

December 21, 2018

The Honorable Phil Mendelson  
Chairman  
Council of the District of Columbia  
1350 Pennsylvania Avenue NW, Suite 504  
Washington, DC 20004

**RE: Annual Report of the Sustainable Energy Utility Advisory Board**

Dear Chairman Mendelson:

Pursuant to Section 204(g) of the Clean and Affordable Energy Act of 2008 (CAEA), D.C. Law 17-250, I hereby transmit the Sustainable Energy Utility Advisory Board's (Board) Annual Report (Report) on behalf of the Board. This Report provides the Board's assessment of the DC Sustainable Energy Utility's (DCSEU) performance in FY 2017, and offers recommendations to the Department of Energy & Environment (DOEE) and the Council of the District of Columbia (Council). This Report was approved by the Board. It is the Board's understanding that DOEE will make this Report available to the public on its website within 10 days of its submission to the Council, as required by the CAEA.

Please feel free to contact me at the telephone number or e-mail address below, or Dr. Taresa Lawrence at 202-671-3313, if you have any questions regarding this report.

Sincerely,



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Chair, SEU Advisory Board  
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Enclosure

cc: Nyasha Smith, Secretary of the Council  
Councilmember Mary Cheh, Chairperson, Committee on the Environment, Public Works and  
Transportation

**SEU Advisory Board FY 2017 Annual Report**  
**December 21, 2018**

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## I. Executive Summary

As we will discuss further in this Report by the District of Columbia Sustainable Energy Utility (“DCSEU”) Advisory Board (the “Board”) on the DCSEU’s fiscal year (FY) 2017 performance, with the exception of the several items noted below, it appears that the DCSEU’s new multi-year contract vehicle is working well, and producing good results for the District. Against that backdrop, the Board notes that at the same time it is filing this Report, it will not be known whether pending legislation (B22-904) that will address the role for the District’s electric and natural gas utilities in implementing energy efficiency and demand reduction programs. Until now, responsibility for energy efficiency was borne mostly by the DCSEU. The Board takes no position on whether the utilities can perform better than can the DCSEU, and notes that some states have obtained great successes through collaborative efforts between the utilities and energy efficiency service providers.<sup>1</sup>

The Board notes that the NMR Group, Inc. (“NMR”), the new Evaluation Measurement & Verification (“EM&V”) Contractor, found that the DCSEU’s costs of saved energy for low-income programs is about 6x greater than the rest of its portfolio, but that its costs are similar to a nation-wide study, which found costs to be 4x greater.<sup>2</sup> In any event, the Board notes that if the legislation becomes law, it will be incumbent upon it (and of course, upon the DCSEU, the District’s utilities, the District of Columbia Public Service Commission (“DC PSC”), the District Department of Energy and the Environment (“DOEE”), and stakeholders) to ensure that the split, or sharing, of responsibility, only compliments and surpasses the high bar the DCSEU is setting, and accelerates the delivery of maximum benefits for the District’s ratepayers, and achievement of the District’s ambitious low-carbon objectives.

Generally, the Board wishes to communicate several observations, the first of which relates to the discussion, above. First, while in FY2017, the DCSEU achieved the minimum target for all six of its annual benchmarks, as well as the maximum targets for three out of the five of its annual numeric benchmarks (see Summary Table, below), all in a manner NMR found to be cost-effective,<sup>3</sup> the DCSEU did fail to achieve its maximum target for low-income savings, as well as its maximum target for green jobs.<sup>4</sup> Notwithstanding these shortfalls, NMR was optimistic that the second year of the new DCSEU contract would provide the DCSEU with the opportunity to leverage external funds to achieve the maximum green jobs target, and to realize savings from longer-term low-income projects to achieve the maximum low-income savings target. NMR Report, p. 1.

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<sup>1</sup> See

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=2ahUKEwjA8-fq\\_PLeAhUrqlkKHWKJAKiQFjADegQIBBAB&url=https%3A%2F%2Fwww.masssave.com%2F&usg=AOvVaw0o1SiJzRHX-kTdrAi9i03e](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=2ahUKEwjA8-fq_PLeAhUrqlkKHWKJAKiQFjADegQIBBAB&url=https%3A%2F%2Fwww.masssave.com%2F&usg=AOvVaw0o1SiJzRHX-kTdrAi9i03e), which states that Massachusetts, which employs such approach, has been #1 in energy efficiency for 8 straight years.

<sup>2</sup> NMR Group, Inc., et al., *Performance Benchmark Assessment of FY2017 DC Sustainable Energy Utility Programs*, Sept. 28, 2018 (hereinafter, “NMR”), p. 23. (<https://doee.dc.gov/publication/dcseu-evaluation-measurement-verification-reports>)

<sup>3</sup> NMR’s cost-effectiveness testing found that the DC SEU portfolio was cost-effective as a whole, although the two residential programs were not cost-effective. NMR, p. 1.

<sup>4</sup> NMR, p. 4.

**Table 1: DCSEU FY2017 Performance Benchmarks Summary**

Benchmark Type	Benchmark	Verified Results	Minimum Benchmark		Maximum Benchmark	
			Target	Achieved	Target	Achieved
Annual Target	Reduce Electricity Consumption (MWh)	92,686	60,878	✓	86,473	✓
	Reduce Natural Gas Consumption (Therms)	1,998,033	852,565	✓	1,705,129	✓
	Increase Renewable Energy Generating Capacity (kW)	2,244	650	✓	1,000	✓
	Improve Energy Efficiency of Low-income Properties	Expenditures \$3,898,925	\$3,834,596	✓	n/a	n/a
Five-Year Cumulative Target		Savings (MMbtu) 28,858	23,278	✓	46,556	X
	Increase Green-collar Jobs	84	66	✓	88	X
	Leverage External Funds	\$439,111	\$2.5M	n/a	\$5.0M	n/a

Source: Table 2: FY 2017 Performance Benchmarks Summary, NMR, p. 3.

And indeed, in the second year of its new contract, the DCSEU made substantial progress in closing those two gaps. Thus, while in FY2017, the DCSEU achieved only 62% of its maximum low-income savings target,<sup>5</sup> the as-yet unverified results show that in FY 2018, it achieved 94% of its maximum low-income savings target.<sup>6</sup> Similarly, while in FY 2017 it missed (but only barely) its maximum target for green jobs (it achieved 95%), the as-yet unverified results show that in FY 2018, the DCSEU achieved 100% of its green jobs target. The Board applauds the DCSEU on its progress. However, the Board has questioned and expects it will explore in FY 2019 whether the change to the DCSEU contract that now requires that each dollar spent in the low-income arena produce a set amount of low-income savings, has necessitated a shift in the kind of projects carried out in the low-income space, by discouraging the DCSEU from pursuing certain low-income projects, because of the challenges in finding the requisite degree of annual savings.

Second, the Board notes a continued tension between the ways with which the DCSEU’s success can be measured. NMR found that the DCSEU’s energy savings obtained in the first-year of the contract were cost-effective.<sup>7</sup> While the Board applauds such success, the Board questions whether greater savings might be achieved if savings were rewarded over a longer term. For example, would installation of high efficiency water heaters, which can provide decades of lower energy use, produce greater overall savings than would changing out light bulbs, which produce robust first-year savings? The Board recognizes, however, that altering the DCSEU’s targets in

<sup>5</sup> NMR Report, Fig. 1.

<sup>6</sup> DC SEU FY 2018 Annual Report, Table 1.

<sup>7</sup> NMR Report, Table 27.

the midst of a five-year contract could frustrate the DCSEU's ability to achieve any of its five-year targets.

