

**Public Service Commission**

**of the**

**District of Columbia**

**Report Pursuant to the  
Renewable Portfolio Standard Expansion  
Amendment Act of 2016**

**March 1, 2017**

Pursuant to the requirements of the Renewable Portfolio Standard Expansion Amendment Act of 2016 (D.C. Law 21-154, effective October 8, 2016) the District of Columbia Public Service Commission submits the following report to the D.C. Council. Specifically, this report is submitted in fulfillment of Section 2b of the Act (D.C. Code § 34-1432(f)) which provides that:

No later than March 1, 2017, the Commission shall provide a report to the Council that includes:

- (1) An estimate of the amount of solar energy generated annually by solar energy systems in the District that could qualify to be used to meet the annual solar energy requirement, but for which renewable energy credits cannot be purchased by electricity suppliers to meet the solar energy requirement; and
- (2) A recommendation for how the Commission could adjust the annual solar requirement to account for the amount of solar generation identified in paragraph (1) of this subsection.

The report consists of a brief background section, a section addressing a method for making an annual estimate of the amount of District-based solar facilities for which renewable energy credits are not available for purchase, a section addressing a method for annually adjusting the solar requirement to include the capacity of these facilities, and a summary of the Commission's recommendations. The Commission is available to discuss any of the information and recommendations in the report with the Council.

## **I. Background**

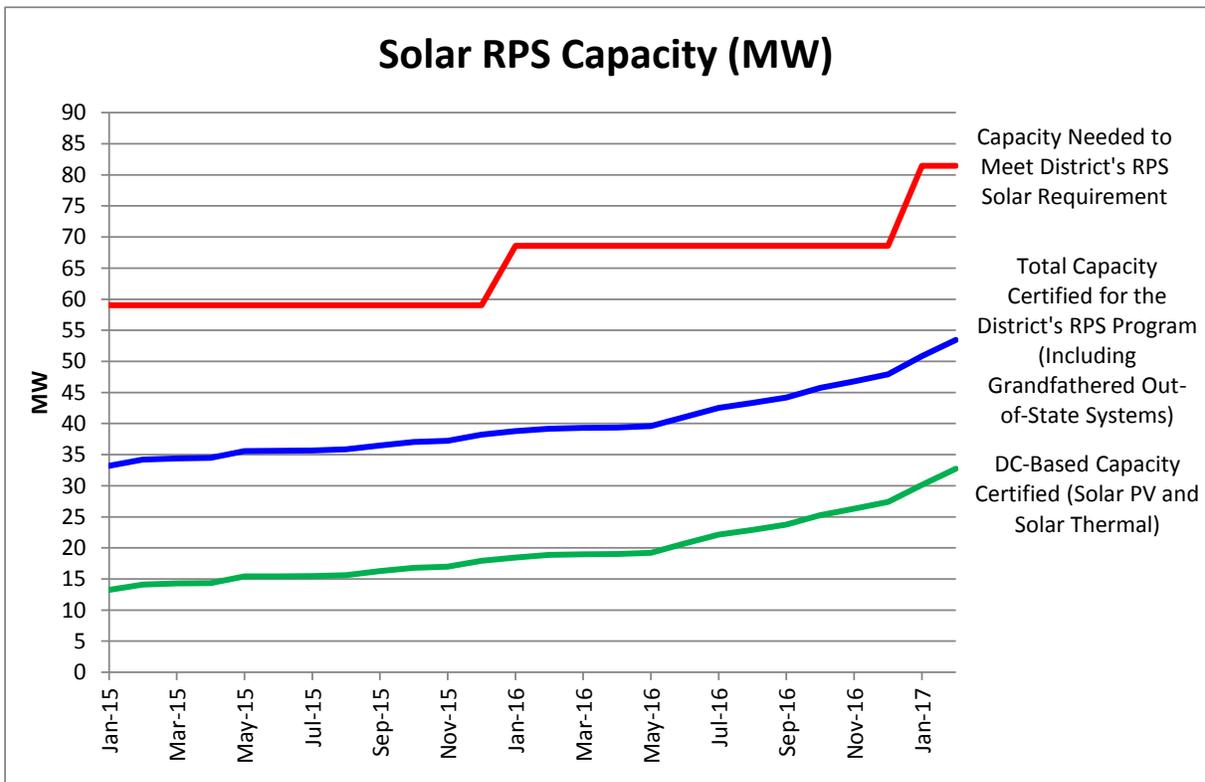
The Renewable Portfolio Standard law in the District requires each retail supplier of electricity licensed by the Commission to demonstrate that a certain percentage of the electricity sold to District customers is associated with renewable sources. The requirement also applies to the provider of default Standard Offer Service (SOS) for customers who do not purchase electricity from a licensed supplier. Under laws passed by the Council, the percentage of electricity required to come from renewable sources increases each year. Prior to enactment of the Renewable Portfolio Standard Expansion Amendment Act of 2016 the overall percentage of electricity sold to consumers in the District that each supplier was required to associate with renewable sources increased annually until it reached 20% in 2023. The 2016 Amendment Act extended the annual increases until reaching 50% by 2032.

