

SIEMENS

Siemens helps New York's
Jacob K. Javits Convention Center
achieve a sustainable future





Index

Introduction	3
Collaboration leads to reduced energy consumption	4
Clean solar power and energy storage meet the energy needs	5
Conclusion	6

Introduction

At New York's Jacob K. Javits Convention Center, Siemens Energy as a Service (EaaS) approach helps generate an expected annual 1,011 MWh of renewable energy, which is equivalent to the energy consumption of 94, four-member households.

Setting decarbonization goals can be easy — but the follow-through often presents unforeseeable roadblocks in a sustainability journey. Organizations that take on the challenge of reinventing their businesses to enable more sustainable operations no longer must do it alone. A perfect example is New York City's Jacob K. Javits Convention Center, an organization that has leveraged strong partnerships to drive rapid sustainability improvements. Perched alongside the Hudson River on the west side of Manhattan, the Javits Center is one of the busiest convention centers in the country, hosting more than 175 events with 40,000 exhibitors and 2 million visitors annually.

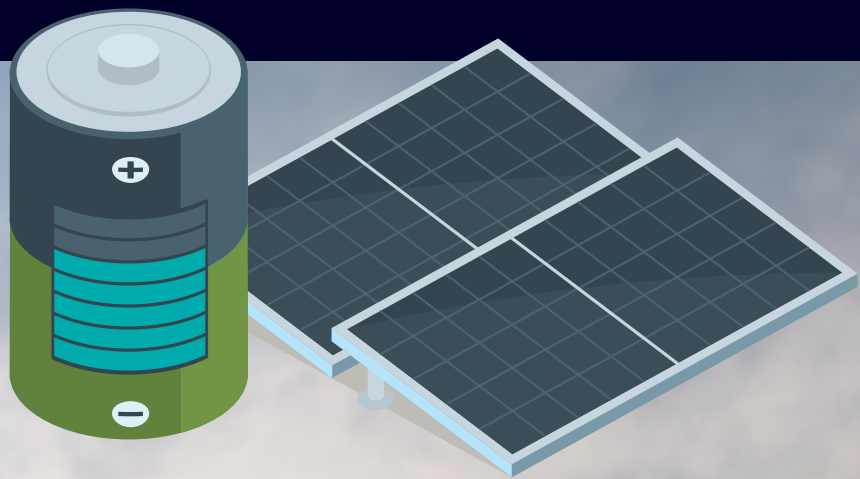
With nearly 19 acres of exhibit space, the Javits Center is a major power consumer. That is why the New York Power Authority (NYPA) sought ways to offset the facility's considerable electricity needs while advancing the clean energy goals of the state and city. New York State is on track to reach 1,500 megawatts of electricity storage by 2025, and to double that capacity by 2030. New York City is planning to have 70 percent of its electricity come from renewable energy by 2030, and 100 percent by 2040.



Collaboration leads to reduced energy consumption

The Javits Center had worked with Siemens since the construction of its convention center in 1986. At that time, Siemens provided electrical, fire, security system, and building controls software. It was only natural that the Javits Center leadership turn to Siemens to help better manage energy consumption and CO2 emissions.

For a fully integrated and managed Energy as a Service (EaaS) solution from design to delivery Javits Center leveraged Siemens Smart Infrastructure and Financial Services, along with engaging with asset management leader, Calibrant, to meet its clean energy requirements. This collaboration helped the Javits Center to deploy smart building energy infrastructure (such as solar panels, microgrids, and energy storage) with no upfront capital allocation required. The infrastructure is owned and operated by Calibrant, in an Energy as a Service (EaaS) arrangement. Since energy savings will be significant, the Javits Center pays Calibrant a service fee that is sourced from the pool of energy savings. Part of the service offering includes the generation of energy reports for the purpose of consumption measurement and evaluation of performance benchmarks.



3.5 MW

energy storage battery units

906.3kW

solar renewable energy

Clean solar power and energy storage meet the energy needs

Siemens also helped the convention center and NYPA build Manhattan's largest rooftop solar array as part of a \$1.5 billion expansion project, adding 1 million square feet to the convention center. When finished, the Center will have more than 2,014 solar panels on 34 canopy-style solar arrays on its 6.75 acre green roof.

The solar array will provide 906.3 kilowatts of solar energy per year, equal to the power needs of 94, four-member households and charging capacity equivalent to 866K iPhone batteries.

The Javits Center system will include up to 3.5 megawatts of battery storage inside the building so that the solar energy gathered during the day can be stored and used at night. The system also includes remote monitoring to help improve building system performance and balance energy supply and demand. Facility management uses a cloud-based platform that provides real-time reports on system performance, as well as early warnings of system malfunctions and interruptions.

