Commonwealth of Massachusetts – Department of Energy Resources
Renewable and Alternative Energy Portfolio Standards (RPS &APS)

Summary of RPS & APS Regulations

Referred to the Joint Committee on Telecommunications, Utilities, and Energy on March 19, 2009

and resubmitted May 29, 2009

RPS CLASS I

Definition changes:

- The following newly eligible resources are added, pursuant to the Green Communities Act:
  - algae as a type of Eligible Biomass Fuel,
  - geothermal energy,
  - marine & hydro-kinetic energy, and
  - hydroelectric energy.
- Eligible Liquid Biofuel (a type of Eligible Biomass Fuel) is newly defined and must meet lifecycle GHG-related & other standards based on Clean Energy Biofuels Act of 2008.
- "New Renewable" is replaced by "RPS Class I Renewable."

Eligibility changes:

- Hydroelectric Generation: For Class I qualification, Hydroelectric Generation is limited to a post-1997 Unit with a capacity no more than 25 MW or incremental capacity up to that limit at a pre-1998 facility, including increased output from efficiency improvements at such facility. Qualification is contingent on "certification" by the Low Impact Hydropower Institute (LIHI), with provision for a limited period of follow-up advice by relevant state and federal agencies with environment-related hydroelectric permitting interests – either opposing RPS qualification in spite of LIHI certification (with opportunity for applicant rebuttal) *or* supporting an applicant's argument that the Unit should qualify in spite of LIHI non-certification.
- Incremental Generation (replaces Vintage Waiver): Class I qualification of increased output – as compared to a calculated baseline (per DOER methodology) – that is based on capacity additions and efficiency modifications at pre-1998 Generation Units, and provided that all other relevant Class I criteria are met. Possible Class II qualification of the portion of such Unit's output that is not Class I qualified.
- Capacity Obligations for *all* newly-qualified Generation Units (per DOER's *Imports* report):
  - All Units may *not* commit Capacity to *non*-ISO-NE Control Areas
  - Non-Intermittent Units (biomass, LFG, some hydro – not solar, wind) *must* commit Capacity to ISO-NE via the *earliest available* Forward Capacity Auction
- Imports can qualify only from Units in adjacent Control Areas, and they are limited in each hour to the lower of actual generation or actual transmission into ISO-NE Control Area. This is pursuant to the Act and also codifies current long-standing practice. Owner or Operator must self-attest to non-round-tripping (a.k.a., netting). Import Units have the same Capacity Obligation as in-region Units (*see* above). (Pursuant to the Act and DOER's *Import* report.)
- Massachusetts On-site Generation Units: [RESERVED]

- Behind-the-Meter Generation will qualify from anywhere in ISO-NE (not only in MA, which had been the case before 2009), but contingent on independent 3rd Party Meter Reader (per NEPOOL GIS standards) for monitoring & reporting to NEPOOL GIS. (Pursuant to the Act.)
- Co-firing provisions now cover the use of Blended Fuels – mainly liquid bio-fuels.
- Aggregations (multiple, behind-the-meter Units sharing the same technology, mainly residential PV) can receive a single SQ and be treated as single Unit for RPS and NEPOOL GIS. (This codifies existing practice, now with definitions & conditions.)
- Landfill methane gas (LMG) currently cannot be transported via a natural gas common carrier pipeline and is used on-site or very nearby. Under a these regulations, LMG could be transported through a common carrier pipeline, but only from a landfill in ISO-NE or adjacent Control Areas to a Generation Unit within ISO-NE or adjacent Control Areas.
- Eligibility, contingent of meeting other relevant criteria, for
    - Relocated Units (from outside ISO-NE & adjacent);
    - Repowered Units (fossil fuel replaced by RPS Class I Eligible Renewable Fuel);
    - Replacement Units (old, defunct Generation Units have all essential, old equipment/ technology replaced with new/advanced, facilitating reuse of old plant buildings or sites).

Statement of Qualification Application (SQA) process and provision changes

- Current automatic opportunity for "public comment" (not under c. 30A) for SQAs from certain Unit types is replaced by such opportunity at the sole discretion of DOER.
- RPS Effective Date is now made explicit. (Codification of long-standing process.)
- Notice of additional information changes (e.g., change of ownership, contacts) will be required.
- Adds a time limit of 48 months for project implementation after the date of an SQ, failing which the Owner must submit a new SQA under possibly revised Regulations (important mainly for biomass Units, which can take some time to implement and for which standards could change).

