



FINAL

Meeting Minutes Alternative Energy Committee

TIME: Thursday, April 13, 2023, 7:30 pm

PLACE: Town of Cohasset Zoom Meeting

ATTENDEES:

Committee Members

Tanya Bodell (Chair)
Chris Oddleifson
Mike Schmitt
Josh Staunton
Steve Wenner

Excused Absences

Deborah Cook

Guests

Stephen Girardi

Unexcused Absences

Town Staff

Montanna Cassel

1) CALL TO ORDER AND INTRODUCTIONS

After a delay in establishing a quorum, the meeting was officially called to order at 7:53 pm.

2) MEETING MINUTES

The Committee reviewed the final draft of the meeting minutes from March 16, 2023.

Steve Wenner made a motion to approve the minutes, which was seconded by Chris Oddleifson. The motion was passed unanimously, and the minutes were approved.

The Committee reviewed the final draft of the meeting minutes from March 29, 2023. Upon realizing that only 2 of the attendees were present, a motion to defer approval of the meeting minutes was made by Tanya and seconded by Chris Oddleifson and Steve Wenner. The motion to defer approval until the next meeting was approved unanimously.

3) MEMBERSHIP AND RENEWALS

Tanya noted that some of the members were up for renewal, and she was interested in understanding whether those members were interested in continuing or rolling off. Tanya also indicated that Pat Gooding had tendered her resignation from the Committee.

Mike Schmit indicated that he was at the end of his term and, after four years serving, intended to give someone else the opportunity to participate.

She asked everyone to consider potential candidates and reach out to people who would be interested in joining. A few potentially interested parties have attended meetings in the past and Tanya agreed to reach out to them.

It is important to have a full seven member committee. The quorum is defined as four (4) people, regardless of the number of active members.

Action Items:

All – Determine whether your term ends in June and reapply to be a member. If you are not interested in renewing, please let Tanya know in advance.

All – Think about who you know in Town who would be interested and would contribute.

Tanya – Reach out to people who have expressed an interest in the past, indicate that there are openings, and encourage them to apply.

Active Members and their term dates are as follows:

Name	Status	Term Start	Term End
Michael L. Schmitt	FULL MEMBER	7/1/2020	6/30/2023
Deborah S. Cook	FULL MEMBER	7/1/2020	6/30/2023
Josh Staunton	FULL MEMBER	10/22/2021	6/30/2024
Steven R. Wenner	FULL MEMBER	7/1/2021	6/30/2024
Chris Oddleifson	FULL MEMBER	7/27/2022	6/30/2025
Tanya L. Bodell	FULL MEMBER	7/27/2022	6/30/2025

4) EARTH DAY

Tanya indicated that there were two events coming up:

- 1) **Earth Day:** April 22, 2023 at Town Hall



That week, the Committee is sponsoring daily postings about electrification. Debbie, Steve and Josh are taking the lead on developing the content and coordinate with Justin Shair, the Town's Communications Director. Justin will post on the Town's Facebook page and Steve will post on 1-4-3.

Steve reported that Joan Meschino, the Town's state representative, had recorded a video message to be played at the beginning or end of the week that highlights the legislative roadmap to decarbonization, importance of electrification, and kind words for the Alternative Energy Committee.

Tanya noted that the traditional Cohasset Trash Pick-up Day was being held on April 22. In the past, the Committee has set up a table to highlight important activities, including community aggregation, location of charging stations, and a Tesla electric vehicle for kids to climb into – which has always been a big hit. Both Steve and Debbie will be out of town that weekend, and unable to participate. Tanya indicated that she would speak with others one-on-one to see if there was appetite for a table or if the effort should be focused on Ecofest.

2) **Ecofest:** May 20, 2023 2:00 pm – 7:00 pm at Town Common

The second annual Ecofest is being held on Cohasset Common. Virginia LeClair is the key point person for organizing Ecofest for the Town of Cohasset. Brianna Bennet is responsible for Hingham. Steve and Debbie have reached out to a number of vendors about an "electric pavilion" to highlight how people can "Go Electric." So far, there has not been much interest by vendors and government agencies. In addition, there would not be readily-available electricity.

Last year, the Committee had a table highlighting our activities, and expects to do so again this year. Only three members at a time can be at the table given open meeting laws and the fact that a fourth would create a quorum.

5) **UPDATE ON ACTIVITIES**

- **Massachusetts DOER Specialized (Net Zero) Stretch Building Code:** Steve indicated that the City of Boston and a number of other towns already have adopted the stretch code. This represents 40 percent of the Massachusetts population due to the high density of Boston. Steve is doing additional research so the Committee can make a recommendation to the Select Board on how the Town should proceed, and offered to reach out to the Facilities Director from UMass and/or Boston University who could come speak to the Committee.



- **Update on Community Choice Aggregation:** Steve has received the data on how many people are on Community Aggregation Plan and at what levels. He will report out at the next meeting. He indicated that the summer default supply rates are around \$0.14 / kWh – which is a few cents lower than the standard community aggregation rate of \$0.1671 / kWh (which has 10% more renewables) and low-cost rate of \$0.1631 / kWh (standard) and \$0.1785 / kWh 100% renewable rate.

