



A DECADE OF

TRANSFORMATION

2021 ANNUAL REPORT



DC
SUSTAINABLE ENERGY
UTILITY



Ten years
of **adaptation,**
innovation, and
transformation.



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The 2021 fiscal year (FY) data presented in this report are based on the DCSEU's estimates of energy savings and green job hours. These data are subject to rigorous monitoring and verification by a third-party evaluation firm hired by the District Department of Energy & Environment.

A message from the DCSEU

This year, the DC Sustainable Energy Utility (DCSEU) marked two milestones: the tenth anniversary of our establishment, and the completion of our most recent five-year contract with the District Department of Energy & Environment (DOEE).



Ted Trabue
Director, DCSEU

We are incredibly proud of the impact we have made through our work with District residents, businesses, and partners – positive impacts on the economy, on the environment, and on the people who live and work here. Over the past ten years, it has been our great pleasure to work with DOEE, teaming partners, contractors, other District agencies, and the businesses and residents here to be a part of transforming the District into a clean energy powerhouse.

As we look back on the past five and ten years, it is striking to see how the District has transformed. When we began in 2011, the population of DC was approximately 620,000; in the last ten years it has grown by 10 percent. We have seen tremendous development across the District, with areas like the Wharf, Navy Yard, NoMa, Union Market, and many others seeing a huge influx of new and renovated commercial and multifamily buildings. More than 106 million square feet of new development occurred between 2011 and 2020.¹ Thanks to bold

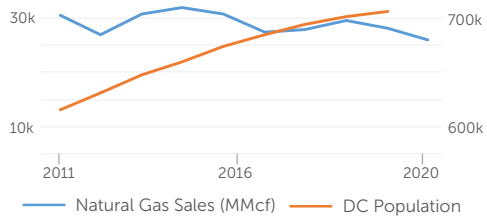
policies from District leaders, aggressive building and energy codes, and our work to help residents and businesses reduce their energy consumption, electricity sales in DC have largely remained flat, and natural gas sales have declined, despite the population growth and economic development. Our collective work has not gone unnoticed over the last ten years. In 2013, the District was ranked number 30 by the American Council for an Energy-Efficient Economy (ACEEE) on its State Scorecard, which ranks states on their energy efficiency policy and program efforts. In 2020, the District was ranked number 8.

The last ten years have also marked a transformation for the DCSEU itself. When we began this work in 2011, the DCSEU was a bit of an experiment, combining energy savings goals with social equity goals to help the District transition to a clean energy economy. Those first few years were not without their challenges, as we worked to build the relationships, infrastructure, and programs to transform this market.

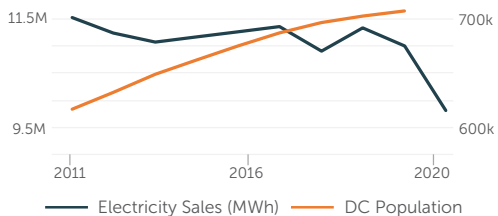
As we were getting programs off the ground and trying to balance the unique and challenging goals of this contract, we explored new technologies and refined program delivery models that have helped accelerate the District's transition to energy efficiency and renewable energy. This included bringing solar technology to low-income residents in Wards where just a handful of systems had been installed; building strong relationships with local contractors, distributors, and manufacturers; and developing a robust Workforce Development program that gives unemployed and underemployed DC residents the opportunity to pursue new careers in energy efficiency and renewable energy.

When we transitioned to this most recent contract in fiscal year (FY) 2017, we faced even bigger challenges, with increased energy savings goals and performance benchmarks that pull and tug at one another. The foundation we laid early on has allowed us to rise to the occasion, though. During the last five years, we've piloted innovative new programs, such as the Low-Income Decarbonization Pilot to study electrification in income-qualified residents' homes, and the Pay for Performance program, designed to incentivize commercial and multifamily building owners and managers based on behavioral and operational changes in their buildings. In FY 2019 we also took on the management of the Solar for All program, partnering with DOEE to work towards the goal of providing 100,000 income-qualified DC households with access to savings from solar energy. Through all of our work over the past five years, we've helped Certified Business Enterprise (CBE) contractors expand their companies, Workforce Development program graduates pursue new careers, businesses open up new opportunities for themselves by reducing their energy costs, and ensure our most vulnerable residents are realizing the benefits of energy efficiency and renewable energy.

Natural Gas Sales & Population in DC



Electricity Sales & Population in DC



While residential electricity sales have increased by approximately 5.9% from 2007 to 2020, the population has increased by 23%, resulting in a per capita electricity sales decrease of 22.5% over the same period.²

As we close FY 2021, we are proud to report that we have exceeded all of our five-year cumulative maximum performance benchmarks, and exceeded four out of five of our annual maximum performance benchmarks for this year. More importantly, we've continued to play an important role in the District's clean energy transition and helped transform the lives of many who live and work here. We are honored that the District government has placed its trust in us to continue to deliver these programs and services for another five years. We look forward to the challenge ahead and to continuing to deliver results that can transform our community, our economy, and our environment.

Ted Trabue

² DC population estimates 2011-2019 from U.S. Census Bureau; electricity and natural gas sales data from U.S. Energy Information Administration (EIA)

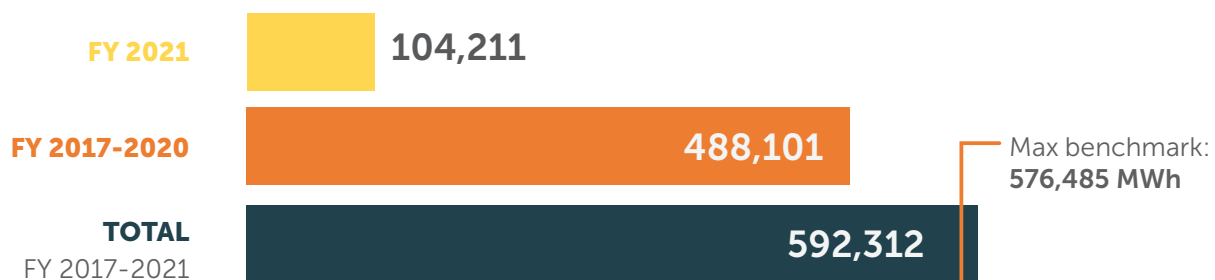
A DECADE IN REVIEW

Highlights

Results over the last 10-years, 5-years and last year (2021)



