



OFFICE OF THE
SECRETARY

2015 DEC 31 AM 11:52

MURIEL BOWSER

MAYOR

DEC 31 2015

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

RE: DC Sustainable Energy Utility Report (Clean and Affordable Energy Act of 2008, D.C. Law 17-250)

Dear Chairman Mendelson:

Pursuant to section 210 of the Clean and Affordable Energy Act of 2008 ("CAEA"), D.C. Law 17-250, the Department of Energy and Environment ("DOEE") is pleased to submit the enclosed Fiscal Year 2015 Annual Report on behalf of the District of Columbia Sustainable Energy Utility ("DCSEU"). This report details the activities undertaken and the accomplishments of the energy efficiency and renewable energy programs administered during July 1, 2015 to September 30, 2015. The report was prepared by the DCSEU. DOEE, the designated contract administrator, is transmitting the attached report.

Please feel free to contact Dr. Taresa Lawrence at 202-671-3313 if you have any questions regarding this report.

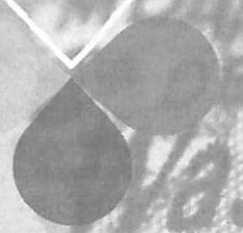
Sincerely,

A handwritten signature in black ink, appearing to read "Muriel Bowser".

Muriel Bowser
Mayor

ON THE MAP:
Helping DC Lead
in Sustainability

2015 ANNUAL REPORT



DC
SUSTAINABLE ENERGY
UTILITY



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The 2015 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 and Environment.

A message from the DCSEU

Through progressive policies and initiatives, Washington, DC, has positioned itself as a national leader in energy efficiency. In May, the American Council for an Energy-Efficient Economy (ACEEE) ranked the District third in a field of 51 of the nation's most energy-efficient cities in its 2015 City Energy Efficiency Scorecard. Only a year ago, DC ranked seventh. The District's rise of four positions within a single year earned it the title of "most improved city." For the second year in a row, ACEEE identified the DCSEU as a "best practice." Also in May, the U.S. Environmental Protection Agency (EPA) announced that the District leads the nation with the most ENERGY STAR® certified buildings, more than any other metropolitan city. We're excited to report that Washington, DC, also has the most LEED certified buildings, with nearly twice as many certified buildings as second-ranked San Francisco.

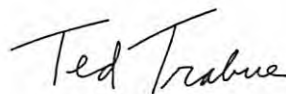
The District's rise to prominence in energy efficiency performance can, in many ways, be attributed to enhanced partnership among several District agencies and utilities. When Mayor Muriel Bowser set a goal to install 130 solar photovoltaic systems on the homes of limited-income District residents in just 250 days, we met that goal—and then exceeded it. The Solar Advantage Plus Program (SAPP), jointly funded by the DCSEU and the Department of Energy and Environment (DOEE), installed and interconnected 137 solar PV systems. This collaborative work catalyzed unprecedented cooperation among DOEE and several other District agencies.

It is particularly noteworthy that (1) the Department of Housing and Community Development (DCHD) helped us to identify rooftop locations that would be good candidates for solar installation; (2) the Department of Consumer and Regulatory Affairs (DCRA) streamlined its permitting and inspection processes to enable more rapid installation; and (3) Pepco reduced the time required to interconnect these systems. All of these efforts helped

us meet the Mayor's goal, reduced the cost of energy to participating customers, and contributed to keeping housing affordable in the District.

Our work is about more than reducing the costs of energy use. Early in FY 2015, when dozens of District residents were at risk from the extreme cold, the DCSEU managed its resources to carry out a District emergency response effort. We deployed our trusted contractors to install heating equipment, keeping our city's most valuable assets—its residents—safe and warm.

Washington is advancing energy efficiency to levels befitting a leading U.S. city, and a city of international importance and influence. Our teamwork has resulted in a District that can point to the hard work of its residents, contractors, and businesses as a collective, exceptional example of energy improvement and workforce achievement. The DCSEU has built the infrastructure and momentum for even greater accomplishments. We are committed to continuing to play a role in the District's quest to be the greenest city in the nation.



Ted Trabue,
Managing Director



2015 Highlights

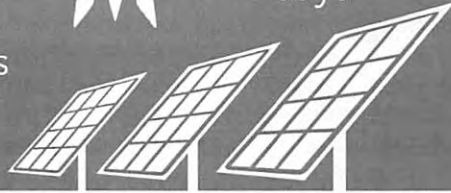
Largest income-qualified solar program on East Coast

137
solar PV system installations



250
days

1 PV
system every 1.8 work days



185,250

Green Job Hours created



\$5.7 million

invested in energy efficiency for low-income residents



\$5.6 million

invested working with **28** Certified Business Enterprises



Enough energy saved to power

6,800 homes

in DC for a year*



*Energy Information Agency (EIA.gov). 2013 DC average home use = 720 kWh per month x 12 = 8,640 kWh (annual energy use)



\$18.6
million
invested

\$92.6
million
lifetime savings

ALL
PERFORMANCE
BENCHMARKS
ACHIEVED

Making an impact beyond saving DC residents money

RESIDENTIAL

The DCSEU has been the primary resource for energy savings for District residents for more than four years. In FY 2015 the DCSEU enrolled and involved more participating retail partners—the main points of contact for customers throughout the District—than in any previous year. With initiatives offering services for the city’s most vulnerable residents, the DCSEU is meeting the energy-saving needs of more customers across the city than ever before. This year, the DCSEU served the highest number of customers with Home Performance with ENERGY STAR services, to date. And through the emergency heating replacement initiatives, the DCSEU provided no-cost installation services to customers in need by coordinating with heating and plumbing contractors to install more than 114 energy-efficient units in District households.

As efficient technologies continue to emerge into the market and as the market responds, customers have explored—and purchased—many more LED lighting fixtures than in previous years. In January, the DCSEU expanded its efficient appliance offerings to include

clothes dryers when ENERGY STAR qualified models became available for the first time.

The DCSEU also made it easier than ever for residential customers to take advantage of energy efficiency services that matter to them. For the first time, customers could use an online rebate application for all equipment rebate types. Rebate submissions for heating and cooling equipment also increased by more than 78% this year over FY 2014. More DCSEU Participating Heating and Cooling Contractors installed high-efficiency equipment: in FY 2014, there were 17 who qualified as Participating Contractor; in FY 2015, the list grew to 27. The DCSEU also worked with retailers this year to make customers more aware of DCSEU-discounted efficient products on the shelves. These methods included floor decals at major retailers, to lead customers toward efficient lighting and displays with increased LED selections.

*Source: <http://www.bizjournals.com/washington/blog/2014/02/forecast-average-dc-home-will-sell.html>





52

participating retailers across DC



\$2.6 million

in annual energy savings



298,406

efficient products sold



Annie's ACE Hardware

ACE
Hardware

An Ace in the Hole **FOR THE COMMUNITY**

Serving the Petworth, Columbia Heights, and Park View neighborhoods, Annie's Ace Hardware is a pillar of the community. In addition to being a DCSEU participating retailer and carrying DCSEU-discounted LED bulbs, the store hosts monthly cat adoption events, offers a free bike clinic, and participates in Habitat for Humanity. Since 2012, Annie's Ace has been helping customers choose the most efficient products for their homes and offices, working closely with the DCSEU to bring all electrical retail staff up to speed on efficient lighting technology.

Annabeth Roeschley, Annie's Ace Business Development Manager, acknowledges the role the DCSEU has brought to her business: "Our relationship with the DCSEU is one of the best kinds of community partnerships—not only can

we take pride in doing a great thing for the community and the environment, but our customers benefit from knowledge about energy efficiency. It's also rewarding to show our customers that going green doesn't always mean expensive. It's a way for everyday consumers to take a small step toward being more sustainable."

In November 2015, Annie's Ace is opening its second location in the Brookland neighborhood, joined by the team from Brookland Hardware, an existing neighborhood establishment that is retiring after more than 30 years. After years of collaboration, Annie's Ace knew it could count on the DCSEU to make its newest space more energy efficient. Staff enlisted the DCSEU to help them choose energy-efficient LED tube lights to outfit the new location. These improvements will help them continue to serve their customers without having to pass on any unnecessary costs related to energy use.



