



ENERGY CREDIT AGGREGATION GUIDE



This is a guide to HCG as your Solar Renewable Energy Credit (SREC) Aggregator. We are excited to be working with you and keeping your energy dollars in the local economy. If you have recently installed a new solar photovoltaic array then you have come to the right place.

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What are Solar Renewable Energy Certificates (SRECs)

- SRECs are the positive environmental attributes associated with renewable energy production
- SRECs are the incentives for technologies increasing energy efficiency and reducing the need for conventional fossil fuel-based power generation.
- Every SREC represents a 1 MWh (dependent on SREC Factor equivalent) of electricity generated
- SRECs behave like stock certificates and are sold on a market administered by MA Department of Energy Resources (DOER). Bids are subject to supply and demand. Certificate prices are based on the market conditions and may fluctuate over time.

A common question is “Who purchases SRECs?”

The answer is: Investor owned utilities need SRECS to meet Portfolio standards (like the RPS or APS). It is an alternative to investing in developing their own renewable projects to otherwise invest in the development of the other renewable projects.

Aggregating your SRECs

The HCG Energy Certificate aggregation currently represents thousands of homeowners, small business owners, and municipal building managers across Massachusetts and we are growing every day.

We aggregate our members’ certificates and sell them to competitive suppliers and distribution companies in need of credits to attain compliance with the Massachusetts Renewable Portfolio Standard (RPS) and Alternative Portfolio Standard (APS) markets. Apart from a small broker fee, the money is returned directly to you.

Join your local energy aggregation

- Since 2011 we have grown to manage \$9.1 million worth of REC’s
- We monitor the REC marketplace to ensure that you get top dollar
- We monitor the SREC marketplace to ensure that you get top dollar
- We maximize your investment with a low brokerage fee



“My experience working with HCG has been awesome! They have been exceptional at both responding back quickly & getting any/all of my questions about the program answered. They even went outside the box & provided help/input in other areas of solar beyond my current SREC2 program. Working with you guys has been smooth sailing – hands down. Thanks again!”

Robert Letendre, Belchertown Solar Customer

Eligibility Criteria

There are various programs that the DOER have created to support the installation of distributed solar photovoltaic systems. Any solar PV systems installed between January 1, 2010 and April 25, 2014, are part of the original Solar Carve-Out Program and labeled as qualified under "SREC I".

The DOER further took steps beginning in early 2013 to expand the Solar Carve-Out Program to meet a newly established goal for the Commonwealth of 1,600 MW of PV by 2020. This resulted in the creation of the Solar Carve-Out II Program and an updated version of the RPS Class I Regulation on April 25, 2014. These solar PV systems are labeled as qualified under "SREC II".

Current Status of the Solar Carve Out II Program

In 2016, The DOER rolled out a new Solar Massachusetts Renewable Target (SMART) program. In order to have a systematic transition between the SREC II and SMART program, DOER will grant good cause extension requests for projects that seek one.

Under the terms of the extension, SREC II systems that qualify and can demonstrate that they are mechanically complete or operational by March 31, 2018 will receive the following **SREC Factors**. The section "Understanding your SREC Factor" explains how SREC Factors work.

SREC Issuance Process

The MassCEC Production Tracking System (PTS) tracks monthly total kWh of production data reported by the system authorized representative/reporter. Once a MWh (1,000 kWh) has been generated, MassCEC reports the whole MWh to NEPOOL GIS. Any remaining kWhs are carried forward to the first month of the next quarter. NEPOOL GIS applies the SREC II factor to the MWh reported, creates 1 SREC II for each eligible MWh reported, and carries forward any remaining fractional SREC II to the next generation month. Your SRECs are deposited into HCG's NEPOOL GIS Aggregation for our reporting and thus the selling process of the SRECs begins.



"At all times, HCG has been a dependable, hardworking, and conscientious resource for us. They have always followed through with any questions or concerns that we or our customers have had. We find them to be organized, reliable, and a good communicator."

