



# The Commonwealth of Massachusetts

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## DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 17-146

October 3, 2017

Inquiry by the Department of Public Utilities on its own Motion into the eligibility of energy storage systems to net meter pursuant to G.L. c. 164, §§ 138-140 and 220 CMR 18.00, and application of the net metering rules and regulations relating to the participation of certain net metering facilities in the Forward Capacity Market pursuant to Net Metering Tariff, D.P.U. 09-03-A (2009).

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VOTE AND ORDER OPENING INQUIRY

## I. INTRODUCTION

The Department of Public Utilities (“Department”) opens this inquiry to investigate two issues: (1) the eligibility of energy storage systems to net meter, pursuant to 220 CMR 18.00; and (2) the qualification and bidding of certain net metering facilities in the Forward Capacity Market (“FCM”) administered by ISO New England Inc. (“ISO-NE”),<sup>1</sup> pursuant to Net Metering Tariff, D.P.U. 09-03-A (2009).<sup>2</sup> This inquiry will investigate the eligibility of energy storage systems paired with net metering facilities to net meter, and the appropriate definition of energy storage systems for net metering purposes. This inquiry will also review the current standards and procedures by which electric distribution companies (“EDCs”) bid the capacity from certain net metering facilities into the FCM and the use of FCM revenues to offset the cost of net metering services.

On November 6, 2015, Massachusetts Electric Company and Nantucket Electric Company each d/b/a National Grid (“National Grid”), filed a petition with the Department for an increase in its base distribution rates for electric customers. As part of its initial filing, National Grid proposed ratemaking treatment of certain FCM costs and proceeds associated with bidding the capacity of customer-owned net metering facilities into the FCM. The Department docketed this matter as D.P.U. 15-155. On February 9, 2016, the

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<sup>1</sup> ISO-NE is a not-for-profit, private corporation that serves as the regional transmission organization for New England. ISO-NE operates the New England bulk power system and administers New England's wholesale electricity market. Investigation Into The Need For Additional Capacity In NEMA/Boston, D.P.U. 12-77, at 1 n.1 (2013).

<sup>2</sup> The FCM is a market in which ISO-NE projects the needs of the power system three years in advance and then holds an annual auction to purchase power resources to satisfy the region's needs. D.P.U. 12-77, at 4.

Department issued an Interlocutory Order in D.P.U. 15-155 reserving adjudication of National Grid's FCM-related proposals for a subsequent proceeding. Massachusetts Electric Company and Nantucket Electric Company, D.P.U. 15-155, Interlocutory Order on Scope of Proceeding at 6-7 (February 9, 2016).

On July 12, 2016, Genbright LLC ("Genbright") filed a petition ("Genbright Petition") with the Department for a declaratory order pursuant to G.L. c. 30A, § 8 and 220 CMR 2.02 with respect to National Grid complying with D.P.U. 09-03-A (2009) and acting in a commercially reasonable manner to obtain payments for capacity products associated with solar net metering facilities. In addition, Genbright seeks a determination from the Department that battery storage projects are not subject to net metering regulations. The Department docketed Genbright's Petition as D.P.U. 16-116. On September 12, 2017, the Department suspended review of Genbright's Petition until the investigation in this inquiry, and the Department's findings regarding the same, are concluded. Genbright LLC, D.P.U. 16-116 (September 12, 2017). On May 18, 2017, Tesla, Inc. ("Tesla") filed a petition ("Tesla Petition") for emergency declaratory relief or an advisory ruling with respect to the eligibility for net metering of certain solar power generation systems paired with battery storage, pursuant to G.L. c. 164, §§ 138-140 and 220 CMR 18.00. The Department docketed Tesla's petition as D.P.U. 17-105. On September 12, 2017, the Department issued a limited scope Advisory Ruling, applicable to Tesla only, offering its advisory opinion on Tesla's request for interim guidance. Tesla, Inc., D.P.U. 17-105 (September 12, 2017).

Through public comments submitted in D.P.U. 16-116 and D.P.U. 17-105, net metering stakeholders expressed a desire for the Department to further explore the eligibility of energy storage systems to net meter and the participation of certain net metering facilities

in the FCM. In response to D.P.U. 15-155, the Genbright Petition, the Tesla Petition, and public comments in D.P.U. 16-116 and D.P.U. 17-105, the Department opens this Inquiry to explore issues that have arisen in the context of the eligibility of energy storage systems to net meter and the participation of certain net metering facilities in the FCM.