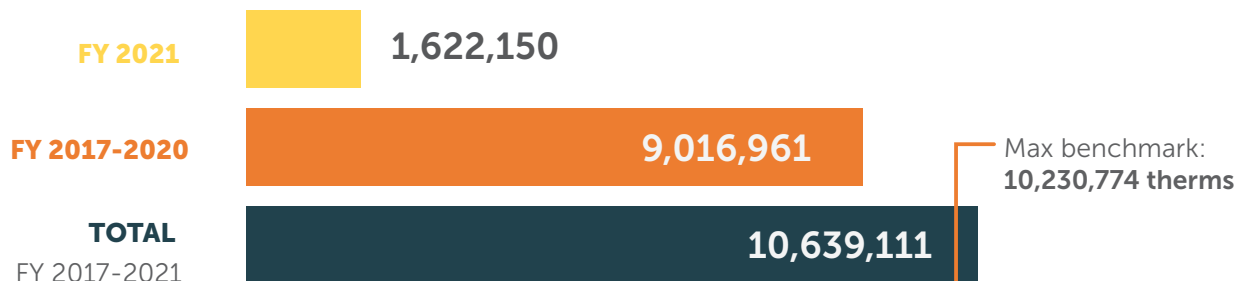
Total Electric Savings (MWh)



In total, that's equivalent to the annual electricity usage of about **70,000 DC households**.³



Total Natural Gas Savings (therms)



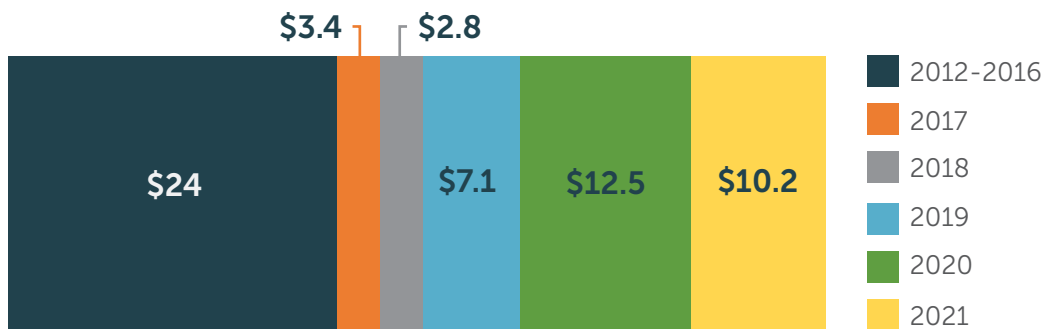
In total, that's equivalent to the annual natural gas usage of **15,900 DC households**.⁴

³ Source: https://www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf

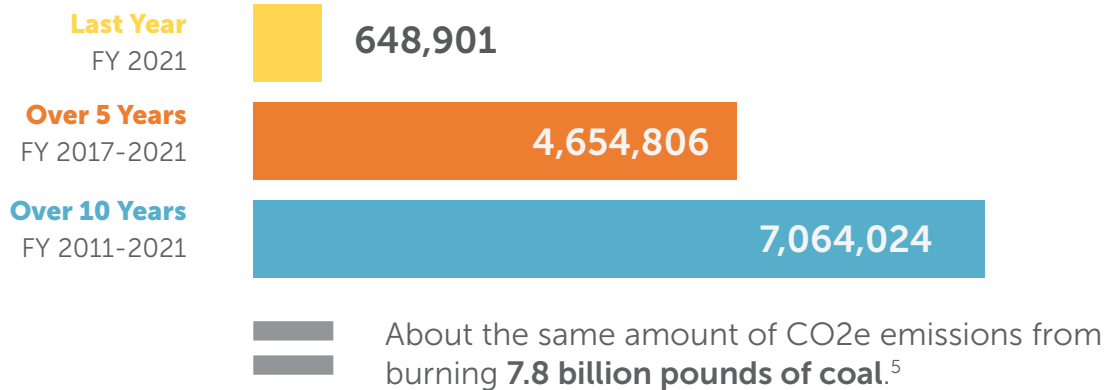
⁴ Source: <https://www.aga.org/contentassets/6894914d95e6467fae106015cbcb2abc/table6-14.pdf>



Dollars spent with CBEs (\$ million)



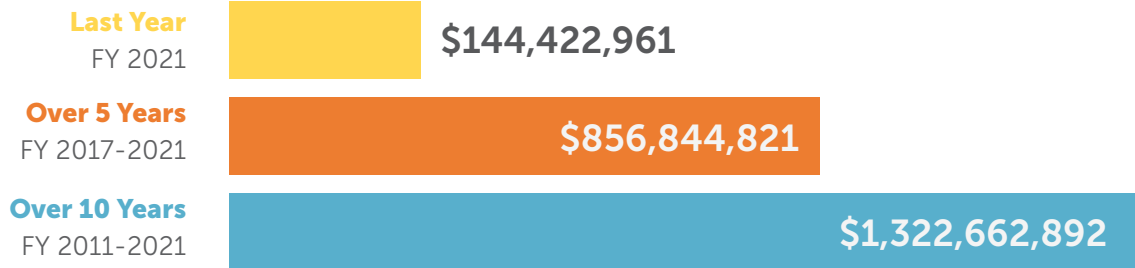
Lifetime CO₂e emissions prevented (Metric Tons CO₂e)



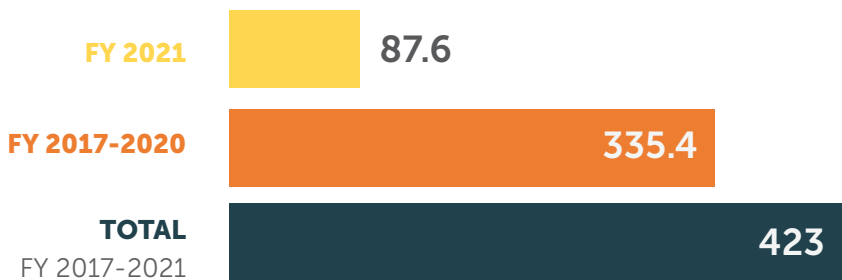
⁵ Source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



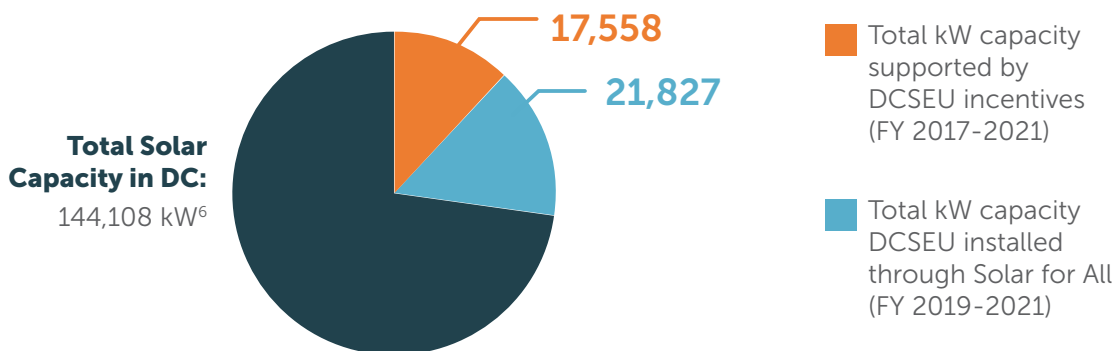
Lifetime energy cost savings *(includes Solar for All)*