Third, the Board notes an increasing need to align the DCSEU's achievements and the District's evolving objectives. At the time the DCSEU was created more than a decade ago, the Council and the Mayor placed a primacy on reducing energy consumption. Since that time, however, both have made a priority of reducing greenhouse gas emissions, which metric is absent from the DCSEU's performance benchmarks and tracking requirements. The Board views such alignment as critical, not only to ensure the DCSEU's continued success, but also to the District's achievement of its decarbonization goals. The Board questions whether the metrics which were converted from performance benchmarks to tracking goals<sup>8</sup> would be better able to support the District's objective of reducing greenhouse gas emissions if they were converted to performance benchmarks again. These are discussed further, below.

## II. Board's Activities this Year

The Board increased the numbers of times it meets from once every other month, to once a month, with the proviso that it would cancel if there were no need to meet so frequently. Board members believed it was difficult to keep momentum with meetings only every other month. The Board met 12 times in FY 2017, including once over the phone.

The Board believes it made sound contributions to the DCSEU's operations, and in assisting the DCSEU in communicating its performance to stakeholders, either in Board meetings, or in written product. In particular, in addition to its regular activities, the Board did the following:

- a) Suggested edits that were incorporated into this year's EM&V report, chiefly to provide comparisons with other jurisdictions, and/or with the DCSEU's past performance;
- b) Requested and obtained the ability to review significant contract modifications being contemplated by the DCSEU and DOEE, time permitting;
- c) Requested and obtained clearer reporting on achievement of minimum and maximum performance benchmarks; and
- d) Requested inclusion of three items on the agenda for each Board meeting:
  - Reporting by the DCSEU on its expenditures;
  - DOEE reporting on legislative, regulatory and/or administrative or other developments that were relevant to the DCSEU's performance;
  - Reporting by the DCSEU on perceived obstacles to its success.

There is room for improvement with regard to the latter item – maintenance of the three above-identified running items on the agenda, and provision of content thereon.

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<sup>8</sup> The CAEA initially mandated the achievement of six performance benchmarks in the DCSEU contract, including reduction in energy consumption, increase in renewable energy generating capacity, improving the energy efficiency of low-income housing, increase in the number of green jobs, reducing the growth of peak electricity demand and reduction of the energy demand of the largest energy users. However, the peak demand and largest energy users benchmarks were subsequently changed to tracking goals, in a subsequent legislative amendment.

### III. Changes to Contract

The new DCSEU contract included revised language in keeping with updated procurement and other District requirements, and prior year legislative amendments (specifically authorization for a multiyear DCSEU contract). The following provides a snapshot of the changes made specific to the DCSEU contract:

**1) Definitions**

Updated definitions of low-income clinics and technical assistance.

**2) Performance Benchmarks and Metrics**

- a) Cumulative Performance Benchmarks: Reduce Electricity Consumption, Reduce Natural Gas Consumption, Increase Renewable Energy Generating Capacity, and Leverage External Funds.
- b) Annual Performance Benchmarks: Improve Energy Efficiency of Low-Income Properties (includes both spending and energy savings targets) and Increase Green-Collar Jobs.
- c) Annual independent measurement and verification of DCSEU's performance against established benchmarks.
- d) Clarification of methodology for modified gross verified natural gas savings as the claimed savings towards the annual reduction in weather-normalized total natural gas consumption.
- e) An automated Green Job Tracking System to capture FTE green job-hours.

**3) Strategic Plan**

- a) Required within 90 days of contract execution to lay out how the Contractor will meet the performance goals over the base period of this Contract.
- b) Intended to be a living document, and updated as needed to align with changes in the annual or other plans.

**4) Requirements Regarding Certain Expenditures:**

- a) Clarified that expenditures are not reimbursable if they are outside of the guidance and / or rules proscribed in IRS guidance or OMB guidance.
- b) DOEE must provide prior approval for expenditures related to sponsorships, parking, food and beverages, except as part of employee's travel expenses.
- c) Travel expenses must be accordance with federal travel guidelines and per diem rates for lodging, meals and incidentals.
- d) Reimbursement procedures are submitted annually for DOEE's review.
- e) Updated components of General & Administrative expenditures, and applied a 20% cap (of cost-reimbursement ceiling).

**5) Dispute Resolution**

Third-party mediator to resolve disputes between DCSEU and their subcontractors.

**6) Workforce Training Requirements**

Must actively support District-based workforce training programs.

**7) Innovation Fund Programs**

- a) Budget cannot exceed 5% of the annual funds from the SETF.
- b) Innovation programs shall be subject to review and approval by DOEE.
- c) 3-year limitation on Pilot Programs.

**8) Subcontracts**

All executed subcontracts to be submitted to the Contract Administrator within 7 days.

**9) Invoices**

Updated procedures for submitting invoices and resolving discrepancies.

**10) Press releases**

Must be approved by DOEE prior to release.

**11) Reserve Funds**

Requirement to maintain a capital reserve or line of credit sufficient to cover approved subcontractor invoices for an average month of expenses paid out to the subcontractors.

**12) Key Personnel**

Providing notification prior to reassigning or discharging Key Contractor Personnel.

**13) Operational Liaison**

Designation of a DOEE Operational Liaison to increase coordination, collaboration, and communication between DOEE and Contractor for the efficient and effective performance of this Contract.

#### **IV. Legislative or Other Changes that Impacted the DCSEU**

The Renewable Portfolio Standard Expansion Amendment Act of 2016, effective October 8, 2016, (D.C. Law 21-154; 63 DCR 12926) (Act) established the District of Columbia’s Solar for All Program (“SfA”). Section 216 (b) of the Act specified that SfA shall be administered by DOEE, and shall coordinate with DCSEU. Pursuant to Sec. 216(c) of the Act, SfA shall be funded annually from the Renewable Energy Development Fund (“REDF”), and REDF funding for SfA may be used to supplement programs supporting the creation of new solar energy sources in the District through the DCSEU contract – Sec. 216(d).

PSC Order No. 18846 directed Pepco to become a more engaged partner with the DCSEU, particularly with regard to load forecasting. The Board requests that Pepco and the DCSEU inform it as to the status of these paragraphs’ implementation, the outcomes, if any, and whether there were any lessons to be learned that would be informative.



## V. Natural Gas Consumption

In 2017, the DC SEU exceeded both the minimum and maximum targets for reduction in natural gas consumption. With verified results of 1,998,033 therms, the DC SEU exceeded the maximum target of 1,705,129 therms by 17%. Verified results are based on NMR's modified gross gas savings which are, according to NMR, "*calculated from gross savings by excluding the cross-fuel interactive effects that reflect the increase or decrease in energy usage due to the installation of an energy-efficient measure.*"<sup>9</sup> On a goal achievement basis, the DC SEU outperformed the 2016 results significantly, a year in which they only exceeded the minimum target. The move to a multi-year contract, which allows for flexibility for funding incentives for projects that straddle multiple fiscal years, will open new opportunities in future program years. We see this already occurring in 2017, as the verified results of nearly 2 million therms saved is a substantial increase from the 100,900 therms saved in 2016.

Of the verified results, 93% of the savings came from three Commercial & Institutional ("C&I") Services Programs: Custom Retrofit, Custom Market Opportunity, and Custom New Construction. Program descriptions, as included in the 2017 EM&V Report are:

### **Retrofit - Custom**

The Custom Retrofit program is a component of the C&I Custom Services ("Non-prescriptive") initiative, which provides incentives to owners of large buildings who replace equipment prior to the end of its useful life. The program offers incentives for a variety of equipment types, including lighting, chillers, boilers, heat pumps, steam systems, insulation, refrigeration, and various building and equipment controls. Through this program, DCSEU provides technical assistance to help decision makers design, scope, and fund their projects. Funding is available through a traditional rebate structure, in which participants are paid per unit of energy saved, but also through partnerships with lenders in the District who may provide up to 100% of a project's cost.

### **Market Opportunities - Custom**

The Market Opportunities program is a component of the C&I Custom Services ("Non-prescriptive") initiative. The Market Opportunities program focuses on major renovation projects and retrofit projects where equipment is at the end of its life. The key features of the program offset the incremental costs of adding more energy efficient equipment compared to the current energy code and provide comprehensive technical services.

