

# ITEM # 123-19 POWER PURCHASE AGREEMENT

July 1, 2019

Sarah Tracey, Select Board Chair Town of Freeport 30 Main Street Freeport, ME 04032

Dear Sarah,

Thank you for the opportunity to provide this Solar Power Purchase Agreement (PPA) proposal to the Town of Freeport for a 309.4 kilowatt (kW) grid-tied solar electric array located on the grounds of the Good Will-Hinckley property in Fairfield (to be a portion of a 928.2 kW array shared with the Freeport Sewer District). The project will generate an estimated 404,060 kilowatt hours (kWh) of clean solar electricity per year, reduce the Town of Freeport's energy costs, and eliminate roughly 427,500 lbs. of CO2 emissions annually.

Under the financial structure we are offering, there is no upfront cost to the Town of Freeport. Instead, we will collaborate with qualified investors to finance, build, own and operate the solar array on Good Will-Hinckley's property in Fairfield, Maine. The Town of Freeport will simply agree to purchase all solar electricity generated by the array.

After the first 7 years of the PPA (and in later years of the agreement), the Town of Freeport and Freeport Sewer District will have the option to purchase the solar array and close out the PPA agreement, or continue to purchase solar electricity from the array for the full 25 years, after which there will be two options for 5-year extensions. At the end of the second 5-year extension, the Town of Freeport and Freeport Sewer District can then choose to either have the system removed for free, or purchase it at an agreed upon price.

The attached proposal compares the economics of a solar PPA to an outright system purchase and explains the PPA electricity rate schedule offered to the Town of Freeport.

ReVision Energy is grateful for the Town of Freeport's commitment to reducing carbon pollution by switching to clean, renewable solar power. Please let us know if we can provide any additional information regarding this opportunity to create the better future we know is possible for ourselves and future generations.

Sincerely,

Nick Sampson Commercial Solar Consultant ReVision Energy

# Solar PPA Proposal for the Town of Freeport

Ву



July 1, 2019



Figure 1. A 968.76 kW solar array installed for the Kennebec Sanitary Treatment District in Waterville, Maine, by ReVision Energy.

#### SOLAR PPA PROPOSAL FOR THE TOWN OF FREEPORT

#### **Project Summary**

Solar array sizing is based on a rigorous on-site analysis of the Good Will-Hinckley property and your current electricity usage. Our design professionals have visited this site and reviewed your utility electricity purchase history. We can recommend with confidence that a 309.4 kilowatt grid-tied solar electric array located on the grounds of the Good Will-Hinckley property is an optimal system design and size for your stated objectives. (This will be a portion of a 928.2 kW array to be shared with the Freeport Sewer District and the full 928.2 kW array is depicted in the attached engineer's rendering).

The array will include approximately 884 Tier 1<sup>i</sup> solar panels, 4 inverters, a smart meter and real-time system monitoring via the internet. Solar electricity production from every panel is warranted by the manufacturer for 25 years, and the expected useful lifespan of these panels, all wiring, and the structural components exceeds 40 years. Inverter equipment, which typically accounts for less than 5% of upfront system cost and is becoming less expensive each year, has an expected useful life exceeding 20 years. With minimal maintenance, solar systems provide a long-term supply of trouble-free renewable energy.

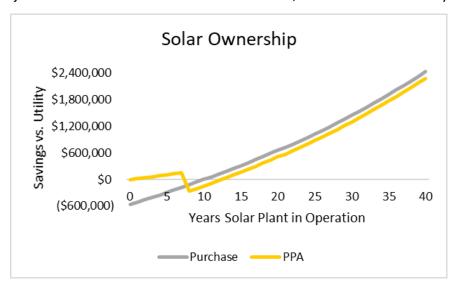
#### **Zero Up Front Cost**

Under the proposed Solar Power Purchase Agreement (PPA) financial structure, there will be no upfront cost to you for this \$563,321 project. Rather, the project's Investor partner will finance, own and operate the solar array for a contract term of 25 years, with options for an early purchase beginning after year 7, and with options for two 5-year extensions. You will simply purchase the solar electricity generated by the system under the rate schedule described on page 2.

