

225 CMR 16.00

Renewable Thermal Technologies in the APS

Biofuels Subgroup Meeting
December 1, 2014
Boston, MA

DOER Renewable Thermal Business Investment Financing Program

Cape Cod Biofuels, Sandwich

Increase advanced biodiesel production through facility expansion and upgrades

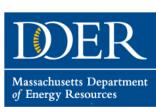
\$280,000

Northeast Biodiesel, Greenfield

Complete biodiesel plant, expand waste vegetable oil collection and biodiesel distribution

\$540,000

DOER, May 30, 2014, http://www.mass.gov/eea/pr-2014/industry-grants.html



Advanced biofuels market - Questions

- Production capacity in MA
 - > Impact of MassDEP organic waste ban
 - ➤ MA Advanced Biofuels Task Force (2008) estimated between 100 and 380 million gallons could be produced by 2025
- Blending location
- Sales of advanced biofuels
 - ➤ Bio-heat?
 - > Suppliers serving multiple states
 - Warranty issues



Specifications for biofuels for inclusion in the APS (per the Statute)

DOER has to establish for biomass, biogas and liquid biofuel technologies (with MassDEP):

- Air emission performance standards for PM2.5 and CO;
- A requirement of 50% reduction in life-cycle GHG emissions;
- Requirements for thermal storage or other means to minimize deterioration of efficiency or emissions due to boiler cycling, if feasible;
- Fuel conversion efficiency performance standards;
- Requirements that fuel shall be provided by means of sustainable forestry practices (with DCR).



Lifecycle GHG emissions

- Biofuels need to be "advanced" biofuels
 - ➤ 50% lifetime GHG savings per unit of delivered energy, in comparison to the petroleum distillate fuel displaced

An Act Relative to Clean Energy Biofuels, M.G.L. 94, § 295G1/2 2008

- > Currently only organic waste derived biodiesel
 - DOER considers other feedstocks case-by-case



Mechanics of APS Qualification

- No upfront minting
- Only for energy generation with advanced biofuel
 - > Takes into account conversion efficiency
 - > Share of advanced biofuel needs to be significant
 - Tracked with Renewable Identification Number
- Options for APS qualification
 - Qualify the user
 - Information about oil furnace/boiler
 - Demonstrates purchase of advanced biofuel
 - > Qualify the fuel **supplier/distributor**
 - Demonstrate blend of advanced biofuel (terminal?)
 - Information about sales in MA
 Average efficiency of furnaces/boilers