Finding Savings ON A FIXED INCOME

More than 50 low- and moderate-income homeowners have received whole-home weatherization and other energy services through the DCSEU's Income-Qualified Services initiative. This year, Virginia Thomas of Congress Heights was just one resident who benefited from the initiative, which provides major home energy improvements such as air and duct sealing, insulation, and heating system upgrades to income-qualified District residents.

In winter 2014, Ms. Thomas received whole-home air sealing and insulation, a new efficient water heater, and a new high-efficiency furnace through the initiative. She also uses the programmable thermostat she received through the DCSEU, adopting practices that help her save even more energy. Virginia's home improvements will provide energy savings of approximately \$6,000 across the lifetime of these installations, and they will also add comfort to her home. As a retiree on a fixed income, Ms. Thomas is happy that she will be saving an estimated \$450 in energy costs each year, compared to what she was paying before she used DCSEU services. She also recommends working with the DCSEU to everyone she meets at the Congress Heights Senior Wellness Center, where she is an active member.

"My experience working with the DCSEU was excellent. The people were professional, very nice, and very kind. I enjoyed having them here and I truly enjoy receiving the benefits of the things that were done in my house," said Ms. Thomas. "I would have never been able to do that on my own. It's a blessing to me."

*Source: <http://www.bizjournals.com/washington/blog/2014/02/forecast-average-dc-home-will-sell.html>

" The savings mean a lot to me because I'm on a fixed income, and anytime you're on a fixed income you don't get nothing coming in extra. Any time you can save anything, that's more money going into your pocket so you can do some extra things. The savings may not be more than \$10 or \$20, but that's \$20 more than I had! That extra bit of money coming in is very much appreciated. "

● **Virginia Thomas**
Homeowner

\$965,300
Average DC
home price
by 2018*

A model for sustainable affordable housing

LOW-INCOME MULTIFAMILY

In her first year in office, Mayor Muriel Bowser identified investment in affordable housing as one crucial component for creating attainable pathways to the middle class—and bringing the District closer to ending homelessness. As the City turns its attention to housing preservation and affordability during a time of rising housing costs, the District is becoming a model for sustainable affordable communities.

The DCSEU offers technical assistance and financial incentives to developers, owners, and property managers who incorporate energy-efficient systems and measures when building or rehabilitating affordable housing in the District. These incentives help break down the financial barriers of incorporating energy efficiency into affordable housing. They also reduce costs for both owners and residents, and encourage decision makers to go beyond

code requirements. Strong codes and standards contribute to improving the quality of life and comfort for those who call these buildings home.

This year, the DCSEU gained recognition as an expert resource in the local and regional affordable housing industry. It was asked to join national working groups for program implementation, leadership, and policy discussions and spoke at the Greenbuild and National Energy and Utility Affordability Coalition conferences. Finally, the DCSEU also worked with its partners in affordable housing to help secure recognition for DCSEU projects with the Northeast Energy Efficiency Partnerships (NEEP) Northeast Business Leader in Energy Efficiency Awards and the Housing Association and Nonprofit Developers (HAND) Housing Achievement Awards.

*Source: <http://www.dcfpi.org/wp-content/uploads/2009/03/DC-Poverty-Demographics.pdf>





68

income-qualified buildings served



\$9.45 million

in lifetime energy cost savings



14.2 million

gallons of water saved

Stability for Those **WHO NEED IT MOST**

The cost of energy has a much larger impact for the owners and developers of affordable housing, compared to their counterparts in the market rate housing sector, because their energy bills vary greatly from month to month. New luxury apartments and condominiums spring up regularly across the city, but affordable housing must operate in a less agile environment. Development setbacks and razor-thin budget margins frequently result in major delays in the rehabilitation of many dilapidated, neglected, or abandoned buildings slated for affordable housing. For these owners and developers, the prospect of rehabilitating a building so that it will be energy efficient offers an element of security against future price instability in this market. This is a plus for current or prospective residents, as well. When the DCSEU provides technical and financial assistance that ensures properties on the drawing table will result in buildings that are as energy efficient as possible, developers and other stakeholders are more likely to agree to move forward with these rehabilitation projects.

"It can be challenging to produce housing that is both environmentally sustainable and affordable," said Bill Winston, Chief Performance Officer at Manna, Inc. "The DCSEU helps Manna combine environmental responsibility with our mission of providing affordable housing by lowering the higher up-front costs of energy-efficient products—products that help our first-time homeowners save energy and lower their energy bills."

In 2015, the DCSEU worked with Manna, Inc. to complete a two-phase rehabilitation of the Buxton Condominiums in historic Anacostia. The former rental apartment building was abandoned and in disrepair, posing a safety risk to the neighborhood. The DCSEU provided technical assistance and incentives for installations of ENERGY STAR® appliances and efficient lighting in each unit, energy-efficient heating and air conditioning equipment, and insulation and air sealing for the building envelope. The Buxton Condominiums will now save more than 79,300 kWh of electricity and 250 MMBTU of natural gas annually, with associated cost savings of more than \$9,100 per year.

Manna, Inc. is the first to partner with the DCSEU to make an affordable condominium building as efficient as possible. The Buxton Condominiums now serve as a model for homeownership, energy efficiency, and price stability in the District's low-income community.

" The DCSEU helps Manna combine environmental responsibility with our mission of providing affordable housing by lowering the higher up-front costs of energy-efficient products—products that help our first-time homeowners save energy and lower their energy bills. "

Bill Winston
Chief Performance Officer
Manna, Inc.

109,000
Residents lived
below poverty
line in 2012*

*Source: <http://www.dcfpi.org/wp-content/uploads/2009/03/DC-Poverty-Demographics.pdf>



Moving the mark on access to solar

RENEWABLE ENERGY

Renewable energy now has a significant foothold in the District—particularly for those who can benefit from it the most. “Renewable energy” pertains primarily to solar energy installations, particularly in FY 2015; the DCSEU has deepened its commitment to this technology, because of its high effectiveness. In FY 2015, the DCSEU installed more solar panels for income-qualified residents than in any previous year. Partnering with DOEE and furthering the shared commitment to bring renewable energy to households across the District, the DCSEU provided 137 limited-income households—many located in Wards 7 and 8—with solar photovoltaic (PV) panel systems in just 250 days.

Between October 1, 2014 and September 30, 2015, the DCSEU completed 30 percent of all solar PV installations in the District. The initiatives have not only made solar technology accessible to those who need it most, but also

supported local businesses and the local green economy by helping to train and employ local residents in the solar industry. These successes come on the heels of the White House’s initiative to increase solar access for all Americans, and in support of President Obama’s goal of training 75,000 workers nationwide to enter the solar industry by 2020.

Owners of multifamily buildings also took advantage of DCSEU renewable energy initiatives in FY 2015. The systems, which increase stability of energy costs for property managers and building owners of multifamily buildings, help to keep rents affordable. With each passing year, the DCSEU moves the District closer to its Sustainable DC goal of increasing the City’s renewable energy-generating capacity by 50 percent, from 2012 levels, by 2032.