#### A PPA is the Most Cost Effective Way for Nonprofits to Buy Solar Electricity

PPA financing enables the project to benefit from federal solar tax credits, which can substantially

reduce overall costs. There is never any obligation to purchase the solar project, but generally, the earlier you exercise your buyout option, the larger the lifetime project savings, and so we encourage you to consider that option. As shown in the accompanying graph, the PPA coupled with an early buyout results in a significantly more favorable cash flow position than a cash purchase on day one.



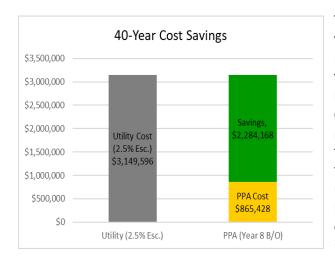


#### **Solar Electricity Rate Schedule**

ReVision and the project's Investor partner are proposing the sale of electricity generated by this project to you at the rates specified below. Our goal is to design a rate schedule that best suits the goals of the Town--to fulfill its commitment to sustainability and to reduce its long term energy costs-while simultaneously designing an investment that is acceptable to an Impact Investor partner. Our mission in offering solar PPAs is to make solar electricity as accessible, convenient and easy to understand as grid electricity — but without any of the associated pollution and without the uncertainty about future prices that is inherent in electricity from the grid. The solar electricity rate is as follows:

	PPA Rate (\$/kWh)	Fixed rate increase (starting in Year 2), regardless of inflation	Estimated Buyout Year 8 <sup>ii</sup>
SOLAR	\$0.08	2.0%	\$478,823

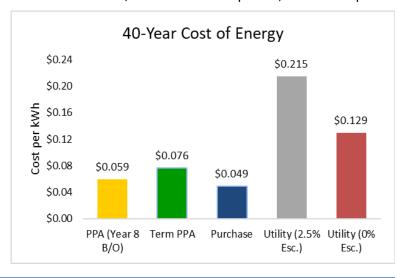
Note: this price is valid for 30 days from the date of this proposal and is contingent upon securing project financing.



The solar rate schedule is designed to start below your current utility rates. This solar rate will also rise slower than historical utility rates (3.2% per year iii) and slower than projected future utility rates (2.5% per year<sup>iv</sup>). In addition, locking in a consistent 25-year energy price schedule offers a predictable electricity budget over the lifetime of the PPA. Finally, an early buyout offers a pathway to ownership that often costs much less than an upfront purchase of the same solar energy project, allowing you to maximize long-term savings while minimizing capital energy investments.

#### A Solar PPA Has the ideal Cash Flow Structure for towns, schools and non-profits, with zero upfront

investment, and is a proven way to lock in low electricity prices. A solar PPA with an early buyout provides substantial electricity savings when compared to buying electricity from the utility, even when conservatively incorporating the cost of full inverter replacement after the 20th year. If an early buyout is not feasible, taking the PPA contract to its 25-year term will lock in an electricity price that is still significantly lower than expected utility prices over the system lifetime.





A Solar PPA is a contract between you and the Investor Partner, with both parties having responsibilities under that agreement. In capsule summary,

#### The Town of Freeport:

- You purchase the solar electricity generated by the array according to the price schedule;
- You enter into a utility interconnection agreement arranged by ReVision Energy; and
- You add a liability insurance rider to your regular insurance coverage.

#### The Investor:

- Owns and operates the installed solar system for the duration of the PPA contract, either 25, 30 or 35 years, or until you choose to exercise a buyout option;
- Has site under lease;
- Registers the system with NEPOOL-GIS in order to sell the Renewable Energy Credits (Town has the option to purchase from the Investor through an agreement at the start of the PPA);
- Maintains the system while under their ownership (no maintenance costs to you);
- Fully insures the system for both property and liability risks.

When you notify ReVision Energy that you are ready to proceed, we will collaborate with the Investor partner, who will complete its project due diligence and provide a draft PPA contract for your review. Once the PPA contract is finalized and signed, ReVision Energy will procure the solar equipment and finish the permitting process with local and state authorities, and the interconnection application with the utility. (Both the permitting and interconnection processes are already under way). Our usual timing from PPA signature to project completion is 180 days.

