UNITED STATES ADVANCED BATTERY CONSORTIUM LLC

https://uscar.org/usabc/

REQUEST FOR PROPOSAL INFORMATION (RFPI)

SUPPLY CHAIN R&D FOR INACTIVE MATERIALS IN COMMERCIALIZED ELECTRIC VEHICLE (EV) BATTERIES

All information related to this RFPI - including process guidance, forms, and reference materials – is available on the USABC website.

*If you require assistance with the RFPI process, please contact us using the **USABC Help** form under the **Tools & Resources** section of the website.*

REQUEST FOR PROPOSAL INFORMATION (RFPI)

Interested parties should submit their proposal package using the link provided under the ***Active RFPIs*** section of the United States Advanced Battery Consortium LLC (USABC) website.

- Every proposal package submitted must include: the RFPI Proposal, Financial Documents, Additional Required Proposal Documents, and the signed RFPI Agreement, which must be executed without any modifications.
- No proposal shall be evaluated by the consortium without the proper execution of the RFPI Agreement.

The proposal should address the technical program information outlined in section 3 below as thoroughly as possible, within a maximum count of 25 pages. Additional required documentation as outlined in section 4 does not count towards the 25-page limit for the technical content of the RFPI and may be submitted as separate documents. All technical and financial material submitted to the USABC must be in the English language.

USABC does not expect to award subrecipient agreements on the sole basis of responses to this RFPI. All responses will be considered by representatives of the USABC Member Companies and other participants and will be ranked in order of merit based upon these evaluations. Applicant(s) with the most promising Phase 1 proposals will be contacted by USABC for additional documentation (Phase 2). Materials will be reviewed and submitted to DOE for a risk review which may lead to final selection and contractual agreements with USABC. USABC intends to award one or more development subrecipient agreements; however, nothing herein should be interpreted as a commitment to award a contract.

Notwithstanding applicant markings to the contrary, all information submitted in response to this USABC RFPI will be treated as non-confidential.

Funding for this RFPI is made available through Cooperative Agreement DE-EE0011268 with the U.S. Department of Energy (DOE). All terms and conditions of the cooperative agreement with the DOE that apply to USABC also apply to all subrecipient agreements awarded under this RFPI. This includes, but is not limited to, any subrecipient monitoring activity necessary for USABC to fulfill its prime recipient responsibilities. Award Terms and Conditions may be obtained under the ***Tools & Resources*** section of the USABC website.

Unless exempt from this requirement under 2 CFR 25.110, each proposal must contain the applicant's Unique Entity Identifier (UEI) or, acknowledgement the registration[i] process for a UEI has been started. The UEI is a 12-character alphanumeric ID assigned by the System for Award Management (SAM) to uniquely identify an entity.

a. Due to the high demand of UEI requests and SAM registrations, entity legal business name and address validations are taking longer than expected to process. Entities should start the UEI registration process through SAM.gov as soon as possible

[i] Information about registration procedures may be found in SAM.gov (currently at Entity Registration | SAM.gov). As a potential subrecipient, applicants are not required to complete a full registration in SAM.gov to obtain a UEI.

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REQUEST FOR PROPOSAL INFORMATION (RFPI)

1. USABC Business Objectives

The United States Advanced Battery Consortium (USABC) was formed in 1991 to sponsor development of advanced high-performance batteries for electrified vehicle applications. USABC has carried out numerous battery development programs, focusing on low-cost and long-life batteries for all types of electrified vehicles (EVs). USABC intends to engage development activity in the areas of advanced battery technologies for both light duty and potential use in medium/heavy duty vehicles, supply chain development of various components in battery cells, and battery recycling.

The goal of this RFPI is to identify developers with compelling battery technologies for EVs, and partner with them through focused, cost-shared development projects. These projects are typically multiple years in duration, with budgets totaling several million dollars. Non-federal cost share (cost share) percentages for each project will depend on the technology focus area as described in Section 2. The expected end of program output is testable hardware deliverables, most commonly battery cells, that will be independently tested at a national laboratory against USABC's future EV performance targets.

This USABC RFPI represents a unique opportunity for developers to leverage their resources with the automotive industry and the federal government. For the auto makers, this type of pre-competitive collaboration minimizes duplication of effort, increases the probability of downstream commercialization and adoption, and maximizes the return on private and government (public) funds.

Beyond the efficient and timely usage of resources, the USABC Member Companies recognize that successful commercialization of these technologies will only be completed when a supply base has been established for the selected components and subsystems. A major business objective of USABC is to enhance a domestic supply base as the development progresses. All developers submitting proposals will be required to demonstrate they have the potential to develop a commercially viable business, which can produce sufficient volumes to meet automotive requirements, and provide engineering and testing support to meet automotive implementation requirements in the U.S. Research organizations with current direct affiliations with businesses that derive a majority of their income from related product sales will also be considered.

As a pre-competitive research organization, USABC focuses its development efforts on technical readiness levels (TRL) ranging from TRL 4-TRL 7. Therefore, at the time of proposal submission all developers are required to have relevant demonstration hardware (e.g. battery cells, materials, equipment) and test results available for USABC inspection to verify technology feasibility. Testing performed in accordance with the USABC battery test procedures is preferred, but not mandatory. USABC test manuals can be found under the ***Manuals & Models*** section of the USABC website. Inspection and test of current technology baseline by USABC may be included in the selection process. Developers lacking relevant hardware and test results available for inspection by USABC at the time of submittal need not respond.