Tanya indicated that this was to be expected. Anytime there is a fixed price for a seasonally-priced commodity, there will be periods when prices are higher and lower than the fixed price. Come winter, prices are likely to be back up above the fixed price. As it is, this summer's prices are the highest they ever have been. Normally, summer default supply rates are between \$0.09/kWh and \$0.11/ kWh (see Attachment A).

Come winter, people on the community aggregation rates could be very happy that they are protected. At that point, anyone who opted out may not be able to reenter at the same fixed rate.

- **Climate Action Plan**

Tanya reported that Hingham will be completing their Climate Action Plan shortly. A draft of the plan can be found here:

https://hingham-ma.gov/DocumentCenter/View/18070/Hingham-CAP_Draft_03302023?bidId=

Once it is complete, the Committee agreed that it would be helpful to have a representative from the Hingham Climate Action Planning Committee present on the process and outcome.

Action Items:

Tanya – Reach out to Brad Moyer, Chair of the Hingham Climate Action Planning Committee to invite him to speak with the Alternative Energy Committee once the final Hingham Climate Action Plan is complete.

6) UPDATE ON GRANTS

ELECTRIC SCHOOL BUS

Electric School Bus Demonstration Project: Discussions surrounding the electric school bus demonstration project are entering into the final stage. There are three outstanding questions:

- **What type of charging station is required?** The proposal includes a Level 2 charger at no additional cost. However, Ray, the school staff member responsible for the bus fleet, reached out to Boston School System to understand more about how their buses are operating. His counterpart in Boston indicated that you absolutely have to have a Level 3 charger. The issue is that 12 kW/hour is required to keep the battery warm while charging. Therefore, a Level 2 charger connected to an electrical outlet acts like a Level 1 charger in the middle of New England winters – requiring 12 hours or more to charge the bus; a Level 3 charger acts like a Level 2 charger, requiring 6 to 8 hours to fully charge the bus. In warm conditions, the Level 3 charger would only take 2 to 3 hours to charge.

As explained in the next section, the buses are likely to need at least a partial charge during the day, requiring at least a Level 3 fast charger.

Steve Girardi indicated that Hingham just purchased two Level 3 chargers. They cost \$121,000 before install and \$171,000 after installation. A cost to the Town of almost \$90,000 would increase the annual lease for the electric school bus by 72 percent, making this approach a non-starter unless grant funding was available.

Fortunately, Enel produces chargers that are even better than Level 3 chargers. It is unclear whether Enel would provide use of that charger for purposes of the demonstration project.

- **What is the electric school bus availability?** Can the bus be used under every condition, or will there be days where the backup bus will be needed in its place? Turns out the current specifications of an electric school bus make it difficult to service the schools every day without charging mid-day:
 - **150 kWh:** Total battery charge
 - **120 kWh:** Maximum energy the battery should use before recharging
 - **100 - 110 kWh:** Potential charge the battery could hold for usage by year 5 due to battery degradation
 - **40 hours:** Number of hours a single school bus drives on an average day
 - **2 – 3 kWh/Mile:** Amount of electrical energy required to power the bus 1 mile, with the higher end being in winter and the lower end under optimal conditions (Southern California may only require 1 kWh/mile whereas Alaska closed in almost 4 kWh/mile in – 37 degree temperature)
 - **18 Half days total:** Number of days the schools have half days
 - **8 Half days:** Number of days when all of the schools have half days, making it difficult for an electric bus to charge



Therefore, a school bus in Cohasset may require 80 to 120 kWh per day, running up against the limit in the middle of winter during those days when all three schools have half days. This may only impact driving the electric school bus 2-3 days per year, and a backup bus could be the solution in those limited cases. However, we would rather understand this now.

To this end, Ray is going to ask more questions to Boston about their operational experience, including miles per day, kWh per mile, and other metrics described above.

- **Where the bus will be parked?** This continues to be an outstanding issue that has yet to be resolved for the fleet and therefore the electric bus.

MASSCEC BACKUP BATTERIES

- **MassCEC Batteries for Harborview:** Town Counsel has reviewed the contract, the MassCEC has made minor edits, and the contract is back to the Town. The Town Manager was under the impression that the cost to acquire and install was higher than the \$20,000 grant, and that there had been no communication with Harborview. In fact, Tanya has had multiple conversations with Harborview's board members, and price points indicate that the \$20,000 could support two batteries with installation -- \$17,000 - \$22,000 -- requiring further review.

Chris Senior has asked Ginny to take the lead on obtaining three price estimates for installed batteries, and she already has engaged in research. It would be useful for the Committee to provide suggestions as to who Ginny should call.

Chris Oddleifson offered to take the lead on this project:

- 1) Identify potential installers for a Tesla Power-wall or equivalent;
- 2) Work with Ginny on the bids;
- 3) Coordinate with Tanya on requesting incremental funding from the Affordable Housing Trust; and
- 4) Speak with Harborview board members Bobby and Taffy to confirm that they are on board.