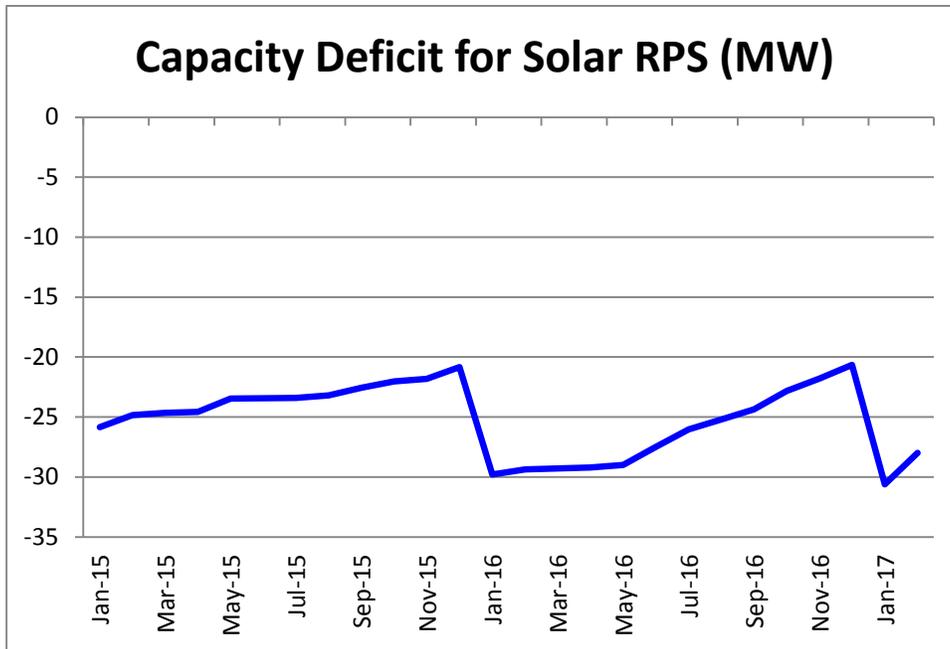
In addition, within the required overall annual percentages, the RPS law includes a so-called "carve out" requirement for electricity from solar sources. Under the carve out provision prior to the Distributed Generation Amendment Act of 2011, suppliers had to first attempt to satisfy the requirement using facilities located in the District and could use solar associated with facilities located within PJM or a state bordering PJM if DC-based sources were not available. The 2011 amendment to the RPS law significantly changed this by requiring that, except for a small 20 MW of grandfathered facilities, the solar carve out could only be met using solar associated with facilities located in the District or on a feeder serving

the District. The solar carve out percentage was set at amounts that increased annually to 2.5% by 2023. The 2016 Amendment Act retained the District based requirement and further increased the solar carve out annually until reaching 5% by 2032.

Retail suppliers can meet the RPS requirements in only one way—by the purchase of Renewable Energy Credits, or RECs, associated with facilities that have been certified by the Commission as eligible to participate in the RPS program. In the case of solar facilities eligible for the carve out, the Commission may only certify a facility if it is physically located in the District or on a feeder serving the District (i.e. a facility located in nearby areas of Maryland on a feeder that serves both jurisdictions). If RECs are not available for purchase, a retail supplier must meet the balance of the sales percentage requirement by the payment of an alternative compliance fee. The price of the fee for each category of renewable resource is set by the Council in the statute and the amount of the solar compliance fee was set to decline, in 2017, as the percentage requirement increased. However, the 2016 Amendment Act delayed the decline of the fee associated with the solar carve out and kept it at 50 cents per kilowatt-hour (kWh) through 2023.

While the number and capacity of District-based solar facilities certified by the Commission to sell solar RECs (SRECs) to retail suppliers for satisfaction of the District’s Renewable Portfolio Standard requirement program has increased significantly over time, the amount of available SREC capacity is still well below the capacity required to meet the RPS requirement. The following charts display the continuing deficit.





In its comments on the proposed Amendment Act, the Commission expressed concern about the cost to consumers of the increase in the solar carve out and the maintenance of the higher solar alternative compliance fee for an additional seven years. Both the cost of the purchased SRECs and the price of the Alternative Compliance Fee are passed on to consumers by the retail suppliers and the SOS provider. The Commission estimated that the cost to consumers could reach over \$100 million in 2023.

The Commission also noted that looking only at facilities that had been certified by the Commission for the sale of SRECs to retail suppliers did not give the full picture of the amount of electricity generated and consumed from solar resources located in the District, because it did not include facilities that were generating electricity from solar but were not certified for participation in the sale of SRECs. There are a number of reasons an owner of a solar facility might not certify its facility for the sale of SRECs. For example, if the SRECs are sold a building owner cannot count the solar facility for points in obtaining LEED, or Leadership in Energy and Environmental Design, certification—a significant consideration for commercial building owners. The Commission suggested that the Council might want to adjust the RPS requirement to account for these additional facilities. The Commission’s comments led to the requirement in the 2016 Amendment Act for a report to the Council on how such a broader picture and adjustment might be accomplished.