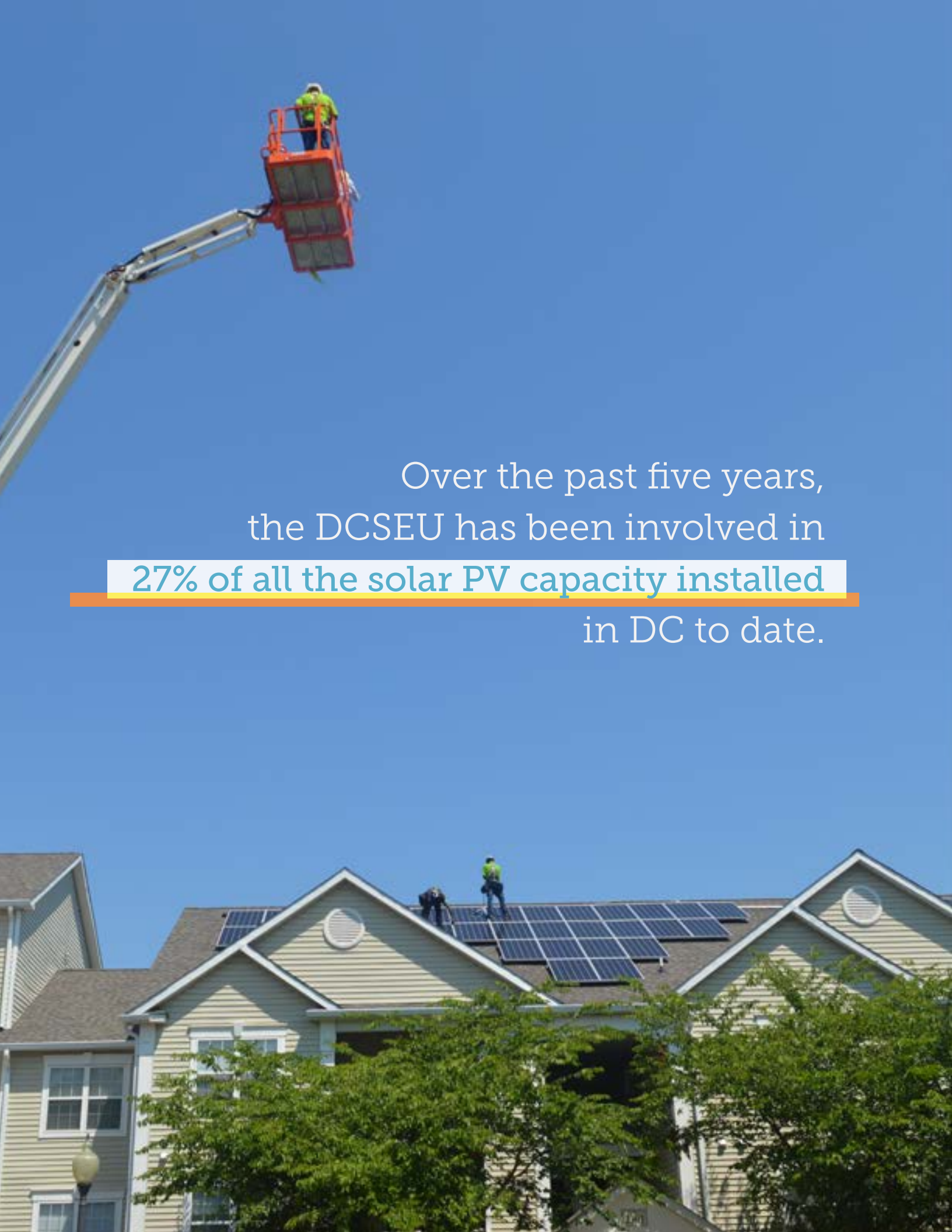
Green Jobs *(full-time equivalent)*



Total Solar Capacity Installed in DC (kW)



⁶ Source: <https://dcpssc.org/Utility-Information/Electric/RPS/Renewable-Energy-Portfolio-Standard-Program/Monthly-Update-of-Solar-Generator-Certification.aspx>



Over the past five years,
the DCSEU has been involved in

27% of all the solar PV capacity installed

in DC to date.

2021 IN REVIEW

Cumulative & Annual Performance Benchmarks



Natural Gas Savings & Electricity Savings

10,639,111 therms

The DCSEU achieved a five-year cumulative savings of 10,639,111 Therms in natural gas consumption from FY 2017-2021. This exceeds the Performance Benchmark maximum cumulative target for natural gas savings during the five-year contract period.

592,312 MWh

Total electricity consumption from FY 2017-2021 was reduced by 592,312 MWh, which also exceeds the Performance Benchmark maximum cumulative target for the five-year contract period.



Renewable Energy Generating Capacity

17,558 kW

From FY 2017-2021, the DCSEU installed 17,558 kW of solar capacity—exceeding the maximum cumulative five-year Performance Benchmark target of 5,000 kW.



Low-Income Spending

\$4,910,777

The DCSEU spent \$4,910,777 in low-income communities in FY 2021. This exceeds the Performance Benchmark maximum annual target for low-income spending.



Low-Income Energy Savings

55,314 MMBTUs

The DCSEU significantly reduced energy use in low-income communities, with a combined electricity and thermal savings of 55,314 MMBTUs in FY 2021. This exceeds the Performance Benchmark maximum annual target.



Green Jobs

87.6 full-time equivalent

All DCSEU jobs and contractor positions, both internal and external, are offered at or above the District's Living Wage. In FY 2021, the DCSEU created 87.6 full-time equivalent (FTE) jobs, exceeding the Performance Benchmark minimum annual target of 66 FTEs and just under the maximum annual target of 88 FTEs.



Leveraging

\$5,667,419

In total, the DCSEU has leveraged \$5,667,419 between FY 2017-2021, exceeding the five-year cumulative contract Performance Benchmark of \$5 million. In FY 2021, the DCSEU leveraged a total of \$2,658,936, including \$85,893 in revenue from the DCSEU's participation in the PJM capacity market, and \$2,572,832 in funding from Washington Gas for the DCSEU's Income-Qualified Efficiency Fund.

2021 IN REVIEW

Cumulative Benchmarks

BENCHMARK	FY 2021 Actuals (10/1/2020 - 9/30/2021*)	Cumulative Actuals End of Year 5 (10/2016 - 9/2021**)	Maximum Cumulative Benchmark End of Year 4	Progress to 5-Year Maximum Benchmark
Total Electric Savings (MWh)	104,211	592,312	576,485	103%
Total Gas Savings (therms)	1,622,150	10,639,111	10,230,774	104%
Total Renewable Capacity (kW)	4,997	17,558	5,000	351%
Financial Leveraging	\$2,658,936	\$5,667,419	\$5,000,000	113%

*FY 2021 results are unverified and will be evaluated by an independent third party.

