

**Request for Proposals: Indiana-Focused**  
**Utility-Scale Battery Energy Storage System Technology Study**

**Summary:**

The Indiana Office of Energy Development (IOED) is announcing a request for proposals for a qualified partner to research utility-scale battery energy storage systems (BESS) technology and provide best practices for local governments and utilities looking to implement these technologies in their communities. Proposals need to address the information requested below and submit the proposal by July 31, 2024. It is anticipated the contract for the selected proposal will begin October 1, 2024. The budget is not to exceed \$250,000.

**Background:**

The State of Indiana currently has and wants to maintain a diverse portfolio of generating resources that provides electricity to customers. Through significant stakeholder engagement and work under the legislatively created 21<sup>st</sup> Century Energy Policy Development Task Force (Energy Task Force), Indiana created the foundation of its energy policy through the development of five pillars: (1) reliability, (2) affordability, (3) resiliency, (4) stability, and (5) environmental sustainability. It is recognized that one pillar cannot be affected without affecting any of the other four. Further, recognizing the principle of a managed energy transition, the Task Force concluded that Indiana's electricity needs are best served through a diverse resource mix that leverages the strengths of, and mitigates the weaknesses inherent in, each type of generation resource. This “all of the above” approach provides the best path forward to ensure that all five pillars are appropriately balanced.<sup>1</sup>

The Indiana Office of Energy Development serves as a lead agency for comprehensive energy planning and policy development for the State of Indiana. IOED’s mission is to develop affordable, stable, and reliable energy solutions through a diverse and balanced portfolio of energy resources for the benefit of all Hoosiers.

As more intermittent energy resources come online in Indiana and across the country, interest in BESS technology has increased to support the electric grid as a load-following resource and provide energy, capacity, and/or ancillary services necessary to maintain and support reliability, resiliency, and stability of the system. Indiana utilities continue to contemplate growing amounts of BESS technology to support their generation portfolio in their 20-year integrated resource plans (IRPs)<sup>2</sup>. Furthermore, in 2023, the legislature passed House Enrolled Act (HEA) 1173<sup>3</sup>, which created a statutory framework to regulate BESS by the Indiana Department of Homeland

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<sup>1</sup> For more information, see [21<sup>st</sup> Century Energy Policy Development Task Force Final Report](#)

<sup>2</sup> [Integrated Resource Plans](#)

<sup>3</sup> [HEA 1173 - 2023](#)

Security (IDHS) through the Fire Prevention and Building Safety Commission. Although BESS technology implementation is still nascent across Indiana, the IOED sees a proactive opportunity to conduct a thorough study to better understand all aspects of BESS technology – the benefits and drawbacks – and its applicability and suitability to the state. This study will enable state and local officials, stakeholders, and the public to develop a more robust understanding of BESS technology.

## **Objective:**

The objective of this RFP is to develop one (1) study that outlines BESS technology applicability and potential impacts within Indiana and the electric system as outlined below by March 3, 2025.

IOED is interested in a comprehensive approach in analyzing BESS technology applications and impacts. The study shall provide specific and detailed information on the following broad topic areas:

- **Current Status of BESS Technology**
- **Safety**
- **Workforce Development and Employment**
- **State and Local Economic Impact**
- **Installation, Operation, Decommissioning, and Recycling Practices**
- **Community Engagement Needs and Best Practices**
- **Key Findings**

The list of elements under each topic within this RFP area are not to be considered exhaustive. Respondents are encouraged to propose additional related items for IOED consideration.

## **Scope of Work and Deliverables:**

### **Task 1: Coordination with IOED**

#### *Subtask 1.1 Planning and Coordination Meeting with IOED*

1. The contractor shall meet with IOED staff within thirty (30) days of contract approval to discuss the project and walk through the topic areas and necessary elements for the successful completion of the study.
2. The contractor shall provide a list of names and contact information for all staff working on the project, including any executives, project or management staff, and fiscal staff.
3. Within thirty (30) days, the contractor shall meet with IOED staff on a mutually agreed upon schedule that should be conducted on a basis of at least monthly until the completed study is submitted to IOED. In those meetings, the contractor shall provide updates on the status of the study and share drafts as appropriate.