30%

of all solar PV projects installed
in DC during FY 2015*



137

solar PV installations for
income-qualified homeowners



\$3.6 million

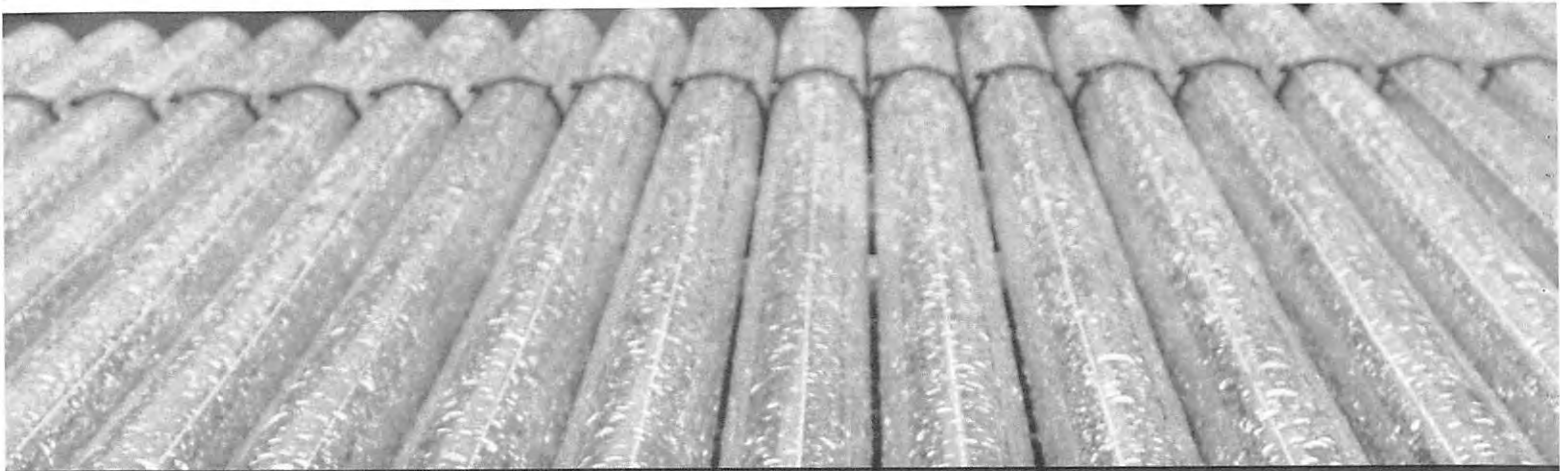
in lifetime energy cost savings



\$667

annual savings per household
with solar PV installed

*Source: http://www.dcpssc.org/Electric/Eligible_Renewable_Generators_List.xls



A New Beginning **IN MOUNT PLEASANT**

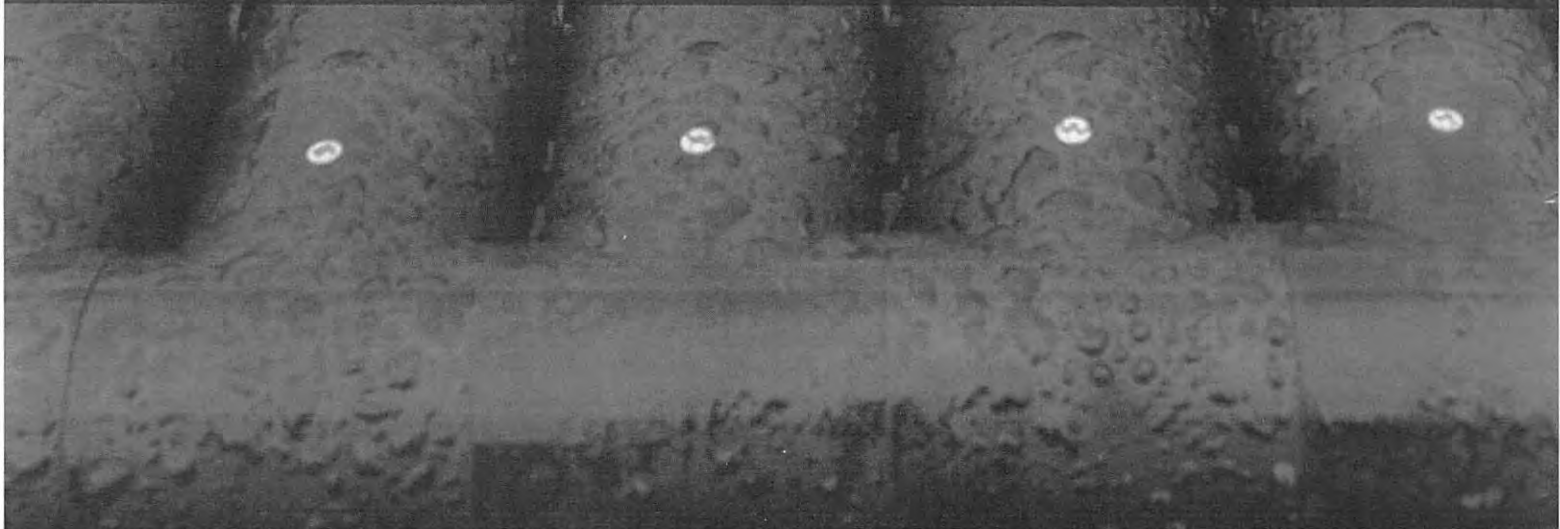
In FY 2015, the DCSEU facilitated the largest solar installation across multiple properties, through its partner and customer, the National Housing Trust / Enterprise Preservation Corporation (NHT / Enterprise). The initiative, called NHT Renewable, installed solar thermal and PV arrays on all NHT's properties in the District.

The Monseñor Romero Apartments, just one of the more than 20 buildings comprising the NHT Renewable initiative, is now housing tenants for the first time since a 2008 fire made uninhabitable the Mount Pleasant neighborhood building (known formerly as the Deauville). NHT / Enterprise was the third developer to attempt its rehabilitation.

NHT / Enterprise incorporated environmentally conscious elements into the building's full renovation, working with future tenants throughout the design process to ensure

their needs were met. In addition to rooftop solar panels, they installed a vegetated green roof and ENERGY STAR qualified appliances, started an organic composting program, and installed LED lighting throughout the property. The building has received Enterprise Green Communities Certification, designating the project as having met rigorous standards for environmental quality and efficiency. The panels installed on the Monseñor Romero Apartments will reduce the building's natural gas use by 201 Mcf of natural gas per year.

After 6 years of dormancy, NHT / Enterprise returned the building to 40 low-income families displaced by the fire. The Mount Pleasant neighborhood, home to a large and thriving Latino community, has a rich history of ethnic and economic diversity. The need for affordable housing continues to grow there, where demand has left many existing units overcrowded. The rehabilitation of the Monseñor Romero Apartments has been critical to preserving the community's diverse identity.



RENEWABLE ENERGY



Edwin Amaker, homeowner

Bringing the District **CLOSER TO THE SUN**

In 2015, the DCSEU and DOEE launched the Solar Advantage Plus Program (SAPP) for District residents. The initiative offered photovoltaic panel arrays at no cost to residents meeting income requirements. The SAPP program's goal of installing 130 solar panels in 250 days coincided with the end of the fiscal year, September 30. Solar installations for income-qualified residents reduce energy costs, allowing more of their income to be allocated to other household needs.

The team effort in the SAPP program involved several District agencies and the utility, working together to ensure that as many qualified residents as possible could benefit from the initiative. The DCSEU worked with the Department of Consumer and Regulatory Affairs, District of Columbia Housing Authority, and Pepco to spread awareness about the opportunity and streamline the process, making it easy for customers to participate.

Alongside the DCSEU's Workforce Development Program, the SAPP program helped train and employ local residents in the solar industry, thus supporting both the DCSEU's green job creation performance benchmark. The DCSEU tripled the number of local Participating Contractors working on DCSEU solar initiatives this year—from two contractors to eight.

Customers recognized the high value the SAPP program brought to their lives and communities. Edwin Amaker, a homeowner and program participant, said "I was told that I would save between 30 and 40 percent, which is major when you start talking about the cost of energy nowadays. The less money out of my pocket, the more money I have for the family."

In Mr. Amaker's neighborhood, news about the SAPP program spread. He received 16 new solar PV panels through the initiative, after learning about it from his next door neighbor, who also participated in the program. The 137 installations and interconnections exceeded the SAPP program goal of installing 130 operable systems by September 30.

109.9
million ft²
of suitable roof
area for solar
PV in DC*

*Source: <http://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/RENEWABLE%20ENERGY%20TECHNOLOGIES%20POTENTIAL%20FOR%20THE%20DISTRICT%20OF%20COLUMBIA%20.pdf>

Guiding District businesses to energy opportunities

COMMERCIAL AND INSTITUTIONAL MARKETS

Because more District customers are now aware of the DCSEU's rebates and technical assistance, they have begun to come to the DCSEU in the early stages of their project and capital expenditure planning processes. The earlier a business or institution involves the DCSEU in its energy efficiency project, the more the DCSEU can offer technical assistance and guidance on other energy-saving opportunities.