**Cumulative results incorporate third-party verified results for FY 2017-FY 2020 and DCSEU unverified results for FY 2021.

2021 IN REVIEW

Annual Benchmarks & Contractual Requirements

BENCHMARK	Actuals	Maximum Benchmark metric	Progress
Total Low-Income Savings (MMTBtu)	55,314	46,556	119%
Total Low-Income Spend	\$4,910,776	\$3,819,667*	129%
Total Green Jobs Created	87.6	88	99%
CBE Spending (includes Solar for All)	\$10,268,187	\$6,463,023**	159%
General and Administrative (G&A) spending	\$3,390,862	\$3,819,667***	

* Minimum spending requirement for the DCSEU.

** Minimum contractual requirement for CBE spending per the DCSEU's Subcontracting Plan filed with the District Office of Contracting and Procurement.

*** General and administrative spending is capped at 20 percent of total contract spending.

Customer Cost Savings

In FY 2021, the DCSEU delivered more than \$144 million in lifetime customer cost savings to District residents and businesses. This continues to demonstrate the valuable return on investment in energy efficiency and renewable energy projects through the DCSEU's work.

	Residential customers	C&I customers	Total
Lifetime customer cost savings	\$14,588,741	\$129,780,036	\$144,368,777
First-year annual cost reduction	\$1,522,169	\$11,939,611	\$13,461,780

Lifetime customer cost savings are defined as the customer energy and water cost savings for the life of each measure installed.

First-year annual energy cost reduction equals the estimated savings in energy costs, at average retail rates, for the first 12-month period in which the efficiency and / or renewable energy measures are in operation. This value also contains savings derived from the DCSEU's work on Solar for All.

BUDGETED TO ACTUAL EXPENDITURES

DCSEU Core Contract

DCSEU FY 2021 Budget					Actuals		
Sector	Program/Initiatives	Incentive Budget	Non-Incentive Budget	Total Budget	Incentive Actual	Non-Incentive Actual	Total Actual
C&I	Business Energy Rebate	\$360,000	\$130,000	\$490,000	\$402,277	\$125,045	\$527,322
C&I	Commercial Midstream	\$850,000	\$45,000	\$895,000	\$739,106	\$50,821	\$843,927
C&I	Commercial Custom	\$2,553,169	\$1,836,155	\$4,389,324	\$2,874,479	\$1,758,624	\$4,633,103
C&I	Commercial Direct Install	\$100,000	\$20,000	\$120,000	\$101,440	\$26,202	\$127,642
LIMF	Income Qualified Efficiency Fund	\$1,881,618	\$500,952	\$2,382,570	\$1,881,618	\$335,779	\$2,217,397
LIMF	Low Income MF Comprehensive	\$1,351,943	\$279,600	\$1,631,543	\$1,806,136	\$438,563	\$2,244,699
LIMF	Low Income MF Prescriptive Rebate	\$87,500	\$58,000	\$145,500	\$51,835	\$48,533	\$100,368
RES	Residential Efficient Products	\$925,000	\$260,000	\$1,185,000	\$917,641	\$260,277	\$1,177,918
RES	Residential Midstream	\$1,000	\$1,600	\$2,600	\$454	\$188	\$642
RES	Energy Kits & Food Banks (LI)	\$150,000	\$60,000	\$210,000	\$221,352	\$50,742	\$272,094
IN	Innovation: Curb Project (LI)	\$-	\$17,457	\$17,457	\$-	\$17,527	\$17,527
IN	Innovation: Other	\$-	\$10,000	\$10,000	\$15,385	\$3,292	\$18,677
WD	Workforce Development	\$-	\$875,992	\$875,992	\$-	\$890,729	\$890,729
RE	Commercial Solar	\$189,770	\$31,875	\$221,645	\$189,850	\$2,276	\$192,126
PS	Program Support	\$-	\$2,702,035	\$2,702,035	\$-	\$2,376,488	\$2,376,488
G&A	General & Administrative Support	\$-	\$3,819,667	\$3,819,667	\$-	\$3,390,862	\$3,390,862
Total		\$8,450,000	\$10,648,333	\$19,098,333	\$9,255,573	\$9,775,948	\$19,031,521

BUDGETED TO ACTUAL EXPENDITURES

Solar for All

Budgeted	\$10,460,701
Actual spending	\$10,281,593
Single-family installations	122
Community renewable energy facility (CREF) installations	23

Sustainable Energy Infrastructure Capacity Building and Pipeline (SEICBP) Program

Budgeted	\$350,000
Actual spending	\$330,360

	FY 2020	FY 2021
Courses Offered	19	20
Total Participants	111	217
Participants working for CBE's	83	99
Participants working for CBE-eligible firms	11	34



TRANSFORMING THE COMMUNITY for Residents

In FY 2021, the DCSEU continued its work to transform the market and make energy efficiency and renewable energy more accessible to District residents, especially our most vulnerable neighbors.

This included serving both individual residents as well as helping owners and managers of affordable multifamily housing, shelters, and clinics make energy efficiency and renewable energy upgrades.

With many residents still struggling with unemployment, rent, and energy bills as a result of the pandemic, the DCSEU continued to reach out to and serve income-qualified DC residents. One of the largest efforts was through Solar for All, where the DCSEU worked with CBE solar contractors to install solar directly on the rooftops of 122 income-qualified DC residents and worked with solar developers to install 23 community renewable energy facilities (CREFs) that will serve more than 1,600 income-qualified families.



FIVE YEAR HIGHLIGHTS

 **6,000**

income-qualified DC households with access to solar energy through Solar for All

 **320+**

income-qualified DC households with solar installed directly on their roofs

 **9,000+**

free or discounted market-rate and income-qualified energy kits distributed to DC residents

 **\$16.7 million**

invested in energy efficiency incentives at affordable multifamily, clinic, and shelter properties with well over 30,000 units

 **1.1+ million**

DCSEU-discounted LED light bulbs purchased at DC retailers

 **11,000+**

efficient HVAC, appliance, and smart thermostat rebates provided to DC residents

Over the next 15 years, these Solar for All installations will help cut electricity costs in half for residents, resulting in over \$12 million in lifetime electricity cost savings for residents. The DCSEU also continued its partnership with the Public Service Commission of the District of Columbia (PSC), the Office of the People's Counsel, and DOEE on the #Here2HelpDC public awareness campaign. The campaign is designed to help connect residents with information and resources to help them manage their utility bills and take advantage of programs and services that can cut their energy costs long-term. As part of the campaign, the DCSEU partnered with LED lighting manufacturer Signify, who provided 500 LEDs at no cost to distribute at Living Classrooms' Dent House food pantry.

