



Stor4Build Annual Meeting 2024

Overview of Stor4Build Consortium

Photo from iStock-1411304340

Presenters: Suman Kaur, Judith Vidal, Kyle Gluesenkamp

Stor4Build Annual Meeting

August 26–27, 2024

Oak Ridge National Laboratory

About Stor4Build

The consortium focuses on accelerating the development and deployment of energy storage technologies in buildings.

This includes development of thermal energy storage (TES) and exploring available electrochemical battery energy storage (EES) solutions for the benefit of all communities.

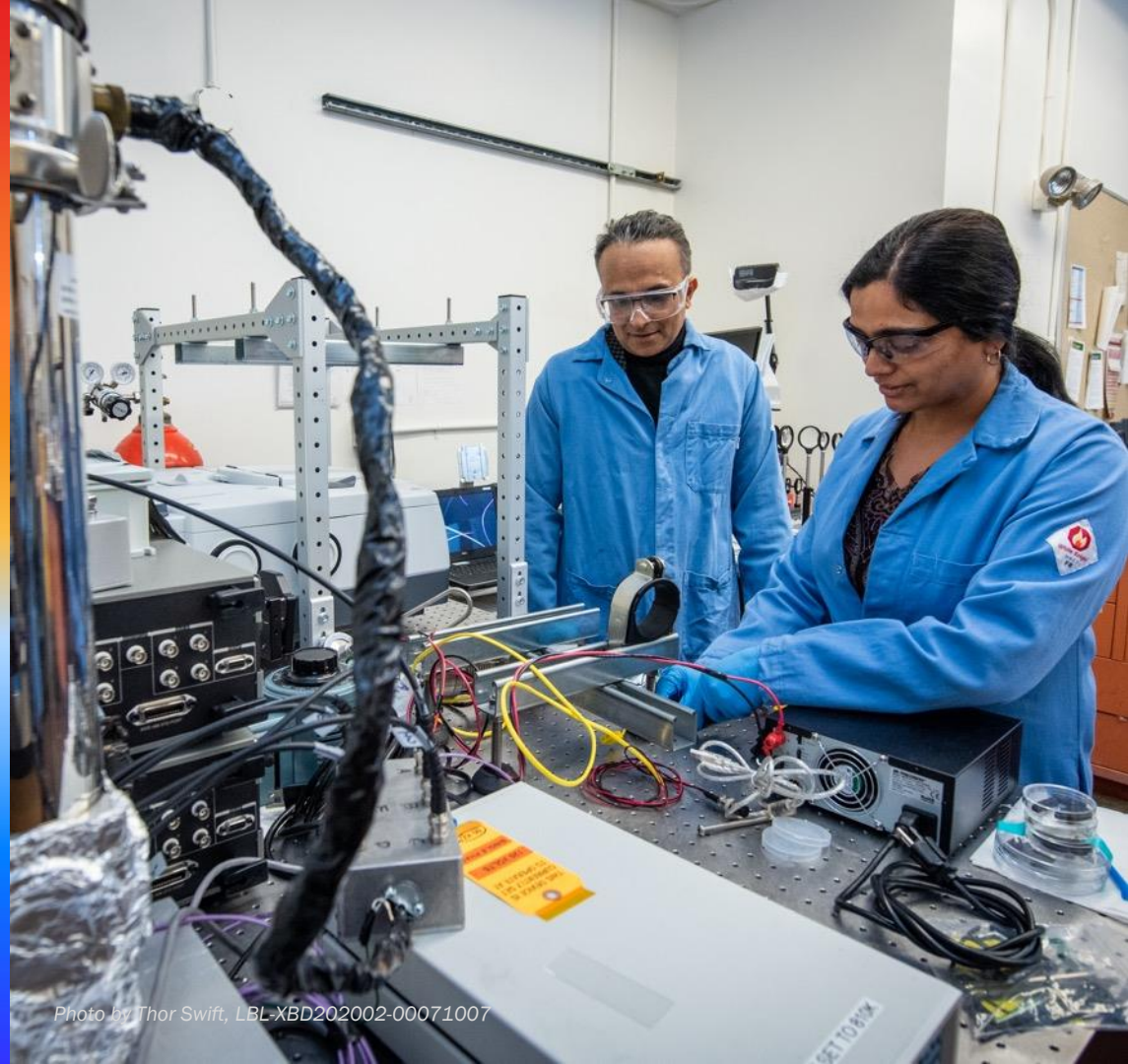
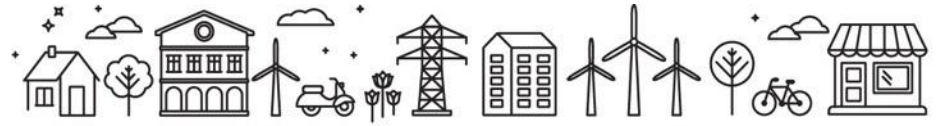