### **New Construction - Custom**

The New Construction program is a component of the C&I Custom Services ("Non-prescriptive") initiative. The New Construction program focuses on new construction buildings. Typically projects in this program are reviewed and analyzed with energy models from the customer. The key features of the program offset the incremental costs of adding more energy

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<sup>9</sup> NMR Report, p.9.

efficient equipment than the current code requires and provide comprehensive technical services during design stage.

Additionally, heating measures resulted in 94% of the gross gas savings, with only 2% gross savings coming from hot water and 3% from shell measures. C&I heating projects were the driving force behind the DC SEU achieving the natural gas consumption goal.

The DC SEU should continue to identify these C&I projects that drive an elevated level of savings and build a significant pipeline of projects. The DC SEU should also focus on increasing participation in residential programs to balance the portfolio of gas savings. In the event that one or two C&I custom gas projects are delayed or cancelled, higher participation in other programs will ensure the DC SEU does not miss its goals.

**Table 2: DCSEU Modified Gross Natural Gas Savings**

DCSEU Program	Therms Saved		Percentage of Modified Gross gas Savings
	Tracked	Modified Gross	
Solar Hot Water	2,200	2,230	0.1%
Income Qualified	220	230	0.0%
HPWES	1,530	1,660	0.1%
Retrofit - Custom	1,108,820	1,038,420	52.0%
Market Opportunities - Custom	652,780	611,340	30.6%
New Construction - Custom	217,240	212,900	10.7%
LI Direct Install	40,650	40,650	2.0%
LI Custom	13,580	13,580	0.7%
LI MF	24,160	24,160	1.2%
Retail Appliances	3,700	3,690	0.2%
Retail Gas Products	49,190	49,100	2.5%
Retail Lighting	90	100	0.0%
	2,114,160	1,998,060	100.0%

Source: DCSEU FY2017 EMV Program Report – Final, September 28, 2018. Page 6, “Table 5: DCSEU Modified Gross Generator-level Program Savings.” NMR Group, Inc. (Table values converted from MMBTU to Therms).

The natural gas savings for 2017 may have been higher if application tracking was more rigorous. The DCSEU Advisory Board supports the NMR recommendation to track efficiency levels of all measures submitted through incentive applications, particularly gas measures. NMR noted that the “DCSEU assumed deemed capacity and AFUE values for all boilers and furnaces due to a concern that these inputs had not been consistently entered into the program tracking data in consistent units.”<sup>10</sup> NMR, in a desk review of a sampling of application, determined that efficiency levels were higher than the assumed 94% AFUE for furnaces and 85% AFUE for

<sup>10</sup> NMR Group, Inc., et al., *Evaluation of DC Sustainable Energy Utility Programs*, Sept. 28, 2018, p.33

boilers. Accurate tracking of deemed savings will help the DCSEU forecast goal achievement throughout the year and ensure that the DCSEU is getting credit for incentivizing the highest efficiency gas equipment.

Overall, the DCSEU exceeded its 2017 natural gas consumption goal with a significant increase in savings compared to 2016. Building a larger pipeline of C&I projects and increasing the participation in residential programs will help the DCSEU reduce the risk of missing future goals.

## VI. Electricity Consumption

### *Select Program Highlights*

In 2017, the DCSEU entered into a first of its kind partnership, since its inception, with the Department of General Services, focusing on District-run shelters. It was determined that allocating funding to support investments in reducing energy use in shelters is consistent with the DCSEU's goal of reducing the energy use of some of the District's most vulnerable residents and communities. The DCSEU reported that the investments will reduce the operating cost of the shelters by more than \$30,000 per year and will prevent the emission of 180 metric tons of carbon dioxide annually. There are 24 shelters in the District of Columbia jointly operated by the Department of Human Services and the Department of General Services. The DCSEU plans to work on improving the energy efficiency of other shelters, within this portfolio, in future years.

The DCSEU continues to focus its attention on increasing access to solar energy for all, in particular, by focusing on larger projects. This effort is supported by DOEE and other key stakeholders. There has been a significant increase in solar installations in the District of Columbia which has resulted in a decrease in electricity supplied from outside the District. Installed solar capacity in the District increased by 16.3 MW during FY 2017, of which DCSEU accounted for approximately 2.44 MW. In addition, the DCSEU has partnered with the federal government, through the General Services Administration (GSA), to advance solar installations. The DCSEU was engaged in 2014 with GSA for assistance in reducing the cost of solar installations. The expansion of solar to federal properties will have a significant impact on reducing energy usage and greenhouse gas emissions in the District of Columbia.

To facilitate increased solar installations, Pepco, the District's electric utility, has streamlined and enhanced its solar application and review process and increased the ability to identify potential solar installation sites. The Public Service Commission of the District of Columbia exercises oversight over this process.

In 2017, new options were offered to the Commercial and Institutional market, with an emphasis on small and medium-sized businesses. The DCSEU also partnered with American University and the Howard University Hospital. Projects implemented at Howard University and American University have reduced gas and electric consumption. This partnership commenced in 2012. According to the DCSEU, energy savings have resulted in more than \$10.5 million in lifetime cost savings and have prevented lifetime emissions of 70,000 tons of carbon dioxide, which is equivalent to generating electricity for more than 10,000 homes for one year. The American

University pilot is projected to result in the reduction in carbon emissions by forty-two percent and a decrease in energy costs by thirty-six percent, and the payback period will be less than a year.

### *Performance Benchmarks*

In 2017, overall electricity consumption was reduced by more than 93,000 MWh, of which, 70% of total electric savings are attributed to Commercial and Institutional savings (DCSEU). This reduction exceeds the Performance Benchmark maximum annual target.

According to the NMR Group, EcoMetric Consulting, the entity that evaluated the energy efficiency and renewable energy programs, the estimated actual portfolio of electric savings is 99% of the DCSEU-tracked electric savings and the actual portfolio peak demand reduction is 96% of tracked peak demand reductions.

NMR found that tracked electric savings total 86,488, with a realization rate of 99% and evaluated savings of 85,312.<sup>11</sup> Peak demand tracked savings (MW) were 12.1, with a realization rate of 96% and evaluated savings of 11.6. The evaluation found that the three commercial custom programs are, largely, driving the savings. It was determined that lighting contributed to 1/3 of all energy savings; two-thirds of electric savings; and over one-half of demand savings.

The DCSEU modified gross generator-level program savings (electric), tracked for 2017 is 93,958 and evaluated is 92,686. Peak demand savings tracked is 12.9 percent and evaluated is 12.4. In FY17, the DCSEU met the minimum targets for each of the five performance benchmarks and achieved the maximum target for three of the five benchmarks.

**Verified Results:** Reduction of electric consumption is 92,686 and the minimum target was 60,876. The DCSEU exceeded the minimum and maximum benchmarks.

**Table 3: DCSEU Progress Against FY2017 Performance Benchmarks and Tracking Goals**

Benchmark	Description	FY 2017 Actual	FY 2017 Min. Target	% To Min. Target	FY 2017 Max. Target	% to Max Target
Reduce Electricity Consumption	Electricity Saved (MWh)	92,686	60,878	152%	86,473	107%
Increase Renewable Energy Generating Capacity	Solar Capacity Installed (kW)	2,244	650	345%	1,000	224%
Increase Energy Efficiency of Low-Income Properties	Total Energy Saved (MMBTU)	28,858	23,278	124%	46,556	62%
	Total Amount Spent on Low-Income Properties	\$3,898,925	\$3,834,596	102%	N/A	
Spending on Electric Programs	Total Amount of Expenditures Attributed to Electric Savings	\$13,469,131	\$11,502,085	117%	N/A	
Reduce Growth of Peak Demand	Reduction in Peak Demand Attributable to DCSEU Programs (kW)	12,409			N/A	

<sup>11</sup> NMR Group, Inc., et al., *Evaluation of DC Sustainable Energy Utility Programs*, Sept. 28, 2018, p.3.