A new approach to data analytics has made a difference. Large commercial and institutional buildings in the District account for 65 percent of the District's total energy use.* As these buildings consume energy, those who manage them receive data about their energy use—sometimes as many as 33,000 data points per year, supplied by meters capturing 15-minute interval data. But the building managers frequently do not know how best to use this

valuable information. Using data analytics tools from First Fuel and VEIC, the DCSEU has helped several customers analyze these data and determine where they might find savings across seasons, times of day, and technologies. In fact, the operator of one large museum discovered a single, 15-minute period that had led to a \$9,000 charge on the building's utility bill. Using a VEIC analytics tool, the DCSEU was able to illustrate to the customer the cost and energy savings impact of preventing short periods with high energy draw. The presentation of those data and a subsequent discussion with DCSEU staff led to a team effort to find corrective solutions throughout the building.

Across the commercial and institutional market, the DCSEU worked with more customers in FY 2015 than ever before. Businesses large and small responded well to improvements in clarity around total rebate amounts and average custom rebate amounts. In addition, the DCSEU deepened its strong relationships with trade allies (manufacturers, distributors, and vendors) to reach new customers.

*Source: <http://www.eia.gov/state/?sid=DC>





240

projects with commercial &
institutional customers



\$11 million

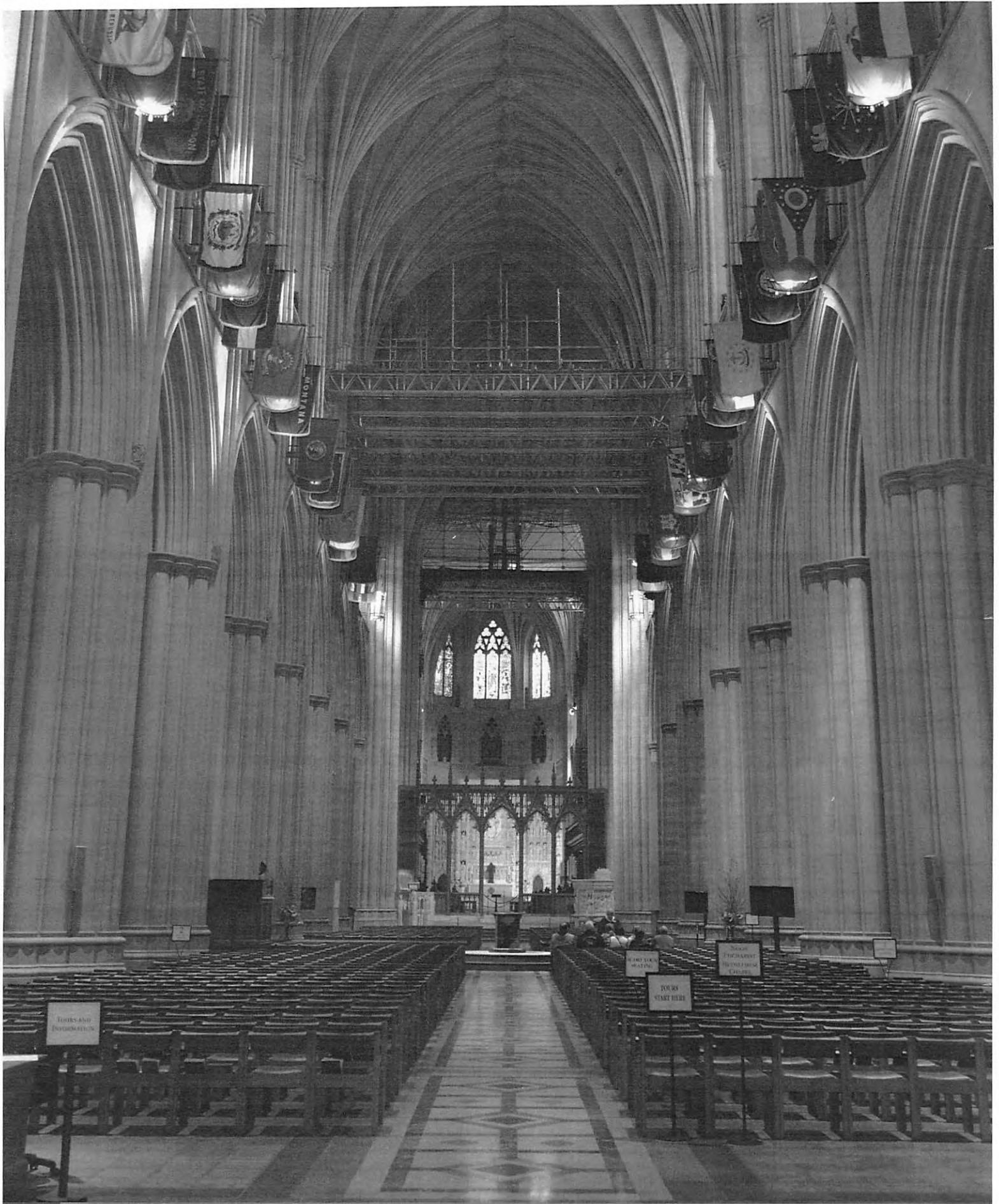
in energy efficiency improvements



56,764 MWh

of energy, enough to power
Wilson Building for 9 years*

*Source: <http://www.buildsmartdc.com/buildings/217>, Wilson Building electricity use in 2014 (6,054,366 kWh)



COMMERCIAL AND INSTITUTIONAL MARKETS

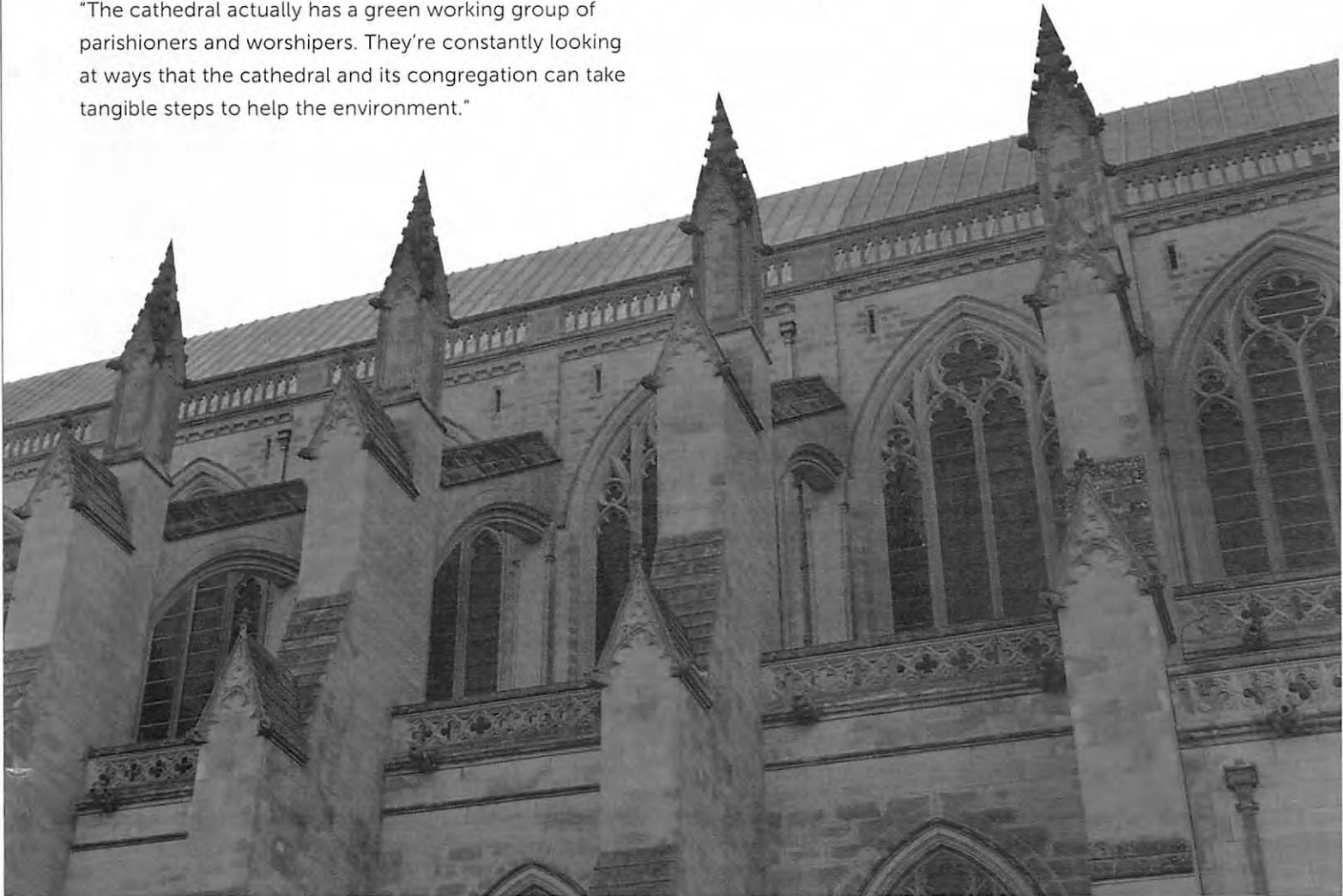
Bringing Energy Savings **TO LIGHT**

The DCSEU has completed 120 projects for more than 85 buildings used for religious purposes in the District. The electricity savings: more than 4,600,000 kWh each year. In preparation for Pope Francis' September visit to the city, the Washington National Cathedral—the second-largest cathedral in the United States—reached out to the DCSEU to reduce its energy use and carbon footprint. The National Cathedral belongs to the Episcopal Church, but its leaders are committed to joining the Roman Catholic pope's effort to slow climate change.