## II. BACKGROUND AND PROCEDURAL HISTORY

Under the statutory and regulatory framework in Massachusetts, net metering allows customers to generate credits for excess electricity that net metering facilities generate. To qualify for net metering, a customer may install any type of generating facility, regardless of fuel source, as long as the facility is 60 kilowatts (“kW”) or less. 220 CMR 18.02. Facilities of up to two megawatts (“MW”), or ten MW in the case of certain public facilities, are eligible for net metering if they generate electricity with renewable fuels (*i.e.*, wind, solar photovoltaics, and anaerobic digestion). 220 CMR 18.02. On August 24, 2012, the Department issued Net Metering, D.P.U. 11-11-C (2012), clarifying which projects are eligible for net metering and which are not. D.P.U. 11-11-C at 21-23.

### A. Energy Storage Systems and Net Metering

The statutory framework concerning net metering is silent with regard to energy storage systems. G.L. c. 164, §§ 138-140. The Legislature has, however, defined “Energy Storage System” in G.L. c. 164, § 1 as:

a commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy and which may be owned by an electric distribution company; provided, however, that an energy storage system shall: (i) reduce the emission of greenhouse gases; (ii) reduce demand for peak electrical generation; (iii) defer or substitute for an investment in generation, transmission or distribution assets; or (iv) improve the reliable operation of the electrical transmission or distribution grid; and provided further, that an energy storage system shall: (1) use

mechanical, chemical or thermal processes to store energy that was generated for use at a later time; (2) store thermal energy for direct heating or cooling use at a later time in a manner that avoids the need to use electricity at that later time; (3) use mechanical, chemical or thermal processes to store energy generated from renewable resources for use at a later time; or (4) use mechanical, chemical or thermal processes to capture or harness waste electricity and to store the waste electricity generated from mechanical processes for delivery at a later time.

The Legislature has not addressed the interaction between net metering facilities and Energy Storage Systems.

It is the Legislature's intent to promote the use of Energy Storage Systems in the Commonwealth and established policy of the Commonwealth to provide, forthwith, renewable and alternative energy for the immediate preservation of the public convenience. See e.g., An Act to Promote Energy Diversity, St. 2016, c. 188, § 15; An Act Relative to Green Communities, St. 2008, c. 169 ("GCA"). Since the GCA's enactment, net metering has become increasingly important to the development of a robust and stable market for renewable energy projects in the private and the public sectors. Net Metering Rulemaking, D.P.U. 16-64, at 1-2 (2016).

B. The Forward Capacity Market and Net Metering

On August 20, 2009, the Department issued Net Metering Tariff, D.P.U. 09-03-A (2009), allowing, but not requiring the EDCs to bid the capacity of Class II and Class III net metering facilities into the FCM administered by ISO-NE. D.P.U. 09-03-A at 18. The Department requires the EDCs to use any energy and/or capacity payments to offset the total net metering recovery surcharge ("NMRS") to be recovered from ratepayers.<sup>3</sup>

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<sup>3</sup> The purpose of the NMRS is for an EDC to recover the net metering credits applied to customers and the non-reconciling distribution portion of revenues displaced by

D.P.U. 09-03-A at 18. An EDC must declare its intent to seek capacity payments when a Host Customer applies for net metering services, and the company is then obligated to act in a commercially reasonable manner to obtain such capacity payments, which will be applied to offset any NMRS. D.P.U. 09-03-A at 19. See e.g., Fitchburg Gas and Electric Light Company Net Metering Tariff, M.D.P.U. No. 309, § 1.08(8).