2. RFPI Technical Objectives

Research and development activities funded under this RFPI are intended to support development of inactive material technologies which enable battery cell designs with improved supply chain-related features and/or enhanced performance, as described below and in Appendix A. This RFPI aims to fund developers with expertise in electrochemical energy storage materials who possess innovative technologies for further development. If a material developer believes their proposal would be enhanced and more likely to meet the requirements in Appendix A through strategic collaboration with cell, process, or system developers, they are encouraged to submit a team-oriented proposal.

For this RFPI, areas of interest (AOIs) include conductive additives, binder, current collectors, and packaging materials. The proposed technologies should address cost of material, environmental impact, or processability / manufacturing concerns, with the expectation that the proposed material is competitive with (or exceeds) current state-of-the-art performance characteristics when incorporated in an appropriate cell design. Improvement in component/cell properties should be validated by appropriate physical measurement, cost model, or other evaluation methods explained in the proposal at both component and cell-level. Specific AOI goals are outlined as follows:

1) Conductive Additives:

Conductive additives play a significant role in enhancing electrical conductivity of the electrode and overall battery performance in terms of power, capacity and cycling capability. The proposed technology may address improvements over state-of-the-art Li-ion cell conductive additive design in electrical conductivity, energy density, electrochemical stability and impact on electrode mechanical / morphological properties.

2) Binder:

Binder plays a crucial role in maintaining the structural integrity of the electrode, ensuring the cohesion of active materials and providing adhesion to the current collector. The proposed technology may address improvements over state-of-the-art Li-ion cell binder design in adhesive and cohesive strength, elasticity, thermal / electrochemical stability, energy density, electrolyte wettability, ion conductivity and impact on electrode mechanical / morphological properties. Novel designs focused on environmental impact or manufacturing concerns are also encouraged.

3) Current Collectors:

Current collectors are critical in battery cell design for their role in electrode structural support and electrical connection with the external circuit. The proposed current collector technology should provide a significant improvement over the state-of-art current collector technology on improving the performance and robustness of the electrodes and cell. The USABC expects the proposed technology to improve current collector through the enhancement of the conductivity, corrosion resistance, and adhesion properties. Novel current collector designs that can increase electrode loading, improve the cell fast charge capability, or reduce manufacturing failure are also encouraged.

4) Packaging Materials:

The utility of packaging materials is foundational in the battery cell design and manufacturing process. From cost savings to overall functionality, the materials developed to enclose the cell's active materials must incorporate competitive characteristics, including mechanical strength/tolerances, gas permeability limits, thermal transfer, effective dielectric strength and must be non-reactive to the respective materials and components enclosed within the package. This AOI focuses on competitive and enabling technologies for pouch and prismatic can cell packaging in alignment with demonstration cells described in Section 3.4, with scalability to higher Ah cell sizes motivated by current commercialized EVs. Such scaling should also be in support of varying cell footprints, enclosure space formability, and deformation associated with swelling, gas formation, and associated mitigation thereof.

5) Other – Innovations & Enablers:

While the primary goal of this RFPI is supply chain development of state-of-the art inactive materials, developers are welcome to propose other innovations that represent a significant advancement in the field (but fall outside the scope of the above AOIs). This could include: inactive materials as enablers for advanced cell materials, designs or manufacturing processes (e.g. binder for Si-anode, materials for solvent-free electrode fabrication); multi-component integration (e.g. pouch cell design); functionalized component design (e.g. conductive binder).

Given the broad scope of the above AOIs, the proposal evaluation will include an iterative step, the Gap Chart Development Phase, whereby proposals of interest are identified and measurable targets (Gap Chart) are developed and agreed to by proposal teams and USABC prior to final program selection. All programs will require measurable targets/metrics. Example comparison chart templates are provided in Appendix A for reference. Although project goals may approach but not fully meet all of USABC's objectives, a credible plan aimed at achieving all USABC goals must be included. These goals pertain to development efforts that will result in the commercialization of the materials, cells or systems by 2028. The targets for inactive material components are not restricted to specific chemistries or formats. Materials relevant to battery cells utilizing liquid, solid-state, or polymer electrolytes that have the potential to meet USABC's goals will be considered viable candidates. Additionally, battery equipment manufacturers with novel technologies that enable advanced battery performance are encouraged to collaborate with battery cell suppliers to submit proposals.

Through its Cooperative Agreement with the US Department of Energy, USABC will distribute federal funds to selected developers. The estimated program funding for this RFPI is between $3 million and $5 million with project durations of approximately 2 to 3 years. The number of funded proposals is expected to range between 1 to 2, depending on the volume and merit of the proposals received, and the availability of funding. Proposals must include a cost share of either 20% or 50% of total project costs, based on the proposed technology and its maturity level.

The amount of funding passed through will be determined based on total project costs less any developer contributed cost share. Detailed guidance on the required developer cost share can be found below in Table 1 and under Section 3.5.

a. Selected developers will be liable for contributing their required cost share as a percentage of total allowable and allocable project costs on each invoice submitted throughout the life

of the project. USABC will only reimburse for actual costs incurred less any required developer cost share.

b. Allowable and allocable project costs (including cost share) are determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E – Cost Principles for all other non-federal entities.

