

Draft for Public Comments – Deadline for comments: 5/22/2013

Massachusetts Department of Energy Resources

Long term contract carve-out for local distributed renewable generation

DOER has to determine which technologies meet the criteria of the 10% carve-out of the long term contracts pursuant to the new Section 83A of the Green Communities Act as amended by Chapter 209 of the Acts of 2012, Section 36.

Determination of eligible technologies/projects

Projects seeking a long term contract under this carve-out need to be “newly developed, small, emerging or diverse renewable energy distributed generation facilities”, and more specifically need to meet the following criteria:

1. Qualify for the MA Renewable Portfolio Standard Class I.
2. Be located in the service territory of the utility.
3. Have a nameplate capacity not larger than 6 MW.
4. Use a technology with less than 30 MW installed in MA before 4/1/2012.
5. Not be qualified for net metering credits.

DOER analyzed installed capacity of the different renewable technologies in the table below. This shows that criterion 3 excludes the following technologies: solar PV, wind turbines, hydroelectric, landfill gas. From the currently qualified technologies in the MA RPS, the following technologies would not be excluded based on criterion 3: anaerobic digestion and biomass. Furthermore, a number of renewable energy technologies currently have no projects qualified in MA, but may be considered for the list of eligible technologies.

Technology/Resource	MA generation qualified before 4/1/2012 (MW) ¹			
	Class I	SCO	Class II	Total
Solar Photovoltaic	19	70		89
Hydroelectric	7		43	50
Landfill Gas	44			44
Wind	43			43
Anaerobic Digester ²	19			19
Biomass	10			10

¹ Note that the date of RPS qualification is used as a proxy for the date of installation, except for the Solar Carve-out where the commercial operation date was used.

² The MWRA Deer Island AD is rated 18 MW, but the effective use of digester gas in 2012 represented 2.7 MW (Nexant, January 2013). The steam generator was retrofitted after 4/1/2012 with a back pressure turbine, adding 1.1 MW to the installed capacity.

DOER proposes the following list of technologies/resources **be eligible** to long term contracts required under the Section 83A Carve-out:

- Biogas from **anaerobic digestion (AD)**, pure or blended with landfill gas, provided blending increases the electricity generation of the AD facility and the landfill gas does not have sufficiently high or constant calorific value for stand-alone energy generation
- **Biomass** energy with high Overall Efficiency to meet RPS Class I standards, including alternative technologies such as:
 - o Pyrolysis: thermal conversion (destruction) of organics in the absence of oxygen to produce mainly biofuels
 - o Gasification: thermal conversion of organic materials at elevated temperature and reducing conditions to produce primarily permanent gases
- **Marine or hydrokinetic** energy³, including but not limited to in-line hydro, tidal, current and wave energy
- Emerging **run-of-river hydroelectric** technologies with direct passage of fish and other aquatic life and which do not use conventional water turbines
- **Fuel cells** using biogas or another eligible RPS Class I Renewable Fuel
- **Wind turbines**,
 - o having a nameplate capacity less than or equal to 99kW,
 - o or using an innovative or emerging design different from standard horizontal axis turbines (eg. airflow acceleration) to the extent that it has either already been tested as a prototype or is a scale-up of a previously deployed or field-tested technology,
 - o or a field verification for small offshore wind projects in state waters
- **Solar thermal electric**: solar energy used to generate electricity by heating up a fluid
- **Geothermal** energy to produce electricity using steam from reservoirs of hot water found a few miles or more below the Earth's surface

Non-eligible technologies

Based on the criteria laid out in Section 83A of the Green Communities Act, the following technologies will not be eligible for the long term contract carve-out:

- Projects that qualified for net metering,
- Projects with a nameplate capacity larger than 6 MW,
- Solar PV,
- Hydroelectric projects using conventional water turbines,
- Landfill gas, unless they are unable to generate energy on their own, and by blending with biogas from anaerobic digestion can increase the energy generation of the AD facility,

³ 225 CMR 14.02: "hydrokinetic energy: electrical energy derived from waves, tides and currents in oceans, estuaries and tidal areas; free-flowing water in rivers, lakes, streams, and human-made channels, provided that such water is not diverted, impounded, or dammed; or differentials in ocean temperature, called ocean thermal energy conversion." If a man-made channel, built for a non-energy generating purpose, should take advantage of the free-flowing water in a generating unit, that unit should be considered to produce hydrokinetic energy.

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- Onshore wind projects using standard horizontal axis turbines with a nameplate capacity of more than 99 kW.

LTK Solicitation procedure

Prior to December 31, 2016, Massachusetts Distribution Companies must individually solicit proposals for long-term contracts with eligible renewable energy distributed generation facilities. Unlike the larger Section 83A process, each utility will organize its own competitive procurement. The contracts must represent 0.4% of the company's total energy demand.

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Stakeholders are invited to comment on this draft determination by **May 22, 2013**.
Send comments to Bram Claeys, Deputy Director, DOER Renewables Division, bram.claeys@state.ma.us.

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