

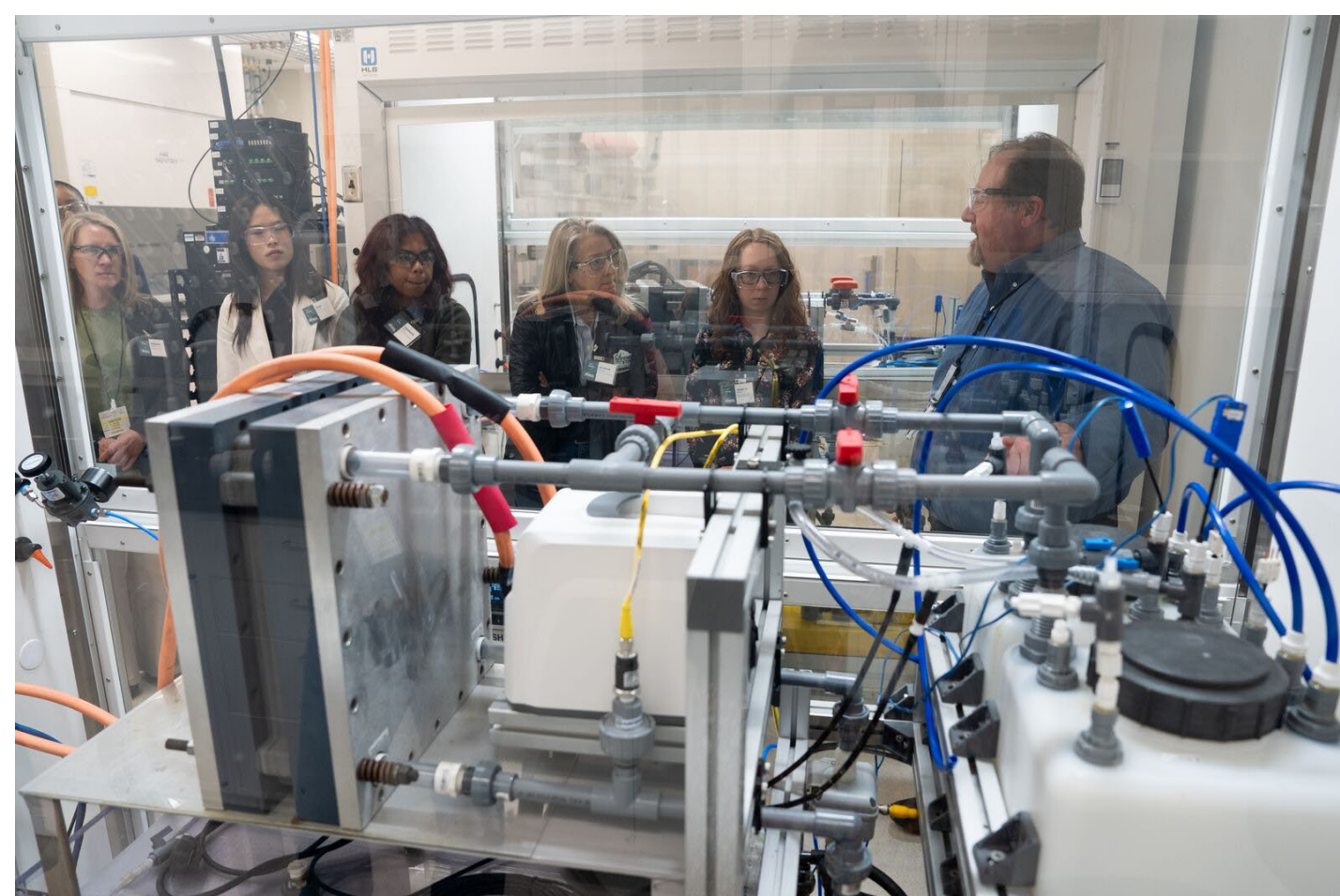
Energy Storage Siting and Permitting Outreach

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Topic: Regulatory | Vertical: Analytics, Safety and Reliability
Strategic Pathway: Grow grid capacity
Project start and finish: FY26