The Affordable Housing Trust also indicated that they would consider providing funding. In the event bids exceed \$20,000, this could be a source of funding.

SOLAR ENERGY PROJECTS

Stop & Shop Solar Energy Array: There are two delays in moving forward with the guaranteed savings that the Town has been offered:

- 1) **National Grid** continues to perform a cluster study on towns including Cohasset, Scituate, and Norwell to assess the impact of solar energy arrays on the distribution system. This study is delaying the installation of new solar energy arrays.
- 2) **Contract for Credits:** The contract for credits is in the hands of the Town/Town Counsel, and has not yet been reviewed.

As the Town replaces roofs, the Committee should be prepared to act to solicit bids to install solar energy arrays on the new building roofs.

MVP GRANT

Tanya reported that Ginny has been looking into grants and will provide an update on a potential Municipal Vulnerability Preparedness ("MVP") grant program at the next meeting.

7) MARKETING AND SOCIAL MEDIA

This topic was deferred until next meeting when Josh could report out.

8) DATA REPORT

SOLAR ENERGY ARRAYS.

As of the end of March 2023, the solar energy array on the old landfill produced:

- **Generation:** 3,206,740 kWh = 3.207 GWh This is around 20 percent of the municipal building load, and 10 percent of all Cohasset municipal load including water and sewer treatment services.
- **Electricity Cost Savings to the Town:** \$356,875 in total; \$77,000 in savings for 2023, a record level.

See Attachment B.

ELECTRIC VEHICLES

A report was not available for this meeting.



9) MATTERS NOT REASONABLY KNOWN IN ADVANCE

None.

10) ADJOURNMENT

Chris Oddleifson made a motion to adjourn, and Steve Wenner seconded. The motion passed unanimously. The meeting ended at 9:04 pm.

SUMMARY OF ACTION ITEMS

All Members

- Think about potential candidates for AEC membership.
- Determine whether your term ends in June and reapply to be a member. If you are not interested in renewing, please let Tanya know in advance.
- Research grant opportunities for funding alternative energy solutions for the Town.
- Forward ideas for social media to Josh.

Tanya Bodell

- Reach out to people who have expressed an interest in the past, indicate that there are openings, and encourage them to apply.
- Reach out to Brad Moyer, Chair of the Hingham Climate Action Planning Committee to invite him to speak with the Alternative Energy Committee once the final Hingham Climate Action Plan is complete.
- Assist schools with electric school bus demonstration project.
- Consult with Select Board to determine why the AEC's recommendation to charge \$0.20 per kWh has not yet been implemented.
- Ask Select Board for approval to study solar and wind technologies and work with the Zoning Bylaw Committee to write the solar and wind bylaw revisions.
- Arrange for presentation about hydrogen at an upcoming meeting.

Chris Oddleifson

- Monitor status of Harborview grant for backup batteries and help bring it to fruition.

Virginia LeClaire

- Update on the status of Town Counsel's review of the MassCEC battery contract.
- Check on the status of the Stop and Shop rooftop solar contract with Town Counsel.
- Track down the status of the MAPC grant for a carbon assessment for Cohasset.
- Check with Michelle on the status of the National Grid Fleet Assessment. If this has stalled, work directly with National Grid to see if a Fleet Assessment is still possible.
- Understand why the Town has not implemented charging fees for the EV Charging Stations.
- Determine where the Town is currently allocating its electricity credits and if the Town departments are utilizing all the credits.
- Research the Town's current electric rate and when the contract expires.

Debbie Cook

- Check with Michelle to see if AEC has been allocated funds in the Town budget for its use.



Josh Staunton

- Work with Steve Wenner and Debbie Cook on developing article ideas, messaging and marketing strategies to promote the AEC's initiatives.
- Continue compiling and presenting EV charging stations usage and demand, including a download of data since their operational beginning.
- Forward social media blurbs from AEC to Justin for posting.

Steve Wenner

- Take the lead on the Stretch Code:
 - Research the Net Zero stretch code to determine future adoption.
 - Provide information for the Select Board meeting.
 - Obtain a speaker for a future AEC meeting to inform the AEC about the new stretch code.



