Resilient Energy Studio
Overview

Spring 2022

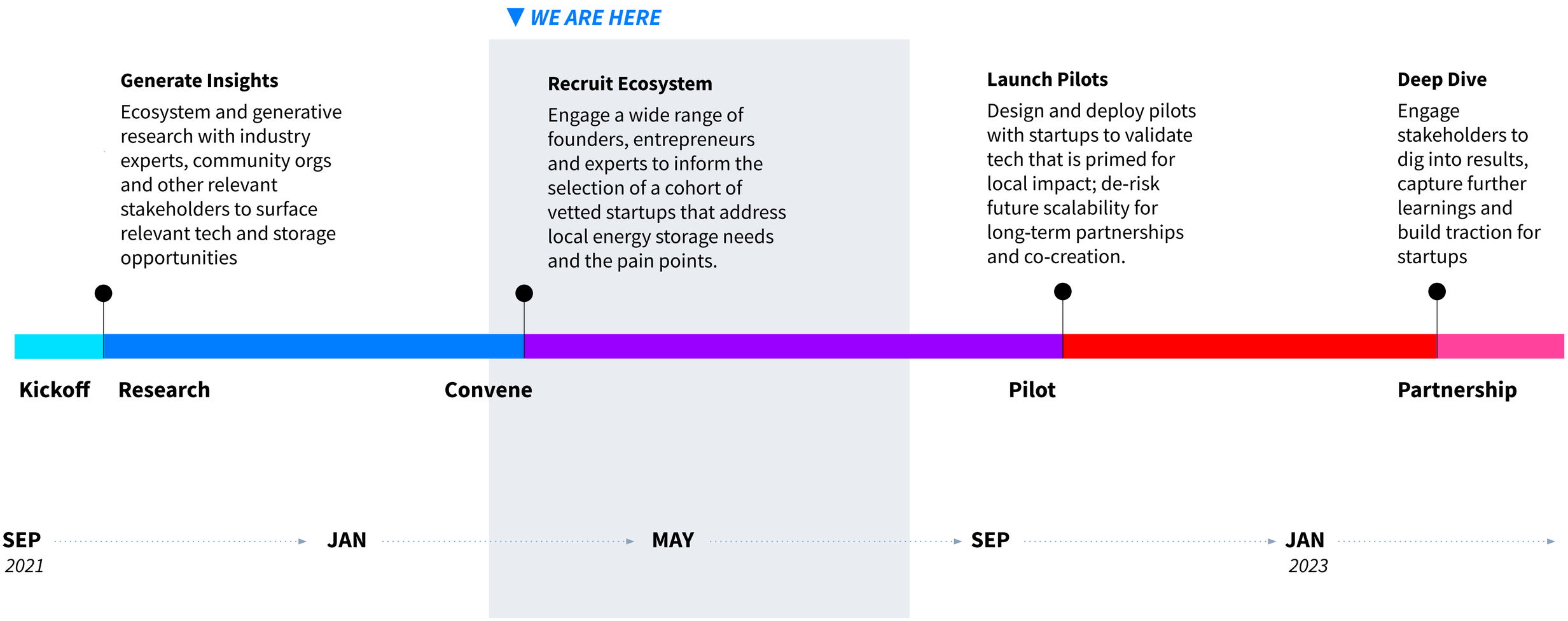
Resilient Energy Studio

In partnership with the New York City Economic Development Corporation and in collaboration with Con Edison, the Resilient Energy Studio aims to cultivate local energy storage capacity by working with entrepreneurs, community organizations, energy experts and leading industry stakeholders to advance energy storage for a sustainable urban future.

The Studio supports goals that are critical to New York City's climate agenda by advancing pilot projects to catalyze energy storage solutions that fit local needs.

Resilient Energy Studio Timeline

Below is a high-level timeline for the Resilient Energy Studio



Engagement with the Studio

What does it mean to serve as a potential pilot site host?

Opportunity to Serve as a Potential Pilot Site Host

Pilot sites play a critical role in Newlab's Innovation Studios by **serving as the location where startups deploy their technologies and products** for a limited time to test and validate tech feasibility, user experience and other functionality. This can include, but is not limited to, providing physical access to infrastructure, digital access to data and and guiding startups through the relevant process to install technology at your site.