<b>Reduce Growth of Energy Demand of Largest Energy Users</b>	Number of Large Energy Users (buildings >200,000 ft sq.) with whom the DCSEU has completed projects.	104	N/A
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Sources: Tables 2 & 3: FY 2017 Performance Benchmarks Summary, NMR, pp. 3,5; DCSEU FY17 Annual Expenditures

According to DCSEU data, the lifetime economic benefits for residential customers and the first-year annual energy cost reduction levels are as follows:

**Table 4: Lifetime Economic Benefits and Annual Customer Savings**

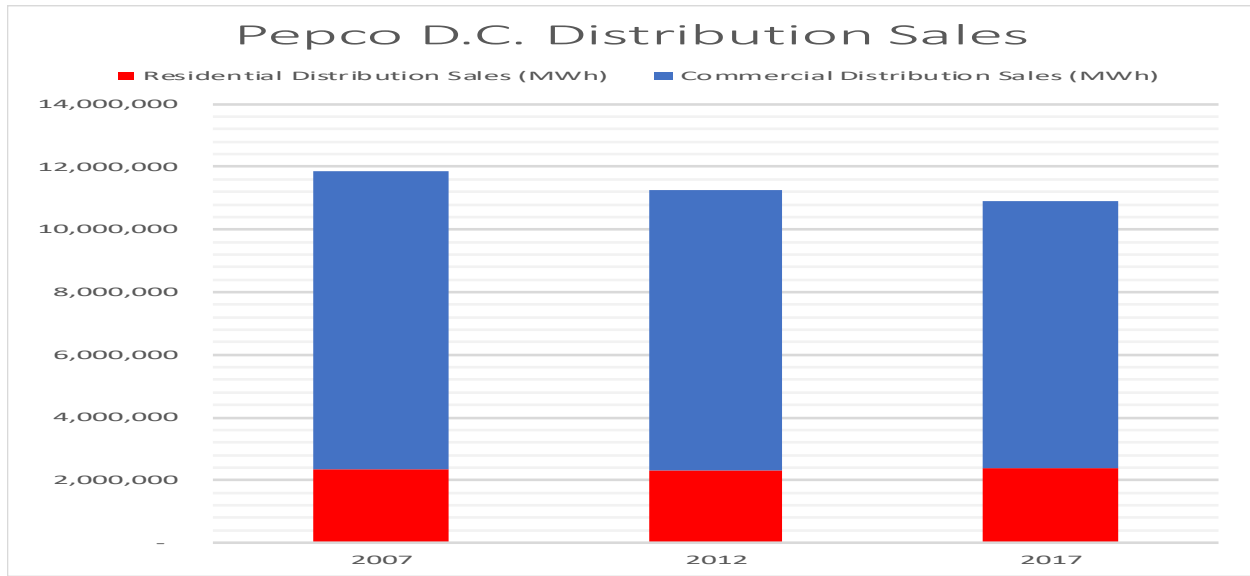
	Residential Customers	C&I Customers	Total
Lifetime Economic Benefits <sup>1</sup>	\$26,613,275	\$111,527,606	\$138,140,881
First-year annual energy cost reduction <sup>2</sup>	\$3,147,594	\$8,985,195	\$12,132,789

Source: DCSEU 2017 Annual Report, p. 36

*Electricity Sales (District of Columbia)*

The District of Columbia experienced an eight percent reduction in overall electricity sales from 2007 to 2017, unadjusted for weather (weather adjusted sales fell by 6.8%, highlighting the impact of temperature/humidity conditions on electricity use). However, during this same period, there was significant population and development growth. The increased energy consumption on the grid that would correspond with population and growth development was offset by gains in energy efficiency and conservation delivered by the DCSEU, increases in photovoltaic arrays, naturally occurring impact of increased local and federal efficiency codes and standards, residential housing types, and increased number of people per home. The net results have permitted the District as a whole to prosper and grow, while at the same time consuming less energy. Residential sales have increased approximately two percent, while population has increased by twenty-one percent, yet per capita KWh consumption, as measured by electricity sales, has decreased by fifteen percent over the same period. Commercial Sales have been reduced by eleven percent over the past ten years from 2007 to 2017 (separate weather adjusted sales are not readily available for residential and non-residential classes).

**Figure 1: Pepco D.C. Distribution Sales**



Source: Pepco

The 2017, unadjusted for weather, Total Distribution sales for Pepco DC was 10,892,209 MWhs, while the weather adjusted sales for the same period was 10,958,976 MWhs. In addition, the corresponding sales for 2007 baseline year and 2012 have also been provided below.

**Table 5: Pepco Historical Distribution Sales**

Pepco D.C. Sales	2007	2012	2017
Residential Distribution Sales (MWh)	2,333,431	2,314,580	2,383,362
Commercial Distribution Sales (MWh)	9,535,788	8,957,241	8,508,847
Total Distribution Sales (MWh)	11,869,219	11,271,821	10,892,209
Total WN Distribution Sales (MWh)	11,761,691	11,221,915	10,958,976

Source: Pepco

The reduction, unadjusted for weather sales, as a percent of the baseline year of 2007 were down 8.2%, while weather adjusted sales were down only 6.8%. Weather typically has a larger impact on residential buildings than commercial buildings due to their inherent thermal mass and typical shell and insulation characteristics. The detail on residential and commercial classes are based on unadjusted for weather sales, and the Commercial rate class has significant reduction of over ten percent in sales.

**Table 6: Pepco Weather Normalized and Non-Weatherized Sales Variance**

Sales Change	2007 to 2015	2007 to 2017
Weather Normalized Total	-4.6%	-6.8%
Non-Weatherized Total	-5.0%	-8.2%
Actual Residential	-0.8%	2.1%
Actual Commercial	-6.1%	-10.8%

Source: Pepco

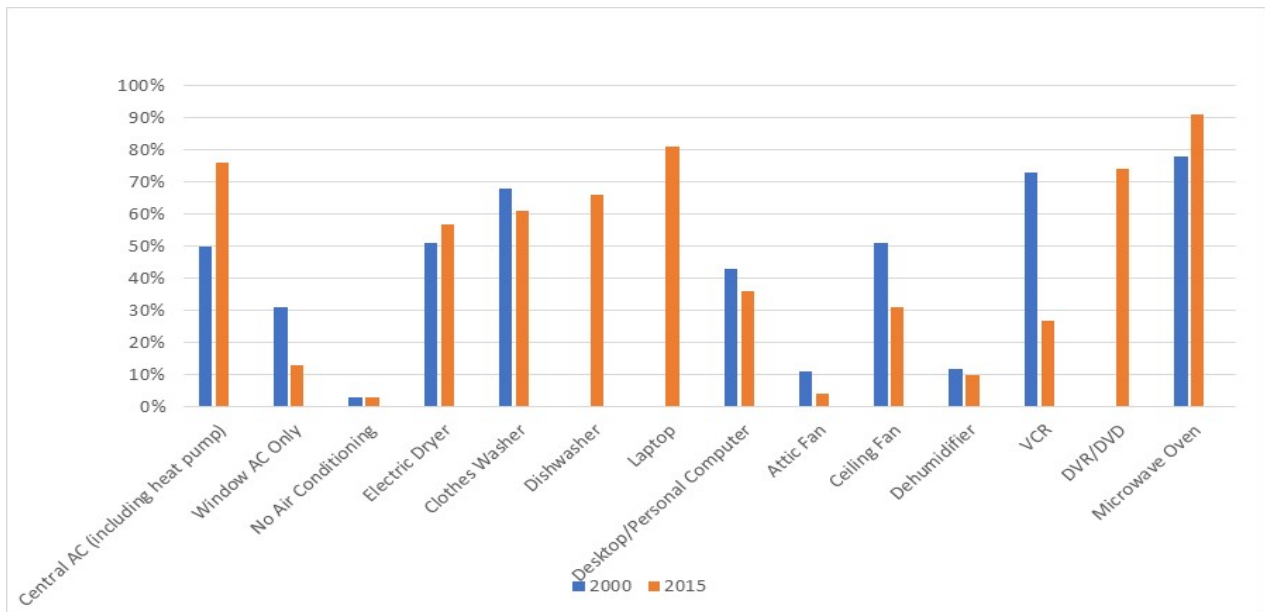
Pepco recently completed a Residential Appliance Saturation Survey which indicates that from 2000 to 2015, there has been a general trend of increasing household size per-dwelling unit from 2.2 to 3.4 persons. Most notably, there has been a notable increase in homes with central air conditioning (including Heat Pumps) from 50% to 76%, and an increase in the use of electronic plug loads. Yet, with a moderate two percent increase unadjusted for weather, Pepco DC residential electricity sales, when compared to a corresponding twenty one percent increase in population, had the net effect of a fifteen percent reduction in per capita consumption.