**ATTACHMENT A
 National Grid Default Supply Rates**

		NATIONAL GRID											
		Residential		Small C&I		Large C&I NEMA		Large C&I SEMA		Large C&I WCMA			
		Monthly	Fixed	Monthly	Fixed	Monthly	Fixed	Monthly	Fixed	Monthly	Fixed		
2023	Dec												
	Nov												
	Oct	13.467		12.732									
	Sept	13.436		12.824									
	Aug	14.670	14.115	13.939	13.393								
	July	14.909		14.414		15.159		13.934			14.613		
	June	13.634		12.920		12.164	13.338	11.931	12.900		11.941	12.940	
	May	14.249		13.372		12.446		12.716			12.037		
	Apr	25.248		25.393		14.395		14.796			14.365		
	Mar	29.733		28.990		21.357	22.967	21.735	22.899		21.175	22.295	
Feb	39.776	33.891	37.980	32.287	33.072		32.097			31.277			
Jan	40.500		38.347		37.607		36.765			35.334			
2022	Dec	35.959		34.258		29.449	28.736	29.270	28.455		28.065	27.387	
	Nov	28.571		27.830		18.043		18.279		17.764			
	Oct	11.610		10.168		20.667		19.501		20.167			
	Sept	11.177		10.097		21.489	22.132	20.463	21.017		20.609	21.304	
	Aug	11.573	11.491	10.620	10.370	23.998		22.842		22.941			
	July	11.799		11.121		12.354		12.441		11.810			
	June	11.029		9.944		10.360	11.223	10.328	11.223		10.468	10.796	
	May	11.762		10.158		10.809		10.741		9.953			
	Apr	11.183		9.440		11.571		11.634		11.323			
	Mar	12.986		11.605		15.680	16.301	15.467	16.225		15.053	15.892	
Feb	17.651	14.821	16.046	13.113	21.624		21.548		21.275				
Jan	18.018		16.595		21.507		21.369		20.710				
2021	Dec	14.961		13.518		16.979	17.336	16.760	17.129		16.272	16.606	
	Nov	12.551		10.899		12.946		12.673		12.267			
	Oct	10.022		8.281		8.804		9.060		8.454			
	Sept	9.822		8.273		8.783	8.829	8.765	8.908		8.266	8.365	
	Aug	9.412	9.707	8.536	8.440	8.914		8.892		8.375			
	July	9.356		8.665		8.850		9.071		8.470			
	June	9.620		8.157		8.210	8.533	8.441	8.819		7.864	8.275	
	May	10.380		8.727		8.496		8.923		8.486			
	Apr	11.393		9.386		9.711		9.636		9.204			
	Mar	11.898		10.299		10.102	10.230	10.161	10.239		9.764	9.809	
Feb	13.779	12.388	12.244	10.763	10.868		10.911		10.45				
Jan	13.583		12.245		12.896		12.760		12.504				
2020	Dec	11.912		10.623		11.165	11.325	11.067	11.305		10.947	11.066	
	Nov	11.022		9.323		9.686		9.887		9.536			
	Oct	10.340		8.173		8.153		8.372		8.191			
	Sept	10.012		8.298		8.234	8.223	8.469	8.452		8.186	8.188	
	Aug	9.458	9.898	8.433	8.428	8.278		8.511		8.190			
	July	9.460		8.515		8.113		8.448		8.092			
	June	9.635		7.979		7.532	7.995	7.792	8.393		7.586	8.070	
	May	10.935		9.220		8.337		8.954		8.549			
	Apr	12.004		10.01		9.889		10.102		9.862			
	Mar	13.029		11.339		10.788	11.269	10.955	11.394		10.858	11.247	
Feb	15.718	13.982	14.177	12.184	12.958		12.967		12.857				
Jan	15.78		14.172		14.156		14.165		13.820				