#### About ReVision Energy & Our Mission

Since 2003, ReVision Energy has installed more than 8,000 solar energy systems in Maine, New Hampshire and Massachusetts. To ensure maximum performance and longevity in our relatively harsh northern climate, each system is designed by ReVision Energy engineers from Brown, Dartmouth, MIT, UMaine and UNH and installed by our in-house team of licensed, professional solar technicians. The company mission is to lead the region's transition from a fossil fuel based economy to a sustainable, renewable energy based clean economy. Our solar energy solutions provide our partners with viable, long-term plans for responsible energy consumption and for recurring savings with zero up front capital costs. Today northern New England has the highest per capita carbon pollution on the east coast—every solution we provide at ReVision Energy helps to reduce greenhouse gas emissions and ensure a sustainable future for generations to come. ReVision Energy is a certified B-corp and is 100% employee-owned.

W US Energy Information Administration, Annual Energy Outlook 2018, "Table 8. Electricity Supply, Disposition, Prices & Emissions", February 6, 2018. <a href="https://www.eia.gov/outlooks/aeo/excel/aeotab">https://www.eia.gov/outlooks/aeo/excel/aeotab</a> 8.xlsx; 2.5% represents the simple average annual rise in the nominal End-Use Prices for the All Sectors Average 2017-2040.

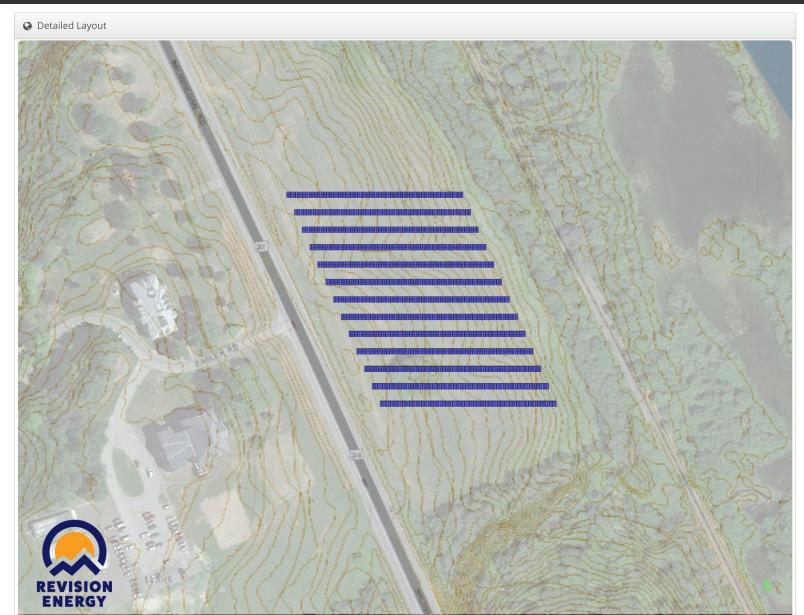


i http://about.bnef.com/content/uploads/sites/4/2012/12/bnef 2012-12-03 PVModuleTiering.pdf

<sup>&</sup>quot;Pursuant to IRS rules, future buyout estimates may be expressed as an amount equal to the greater of Fair Market Value or a schedule of values. See IRS Publication 561: <a href="https://www.irs.gov/publications/p561/ar02.html#d0e139">https://www.irs.gov/publications/p561/ar02.html#d0e139</a>; and 22 U.S. Code § 7701(e)(4)(A)(iv) <a href="https://www.law.cornell.edu/uscode/text/26/7701">https://www.law.cornell.edu/uscode/text/26/7701</a> (which prohibits solar PPAs financed with ITC proceeds from including any option or requirement providing for the host's purchase of the solar equipment at any price less than its fair market value).

iii US Energy Information Administration, November 9, 2017. <a href="https://www.eia.gov/electricity/data/state/avgprice\_annual.xlsx">https://www.eia.gov/electricity/data/state/avgprice\_annual.xlsx</a>; 3.2% represents the simple average annual rise of the Total price for the Total Electric Industry in all six New England states 2003-2016.