### *Task 1.2 Stakeholder Engagement*

1. Stakeholder engagement will be an important part of the development of this study. The contractor shall coordinate closely with IOED to engage with a variety of stakeholders representing interested parties ranging from utilities and generation owners, BESS technology manufacturers, local officials, customer advocacy organizations, and other relevant entities as applicable and appropriate.
2. The contractor shall coordinate with IOED staff and attend any meetings, either virtual or in-person, that is a result of stakeholder engagement and/or outreach efforts as determined necessary or appropriate by IOED.
3. The contractor may be invited by IOED to present findings to interested state and local officials and stakeholders.

### **Task 2: Study Contents**

#### *Subtask 2.1 Literature Review: Current Status of BESS Technology*

1. The contractor shall provide an analysis of the existing landscape of BESS technologies across the nation and in Indiana. This section should include but is not limited to an overview of information on relevant state and federal laws related to BESS technology, how batteries are generally built, resources and minerals and their sources that are used to build batteries, the supply chain from sourcing, refinement, and manufacturing of batteries and battery materials.
  - a. The literature review shall also evaluate the scale, scope, and types of Indiana companies currently engaged in the sourcing, refine, manufacturing, transportation, operation, and recycling of BESS technologies utilized within the electric grid (i.e., utility-scale) or on the grid-edge (e.g., behind-the-meter battery systems).
2. The contractor shall provide information on the types of electric grid-supporting attributes BESS can provide, including capacity, energy, and/or ancillary services. This should also include how BESS may fit within Indiana's current and expected generation portfolio mix and its relationship with other generation resources, as applicable. The contractor should also evaluate BESS attributes and how the resources are generally applied/used within the Midcontinent Independent System Operator (MISO) and PJM Interconnection (PJM) wholesale power markets.
3. The contractor shall provide information on any current licensing and regulatory approvals needed to implement a BESS project at the federal, state, and local level, as applicable.
4. The contractor shall provide potential use case or scenario-type information, including the usage of BESS as a utility-scale asset, as well as other use cases in industrial, commercial, and residential settings or other relevant applications. The contractor shall evaluate how the use cases/scenarios affect resource adequacy, reliability, affordability, and decarbonization.

5. The contractor shall provide general timelines of the completion of a BESS from conceptualization to commercial operation.
  - a. This shall be accomplished through the lens of both utility-scale as well as other identified support functions.
6. The contractor shall identify the type and scale of BESS technology that exists in the state today as well as those identified for future implementation by Indiana utilities (primarily gathered through IRPs and interconnection queues), and the timing and trajectory of the technology's use in Indiana for utility-scale operations.

### *Subtask 2.2 Safety*

1. The contractor shall provide information related to laws, regulations, standards, and/or best practices for safety surrounding BESS technology, including any built-in safety features that may exist for BESS. This information should include both physical and cybersecurity risks.
2. The contractor shall provide information on the potential environmental impact from BESS technology, including a discussion surrounding the environmental impacts of components used to construct a BESS.
3. The contractor shall provide information related to safety for BESS project siting, and considerations for developers and communities.
4. The contractor shall provide information surrounding the differences in safety practices between different types of BESS.
  - a. An example includes, but is not limited to, different practices for lithium ion vs. sodium ion technologies.
5. The contractor shall provide information on safety differences between different scales of BESS, and potentially unique hazards for each system.
  - a. An example includes, but is not limited to, different practices for utility scale vs. residential battery systems.
6. The contractor shall provide information on the development of specialized state-level battery fire responders<sup>4</sup> strategically positioned throughout the state.