This year we served more than 57,000 program participants across our residential efficient products programs, including more than 10,000 low-income participants through our LED lighting distribution efforts at DC food banks and our home energy conservation kits offered at no cost to income-qualified residents. The DCSEU promoted Home Energy Conservation Kits through two sweepstakes campaigns where DC residents could enter for a chance to win prizes, such as smart thermostats or ENERGY STAR appliances, by purchasing a kit for \$10 or entering their information on the DCSEU website. These campaigns helped drive the purchase of more than 1,200 kits. The DCSEU also continued to promote its appliance and HVAC rebates, as well as the Solar for All program. These campaigns and promotions help drive significant traffic to the DCSEU website, with the DCSEU nearly doubling the number of overall website users

in FY 2021 versus FY 2020. In preparation for FY 2022 and beyond, in August the DCSEU announced it would no longer be offering rebates on natural gas heating equipment and raised rebates on electric heat pumps and heat pump water heaters as the District seeks to decarbonize.

To serve owners and managers of affordable multifamily housing, as well as qualified clinics and shelters, in FY 2021 the DCSEU sought to meet customers' unique needs at a time when many of their residents may still be having difficulty paying their rent and utilities. The DCSEU offered multiple levels of support to property owners and managers to make upgrades, lower their energy and operating costs, and help preserve affordable housing. For customers needing both technical assistance as well as project management support, the DCSEU brought qualified CBE contractors to projects and paid for a percentage of the project costs through its Income Qualified Efficiency Fund (IQEF) program to ensure customers had the support they needed. The DCSEU also offered custom technical assistance and incentives through its Account Management and Engineering teams, as well as enhanced prescriptive rebates on lighting and HVAC equipment. In September, the DCSEU hosted its first Affordable Multifamily Roundtable with the Institute for Market Transformation (IMT) and Steven Winter Associates. The roundtable offered building owners and managers an opportunity to discuss how they can take advantage of existing programs and services in preparation for BEPS in their affordable multifamily buildings. The DCSEU will continue this work in FY 2022 and beyond.

In total, in FY 2021 the DCSEU provided **more than \$3.7 million** in incentives for energy efficiency upgrades at **62 affordable multifamily, clinic, and shelter sites** that will provide more than **\$10.8 million in lifetime energy cost savings.**

TRANSFORMING THE COMMUNITY FOR RESIDENTS

CASE STUDY | Children's National Serves Community Through Solar

In FY 2020, one of the District's largest solar canopies was installed on top of the parking garage at Children's National Research & Innovation Campus (RIC) as part of the DCSEU's work on the Solar for All program. The pandemic, however, prevented us from properly recognizing the project.



In April 2021, our first in-person gathering since the pandemic began, the DCSEU and New Columbia Solar joined elected officials and representatives from District government, Children’s National, DOEE, and the PSC to officially cut the ribbon on the project.

The installation on this Solar for All project began when Children’s National acquired a large five-story above-grade parking garage, which provided the perfect location for a cutting-edge solar array. The original re-development vision for the parking garage at the RIC always had the goal to incorporate a solar array, and the installation of the 1.1 MW system was an engineering feat, representing one of the District’s most complex solar systems. The feat of the installation process was well worth the struggle – in addition to the environmental benefits of solar energy, the array brings the benefit of supporting District families through the Solar for All program.

“ When we began to plan the Children’s National Research & Innovation Campus, we wanted to do more than discover new and better ways to care for children. We also wanted to support the local community.

I’m proud that we could incorporate the solar design into our campus thereby returning clean energy to the residents of Ward 4 and doing our part to support the environment.”

Kurt Newman, MD, President and CEO of Children’s National

Clean energy generated by this solar array will be distributed through the Solar for All program, Mayor Muriel Bowser’s initiative to provide 100,000 low-to-moderate income families with the benefits of locally generated clean energy. This community solar installation will serve more than 325 income-qualified DC families, saving each household up to \$500 annually, and saving these families up to \$2.4 million over 15 years.

TESTIMONIAL | Project Food DMV



“These lightbulbs have significantly helped seniors, the homebound, and those in low-income areas, especially Wards 7 and 8. We appreciate that they are low energy LEDs because it saves our clients money on their

electric bills. Thanks, DCSEU for your valuable service to our community!”

Dave Edwards, Executive Director of Project Food DMV. Project Food has worked with the DCSEU to distribute more than 7,500 light bulbs to income-qualified residents through the DCSEU’s Food Bank Lighting Distribution program.



CASE STUDY | Finding Comfort & Assurance in Solar

Sylvie, a mother of two and former nurse, is well acquainted with providing care inside and outside of her home. Originally from Cameroon, Sylvie immigrated to the US many years ago and made the US and DC her new home. She hadn't considered getting solar on her home as a possibility due to cost, but was looking for a way to save money on her energy bills while being able to keep her home's temperature well-regulated for her son who has a disability. Solar for All, a DOEE program managed by the DCSEU, was recommended to her during a visit to Children's National Medical Center for one of her children. Initially somewhat skeptical that she could receive solar on her roof for free, she decided to take a chance and apply since she was recently a participant in the Low-Income Home Energy Assistance Program (LIHEAP) through DOEE.

“ It's really Solar for All, it's really for everyone. No matter where you come from.”

After completing her application and starting the process, she was worried that the solar installers would find that her roof wasn't fit for solar panels. This brought back the initial skeptical feelings and put her on guard against prejudices that she has received in the past because of her accent. The DCSEU's Solar for All program manager called Sylvie to assure her that the DCSEU was going to make sure she had solar on her roof. "This program made me change my mind, made me feel comfortable, and I didn't have to worry anymore about discrimination because of my accent," she said.

Since installation, Sylvie has seen an almost immediate reduction in her electricity bill from \$300-\$500 per month down to a bill that now maxes out at around \$100 per month. She is excited that she can put these funds back into caring for her kids. Sylvie also wants residents like her, who have come to make DC their new home, to know that Solar for All is "a good program, and it's true," and they shouldn't be held back by their language or their accent.



PREPARING DC'S WORKFORCE for a Clean Energy Economy

The District's clean energy and climate policies have driven and will continue to drive the need for workers with the necessary skills, training, and certifications to work in energy efficiency and renewable energy.

With the Biden Administration's infrastructure bill, the demand for construction workers in skilled trades such as electricians, HVAC technicians, and solar installers could grow by leaps and bounds. According to a New York Times article highlighting the labor shortage that already exists among construction jobs and the need to diversify the industry, though, the workforce shortage could grow to as many as two million workers by 2025 with passage of the infrastructure bill.⁷

The need for workers who are ready to fill these jobs offers a tremendous opportunity here in the District. In FY 2021, the DCSEU created 87.6 FTE green jobs for DC residents, drove jobs and opportunity for CBE businesses through the Solar for All program, and helped CBE and CBE-eligible businesses and their staff get access to training and certification opportunities that will benefit them for years to come. The DCSEU wants to continue to ensure that, as we work to make energy-efficient and renewable energy technologies more accessible to District residents and businesses, DC residents are benefiting from good paying green job opportunities.

