

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**  
**PUBLIC UTILITIES COMMISSION**

Petition of Tesla, Inc. and Sunrun, Inc. for  
Declaratory Judgment or an Advisory Ruling on  
Rhode Island General Laws §39-26.4, the Net-  
Metering Act

**Docket No.**

**PETITION OF TESLA, INC. AND SUNRUN, INC. FOR DECLARATORY JUDGMENT  
OR AN ADVISORY RULING**

Pursuant to R.I.G.L. § 42-35-8(c)<sup>1</sup> and Procedural Rule 1.10(c)<sup>2</sup> of the Rhode Island Public Utilities Commission’s (“Commission”) Rules of Practice and Procedure, Tesla, Inc. (“Tesla”), and Sunrun, Inc. (“Sunrun”), hereinafter “the Parties,” hereby petition the Commission for a Declaratory Judgment, 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 R.I.G.L. § 39-26.4 et seq., where: 1) the solar power generating system is no greater than 25 kW alternating current (“AC”);<sup>3</sup> (2) the battery storage charges only from the solar power generation system; and (3) where the customer-host does not take electric supply service under a time-varying or time-of-use (“TOU”) rate (“Rhode Island Small Scale Solar+Storage”). Tesla and Sunrun request that the commission open a separate proceeding to address net-metering eligibility and treatment of systems under different system configurations, use-cases, sizes and rate structures, including time-varying rates. Specifically, Tesla and Sunrun request that the Commission address, in such proceeding, net-metering eligibility for Solar+Storage customers that may be served under time-varying rates, when those rates become available. The

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<sup>1</sup> R.I.G.L. § 42-35-8(c) specifies that “Not later than sixty (60) days after receipt of a petition under subsection (a), an agency shall issue a declaratory order in response to the petition, decline to issue the order, or schedule the matter for further consideration.”

<sup>2</sup> RIPUC Rules 1.10(c) allows for petitions for declaratory judgments as to the applicability or inapplicability of a statutory provision in question.

<sup>3</sup> The [Narragansett Electric Company Net Metering Provision](#), RIPUC No. 2178

Narragansett Electric Company (“National Grid or “Company”) has expressed additional legal, technical and policy concerns with respect to other configurations, including, without limitation, applicable rate classifications, such as TOU for battery exports (as may be available through competitive energy suppliers or through the Company should those rate structures become available at a later time). Given the current minimal use of time-varying rates from competitive energy suppliers for the class of customers who would install a small scale solar + storage systems in Rhode Island, Tesla and Sunrun believe that a separate, broader proceeding can effectively address the eligibility of NEM under TOU rates and the kinds of export restrictions, if any, that may be necessary to mitigate National Grid’s concerns.<sup>4</sup>

However, presently, the Parties seek clarification that such systems meeting the aforementioned three criteria for Rhode Island Small Scale Solar+Storage qualify as “Eligible Net-Metering Systems,” as defined in R.I.G.L. § 39-26.4-2(5), and are therefore eligible for net-metering services pursuant to National Grid’s Net-Metering Provision tariff RIPUC No. 2178 (“Tariff”).<sup>5</sup> The Parties assert that since under the Rhode Island Small Scale Solar+Storage configuration described above, the battery stores electricity that was *only* generated using Solar PV,<sup>6</sup> the battery’s inclusion does not *dis*-qualify a system from net-metering eligibility. The Parties also assert that as a legal matter, the definition of an “Eligible Net-Metering System” does not specifically exclude battery storage equipment.

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<sup>4</sup> The Parties note, however, that solar and storage paired systems taking service under a TOU NEM tariff structure, where the battery does not charge from the grid but does export stored solar energy to the grid, provide all ratepayers with a broad range of significant benefits.

<sup>5</sup> National Grid’s Net-metering Tariff defines an “Eligible Net-metering System” in part as “a facility generating electricity using an Eligible Net-metering Resource that is reasonably designed and sized to annually produce electricity in an amount that is equal to or less than the Net-metering Customer’s usage at the Eligible Net-metering System Site measured by the three-year average annual consumption of energy over the previous three years at the Net-metered Account(s) located at the Eligible Net-metering System Site.” See National Grid’s Net Metering Provision, RIPUC 2178, Section I.