## **PPA Project Summary**

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Pro	1ect	Desi	an

Project Size kW DC (Panels)	309.40
Project Size kW AC (Inverters)	216.67
Year 1 Projected Generation (kWh)	404,060

#### **PPA Deal Structure**

Upfront cost to project host	\$	-
Project cost financed by investor	\$	563,321
Investor monetizes incentives:		
30% federal tax credit		
100% Bonus Depreciation		
Renewable Energy Credits (RE	ECs)	

#### **PPA Details**

Y1 PPA Rate (\$/kWh)	\$ 0.0800
PPA Rate Escalator starting in Y2	2.0%
Year 8 early buyout price	\$ 478,823

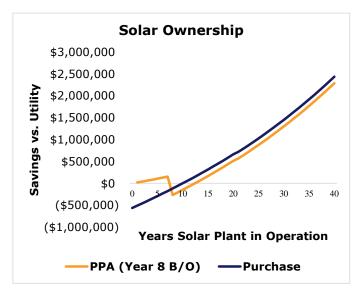
#### **Term PPA**

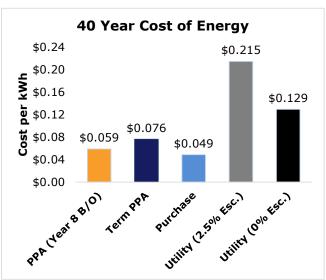
Approx. annual savings	\$ 20,000
10-year savings	\$ 226,000
25-year savings	\$ 701,000

### PPA with year 8 huyout

PPA with year 8 buyout			
Years 1-7			
Approx. annual savings	\$	20,000	
Year 8 buyout			
Upfront Investment	\$	478,823	
Y 1-7 savings	\$	152,000	
Buyout depreciation	\$	=	
Net Investment	\$	326,823	
Years 8-40			
Annual energy savings	\$	60,000	
Annual REC revenue	\$	2,000	
25-year savings	\$	876,000	
40-year sayings	\$	2,284,000	

Environmental Benefit	
Annual CO2e offset (lbs)	427,495
Equivalent to	
Gallons of gasoline not burned	21,811
Passenger cars removed from the road	41
Gallons of propane not burned	33,674
Pounds of coal not burned	4,665





# PPA Rate Schedule & Savings

Project Design	
Annual Generation	404,060
System Size in kW (DC)	309.40
System Size in kW (AC)	216.67
Annual Output Derate	0.5%
Purchase Option	\$563.321

Project Inco	me
Year 1 Utility Rate	\$0.1294
Utility Escalator	2.5%
Y1 REC Volume	404
REC Price (\$/MWh)	\$10
REC Term (years)	10
REC De-Escalator	5%
Tariff Rate (\$/kWh)	\$0.000
Tariff Term (years)	0

Project In	centives
State	ME
Grant/Rebate	\$0
RECs Flow to	Investor

Operating Expenses	
Inverter Replacement	\$18,564
Insurance	\$0
Insurance De-Escalator	0.0%
O&M	\$1,688
O&M Escalator	0.0%
Land Lease (\$/kW)	\$5.00
Land Lease Escalator	2%
Property Tax	\$0
Property Tax Escalator	5%

PPA Assumptions	
ReVision Offer Type	Custom
EPP	\$0
Year 1 PPA Rate	\$0.0800
PPA Escalator %	2.0%
Year Escalator Takes Effect	2
Year 7 Premium	\$0.00
Buyout Estimate	\$478,823
Buyout Year	8

Buyout Terms	
Buyout Method	Cash
Buyout Estimate	\$478,823
Interest Rate	
Loan Term	