FIVE YEAR HIGHLIGHTS

 **423+**

full-time equivalent jobs created for District residents

 **90**

Workforce Development program graduates

 **100+**

national certifications pursued by CBE employees and DC residents through Train Green SEICBP 2021-2022

 **98%**

of Train Green SEICBP participants indicated they would take another course



The DCSEU continued its Workforce Development program, which offers unemployed and underemployed District residents the opportunity for a 5-month paid (at DC's Living Wage or above) "externship" with a District contractor or organization. While the participating organizations play a key role in hiring, training, and mentoring externs, there is little to no cost to their companies. The DCSEU offers job skills development, on-the-job training, a competitive hourly wage, nationally recognized certifications at no cost, weekly energy and soft skills trainings, and job placement assistance. In FY 2021, the DCSEU hosted two cohorts of externs, including our largest cohort ever in the summer of 2021. A total of 34 externs graduated from the program in FY 2021, with a total of 28 achieving full-time employment after graduation, a remarkable accomplishment during the pandemic. Externs received mentoring and on-the-job experience with firms such as Greenscape Energy, WDC Solar, the Metropolitan Washington Council of Governments (MWCOCG), DC Water, Flywheel Development, the District Department of General Services (DGS), and many others.

While they were in the program, externs were able to access classes and exams for national certifications at no cost, such as LEED Green Associate certification and North American Board of Certified Energy Practitioners (NABCEP) solar certification.

For the second year, the DCSEU partnered with DOEE and the District Department of Small and Local Business Development (DSLBD) on the Train Green Sustainable Energy Infrastructure and Capacity Building Pipeline (Train Green SEICBP) program⁸. The program is designed to assist CBEs and CBE-eligible firms in acquiring new or enhanced skills and knowledge around energy efficiency and renewable energy design, construction, inspection, and maintenance. Building on our work to launch the program in FY 2020, this year the DCSEU provided a total of 19 training opportunities from 9 training providers for the staff of CBE and non-CBE businesses, all at no cost to the registrants. Courses included Certified Energy Manager (CEM) training, Building Automation Systems, LEED AP O+M exam preparation, Commercial Building Retuning, and many others. This year a total of 217 individuals registered for at least one session, nearly double the number in FY 2020, while 80 (37%) of them registered for multiple courses. We worked closely with DSLBD and the Coalition for Nonprofit Housing and Economic Development (CNHED) to promote the program, resulting in a 106% increase in subscribers to our Trade Ally email marketing list and more than 1,000 new website visitors. The DCSEU was able to offer credentialing and certification opportunities to 99 students, providing these students and the firms they work on with new skills that can help them compete for work here in the District. As new policies like DC's Building Energy Performance Standards (BEPS) drive the need for buildings to make improvements, the Workforce Development and Train Green SEICBP programs are helping CBEs, other District-based firms, and DC residents build their skillsets, pursue new career opportunities, and compete for contracting opportunities.

⁸ A complete report on the Train Green SEICBP program was submitted to DOEE.

TESTIMONIALS

“ I would encourage anybody who's undecided about going through the [Workforce Development] program to do it. I graduated from UDC with a degree in electrical engineering with a concentration in computer engineering, but I had never done project management at a construction company. Greenscape took me and basically taught me how to fly, and then once I know how to fly, I can just go and look for my own horizon with the skills that you gave me.”

Victor Ramos-Martinez, 2021 Workforce Development program graduate and current Project Manager at Greenscape Energy

“ It was really great that [the DCSEU] had a lot of resources for us, not just the weekly meetings but also resources for certification programs like LEED and ISSP. The cost factor is a major hurdle for a lot of people.”

Amanda Woolsey, 2021 Workforce Development program graduate who externed at MWCOG

“ I've participated in several training opportunities through DCSEU. This organization is an absolute lifesaver and lifeline to small business eager to grow and scale.”

DCSEU Train Green SEICBP program participant



Sometimes people can't afford solar and they don't have a good roof. However, we are still able to help people and inform them. With the help of others leasing the roof and lending their roof we have been able to make a huge difference. It feels amazing that I can help contribute to ease their financial struggle and if I could do it in any other ways, I would as well."

Kassandra Reyes, Project Manager at New Columbia Solar, a DCSEU Solar for All CREF developer.

"The SEI training platform is by far the best I have ever seen. The topic flows and the presentation along with the practical videos makes it more interesting. The amount of resources they put into each training chapter is amazing."

DCSEU Train Green SEICBP program participant

"It means a lot. It means that I have someone who has my back. It means there is someone interested in seeing me pull through. [The DCSEU] has been extremely supportive, and has been very firm in trying to push me to take those LEED certification exams, which I will. Knowing that I have the DCSEU interested in me and my success is what keeps me motivated."

Uchenna Egenti, DCSEU Train Green SEICBP Program Participant

HELPING BUSINESSES Change the Built Environment

In FY 2021, the DCSEU continued to strengthen its relationships with customers, contractors, industry organizations, and stakeholders in the commercial, institutional, and multifamily markets.



With many office buildings still closed or not operating at full capacity due to the pandemic, and with the District's Building Energy Performance Standards (BEPS) starting to roll out, building owners and managers will need help as they adjust to new market conditions and standards. The relationships we've developed and the trust we have built with customers over the past ten years will be incredibly important in having their trust to help them navigate decisions on how they operate their buildings and on how they will finance upgrades in the coming years. These buildings also represent the District's biggest opportunities for reducing energy consumption and greenhouse gas emissions.

FIVE YEAR HIGHLIGHTS



\$21.3+ million

in incentives provided for over 2,100 projects in the commercial, institutional, and market-rate multifamily markets



\$633.8 million

in lifetime energy cost savings for commercial, institutional, and market-rate multifamily



2.68 million

metric tons of lifetime CO2e emissions reduction from commercial and institutional (C&I) buildings



\$30+ million

in lifetime energy cost savings for DC hospitals



\$36 million

spent with CBEs

Through outreach via our Account Management and Engineering teams, the DCSEU continued to offer custom technical assistance and financial incentives; prescriptive rebates on lighting, HVAC, refrigeration equipment, and commercial cooking equipment (including enhanced amounts for small businesses and income-qualified facilities); midstream lighting rebates working with CBE and non-CBE distributors; and direct installation incentives for customers who work directly with DCSEU subcontractors. In total, the DCSEU provided \$4.1 million in incentives to customers across these programs in FY 2021. To deepen engagement with some of DC's largest energy users, the DCSEU began work to expand its "roundtable" and Strategic Energy Management (SEM) efforts. This included hosting our first K-12 Schools Roundtable in July in partnership with IMT and Steven Winters Associates, where we co-led discussions about the BEPS and the technical and financial support buildings in this sector could access. The DCSEU continued its College and University Roundtable discussions, and also completed our first SEM cohort with 8 universities in May of this year (see story below for more details). The DCSEU began planning and recruiting in FY 2021 for SEM cohorts with affordable multifamily buildings and District hospitals. And to ensure we are prepared for BEPS, the DCSEU also participated in numerous BEPS stakeholder meetings and worked on analyzing building data to prepare to support buildings starting in FY 2022 that did not meet the BEPS.

