

MEMORANDUM

TO: NEPOOL Markets Committee

FROM: Paul Belval and Lynn Fountain, NEPOOL Counsel

DATE: December 1, 2020

RE: Generation Information System Modifications: Massachusetts Clean Energy Standard and Third Party Meter Reader Uploads

At its December 8, 2020 meeting, the NEPOOL Markets Committee (the “Markets Committee”) will be asked to consider and vote on changes to the NEPOOL Generation Information System (“GIS”) and the GIS Operating Rules (the “Rules”) relating the addition of “Clean Existing Generation” (“CES-E”) to the Massachusetts Clean Energy Standard (“CES”), as well as to a change to improve independent verifier (“Third Party Meter Reader”) uploads. The proposed changes to the Rules related to the CES-E are included as Attachment 1. The changes related to the Third Party Meter Reader uploads do not require a change to the Rules.

The Markets Committee, at its September 8, 2020 meeting, referred to the GIS Operating Rules Working Group (the “Working Group”) a requested change to the GIS to improve Third Party Meter Reader uploads. Currently, if a facility that has not been assigned a “verifier” status is included in a comma separated value (“CSV”) upload by a Third Party Meter Reader, the entire upload fails. The proposed change would provide a specific error message in the event the Third Party Meter Reader attempts a CSV upload that contains a facility that is not in the account, but would allow all other data to be uploaded successfully. This change would reduce the necessity for manual crosschecks between the GIS account holders’ internal systems and the GIS. APX estimates that this change will require 31 hours of development time to complete.

In addition, at its October 6, 2020 meeting, the Markets Committee referred proposed GIS changes relating to the addition of CES-E to the CES to the Working Group for discussion.¹ In addition to adding CES-E as a new category in the GIS, the proposed changes to the Rules permit multiple co-located GIS Generators to have their generation aggregated for purposes of the CES-E, and provide for the allocation of certain annual caps in the CES-E regulations on the output that qualifies for the CES-E among those GIS Generators. The Rule changes also recognize that certain generators in Newfoundland and Labrador, Canada could be eligible for the CES-E, and expand (beyond adjacent control areas) the area where generators that are qualified for the CES-E can receive unit-specific Certificates in the GIS. APX estimates that the CES-E-related changes to the GIS will require 220 hours of development time to complete.

¹ For purposes of the CES, Clean Existing Generation Units are defined as nuclear or hydroelectric units that have a nameplate capacity of at least 30 MW, commenced commercial operation before January 1, 2011 and satisfy certain geographic requirements.

The Working Group met by teleconference on October 16th to discuss each of the above changes. No Working Group member expressed any objection to the change to improve Third Party Meter Reader uploads.² With regard to the CES-E changes, Working Group members proposed minor modifications to the draft Rules, which are reflected in Attachment 1, but none of the members objected to the changes.

Under Rule 1.3, the CES-E-related changes are “Regulatory Enhancements” that can be adopted by the Markets Committee without action by the NEPOOL Participants Committee. Under that same Rule, the changes related to the Third Party Meter Reader Uploads are “Discretionary Enhancements,” but because they will require less than 50 hours or \$30,000 to complete, the Markets Committee may also approve those changes without action by the NEPOOL Participants Committee. Such changes, if approved, would become effective on July 1, 2021 and would apply to Certificates created for energy generated on and after January 1, 2021.

The GIS Agreement, as amended in October 2020, provides that the GIS Administrator will perform up to 500 hours of development work for enhancements to the GIS each year without additional cost beginning on January 1, 2021. Work on the changes will not begin before January 1, so that work will count against the 500 hours for 2021.

The following resolution could be used to adopt the changes to the Rules discussed above:

RESOLVED, that the Markets Committee adopts the changes to the NEPOOL Generation Information System and the NEPOOL Generation Information System Operating Rules proposed and discussed at this meeting, which changes relate to improvements to Third Party Meter Reader uploads and the addition of “Clean Existing Generation” to the Massachusetts Clean Energy Standard [with such changes thereto as were discussed at this meeting and] with such non-material changes thereto as the Vice Chair of the Markets Committee may approve.

cc: NEPOOL GIS Operating Rules Working Group

² The Markets Committee has also referred a change requested by SRECTrade to enable access to public reports through the GIS application programming interface (“API”). APX suggested that “Snowflake”, a cloud-based data warehouse, could be used for that access, obviating any need for a change to this GIS. SRECTrade agreed to try this approach and has requested that this proposed change be delayed until it can determine whether Snowflake resolves the issue.