<sup>6</sup> See National Grid’s Net-metering in Rhode Island web page, defining net-metering eligibility, *available at* [https://www.nationalgridus.com/narragansett/home/energyeff/4\\_net-mtr.asp](https://www.nationalgridus.com/narragansett/home/energyeff/4_net-mtr.asp).

Accordingly, the Parties seek immediate clarification that Solar+Storage systems meeting the narrow and specific aforementioned criteria are eligible for net metering. The Commission is further urged to open a docket on the general matter of the net metering eligibility of all solar systems paired with storage, in which the Parties will participate on those broader questions. The Parties respectfully submit that it is imperative that the full range of configurations be addressed by the Commission in the near term, to address issues including system size, whether the battery must charge exclusively from the solar system, and operational configurations where the batteries can participate in utility programs. In the interim, however, the Parties respectfully seek an accelerated clarification with regard to the particular narrow fact pattern addressed herein.

## **I. BACKGROUND**

In February of this year, Tesla inquired as to the net-metering eligibility in Rhode Island of an AC-coupled system comprised of a Tesla H6 inverter and Powerwall 2.0 Battery Backup. In a March 28, 2017 e-mail from National Grid's Andy Garsils, Lead Technical Support Consultant, Customer Energy Integration, National Grid indicated that battery backup systems will not be eligible for net metering in Rhode Island. The e-mail stated:

At this time, National Grid does not believe that battery storage is eligible for net metering, and does not intend to provide net metering services to a solar facility that includes battery storage. Such a system may apply for treatment as a Qualifying Facility ("QF"). Please review the information contained at the following link about how to apply as a QF: [http://www9.nationalgridus.com/non\\_html/MA\\_DG\\_QF\\_Checklist.pdf](http://www9.nationalgridus.com/non_html/MA_DG_QF_Checklist.pdf).

In light of the impasse reached in the particular project that was the subject of the above-quoted correspondence, which has also caused approximately 15 additional paired projects for Tesla to be stalled, the Parties seek confirmation from the Commission that certain paired systems as

described herein are eligible for net metering. As the case is one of first impression in Rhode Island, but has been raised in recent dockets involving the Company's affiliate, Massachusetts Electric Company ("MECO") and the same issue in Massachusetts, the Parties briefly summarize a recent decision by the Massachusetts Department of Public Utilities ("Department" or "M.D.P.U") that is precisely on point, as well as activities in additional jurisdictions regarding the net metering eligibility of paired systems. In Massachusetts, the M.D.P.U issued an interim advisory ruling, finding that certain Massachusetts small scale solar & battery storage facilities configured in the manner as described in Tesla's Massachusetts Petition were eligible to net meter.<sup>7</sup>

## II. ARGUMENT

The Parties have an interest in this proceeding because the open question as to whether Rhode Island Small Scale Solar+Storage projects will qualify for net metering has created uncertainty for some customers in the state. Further, this uncertainty is impacting the deployment of paired Solar+Storage systems across National Grid's service area, which in turn may impede Rhode Island's ability to meet its "1,000 by '20" Clean Energy Goal (or, 1,000 megawatts of clean energy by 2020),<sup>8</sup> as well as to advance the clear intent of the Rhode Island legislature, as described below.

The Parties respectfully urge the Commission to bring clarity to the current state of affairs as did the M.D.P.U., so as to enable project developers to continue to deploy paired

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<sup>7</sup> M.D.P.U. 17-105, *Petition of Tesla, Inc. for Emergency Declaratory Relief or an Advisory Ruling pursuant to G.L. c. 30A § 8 and 220 CMR 2.02* at 13 (September 12, 2017).

<sup>8</sup> Press Release, Office of the Governor of Rhode Island, Raimondo Announces "1,000 by '20" Clean Energy Goal--1,000 megawatts of clean energy by 2020 (March 1, 2017) available at: <http://www.ri.gov/press/view/29766>.<sup>9</sup> *Id.* at 5, 17-18; see also, National Grid's Comments at 4. Tesla's petition to the M.D.P.U. included an additional criterion for a "Small Scale Solar + Storage" system, namely, that the battery would not export to the electric power grid.

projects and be assured they will not jeopardize any financing expectations, or face enforcement actions moving forward.

