

NEW YORK CITY: SELF-FUNDING OF MUNICIPAL ENERGY EFFICIENCY*

In 2008, New York City (NYC) issued a long-term action plan to reduce energy consumption and greenhouse gas emissions from municipal buildings and operations by 30% by 2017. Mayor Bloomberg made an annual commitment equal to 10% of the city's energy budget which was approximately \$1 billion dollars at the time. The city also leveraged additional available funding from other agencies including the State of New York, the Dormitory Authority of the State of New York, the New York Power Authority, as well as grants from federal and nonprofits.

The program entailed an aggressive capital improvement plan for city facilities as well as significant enhancements to its operations

and maintenance (O&M), and was anticipated to have an average payback of 7.6 years. To target the highest priority buildings, NYC benchmarked all buildings above 10,000 square feet annually and conducted audits on all buildings above 50,000 square feet. Projects with a 15-year payback or less were approved. The city implemented a proactive O&M plan to repair and maintain equipment, to increase training and outreach, to improve building operator skills, and to raise energy awareness. Monthly disclosure of agency-level energy consumption helped make agencies accountable for improving energy performance.

SIGNIFICANT IMPACT

30%

Targeted greenhouse gas emissions reduction from 2008–2017

22%

Average ENERGY STAR score improvements from 2010–2018

18%

Greenhouse gas emissions reductions from 2005–2015

3,000

Buildings benchmarked annually since 2007

** New York City did not participate in the City Energy Project, however the city's approach serves as a model for other cities to follow.*

WHAT IS SELF-FUNDING OF MUNICIPAL ENERGY EFFICIENCY?

Self-funding of municipal energy efficiency assumes that the city will finance the energy efficiency investments through its own budget. Those funds can come from the general budget, can be set aside as a separate budget line item, or come from grants from a state or federal government or other donor.

- General budget funding is straightforward to implement but there is always competition for budget funds and the continued availability of general funding is not assured.
- Budget line item funding requires obtaining budget/finance department buy in on the concept of energy efficiency investment, which requires time and effort, but enables a longer time horizon of funding and the ability to link energy savings to energy efficiency investments.
- Grant funding is helpful but depends on the availability of grants. Many state and local governments benefited from ARRA grants in the late 2000s, but those sources have now been used up.

SUCCESSFUL FEATURES OF NEW YORK CITY'S MUNICIPAL ENERGY PROGRAM

Setting an aggressive but achievable goal. NYC set an ambitious goal, which required it to develop a comprehensive strategy to address energy efficiency. That goal was translated at the agency level which helped to mobilize personnel throughout government.

Good data is key. To achieve such an ambitious goal, the City needed to have an accurate understanding of its energy use. Developing and maintaining a comprehensive data set on energy use enabled NYC to be able to track energy use granularly, prioritize projects, and inform and reward agency staff for their accomplishments.

Strong mayoral leadership and support. Mayor Bloomberg's full support for the initiative at its inception, including the funding commitment, provided the team managing DEM with levers to motivate agencies to participate.

Need for clear organizational framework. Given the size of NYC, the ambitious level of the goal, and the various initiatives implemented to achieve the goal, a clear and strong organizational framework was key to integrating and coordinating efforts. DEM is in charge with delegated responsibility with Energy Managers at each city agency.

KEY COMPONENTS OF NEW YORK CITY'S MUNICIPAL ENERGY PROGRAM

- In the 10 years since NYC announced its plan to reduce greenhouse gas emissions by 30% by 2017, its detailed approaches and targets have evolved with a new Mayor and experience from the first few years of the program.
- The city's reduction goal has now been updated to target a 35% reduction in CO₂ emissions by 2025 against a 2005 baseline.
- The process has been streamlined and become more decentralized. The Department of Energy Management (DEM) still plays an important and central role, but more authority has been delegated to the agencies. Efficiency improvements run through two main programs:
 - » Capital projects for energy efficiency and distributed generation (ACE Program). DEM solicits proposals from agencies and evaluates them based on their expected emissions reductions, energy usage and costs savings, and other benefits. From 2014-2018, 420 projects have been completed in 360 buildings representing an investment of \$140 million and are expected to create 45,900 MT of emissions reductions.
 - » Expense funding for energy-saving retrofit projects, O&M improvements, diagnostic tools, studies and specialized training for building staff (ExCEL Program). From 2014-2018, 680 projects in 540 buildings were completed at a cost of \$24 million to create 26,800 MT of emissions reductions.