To raise awareness in the market, the DCSEU also worked on new marketing campaigns in the C&I market in FY 2021. The Account Management team worked with the Program Management and Marketing and Communications teams on developing and launching the DCSEU's first refrigeration campaign promotion. The offer covers up to 100% materials costs on electronically commutated motors (ECMs) and door heater controls. The DCSEU promoted the

campaign with digital advertising, including outreach via the Restaurant Association of Metropolitan Washington (RAMW), and direct outreach to customers and trade allies from the Account Management team. From June to September, the campaign had more than 80,000 impressions and the refrigeration web page had a 650% increase in page views over the previous period. This campaign, which will continue in FY 2022, will help prepare the market for additional refrigeration measures the DCSEU is exploring, including leak detection/reduction and natural refrigerants, in the next five years. The Marketing and Communications team also launched a campaign for the Account Management team designed to drive brand awareness about their team and their work with different vertical markets. The campaign drove more than 900,000 impressions through digital advertising on BISNOW, the Washington Business Journal, LinkedIn, and Google Ads. As part of the campaign, the DCSEU set up a tool where customers can schedule a meeting at an available time with an Account Manager without having to send an email.

In addition to our Workforce Development and Train Green SEICBP programs, the DCSEU expanded outreach and engagement with trade allies in FY 2021. This included hosting the first of two Trade Ally Tech Talks: one focused on variable frequency drives (VFDs) and the other on refrigeration. These tech talks allow the DCSEU to engage with existing and new trade allies (contractors, distributors, and other businesses) on new technologies, contracting opportunities, and rebate offerings. The DCSEU worked closely with DSLBD and CNHED to ensure CBEs and other District-based firms are engaged in these discussions and aware of the opportunities. As a result of this work and the Train Green SEICBP program, the DCSEU doubled the number of subscribers to its trade ally email marketing list in FY 2021. The DCSEU will continue this work in FY 2022 to expand engagement with trade allies, especially CBEs.

CASE STUDY | Serving the Community Through Solar

Mark Davis was inspired by former President Barack Obama's climate change policies and believed there was a unique opportunity for him here in the District.



When he decided to start a new business, WDC Solar, in 2009, Davis had three main goals in his business plan: to create jobs for District residents; to provide low- to no-cost energy for low- and middle-income DC residents; and to do something to improve the environment. With similar missions, over the past decade the DCSEU and WDC Solar have grown alongside one another to serve the District through solar.

In 2012, the DCSEU saw that access to solar was lacking in Wards 5, 7, and 8 when compared to the rest of the District, with fewer than a dozen systems installed in Wards 7 and 8. With modest goals of installing 15 to 20 systems for income-qualified families as part of a Small-Scale

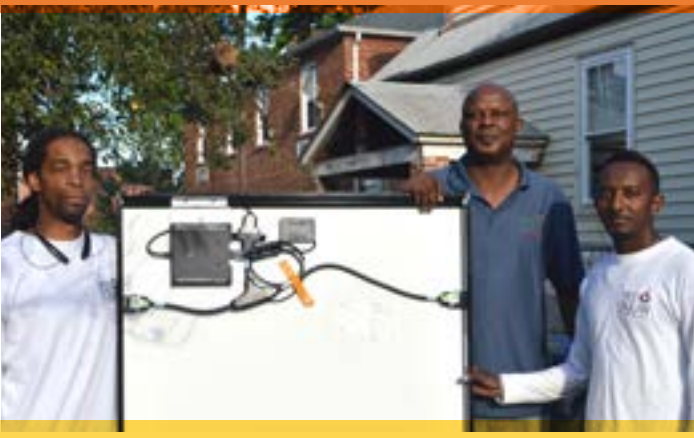
Solar pilot, WDC Solar was one of the first local contractors the DCSEU worked with to develop a pipeline of projects. The pilot ended up serving 87 homes with solar and helped form the basis for how to provide low- to moderate-income DC residents with access to solar. This initial partnership helped the DCSEU establish itself, and helped Davis build his business in its early stages.

"The DCSEU has had a significant impact on my business, especially in its developmental stages," said Davis. "And we have helped the DCSEU by being another connection to the community that they can depend on, to treat the customers we serve with dignity and respect no matter their income level."

Since 2012, WDC Solar has grown immensely, expanding to have single-family as well as commercial solar installation crews and working on large community solar projects across the District. Davis's company has worked on hundreds of solar installations as part of the DCSEU's programs, including the DCSEU's most recent work on the Solar for All program starting in FY 2019. Davis and his team have also served as hosts and mentors for externs from the DCSEU's Workforce Development program, some of which are still working at WDC Solar.

“Some of the young men and women we have hired have been with us seven, eight, even nine years. I have seen some of them go from homeless, to getting their own apartment and purchasing a car.”

Mark Davis, President of WDC Solar



Davis pointed out that having a supportive Mayor, Council, and leadership at DOEE have played an important role in his success and the success of solar in the District as well. When asked what he sees for solar in the District and for WDC Solar over the next decade, Davis said he looks forward to continuing to serve low- and middle-income residents, especially elderly residents, and hopes to see more income-qualified single-family residents get access to solar.

“I have gotten so many calls over the years from customers where we have been able to cut their electric bills in half, sometimes completely. For retired and elderly residents, that's as valuable as putting a check in the bank. When I started this company, I wanted to make a difference in my community and I feel like I have been able to do that.”

CASE STUDY | Putting High Energy Bills on Ice at Mess Hall

Al Goldberg founded Mess Hall in October 2014 to solve the need for more commercial kitchen space in the marketplace. There were and continue to be a lot of food entrepreneurs that cannot overcome the barriers of entry to opening a food business.

By using their shared kitchen model along with other resources that they can help provide, Mess Hall has been able to launch and accelerate their business while helping many others do the same thing. "We get excited when we're presented with a really great new concept. I started Mess Hall to create opportunities for people to launch their dream businesses, so helping talented individuals bring their successful brands to life is always rewarding," said Goldberg. Mess Hall is also very conscious about their energy consumption and their carbon footprint.

neglect that each and every one of us has effect on the whole environment." With a collective of approximately 50 businesses utilizing its space, Mess Hall understands the importance of being mindful of its energy footprint.