		NATIONAL GRID									
		Residential		Small C&I		Large C&I NEMA		Large C&I SEMA		Large C&I WCMA	
		Monthly	Fixed	Monthly	Fixed	Monthly	Fixed	Monthly	Fixed	Monthly	Fixed
2019	Dec	13.918		12.511		12.067	12.189	12.144	12.226	11.788	11.872
	Nov	12.338		10.491		10.077		10.101		9.739	
	Oct	11.222		9.513		9.257		9.052		8.290	
	Sept	10.86		9.423		9.279	9.182	9.030	9.031	8.187	8.278
	Aug	10.35	10.793	9.406	9.646	9.031		9.015		8.354	
	July	10.397		9.564		9.697		9.760		9.104	
	June	10.514		9.148		9.148	10.066	9.173	10.641	8.477	9.275
	May	11.818		10.922		11.420		13.135		10.283	
	Apr	11.631		10.910		12.048		13.878		10.867	
	Mar	12.658		12.215		14.747	15.024	16.174	16.525	13.807	13.852
	Feb	15.995	13.718	15.647	13.166	18.135		19.392		16.746	
	Jan	15.802		15.341		16.399		17.286		15.361	
2018	Dec	13.255		13.227		13.827	13.921	14.680	14.761	12.787	12.860
	Nov	11.599		11.165		11.219		11.990		10.129	
	Oct	11.636		10.331		10.095		10.327		8.996	
	Sept	11.130		10.200		10.095	10.095	10.327	10.327	8.996	8.996
	Aug	10.400	10.870	10.129	10.182	10.095		10.327		8.996	
	July	10.336		10.184		10.568		10.724		9.791	
	June	10.844		10.031		10.126	10.465	10.311	9.976	9.318	9.370
	May	11.191		10.227		10.710		8.772		8.947	
	Apr	11.304		10.192		11.539		9.370		9.401	
	Mar	12.300		11.537		12.471	13.096	10.748	11.131	10.785	11.128
	Feb	14.757	12.673	14.259	11.946	15.189		13.183		13.109	
	Jan	14.574		14.023		14.032		13.401		13.236	
2017	Dec	11.770		11.357		11.299	11.657	10.607	10.931	10.414	10.753
	Nov	10.457		9.750		9.586		8.727		8.550	
	Oct	10.261		9.122		9.299		8.130		8.169	
	Sept	9.936		9.048		9.610	9.483	8.177	8.263	8.239	8.305
	Aug	9.494	9.432	9.150	8.791	9.528		8.479		8.504	
	July	9.516		9.330		9.823		8.649		8.645	
	June	9.684		8.858		9.823	8.803	7.740	7.727	7.945	7.673
	May	7.362		6.959		7.111		6.712		6.309	
	Apr	8.293		7.547		8.502		7.380		7.356	
	Mar	9.404		8.833		9.810	10.133	8.838	9.116	8.929	9.170
	Feb	11.565	9.787	10.854	9.094	12.065		11.103		11.194	
	Jan	11.543		10.956		11.576		11.138		11.125	
2016	Dec	9.184		8.555		8.961	9.326	8.310	8.721	8.247	8.669
	Nov	7.900		7.366		7.391		6.664		6.582	
	Oct	7.966	8.084	7.320	7.578	7.034	7.394	6.291	6.599	6.351	6.625
	Sept	7.652		7.065		7.259		6.370		6.431	
	Aug	8.155		7.743		7.752	7.349	6.999	6.554	6.961	6.580
	July	8.645	8.042	8.214	7.542	8.045		7.541		7.420	
	June	8.101		7.541		7.344	7.395	6.773	6.979	6.462	6.775
	May	7.573		7.312		6.688		6.546		6.362	
	Apr	10.299		10.071		7.569		7.511		7.325	
	Mar	11.997		11.771		8.456	8.538	8.521	8.586	8.201	8.258
	Feb	15.104	13.038	14.437	12.619	9.589		9.724		9.246	
	Jan	15.147		14.748		14.563		14.748		14.689	