NorthEast Solar Design Associates, LLC

Understanding your SREC Factor

Pursuant to the MA DOER's [SREC Factor Guideline](#), any Solar Carve Out II Renewable solar PV array (SREC II) that meets the criteria below will be granted the following SREC Factors:

Market Sector	Mechanically Complete by 1/8/2017	Mechanically Complete (& 50% of Construction Cost Expended) by 5/8/2017	Mechanically Complete by 3/31/2018	Mechanically Complete After 3/31/2018
A (<= 25 kW DC)	1.0	0.8	0.8	0.8
A (>25 kW DC)	1.0	0.8	0.7	0.65
B	0.9	0.7	0.6	0.55
C	0.8	0.65	0.55	0.5
Managed Growth	0.7	0.55	0.5	0.45

If you are under the Solar Carve Out II program, here's how it's calculated:

1. You add up your production in a quarter
2. You convert the kW to MW (1000kW = 1 MW) and remove anything remaining that doesn't come to a full MW. The remaining MW are considered 'rollover' MW that can be counted in the next quarter's calculation.
3. You are now left with X MW
4. Multiply the amount of MW by your SREC Factor for your total amount of SRECs due for that quarter
5. Anything not adding up to a full MW after the formula has been applied will rollover into the next quarter.

Here is an Example: Jane installed an 8 KW DC system in On January 10, 2017 with a 0.8 SREC Factor.

Quarter 1 (January to March) Production:

- System authorized representative/reporter reported to MassCEC PTS 1,500 kWh of production
- PTS reported to NEPOOL GIS 1 MWh, and carried forward to Q2 500 kWh
- NEPOOL GIS applied 0.8 SREC Factor = 1 MWh x 0.8 SREC Factor = 0.8 SREC IIs, minted 0 SREC IIs for Q1 and carried forward 0.8 SREC IIs to Q2

Quarter 2 (April to June) Production:

- System authorized representative/reporter reported to MassCEC PTS 1,800 kWh of production
- PTS combined production from (Q1) remaining production 500 + (Q2) 1,800 = 2,300 kWh
- PTS reported to NEPOOL GIS 2 MWh, and carried forward to Q3 = 300 kWh from Q2
- NEPOOL GIS applied 0.8 SREC Factor = 2 MWh x 0.8 SREC Factor = 1.6 SREC IIs and combines with the 0.8 SREC IIs from Q1 = 2.4 SREC IIs
- NEPOOL GIS minted 2 SREC IIs and 0.4 SREC IIs carried forward to Q3

Table showing example:

Q1 Production	Eligible SREC II MWhs	SREC Factor	Eligible SREC II Issued	Rollover SREC IIs	Q2 Production	Eligible SREC II MWhs	SREC Factor	Eligible SREC II Issued	Rollover SREC IIs
1.5 MW	1	0.8	0	0.8	1.8 MW	2	0.8	2	0.4

How much are SRECs worth?

Each year the Investor owned utilities must show that they have purchased a sufficient amount of Renewable Energy Certificates (RECs), Alternative Energy Certificates (AECs), Solar Renewable Energy Certificates (SRECs), and Solar Renewable Energy Certificate IIs (SREC IIs) to show they are investing in renewable technologies.

The Solar Alternative Compliance Payment (SACP) is the penalty price that electricity suppliers must pay per SREC if they fail to file the required number of SRECs by the end of each compliance period. The SACP price decreases over time in both the SREC I and SREC II programs. For more information: <https://www.mass.gov/service-details/compliance-information-for-retail-electric-suppliers>

HCG can sell your SRECs in either the annual auction or in quarterly open market trading periods.



- Occurs once a year in July.
- State ensures a price floor so market volatility will have less of an impact.



- Occurs four times a year in October, January, April, and July
- You will receive whatever the open market rate is at that time, or can specify a price floor.

Solar Credit Annual Auction

The DOER sponsors an auction each July for SRECs generated in the previous calendar year. Example: an auction in July 2019 will cover all credits generated during 2018 at \$257.45. The state guarantees a price floor for each auction so you will know in advance what to expect.

The auction process has several different levels and it is possible that not all credits will be sold in each auction. If the number of SRECs in the auction is larger than the number bid upon, unsold SRECs will be allocated back to sellers in a pro-rated manner. Unsold credits remain eligible for sale in the next 3 years' auctions.