Goldberg has worked with the DCSEU on several projects since getting his start in 2014, including lighting upgrades and rebates on the purchase of efficient reach-in coolers. Having a large walk-in refrigeration space is an important piece of equipment for restaurants and shared kitchen spaces, and can make up as much as 60% of energy consumption for a business like Mess Hall. When the DCSEU reached out about its refrigeration campaign to help Goldberg upgrade the fan motors on Mess Hall's walk-in refrigeration, Goldberg was interested but facing the same cash crunch that many small businesses have dealt with throughout the pandemic. The DCSEU's special campaign offer to cover all materials costs, along with DCSEU Engineer Edward Friebe's assistance with identifying the right equipment, helped convince him. Coupled with their recently installed solar PV system, they will be reducing their carbon footprint and reducing their energy costs for years to come. "DCSEU has always provided cutting edge programs that help bridge the gap for small businesses in the District of Columbia that want to do the right thing but may not be able to afford to do it," said Goldberg. "To businesses like Mess Hall, having a resource like the DCSEU is invaluable."



Raising two children, Goldberg is always thinking about the future of the planet. "It's our responsibility as a business to not only be conscientious of our footprint, but to also influence others to actively reduce energy consumption," he said. "Never should we

CASE STUDY | Better Lighting, Bottom Line for DC Brau

When they opened their doors in 2011, DC Brau was the first production brewery to operate in the District since 1956. Over the past ten years, DC Brau has grown immensely, distributing their beers and hard seltzers in DC, Maryland, Virginia, eastern Pennsylvania, Delaware, and sometimes Massachusetts, and producing up to 15,000 barrels a year. The company has implemented a number of sustainability measures, including sending its spent grain



(about 14 tons per week) to be used as feed for livestock and ensuring waste cardboard and aluminum are all recycled. With a large, 50,000 square foot facility in northeast DC, keeping energy costs under control is also important. "Energy savings are very important to us," said Jeff Hancock, DC Brau co-founder and brewmaster. "Brewing is a capital and equipment intensive operation. The power we use for most of our heavy equipment has to be three-phase electricity, and because of our large boilers, we had to get a larger diameter gas line."

Having good, high quality lighting is also an important part of their operations at DC Brau. While they had upgraded from old and dim metal halide lighting to more efficient T8 fluorescent tube lighting several years ago, lighting ballasts on the fixtures were failing regularly, which meant Hancock was constantly on a scissor lift maintaining the lighting. "It's important to have proper lighting in the production facility because you are working with so many moving parts," he said. "You have to be able to see what you're doing and if there's any kind of risk or something that could go wrong." When DCSEU Account Manager Leigh Harrold approached the company with the offer to bring a DCSEU participating contractor, Greenscape Energy, and financial incentives to help them upgrade to more efficient LEDs, Hancock was keen on making the switch. And while they had only planned on upgrading lighting in the production area, Greenscape was able to upgrade nearly all the lighting in the entire facility. "We did a walkthrough and bulb count with Greenscape, who estimated it would take about five days to complete the upgrade," Hancock said. "It only ended up taking two and a half days – it was a great experience." The lighting upgrade is expected to save DC Brau more than \$7,000 a year and countless hours on lighting maintenance.

“ Being able to save that amount of money on an annual basis goes right to our bottom line, and that’s money that we can count on in situations like this pandemic.

Jeff Hancock, DC Brau co-founder & brewmaster

CASE STUDY | Taking SEM to University

In FY 2020, the DCSEU launched a Strategic Energy Management (SEM) pilot focused on identifying quick cost- and carbon-saving opportunities by helping customers intentionally focus efforts on behavior change around energy use, proactively manage consumption and waste, and stimulate organization-wide engagement.

The DCSEU was excited to demonstrate how integrating a critical energy management (EnMS) framework—as introduced by the SEM curriculum—could help customers champion their own sustainability goals and meet other evolving energy and environmental regulations and requirements at the local and national level such as the District’s Building Energy Performance Standards (BEPS).

To date, the DCSEU has supported the delivery of two SEM cohorts: one for federal buildings and another for colleges and universities that collectively represent a total of six individual federal departments/facilities, and eight District universities. Under the SEM pilot these peer groups have successfully conducted individual energy assessments, participated in remotely delivered workshops, and received technical assistance over an eight-month period.

Beginning in March 2020, the DCSEU enrolled eight District universities in the SEM initiative and held the first workshop in September 2020 as part of a nine-month curriculum. For the university cohort specifically, coaching and training materials focused on how to best implement and integrate an effective EnMS across campus (engaging students, faculty, and facility members); create a framework that will help them meet and track compliance with BEPS, and support designation leadership in the Association for the Advancement of Sustainability in Higher Education’s



Sustainability Tracking, Assessment & Rating System (AASHE STARS). It was also designed to respond to specific requests from universities interested in learning how an SEM initiative could help them maintain progress towards their own campus-wide energy, climate, and sustainability goals, increase financial stability, attract new students, and set a vision for excellence in academics and operations.

The universities set ambitious goals, including developing an energy management strategic plan, systematizing low- and no-cost maintenance operations, engaging students and staff in public outreach and “energy efficiency treasure hunts,” and completing audits of their facilities. By the end of the initiative, five of the eight participants had actively revised or written energy management plans, and three had identified student engagement opportunities with the Toolkit.

"The DCSEU SEM program is an invaluable resource. It helped us to elevate the importance of integrating energy management strategies across the campus," said Alfonzye "Chip" Chisholm, Director of the Office of Sustainability at Howard University.

While the pandemic precluded any on-site engagement and made the measurement and verification of energy savings or regression analysis a moot point, the DCSEU was still successful in maintaining strong participant engagement and created a valuable collaboration space for peers to discuss topics such as "how do I best take advantage of the current circumstances and assess / optimize my building's systems, campus physical plant?" to thoughts on "how to plan for and meet COVID-related HVAC operation requirements?". The DCSEU was also successful in introducing a customer-centric behavioral science boost to their SEM training materials, and created fun and impactful printed collateral to support student/staff return-to-campus activities focused on developing new habits

and energy-efficient behaviors. To date, these DCSEU-branded materials have been leveraged by all cohort participants and also co-branded by two university participants.

While the DCSEU distributed certificates of completion to the universities in May 2021 for this SEM initiative, work will continue with ongoing University Roundtable events and SEM activities to ensure these partners are supported as they navigate the BEPS and other energy efficiency opportunities and challenges on their campuses. Looking forward, the DCSEU is actively planning and recruiting an additional two SEM cohorts: one that will engage District hospitals and another focused on multi-family affordable housing (U.S. Department of Housing and Urban Development-classified) properties. While the DCSEU had hoped to launch the hospital cohort this fall, in spite of strong interest, due to the rising concern and uncertainty surrounding the impact the delta variant, this has been postponed till 2022. The multifamily cohort will launch in early 2022.





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