

## Application and Application Process

In support of the DOE Office of Electricity Energy Storage Program,<sup>1</sup> the Energy Storage for Social Equity (ES4SE) Initiative is offered by Pacific Northwest National Laboratory and Sandia National Laboratories to support disadvantaged communities affected by energy challenges. The ES4SE technical assistance program is designed to offer a range of assessments on energy storage feasibility, design, and application to enhance community benefit outcomes. The program comes at a critical time to promote equity in the energy system and achieve the U.S. Department of Energy's (DOE) Justice40 initiative targets.

Please contact us if you have questions regarding the program or application.

**ES4SE Contact Information:**

Email: [ES4SE@pnnl.gov](mailto:ES4SE@pnnl.gov)

Phone: 509-372-4487

### **What kind of energy challenges can be helped by energy storage?**

Communities across the country face energy challenges that may be alleviated or mitigated through energy storage. For example, energy storage can support more reliable electric service delivery at the local level during normal conditions and extreme weather events. Energy storage can also strategically integrate with “peaking” power plants to reduce emissions, both greenhouse gas emissions and health-related criteria pollutants such as particulate matter. Other ways energy storage may support community needs include access, affordability, decarbonization, environmental impact, resiliency, and social impact. Examples of community objectives and use cases relevant to this technical assistance can be found in [Appendix A](#).

### **What kind of help can you get?**

Technical assistance will occur through a combination of one-on-one assistance between the selected participant and National Laboratories, through in-kind guidance, training, analysis, workshops, partnership building, and support. Technical assistance offered will vary based on the selected participant's application and community needs. The technical assistance will help participants transition from problem- to solution-identification by enhancing community understanding, knowledge, and capacity on their energy system. Through this program, participants will gain a deeper understanding of their energy system challenges and possible solutions, develop a network of people to serve as a valuable resource long after the technical assistance program is over, and be closer to implementing solutions to the community-defined challenges. Additionally, we will provide ways for selected communities to connect with one another and have a shared practice, developing a cohort of technical assistance participants.

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<sup>1</sup> <https://www.energy.gov/oe/energy-storage>

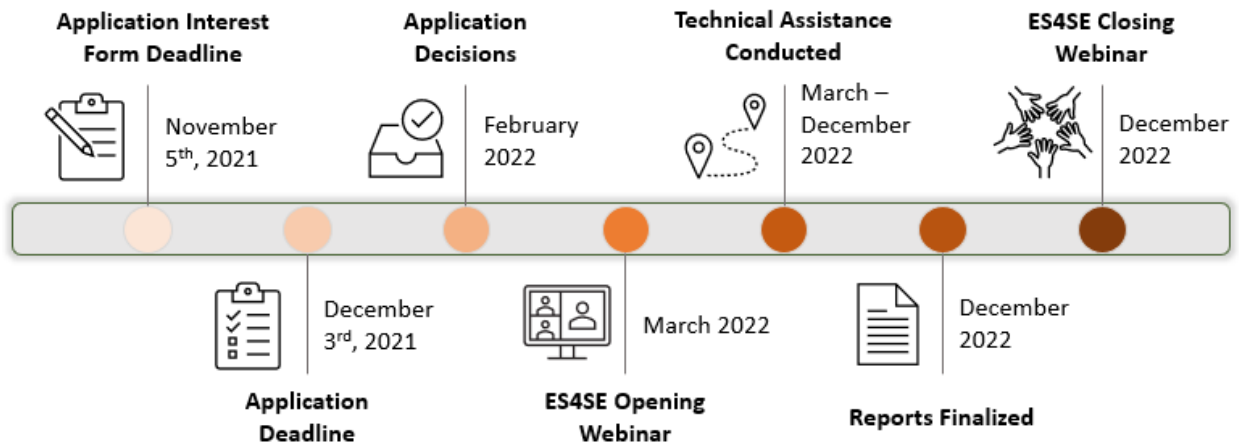


Technical assistance may include, but is not limited to, the following:

- Energy analysis
- Economic analysis
- Spatial analysis
- Grant/funding application assistance

All technical assistance is accompanied by equity and workforce analyses to better understand the relationship between energy challenges, energy storage, and equity. The equity and workforce analyses are intended to be developed in partnership between the national labs and participants to ensure accuracy and relevancy. All participants in the technical assistance program will receive a detailed report on the technical assistance, equity, and workforce analyses and findings. This will also help us improve the program for future cohorts and communities.