CHANGES TO NEPOOL GIS OPERATING RULES

Rule 2.2 Account Holder Registration

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(b) A generator that is included in the MSS for part of its generation (the “MSS Generation”) and that sells or uses part of its generation behind-the-meter (the “Non-MSS Generation”) may establish separate GIS assets for the generator’s MSS Generation and its Non-MSS Generation, and except for purposes of paragraph (c) below, it shall be deemed to be two distinct GIS Generators for its MSS Generation and its Non-MSS Generation. Any generator establishing two GIS assets under this paragraph shall, with respect to its Non-MSS Generation:

- (x) provide the GIS Administrator with meter data meeting the requirements of ISO New England Operating Procedure No. 18 or any successor thereto or the Small Generator Metering Protocol or, for those states that require that a Third Party Meter Reader provide such meter data and for those resources that are subject to Rule 2.5(j), cause a Third Party Meter Reader to provide the GIS Administrator with meter data meeting the requirements of Rule 2.5(j);
- (y) be eligible under one of the RPS (which includes the MAPS for purposes of these GIS Operating Rules) fields or the Massachusetts Clean Energy Standard (“CES”) field, the Massachusetts Clean Energy Standard for Clean Existing Generation Units (“CES-E”) or the Massachusetts Clean Peak Energy Portfolio Standard (“CPS”) field listed in Part 2 of Appendix 2.4; and
- (z) provide the GIS Administrator with a certification from one of the Energy Regulatory Agencies listed in Appendix 5.3 (1) stating that such GIS Generator has committed to submit to an annual audit by such Energy Regulatory Agency with respect to the quality of the data it provides for its Non-MSS Generation and to confirm that none of the Non-MSS Generation for which Certificates are created is used for such GIS Generator’s station service, and (2) either (a) establishing an annual limit on the MWhs that such GIS Generator may report to the GIS Administrator for purposes of creating Certificates for its Non-MSS Generation, which limit shall be based upon a proxy unit with a 5 MW nameplate capacity using the same fuel type or, (b) if the GIS Generator is a NEPOOL Participant, certifying that the GIS Generator qualifies under the mandatory renewable portfolio standard, mandatory alternative energy portfolio standard, mandatory clean energy standard or

mandatory clean peak standard of the state in which the Certificates will be used.

The Certificates created for a generator's Non-MSS Generation in any year shall not exceed the limit established in the certification provided by the applicable Energy Regulatory Agency described above. Any generator availing itself of this Rule 2.2(b) shall be considered a NEPOOL Generator for purposes of its MSS Generation and a Non-NEPOOL Generator for purposes of its Non-MSS Generation.

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(j) For all GIS Generators that are qualified as "Clean Existing Generation Units" under the CES-E, the Massachusetts Department of Environmental Protection will notify the GIS Administrator of the annual limit on the number of Certificates that will qualify for the CES-E, and Certificates issued for each such GIS Generator will be denoted as qualifying for the CES-E until the annual limit is reached. Multiple co-located GIS Generators may be aggregated into a single Clean Existing Generation Unit for purposes of the CES-E. The Massachusetts Department of Environmental Protection will identify to the GIS Administrator those GIS Generators that are aggregated into a single Clean Existing Generation Unit under the CES-E. For multiple GIS Generators aggregated into a single Clean Existing Generation Unit under the CES-E, in any month in which the annual limit for CES-E-qualified Certificates would be reached, the CES-E-qualified Certificates associated with energy generated in that month will be allocated among those GIS Generators *pro rata* based on the generation of each such GIS Generator in that month.

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Rule 2.5 Sources of Generation Data

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(k) In the event that one of the Energy Regulatory Agencies identified in Appendix 5.3 notifies the GIS Administrator that only it shall provide information regarding eligibility for its state's RPS, APS, CES, CES-E or CPS, then upon initial registration and updated as necessary after any change in such RPS, APS, CES, CES-E or CPS eligibility, such Energy Regulatory Agency will notify the GIS Administrator of the applicable generating unit's status under its state's RPS, APS, CES, CES-E or CPS, and no other entity may provide the GIS Administrator with such information. In all other cases, information as to a generating unit's eligibility for a state's RPS, APS, CES, CES-E or CPS may be provided by the applicable Energy Regulatory Agency listed in Appendix 5.3 or by the generating unit itself. The GIS Administrator will notify each GIS Generator or Importing Account Holder of any change in its RPS, APS, CES,

CES-E or CPS eligibility provided by one of the Energy Regulatory Agencies under this Section 2.5(k), including in such notice the specific state(s) for which such eligibility was changed. The GIS Administrator will maintain, on the public portion of the GIS website, a list of the Energy Regulatory Agencies that have notified it that only they may provide information on its state's RPS, APS, CES, CES-E or CPS eligibility.