**Table 7: District of Columbia Per Capita KWh Sales**

Census Data	2007	2012	2017
Residential Population	574,404	635,630	693,972
Population Change	na	11%	21%
Residential kWh Per Capita	4,062	3,641	3,434
Per Capita decline from 2007	na	-10%	-15%

Source: Census Data sourced from <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml> and sales data from Pepco.

**Figure 2: 2015 Pepco D.C. Appliance Saturation Survey**



Source: Pepco

## VII. Increasing Renewable Energy Generating Capacity

See PSC’s RPS report for calendar year 2017:

<https://dcpsc.org/PSCDC/media/PDFFiles/NaturalGas/Report-on-REPS-for-2018-043018-final.pdf>



## VIII. Increasing Energy Efficiency of Low Income Properties

- a. *What criteria did DCSEU implement to identify low income single family and multifamily dwelling properties to implement energy efficiency measures?*

DCSEU used the following contract language as criteria to qualify single family and multi-family low income properties:

A.1.25 “Low-Income Households” are households that have annual incomes equal to or below 80% of the Area Median Income (“AMI”) or 60% of the State Median Income (“SMI”), whichever is higher. For a household of 4 persons, the area median income for a household of 4 persons in the Washington Metropolitan Statistical Area as set forth in the periodic calculation provided by the United States Department of Housing and Urban Development.

A.1.26 “Low-Income Housing” is defined as the District’s stock of affordable, low-income housing. It is defined as either (a) a single home where the owner or occupant meets the definition of “low-income households” in this Contract, (b) a multifamily building where at least 66% of the households meet the definition of “low-income households” in this Contract, (c) buildings owned by non-profit organizations or government that meet the definition of “low-income households” in this Contract, or (d) buildings where there are contracts or other legal instruments in place that assure that at least 66% of the housing units in the building will be occupied by low-income households.

- b. *How were the energy saving benchmarks established?*

The original FY 2017 – FY 2021 DCSEU contract had a floating energy savings goal of 10% total savings. This benchmark could not be known until *after* completion of a fiscal year and *after* a subsequent 3<sup>rd</sup> party evaluation (up to 1 year later). To address this issue, DCSEU and DOEE negotiated the benchmark to create a fixed savings target equal to 10% of the FY 2017 fixed energy savings benchmarks. Contract Modification (M03) is as follows:

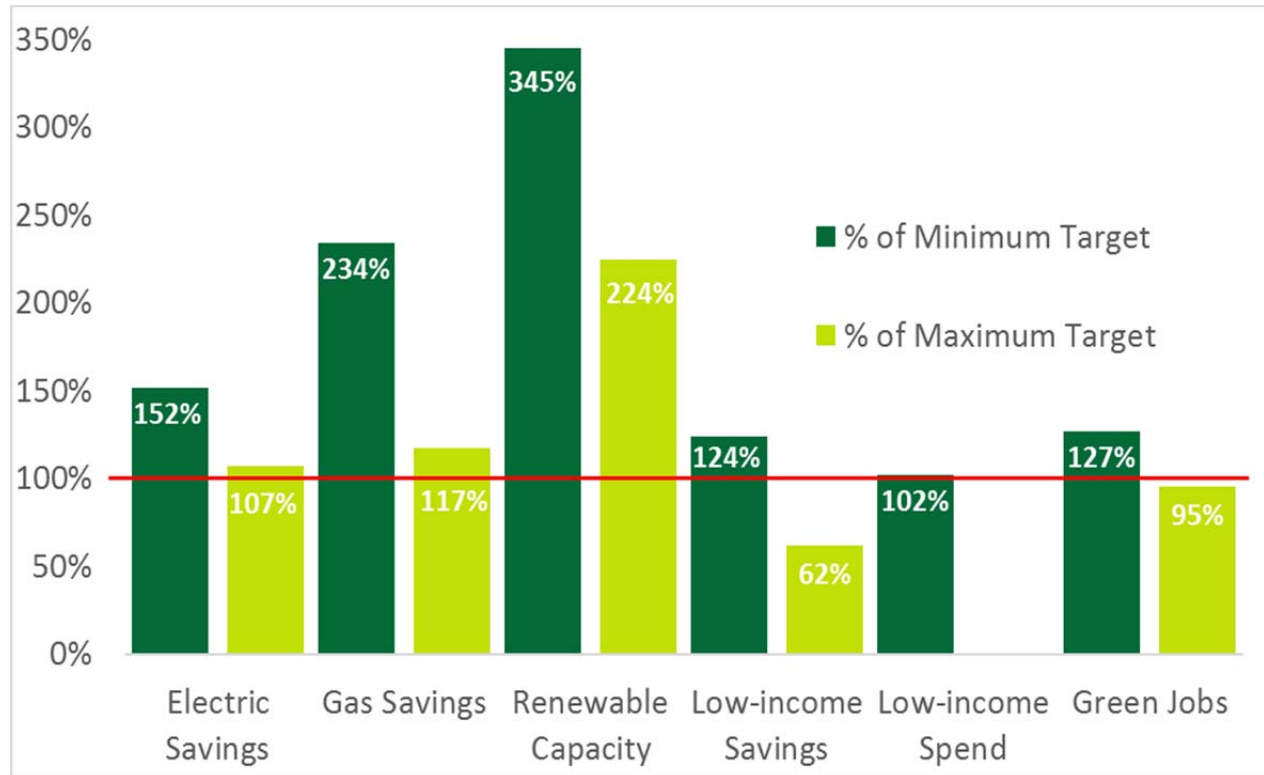
C.40.8.3.1.1 – delete in its entirety and substitute:

“On an annual basis, the Contractor shall achieve the following two requirements to be eligible for an incentive under the low-income benchmark. First, the Contractor must spend a minimum of 20% of the SETF funds allocated to this Contract on expenditures that increase the energy efficiency and renewable energy generating capacity of low-income housing, shelters, clinics, or other buildings serving low-income residents in the District. For example, if the Contractor’s annual expenditures from the SETF for a given fiscal year are \$19.179 million, the Contractor must spend a minimum of \$3.835 million in that fiscal year on low-income programs. Second, the Contractor must achieve a combined 46,556 MMBtu reduction in electricity and natural gas consumption attributable to low-income programs implemented by the Contractor” (the “Low-Income Energy Consumption Reduction Goal”).

From the NMR Evaluation Report for FY 2017 Performance Benchmarks Report, Table 2/Figure 1, the DCSEU exceeded the spending target, 124% of the Minimum savings target and 62% of the Maximum savings target. The Maximum savings target was not hit, because of programming

changes required to address the change in the low-income savings target, which was established mid-way through the Fiscal Year. The DCSEU did not complete projects at clinics in FY 2017.