Kevin Eckstrom, Chief Communications Officer at the National Cathedral, explains that the cathedral's commitment to sustainability extends to its congregation. "The cathedral actually has a green working group of parishioners and worshipers. They're constantly looking at ways that the cathedral and its congregation can take tangible steps to help the environment."

Working with the DCSEU, Washington National Cathedral replaced more than 1,100 bulbs with ENERGY STAR certified LED bulbs, and replaced 154 T12 fixtures with high performance T8s. The project was one of the DCSEU's most complicated lighting projects, given the cathedral's historic and ecclesiastical architecture.

The lighting upgrades will save the cathedral more than 280,000 kWh each year. The upgrade, which will pay for itself in only 4 months, will save the National Cathedral more than \$30,000 in the first year alone. These energy cost savings can also be used to restore the building, which was badly damaged in the 2011 earthquake. The cathedral, which has been recovering slowly from the damage, still has \$22 million worth of unfinished repairs. Smaller energy bills also mean the church can do more charitable work.



COMMERCIAL AND INSTITUTIONAL MARKETS

Building a Presence with One of **DC'S LARGEST ENERGY USERS**

The DCSEU has worked productively with the U.S. General Services Administration (GSA) since FY 2013 to provide energy incentives and technical assistance on more than 35 projects. The GSA is an independent agency of the federal government, and manages and supports the basic space functions of federal agencies, serving a local portfolio of 80 buildings. As the relationship between the two entities has grown, the DCSEU has become integrated into the GSA's energy management process.

Joe Eberly, GSA Building Management Specialist and an energy manager for the region, credits the DCSEU's role as a technical assistant and objective, third-party resource with helping the GSA capture many energy-saving opportunities. More important, he stresses that the DCSEU's involvement with GSA buildings has created greater energy awareness among property managers. In FY 2015, the DCSEU worked on 19 projects in GSA-owned or operated buildings, with lighting upgrades and controls, chiller replacements, installations of heat plate exchangers, roof and pipe insulation, installation of variable frequency drives, and window retrofits.

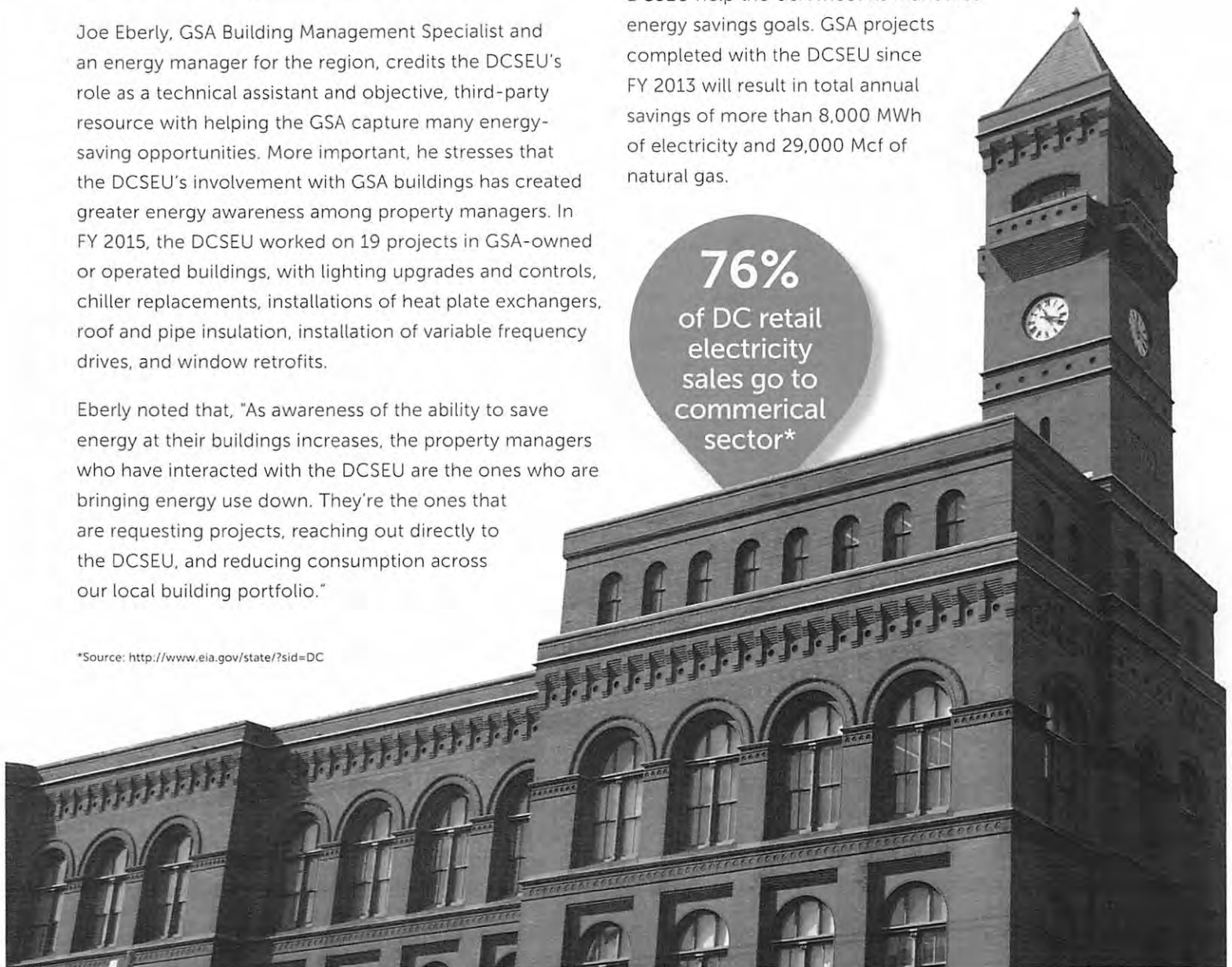
Eberly noted that, "As awareness of the ability to save energy at their buildings increases, the property managers who have interacted with the DCSEU are the ones who are bringing energy use down. They're the ones that are requesting projects, reaching out directly to the DCSEU, and reducing consumption across our local building portfolio."