RPS CLASS II

DOER's Regulations for Class II of RPS uses the same structure, definitions, provisions, and nearly all of the same types of eligible resources and technologies as the Regulations for the newly-revised Class I of RPS. The exceptions and differences (other than replacing "RPS Class I" throughout with "RPS Class II") are summarized below

Eligibility of Generation Units:

- Class II is limited to generation that went on-line **on or before December 31, 1997**, what would have been termed "vintage" in the Class I regulations.
- **Hydropower** eligibility is limited to a facility that has a capacity no higher than **5 MW** (vs. 25 MW for Class I). Such facility would have to meet the same environmental requirements as in Class I, normally entailing certification by the Portland (ME)-based Low Impact Hydropower Institute (LIHI) and input from Relevant Hydroelectric Agencies.

- **Waste Energy** (from conventional municipal waste combustion technology) is added to the list, with eligibility conditioned by the requirement that the Generation Unit's Owner or Operator document the following:
    - MassDEP approval of the Unit's participation in or operation of a MassDEP-authorized recycling program
    - Allocation, per statute, of at least 50% of the Unit's proceeds from the sale of RECs to such a recycling program, with MassDEP monitoring compliance.
    - The Unit's compliance with the MassDEP's emission standards for solid waste facilities, which includes stringent mercury limits.
- **Behind-the-Meter Generation** will be limited in capacity up to 25 MW**.** Behind-the-Meter Biomass Units also must meet the same strict emission limits as any other RPS Class II Biomass Units, which will be identical to the stringent limits used in Class I (limits that were developed in consultation with the MassDEP).

Class II Minimum Standards

- The RPS Class II Minimum Standard will be **3.6%**.
- The RPS Class II **Waste Energy** Minimum Standard will be **3.5%**.

Compliance by Retail Electricity Suppliers

- Annual Compliance for will be (as with Class I) by documenting to DOER a Supplier's ownership of sufficient RECs to meet the required percentages for each of the two Minimum Standards.
- The **Alternative Compliance Payment (ACP) rates**, which will be subject to annual adjustment by the same method as with Class I (percentage changes in the Consumer Price Index), will be as follows for 2009:
    - For the RPS Class II Minimum Standard – **$25**.
    - For the RPS Class II **Waste Energy** Minimum Standard – **$10**.

APS

DOER's Regulations for the new APS, established by the Green Communities Act of 2008 in Section 32, uses the same structure and many of the definitions and provisions as for RPS.

Eligibility of Alternative Energy Facilities:

- **Eligible Technologies:**
    - **Coal Gasification**, but with environmental standards, including "carbon dioxide capture and permanent sequestration".
    - **Combined Heat and Power** (a.k.a., cogeneration), which is defined as the concurrent production of both electricity and useful thermal (heat) energy in the same facility. The thermal output of a CHP Unit must be used within Massachusetts.
    - **Flywheel Energy Storage**, a new technology that must participate in the Regulation Market of ISO-NE.

- Displacement of a portion of the coal at a power plant by an equivalent or greater amount of **paper-derived "fuel cubes"** that have been granted a "beneficial use determination" by the MassDEP.
- **Energy Efficient Steam Technology**, a technology not yet ready for commercial deployment and for which definitions and provisions are not ready at this time.

- **Environmental Standards:** DOER, in consultation with the MassDEP, is developing emission performance standards for all of the eligible technologies. The standards include CO2 emissions, fuel conversion efficiency, and CO2 capture and permanent sequestration, and the emissions at the facility itself, as well as those for gasification, fuel processing, and CO2 sequestration, even if remote from the site of energy generation.
- **Date of Deployment and Eligibility**: All facilities must have begun commercial operation on or after January 1, 2008, except for projects that involve qualified retrofit of older plants. However, only production of electricity on 1/1/08 and thereafter will qualify for credits in the program.
- **Combined Heat and Power (CHP):** APS eligible CHP units receive credits for the useful thermal energy of a CHP unit delivered to Massachusetts end-uses, subject to the formula included in the regulations. The rules will for the first time in the Commonwealth promote the installation and effective operation of new CHP units for appropriate residential, commercial, industrial, and institutional applications.

APS Minimum Standard:

- Every company supplying electricity at retail to Massachusetts end-use customers must obtain a small but annually increasing percentage of its electricity from facilities that area APS qualified. The APS Standard for 2009 is 1% and increases at a rate such that the standard will reach 5% by 2020.

Compliance by Retail Electricity Suppliers

- Annual Compliance for will be (as with RPS) by documenting to DOER a Supplier's ownership of sufficient Alternative Energy Certificates (AECs) at the NEPOOL GIS to meet the required Minimum Standard.
- The **Alternative Compliance Payment (ACP) rate for 2009**, which will be subject to annual adjustment thereafter by the same method as with RPS Class I (percentage changes in the Consumer Price Index), will be $20.