C. Genbright's Request in D.P.U. 16-116

On July 12, 2016, Genbright filed a petition for a declaratory order with respect to National Grid complying with Net Metering Tariff, D.P.U. 09-03-A (August 20, 2009) and acting in a commercially reasonable manner to obtain payments for capacity products associated with solar net metering facilities. Specifically, the Genbright seeks a determination from the Department that:

1. confirms that Genbright may qualify the capacity products from any solar net metering facilities to which National Grid did not assert title during the 30-day window provided for in the Schedule Z<sup>4</sup> for solar net metering facilities (“30-Day Window”) both now and in the future;
2. permits Genbright to qualify the capacity products from any solar net metering facilities to which National Grid asserted title during the 30-Day Window, but has not qualified for the eleventh Forward Capacity Auction organized by ISO-NE or future ISO-NE auctions;

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customers who have installed on-site generation facilities in accordance with G.L. c. 164, §§ 138 and 139. See e.g., Fitchburg Gas and Electric Light Company Net Metering Tariff, M.D.P.U. No. 309, § 1.08(1).

<sup>4</sup> Schedule Z is a part of each EDC's Standards for Interconnection of Distributed Generation (“Interconnection Tariff”). Schedule Z is a comprehensive application for net metering services. Schedule Z allows net metering Host Customers to allocate net metering credits to other customers located in the same distribution company territory and ISO-NE load zone. See Massachusetts Electric Company and Nantucket Electric Company, M.D.P.U. No. 1320, Sheet 137; see also G.L. c. 164, §§ 139(a)(1), (b)(1); 220 CMR 18.05(1).

3. permits Genbright to qualify the capacity products from any solar net metering facilities to which National Grid has not yet asserted title during the 30-Day Window until such time as National Grid can and does qualify those capacity products; and
4. states that battery storage projects are not subject to net metering regulations.

The Department received comments from net metering stakeholders in D.P.U. 16-116 during the written comment period and at the public hearing held on September 26, 2016.<sup>5</sup>

The Department has suspended the proceedings in D.P.U. 16-116 pending further action in the instant docket. D.P.U. 16-116, at 11-12.

D. Tesla's Request in D.P.U. 17-105

On May 18, 2017, Tesla filed a petition pursuant to G.L. c. 30A, § 8 and 220 CMR 2.08 seeking emergency declaratory relief or, in the alternative, an advisory ruling with respect to the eligibility for net metering of certain solar power generation systems paired with battery storage, pursuant to G.L. c. 164, §§ 138-140 and 220 CMR 18.00. Specifically, Tesla sought a determination that solar power generating systems paired with battery storage that meet the following criteria qualify as a solar net metering facility under G.L. c. 164, § 138 and 220 CMR 18.02: (1) the solar net metering facility has a nameplate capacity of 60 kW or less alternating current; (2) the battery storage charges only from the solar net metering facility; and (3) the battery storage component of the facility does not export power to the electric grid ("Small Scale Solar & Battery Storage Facilities").

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<sup>5</sup> The Department received comments from the following entities: Attorney General Maura Healey ("Attorney General"); National Grid; and Northeast Clean Energy Council ("NECEC"). The Department summarized these comments in an Order issued September 12, 2017. D.P.U. 16-116, at 4-8. Pursuant to 220 CMR 1.10(3), the Department hereby incorporates by reference into D.P.U. 17-146: all comments, written and oral, received in D.P.U. 16-116.

The Department received comments from net metering stakeholders in D.P.U. 17-105 during the written comment period.<sup>6</sup> On September 12, 2017, the Department issued a limited scope Advisory Ruling in D.P.U. 17-105, applicable to Tesla only, offering the advisory opinion that, Small Scale Solar & Battery Storage Facilities should be eligible to net meter pursuant to G.L. c. 164, §§ 138-140 and 220 CMR 18.00.

### III. SOLICITATION OF COMMENTS

#### A. Eligibility of Energy Storage Systems to Net Meter

The Department seeks initial written comments on the following questions related to the eligibility of energy storage systems to net meter no later than 5:00 p.m. on **November 17, 2017**. The Department seeks written reply comments on the below questions related to the eligibility of energy storage systems to net meter not later than 5:00 p.m. on **December 8, 2017**. When providing comments, please clearly indicate which question is being answered. Comments may be provided on any or all of the questions.

1. Should net metering facilities paired with energy storage systems be eligible to net meter?
  - a. If so, how should the Department define “energy storage system”?
2. Should only specific types of energy storage systems be eligible to net meter (e.g., battery storage systems)?