## II. Analysis

The Commission staff has considered various sources of information that are available to determine the total capacity of solar facilities located in the District. In addition to the Commission’s database of certified facilities, Pepco maintains a database of facilities that have been approved for interconnection with Pepco’s distribution system. This database includes all interconnected facilities, whether or not the owner has taken the second step of seeking certification for participation in the sale of SRECs. By comparing the solar

photovoltaic (PV) systems that have been interconnected to Pepco's distribution system with the solar PV applications that have been submitted to the Commission for certification in the District's RPS program, the additional capacity can be identified.

In response to Order No. 18575 (issued October 17, 2016), in Formal Case No. 1050, Pepco provided information on the interconnection of systems through 2016. The solar PV systems included in Pepco's filing are reported to have a capacity of about 31,022 kilowatts (kW). As of February 1, 2017, the Commission has approved solar PV systems in the District with an estimated capacity of 27,582 kW. In addition, based on information obtained from the Renewable Electric Plant Information System (REPIS) database developed by the National Renewable Energy Laboratory (NREL), we adjusted the data to account for 356 kW of systems not contained in Pepco's interconnection database. This results in 3,795 kW of solar capacity that is "unaccounted" for in the District's RPS program.<sup>1</sup> This unaccounted for capacity can be converted into solar energy generation by using software, developed by NREL, called PVWatts®. Based on NREL's PVWatts® calculation, 1 kW of capacity produces about 1,329.5 kWh per year, or about 1.330 MWh per kW. Multiplying the latter number by the "unaccounted" for capacity of 3,795 kW yields roughly 5,046 unaccounted for renewable energy credits—1 REC is equal to 1 megawatt-hour (MWh) of electricity generation—which would be produced annually. This estimate satisfies the request in Item (1) of the Act above.

With respect to Item (2) of the Act, one can subtract the unaccounted for RECs from the estimated number of solar RECs needed to meet the RPS requirement in say 2016, for example, and estimate a new percentage requirement. The current solar requirement for 2016 is 0.825%. Based on Pepco's response to a Commission data request, the reported retail electricity sales for 2016 are 11,050,011.956 MWh and, after multiplying the previous solar requirement for 2016, yields a total number of required solar RECs of 91,162 (about 68.6 megawatts (MW) of solar capacity). Subtracting the unaccounted solar RECs from the required solar RECs yields a net amount of 86,116 solar RECs (roughly 64.8 MW).<sup>2</sup> This latter figure is equivalent to an RPS solar requirement of about 0.779% for 2016. Thus, if implemented, the unaccounted for solar RECs would produce a lower solar requirement that electricity suppliers would meet for the 2016 compliance year. This procedure would satisfy the request in Item (2) above.

The table below summarizes the two items (in bold) required, pursuant to the RPS Amendment Act of 2016. In particular, based on the available information, an estimated 5,046 MWh (or 5,046 solar RECs) would not be available to electricity suppliers to meet the District's solar energy RPS requirement at this time. Accounting for these unavailable solar RECs would lower the 2016 RPS requirement, for example, from 0.825% to 0.779% (an adjustment of 0.046%).

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<sup>1</sup> The Commission is also trying to make adjustments, as necessary, to account for any discrepancies between the data received from Pepco and the renewable portfolio standard ("RPS") applications submitted to the Commission in order to be certified for the RPS program.

<sup>2</sup> The adjustment of about 3.8 MW is roughly 5.5% of the 68.6 MW RPS solar requirement for compliance year 2016.

	MW	MWH
2016 RPS Requirement (0.825%)	68.6	91,162
<b>Adjustment</b>	<b>3.8</b>	<b>5,046</b>
<b>2016 Revised RPS Requirement (0.779%)</b>	<b>64.8</b>	<b>86,116</b>

### III. Next Steps

Assuming that new legislation were to adopt the two requirements outlined in the Act, the remaining issues that would need to be addressed by the Commission are related to obtaining the data and the timing of informing the suppliers of the new solar requirement:

- First, the Commission would need the compliance year electricity sales and an update of interconnection approvals, which could be obtained from Pepco by mid-January.<sup>3</sup>
- Next, the process proposed in Section II would then be applied to the new data, producing a revised RPS requirement for the following compliance year.
- Subsequently, the Commission would inform the Council of the proposed adjustment—a 0.046% reduction in this example—in the annual report due to the Council on May 1. The proposed adjustment would also be put out for review and comment through the Commission’s regular public process. The Commission would issue a decision annually by August 1 on any adjustment, which would then be applied to the next compliance year filing by electricity suppliers.<sup>4</sup> This schedule would give adequate opportunity for all interested persons to weigh in and comment on the proposed adjustment, and would inform suppliers of any adjustment prior to the start of a new compliance year.

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<sup>3</sup> It is possible that Pepco’s reported distribution sales may differ from the sales provided by electricity suppliers in their RPS compliance reports.

<sup>4</sup> Thus, following this example, the 0.046% reduction would be applied to the solar RPS requirement for the 2017 compliance year.