**Figure 3: FY2017 Progress Towards Annual Performance Benchmarks**



Source: NMR Report, p.4

*c. Lessons Learned:*

The DCSEU continues to improve their low-income program offerings and FY 2018's focus is on increasing owner's matching funds toward projects and continuing to develop CBE collaboration to increase the dollars allocated for the low-income sector.

Additionally, the following are critical to DCSEU's success, which hindered the low income maximum targets being reached in the low-income sector:

- Multi-year Contract and funding must be in place;
- Benchmarks need to be clear and programs should be aligned to achieve benchmarks at the start of the fiscal year; and
- Staff must be in place to implement projects timely and accept applications on a rolling basis.

## IX. Green Jobs

The DCSEU’s contract includes an annual performance benchmark target for increasing the number of green-collar jobs in the District. This target calls for the DCSEU to ensure the support of at least 88 full-time equivalent (FTE) green jobs annually. The calculation (88 green jobs \* 0.75) results in a minimum target of 66 green jobs for FY2017. The target and the metric for measuring the target are described in the DCSEU contract as follows:

“The following criteria will be used in the calculations of what constitutes a green job for the purposes of this benchmark:

- 1) A green job or green-collar job is 1 FTE job held by a District resident who is paid at least a living wage<sup>12</sup> or a factor of \$200,000 of the Contractor’s direct cash incentives to end-use customers and/or manufacturers. No distinction is required for new versus retained jobs;
- 2) 1 FTE = 1,950 work-hours and is applied to hours reported by the Contractor and its subcontractors. The Contractor shall report hours worked by submitting certified payrolls to DOEE; and
- 3) Only direct jobs are to be used in the green jobs calculation. Indirect (primarily suppliers to Contractor’s subcontractors or its second tier subcontractors) and induced jobs (derived from a multiplier effect) shall not be counted.”<sup>13</sup>

Table 8 highlights the FY2017 green jobs benchmarks, and the verified results against those initiative goals. The FY2017 verified green jobs total of 84 jobs exceeds the minimum performance target of 66 for the green jobs performance benchmark.<sup>14</sup>

**Table 8. Green-Collar Jobs Benchmark Summary – FY2017**

Benchmark Description	Minimum Benchmark	Maximum Benchmark	DOEE Evaluation of FTE Jobs Created	Minimum Benchmark Achieved	Maximum Benchmark Achieved
Work hours generated by direct contractor hires, internal staff, and an estimate based on incentives spent on customers, measured in FTEs	66	88	84	Yes (127%)	No (95%)

Source: Tables 17-18, FY 2017 Performance Benchmarks Summary, NMR, p. 17

DCSEU itself contributed 75,230 green job hours covering the functional categories of commercial, residential, renewable, and low-income for DC residents in unique green job

<sup>12</sup> “Living Wage” is defined to mean “a minimum hourly wage as determined by the District Department of Employment Services in accordance with the ‘Living Wage Act of 2006,’ Title I of D.C. Law 16-118 (D.C. Official Code §2-220.01 to .11). Contract Number DOEE-2016-C-002, p. 5.

<sup>13</sup> Contract Number DOEE-2016-C-002, p. 49. For a more complete definition of indirect and induced jobs, see Executive Office of the President, Council of Economic Advisors, Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009, May 2009, p. 6.

<sup>14</sup> Performance Benchmark Assessment of FY2017 DC Sustainable Energy Utility Programs, pp. 16-17, <https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/DCSEU%20FY2017%20Performance%20Benchmarks%20report%20-%20FINAL%20092818.pdf>.

positions. The DCSEU reports that it did not achieve the maximum target for green jobs due to staff turnover and the loss of one FTE green job due to lack of sufficient proof of residency for a former employee. In addition, because the DCSEU completed less direct install work with their subcontractors in FY2017, subcontractors reported fewer green job hours.

DCSEU worked with three teaming partners, and thirteen implementation contractors, and two workforce development organizations to meet the green jobs benchmark. The teaming partners contributed 6,803.6 DC Green Job Hours covering the functional categories of public affairs, engineering, and market transformation for 31 DC residents in unique green job positions. The implementation contractors contributed 11,679.5 DC Green Job Hours covering the functional categories of lighting, mechanical, weatherization, low-income, and renewables for 95 DC residents in unique green job positions. The workforce development organizations contributed 5,615.25 DC Green Job Hours covering the functional categories of operations and weatherization for 18 DC residents in unique green job positions. In total, DCSEU's partners and subcontractors contributed 24,098 green job hours in FY2017.

The benchmark calculation adds the 75,230 hours DCSEU payroll hours and the 24,098 total DCSEU subcontractor payroll hours for FY2017, then converts this sum to FTE using the conversion factor of 1,950 work-hours to 1 FTE. DOEE verified that in FY2017, DCSEU provided or created 51 green jobs for which a District resident was paid a living wage.

To calculate green jobs created as a result of incentives, DOEE divided \$6,581,663 in direct cash incentives (i.e., the \$8,673,908 total incentive amount distributed in FY2017, minus the \$2,092,045 in incentives that flowed through DCSEU subcontractors whose created jobs were already counted under the payroll hours calculation) by the required factor of \$200,000 per green job. The number of green jobs created by incentives in FY2017 was approximately 33.

Thus, in total, DCSEU met 127% of the minimum benchmark for green jobs created in FY2017, and reached 95% of the maximum benchmark. These figures exclude indirect jobs—those jobs created in support of direct jobs such as suppliers of energy efficiency equipment—and induced jobs, which are those created due to the economic impact of hired workers spending incomes within the District.

An automated Green Job Tracking System, used by DCSEU under the previous Contract No. DDOE-2010-SEU-001, is still used and is mandatory in the current contract.<sup>15</sup> In addition to FTE green jobs obtained by District residents as a result of DCSEU programs, the following must also “be tracked by the Contractor and reported to DOEE:

- 1) Total number of FTE green jobs resulting from the Contractor's expenditures, whether District residents are placed into those FTE green jobs or not;
- 2) The total number of FTE green jobs occupied by District residents earning a living wage;
- 3) Number of District residents placed into job training slots as a direct result of Contractor expenditures or other action by the Contractor;
- 4) Brief description of jobs that District residents were placed into resulting from training programs;

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<sup>15</sup> Contract Number DOEE-2016-C-002, p. 49.

- 5) Categorization of the types of jobs occupied by District residents;
- 6) Identification of the Ward that corresponds to the home address of District residents that occupy FTE green jobs; and
- 7) Total dollar amount of Contractor cash incentives to end-use customers and manufacture[r]s to buy down the cost of energy efficiency measures.”<sup>16</sup>

## X. Leveraging External Funds

The DCSEU’s new contract included a new goal of leveraging \$5 million in new funds to help meet the energy savings and increase the DCSEU’s energy savings impacts. To achieve this goal, the DCSEU devised financing mechanisms and methods to monetize energy savings, as well as added staff to design a strategy to secure a diversified and stable stream of resources.

In FY2017, the DCSEU monetized the energy savings of eligible projects in the PJM Reliability Pricing Model (“RPM”) Capacity Market, securing approximately \$139,000 in net revenue.

Although just beginning, the Board believes these efforts should produce win-win results, as they provide an additional incentive for the DCSEU to undertake far-reaching projects that will not only generate revenue that the DCSEU can plough back into more programs, but will produce large-scale benefits for the District (for example, by providing an income stream to residents and businesses that participate in the projects).