PROBLEM

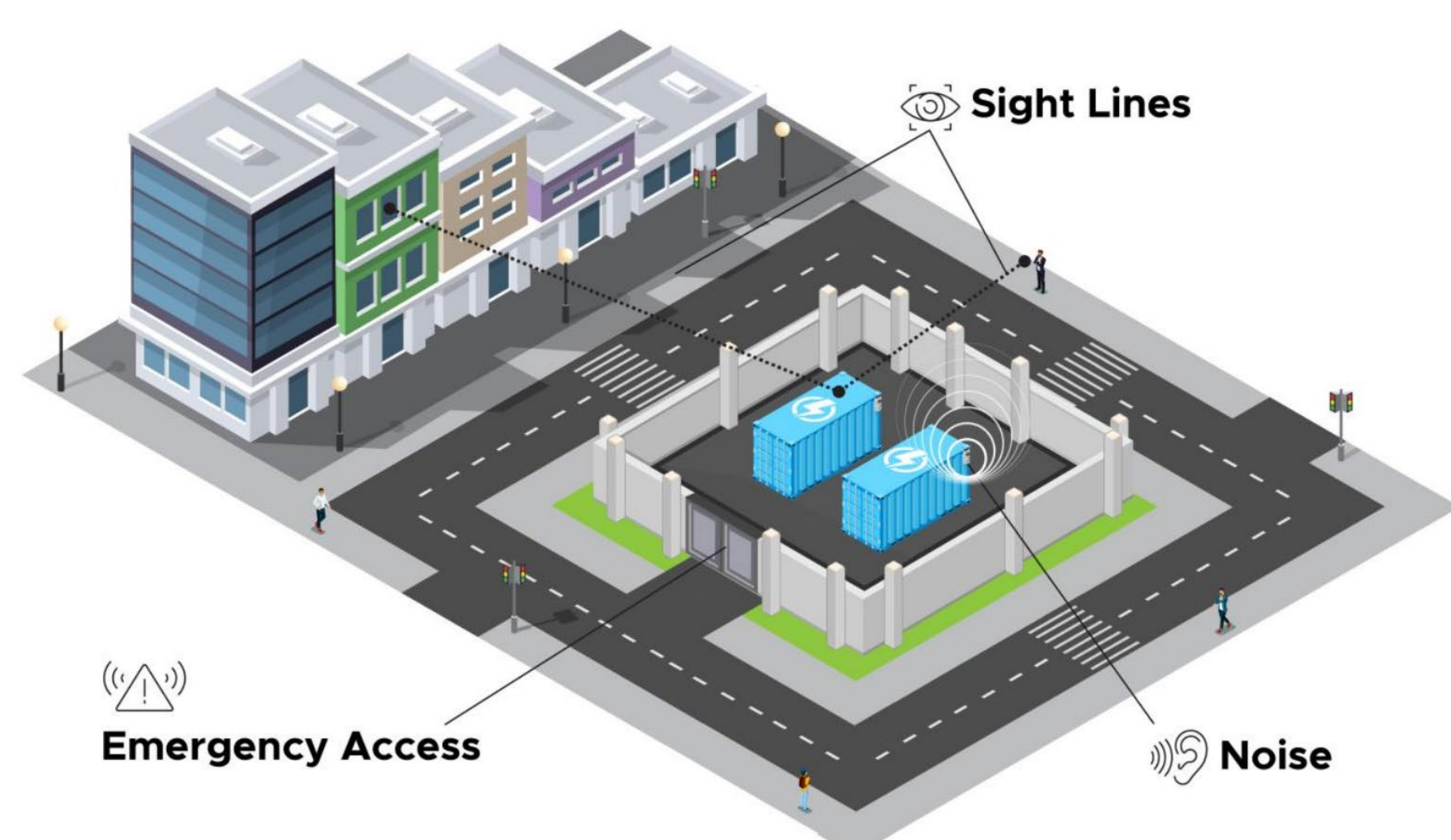
- State and local siting and permitting processes for energy storage projects are often complicated by incomplete or inaccurate information about local impacts and benefits.
- Many local decisionmakers and members of the public have voiced a need for trusted, up-to-date, and accessible resources about energy storage technologies.



Workshop attendees toured the Grid Storage Launchpad laboratory facilities and observed PNNL's research, development, and testing capabilities firsthand.