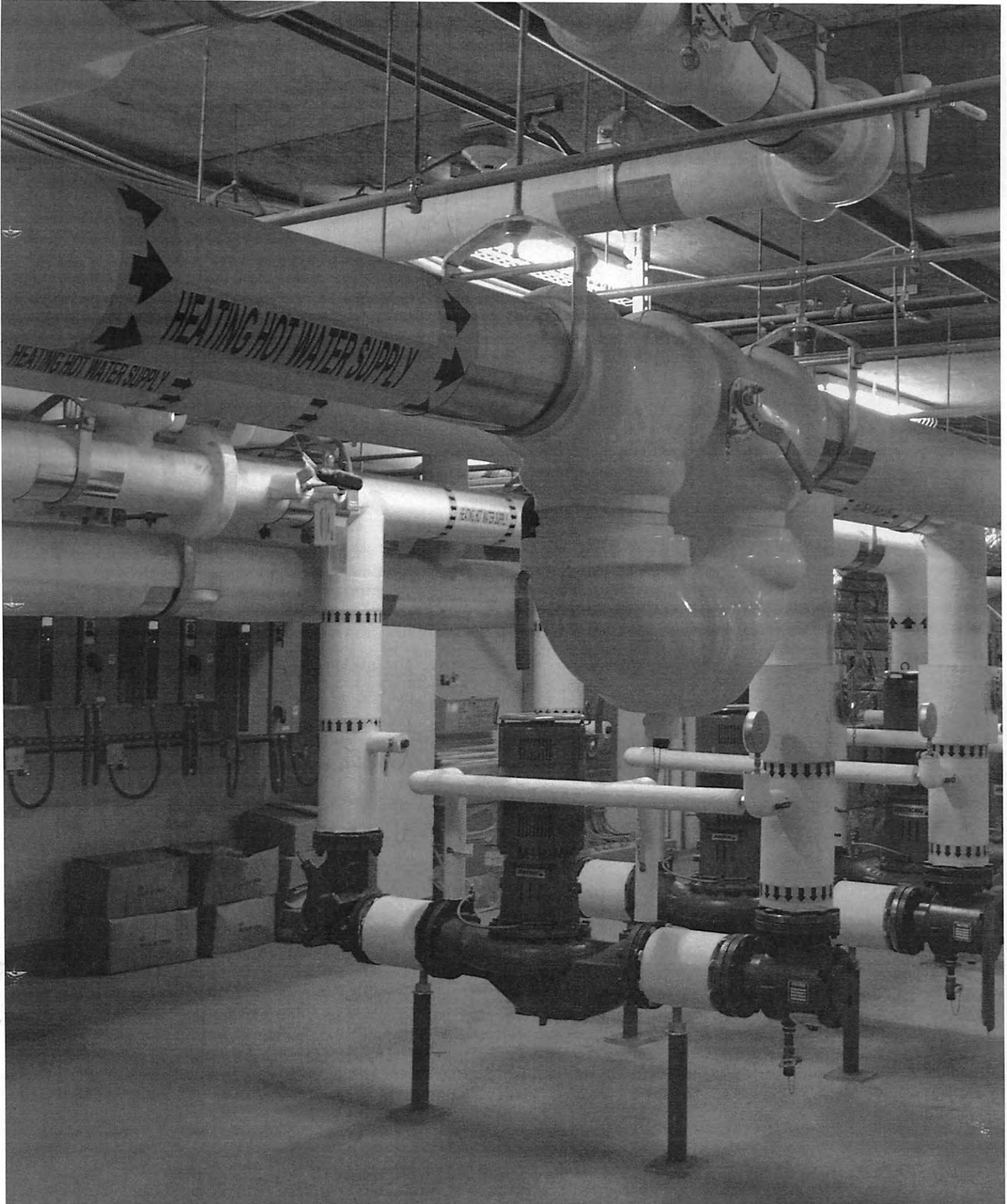
*Source: <http://www.eia.gov/state/?sid=DC>

Unlike other federal agencies, the GSA can re-purpose the money it receives from rebates for additional energy projects across their portfolio. The GSA has access to a fund created specifically for money received through incentives, solar renewable energy certificates, and demand-response programs. At this point, the fund is large enough that the GSA can complete large projects, while adding more money to the fund with incentives received from the new projects. In this way, the money the GSA receives from the DCSEU directly funds future efficiency projects.

Projects completed with the assistance of the DCSEU help the GSA meet its mandated energy savings goals. GSA projects completed with the DCSEU since FY 2013 will result in total annual savings of more than 8,000 MWh of electricity and 29,000 Mcf of natural gas.

76%
of DC retail
electricity
sales go to
commercial
sector*






Building green careers in the District

GREEN JOBS

The DCSEU is committed to building economic opportunity in the District and providing employment opportunities to District residents. All DCSEU hires are District residents, and the DCSEU strives to work with local contractors to complete energy efficiency and renewable energy projects. The DCSEU also ensures that all employees and contractors, internal and external, are paid at or above the City's Living Wage of \$13.80 per hour.

Through its Workforce Development initiative, the DCSEU is widening and improving the trained workforce of local professionals contributing to the green economy. Working with organizations such as United Planning Organization (UPO) and the Department of Employment Services

(DOES), the DCSEU strives to fill a gap in the District's workforce development infrastructure for green jobs: providing mentorship opportunities for entry-level workers and workers who wish to transition into the field. This initiative is for externs, District residents who are paired with seasoned mentors for experiential learning in energy efficiency, renewable energy and related sectors. Through these relationships, DCSEU staff, contractors, and vendors coach, guide, and share experiences that contribute to an extern's professional development and future career opportunities. The initiative helps reduce unemployment and underemployment in the District of Columbia by significantly building the skills of District residents and training them sufficiently to be job-ready, obtain employment, excel in their jobs, and transition to careers in related industries.



\$13.80
Living Wage
in the District
of Columbia



185,250
green job hours for
District residents



240+
District residents worked in
support of DCSEU initiatives



\$5.7 million
spent with Certified
Business Enterprises



85%
of DCSEU externs found
full-time employment



Building the Capacity **FOR SUSTAINABILITY**

Tony Harrison and his team at Greenscape Environmental Services, a CBE energy efficiency contractor, have worked with the DCSEU to make some of the most iconic DC buildings more energy efficient. The National Cathedral, the Wilson Building, and Union Market are all landmarks that Greenscape has made more sustainable. Originally a landscaping company, Greenscape later transitioned to an energy efficiency company. Harrison, Greenscape's owner, credits the DCSEU with helping the new-and-improved Greenscape build itself up as a leader in the green community.

Harrison, who has lived in the District since he was five, considers himself a native Washingtonian. Working on DCSEU projects means a lot to Harrison, who believes in investing in the city. This enthusiasm for community-level engagement is a significant key to moving his company broadly into the green economy. As he noted, "One of the things we're really working on is building the community,

and building partnerships. We want to go out into these underdeveloped areas and build up energy-efficient homes."

Harrison's commitment to a more energy-efficient city, along with his commitment to helping build a bigger green workforce, shines through in his work for the DCSEU. Greenscape also works with small businesses and low-income families to provide training and jobs. Out of Greenscape's full-time employees, 90 percent are DC residents. This proportion is typically hard to come by in the contractor business, because many crew members commute to DC projects from Maryland and Virginia. Five of Greenscape's crew were hired through the DCSEU's Workforce Development Program.

As long as Greenscape is keeping its clients happy and the city a little bit greener, that's all that matters for Harrison and his team. Project manager Mehdi Boukuss knows it well: "Efficiency is everything, whether we're talking about energy efficiency or efficiency in running a project, ultimately we're just about getting the best possible output with the minimum resources available."

The value of investing in sustainability

FINANCIAL LEVERAGING



The DCSEU's role in the financing marketplace has begun to expand. Beginning this year, the DCSEU contracted the services of Encentiv Energy to monetize the energy savings of eligible projects in the PJM Reliability Pricing Model (RPM) Capacity Market. The timing of that contract, and market conditions, allowed only a portion of the DCSEU's energy efficiency portfolio to be bid into the market in FY 2015. However, the total revenue generated for the DCSEU was approximately \$141,000. This revenue will be received in four equal installments in FY 2016, and the DCSEU will continue to bid its energy efficiency resources into the Capacity Market, to provide a stream of revenue in years to come.

The DCSEU also launched an event series in FY 2015 called the Sustainable Energy Finance Forum (SEFF). It is a platform for discussing issues related to sustainable energy financing among several stakeholder groups in the District. The DCSEU hosted two forums in FY 2015: a kickoff meeting to discuss the financing needs of the District's sustainable energy market, and a forum on investing in energy efficiency in schools. The SEFF series will continue in FY 2016 with participation from the private sector as collaborators and co-organizers.

As the DCSEU builds its reputation in sustainable energy financing, it promotes the monetary value of energy efficiency to its customers by assisting them in exploring financing options, assessing financing needs, and structuring financing plans.