In preparation for the Resilient Energy Studio open call launch on April 20th, Newlab is asking for a soft commitment to serve as pilot site host. Organizations will be listed on the Studio website as a **potential** pilot site partner to help interested startups envision the locations where pilots may be deployed.

Organizations will have the **opportunity to review startup applications** to evaluate the projects being proposed and help the Studio **assess which projects are a fit for specific locations and to express interest in specific technologies of interest.**

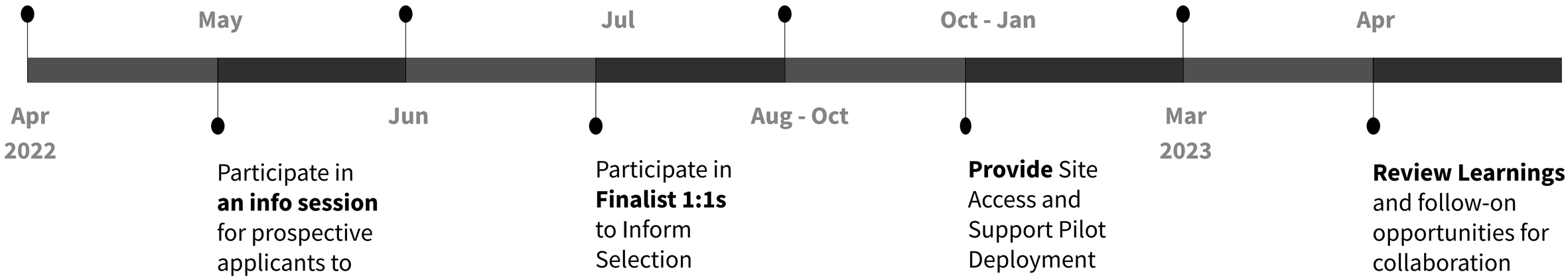
Benefits

Serving as a pilot site host for the Studio has a range of possible benefits for your organization:

- First-hand **access to compelling new energy storage technologies** in a tailored and bespoke way, with no financial commitment.
- Engage with **cutting-edge innovators** and other key stakeholders in the energy storage industry
- Ability to **influence key pilot project outcomes or learnings that are most interesting to your organization** from an energy storage perspective.
- **Visibility** through appearance on the **Studio website**, participation in a **public showcase** and other potential public-facing moments alongside Newlab and NYCEDC.
- Contribute to the advancement of urban energy storage to **help New York City deliver on its clean energy goals.**

Engagement Timeline

We look forward to advancing urban energy storage with you through the Resilient Energy Studio. Below is a timeline of the key points of engagement over the next year.



Engagement Expectations

Pilot Site Host Role and Responsibilities

Required activity a pilot site host can expect to engage in as part of the Studio:

1. **Open Call:** Appear on the open call on Newlab's website to indicate to startups that your site is a potential location for pilots and participate in an info session for applicants.
2. **Review Select Applications:** Review and evaluate startup applications and join a discussion meeting for startups relevant to the pilot concepts you are interested in
3. **1:1s with Startups:** Participate in select 1:1 conversations with top relevant startup applicants to further vet projects and assess fit for your location
4. **Support Pilot Development:** Designate a point of contact that is available on weekly basis to connect with the Studio team and engage with selected startups to help design and develop their pilot projects and enable launch at your site
5. **Provide Access:** Facilitate access to physical infrastructure, data, experts, other requirements for pilot success in order to support project launch and deployment
6. **Showcase Pilot Outcomes:** Participate in a showcase event and facilitate access to the pilot site to select stakeholders for awareness and discourse

Commitment

Approx. dates and time require for activities

1. **Apr-May:** Review webpage copy and participate in (1) 45-min info session
2. **Jun-Jul:** 2-4 hours for independent review and 1.5-3 hours for discussion meetings
3. **Jul:** Participate in select 30-45 min 1:1s with relevant startups
4. **Aug-Oct:** 1-2 hours of meetings per week with the Studio team and/or the startups launching at your site
5. **Oct-Feb '23:** As needed / ongoing via email or Zoom meetings
6. **Mar '23:** Half day

Focus Areas

The following slides provide some detail around four Focus Areas the Studio is poised to address.