### When will the program occur?



Technical assistance is currently planned over a ten-month time frame from March to December of 2022. While technical assistance is ideally accomplished in-person, travel will be determined based on ongoing COVID-19 conditions, DOE and National Laboratories operating procedures, and funding availability. Participants should be prepared for technical assistance to occur entirely virtually and should plan for virtual availability during the technical assistance period (March to December 2022). Technical assistance is free to selected participants but is not accompanied by funding. ES4SE will also have demonstration and deployment opportunities. Where technically feasible, ES4SE technical assistance participants will be considered strong applicants for the complementary demonstration and deployment opportunity. However, follow-on funding is not guaranteed and may require an additional application. If applicants already have a strong understanding of their energy solution needs, they may be a more suitable candidate for immediate project demonstration and deployment. Please contact us if you have questions regarding the appropriate application.



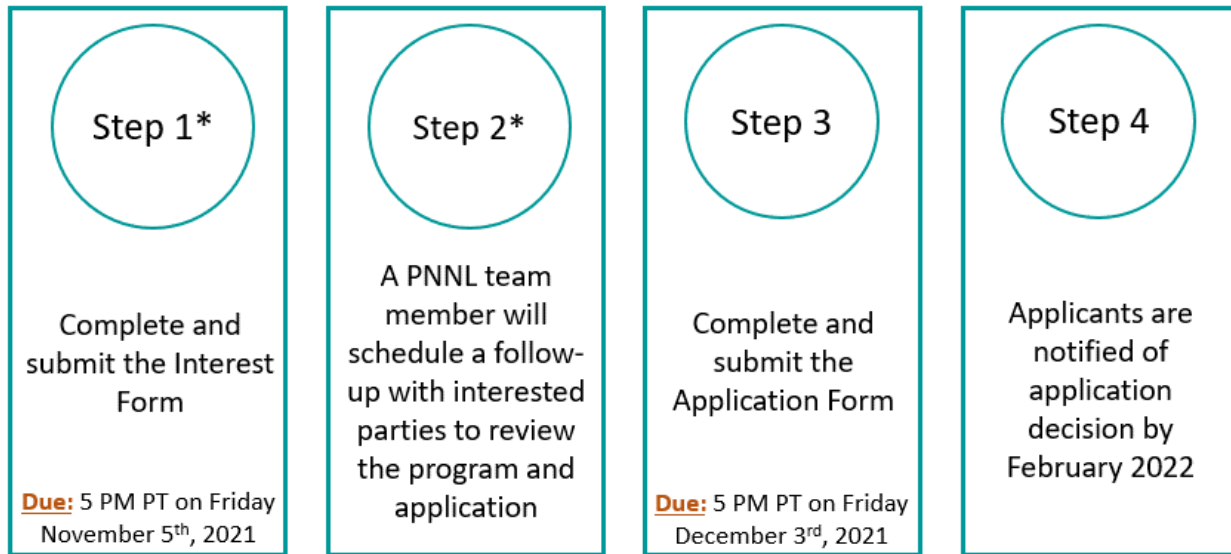
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## Application Process & Instructions

This is a two-stage application process intended to minimize the applicant’s required effort by providing direct support. Prospective applicants will first complete the online interest form to collect basic information. A PNNL team member will then work with the interested party to review the technical assistance program as well as a more detailed portion of the application, and to answer any questions. Prospective applicants can then complete and submit the application form. While we encourage applicants to submit the interest form and engage with PNNL to confirm eligibility and provide any necessary assistance, it is not required. If applicants decide not to submit an interest form, they can still submit an application. Both the interest and application forms will be available on the program website <https://www.pnnl.gov/projects/energy-storage-social-equity/technical-assistance-program> beginning on September 22<sup>nd</sup>, 2021.



\* Steps 1 and 2 are optional – designed to ensure applicants are eligible and provide any assistance necessary to ensure program and application are clear. If applicants decide not to submit an interest form, they can still submit an application.

The interest form and/or application form can be made available in PDF or Word format upon request.



## Application Review and Selection Process

Each application will undergo review by a review committee made up of energy, community, academia, and National Laboratory personnel. Applications must meet the eligibility criteria, and eligible applications will then be scored based on the selection criteria. Both eligibility and selection criteria will be evaluated through the submitted application.

Applications will be selected based on their score. Depending on the applications received, the project diversity criteria identified below may be used to ensure representation across issues, geographies, and operational contexts. The final selection will depend upon the availability of funds and approval by the DOE. The program anticipates selecting 10-15 participants.