## XI. Reducing Growth in Peak Demand [Tracking Goal]

Effective October 2015, the DC Council amended the original requirement for the DCSEU to “Reduce the growth of peak electricity demand in the District of Columbia” (Oct. 22, 2008, D.C. Law 17-250, § 201, 55 DCR 9225) to the current requirement that the DCSEU “track and report to DOEE, at least semiannually, on the reduction of the growth in peak electricity demand [...] due to SEU programs” (Oct. 22, 2015, D.C. Law 21-36, § 6092(a), 62 DCR 10905). The change in law led to the conversion of peak demand reduction from a performance benchmark with a numeric target and financial reward to a tracking goal with no financial award, and was made in part to facilitate the most efficient use of SEU funds.<sup>17</sup>

The DCSEU has fulfilled its obligation under current law to report on Peak Demand reductions due to DCSEU programs on a semiannual basis. The Performance Benchmark Assessment of FY2017 DC Sustainable Energy Utility Programs shows that DCSEU programs accounted for 12,409 kW of peak demand savings, or a reduction of 0.2% of peak demand for the District service territory. The DCSEU peak demand saving has shown a steady year over year increase and jumped sharply from 8,917 kW of peak demand savings in FY2016 to 12,409 kW in FY2017. District peak demand decreased from 6,583.6 MW in FY2016 to 6,097 MW FY2017, demonstrating that the District reduced peak demand by a much larger amount than can be attributed to DCSEU programs.

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<sup>16</sup> Contract Number DOEE-2016-C-002, pp. 49-50.

<sup>17</sup> Report and Recommendations of the Committee on Transportation & Environment on the Fiscal Year 2016 Budget for Agencies under its Purview (May 14, 2015)

The Board finds the DCSEU’s performance on peak demand reduction satisfactory given current law, but would like to urge the Council to consider a change in law that converts the reduction in peak demand from a tracking goal back to a performance benchmark, given recent trends in energy management that would enable the reduction of District peak demand consistent with the efficient use of DCSEU funds. The reduction of District peak demand could avoid the cost of transmission and distribution upgrades and reduce capacity market payments, both of which are passed through as costs to District ratepayers. District ratepayers would benefit as a result through reduced generation and infrastructure charges, along with broader environmental benefits resulting from any coinciding reduction in PJM-wide peak demand.

The direct impact of peak demand reduction in a deregulated market such as the District is difficult to correlate to greenhouse gas reductions, since so called “peaker plants” respond to PJM-wide peak demand, not just the peak demand in the District. Thus avoided peak demand in the District is difficult to correlate to the avoided emissions from new generating facilities. Other states in deregulated markets have approached quantifying the impacts of peak demand reduction by looking to the costs that result from peak demand, namely transmission and distribution upgrades and market capacity price payments to PJM.<sup>18</sup> A further reduction in peak demand for the District could reduce similar costs and subsequently lower rates for all ratepayers.

Leadership in distributed peak demand reduction is evident in Green Mountain Power’s residential energy storage aggregation project. In this program, residents received a financial incentive to install home energy storage, and in return Green Mountain Power is able to draw upon the energy storage resources during peak demand periods to reduce cumulative demand. The program is a logical next step given the level of solar energy in the utility territory and the benefits of reducing peak demand, and furthermore residents are able to share the benefits of on-site energy storage. The District enacted the statutory framework for such an aggregation program<sup>19</sup>, but has yet to fund or incentivize such a program. Similarly innovative leadership in peak demand reduction could be undertaken by DCSEU with the appropriate incentives to reduce District peak demand.

The Board, while recognizing the satisfactory performance of the DCSEU under current law, urges the Council to convert peak demand reduction into a performance benchmark to enable DCSEU to take a leadership role in peak demand reduction through its programs and expenditures. The result would be direct financial benefits to ratepayers and indirect regional environmental impacts.

## XII. Reducing Growth in Largest Energy Users [Tracking Goal]

As buildings become more energy efficient and building codes evolve toward higher energy performance standards, the role of the DCSEU is pivotal as it seeks out new ideas, technologies, and partners within the District’s building sector. In Fiscal Year 2017 (FY 2017), the DCSEU continued to make great progress towards reducing the growth in energy demand amongst the

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<sup>18</sup> Reference relevant NY report

<sup>19</sup> D.C. Code § 34-1515

District’s largest energy users.<sup>20</sup> Previously, year-to-year contracts made it difficult to tailor long-term projects within this key demographic of the DCSEU’s goals. However, with the shift from one-year contracts to a five-year contract beginning in Fiscal Year 2017, the DCSEU is now able to better assist the largest energy users, which is a national leader in green buildings and recently helped the District become the first LEED Platinum city in the world.

While the DCSEU is no longer required to offer programs aimed exclusively at reducing the energy usage of large energy users, it is still required to track the number and types of projects that they have successfully completed with this customer class. In FY 2017, the DCSEU completed projects with 104 large energy users. The number of completed projects is lower than the 132 projects from Fiscal Year 2016, but is much higher than the 52 projects from Fiscal Year 2015 and 67 projects from Fiscal Year 2014.

Continuing their former efforts to meet the needs of this market, most of these projects were completed through the Custom Retrofit Program. This unique program offering allows the DCSEU to personalize incentives to owners of large building who needed to replace essential equipment prior to the end of its useful life. The Custom Retrofit Program also provides a variety of offerings including lighting, chillers, boilers, heat pumps, steam systems, insulation and various building and equipment control incentives to building owners. The individualized offerings are essential to this class as the District has adopted a bold and comprehensive energy plan, driven by climate change, which seeks to reduce annual greenhouse gas emissions and energy consumption by 50 percent by 2032.

In addition to the customization, one of the main drivers to the success of this program is the no-cost technical assistance that the DCSEU’s account managers are able to provide as a complement to the project. This technical assistance supports building owners and managers as they partner with the DCSEU to design, scope and fund their projects, while also ensuring they achieve a more in-depth analysis and energy saving.

**Table 9: Fiscal Year 2017 Large Energy User Sites**

<b>Program</b>	<b>Number of Unique Sites</b>
<b>Solar PV Market Rate</b>	1
<b>Equipment Replacement</b>	36
<b>Market Transformation Value</b>	5
<b>Custom Retrofit</b>	52
<b>Market Opportunities Custom</b>	19
<b>New Construction – Custom</b>	7
<b>Low-income Multifamily Implementation Direct Install</b>	3
Low-income Multifamily Custom Projects	1
Low-income Multifamily Comprehensive	1

<sup>20</sup> The DCSEU defines large energy user as organizations, individuals, or government entities that own a building with more than 200,000 square feet of gross floor area or own a campus or building in a contiguous geographic area that share building systems or at least one common energy meter without separate metering or sub-metering, such that their energy use cannot be individually tracked. Gross area floor includes infrastructure that contain heated and unheated space that is connected to a qualifying building. Energy-efficiency or renewable energy measures must be installed in a qualified building or in an infrastructure connected to a qualified building in order to qualify as a large energy user project.

<b>Total</b>	125
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Source: NMR Group, Inc., *Performance Benchmark Assessment of FY2017 DC Sustainable Energy Utility Programs*, p. 21, Table 24: FY 2017 Large Energy User Sites

### XIII. Innovation

The new contract required that the DCSEU, within 90 days of contract execution, lay out how it will meet the performance goals over the base period of this contract. The contract specifies that the strategic plan is intended to be a living document, and updated as needed to align with changes in the annual or other plans.

The Board recommends that the DCSEU make more vigorous use of the Strategic Plan, for example, to determine how it will implement the requirements of the Omnibus Act, should they become law (including its potential new building performance standards, and ramped up RPS requirements). Surely, a fair amount of innovation will be required, for the District to hit its 100% RPS goal.

### XIV. Societal Cost Test

The Board believes that the DCSEU is now in a position to strengthen its impact by focusing a portion of its portfolio on programs that address carbon emissions in neighborhoods in the District most affected by poor air quality and that bring tangible improvements in public health, health equity and safety to targeted, at-risk communities.