**1. Small Scale Solar+Storage Facilities Should Qualify as Eligible Net Metering System, when the Storage Component Holds *Only* Energy Generated by a PV Solar System.**

An “Eligible Net Metering System” is defined as “a facility generating electricity using an eligible net-metering resource that is reasonably designed and sized to annually produce electricity in an amount that is equal to, or less than, the renewable self-generator's usage at the eligible net-metering-system site measured by the three-year (3) average annual consumption of energy over the previous three (3) years at the electric-distribution account(s) located at the eligible net-metering-system site. . .” R.I.G.L. § 39-26.4-2 (5). The definition of an “eligible net-metering resource” includes “direct solar radiation.” R.I.G.L. § 39-26.5-2(5) and § 39-26-5 (a)(1). The Parties maintain as detailed below, that a Rhode Island Small Scale Solar+Storage facility *is* “a facility generating electricity using an eligible net-metering resource” because it stores *only* energy that was “generat[ed] using an eligible net-metering resource.”

The Tesla Powerwall H6 installation manual, Section 8.5 (“Power Flow Modes”), explains that the default factory setting for the solar inverter *disables* battery charging from the grid and *allows* charging to occur *only* when there is power available from the solar panels (Auto-Mode (Setting 6.25)). This solution is achievable by a number of commercially available inverters, including the SolarEdge inverter used by Sunrun with its solar + storage Brightbox systems which are currently deployed in a number of markets. Thus, the batteries may be configured, or are configured, such that they use *only* the electricity generated by the direct solar radiation, and when so paired, fit squarely within the definition of an “eligible net-metering facility.”

The Parties are aware of National Grid’s position expressed by MECO in Massachusetts, concerning the potential for a customer to charge his or her battery from grid-produced electricity (i.e., non-renewable energy), and potentially dispatch such non-renewable energy back to the grid when electricity prices are high. However, both MECO and the M.D.P.U. agreed in M.D.P.U. 17-105 that such considerations are “mostly mitigated if a solar net metering facility paired with battery storage complies with the limitations outlines in Tesla’s Petition.”<sup>9</sup>

Accordingly, the Parties urge the Commission to find that Rhode Island Small Scale Solar+Storage systems which only charge from the solar generation but may export that stored solar energy from the battery (subject to the rate classification limitations) to the electricity grid are eligible for net metering, absent evidence demonstrating that they indeed lack the types of control measures that will ensure that the battery charges only from solar. Should project developers wish to interconnect a larger scale paired system, or a system that is configured in any way other than that described herein, the Parties agree it would be appropriate to evaluate those configurations in a separate Commission proceeding.

**2. The Small Scale Solar + Storage Configuration at Issue is Not Expressly Prohibited by the Net Metering Laws.**

“Eligible net-metering system” contains no mention of the inclusion of battery storage as part of a facility. However, the definition also does not *preclude* the facility from containing a storage component. Indeed, the definition does not limit how the production “uses” direct solar radiation, nor anywhere does it use the word “only,” or any other limiting or exclusionary language.

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<sup>9</sup> *Id.* at 5, 17-18; see also, National Grid’s Comments at 4. Tesla’s petition to the M.D.P.U. included an additional criterion for a “Small Scale Solar + Storage” system, namely, that the battery would not export to the electric power grid.

Further, the Parties note that R.I.G.L. § 39-26-4 provides that Rhode Island’s net-metering law “shall be construed liberally in aid of its declared purposes.” R.I.G.L. § 39-26.4-1 states:

The purpose of this chapter is to facilitate and promote installation of customer-sited, grid-connected generation of renewable energy; to support and encourage customer development of renewable generation systems; to reduce environmental impacts; to reduce carbon emissions that contribute to climate change by encouraging the local siting of renewable energy projects; to diversify the state’s energy generation sources; to stimulate economic development; to improve distribution system resilience and reliability; and to reduce system costs.

The Parties’ construction, which would increase the numbers of installations of systems that would meet the legislature’s purpose, hews more closely to the Rhode Island legislature’s intent than does National Grid’s, which would *limit* the numbers of eligible systems installed.