Table 1: Developer cost share requirement for each technology

Technology	Developer Cost Share
Graphite/Nickel, Manganese, Cobalt (NMC)	50%
Graphite/Lithium, Iron, Phosphate (LFP)	50%
Enhance Currently Commercialized Technology	50%
Develop Recycling Technology	50%
Supply Chain R&D for Commercialized EV Battery Materials	50%
Cells with Silicon Majority Anodes	20%
Sodium Ion Cells	20%
Cells with Lithium Metal Anodes	20%
Solid State Cell Technology	20%

USABC intends to capitalize on the knowledge it has gained through the HEV, PHEV, and EV research and development activities it has previously engaged in. We expect developers to bring past experiences and lessons learned from their prior work to bear on developing energy storage technologies for this application.

3. Requested Technical Information

The proposal should address as thoroughly as possible the technical program information required below, within a maximum of 25 pages.

3.1. Company Background

To become fully familiar with your company(s), USABC needs information about your business. If your proposal is for a team, furnish the requested information for each company that makes up your team. Please provide the following information:

a. Company UEI number or acknowledgement you have started the application for UEI number.
b. Company structure, ownership, product lines, and customer base, including domestic and foreign facilities for research, development and production.
c. Prior experience successfully executing R&D programs, especially with USABC or DOE.
d. Please describe the company's experience (if any) in high volume manufacturing.
e. Describe the resources (headcount, expenses, and facilities) devoted to electrochemical energy storage technology development that are available for this project.
f. Confirm if you currently hold any licenses and/or patents or pending patent applications for advanced electrochemical energy storage technology and manufacturing processes. Please describe if there are any restrictions on licensing this technology to the Consortium.
g. Your company's Business Plan for areas related to electrochemical energy storage technology.

3.2. Technology Program Introduction

The proposed technology should provide a significant improvement over current technologies. These improvements can be in the area of performance or cost but must be demonstrated while maintaining or exceeding current state-of-the art parameters in the other areas.

A thorough technical review of each proposed technology is required prior to the award of any subrecipient agreement for development. Responses to the RFPI must provide a description for each of the following points.

a. Technical description of the proposed technology.
b. Summary of the present status of the proposed technology, with experimental data and test method used to acquire the data:
    i. Describe the advantage or advancement of your technology or approach, i.e., what distinguishes it from others.
    ii. Describe what risks and challenges remain for the proposed technology, and the strategies planned to address current gaps.
c. Explain constraints or limitations that will not meet USABC goals in this project (if any).

The proposals must be accompanied by a development time chart characterizing the following:

a. Length of time the technology has been under development by the developer;
b. Length of time remaining to full scale, vehicle-size prototype hardware availability; and
c. Timeline for commercialization, including any preproduction phases that may be planned.

3.3. Program Description

Explain how the technology would be developed to meet the USABC technical criteria during a development program with USABC including:

a. Clearly state program goals and objectives
b. Complete gap analysis comparing the technology with USABC targets found in the Appendix A and fill out the attributes of cell technology in Appendix B
    i. Compare current performance to the goals provided
    ii. Provide performance targets for each deliverable in relation to the goals
c. Program development plan:
    i. High level work breakdown structure including main tasks and any identified subtasks, including deliverables.
    ii. Describe barriers to be overcome and work proposed for all key tasks in the plan
    iii. Describe contingency plans for critical aspects of the project
d. Provide a cost estimate or model for the technology. Privately developed or publicly available models can be used. If a developer does not have another resource for this evaluation, you may use the USABC provided cost model found under the ***Manuals & Models*** section of the USABC website.

3.4. Development Timing Plan

The proposed technology program should include a timing chart and table of milestones and deliverables. Please be aware that a set of baseline cells, possibly one or more sets of midterm cells, and a final set of cells are normally required for testing in USABC projects, depending on project length. All cells will undergo testing and evaluation based on the performance gap chart outlined in the proposal. The same testing is done in parallel at the national labs and the developer. Accordingly, approximately 25-40 cells will need to be built at each of these points. If developers intend to submit pouch or prismatic cells, the cell capacity must be a minimum of 10Ah. For cylindrical cells, the capacity should be at least 2Ah.

An example timing chart is shown in Figure 1 including tasks and subtasks, testing timeline, as well as a cell build timeline with go/no go decision points. The program deliverables should be delineated in a table as shown in Table 2 to include specific deliverable descriptions, approximate cell capacity, quantity delivered, recipient, and delivery date. Quarterly and annual reports will be required, using a DOE specific format. Awardees will be required to meet with USABC quarterly, including hosting USABC team members at their facility twice a year. The other two quarterly reviews may be held in-person at the USCAR office in Southfield, MI or virtually.