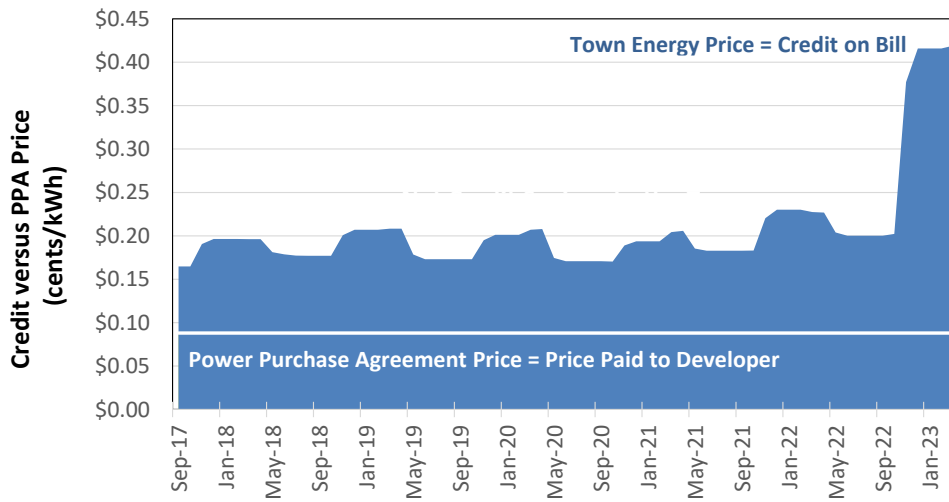


		NATIONAL GRID									
		Residential		Small C&I		Large C&I NEMA		Large C&I SEMA		Large C&I WCMA	
		Monthly	Fixed	Monthly	Fixed	Monthly	Fixed	Monthly	Fixed	Monthly	Fixed
2015	Dec	13.387		13.036		12.311	12.317	12.314	12.355	11.969	12.074
	Nov	11.227		11.056		9.771		9.681		9.216	
	Oct	8.880		8.336		7.447		7.451		7.337	
	Sept	8.855		8.328		7.126	7.441	7.168	7.429	7.011	7.279
	Aug	9.435	9.257	8.850	8.640	7.729		7.654		7.482	
	July	9.896		9.080		9.505	8.313	9.342		9.425	
	June	9.607		8.998		8.112		8.160	8.288	8.058	8.346
	May	8.684		8.162		7.268		7.306		7.231	
	Apr	9.946		9.341		8.856		8.500		8.528	
	Mar	14.062		12.903		13.432	13.855	13.279	13.756	13.162	13.570
	Feb	21.407	16.273	20.405	15.228	19.219		19.426		18.964	
	Jan	22.067		20.993		24.994		23.916		24.218	
2014	Dec	16.706		15.981		18.592	17.829	18.074	17.321	18.022	17.395
	Nov	10.492		9.946		9.366		9.207		9.163	
	Oct	7.882		7.300		7.815		7.782		7.659	
	Sept	7.739		7.143		7.792	8.173	7.691	8.052	7.545	7.900
	Aug	8.479	8.277	8.082	7.758	8.843		8.627		8.445	
	July	8.914		8.578		9.779		9.754		9.748	
	June	8.854		8.269		9.963	9.218	9.970	9.264	9.856	9.149
	May	7.624		7.114		7.873		8.034		7.803	
	Apr	7.719		7.169		7.838		7.146		7.628	
	Mar	8.446		8.077		9.676	11.611	8.979	10.982	9.511	11.403
	Feb	12.086	10.025	11.581	9.448	16.949		16.444		16.700	
	Jan	12.461		11.883		12.557		12.431		12.412	
2013	Dec	10.298		9.856		9.981	9.960	9.950	9.895	9.850	9.804
	Nov	7.837		7.449		6.974		6.941		6.778	
	Oct	7.042		6.450		6.192		6.143		6.177	
	Sept	7.010		6.475		6.250	6.430	6.245	6.377	6.230	6.434
	Aug	7.366	7.251	7.074	6.800	6.796		6.696		6.839	
	July	7.693		7.355		7.585		7.542		7.534	
	June	7.359		6.918		7.407	7.167	7.301	7.111	7.295	7.078
	May	6.911		6.418		6.475		6.454		6.367	
	Apr	6.581		6.071		6.417		6.369		6.429	
	Mar	6.742		6.317		7.316	7.606	7.220	7.530	7.321	7.610
	Feb	8.011	7.314	7.923	7.000	9.061		8.977		9.058	
	Jan	8.294		8.166		8.563		8.425		8.637	
2012	Dec	7.358		7.125		7.496	7.478	7.201	7.231	7.446	7.486
	Nov	6.498		6.010		6.280		5.962		6.275	
	Oct	6.688		6.274		5.340		4.915		5.247	
	Sept	6.544		6.157		5.123	5.296	4.894	5.052	5.051	5.240
	Aug	6.905	6.718	6.751	6.391	5.425		5.324		5.416	
	July	6.856		6.740		5.123		5.170		5.181	
	June	6.557		6.165		5.178	5.312	5.226	5.299	5.211	5.301
	May	6.676		6.203		5.648		5.510		5.520	
	Apr	7.515		7.395		6.987		6.359		6.944	
	Mar	7.480		7.432		6.843	6.917	6.542	6.870	6.844	6.899
	Feb	9.135	8.265	8.704	8.045	6.929		7.665		6.913	
	Jan	9.368		8.812		9.401		8.939		9.394	