As the Siemens Javits Center solar project breaks new ground in the field of smart building energy conservation, it serves as a useful reference model for other applications large enough to support solar arrays. The Javits Center microgrid system, for example, offers a glimpse to municipalities for how they can apply energy management benefits to their own existing energy generation and management structures. The technology components are now commercially proven and can be tailored to meet specific objectives, maximizing economic benefits and providing reliable, resilient, and sustainable power while mitigating stress on the grid.

The New York Power Authority is pleased to partner with one of New York City's most well-known and highest-trafficked buildings, the Jacob Javits Center. This brings New York State closer to achieving its clean energy goals. Installing a commercial-scale solar photovoltaic system on the Javits Center roof will lead to significant cost savings and benefit the environment for years to come."

— Gil Quiniones, NYPA President and CEO

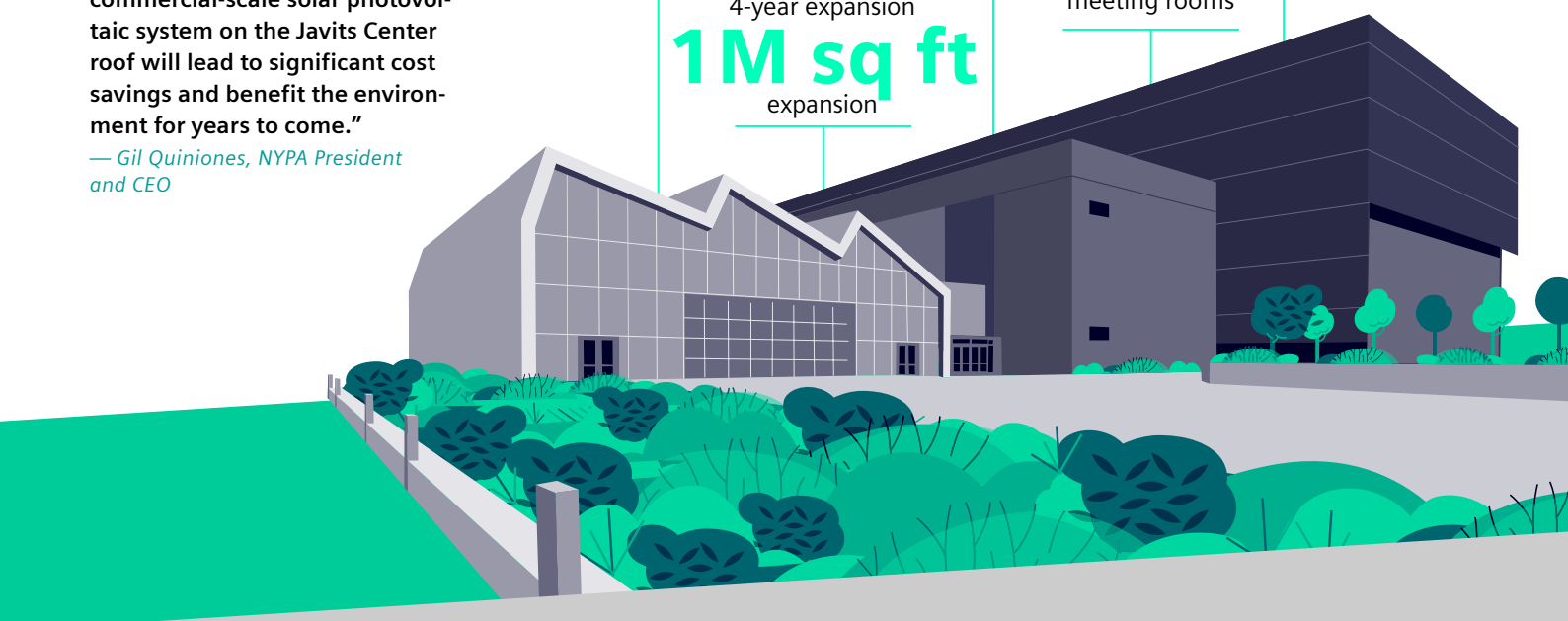
850,000
sq. feet of space

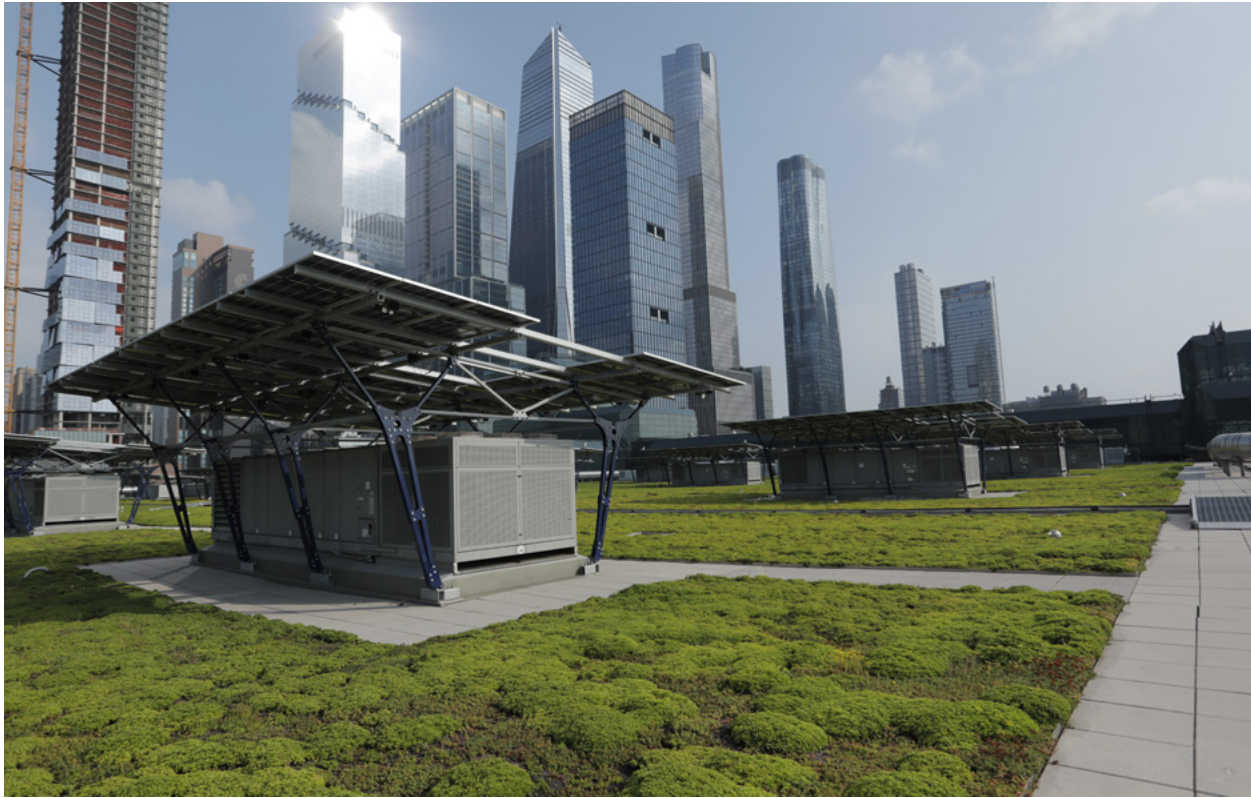
\$2.0B
economic activity

18,000
jobs

4-year expansion
1M sq ft
expansion

122
meeting rooms





Conclusion

EaaS solutions, such as those deployed to support the Jacob K. Javits Convention Center, help consumers meet increasingly strict regulatory obligations surrounding renewable energy and emissions. Digital monitoring of energy consumption and intelligent controls drive higher energy efficiency, less waste, smaller CO2 footprint, and lower energy costs. By facilitating the task of energy management through EaaS, consumers can focus on their core competencies, such as business operations, commercial development, sales initiatives, and new product development.

Siemens offers expertise in advanced EaaS solutions, with a broad technology portfolio and extensive knowledge of energy markets and distributed energy storage (DES) solutions. Siemens highly-qualified project teams provide vital financial, technical, and management skills that help minimize project risk while maximizing economic and operational benefits.

At Siemens, it's our job to make sure those unexpected decarbonization roadblocks can be overcome quickly enough to keep organizations on track toward their sustainability goals. By collaborating with other organizations, Siemens can harness the power of collective expertise and resources to create capital-efficient and scalable solutions. Together, we can make sure there is a better tomorrow on the journey to a sustainable future.

Legal Manufacturer

Siemens Industry, Inc.
Smart Infrastructure
1000 Deerfield Parkway
Buffalo Grove, IL 60089
United States of America

Telephone: +1 (800) 347-6659

www.usa.siemens.com

Order No. 153-SBT-1298

This document contains a general description of available technical options only, and its effectiveness will be subject to specific variables including field conditions and project parameters. Siemens does not make representations, warranties, or assurances as to the accuracy or completeness of the content contained herein. Siemens reserves the right to modify the technology and product specifications in its sole discretion without advance notice.