discuss the solar contract and managing the solar credits. At this meeting, it was agreed that the next steps would be to:
 - Train Brendan on solar credit assignment through Schedule Z
 - Consider hiring a consultant to manage the Schedule Z
 - Adjust the Schedule Z
- After the February meeting, RadianGen sent email (attached at the bottom of these Minutes) which requested new billing terms and answered some of Marc's contract questions. Followup to be done:
 - Meet with and discuss with Matt.
 - Marc will respond to the email from Nico at Radian Generation.
 - Marc will also be following up with RadianGen to confirm that they have met the annual production requirements for the past few years.
- School HVAC Electrification Warrant Article
 - Last year, Holly, Marc and Gary met with the school board and agreed to have Ngrid do a scoping audit of HVAC electrification. The audit was completed the summer of 2022, and incentives will cover much of the cost. School Committee will recommend allocating \$75k for schematic design for the Spofford Pond School.
 - Matt asked that our committee vote to support this article that the school committee is sponsoring.
 - Holly proposed that the Sustainability committee support the motion, all vote yes.
- Other updates.
 - Aggregation
 - Gary got an email from Patrick from Good Energy that Boxford is 2nd in line to have our application reviewed by Department of Public Utilities, DPU.
 - Keith provided input that the timing is good, and we are hopeful this moves quickly based on timing in the market.

- Green Communities grant
 - Boxford applied for a grant in Spring of 2022, which included 2 items:
 - i. Weatherization for both Fire Stations. East Fire is complete, and West Fire almost completed.
 - ii. Hybrid Police Car - The Cruiser purchased in August 2022 did not qualify, because it was purchased prior to signing contract with DOER. Since our last grant is not complete, we are not able to apply for a new grant this Spring. Hopefully the hybrid to be purchased in Summer 2023 will qualify us for a new grant application this Fall.

The email attached below is from Radian Generation, the new owner of our Solar Field:

From: Nico Revheim
Sent: Thursday, February 23, 2023 11:15 PM
To: jdold@town.boxford.ma.us; cdifilippo@town.boxford.ma.us; kbenevento@town.boxford.ma.us
Cc: CarVal.FAM <carval.fam@radiangen.com>; CarVal.PM <carval.pm@radiangen.com>
Subject: December-January Spofford Solar PPA Invoice

Hi Spofford Team,

I wanted to reach out to you to inform you that on 1/1, the management of the Spofford Road Solar 1, LLC entity was transferred to CarVal Investors. CarVal has actually owned this entity for some time, but had been leasing it to the Agilitas group. Your agreement will continue to be with the Spofford Road Solar 1, LLC entity, and this is really a shift in the parent company. In the transfer of this management, CarVal will continue to use my team (Radian Generation) for Asset Management of the site which means this will have little impact on your monthly communications.

One item that will change is where your PPA payments are being directed to on a monthly basis. The CarVal team prefers ACH payment, and I have provided their banking information below.

Account Name: CVI Ren Hold Revenue
Routing #: 042000314
Account #: 07029018848

Since your billings occur mid month, the December to January production must be split up to two different invoices: 1) going to the bank account that you have been using and 2) to the new bank account you will be using moving forward. Please find those two invoices attached.

To confirm- there is no change to the terms of your power purchase agreement with this change, simply a redirection of payment for energy generated and sold. Please let me know if you have any questions and I would be happy to jump on a call if you would like. We are looking forward to making this as smooth a transition as possible.

Best,

[Nico Revheim](#)

Portfolio Manager III

Radian Generation

Supporting Information:

Regarding Production below indicates production is likely to be just over 1,000,000 kWh/year:

Background Narrative on Determining the PV System's Yearly Production Estimate for an Energy Guarantee

It is a complicated process to determine an accurate and realistic yearly system production estimate and energy guarantee for a large solar system. The best practices approach requires two distinct analyses. The first analysis is to run an energy simulation that considers site conditions and PV system parameters. This analysis is done with industry standard energy modeling software, like PVSyst. The program determines the theoretical potential for energy production given the system design, componentry, shade analysis, geographic location & assumed typical weather, and site conditions. The output is theoretical because it cannot predict the actual solar resource and weather conditions that affect system output and performance.

The second analysis is called an Exceedance Probability, which assesses the probability of the system's power production levels based on historical solar radiation data. The analysis takes approximately 50 years of historical, hourly solar radiation data from a qualified, local weather station (provided by the National Renewable Energy Laboratory) and runs a statistical formula to determine which months over the 50 years best represent conditions that will exceed 50%, 90%, 95% and 99%. Once the year and month is determined for each probability category the analysis takes our system parameters from the PVSyst report and adjusts the monthly production based on each solar radiation exceedance category.

A third-party solar engineer as an independent engineering engagement performed both analyses. The bottom line conclusion is that the estimated production used for system is 1,069,094 kWh/year which is

approximately a 13% adjustment off the theoretical potential of 1,235,783 kWh/year derived in the PVSyst analysis. We have attached both reports for your reference.

Below we respond to the specific questions you raised.

1. *The type of panels; the number of panels; and the nameplate per panel:* CSUN manufacturer, 2,646 panels, 345 watt/panel. Note that it is neither reliable nor proper to arrive at system capacity calculations by simply multiplying the number of panels and wattage per panel.
2. *Please provide the full calculations for the “Estimated Annual Production” as listed in Exhibit “C” of the original PPA:* The original annual production was based on a 1 MWDC system size which has since changed to 912.87 kWDC since the array was re-engineered to properly protect the landfill. Along with the decrease in capacity, we also had to specify different equipment (solar modules, inverters, racking, etc.) than what was originally designed by Borrego – mainly due to availability reasons. In either case, the solar project will still produce more power than the Town can consume. We do not have access to the original calculation worksheets nor do we see them as relevant, because the now known actual system size and components necessitates a new calculation. See above for an explanation of the methodology and the reports are attached.
3. *Please provide the full calculations for the “Estimated Annual Production” as listed in Exhibit “C” of the proposed Second Amendment to the PPA.* As described above, the annual production was estimated using an industry standard solar energy modeling tool. A third-party solar engineer was engaged by SRS to produce the reports. Attached please find copies of the reports.
4. *Please provide the full calculations for the “KWH and Terminal Values” as listed in Exhibit “B” of the original PPA.* We do not have access to the original calculations which is why we recalculated them ourselves to assure accuracy.
5. *Please provide the full calculations for the “KWH and Terminal Values” as listed in Exhibit “B” of the proposed Second Amendment to the PPA.* The attached spreadsheet shows the terminal value calculations based using the EBITDA of the business with an 8% NVP discount rate as specified in our Agreement. This is actually a conservative number to your benefit since we didn’t burden the financial model with real but less operational costs such as Tax Equity transaction fees.
6. *Please provide a copy of the O&M Contract between SRS and Borrego.* The contract is attached.