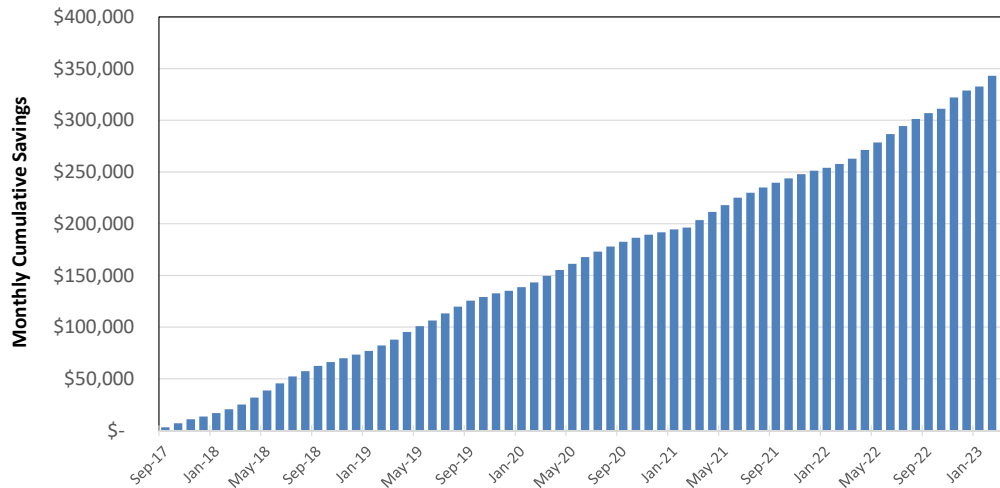


**ATTACHMENT B
 Solar Energy Array Operations**

Solar Energy Array Savings Per Kilowatt-hour



Old Landfill Cumulative Solar Energy Array Savings





Solar Landfill Project: Actual Net Monthly Benefits -- Town of Cohasset

	Actual Monthly Production (kWh - NGrid)	Fixed Electric Rate to Town (\$/kWh)	Actual Monthly Payment to CohSolar LLC	Actual Net Metering Credit Rate (\$/kWh)	Actual Monthly Net Metering Credits	Other Monthly Charges/Credits	Monthly Net Benefit to Town of Cohasset
Sep-17	42,101	\$ 0.08800	\$ (3,705)	\$ 0.16482	\$ 6,939	\$ (66)	\$ 3,168
Oct-17	49,584	\$ 0.08800	\$ (4,363)	\$ 0.16482	\$ 8,172	\$ (10)	\$ 3,799
Nov-17	38,567	\$ 0.08800	\$ (3,394)	\$ 0.19063	\$ 7,352	\$ (10)	\$ 3,948
Dec-17	24,100	\$ 0.08800	\$ (2,121)	\$ 0.19637	\$ 4,733	\$ (10)	\$ 2,602
Jan-18	30,712	\$ 0.08800	\$ (2,703)	\$ 0.19637	\$ 6,031	\$ (10)	\$ 3,318
Feb-18	34,852	\$ 0.08800	\$ (3,067)	\$ 0.19637	\$ 6,844	\$ (10)	\$ 3,767
Mar-18	41,931	\$ 0.08800	\$ (3,690)	\$ 0.19632	\$ 8,232	\$ (10)	\$ 4,532
Apr-18	61,987	\$ 0.08800	\$ (5,455)	\$ 0.19632	\$ 12,169	\$ (10)	\$ 6,704
May-18	73,579	\$ 0.08800	\$ (6,475)	\$ 0.18131	\$ 13,341	\$ (10)	\$ 6,856
Jun-18	76,843	\$ 0.08800	\$ (6,762)	\$ 0.17863	\$ 13,726	\$ (10)	\$ 6,954
Jul-18	74,372	\$ 0.08800	\$ (6,545)	\$ 0.17723	\$ 13,181	\$ (10)	\$ 6,627
Aug-18	57,100	\$ 0.08800	\$ (5,025)	\$ 0.17702	\$ 10,108	\$ (10)	\$ 5,073
Sep-18	58,510	\$ 0.08800	\$ (5,149)	\$ 0.17702	\$ 10,357	\$ (10)	\$ 5,199
Oct-18	41,116	\$ 0.08800	\$ (3,618)	\$ 0.17712	\$ 7,282	\$ (10)	\$ 3,654
Nov-18	33,095	\$ 0.08800	\$ (2,912)	\$ 0.20074	\$ 6,643	\$ (10)	\$ 3,721
Dec-18	30,209	\$ 0.08800	\$ (2,658)	\$ 0.20709	\$ 6,256	\$ (10)	\$ 3,588
Jan-19	29,305	\$ 0.08800	\$ (2,579)	\$ 0.20709	\$ 6,069	\$ (10)	\$ 3,480
Feb-19	44,104	\$ 0.08800	\$ (3,881)	\$ 0.20709	\$ 9,133	\$ (10)	\$ 5,242
Mar-19	46,760	\$ 0.08800	\$ (4,115)	\$ 0.20821	\$ 9,736	\$ (10)	\$ 5,611
Apr-19	61,373	\$ 0.08800	\$ (5,401)	\$ 0.20834	\$ 12,786	\$ (10)	\$ 7,376
May-19	63,035	\$ 0.08800	\$ (5,547)	\$ 0.17847	\$ 11,250	\$ (10)	\$ 5,693
Jun-19	63,507	\$ 0.08800	\$ (5,589)	\$ 0.17314	\$ 10,996	\$ (10)	\$ 5,397
Jul-19	82,791	\$ 0.08800	\$ (7,286)	\$ 0.17314	\$ 14,334	\$ (10)	\$ 7,039
Aug-19	74,676	\$ 0.08800	\$ (6,571)	\$ 0.17314	\$ 12,929	\$ (10)	\$ 6,348
Sep-19	68,848	\$ 0.08800	\$ (6,059)	\$ 0.17314	\$ 11,920	\$ (10)	\$ 5,852
Oct-19	42,221	\$ 0.08800	\$ (3,715)	\$ 0.17314	\$ 7,310	\$ (10)	\$ 3,585
Nov-19	33,421	\$ 0.08800	\$ (2,941)	\$ 0.19492	\$ 6,514	\$ (10)	\$ 3,563
Dec-19	22,155	\$ 0.08800	\$ (1,950)	\$ 0.20127	\$ 4,459	\$ (10)	\$ 2,499
Jan-20	31,126	\$ 0.08800	\$ (2,739)	\$ 0.20127	\$ 6,265	\$ (10)	\$ 3,516
Feb-20	40,476	\$ 0.08800	\$ (3,562)	\$ 0.20127	\$ 8,147	\$ (10)	\$ 4,575