APPROACH

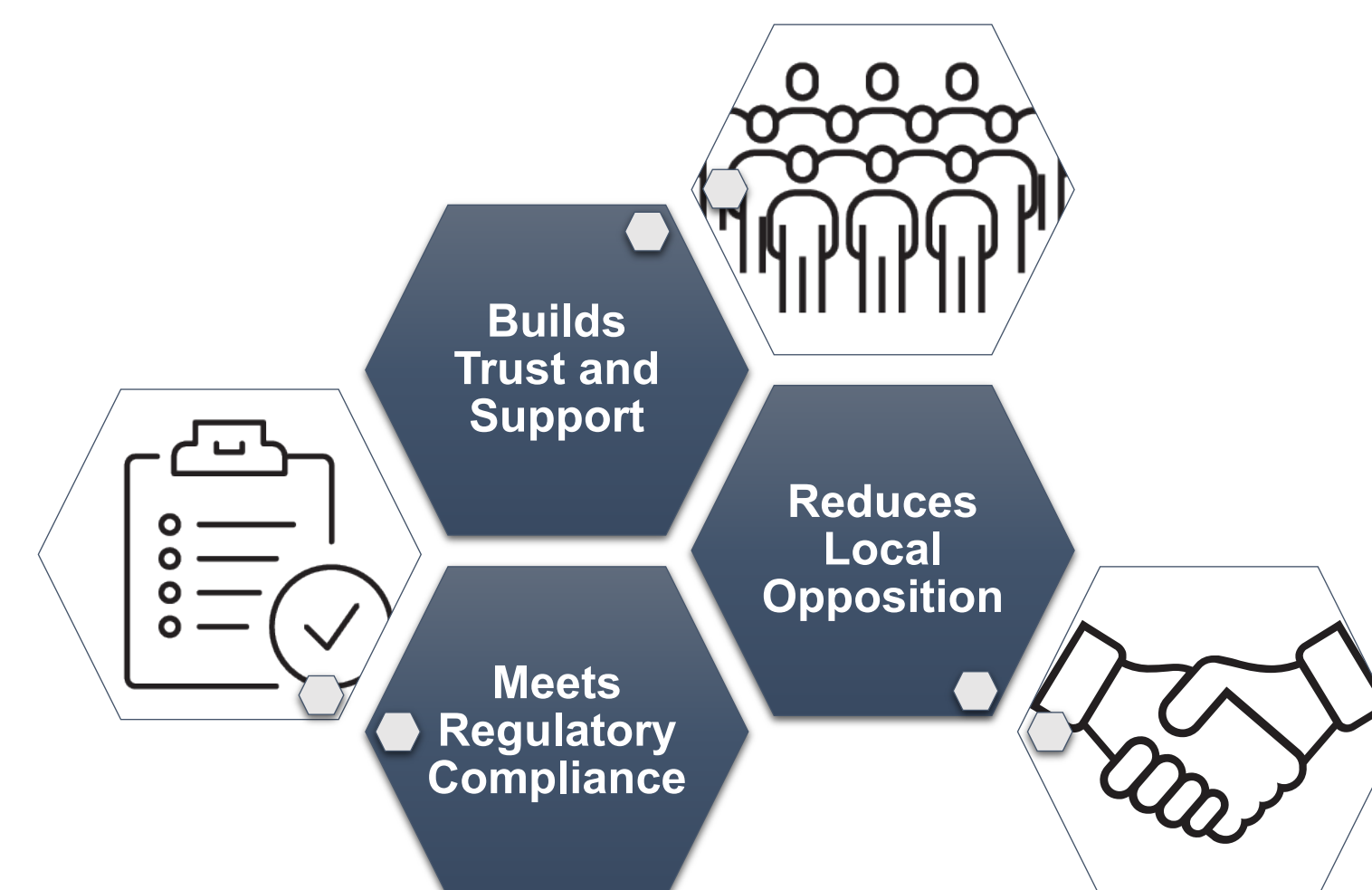
- On March 24, 2026, PNNL convened the Energy Storage Siting and Permitting Outreach Workshop at the lab's Grid Storage Launchpad (GSL) in Richland, Washington.
- The 17 invited participants represented a cross-section of stakeholders: organizations working on local and regional energy issues, local and state government planning officials, developers, consultants, researchers, and utilities.
- PNNL subject matter experts presented on several topics, including technology fundamentals, grid benefits, and safety considerations. Input from cohort members on areas of interest informed agenda development.
- Presentations and factsheets were shared with all participants and published online. Participants will share and adapt these resources to support informed engagement in energy storage deployment in their areas.



Workshop topics included local considerations for siting utility-scale energy storage systems, such as visual impacts, noise, and first responder access.

WORKSHOP TOPICS

- **Energy storage fundamentals:** Overview of technologies, grid applications, market landscape, and project economics.
- **Siting, permitting, and regulation:** Permitting pathways, common challenges, and local siting best practices.
- **Interconnection and grid integration:** Unique interconnection challenges for energy storage, emerging solutions, and grid services and benefits.
- **Safety and risk mitigation:** Lessons from safety incidents, risk mitigation strategies, and relevant codes and standards.
- **Local engagement:** Best practices for proactive public engagement to support project success and local acceptance.
- **Participation in siting proceedings:** Process overview and resources for effective public comments and expert testimony.
- **Case studies:** Examples of grid-scale energy storage projects and real-world applications, including enhancing resilience and reliability, expanding energy access, and affordability.



Illustrating the importance of effective public engagement as part of energy storage siting and permitting efforts.

OUTCOMES AND NEXT STEPS

- Participants identified areas of interest for future resources, including examples and applications of different battery chemistries, additional safety and risk management topics, affordability and flexibility applications, and end of life considerations. These suggestions will help inform future PNNL research.
- Attendees shared positive feedback, including presenters' expertise and clarity, discussions and networking, and the opportunity to see storage R&D in action.
- PNNL is developing additional materials to support public education on energy storage, including webinars and publications for non-technical audiences.