

Harvard Community Solar Garden (CSG)

The Harvard CSG project has the following goals:

- Provide an alternative for Harvard residents and businesses wishing to solarize, but whose property is not suitable.
- Commence construction of the CSG in 2011 and build a CSG with 100 - 200 kW of capacity in first half of 2012.
- Establish CSG structure expandable to multiple sites.
- Create possibility to extend CSG to support municipal needs.
- Create possibility to extend CSG to support non-profits.
- Ensure that all CSG participants have maximum benefit of available grants and tax credits.

The Harvard CSG will have the following attributes:

- Composed of one or more well suited locations where Harvard electricity customers (residents, businesses, municipal customers and non-profits) can have solar PV capacity installed, with full benefit of available grants and tax credits.
- Each customer's purchase cost will reflect the 30% federal tax credit on his/her system (or an equivalent amount by using ARRA section 1603 grant), reducing initial investment cost.
- A share of the CSG entitles customer to have the share of power produced net metered to a Harvard business or residential account using Neighborhood Net Metering.
- The CSG may obtain sufficient bank financing to be able to lend customers up to 70% of the installed costs of their systems.
- All SREC income will be paid directly to the CSG. The CSG will deduct an operations and maintenance reserve fee to fund operations, maintenance, replacement reserves, insurance, accounting, etc.
- When a customer's share of the SREC income exceeds charges, after payment of interest and principal on loan balance and payment to operating reserve, the CSG will pay the customer the difference at least quarterly.
- If a customer's obligations for charges plus interest and principal on the loan exceed SREC income share, customer will be responsible to pay the difference.
- As modeled, based on projected utility rates and SREC payments, it is expected that customer payments would be no more than would have been paid for electricity in the same period.
- If a member wants to exit the CSG, share would be reallocated as follows:
 - to the purchaser of residence or business (in case of a sale),
 - to other then-current members of the CSG,
 - to other residents and business owners in Harvard.

Additional Notes:

- Mass CEC has agreed to allow base grant plus grants for Massachusetts components (i.e. up to \$0.85 / watt of capacity) for each customer's purchased capacity.
- Mass CEC also indicated that they would consider a one-time grant of \$10K to assist the CSG with legal and design/engineering fees, although the availability of this grant has not been confirmed.
- As soon as we know how much capacity we have demand for, and we have identified site(s) for construction, we will seek bids for design and construction. At least one highly qualified solar design firm has expressed interest, and we expect to be able to have a confirmed development plan very quickly.
- This is a unique model because it does not rely on investor funding and instead of representing an income stream that takes cash flow out of renewable energy projects, it lowers the participation costs for Harvard residents and businesses.
- Mass DOER has expressed interest in using Harvard's CSG as an important element of its application for the Federal DOE SunShot grants

The CSG can benefit from assistance on many levels:

- Expediting National Grid to complete the interconnect studies on a timely basis,
- Making sure we can interconnect our CSG notwithstanding the 1% cap on interconnections by passing legislation and/or exerting pressure on National Grid and the DPU,
- Encouraging Mass CEC to provide material support to aid in technical (engineering, interconnect, etc.) and legal activities,
- Identify other grants/funding or technical assistance offered for alternative/renewable energy development,
- Establish whether utilities are receptive to this model and if not, why not?

Information from National Grid on Net Metering:

The net-metering provision as approved by the MA DPU limits net-metering to 1% of a utility's historical peak load. National Grid has a historical peak load of 5,067 MWs in Massachusetts Electric territory; making the 1% limit to 50.67 MWs. National Grid has a historical peak load of 39 MWs in Nantucket Electric territory, making the 1% limit to 390 KWs. As of May 1, 2011 in Massachusetts, there are 20,208 KWs with net-metering service. There are 70,542 KWs with net metering applications in the process of being interconnected and of those 45,086 KWs have returned the Schedule Z.

Note that only 30.4 MW need to be put in service before the 1% cap is reached and 45 MW worth of schedule Zs have been filed -- The limit will soon be exceeded. We may not be able to put the CSG in service if the cap is reached before we complete the interconnect process.

More at http://www.nationalgridus.com/masselectric/home/energyeff/4_net-mtr.asp