Mar-20	52,943	\$ 0.08800	\$ (4,659)	\$ 0.20704	\$ 10,961	\$ (10)	\$ 6,292
Apr-20	46,699	\$ 0.08800	\$ (4,110)	\$ 0.20793	\$ 9,710	\$ (10)	\$ 5,591
May-20	69,466	\$ 0.08800	\$ (6,113)	\$ 0.17457	\$ 12,127	\$ (10)	\$ 6,004
Jun-20	78,419	\$ 0.08800	\$ (6,901)	\$ 0.17072	\$ 13,388	\$ (10)	\$ 6,477
Jul-20	64,876	\$ 0.08800	\$ (5,709)	\$ 0.17072	\$ 11,076	\$ (10)	\$ 5,357
Aug-20	60,612	\$ 0.08800	\$ (5,334)	\$ 0.17072	\$ 10,348	\$ (10)	\$ 5,004
Sep-20	53,914	\$ 0.08800	\$ (4,744)	\$ 0.17072	\$ 9,204	\$ (10)	\$ 4,450
Oct-20	48,373	\$ 0.08800	\$ (4,257)	\$ 0.17034	\$ 8,240	\$ (10)	\$ 3,973
Nov-20	28,661	\$ 0.08800	\$ (2,522)	\$ 0.18892	\$ 5,415	\$ (10)	\$ 2,882
Dec-20	21,866	\$ 0.08800	\$ (1,924)	\$ 0.19379	\$ 4,237	\$ (10)	\$ 2,303
Jan-21	27,963	\$ 0.08800	\$ (2,461)	\$ 0.19379	\$ 5,419	\$ (10)	\$ 2,948
Feb-21	16,124	\$ 0.08800	\$ (1,419)	\$ 0.19379	\$ 3,125	\$ (10)	\$ 1,696
Mar-21	62,314	\$ 0.08800	\$ (5,484)	\$ 0.20434	\$ 12,733	\$ (10)	\$ 7,240
Apr-21	66,475	\$ 0.08800	\$ (5,850)	\$ 0.20585	\$ 13,684	\$ (10)	\$ 7,824
May-21	68,523	\$ 0.08800	\$ (6,030)	\$ 0.18542	\$ 12,706	\$ (10)	\$ 6,666
Jun-21	75,659	\$ 0.08800	\$ (6,658)	\$ 0.18297	\$ 13,843	\$ (10)	\$ 7,175
Jul-21	50,595	\$ 0.08800	\$ (4,452)	\$ 0.18297	\$ 9,257	\$ (10)	\$ 4,795
Aug-21	53,558	\$ 0.08800	\$ (4,713)	\$ 0.18297	\$ 9,800	\$ (10)	\$ 5,076
Sep-21	48,018	\$ 0.08800	\$ (4,226)	\$ 0.18297	\$ 8,786	\$ (10)	\$ 4,550
Oct-21	44,785	\$ 0.08800	\$ (3,941)	\$ 0.18318	\$ 8,204	\$ (10)	\$ 4,252
Nov-21	30,522	\$ 0.08800	\$ (2,686)	\$ 0.22043	\$ 6,728	\$ (10)	\$ 4,032
Dec-21	23,963	\$ 0.08800	\$ (2,109)	\$ 0.23014	\$ 5,515	\$ (10)	\$ 3,396
Jan-22	19,374	\$ 0.08800	\$ (1,705)	\$ 0.23014	\$ 4,459	\$ (10)	\$ 2,744
Feb-22	26,389	\$ 0.08800	\$ (2,322)	\$ 0.23014	\$ 6,073	\$ (10)	\$ 3,741
Mar-22	37,364	\$ 0.08800	\$ (3,288)	\$ 0.22737	\$ 8,495	\$ (10)	\$ 5,197
Apr-22	60,381	\$ 0.08800	\$ (5,314)	\$ 0.22679	\$ 13,694	\$ (10)	\$ 8,370
May-22	62,117	\$ 0.08800	\$ (5,466)	\$ 0.20385	\$ 12,663	\$ (10)	\$ 7,186
Jun-22	72,420	\$ 0.08800	\$ (6,373)	\$ 0.20018	\$ 14,497	\$ (10)	\$ 8,114
Jul-22	69,509	\$ 0.08800	\$ (6,117)	\$ 0.20018	\$ 13,914	\$ (10)	\$ 7,788
Aug-22	61,032	\$ 0.08800	\$ (5,371)	\$ 0.20018	\$ 12,217	\$ (10)	\$ 6,837
Sep-22	50,733	\$ 0.08800	\$ (4,465)	\$ 0.20018	\$ 10,156	\$ (10)	\$ 5,681
Oct-22	36,891	\$ 0.08800	\$ (3,246)	\$ 0.20235	\$ 7,465	\$ (10)	\$ 4,208
Nov-22	37,864	\$ 0.08800	\$ (3,332)	\$ 0.37713	\$ 14,280	\$ (10)	\$ 10,938
Dec-22	20,472	\$ 0.08800	\$ (1,802)	\$ 0.41587	\$ 8,514	\$ (10)	\$ 6,702
Jan-23	11,679	\$ 0.08800	\$ (1,028)	\$ 0.41587	\$ 4,857	\$ (10)	\$ 3,819
Feb-23	31,717	\$ 0.08800	\$ (2,791)	\$ 0.41587	\$ 13,190	\$ (10)	\$ 10,389
Mar-23	42,014	\$ 0.08800	\$ (3,697)	\$ 0.41891	\$ 17,600	\$ (10)	\$ 13,893
Total	3,206,740	\$ 0.08800	\$ (282,193)	\$ 0.19952	\$ 639,794	\$ (726)	\$ 356,875