Figure 1: Example of Gantt Chart (for illustrative purpose only)

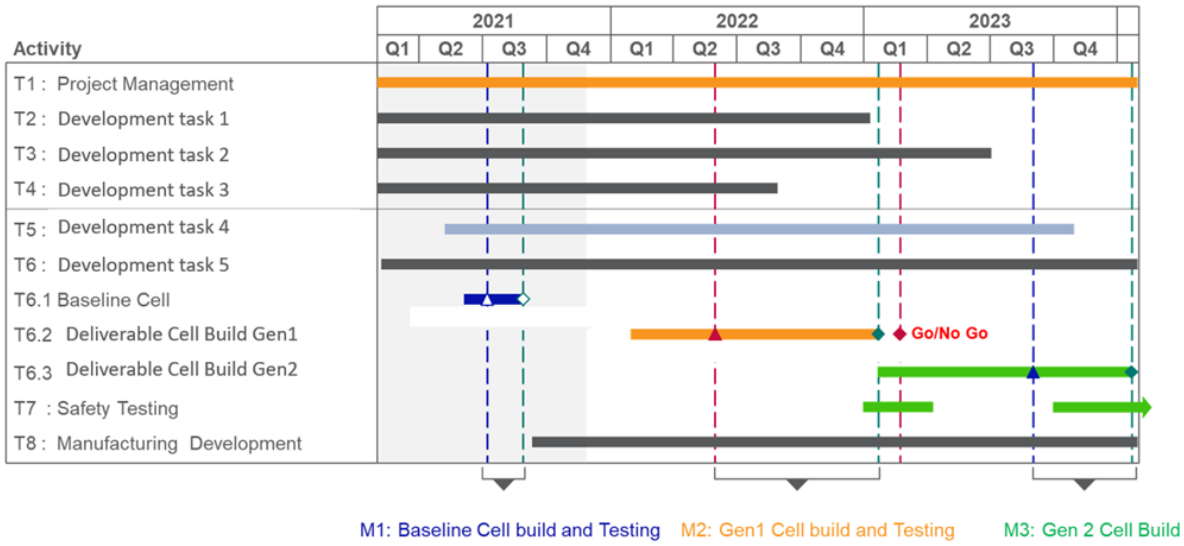

Table 2: Example Program Deliverables

Deliverables	Description	Capacity (approx.)	Quantity Delivered	Recipient	Delivery Date (months after project start)
Baseline Cells	Baseline description	XX Ah	25	tbd	Month 7
Gen 1 Cells	Cells with Gen 1	YY Ah	25	tbd	Month 18
Gen 2 Final Cells	Cells with Gen 2	ZZ Ah	25	tbd	Month 35

Cost Model	Cost Model for Final Deliverable Cells			USABC	Month 35
Final Report	Project Final Report			USABC	Month 35

3.5. Program Cost, Budget and Cost Sharing

a. Provide a project cost table broken down by task, which should be related to milestones and deliverables as described in Section 3.4, as shown in Table 3; if subcontractors are included in the proposal the costs incurred by the subcontractor needs to be broken down as well[ii].
   i. For budgeting purposes, be aware that a set of baseline cells, possibly one or more sets of midterm cells, and a final set of cells are normally required for testing in USABC projects, depending on project length. Typically, USABC encourages cell deliverables roughly annually during the course of a program. The same testing is done in parallel at the national labs and the developer. Accordingly, approximately 25-40 cell will need to be built at each of these points.
   ii. Please budget for internal testing for these cells, see Appendix C for representative test plan. Any testing done by USABC of demonstration hardware will be done in accordance with the USABC battery test procedures. These procedures can be found in the relevant test manuals under the ***Manuals & Models*** section of the USABC website. Validation testing of deliverables by USABC will be completed at a national lab at no additional cost to you.
b. Describe proposed cost share; use Table 1 as a guideline for estimated cost share requirements. Please note, Table 1 is just a reference for cost share. Each project will be judged on a case-by-case basis. If you are uncertain about the required cost share for your RFPI budget justification, we advise using a conservative cost share of 50%. Furthermore, the cost share percentage for all foreign entities is 50% regardless of technology.
c. This RFPI does not provide funding for capital expenses.
d. It is the sense of the Congress that, to the greatest extent practicable, all products purchased with funds made available under this award should be American-made.

[ii] Note: Each proposals will be required to complete and submit the EERE T 540.132 01 Budget Justification form. Refer to Section 4.10.

Table 3: Representative yearly budget by task, showing cost share by entity

Tasks		Yr 1/Ph I	Yr 2/Ph II	Yr 3/Ph III	Total
Task 1	Program Management	$ 69,289	$ 76,475	$ 57,110	$ 202,875
Task 2	Development task 1	$ 138,577	$ 152,951	$ 114,221	$ 405,749
Task 3	Development task 2	$ 346,443	$ 382,377	$ 285,552	$ 1,014,373
Task 4	Development task 3	$ 277,155	$ 305,902	$ 228,442	$ 811,498
Task 5	Development task 4	$ 138,577	$ 152,951	$ 114,221	$ 405,749
Task 6	Development task 5	$ 277,155	$ 305,902	$ 228,442	$ 811,498
Task 7	Safety	$ 69,289	$ 76,475	$ 57,110	$ 202,875
Task 8	Manufacturing Development	$ 69,289	$ 76,475	$ 57,110	$ 202,875
	Total	$ 1,385,774	$ 1,529,508	$ 1,142,209	$ 4,057,491
	Federal Share	$ 692,886.96	$ 764,754.00	$ 571,104.50	$ 2,028,745
	Developer Share	$ 692,886.96	$ 764,754.00	$ 571,104.50	$ 2,028,745

3.6. Program Management

Provide a list of key personnel, in particular program manager, percentage of time allocated to the project, and a short bio (less than 100 words) for each key contributor.