Eligible net-metering systems are entitled to receive net metering credits.<sup>10</sup> Presently, there is uncertainty regarding the applicability of the net metering rules to paired battery storage and solar facilities. As such, in order to assist electric companies and their customers to better understand and achieve compliance with the net metering rules, it is important for a timely issued order that clarifies that Rhode Island Small Scale Solar+Storage meeting the configuration and limitations described in this Petition are eligible net metering systems entitled to net metering services under National Grid’s Tariff.

### **3. Other Jurisdictions Have Examined this Issue and Concluded that the Inclusion of a Battery Component in a Solar Project does not Render the Project Ineligible for Net Metering**

Rhode Island is not the first jurisdiction to entertain the issue of whether inclusion of a battery storage component renders ineligible a paired solar and battery storage system. Other

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<sup>10</sup> R.I.G.L. § 39-26.4-3(a)(3) and (4) state that “customer *shall* receive” or “shall be paid” renewable net-metering credits, or excess renewable net metering credits, respectively.

jurisdictions that have entertained the issue have found that certain paired facilities remain eligible for net metering credits.

For example, Colorado regulators recently held certain paired systems to be eligible for net energy metering.<sup>11</sup>

Further, the New York Public Service Commission made clear that while it would separately explore whether to impose any conditions on paired systems, certain small scale paired projects would remain eligible to participate in net metering programs.<sup>12</sup>

As noted above, the M.D.P.U. also recently found that certain small scale paired systems would remain eligible to net meter while it conducts a separate inquiry into all potential issues related to the eligibility of net metering facilities paired with energy storage systems.

On March 21, 2017, Tesla learned that, in Massachusetts, MECO announced that henceforth, solar energy systems that are paired with battery storage are ineligible to receive net metering services, that the company did not believe that battery storage was eligible for net metering; and that it did not intend to provide net metering services to solar facilities that included battery storage.

On May 18, 2017, Tesla sought an expeditious and limited clarification from the Department as to the net metering eligibility of the Small Scale Solar+Storage configuration at issue in that docket (which configuration is substantially the same as the Parties are proposing

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<sup>11</sup> August 15, 2016 Order (Non-Unanimous Comprehensive Settlement Agreement), p. 21, Colorado Public Utilities Commission Proceeding No. 16AL-0048E, *Re: In the Matter of Advice Letter No. 1712-Electric Filed by Public Service Company of Colorado to Replace Colorado PUC No. 7-Electric Tariff with Colorado PUC No. 8-Electric Tariff*, 16-A-0055E, *In the Matter of the Application of Public Service Company of Colorado for Approval of its Solar\* Connect Program*; and 16A-0139E, *In the Matter of the Application of Public Service Company of Colorado for Approval of its 2017-2019 Renewable Energy Compliance Plan*.

<sup>12</sup> Case No. 15-E-0751, *In the Matter of the Value of Distributed Energy Resources*, Order on Net Energy Metering Transition, Phase One of the Value of Distributed Energy Resources, and Related Matters, at 17 (March 9, 2017).

herein, except that herein, the Parties are proposing that the stored solar energy may be exported from the battery to the grid).<sup>13</sup> The Department opened a comments-only proceeding on Tesla's petition, styled as M.D.P.U. 17-105, *Petition of The Tesla, Inc. for Emergency Declaratory Relief or an Advisory Ruling pursuant to G.L. c. 30A, § 8 and 220 C.M.R. §2.02*.

In its comments in that docket, MECO agreed that a narrow advisory ruling by the Department clarifying the eligibility of small scale Solar+Storage facilities for net metering services was necessary at this time. Because the Company asserts that “the status quo maintained by the Company is ineligibility,” MECO concurred with the necessity for timely clarity on the matter “in order to eliminate regulatory uncertainty and to assist the Company and its customers to better understand and achieve compliance with the net-metering rules.”<sup>14</sup> MECO also emphasized that its policy and technical concerns with paired systems did not need to be addressed in the instant matter, as its concerns were mostly mitigated where paired systems met the limitations outlined in Tesla's Petition.