Customers who choose to sell **annually** will receive one SREC payment a year, and SRECs will be sold at the DOER's set annual auction rate shown in the chart below:

Year Generated	Year Sold	AUCTION RATE	Minus HCG Fee (5%)
2014	2015	\$285.00	\$270.75
2015	2016	\$285.00	\$270.75
2016	2017	\$285.00	\$270.75
2017	2018	\$270.75	\$257.21
2018	2019	\$257.45	244.58
2019	2020	\$244.15	231.94
2020	2021	\$231.80	220.21
2021	2022	\$220.40	209.38
2022	2023	\$209.95	199.45
2023	2024	\$199.50	189.53
2024	2025	\$189.05	179.6
2025	2026	\$179.55	170.57
2026	2027	\$171.00	162.45
2027 and after	TBD		

Quarterly Sales

There are four trading periods each year in which SRECs can be sold in the open market:

Production Quarter	Production Months	Sale Quarter	Sale Month	Payment sent out
Q1	January- March	Q3	July	2 nd - 3 rd week of August
Q2	April - June	Q4	October	2 nd - 3 rd week of November
Q3	July- Sept	Q1	January	2 nd - 3 rd week of February
Q4	October - December	Q2	April	2 nd - 3 rd week of May

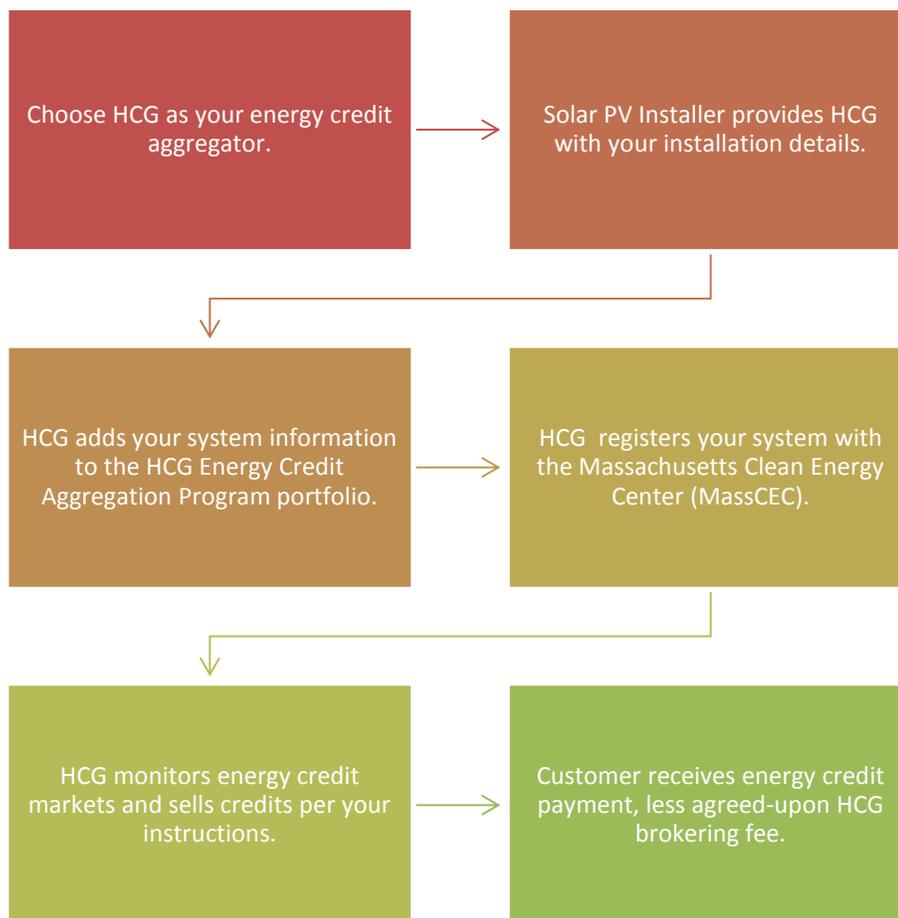
Quarterly sales take place in an open market environment so the rate is influenced by supply and demand in any given quarter. The **demand** comes from the DOER requiring a certain percentage of their total load served by the utilities to meet their compliance obligations. The **supply** comes from facilities, like yours, being installed and generating SRECs. If the supply is low and demand is high,

prices for SRECs go up. If supply is high and demand is low, the prices for SRECs go down. The resulting price may be higher or lower than the annual auction rate. However, if you choose to sell quarterly, you may specify the lowest price that you are willing to accept per SREC and we will not sell unless we can meet that price.

There is a three month delay between when credits are generated and when they can be sold. You are allowed to hold credits for future trading periods up to a point. The rule is that credits can be held until the time of the auction that they will be eligible for.