4. Additional RFPI Proposal Documents

Additional documentation that must be submitted with the RFPI package is listed below. The additional documents do not count towards the 25 pages limit for the technical content of the RFPI. All forms are available for download under the ***Forms*** section of the USABC website.

a. **Financial Documents (Section 4.1)**
   Combine all required financial documents into a single PDF file.
b. **Supporting Documents (Sections 4.2-4.9)**
   Combine all additional required documents from Sections 4.2 through 4.9 into a separate single PDF file.
c. **Budget Justification (Section 4.10)**
   Complete the Budget Justification form and submit it as an Excel (.xlsx) file.

4.1. Financial Documents

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a. For publicly owned entities, submit the last 3 years of Annual, 10k, and 10Q Reports.
b. For privately held entities, submit the last 3 years of Balance Sheets, Income Statements, and a Sources & Uses of Funds Statement.

4.2. Current Government Funding Disclosure - Potentially Duplicative Funding Notice Form

Each recipient and subrecipient covered under this RFPI that has other active awards of federal funds is required to disclose whether project funds (i.e., recipient cost share and federal funds) from any of those other federal awards have been, are being, or are to be used (in whole or in part) for one or more of the identical cost items under this RFPI.

a. When the recipient or subrecipient has federal funds from active awards that have been, are being, or are to be used for one or more of the identical cost items under this RFPI, the recipient or subrecipient must submit a Potentially Duplicative Funding Notice Form.

4.3. Cooperative Relationships – Other Collaborating Organizations Form

Each recipient and subrecipient covered under this RFPI must identify any additional resources that may be required beyond those of the contractor to achieve the proposed program goals. This includes the development of cooperative relationships between component developers, component manufacturers, and subsystem integrators. Other cooperative relationships could involve Universities for materials research, test facility development, test and analytical procedures, or other techniques available only at specialized locations.

a. The recipient or subrecipient must submit an Other Collaborating Organizations Form.
b. All work performed under this award must be performed in the United States. In limited circumstances, the Grants Officer may approve the recipient to perform a portion of the work outside the United States. To request a waiver of this requirement, an entity must submit a Waiver for Work Outside the U.S. form.

4.4. DOE Current and Pending Support Form

Current and Pending Support allows for the identification of potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support.

As part of the proposal process, a Current and Pending Support Disclosures form must be submitted for all covered individuals at the applicant and subrecipient level and include the document(s) with their Full Application.

- The individual Current and Pending Support Disclosures submitted must include the exact certification statement provided and must be signed and dated to be considered.
- DOE reserves the right to request additional information or documentation as part of its Risk Reviews.

a. Current and Pending Support Submission Requirements

As part of the proposal, the Principal Investigator or Lead Project Manager and all 'covered individuals', as defined below, at the applicant and subrecipient level must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses.

- All connections with Malign Foreign Talent Recruitment Programs[iii] must be identified in the current and pending support submission.

b. Definitions

For purposes of this requirement, the following definitions are applicable:

Current and Pending Support

a. All resources made available, or expected to be made available, to an individual in support of the individual's RD&D efforts, regardless of
    i. whether the source is foreign or domestic;

[iii] As defined in P.L. 117-167, Section 106384(4)

ii. whether the resource is made available through the entity applying for an award or directly to the individual; or
iii. whether the resource has monetary value; and

b. includes in-kind contributions requiring a commitment of time and directly supporting the individual's RD&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students.

This term has the same meaning as the term "Other Support" as applied to researchers in NSPM-33: For researchers, Other Support includes all resources made available to a researcher in support of and/or related to all of their professional RD&D efforts, including resources provided directly to the individual or through the organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This includes resources and/or financial support from all foreign and domestic entities, including but not limited to gifts provided with terms or conditions, financial support for laboratory personnel, and participation of student and visiting researchers supported by other sources of funding.

Covered Individuals

Covered Individual means an individual who:

a. contributes in a substantive, meaningful way to the development or execution of the scope of work of a project proposed for funding by DOE, and
b. is designated as a covered individual by DOE.

DOE designates as covered individuals any principal investigator (PI); project director (PD); co-principal investigator (Co-PI); co-project director (Co-PD); project manager; and any individual regardless of title that is functionally performing as a PI, PD, Co-PI, Co-PD, or project manager. Status as a consultant, graduate (master's or PhD) student, or postdoctoral associate does not automatically disqualify a person from being designated as a "covered individual" if they meet the definition in (a) above.

The applicant is responsible for assessing the applicability of (a) above, against each person listed in the proposal. Further, the applicant is responsible for identifying any such individual for designation as a covered individual.

The applicant's submission of a current and pending support disclosure and/or biosketch/resume for a particular person serves as an acknowledgement that DOE designates that person as a covered individual.

DOE may further designate covered individuals during award negotiations or the award period of performance.

c. Disclosure Requirements

The information may be provided using the Covered Individual: Current and Pending Support Form available on the USABC website or the approved common disclosure format available at Common Form for Current and Pending (Other) Support (nsf.gov). Regardless of the format used, the individual must include a signature, date (Certified electronic signature or "wet" signature), and a certification statement using the language included in the table below.