### *Subtask 2.3 Workforce Development and Employment*

1. The contractor shall model potential workforce impacts (both direct and indirect) that a hypothetical BESS project could make in one or more potential scenarios. Examples of direct workforce impacts would include construction and permanent job creation, and examples of indirect workforce impacts would be supply-chain-based and localized economic impact.
2. The contractor shall examine the talent development pipeline and explore recommendations to support the workforce for BESS technologies and explore options

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<sup>4</sup> An example structure would be the Indiana Department of Environmental Management Emergency Response

for the state to consider to further develop BESS-related workforce and talent development programs.

- a. This shall include manufacturing, construction, and any applicable permanent jobs created.
  - b. The contractor shall provide information on the length of time required to acquire the necessary trade certifications or training for various positions or groups of positions likely involved with BESS facilities.
  - c. The talent pipeline should consider differences between BESS field staff and utility operation staff.
3. The contractor shall evaluate opportunities for re-skilling and re-training of jobs that are impacted by the energy transition and whether adequate crossover exists for affected workers and BESS technology.
  4. The contractor shall provide a detailed analysis of any challenges that currently face the workforce as it relates to BESS development and operation.
  5. The contractor shall evaluate the potential for Indiana to serve as a BESS training hub due to positioning between the Midcontinental Independent Systems Operator (MISO) and the PJM regional transmission organizations.

#### *Subtask 2.4 State and Local Economic Impact*

1. The contractor shall research and model economic impact (both costs and benefits) at the state and local levels that a BESS facility provides. Local-level analysis should include regional, county, and municipal levels. Modelling outcomes should include, but are not limited to the following:
  - a. Associated tax revenue impacts of BESS, including impacts when BESS is paired with existing and new renewable energy systems and stand-alone BESS systems.
  - b. Tax revenue changes for the local and state governments, especially in areas where revenue replacement for a retired generation is a high priority.
  - c. Expected economic impact from wages of construction, temporary, and permanent workers.
2. The contractor shall provide information on the current costs to build a BESS project, and a detailed description of aggravating and mitigating factors that can affect the total cost of construction and operation of a BESS facility. The information should include, but is not limited to:
  - a. Total construction and project costs to achieve commercial operation. This may include construction, licensing, production, and ongoing operation and maintenance costs.
3. The contractor shall consider the potential opportunities for a BESS manufacturing supply chain to be developed in the state.
  - a. This opportunity should consider resource limitations from components and materials not available in the United States, as applicable.
4. The contractor shall provide information on the potential impacts to property values and property taxes for houses located near a BESS facility.

### *Subtask 2.5 Installation, Operation, Decommissioning, and Recycling Practices*

1. The contractor shall provide information surrounding existing laws, regulations, standards, and best practices for the installation, operation, decommissioning, and recycling of all BESS components. This information should include, but is not necessarily limited to, how a developer and/or owner achieves each step of the process and a description of ongoing activities throughout the life of a BESS development. Additionally, the contractor should identify the extent to which BESS operators must comply with certain practices as it relates to standards (e.g., UL Standards, National Fire Protection Association (NFPA), etc.).
  - a. This should include both national and existing Indiana practices, specifically related to local impacts during construction, installation, and operation of BESS.
  - b. The contractor shall provide information concerning estimated decommissioning costs and timelines for full decommissioning.
  - c. The contractor shall identify existing gaps in Indiana BESS recycling practices and make recommendations to establish a framework for BESS recycling network in Indiana that can promote safety of the technology, economic development, and workforce development for the state.

### *Subtask 2.6 Community Engagement Needs and Best Practices*

1. The contractor shall provide information on the best practices for thoughtful community engagement on BESS technology deployment.
2. The contractor shall provide pertinent information on common questions and answers community members may have related to BESS technology including, but not limited to: economic impact, health and safety, aesthetics, decommissioning, and land use/siting.
3. The contractor shall conduct a high-level survey of Indiana residents and community leaders on overall understanding, awareness, and attitudes towards BESS technology, including potential interests and concerns.
4. The contractor shall identify opportunities for local units of government to establish appropriate development standard topics of interest that facilitate a safe and reasonable deployment of BESS in a community, including types of commonly used standards and practices, and the potential methods of application (e.g., economic development agreements, ordinances, regulations, etc.). The contractor shall provide example development standard topics of interest for these local standards, which should capture all elements: installation, operation, decommissioning, and recycling, as applicable.