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Rule 2.7 Imports

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- (c) The Certificates for Energy imported into the New England Control Area pursuant to an External Transaction for the output of a particular External Resource identified in the MSS for purposes of the GIS (together "Imported Unit Energy") shall reflect the attributes of the generating unit generating such Energy if:
- (u) such generating unit is either (i) eligible under one of the RPS fields, the CES field or the CES-E field listed in Part 2 of Appendix 2.4 or (ii) a hydroelectric or hydropower generating unit or (iii) a nuclear generating unit;
 - (v) either (i) such Energy is imported from such generating unit in an adjacent Control Area into the New England Control Area with transmission rights over the ties to the New England Control Area or (ii) such Energy is generated by a Clean Existing Generation Unit qualified for the CES-E by the Massachusetts Department of Environmental Protection and is imported into the New England Control Area with uninterrupted transmission rights to the New England Control Area from a control area that is only electrically connected to control areas that are adjacent to the New England Control Area;
 - (w) such Energy is actually settled in the MSS;
 - (x) the generation data for such Energy generated by such generating unit (i) meets the requirements of Rule 2.1(e) and (ii) is provided directly to the GIS Administrator via a secure internet portal by either (1) the regional transmission organization or independent system operator (as recognized by the Federal Energy Regulatory Commission) that covers the area in which such generating unit is located, or (2) an electric utility metering the generation of such generating unit, or (3) a nationally recognized renewable energy credit tracking system, or (4) a Third Party Meter Reader meeting the requirements of Rule 2.5(j);
 - (y) the Importing Account Holder importing such Energy has registered the applicable generating unit in the GIS as contemplated by Rule 2.3 and has provided the data contemplated by Rule 2.5; and

- (z) such Importing Account Holder provides the GIS Administrator with (i) a NERC tag for such Energy meeting the requirements of the System Rules for External Transactions for Energy and the requirements of the source Control Area, (ii) a certification of the seller of such Energy, in the form set forth in Appendix 2.7A, to the effect that the specified attributes have not been and will not be otherwise sold, retired (except as described in clause (iii)), claimed, represented as part of Energy sold elsewhere or used to satisfy obligations in another jurisdiction, and (iii) if the Energy and/or attributes of such generating unit are tracked by another renewable energy credit tracking system, evidence that the renewable energy credits associated with such Energy have been retired or otherwise made ineligible for transfer in such other tracking system.

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Rule 3.6 Exports

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(b) The Certificates associated with Energy exported from the New England Control Area (i) prior to the SMD Effective Date, pursuant to a Unit Contract and (ii) from and after such date, pursuant to an External Transaction identified in the MSS as a unit-specific External Transaction sale for purposes of the GIS, may be transferred to the purchaser of such Energy if:

- (x) the generating unit generating such Energy is eligible under one of the RPS fields, the CES field or the CES-E field listed in Part 2 of Appendix 2.4;
- (y) such Energy is exported from the GIS Generator to a purchaser in an adjacent Control Area with transmission rights over the ties from the New England Control Area; and
- (z) the Account Holder exporting such Energy and associated Certificates provides the GIS Administrator with a NERC tag for such Energy meeting the requirements of the System Rules for such External Transactions and the requirements of such adjacent Control Area.

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Rule 3.7 Banked Certificates

(a) Each GIS Account Holder shall have a separate subaccount within its account designated as its “Banked Certificate Subaccount.” At the end of each Trading Period for the first, second and third quarter of any calendar year, all Conservation Certificates, all APS Certificates, all Renewable Certificates, all Certificates representing MWhs generated by Zero Emissions Generators and all

other Certificates representing MWhs generated by a GIS Generator or NH Biodiesel Producer designated as qualified under any RPS, APS, CES, CES-E or CPS listed in Part 2 of Appendix 2.4 (except S-REC Auction Certificates and SREC-II Auction Certificates, but including Clean Peak Energy Certificates) that in each case are neither Reserved Certificates, nor held in a Retail Subaccount nor associated with an export transaction (collectively, “Banked Certificates”) shall automatically be transferred by the GIS Administrator to the Banked Certificate Subaccount held by the applicable GIS Account Holder. Banked Certificates may be removed from a Banked Certificate Subaccount and (a) transferred, (b) deposited into a Retail Subaccount and used to satisfy a Certificates Obligation, (c) used for an export transaction, or (d) used for a Reserved Certificate transaction (in each case in accordance with all applicable Rules) in any Trading Period that relates to the same calendar year as the one in which the MWhs represented by that Banked Certificate were created; i.e., eligible Certificates created in any Trading Period for a calendar year (which Trading Periods begin on July 15 of that calendar year and end on June 15 of the following calendar year) can become Banked Certificates and then be transferred or used in subsequent Trading Periods for that same calendar year. Transferred Banked Certificates may be deposited into the Banked Certificate Subaccount of the transferee for subsequent transfer or use as described above. Banked Certificates will not be used to satisfy a Retail LSE’s Certificates Obligations while they are in a Banked Certificate Subaccount. Except as set forth below, the attributes associated with Banked Certificates will not be taken into account in the creation of Residual Mix Certificates for any Trading Period.