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<sup>6</sup> The Department received comments from the following entities: Attorney General Maura Healey (“Attorney General”); Department of Energy Resources (“DOER”); National Grid; Northeast Clean Energy Council (“NECEC”); and Sunrun, Inc. (“Sunrun”). The Department summarized these comments in an Order issued September 12, 2017. D.P.U. 17-105, at 4-8. Pursuant to 220 CMR 1.10(3), the Department hereby incorporates by reference into D.P.U. 17-146: all comments filed in D.P.U. 17-105.

- a. If so, how should the Department define the specific type(s) of energy storage system(s)?
3. If net metering facilities paired with energy storage systems are allowed to net meter, what specific technical requirements are necessary to ensure that both the net metering facility and the energy storage system can participate in the ISO-NE energy and capacity markets for the purposes of offsetting the costs of net metering services?
4. To safeguard against gaming and manipulation of the net metering rules and regulations, the Department expects that, to be eligible for net metering, a net metering facility paired with an energy storage system would need to be configured such that: (1) the energy storage system is charged only from the net metering facility; and (2) the energy storage system cannot export power to the electric grid. What should the process be to certify, ensure, and enforce customer compliance with these requirements?
5. If net metering facilities paired with energy storage systems are permitted to net meter, are there any requirements in addition to those set forth in (4) above that would be necessary to safeguard against gaming and manipulation of the net metering rules and regulations (e.g., capacity size limits, additional configuration requirements, etc.)? If so, what should the process be to certify, ensure, and enforce customer compliance with these requirements?
6. If net metering facilities paired with energy storage systems are permitted to net meter, should the net metering cap allocation reflect the combined capacity of the net metering facility and the energy storage system?

- a. Should there be any distinction between existing net metering facilities and new net metering facilities?

**B. Net Metering Facility Participation in the FCM**

The Department seeks initial written comments on the following questions related to the participation of certain net metering facilities in the FCM no later than 5:00 p.m. on **February 1, 2018**. The Department seeks reply written comments on the net metering questions related to the participation of certain net metering facilities in the FCM no later than 5:00 p.m. on **February 22, 2018**. When providing comments, please clearly indicate which question is being answered. Comments may be provided on any or all of the questions.

1. If an EDC does not assert title to capacity rights within the 30-Day Window, to whom does title revert?
2. Does the 30-Day Window reset every time a new Schedule Z is filed?
3. If an EDC does not assert title to capacity rights within the 30-Day Window, does the EDC have an obligation to work with the Host Customer to provide any necessary information to allow the Host Customer or its designated entity to qualify the asset in the FCM?
  - a. What information, if any, must the EDC provide?
  - b. What is a reasonable timeframe for the sharing of such information?
4. Once an EDC asserts title, must the EDC qualify and bid the asset in the FCM?
  - a. If so, what is a commercially reasonable amount of time to allow the EDC to qualify and bid the asset in the FCM?

- b. Should there be consequences if the EDC does not act within a set timeframe? If so, what types of consequences are appropriate?
5. Is it appropriate for the EDCs to collect a fee or margin to manage risk associated with FCM obligations? If so, how should the amount of the fee or margin be determined?
6. Should EDCs be required to qualify and bid all Class II and Class III net metering facilities in the FCM?

Any person who desires to file written comments shall file an original and one (1) copy of such written comments with Mark D. Marini, Secretary, Department of Public Utilities, One South Station, Boston, Massachusetts, 02110. All documents should also be submitted to the Department in electronic format using one of the following methods: (1) by e-mail attachment to [dpu.efiling@state.ma.us](mailto:dpu.efiling@state.ma.us) and the hearing officers [Staci.Rubin@state.ma.us](mailto:Staci.Rubin@state.ma.us) and [Kate.Tohme@state.ma.us](mailto:Kate.Tohme@state.ma.us); or (2) on a CD-ROM. The text of the e-mail or CD-ROM must specify: (1) the docket number of the proceeding (D.P.U. 17-146); (2) the name of the person or company submitting the filing; and (3) a brief descriptive title of the document. The electronic filing should also include the name, title, and telephone number of a person to contact in the event of questions about the filing. Documents filed with the Department will be available for public inspection at its offices during business hours and through our website by looking up the docket by its number in the docket database at <http://web1.env.state.ma.us/DPU/FileRoom/dockets/bynumber> (insert 17-146).