Opportunities exist for the DCSEU to address the main carbon emission polluters in the District, namely, vehicles (idling as well as moving), generators (including demand-response and emergency generators), boilers, industrial equipment. The DCSEU could take advantage of new, clean energy technology on the market for, *inter alia*, idling-control for heavy and medium commercial trucks allowing them to operate their heating, cooling and equipment without combustion, and for cleaner back up generation options for buildings. Other District-wide or District agency initiatives such as the Sustainable DC 2.0 Plan, Clean Energy DC, DDOT’s MoveDC, already include pollution mitigation plans and the DCSEU might achieve cost/benefit synergies by collaborating with them. Also, financing opportunities and technical assistance (e.g., from the Federal Dept. of Energy) might be available for piloting such projects. The DCSEU may consider the use of pilots to further such programming.

The Board recognizes that the DCSEU has been assessing non-energy impacts using traditional multipliers that approximate the non-energy benefits that accompany the energy savings obtained. The Board is recommending improved societal cost-effectiveness tests that measure the “non-energy” impacts of such programs that could be crucial to their effective development – provided of course, that the design and implementation of such tests avoids known pitfalls. For example, rather than applying formulae, perhaps the DCSEU could consider devising tests that allow it to hone in on District-specific problems, i.e., that are more geographically focused. Societal cost-effectiveness tests once piloted could also be expanded to other programs of the DCSEU.



The Board recommends that DCSEU staff, working with other partners, consider pursuit of actions such as the following:

- a. Means of integrating clean, low-carbon, energy reduction measures into its existing programs, or create new programs, in ways that broaden range of program impacts and do not interfere with the DCSEU’s achievement of its annual and cumulative benchmarks.
- b. Parameters and adders in societal cost-effectiveness tests as a tool for promoting the “non-energy” societal benefits of proposed DCSEU programs (see for example, the “California” cost-effectiveness tests). Such societal benefits/costs include public health, comfort, safety, health equity, impacts on earnings/productivity/education, impacts on building and infrastructure deterioration, social costs of greenhouse gas emissions, the economic impacts of job creation.
- c. District neighborhoods most severely impacted by poor air quality and determine major air pollution sources that might be addressed in DCSEU programming. In this respect, up-to-date geo-spatial mapping that overlays air quality (significant exposure day or night) and asthma (pediatric and adult) metrics in the District may be readily available. Consider restricted activity days because of heat and cold in evaluating opportunities for mitigation via DCSEU programming.
- d. New technologies that could be used for reducing emissions from vehicles, generators, boilers on a neighborhood basis. Examples include idling-control technology (on-board and outdoor plug-in) for medium and heavy commercial to run their heating, cooling or equipment operations without running their diesel or gasoline engines (e.g., on long-term construction sites, loading zones, tour bus parking), and solar + battery storage systems as alternatives to diesel fueled backup generation, and mobile air quality monitoring and other equipment being introduced in “smart city” initiatives in the U.S.
- e. Use of pilot projects to further such programming.

## XV. CBE Requirements

In December 2016, the DSLBD approved a request by DOEE to modify the requirement related to SBE spending as it relates to the DCSEU Contract. The revised provision states that the 35% threshold should be based on “contractable” expenditures, meaning the Contract amount remaining after the incentives paid to third parties, performance incentive, and direct labor cost of DCSEU employees.<sup>21</sup> Using the modified baseline, the DCSEU significantly exceeded the District’s statutory CBE spend requirement.

## XVI. Stats on Engagement/Outreach

This year, the DCSEU focused on increasing brand awareness, developing leads for programs, and delivering value to the community.

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<sup>21</sup> FS Taylor, p. 5.

From partnering with Burroughs Elementary School on STEM activities, to working with District agencies such as the Public Service Commission on its Winter Preparedness event, the DCSEU had a strong presence in the community throughout the year at more than 50 events. The DCSEU continued to align its focus on partnering with District agencies on existing outreach activities that support hard to reach populations, such as seniors and low-income residents. The DCSEU also distributed light bulbs and information at a number of events with the Office on Aging, and distributed hundreds of backpacks to students prior to the 2017-2018 school year to ensure students who needed supplies were prepared for their first day.

For residential customers, the DCSEU sought to find ways to make it easier for customer to take advantage of rebates and to drive them to DCSEU programs. Working with Nest, the DCSEU developed an online coupon code tool that allows qualified District residents to retrieve a code that can be applied on the Nest website for an instant rebate. The DCSEU also partnered with retailers on a series of events to inform residents about rebates and drive traffic to District retail partners. Finally, the DCSEU created a summer advertising campaign that focused on smart thermostat and cooling rebates, with advertisements placed in a variety of print, digital, and outdoor media outlets. The DCSEU worked closely with El Tiempo on Spanish-language ads and outreach to the Latino community. The summer campaign included a special advertisement for smart thermostats on Metro platforms that automatically appeared when the temperature reached 90 degrees or greater, the first time an advertiser has utilized weather-triggered ads in the Metro with Outfront Media.

For commercial and institutional customers, the DCSEU focused on increasing awareness about DCSEU rebates as well as the value of its technical assistance. As part of its summer advertising campaign, the DCSEU ran advertisements in the Washington Business Journal and through Google Adwords that drove customers to DCSEU lighting rebates while also highlighting a customer success story. In addition, the team also partnered with CBE distributors to drive participation in the DCSEU's Instant Business Rebates program. The team created custom materials for the distributors, and held events at two distributor locations to drive traffic to the program. Finally, the DCSEU worked closely with C&I customers to shed positive light on the customer's work and on the value that the DCSEU is delivering to them.

In FY 2017, the DCSEU also hired a public relations project manager, whose focus is telling the DCSEU's story through earned media and partnering with customers to highlight their interaction with the DCSEU, work that will continue in FY 2018 and beyond. In terms of measuring success, the DCSEU had the highest website traffic in its history this year with more than 100,000 visits, and continued its growth on social media – results the team looks to build upon in FY 2018.

## XVII. Going Forward

The Board recognizes that a multi-year contract and cumulative performance targets has greatly facilitated the DCSEU's ability to meet and in some cases significantly exceed its performance benchmarks. At the same time, the Board questions whether five-year goals can limit the ability with which the benchmarks themselves, or implementation of them, can keep up with changing demands. In particular, the Board notes that now that the DCSEU has entered this phase of maturity, and that significant changes have been made to the DCSEU's contract, it is succeeding

in reducing energy consumption in the District. However, the DCSEU is not separately rewarded for achieving reductions in greenhouse gas emissions. Clearly, the latter has become critical.

The Board therefore recommends that there be a thoughtful discussion as to how to modernize the DCSEU's programs and/or benchmarks without so significantly "changing the goal posts" that it would interfere with the DCSEU's ability to plan, in particular, by focusing on the following:

- a. The Board recommends that in FY19, the DCSEU, DOEE, the Board and interested stakeholders evaluate whether changes may be made to the DCSEU's performance benchmarks, and/or to the methods of accounting, that will align the DCSEU's current performance benchmarks (for example, such as decreasing energy consumption) with the District's modern policy objectives (most significantly, decreasing greenhouse gas emissions).
  - i. For example, the Board recommends discussion as to whether reinstating a performance benchmark (rather than a tracking goal) for a reduction in peak demand will facilitate achievement of greenhouse gas emissions reductions?
- b. The Board recommends that in FY19, the DCSEU, DOEE, the Board and interested stakeholders explore changes to accounting or reporting mechanisms that will enable the DCSEU to receive credits for investing in improvements with longer-term payoff (such as high efficiency water heaters), rather than only Year 1 savings (such as lightbulbs). This exercise may include evaluating how other jurisdictions are approaching the task (e.g., EmPower Maryland).
- c. The Board recommends additional/alternative measures in EM&V, for example:
  - i. Trying to make the tie to improvements in public health more meaningful, while recognizing that the DCSEU is already charged with producing more societal benefits than are other SEUs or other states' energy programs.