Collaborating for a stronger community

IN THE COMMUNITY

This year, the DCSEU increased customer awareness across residential and commercial markets. It built new and strong relationships with District agencies and other organizations where the DCSEU could have the greatest impact. Among the DCSEU many collaborations: the DC Office on Aging, Office of the People's Counsel, Department of General Services (DGS), the Department of Consumer and Regulatory Affairs (DCRA), DC Public Schools (DCPS), the Department of Employment Services (DOES), Pepco, the Ward 8 Food Pantries Collaborative, United Healthcare, United Church in Foggy Bottom, Iona Senior Services, Capitol Hill Villages, U.S. Department of

Transportation, the Restaurant Association of Metropolitan Washington, the U.S. Green Building Council, the Metropolitan Washington Council of Governments, American University, So Others Might Eat (SOME), and the United Planning Organization (UPO). By building and strengthening these relationships, the DCSEU was and will be able to reach more residents and businesses to inform them about DCSEU offerings in FY 2016. The DCSEU is committed to being a trusted resource to the community for energy solutions, green jobs, and economic opportunities for District businesses.





6,000 visitors
to the DCSEU website
each month



2.9 million
impressions from the DCSEU's
business advertising campaign



37
earned media appearances



33% increase
in Twitter followers

IN THE COMMUNITY

Saving Energy **IS ELEMENTARY**


Last winter, the DCSEU partnered with Langley Elementary School in the DC Green School "Sprint to Savings" competition. The annual event, led by DGS, challenges DC Public Schools to identify and subsequently carry out ways to save energy. In FY 2014, the DCSEU worked in classrooms with students to demonstrate ways they could save energy in school and at home. This year, the DCSEU offered financial resources towards energy improvements for the 2015 "Sprint to Savings" winner, with funds to be matched by DGS.

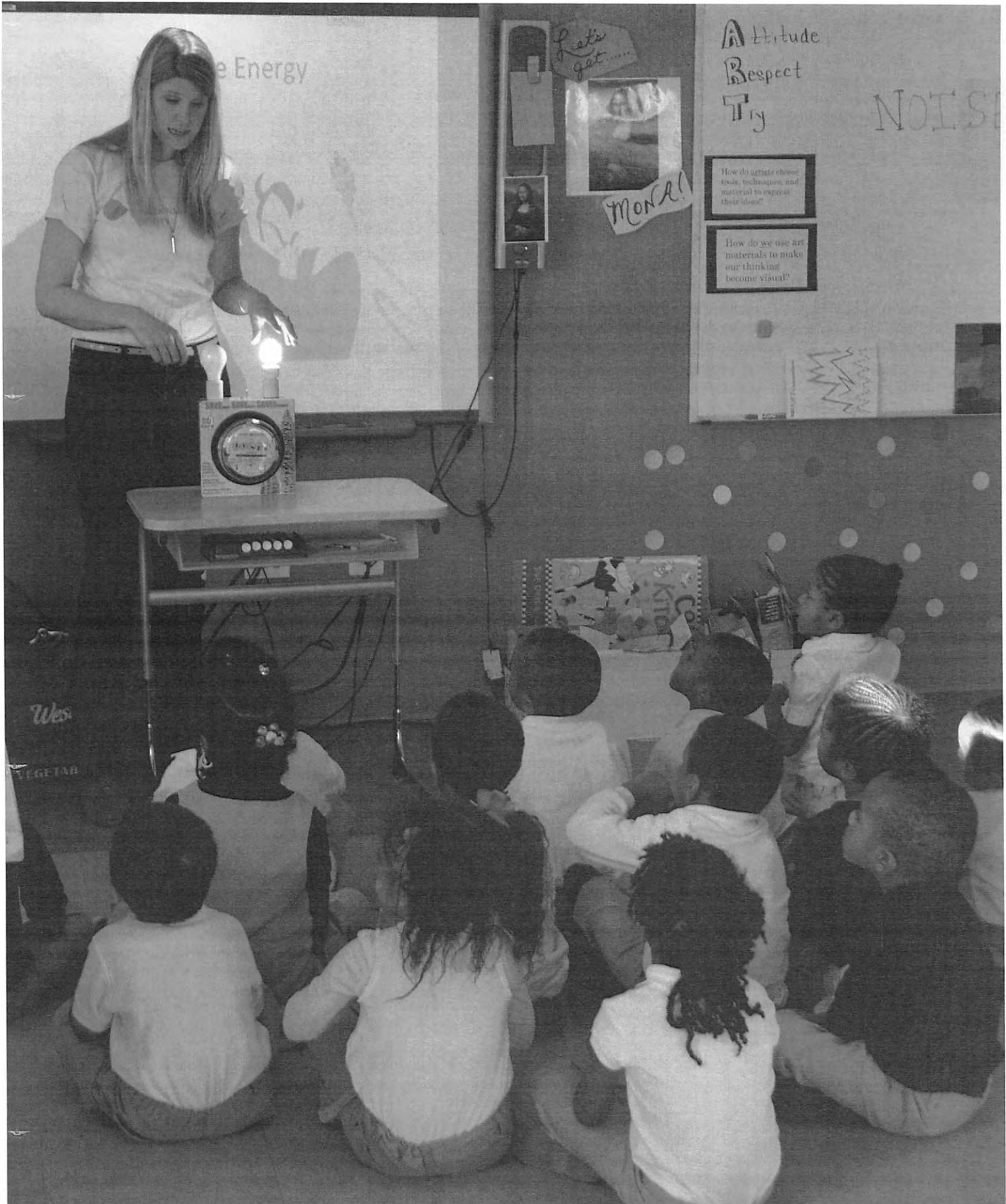
After three intensive weeks, Langley Elementary School won the competition for the second year in a row, with a 36 percent reduction in electricity consumption. This is a massive reduction for a school of 100,000 square feet. Overall, 24 of the 28 participating schools succeeded in reducing their electricity consumption, and their efforts saved more than 76,000 kilowatt-hours of electricity.

To reward Langley as the winning school, the DCSEU worked with Langley Elementary School and DC Public Schools to provide direct installation of efficient lighting and lighting controls. The upgrades and controls will reduce the school's annual electricity use by more than 126,000 kWh, enough energy to power eight homes for one year.

"The DCSEU continues to be a valued partner in the DC Green Schools Challenge," said Jamie Donovan, an Energy Efficiency Specialist and Director of the Green Schools Challenge at DGS. "At Langley, where the DCSEU funded an energy-efficient lighting retrofit, energy consumption dropped 30 percent during the competition. To put that into perspective, if every DCPS school managed the same reduction on an annual basis, DCPS could hire an additional 86 teachers with the cost savings."

" If every DCPS school managed the same reduction on an annual basis, DCPS could hire an additional 86 teachers with the cost savings. "

 **Jamie Donovan**
Department of
General Services



e Energy

Let's get.....

Attitude
Respect
Try

NOISE

How do artists choose tools, techniques, and material to express their ideas?

How do we use art materials to make our thinking become visual?

MONA!

Wes
VEGETAB

FY 2015 Initiatives

This year, the DCSEU offered 11 energy efficiency and renewable energy initiatives to serve customers in four core sectors: Residential, Low-Income Multifamily, Renewable Energy, and Commercial and Institutional.



RESIDENTIAL

Efficient Products

Deep discounts on CFLs, LEDs, and appliances, with partner retailers in DC; and rebates for appliances and gas equipment installed by licensed DC contractors

Customer:

All District residents

Efficient Products at Food Banks

Efficient lighting offered at no charge to patrons of food banks

Customer:

Income-qualified District residents

Home Performance with ENERGY STAR®

Rebates for whole-home energy efficiency improvements

Customer:

District single-family homeowners

Low-Income Direct Services

Direct installation of household energy efficiency products and improvements

Customer:

Income-qualified District homeowners

LOW-INCOME MULTIFAMILY

Low-Income Multifamily Comprehensive

Custom technical and financial assistance for energy efficiency improvements in multifamily properties

Customer:

Multifamily building owners serving income-qualified District residents

Low-Income Multifamily Implementation Contractor Direct Installation

Direct installation of CFLs, low-flow faucet aerators and showerheads, hot water tank wrap, and pipe wrap in low-income multifamily properties

Customer:

Multifamily buildings owners serving income-qualified District residents



RENEWABLE ENERGY

Solar Photovoltaic (PV)

Incentives and financing to install solar PV systems in partnership with DOEE

Customer:

Income-qualified District homeowners

Solar Thermal

Incentives to install solar thermal arrays

Customer:

Cooperative housing groups and multifamily building owners serving income-qualified District residents

COMMERCIAL AND INSTITUTIONAL

Business Energy Rebates

Rebates for energy-efficient lighting, heating, refrigeration, cooking, and other qualifying equipment

Customer:

District business owners

Business Direct Services

Incentives for customers to install energy-efficient lighting and other equipment

Customer:

District business owners

Commercial and Institutional Custom

Technical assistance, account management, and financial incentives for energy efficiency projects

Customer:

Large commercial and institutional customers in the District

Progress in FY 2015

PERFORMANCE BENCHMARKS

Natural gas savings and electricity savings. DCSEU initiatives in FY 2015 resulted in an annual reduction of 87,696 Mcf in natural gas consumption. This exceeds the Performance Benchmark minimum metric for natural gas savings. Electricity consumption was reduced by 57,189 MWh.

