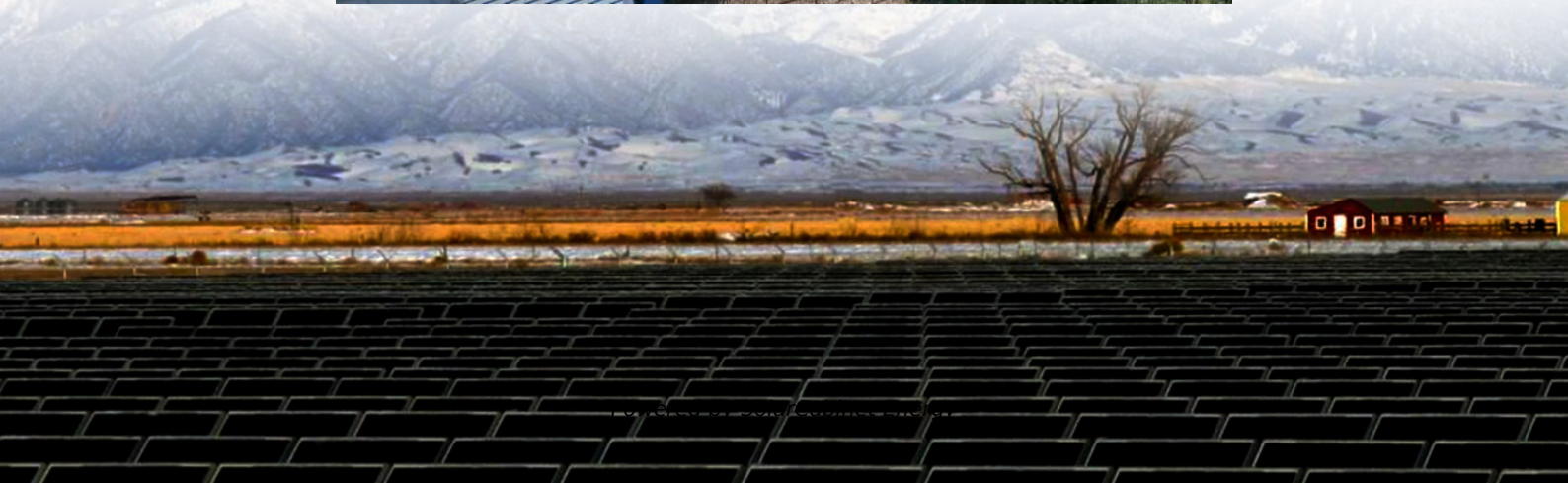


Urban Development Environmental Energy Storage Project





Overview

Newlab, NYCEDC, and Con Edison invite startups to pilot and validate innovative, regulation-compliant urban energy storage solutions in New York City—whether safer lithium-ion designs, alternative chemistries, mechanical or thermal systems, EV-integrated assets, or community impact simulations. Does urban context influence energy storage prospects?

Case study The case study intends to demonstrate the merits of the analytical framework and exhibit the influence of urban context on energy storage prospects. It evaluates and compares the techno-economic potential of ESSs (of single and hybrid types) for improving the performance of energy communities of different urban built types.

Can energy storage technologies improve urban energy performance?

Summary of findings and limitations The case study's results, summarized in Table 7, demonstrated that the scope and economic potential of different energy storage technologies and configurations (single and hybrid) for improving the energy performance of an urban energy community depends on (and varies with) its built context (form and function).

How can urban energy systems contribute to achieving SDGs?

In addition, exploring new technologies and innovative management models could improve understanding of effective strategies to promote resilient and equitable urban energy systems, thereby contributing to the achievement of SDGs, such as, SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities).

Can urban sustainability be achieved without the transformation of the buildings sector?

The aspiration of urban sustainability cannot be materialized without the transformation of the buildings sector (IEA, 2021) because it accounts for >50 % of electricity consumption and almost 30 % of final energy consumption worldwide (IEA, 2019).



What technologies are used in urban environments?

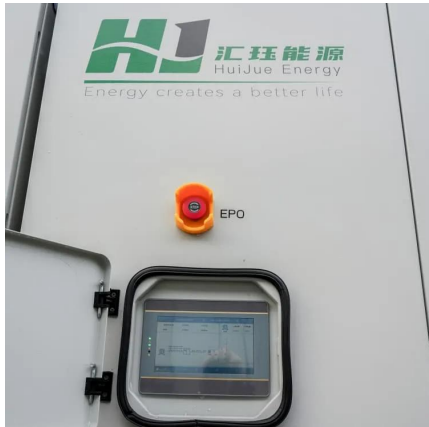
These urban environments have embraced innovative technologies, including solar air conditioning, integrated photovoltaics, and smart grid systems, which are vital for reducing energy requirements while advancing sustainability goals.

Are prosumer buildings a performance potential of urban energy communities?

An expanded version of this model (Mussawar et al., 2023) covered both the community and individual configurations of prosumer buildings to study the performance potential of urban energy communities with respect to their built form and function (land-area wise proportions of different building use-types).



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[Urban energy transition in smart cities: A comprehensive review ...](#)

This systematic review assesses the sustainability, air quality, and economic benefits of urban energy transitions in megacities. Objectives include assessing net-zero energy pathways, ...

[DOE Selects \\$15M in Projects Advancing Energy Storage and ...](#)

The Office of Electricity announced \$5 million each to 3 grid-scale energy storage projects that support critical facilities and infrastructure in a power outage or other emergency. ...



Towards carbon neutrality and China's 14th Five-Year Plan: Clean energy

In September 2021, the integrated energy services demonstration project led by a subsidiary of the State Grid Corporation of China, located in the Xiong'an high-speed railway ...

[Solar power integration in Urban areas: A review of design ...](#)

Efficiency enhancements play a pivotal role in the viability of solar power integration. The paper analyzes emerging technologies and



methodologies that boost the efficiency of solar energy ...

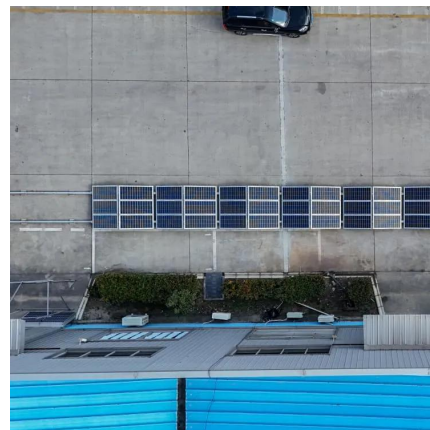


[OPEN CALL: Integrating Safer Energy Storage for Dense, Urban...](#)

Newlab, NYCEDC, and Con Edison invite startups to pilot and validate innovative, regulation-compliant urban energy storage solutions in New York City--whether safer lithium-ion designs, ...

[Integration of renewable energy solutions into urban ...](#)

In conclusion, renewable energy integration in urban infrastructure is pivotal for creating resilient, energy-efficient cities. Targeted policies, stakeholder collaboration, and technological ...



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