Showcase Community Impacts of Energy Storage

Simulating the impacts of behind-the-meter energy storage deployment within a local community has several benefits. These projects will generate data that showcases energy storage projects as safe, technically and financially feasible, and deliver clear benefits to the host community - ultimately advancing the development of future projects. Use cases include, but are not limited to, quantifying backup power potential, modeling the energy cost savings, revenue generation, environmental impacts of systems, and additional benefits to the local economy.

Pilots in this focus area will aim to model the impacts of an energy storage deployment that centers on the priorities of local communities to provide insights and learnings, and guide a just transition to a sustainable energy future.

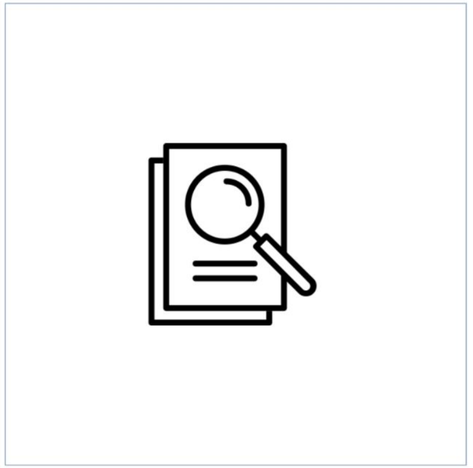
What might a pilot look like?

Scope the site / capacity

- Determine an impactful location for energy storage within a community
- What would be needed to make an impactful solution for this community - battery capacity, rates, financial structure, etc

Assess the benefits

- Financial benefits to the community, job opportunities, resiliency
- There may be a level of assumptions made for how to make this pencil out in the future



Showcase project and learnings

- Create an immersive public-facing story showcasing this simulation that highlights the climate, resiliency and equity benefits

Safer Energy Storage for Dense, Urban Environments

Testing and validating safer energy storage technology, which conforms to FDNY and NYC Department of Buildings' regulations, is critical to creating the right technology mix to scale distributed energy resources in NYC.

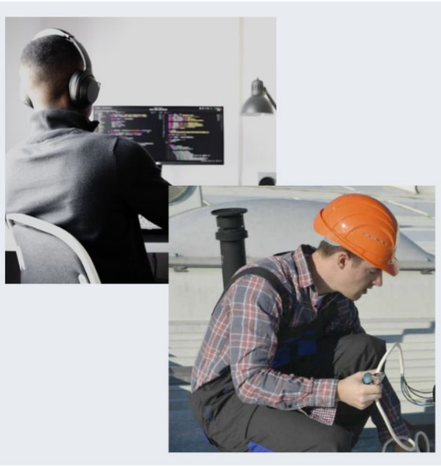
Potential use cases may include but are not limited to, outdoor storage, indoor storage for a building, or integration with rooftop solar energy systems.

Pilots in this focus area will support real-world power needs and generate valuable case studies that help to navigate NYC's current regulatory approval framework, as is required for scaling energy storage in NYC.

What might a pilot look like?

Regulatory approval process

- Work with team to navigate the FDNY and DOB approval process (e.g., FDNY TM2)



Get storage approved and sited

- Work through approvals with site / deployment in mind to show how individual sites shape approval process

Showcase project and learnings

- Ongoing case study showing the experience that the startup is going through to deploy on site - approval process, etc

Demonstrate Novel, Emerging Energy Storage Solutions

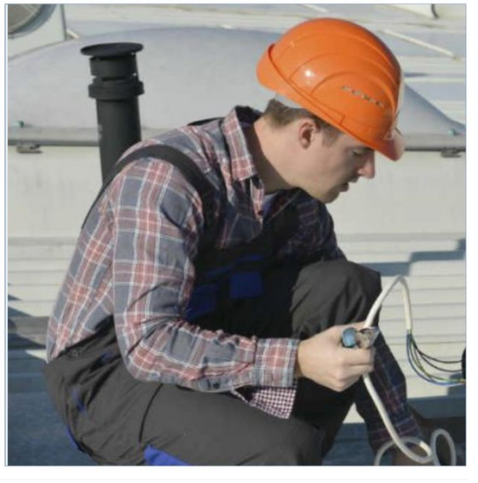
Demonstrating energy storage solutions in locations in NYC that fall outside of FDNY and Department of Buildings' jurisdiction creates an opportunity to test novel, emerging energy storage technologies in a less restrictive environment. Potential use cases should inform new approaches for urban energy storage and may include but are not limited to, indoor deployments, resiliency demonstrations, tests of hyper-safe technologies, thermal, mechanical or kinetic energy storage, alternate battery chemistries, long-duration storage, and other emerging technologies.