Peak demand. DCSEU initiatives in FY 2015 reduced the growth of peak electricity demand in the District of Columbia by 8,625 kW. This far exceeded the Performance Benchmark minimum for peak demand.

Renewable energy generating capacity. In FY 2015, the DCSEU completed more solar projects than in any previous fiscal year. The DCSEU also reduced the negotiated price per therm with participating contractors by 23%.

Low-income. In its commitment to reducing the financial burden from energy costs borne by low-income households, the DCSEU invested over \$5.7 million in energy services to the low-income community. This investment far exceeded the minimum metric for the low-income-services Performance Benchmark of \$3.52 million.

Largest energy users. The DCSEU significantly reduced the growth in energy demand of the largest energy users, defined as buildings with 200,000 square feet. The

minimum metric for this Performance Benchmark (largest energy users) was 30 projects for FY 2015; the DCSEU completed 56 projects with these customers.

Green jobs. All DCSEU jobs and contractor positions, both internal and external, are offered at or above the City's Living Wage. FY 2015 marked the strongest year for green job creation by the DCSEU with 95 full-time equivalent (FTE) positions created.

Table 1. FY 2015 Performance Benchmarks and Minimum Requirements¹

ITEM	DESCRIPTION	METRIC UNIT	BENCHMARK MINIMUM	FY 2015 RESULTS
1a	Reduce per-capita consumption—Electricity	MWh	51,845	57,208
1b	Reduce per-capita consumption—Natural gas	Mcf	61,521	87,694
2	Increase renewable energy generating capacity	Cost / kWh	10%	23%
3	Reduce growth in peak demand	kW	2,000	8,625
4	Improve energy efficiency in low-income housing	% of annual budget	\$3,520,000	\$5,773,175
5	Reduce growth in energy demand of largest users	# of projects completed with a square footage of > 200,000	30	56
6	Increase number of green collar jobs ²	Green job FTE's directly worked by DC residents, earning at least a Living Wage	53	95
<hr/>				
7	Expenditure of annual SETF dollars allocated to DCSEU services	Fiscal year dollars	\$17,600,000	\$18,695,920
8	Expenditures with Certified Business Enterprises	Minimum expenditure for Certified Business Enterprises	\$2,950,000	\$5,673,960
9a	Annual expenditures related to electric energy efficiency	Program expenditures that reduce electrical energy consumption, allocated to sustainable energy activity	\$10,560,000	\$13,300,507
9b	Annual expenditures related to natural gas energy efficiency	Program expenditures that reduce natural gas consumption, allocated to sustainable energy activity	\$2,640,000	\$5,395,764

1. Results to be verified through DOEE's evaluation, measurement, and verification contractor.

2. Period results are estimates subject to final verification of green job hours.

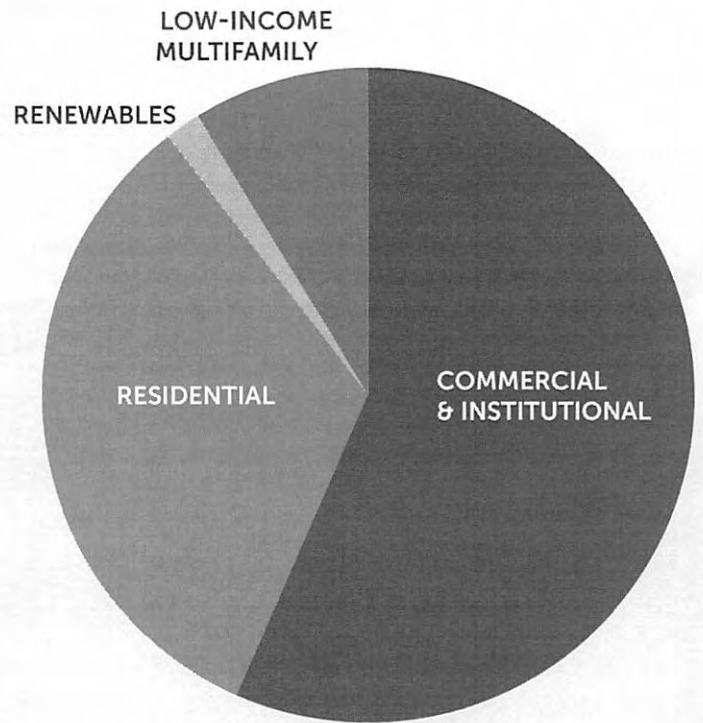
PERFORMANCE BENCHMARKS

MINIMUM REQUIREMENTS

ENERGY SAVINGS BY SECTOR

Overall electricity consumption in FY 2015 was reduced by more than 57,189 MWh. Approximately 56 percent of total electric savings came from the Commercial and Institutional core area.

Figure 1. Electricity savings by core area



ECONOMIC BENEFITS

DCSEU work completed in FY 2015 will generate more than \$92 million in avoided energy costs over the life of the energy improvements installed.

Table 2. Lifetime Economic Benefits and Annual Customer Savings

	RESIDENTIAL CUSTOMERS	COMM. & INST. CUSTOMERS	TOTAL
Lifetime economic benefits ¹	\$30,050,083	\$62,550,392	\$92,600,475
First-year annual energy cost reduction ²	\$2,803,544	\$4,485,378	\$7,288,922

1. Lifetime economic benefits are defined as the present value of the avoided cost of energy for the life of each measure installed.

2. 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.

EXPENDITURES

Table 3. FY 2015 actual expenditures

	ACTUAL EXPENDITURES
IMPLEMENTED ENERGY SERVICES	
Residential Initiatives	\$3,528,696
Low-Income Multifamily Initiatives	\$2,428,095
Renewable Energy Initiatives	\$1,861,403
Commercial Initiatives	\$6,729,892
SUPPORT SERVICES	
Administration	\$2,682,078
Information Technology	\$505,752
Compliance	\$278,124
Workforce Development	\$682,230
TOTAL	\$18,695,920¹

1. Total includes all Sustainable Energy Trust Fund and Renewable Energy Development Fund dollars.

SPECIAL THANKS

American University

Capitol Hill Villages

DC Office on Aging

DC Public Schools

Department of Consumer and Regulatory Affairs (DCRA)

Department of Employment Services (DOES)

Department of General Services (DGS)

Department of Housing and Community Development (DHCD)

Iona Senior Services

Metropolitan Washington Council of Governments

National Housing Trust / Enterprise Preservation Corporation

Office of the People's Counsel

Pepco

Public Service Commission

Restaurant Association of Metropolitan Washington

So Others Might Eat (SOME)

U.S. Department of Transportation

U.S. Green Building Council

United Church in Foggy Bottom

United Planning Organization (UPO)

Ward 8 Food Pantries Collaborative

Washington Gas

And many more...

THE SUSTAINABLE ENERGY PARTNERSHIP

The DC Sustainable Energy Utility is a project of the Sustainable Energy Partnership under contract to the District Department of Energy and Environment. The Sustainable Energy Partnership consists of a team of seasoned, local collaborative organizations, and individuals that collectively brings together national leadership in energy efficiency, renewable energy, program planning and implementation, and local community networks.

Vermont Energy Investment Corp. (VEIC)

George L. Nichols & Associates

Groundswell

Institute for Market Transformation (IMT)

Nextility

PEER Consulting



DC SUSTAINABLE ENERGY UTILITY

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*** DEPARTMENT
OF ENERGY &
ENVIRONMENT

GOVERNMENT OF THE
DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

WE ARE
DISTRICT OF
COLUMBIA
DC