Information Required for Each Activity	
Sponsor of the Activity	The sponsor of the activity or the source of funding.
Award Number	The federal award number or any other identifying number.
Award Title	If the title of the award or activity is not descriptive, add a brief description of the research being performed that would identify any overlaps or synergies with the proposed research
Total Cost or Value	The total cost or value of the award or activity, including direct and indirect costs and cost share. For pending proposals, provide the total amount of requested funding
Award Period	The "Start Date" through "End Date".
Person-months	The person-months of effort per year dedicated to the award or activity
Description	To identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support.
Foreign Government Sponsorship	Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided on request to either the applicant institution or DOE. Supporting documents of any identified source of support must be provided to DOE on request, including certified translations of any document.
Digital Persistent Identifier (e.g., ORCID iD)	For R&D RFPs only, provide an ORCID iD .
Certification Statement	Covered individuals must provide a separate certification statement listing the required information above regarding current and pending support. Each individual must sign and date their respective certification statement via certified electronic signature or “wet” signature: *I, [Full Name and Title], understand that I have been designated as a covered individual by the Federal funding agency.* *I certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete, and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil, or administrative penalties for fraud, false statements, false claims, or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. §§ 3729-3733 and 3801-3812). I further understand and agree that (1) the statements and representations*

	made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above. *I also certify that, at the time of submission, I am not a party in a malign foreign talent recruitment program.* *I further certify that within the past 12 months I have completed one of the following: (1) research security training meeting the guidelines in SEC. 10634(b) of 42 USC 19234, or (2) all of the NSF training modules located https://new.nsf.gov/research-security/training.*

4.5. Transparency of Foreign Connections Form

Each recipient and subrecipient covered by the RFPI must disclose their foreign relationships as required under the award terms and conditions. These relationships may include connections with foreign countries of risk.

The recipient and each subrecipient covered by the RFPI proposal must complete a Transparency of Foreign Disclosures form. The form must be completed in its entirety, even if the applicant does not have any foreign relationships and submit the document with their Full Application.

a. **Foreign Entity Participation Requirements**
   If a proposal team cannot find a suitable domestic partner, foreign entities, including U.S. operations with a foreign parent company, may participate in USABC projects; however, their participation is subject to approval by the DOE. Therefore, any foreign entity interested who is a member of a project team applying to this RFP should contact USABC as soon as possible. Applicants should prioritize partnerships that will bolster US supply chain security for the industrial materials that the Institute focuses on.

4.6. Location(s) of Work

Each recipient and subrecipient identified in the RFPI proposal must submit an EERE Location(s) of Work form. The form must disclose all physical locations where proposed project activities will take place.

a. All work performed under this award must be performed in the United States. In limited circumstances, the Grants Officer may approve the recipient to perform a portion of the work outside the United States. To request a waiver of this requirement, a Waiver for Work Outside the U.S. form must be submitted with the full application.

4.7. Environmental Questionnaire

Each recipient and subrecipient identified in the RFPI proposal must complete the DOE F 540.30 Environmental Questionnaire form. The form helps identify any potential environmental impacts of the proposed project.

a. Complete the form for the entire project, including all work to be performed by the Recipient, its subrecipients and contractors (if known), including any work outside of the United States.
b. Answer all questions as thoroughly as possible by entering either a relevant response or "None" if a question is not applicable.

4.8. Cost Share Commitment Letter

Each recipient and subrecipient identified in the RFPI proposal who intend to provide cost share must submit a Cost Share Commitment Letter confirming their commitment to contribute the resources necessary to fulfill the proposed cost share as detailed in the Budget Justification.

4.9. Disclosure of Lobbying Activities

Federal funds may not be used to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters. The recipient and each subrecipient are required to complete a Disclosure of Lobbying Activities form. This form ensures that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with their application:

- An officer or employee of any federal agency;
- A Member of Congress;
- An officer or employee of Congress; or
- An employee of a Member of Congress

4.10. Budget Justification

Each recipient and subrecipient identified in the RFPI proposal must submit an EERE T 540.132 01 Budget Justification form with their full application. The form itemizes the yearly budget by task, as outlined in Section 3.5, across nine budget categories and identifies the sources of the non-federal cost share.

a. Follow the instructions provided on each worksheet in the workbook file.
b. Cost Category Tabs (a. through i.) - break down and justify cost by specific categories. There is one tab for each category of cost.
c. Cost Share Tab (j.) - identifies sources and amounts of the project contributions designated as Cost Share.
d. SF-424A Cost Categories Tab - automatically populated based on input entered in the other workbook tabs. Once all entries are completed, the totals should align with the yearly budget by task.

5. Post Selection Information

Additional award requirements to consider when preparing your proposal are outlined below. Note that these are not exhaustive. All the terms and conditions of the cooperative agreement with the DOE that apply to USABC, also apply to any technical project agreement selected for a subaward. The redacted Terms and Conditions are available under the ***Tools & Resources*** section of the USABC website.

5.1. Export Control Compliance

The Government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the United States to protect national security, foreign policy, and economic interests without imposing undue regulatory burdens on legitimate

international trade. There is a network of federal agencies and regulations that govern exports that are collectively referred to as “Export Controls”.

The applicant will be required to acknowledge and are responsible for ensuring compliance with all applicable United States Export Control laws and regulations relating to any work performed under a resulting award. The applicant will also be required to acknowledge that they must immediately report to DOE any export control violations related to the project funded under the DOE award, at the recipient or subrecipient level, and provide the corrective action(s) to prevent future violations.

5.2. Prohibition on Certain Telecommunications and Video Surveillance Equipment or Services

Applicants and subrecipient(s) are prohibited from obligating or expending project funds (federal funds and recipient cost share) to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Section 889 of Public Law 115-232, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

5.3. Government Rights in Subject Inventions

Where prime recipients and subrecipients retain title to subject inventions, the Government retains certain rights.

a. The Government retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. any subject invention throughout the world. This license extends to contractors doing work on behalf of the Government.