The Department issued an interim advisory ruling on September 12, 2017, finding that small scale solar & battery storage facilities configured in the manner as described in the Petition were eligible to net meter.<sup>15</sup> The Department noted that the legislature had not addressed the interaction between Solar Net Metering Facilities and Energy Storage Systems. As such, the Department recognized that a regulatory gap exists regarding Energy Storage Systems and Solar Net Metering Facilities subject to G.L. c 164 §§138-140, thereby creating uncertainty for net

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<sup>13</sup> Tesla's petition to the M.D.P.U. included an additional criterion for a “Small Scale Solar + Storage” system, namely, that the battery would not export to the electric power grid.

<sup>14</sup> M.D.P.U. 17-105, Initial Comments of Massachusetts Electric Company, each d/b/a National Grid, at 3 (June 23, 2017).

<sup>15</sup> M.D.P.U. 17-105 at 4.

metering stakeholders. The Department went on to say that 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. Thus, by supporting the eligibility of Small Scale Solar+Storage Facilities for net metering services, consistent with comments received by interested stakeholders, the Department's interpretation of this regulatory gap was consistent with the larger legislative design to encourage the development of renewable and alternative energy throughout the Commonwealth, including the use of Energy Storage Systems. Further, the Department agreed that other considerations "are mostly mitigated if a solar net metering facility paired with battery storage complies with the limitations outlined in Tesla's position."

Battery-enabled shifting of load to reduce demand when electricity is most expensive is exactly the type of behavior regulators are seeking to encourage. Studies show that customer-sited, behind-the-meter energy storage can provide the largest number of services to the customer and to the electricity grid. Behind the meter storage can provide customer services (backup power, increased PV self-consumption, time-of-use bill management, etc.), utility services (distribution deferral, transmission deferral, transmission congestion relief, resource adequacy) and even ISO services (energy arbitrage, spin and non-spin reserves, frequency regulation, voltage support, and black start).<sup>16</sup> Many of these benefits cannot be realized unless the battery is enabled to export stored clean energy to the electricity grid.

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<sup>16</sup> Fitzgerald, Garrett, James Mandel, Jesse Morris, and Hervé Touati. The Economics of Battery Energy Storage: How multi-use, customer-sited batteries deliver the most services and value to customers and the grid. Rocky Mountain Institute, September 2015. <<[http://www.rmi.org/electricity\\_battery\\_value](http://www.rmi.org/electricity_battery_value)>>

Significantly, the California Public Utilities Commission issued a ruling that made explicit its intent to prioritize and incentivize paired projects that provide “grid support.”<sup>17</sup> Restricting export from battery storage systems would restrict the operational capability of the battery system to provide the maximum benefits to the grid.

### **III. CONCLUSION and PRAYER FOR RELIEF**

For the reasons stated herein, the Parties urge the Commission to issue a narrow Declaratory Judgment or Advisory Ruling confirming that Small Scale Solar+Storage systems, where the battery storage component charges only from the solar power generation system, with specific limitations on rate classifications where the battery exports to the electric grid, are eligible for net metering services.

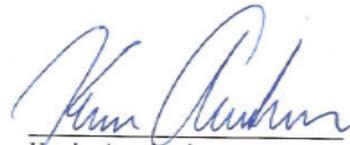
Further, the Commission is respectfully urged to promptly initiate a full investigatory proceeding to address the NEM eligibility of all solar systems paired with storage. In the interim, the Parties requests that the Commission issue an order that will allow projects meeting

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<sup>17</sup> See Orders issued on June 23, 2016 and June 2, 2017, in D. 16-06-055, *Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues*.

the Rhode Island Small Scale Solar+Storage system criteria set forth herein to go forward.

Respectfully submitted,

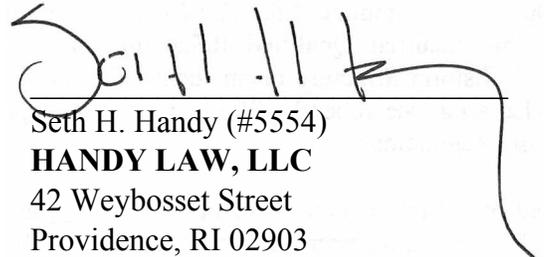


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