Example: If you generated credits from your production in Q1 of 2018, these credits will become eligible for sale in Q3 of 2018. Their eligibility will continue through Q4 of 2018 and Q1 and Q2 of 2019. They are eligible for sale in the July 2019 auction so if they are still unsold at that point, they will have to be sold at auction or their value will be lost.

The SREC Registration Process



Application deadlines

Quarter	New Customers Application Deadline
Q1	May 15th
Q2	July 15th
Q3	October 15th
Q4	January 15th

Reporting

The reporting period for the PTS is open during the last five days of the reporting month through the first five days of the following month. Example: reporting window opens October 27th and closes November 5th.

IF YOUR SOLAR ARRAY IS LESS THAN 10kW: you have the option of choosing to report your monthly production to the Massachusetts Clean Energy Center (MassCEC) Production Tracking System (PTS) yourself, or you can work with your installer to set up a Data Acquisition Systems (DAS) provider.

Owners or agents can report their data by logging into their assigned PTS accounts. If you have questions on how to use the PTS system, their support team can be reached at PTS@MassCEC.com or toll-free at 866-314-9367. They are very helpful and responsive!

Failure to report on time could lead to forfeiture of a systems production and/ or SRECs. **HCG is not responsible for production or SRECs lost due to failure to report.**

IF YOUR SOLAR ARRAY IS GREATER THAN 10kW: you are required by law to have a third party report your production for you. Your solar installer may have Data Acquisition Systems (DAS) providers that he or she works with regularly, and we can provide referrals upon request. If you have a DAS, you can still see how many MWhs are being reported to PTS by logging into your PTS Account.

Payments

HCG can set you up with Direct Deposit into your bank account. No paper checks and you get paid on payday.

You will receive payment by check after your sale of credits has cleared. There is a 2 quarter (6 month) delay in payment from the solar MWh production month to customer payment.

Payment Schedule:

Production Quarter	Production Months	Sale Quarter	Sale Month	Payment sent out
Q1	January- March	Q3	July	2 nd - 3 rd week of August
Q2	April - June	Q4	October	2 nd - 3 rd week of November
Q3	July- Sept	Q1	January	2 nd - 3 rd week of February
Q4	October - December	Q2	April	2 nd - 3 rd week of May

Frequently Asked Questions

I set up my system a long time ago and am not getting payments. What happened to all my SRECs?

This is the most common question among customers in their first year in the aggregation. You likely signed up for quarterly sales with a Floor Price we were not yet able to meet.

When you choose a Floor Price such as the Annual Auction Rate, HCG will sell your SRECs when we meet or exceed that price each quarter. If we do not meet or exceed that price, your SRECs for that quarter will be held until the Annual Auction which occurs each summer.

For example, the 2017 Annual Auction Rate was set at \$270.75 while the open market rate for SRECs in the first three sales quarters averaged \$261.00 per credit. In this scenario, customers participating in quarterly sales at the annual auction rate will not receive payments for the first three quarters of 2017 until their SRECs are sold at the Annual Auction in the summer of 2018.

Although there may be quarters you may not receive a payment, this selling strategy can help prevent underselling your credits and guarantees the highest price possible in the long term.

<p>It is the Summer, where are my payments for these kilowatt hours I am producing?</p>	<p>In total, there can be a six (6) month delay between the production month and the date in which the customer is paid for the SRECs generated.</p>
<p>What is occurring between the times my Solar PV system produces the kilowatts and we receive payment?</p>	<p>In between there are verification processes as well as transactions with buyers. Once the MassCEC verifies your PV system's production, they work with NEPOOL GIS to deposit the SRECs into HCG's portfolio. Depending on the market, it can take 45 days after the minting date to trade and receive payment from the buyer to then disburse payments to Energy Credit clients.</p>
<p>I signed up to have my floor price at the "Annual Auction Rate". When do I get paid?</p>	<p>This is a two part answer. If the market is favorable, in that the bids received for the SRECs meet or exceed the Annual Auction rate, you will receive quarterly payments.</p> <p>If the market for a quarter is unfavorable, meaning that the bids received for the SRECs did not meet the Annual Auction Rate, then SRECs will not be sold and sold in the Annual Auction in July.</p> <p>Here is an example: For clients signed up for quarterly sales at the Annual Auction Rate, their first payment for SRECs generated in 2017 didn't arrive until May 2018. Further, their SRECs generated during the first 3 quarters (Jan-Sep) of 2017 will be sold in July of 2018 - a wait of well over a year for their first quarter production!</p>