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Rule 3.8 Post-Closing Account Adjustment

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(d) In addition to the foregoing provisions relating to Post-Closing Account Adjustments and notwithstanding any other provision of these Rules to the contrary, an Account Holder that has had Certificates that are eligible for inclusion in a Banked Certificate Subaccount under Rule 3.7 retired from its account or Subaccount and become Unsettled Certificates at the end of any Trading Period may, upon request to the GIS Administrator, have such Unsettled Certificates credited back to that account or Subaccount and/or subsequently transferred to another account or Subaccount if the following conditions are met:

- (i) those Certificates may be credited to the Account Holder’s account or Subaccount and/or transferred to another account or Subaccount not later than the date for the annual compliance filing for the state RPS, APS, CES, CES-E or CPS for which those Certificates are eligible; and
- (ii) if an Energy Regulatory Agency listed on Appendix 5.3 notifies the GIS Administrator in writing that any such crediting and/or

transfer of Certificates eligible for its state's RPS, APS, CES, CES-E or CPS must be approved by that Energy Regulatory Agency, then that Energy Regulatory Agency shall have approved the crediting and/or transfer of those Certificates.

In the event that any Unsettled Certificates that are to be credited to an account or Subaccount under this Rule 3.8(d) are eligible for the RPS or APS of more than one state, then those Certificates shall only be designated as being eligible for any RPS or APS for which (x) they are otherwise eligible, (y) the annual compliance filing deadline has not occurred, and (z) either no Energy Regulatory Agency approval is required or the applicable Energy Regulatory Agency has granted approval. Upon any crediting and/or transfer of Certificates under this Section 3.8(d), the GIS Administrator shall update the quarterly and annual reports produced under Rule 5.2(a) of the Account Holder(s) to which those Certificates have been credited and/or transferred.

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Rule 5.4 Publicly Available Reports

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(f) The publicly available reports posted on the GIS Administrator's website shall also include a report showing all Certificates transferred during the quarterly or annual reporting period, aggregated separately by (1) fuel type, (2) each RPS and APS for the New England states and the CES, CES-E and CPS for Massachusetts and (3) the total number of Certificates transferred during the reporting period. Those reports shall also show the number of Certificates that were transferred once, twice, three times or more than three times within each of the fuel type and RPS/APS/CES/CES-E/CPS categories during the quarterly or annual reporting period. The fuel type and RPS, APS, CES, CES-E and CPS categories in such reports shall correspond to the major categories set forth in Appendix 2.4. Those reports shall also show the aggregate number of Unsettled Certificates that are credited and/or transferred pursuant to Rule 3.8(d), the number of times such a crediting or transfer has occurred during the quarterly or annual Trading Period, and the number of Unsettled Certificates that were credited and/or transferred in each transaction.

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Rule 5.5 Reports for the ISO

The GIS Administrator will furnish electronically to the ISO quarterly and annual reports that aggregate by MWh for the applicable period the number of Certificates issued for each of the Fuel Sources set forth in Part 1 of Appendix 2.4, the number of Certificates meeting the requirements for RPS, APS, CES,

CES-E and CPS eligibility for each of the items listed in Part 2 of Appendix 2.4, and the number of Certificates for each of the locations listed in Part 8 of Appendix 2.4. Quarterly reports will be provided by the 5th day after the close of a Trading Period and shall relate solely to such Trading Period; annual reports shall be produced by July 1 of the year following the year to which the report applies. Annual reports shall include amounts for the generation occurring during the applicable calendar year.

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Appendix 1.1

FUNCTIONAL REQUIREMENTS

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4. GIS Database.

The GIS database will be a stand-alone database, separate from the MSS. It will need frequent modifications in the first few years to accommodate evolving Attribute Laws and changes in the GIS Operating Rules.