Photo by Thor Swift, LBL-XBD202002-00071007

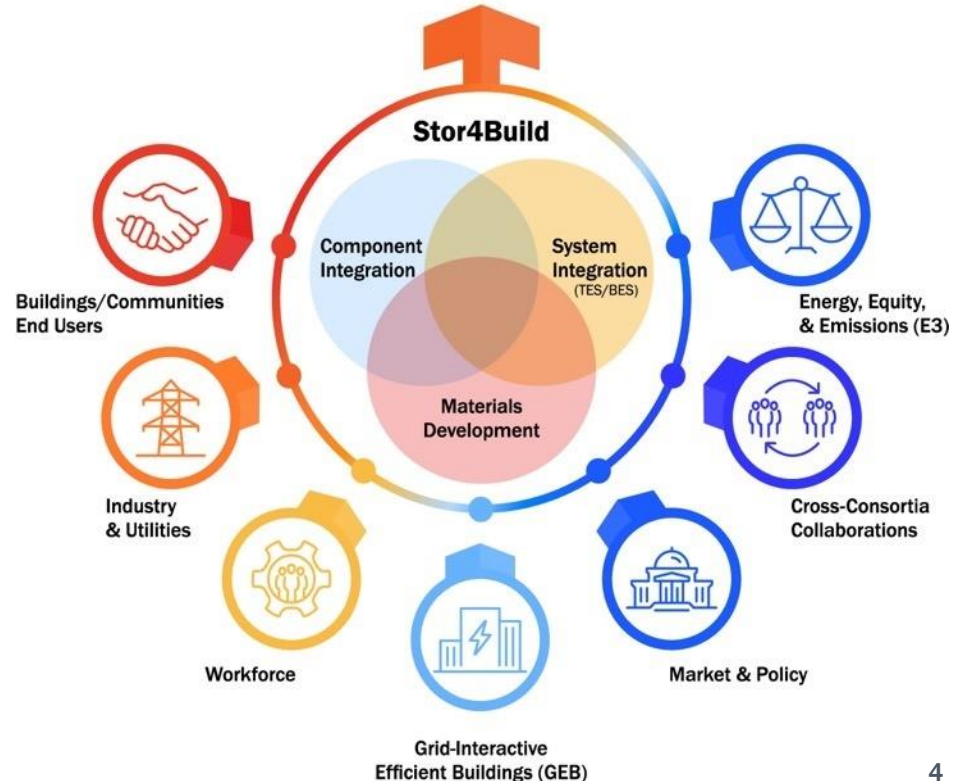
Objectives

Stor4Build is:

- Advancing TES solutions from early- to medium-stage development to market adoption
- Developing metrics for identifying optimal performance targets
- Supporting equity-centric scaled adoption and market transformation
- Conducting field evaluations of novel packaged/integrated TES solutions
- Facilitating synergistic collaboration among stakeholders



Scaled Adoption for All Communities & Market Transformation



Key Accomplishments to Date

- Drafted TES Technology Roadmap
- Communications: created S4B website, issued several news releases, sent quarterly newsletters to members, created LinkedIn group
- Created two Steering Councils
- Created three Task Groups, led by consortium stakeholders/ participants to identify needs/gaps in performance metrics, standards, and R&D
- Drafted Market Adoption Roadmap
- Coordinated research efforts by four national laboratories



R&D Steering Council

- Ravi Annapragada,
Carrier
- Kaushik Biswas, *GTI*
- Reinhard
Radermacher,
*University of
Maryland*

1. R&D gap analysis:
 - a. Development of the biggest technology-agnostic gaps map that need addressing.
2. Energy storage technology readiness:
 - a. Map development of already existing approaches/technologies at different TRLs with current and anticipated market impact.
3. Provide inputs on methodology, technologies, and use-cases for a detailed R&D technology screening/assessment through modeling of key systems.
4. Definition of key performance indicators/metrics.

Market Adoption Steering Council

- Mike Filler, *Trane Technologies*
- Stet Sanborn, *Smith Group*
- Matthew Robinson, *EPRI*
- Ryan Hamilton, *Consortium for Energy Efficiency*
- (formerly) Pradeep Vitta, *Southern Company*

1. Input on market structures and policies that reflect value and accelerate adoption of energy storage.
2. TES standards gap analysis:
 - a. Gather information and leverage ongoing international and national activities on protocol development on TES.
3. Engage subgroups and map standards from different organizations (ASHRAE, ASTM, IEA, etc.).
4. Define inputs and outputs for a simple cost-benefit analysis tool for end users and salespeople.

Anticipated Accomplishments in FY 25

- Execute projects at National Laboratories in five areas:
 - Thermal storage-ready heat pumps for **residential** buildings
 - Thermal storage-ready equipment for **commercial** buildings
 - Active building **envelopes** to improve resilience, reduce peak demand, and save energy
 - TESSBeD: Develop an open-source TES Sizing, Benefits and **Decision tool** to enhance resilience, affordability, and grid-edge benefits in buildings
 - Developing standard **testing protocols** and procedures
- Publish TES Technology Roadmap
- Publish Market Adoption Roadmap
- Manage and disseminate project data
- Implement feedback from stakeholder-led Task Groups
- Host TES “coffee chats” to share info about successful TES deployments



Thank You

Stor4Build Annual Meeting
August 26–27, 2024
Oak Ridge National Laboratory

Questions/Comments ?