### *Subtask 2.7 Key Findings*

1. The contractor shall conclude the study and present key findings and recommendations from the information gathered in a thorough and complete analysis, considering both costs and benefits, and the alignment with current state energy policy. Key findings shall include a summary of the strengths and weaknesses of BESS development opportunities in the state. Recommendations should be generally limited to state and local actions or opportunities.

2. The contractor shall develop executive summaries, handouts, and other communicate to provide brief and easily digestible information in addition to the comprehensive report.

## **Milestones:**

IOED will select the awarded proposal by August 30, 2024, and the study can officially begin upon contract execution shortly after. IOED anticipates the study can be completed in 5 months, by March 3, 2025. Milestones the contractor shall incorporate into the proposal include:

1. Monthly coordination meetings with IOED.
2. A draft outline of the study within 60 days of contract execution.
3. Successive drafts or chapters during the study development period that demonstrate progress being made towards completion.
4. A final version of the comprehensive report by March 3, 2025.
5. The final handout(s) that summarizes the report by March 3, 2025.

## **Payments:**

This project will be administered through a contractual agreement in accordance with Indiana state laws and procedures. The contractor must be [registered](#) with the State and in good standing. Payments will be made up to 35 days in arrears as work is completed satisfactorily and upon receipt of dated invoices that list expenses incurred as specified in the proposal budget. Payments will be disbursed through direct deposit into a banking account specified and authorized by the contractor.

The selected contractor may be determined to be a subrecipient of federal funds and be required to comply with federal stipulations and requirements for pass-through grants as detailed in 2 CFR 200. This includes, but is not limited to, complying with federal audit requirements, and completing an SF-424B Assurances for Non-Construction Programs.

## **Proposal Instructions:**

Proposals must be in pdf format, and include the following elements:

**Cover Page** – provide a cover page that includes title; project summary that briefly states specific objective(s); name, affiliation, and contact information for the project leader and, if appropriate, any project partners; and project budget summary by task and subtask, as applicable.

Additionally, complete contact information (name, title, affiliation, email, phone number) must be provided for the individual(s) authorized to enter into a contractual agreement.

***Approach*** – describe the methods that will be used to meet each stated task and subtask item in the scope of work. This section should clearly identify the level of research and data collection that will be used to meet listed task/subtask.

***Timeline*** – provide a detailed proposed schedule for coordination, research, data analysis and compilation, and report preparation.

***Budget*** – provide an itemized budget by major expense types (e.g., salary & wages, equipment, supplies, travel, etc.). The source and amount of match provided by the applicant, if applicable, must be included.

***Supporting Material*** – a brief biography and bibliography demonstrating the capability and relevant experience of the principal investigator(s) and/or researcher(s) is required. Support materials that aid in evaluating the proposal are encouraged.

## **Proposal Evaluation:**

Proposals will be judged based on the basis of feasibility, efficiency, quality, and quantity of work that will be accomplished within the fixed budget, and qualifications of the principal investigator(s). The successful applicant must be able to enter into a contractual agreement with the State and be a registered Vendor and Bidder with the State or become registered prior to awarding the contract. Work may not commence until the contract is fully executed, which may be up to eight weeks from initiation. The contractor will be notified when work may begin.

## **Proposal Deadline:**

Project proposals are due by COB on July 31, 2024. Notification of acceptance will be made by August 30, 2024.

## **Proposal Submissions:**

Project proposals should be submitted via email to [jcarrico@oed.in.gov](mailto:jcarrico@oed.in.gov).