The Government retains march-in rights with respect to all subject inventions. Through “march-in rights,” the Government may require a prime recipient or subrecipient who has elected to retain title to a subject invention (or their assignees or exclusive licensees), to grant a license for use of the invention to a third party. In addition, the Government may grant licenses for use of the subject invention when a prime recipient, subrecipient, or their assignees and exclusive licensees refuse to do so.

- For additional requirements pertaining to intellectual property acquired under this award, consult the “Attachment 4 - IP Provisions Final” document that is available under the ***Tools & Resources*** section of the USABC website.

5.4. Annual Independent Audits (Single Audit or Compliance Audit)

The applicant and subrecipient(s) must comply with the annual independent audit requirements.

a. If a for-profit entity is a prime recipient and has expended $1,000,000 or more of DOE awards during the entity's fiscal year, an annual compliance audit performed by an independent auditor is required.
b. If an educational institution, non-profit organization, or state/local government is a prime recipient or subrecipient and has expended $1,000,000 or more of federal awards during the non-federal entity's fiscal year, then a Single or Program-Specific Audit is required.

5.5. List of Project Participants

The recipient and subrecipient must submit and maintain a listing each person who is expected to work at least one person month per year on the project regardless of the source of compensation (a person month equals approximately 160 hours of effort).

a. Detailed information for each project participant includes:
    i. Name
    ii. Organization
    iii. Job Title
    iv. Role in the project
    v. Start and end date (month and year) working on the project
    vi. State, U.S. territory, and/or country of resident
    vii. Whether this person collaborated with an individual or entity located in a foreign country in connection with the scope of this award
    viii. If yes to vii. above, whether the person traveled to a foreign country as part of that collaboration, and, if so, where and what the duration of stay was.
b. All project participants are subject to a DOE risk review. USABC and DOE reserve the right to ask for disclosures on project participants not defined as Covered Individuals. The recipient need not submit any additional information on non-Covered Individuals, unless requested. The volume and type of information collected may depend on various factors associated with the award.
c. Any national from a Foreign Country of Risk[iv] is prohibited from accessing any information developed under the DOE-funded project that is not publicly available (including technical data, subject inventions, or any other information that is not publicly available or required to be made public under applicable law or regulation).

5.6. Performance Monitoring (Technical and Compliance)

USABC will exercise normal oversight of the project activities performed under this award. Oversight activities may include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to address deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

DOE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. substantial involvement includes the following:

- DOE shares responsibility with the recipient for the management, control, direction, and performance of the project;
- DOE may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities;
- DOE may redirect or discontinue funding the project based on the outcome of DOE's evaluation of the project at the Go/No Go decision point;
- DOE participates in major project decision-making processes.

[iv] DOE has designated the following countries as Foreign Countries of Risk: China, Russia, Iran, North Korea, and Belarus. This list is subject to change.

a. Review Meetings

Selected applicants are required to participate in periodic review meetings, which include the DOE. The meetings enable USABC to assess the work performed and determine whether the recipient has timely achieved the technical objectives and deliverables.

i. Selected applicants are required to participate in two quarterly review meetings that may be held at the USCAR office in Southfield, MI or virtually. The quarterly review meetings are alternated with the Site Visits.

b. Site Visits

USABC's and DOE's authorized representatives have the right to make site visits and conduct recipient Administrative Organizational Reviews to review the project and management control systems and to provide technical assistance, as appropriate. The applicant must provide and must require its subrecipients and contractors to provide reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the authorized representatives in the performance of their duties. Reasonable efforts will be made to ensure these site visits do not interfere with or unduly delay project work.

i. Selected applicants are required to host USABC team members at their facility twice a year. Site visits are alternated with the quarterly Review Meetings.

c. Subrecipient Monitoring

From time to time, USABC may request additional information as part of its award oversight and compliance monitoring. This may include updated information about personnel, work locations, collaborating organizations, financial or other information. The selected applicant agrees to support all inquiries by providing in a timely manner the requested information.

5.7. Reporting

Selected applicants are required to comply with the reporting requirements of the award.

a. Technical Reports

i. Quarterly Technical Reports - Selected applicants are required to submit to USABC quarterly technical reports that document the entirety of work performed including the accomplishments, impact, changes / problems, and budgetary information among other required elements.

ii. DOE Annual Report – DOE may request the selected applicant to submit a technical summary report in support of their fiscal year progress report.

b. Dissemination of Scientific and Technical Information

Selected applicants are expected to report any Scientific and Technical Information (STI) generated under this award and submitted to DOE via the Office of Scientific and Technical Information's Energy Link (E-Link) system.

a. The type of STI expected to be generated under this award includes Accepted Manuscripts of Journal Articles and Conference Products; however, other STI generated must also be reported.

c. Intellectual Property Reporting

The selected applicant and subrecipient(s) must complete the necessary intellectual property reports in iEdison[v] when applicable. This includes disclosing a subject invention, its anticipated uses and sales, and, if applicable, electing (or declining) to retain title to the invention. When ownership is retained, an annual Invention Utilization Reports must be filed for each invention.

d. Closeout Reporting

The selected applicant agrees to complete the necessary administrative actions required at the conclusion of its statement of work. This includes submitting to USABC a Final Technical Report, Invention Certification, Tangible Personal Property Report, and STI Certification.