Tariff Term (years)			0					Term PPA		PPA w/ Early Buyout		
Year	Generation (kWh)	Utility \$/kWh	Avoided Utility Cost	REC Revenue	Operating Expenses	PPA Rate per kWh	PPA Rate	Annual Revenue	Cumulative Revenue	Buyout Payment	Annual Revenue	Cumulative Revenue
1	404,060	\$0.1294	\$52,285	\$0	\$0	\$0.0800	\$32,325	\$19,961	\$19,961	\$0	\$19,961	\$19,961
2	402,040	\$0.1326	\$53,325	\$0	\$0	\$0.0816	\$32,806	\$20,518	\$40,479	\$0	\$20,518	\$40,479
3	400,030	\$0.1360	\$54,384	\$0	\$0	\$0.0832	\$33,295	\$21,089	\$61,568	\$0	\$21,089	\$61,568
4	398,029	\$0.1393	\$55,465	\$0	\$0	\$0.0849	\$33,791	\$21,674	\$83,242	\$0	\$21,674	\$83,242
5	396,039	\$0.1428	\$56,568	\$0	\$0	\$0.0866	\$34,295	\$22,273	\$105,514	\$0	\$22,273	\$105,514
6	394,059	\$0.1464	\$57,692	\$0	\$0	\$0.0883	\$34,806	\$22,886	\$128,401	\$0	\$22,886	\$128,401
7	392,089	\$0.1501	\$58,839	\$0	\$0	\$0.0901	\$35,324	\$23,514	\$151,915	\$0	\$23,514	\$151,915
8	390,128	\$0.1538	\$60,008	\$2,224	(\$3,465)	\$0.0919	\$35,851	\$24,157	\$176,072	(\$478,823)	(\$420,055)	(\$268,141)
9	388,178	\$0.1577	\$61,201	\$2,075	(\$3,500)	\$0.0937	\$36,385	\$24,816	\$200,887	\$0	\$59,776	(\$208,365)
10	386,237	\$0.1616	\$62,417	\$1,934	(\$3,536)	\$0.0956	\$36,927	\$25,490	\$226,377	\$0	\$60,815	(\$147,550)
11	384,306	\$0.1656	\$63,658	\$0	(\$3,573)	\$0.0975	\$37,477	\$26,180	\$252,557	\$0	\$60,084	(\$87,466)
12	382,384	\$0.1698	\$64,923	\$0	(\$3,611)	\$0.0995	\$38,036	\$26,887	\$279,444	\$0	\$61,312	(\$26,154)
13	380,472	\$0.1740	\$66,213	\$0	(\$3,650)	\$0.1015	\$38,602	\$27,611	\$307,055	\$0	\$62,563	\$36,409
14	378,570	\$0.1784	\$67,529	\$0	(\$3,689)	\$0.1035	\$39,178	\$28,351	\$335,406	\$0	\$63,840	\$100,249
15	376,677	\$0.1828	\$68,871	\$0	(\$3,729)	\$0.1056	\$39,761	\$29,110	\$364,516	\$0	\$65,142	\$165,392
16	374,794	\$0.1874	\$70,240	\$0	(\$3,770)	\$0.1077	\$40,354	\$29,886	\$394,402	\$0	\$66,470	\$231,862
17	372,920	\$0.1921	\$71,636	\$0	(\$3,811)	\$0.1098	\$40,955	\$30,681	\$425,083	\$0	\$67,825	\$299,687
18	371,055	\$0.1969	\$73,060	\$0	(\$3,854)	\$0.1120	\$41,565	\$31,494	\$456,578	\$0	\$69,206	\$368,893
19	369,200	\$0.2018	\$74,512	\$0	(\$3,897)	\$0.1143	\$42,185	\$32,327	\$488,905	\$0	\$70,615	\$439,507
20	367,354	\$0.2069	\$75,993	\$0	(\$3,941)	\$0.1165	\$42,813	\$33,180	\$522,084	\$0	\$72,051	\$511,559
21	365,517	\$0.2120	\$77,503	\$0	(\$22,550)	\$0.1189	\$43,451	\$34,052	\$556,136	\$0	\$54,953	\$566,511
22	363,689	\$0.2173	\$79,043	\$0	(\$4,032)	\$0.1213	\$44,099	\$34,945	\$591,081	\$0	\$75,011	\$641,523
23	361,871	\$0.2228	\$80,614	\$0	(\$4,079)	\$0.1237	\$44,756	\$35,859	\$626,940	\$0	\$76,535	\$718,058
24	360,062	\$0.2283	\$82,217	\$0	(\$4,127)	\$0.1262	\$45,422	\$36,794	\$663,734	\$0	\$78,090	\$796,147
25	358,261	\$0.2340	\$83,851	\$0	(\$4,176)	\$0.1287	\$46,099	\$37,751	\$701,486	\$0	\$79,675	\$875,822
26	356,470	\$0.2399	\$85,517	\$0	(\$4,226)	\$0.1312	\$46,786	\$38,731	\$740,217	\$0	\$81,292	\$957,114
27	354,688	\$0.2459	\$87,217	\$0	(\$4,276)	\$0.1339	\$47,483	\$39,734	\$779,951	\$0	\$82,941	\$1,040,054
28	352,914	\$0.2520	\$88,950	\$0	(\$4,328)	\$0.1366	\$48,191	\$40,760	\$820,710	\$0	\$84,622	\$1,124,677
29	351,150	\$0.2583	\$90,718	\$0	(\$4,381)	\$0.1393	\$48,909	\$41,809	\$862,520	\$0	\$86,337	\$1,211,014
30	349,394	\$0.2648	\$92,521	\$0	(\$4,435)	\$0.1421	\$49,638	\$42,884	\$905,403	\$0	\$88,086	\$1,299,100
31	347,647	\$0.2714	\$94,360	\$0	(\$4,490)	\$0.1449	\$50,377	\$43,983	\$949,386	\$0	\$89,870	\$1,388,971
32	345,909	\$0.2782	\$96,236	\$0	(\$4,546)	\$0.1478	\$51,128	\$45,108	\$994,494	\$0	\$91,690	\$1,480,660
33	344,179	\$0.2852	\$98,148	\$0	(\$4,603)	\$0.1508	\$51,890	\$46,259	\$1,040,753	\$0	\$93,545	\$1,574,206
34	342,458	\$0.2923	\$100,099	\$0	(\$4,661)	\$0.1538	\$52,663	\$47,436	\$1,088,189	\$0	\$95,438	\$1,669,643
35	340,746	\$0.2996	\$102,088	\$0	(\$4,721)	\$0.1569	\$53,447	\$48,641	\$1,136,830	\$0	\$97,368	\$1,767,011
36	339,042	\$0.3071	\$104,117	\$0	(\$4,781)	\$0.1600	\$54,244	\$49,874	\$1,186,704	\$0	\$99,336	\$1,866,347
37	337,347	\$0.3148	\$106,187	\$0	(\$4,843)	\$0.1632	\$55,052	\$51,135	\$1,237,838	\$0	\$101,343	\$1,967,690
38	335,660	\$0.3226	\$108,297	\$0	(\$4,906)	\$0.1665	\$55,872	\$52,425	\$1,290,263	\$0	\$103,391	\$2,071,081
39	333,982	\$0.3307	\$110,450	\$0	(\$4,971)	\$0.1698	\$56,705	\$53,745	\$1,344,008	\$0	\$105,479	\$2,176,560
40	332,312	\$0.3390	\$112,645	\$0	(\$5,036)	\$0.1732	\$57,550	\$55,095	\$1,399,103	\$0	\$107,608	\$2,284,168



