

[greenbiz.com](https://www.greenbiz.com)

Why the District of Columbia is a leader in energy efficiency | Greenbiz

By Catherine Nabukalu August 19, 2020

8-10 minutes

One of my favorite sessions from VERGE 2019 was a presentation by Amory Lovins on the expanding energy efficiency [cornucopia](#). Among several things, he discussed the vital benefit of energy efficiency in working toward environmental sustainability through emissions reductions without harming or slowing economic growth.

In various international climate plans, energy efficiency is increasingly [prominent](#). In fact, more cities and the private sector are tapping into its direct economic benefits, such as job creation and its potential to improve people's livelihoods.

The technical fixes register considerable energy savings, prevent energy waste and demonstrate there is still so much we can do to reduce pollution, especially within old existing infrastructure, such as data centers, commercial real estate and transportation systems.

In the [2019 scorecard](#) by the American Council for an Energy-

Efficient Economy (ACEEE), Washington, D.C., was named as one of the best cities for energy efficiency and for scaling up local generation of clean energy in the country. As a project coordinator, my day-to-day work at the District of Columbia's Sustainable Energy Utility (DCSEU) involves supporting energy projects around the city.

Here is my take on why the district consistently has been a leader in this domain, and what other cities can learn from it as they prioritize commitments to reserve energy for the tasks it is most needed for with the aim of attaining more — as Lovins would say — "negawatts."

1. There's a strong focus on buildings

Buildings are a major aspect of energy conservation because they consume nearly three-quarters of the electricity in the U.S. and represent over a third of greenhouse gas [emissions](#). Besides the strong commitment to increasing localized generation of renewable energy from solar for the local real estate, the Clean Energy Act ([CEDC](#)) of 2018 has prioritized energy efficiency in the U.S. capital's buildings.

To work towards this goal, the act contains a Building Energy Performance Standard (BEPS) for commercial and multifamily buildings. Most real estate has been stratified based on a range of unique factors, such as square footage and their purpose, as these determine occupancy and energy use.

Prescriptive guidelines to reduce energy use resulting from

energy audits will be shared with building operators, with requirements to improve energy performance over five years, based on localized historical baselines. Moreover, all buildings 50,000 square feet and above will need to [benchmark](#) and meet minimum efficiency standards in the first phase of new guidelines published in January.

More buildings in Washington are attaining retrofits even before these regulations take effect because operators are realizing the benefits of energy efficiency. This year, I visited the headquarters of the American Geophysical Union, one of the city's remarkable sites for transformative energy management. It is the first to attain the net-zero standard as a retrofit building in the city.

All components from its demolition were recycled and reclaimed as construction materials on the site. The building also generates solar from over [700 panels](#) on-site, and its windows calibrate to let in natural light, reflect heat while keeping the indoors cool. This building is replicable model for existing building owners to close the loop on building materials while incorporating new technologies to conserve energy.





2. Energy efficiency programs are designed with people in mind

The [programs](#) in Washington have an intense focus on people's well-being. For instance, the Low-Income Home Energy Assistance Program (LIHEAP) and Income Qualified Efficiency Funds (IQEF) initiative are both specifically designed to upgrade energy equipment for single and multifamily buildings occupied by low-income residents.

This is important because besides the greater comfort from improved HVAC systems and better security from improved exterior lighting, the projects reduce household energy expenditures, leaving people with more money to spend on what is more important to them.

In healthcare facilities, where operating hours are long, the technical fixes improve air quality and create a healthier environment for patients. The George Washington University Hospital for example, has retrofitted a wide range of its buildings, by installing LED lighting, occupancy sensors

through the Eco-Building Program in a multi-year [Climate Action Plan](#). The Sibley Memorial Hospital's recent expansion is also designed to meet LEED Silver standards, including 23,000 square feet of green roofs and "[healing gardens](#)."

3. Washington is making it easier to quantify benefits

The benefits of energy efficiency are often hard to quantify. Perhaps because its very nature is counterfactual — how does one measure "savings" that one never used? Nonetheless, while many of energy efficiency's rewards are intangible, customers, regulators and the local utilities mostly know they exist, and they want these efforts to succeed.

Some benefits can be estimated over time, as baselines are reviewed to evaluate energy consumption in buildings before and after installation of new equipment. In more prescriptive programs involving particular technical upgrades, [standard rebates](#) are derived for customers depending on the technology and the quantity of upgrades done to switch.

4. Everyone contributes to financing efficiency

Under CEDC, all of Washington's local rate payers contribute through a surcharge per energy billing cycle, on electricity and natural gas consumption. This fee goes into the [Sustainable Energy Trust Fund \(SETF\)](#) and the [Energy Assistance Trust Fund \(EATF\)](#), a financial reserve to facilitate energy efficiency projects around the city through rebates. Most recently, the

[Green Bank](#) and the DC Property Assessed Clean Energy ([PACE](#)) program were launched to leverage long term private investments and lower upfront costs of adopting energy efficiency and distributed energy projects using public funds.

While many of energy efficiency's rewards are intangible, customers, regulators and the local utilities mostly know they exist, and they want these efforts to succeed.

The funds, around \$20 million annually, are disbursed to the DCSEU to provide energy efficiency services and reduce per-capita energy consumption, ensure low peak electricity demand and reduce energy demand from the largest energy users (such as public transportation systems).

Beyond energy efficiency, the trust funds play a major role in financing the addition of distributed energy resources, such as community solar projects, in the city.

5. There's transparency about the future of energy efficiency

Perhaps one of the most important outcomes of energy efficiency in the city is the steady effort to phase out inefficient equipment locally.

The standards are higher for newer buildings to improve design. Construction codes from the Department of Consumer and Regulatory Affairs (DCRA) have set new standards for what [constitutes](#) net-zero in buildings. This helps developers calculate estimated maximums Energy Use Indexes and determine combinations of prescriptive energy measures while

projects are still being developed.

Lessons for other cities

Energy efficiency truly represents one of the best ways to reduce emissions in concert with other measures. Often, the technical upgrades can be achieved at low cost to consumers, yet the benefits of reducing the energy footprint of cities is worthwhile for climate action.

Cities will have [more inhabitants](#) in the future. While more economic development and increasing population in cities may mean more energy demand, energy efficiency measures demonstrate that growth can continue while (and where) energy is saved. Moreover, energy efficiency mitigates the need to build more capital-intensive infrastructure to supply energy. Lastly, energy efficiency initiatives offer direct benefits that can improve people's quality of life.