In addition to the hourly data, which will be listed on the Certificates, provided from the MSS database, the GIS database will need to include fields for other data, on a product-by-product basis. The GIS database shall include the ability to be expanded to include many additional fields. The current list, as expanded by Appendix 2.4, includes, but is not limited to, the following:

- Fuel Source
- Vintage (year commercially operational or as otherwise required by state regulations)
- Union labor (MA)
- Emissions factors for SO_x, NO_x, and CO₂ which may vary over time or by fuel
- Eligibility for state RPS (MA, ME, CT, NH, RI, VT)³, CES, CES-E, APS, MAPS or CPS (MA)
- Identification of specific unit
- Location
- Time and date of generation
- Certificate ownership share (for multiple owners of a generator)
- Status under Regional Greenhouse Gas Initiative
- Capability to cogenerate electricity and steam

³ Eligibility will be determined by the applicable regulatory agency pursuant to the applicable Attribute Laws.

The GIS Administrator will develop and maintain the database, as well as catalog the initial assignment of Certificates and any trading of Certificates, and provide reports on net Retail LSEs' attribute accounting to facilitate verification by the appropriate state agency. Entry and updating of generator-specific attributes may be performed by the GIS Generator or Importing Account Holder or its designated agent, subject to confirmation by the GIS Administrator.

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Appendix 2.4

GIS Certificate Fields⁴

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Part 1 – The following shall be the data field options for Fuel Sources⁶ (each GIS Generator and Importing Account Holder will select at least one) [bracketed references show state energy portfolio standard eligibility for the specific fuel type, subject in certain cases to additional requirements including without limitation size limits and in-service dates]: *

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Nuclear

Qualified by Massachusetts Department of Environmental Protection for
Massachusetts Clean Energy Standard for Clean Existing Generation Units**

Ocean**

Part 2 - The following shall be the data field options for Renewable Portfolio Standard (“RPS”), Alternative Energy Portfolio Standard (“APS”), Clean Energy Standard (“CES”), Clean Energy Standard for Clean Existing Generation Units (“CES-E”) and Clean Peak Energy Standard (“CPS”) Eligibility:

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Massachusetts

APS Alternative Generation Unit (yes/no)

CHP

Efficient Steam Technology

⁴ Fields identified with an asterisk (*) will not change.

⁶ Fuel Sources identified with two asterisks (**) are eligible for Renewable Certificates, as described in Rule 3.5. Certificates created for a Zero Emissions Generator, as described in Rule 2.3, shall include a notation that such Certificates are “Emission Free-Generated Energy Certificates.”

Flywheel Storage Unit
 Useful Thermal Energy Generation Unit
 RPS Class I Renewable Generation Unit (yes/no)
 RPS Class I Solar Carve-Out Unit (yes/no)
 Expiration of Opt-In Term: (month/year)
 Solar Carve-Out II Unit (yes/no)
 Expiration of Opt-In Term: (month/year)
 RPS Class I S-REC Auction (yes/no)
 Year of energy generation (year)
 Date of conversion / redesignation (month/year)
 Date of expiration (month/year)
 SREC-II Auction (yes/no)
 Year of energy generation (year)
 Date of conversion / redesignation (month/year)
 Date of expiration (month/year)
 RPS Class II Renewable Generation Unit (yes/no)
 RPS Class II Waste Energy Generation Unit (yes/no)
 Renewable Resource (yes/no)
 Clean Energy Standard (yes/no)
 Clean Energy Standard for Clean Existing Generation Units (yes/no)
 Clean Peak Standard (yes/no)
 Eligible MA Renewable for NOx Allowances claims from Public Benefit set-a-side
 (yes/no)
 Generation level per year or Energy imported per year above which qualifies as RPS
 Class I Renewable Generation Unit or APS Alternative Generation Unit: _____
 Generation level per year or Energy imported per year up to which qualifies for RPS
 Class II Renewable Generation Unit: _____
 Percentage of Generation in each reporting period that qualifies as RPS Class I
 Renewable Generation Unit: _____
 Percentage of Generation in each reporting period that qualifies as RPS Class II
 Renewable Generation Unit: _____
 State Certification Number
 Date of eligibility: _____

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Appendix 2.7B

Regulatory Agencies for Other Control Areas

New York

Regulatory Agencies to be Notified: New York Department of Environmental Conservation; New York Department of Public Service

Maritimes

Regulatory Agency to be Notified:

New Brunswick Department of the Environment
and the Local Government

Québec

Regulatory Agency to be Notified:

Québec Ministère de l'Environnement

Newfoundland and Labrador

Regulatory Agency to be Notified:

Newfoundland and Labrador Department of
Environment, Climate Change and Municipalities