Pilots in this focus area will include KPIs around technical feasibility, cost analysis, ease of installation, and interconnection with the grid. Additionally, opportunities to leverage pilot sites to raise public awareness about the benefits of energy storage systems will help to set the stage for energy innovation at scale in NYC.

What might a pilot look like?

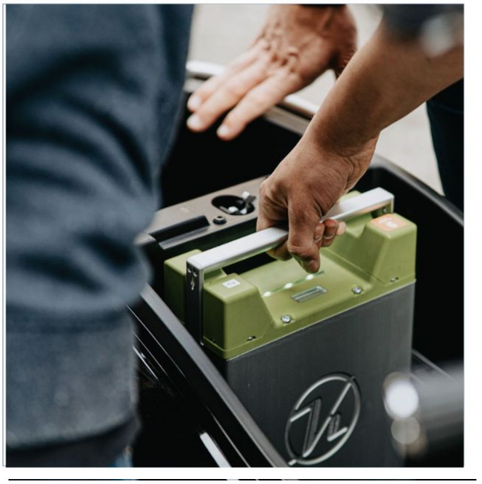
Plan with Site Host and Regulator

- Determine needs of the host site, the capacity required, and the best fit technology
- Work with fire regulator to discuss and submit proper information for approvals



Install and Use Energy Storage

- Install the energy storage solution on host site
- Maintain the system while testing for specific data to share publicly



Education & Public Awareness

- Create a mechanism for NYC residents to understand the goals and outputs of this pilot
- Educational experience for both industry experts and interested New Yorkers

Integrate Electric Vehicles (EVs) and Energy Storage Assets

Exploring the interaction between energy storage, EVs, buildings, and generation assets in NYC can help unlock the full potential of EVs as part of an integrated energy future. Potential use cases may include but are not limited to, validating EVs as back-up energy sources at scale, testing the benefits of energy-storage-enabled EV charging infrastructure, modulating EV charging with intermittent renewable power output, or testing the potential of energy storage to optimize the system of EVs, DERs, and generation.

Pilots in this focus area will aim to showcase how the energy storage capacity of EV batteries can be leveraged as Distributed Energy Resources (DERs) or how integrating energy storage with EV charging infrastructure can lessen grid strain during peak demand.

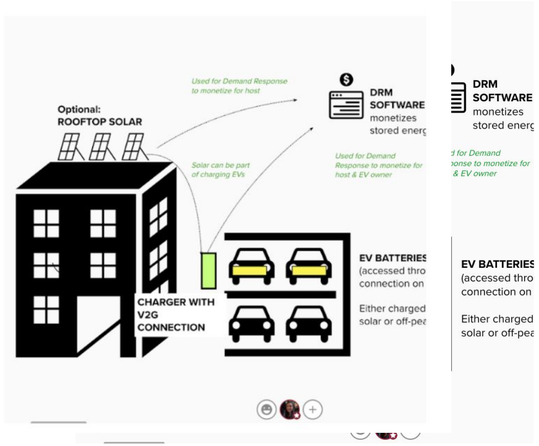
What might a pilot look like?

Validate EVs as backup energy sources at scale

- Test the validity of EVs, particularly fleets, acting as backup power sources and providing resiliency benefits

Test the benefits of ES-enabled charging infrastructure

- Model or simulate the financial benefits and demand curve flattening potential of charging with stationary storage assets



Test the optimization of EVs, DERs and buildings

- Through communications networks, test the optimization of these assets working together, to maximize financial savings and response time

For inquiries, please contact resilientenergy@newlab.com

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