June 27, 2019

Sarah Tracy, Select Board Chair 30 Main Street Freeport, ME 04032

Dear Ms. Tracy,

At the request of ReVision Energy, Inc. ("ReVision"), I am providing this letter stating the intention of Aligned Solar Partners 2 LLC ("ASP2") to acquire fully-permitted and construction ready solar projects that ReVision is developing in Northern New England.

41 MADISON AVENUE 31st FLOOR NEW YORK, NY 10010 Subject to satisfactory final review and diligence, execution of all relevant contracts satisfactory to us, and completion of permits, ASP2 has indicated its intent to acquire the contemplated solar project ReVision is currently negotiating with the Town of Freeport.

Aligned Climate Capital LLC ("Aligned") is an investment advisor focused exclusively on investments in low-carbon and sustainable real assets—clean energy, efficient transportation, green real estate, and sustainable natural resources. We advise large institutional investors and manage capital on behalf of family offices focused on this market.

ASP2 is an investment partnership managed by Aligned. This is the second fund in the Aligned Solar Partners series and it continues Aligned's relationship with ReVision. Last year, Aligned Solar Partners 1 LLC acquired solar projects in Maine from ReVision of similar size and structure to what is currently being contemplated between ReVision and the Town of Freeport.

If you have any questions about the content of this letter, please feel free to email me at <a href="mailto:brendan@alignedclimatecapital.com">brendan@alignedclimatecapital.com</a> or call me at 202.669.5977.

Best,

Brendan Bell

Brendan Bell

Principal

Aligned Climate Capital LLC