### Eligibility Criteria

1. Technical assistance will provide benefits to a disadvantaged community
2. Disadvantaged community experiences problems or challenges with their energy system that can be addressed or partially mitigated through electric service delivery and/or energy storage
3. Applicant must have the capacity to support the technical assistance process
4. Applicant must have credibility to support the disadvantaged community

Disadvantaged community<sup>2</sup> criteria include but is not limited to:

- Low income, high and/or persistent poverty;
- High unemployment and underemployment;
- Racial and ethnic segregation;
- High local pollution;
- Linguistic isolation\*;
- High housing cost burden and substandard housing;
- Distressed neighborhoods\*\*;
- High transportation cost burden and/or low transportation access;
- Disproportionate environmental stressor burden and high cumulative impacts;
- Limited water and sanitation access and affordability;
- Disproportionate impacts from climate change;
- High energy cost burden\*\*\* and low energy access;
- Tribal jurisdictions;
- Jobs lost through the energy transition; or
- Access to healthcare.

### Additional Explanation of Selected Criteria

\***Linguistic isolation** is a household in which all members age 14 years and over speak a non-English language and also speak English less than “very well” (have difficulty with English) is linguistically isolated, as defined by the U.S. Census Bureau.

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<sup>2</sup> Operational definition of the Department of Energy’s Office of Economic Impact and Diversity



**\*\*Distressed neighborhoods** are areas experiencing problems endangering the area's economic viability and stability. Applicants may utilize the 2016 Distressed Communities Index from the Economic Innovation Group <https://eig.org/dci/interactive-map> to get an impression of potential distressed levels. However, this is not required, and applicants should use their best judgment to determine if their community is experiencing economic distress.

**\*\*\*Energy burden** is the percentage of gross household income spent on energy costs. Households with a 6% energy burden or higher experience a high energy burden.

### Selection Criteria

1. Impact potential of energy storage to contribute to community objectives
2. Unique value of laboratory analysis (limited funding, need for scoping work, potential public benefit, etc.)
3. Strength of team described in the application to support the technical assistance process, develop a cohort with other participants, and support the community
4. Likelihood of technical feasibility to enable implementation of solution identified in technical assistance. Note: this program does not include implementation/demonstration/deployment

### Program Policy Factors:

1. Projects may be selected to best represent a range of issues.
2. Projects may be selected to support geographic diversity.
3. Projects may be selected to support diverse policy and operational contexts.

## Contact Information

Any inquiries about the technical assistance program and the application process can be directed to:

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Email: [ES4SE@pnnl.gov](mailto:ES4SE@pnnl.gov)

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## Example use cases of energy storage to support community objectives

<b>Equity challenges</b>	<b>How can energy storage play a role?</b>	<b>Example use cases of energy storage to support community objectives:</b>
Access	Energy storage, when integrated with a fuel source (fossil or renewable), can provide energy access.	<ul style="list-style-type: none"> <li>• Unelectrified areas</li> <li>• Limited resource availability</li> <li>• Disconnection rates</li> <li>• System capacity for small-scale renewables, efficiency, or electrified vehicles</li> <li>• Eligibility for demand response programs</li> <li>• Future load growth</li> </ul>
Affordability	Energy storage can reduce energy costs for consumers, increasing energy affordability.	<ul style="list-style-type: none"> <li>• Energy cost burden</li> <li>• Demand charges</li> <li>• Energy market revenue</li> <li>• Shut-off notices for non-payment</li> </ul>
Decarbonization	Energy storage can be integrated with renewable energy to provide clean energy in place of traditional fossil fuel systems.	<ul style="list-style-type: none"> <li>• Climate/renewable energy targets (solar, wind, etc.)</li> <li>• Fossil fuel power plant decommissioning</li> <li>• Peaker power plant replacement</li> </ul>
Environmental Impact	Energy storage can replace Peaker plants or backup generators.	<ul style="list-style-type: none"> <li>• Health improvement</li> <li>• Air quality improvement</li> <li>• Emissions reduction</li> </ul>
Resilience	Energy storage can be integrated with energy systems to provide energy that is accessible during extreme weather events.	<ul style="list-style-type: none"> <li>• Avoided energy outages</li> <li>• Avoided disruption costs (financial and otherwise)</li> <li>• Enhanced reliability</li> <li>• Sustained critical loads during extreme events and natural disasters (particularly for infrastructure that supports multiple stakeholders such as a community center, cooling center, library, school, etc.)</li> </ul>
Social Impact	Energy storage can serve as a community asset.	<ul style="list-style-type: none"> <li>• Energy independence</li> <li>• Wealth creation</li> <li>• Community ownership</li> <li>• Community building</li> </ul>