- All financial, performance, and other reports required must be submitted no later than 90 calendar days after the conclusion of the period of performance.

[v] Refer to the iEdison Organization User Guide for complete reporting compliance requirements iEdison Organization User Guide | NIST

6. RFPI Agreement

Notwithstanding any markings to the contrary, all information submitted in response to this RFPI shall be treated as non-confidential. By signing this RFPI, any proposing party agrees to be bound by the terms and conditions of DOE Cooperative Agreement DE-EE0011268. Any proposing party(ies) further agree that proposing entities and USABC shall, in addition to the terms of the Cooperative Agreement, be bound only according to the terms of any Subrecipient Agreement mutually agreed upon by the parties following selection.

PROPOSAL TITLE:

AGREED BY:

Signature of Authorized Certifying Official:

Typed or Printed Name and Title of Authorized Certifying Official:

Organization Name:

Date Submitted:

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*To execute the RFPI Agreement, please sign and date the completed agreement without any modifications, and submit a PDF copy along with your full application using the submission link provided under the **Active RFPIs** section of the USABC website.*

Reminder: No proposal shall be evaluated by the consortium without the proper execution of the RFPI Agreement.

Appendix A. Inactive Material Component Comparison Chart

Example charts for benchmark analysis on proposed technology (*to be aligned on with developer):*

1) Conductive Additive Properties Comparison Chart

Parameter	Unit	Benchmark Baseline	Proposed Technology	Comments:
Cost @ yearly production volume	$/kg $/m^2			**Goal:** Please specify capable annual production volume
Density	g/cm^3			**Recommended Method:** *Developer - Please specify test method to be used*
Loading Requirement in functional electrode (wt-%)	%			**Goal**: Requirement should reflect comparable level of electrode performance if possible (benchmark vs. proposal)
Surface Area	m2/g			**Recommended Method:** ISO 9277 - "Determination of the specific surface area of solids by gas adsorption — BET method."
Electrical Conductivity	S/m			**Recommended Method:** ASTM B193-16 - "Standard Test Method for Resistivity of Electrical Conductor Materials."
Electrochemical Stability Window	V vs Li/Li+			**Recommended Method:** *Developer - Please specify test method to be used.* E.g. Linear or Cyclic Voltammetry (or comparable procedure). **Goal:** Material interaction with traditional lithium-ion battery cell electrolyte, solvents, etc.
Thermal Stability Window	°C			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Differential Scanning Calorimetry (DSC), Thermogravimetric Analysis (TGA) (or comparable procedures)

2) Binder Properties Comparison Chart

Parameter	Unit	Benchmark Baseline	Proposed Technology	Comments:
Cost @ yearly production volume	$/kg $/m^2			**Goal:** Please specify capable annual production volume
Density	g/cm^3			**Recommended Method:** *Developer - Please specify test method to be used*
Loading Requirement in functional electrode (wt-%)	%			**Goal**: Requirement should reflect comparable level of electrode performance if possible (benchmark vs. proposal)
Binder Composition (primary substrates)	-			**Goal:** specify primary material components (e.g. PVDF, biomaterials, etc.)
Compatible Solvents	-			**Goal**: specify solvents as indication for processing/fabrication requirements (e.g. H2O-based, NMP, etc.)
Adhesive Strength	kN/m			**Recommended Method:** ASTM D903-98(2017) - "Standard Test Method for Peel or Stripping Strength of Adhesive Bonds." **Goal:** characterize Binder-Current Collector interaction
Cohesive Strength	kN/m			**Recommended Method:** *Developer - Please specify test method to be used* **Goal**: characterize Binder-Particle interaction
Elasticity	kPa			**Recommended Method:** ASTM E111-04(2010) - "Standard Test Method for Young's Modulus, Tangent Modulus, and Chord Modulus."

Porosity	%			**Recommended Method:** ISO 15901-1:2016 – "Evaluation of pore size distribution and porosity of solid materials by mercury porosimetry and gas adsorption."
Electrochemical Stability Window	V vs Li/Li+			**Recommended Method:** *Developer - Please specify test method to be used.* E.g. Linear or Cyclic Voltammetry (or comparable procedure). **Goal:** Material interaction with traditional lithium-ion battery cell electrolyte, solvents, etc.
Thermal Stability Window	°C			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Thermogravimetric Analysis (TGA), Differential Scanning Calorimetry (DSC) (or comparable procedures)
Electrolyte Wettability	Dyne/cm			**Recommended Method:** ASTM D8597- "Standard Test Method for Surface Wettability of Coatings, Substrates, and Pigments by Contact Angle Measurement Using Portable Goniometers"
Ion Conductivity	S/m			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Electrochemical Impedance Spectroscopy (EIS)

3) Current Collectors Properties Comparison Chart

Parameter	**Unit**	**Benchmark Baseline**	**Proposed Technology**	**Comments:**
Cost @ yearly production volume	$/kg $/m^2			**Goal:** Specify capable annual production volume
Purity	%			**Recommended Method:** *Developer - Please specify test method to be used* E.g. ICP-MS
Total thickness	µm			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Micrometer, caliper
Area specific weight	g/m2			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Analytical balance
Width	mm			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Micrometer, caliper
Tensile strength	kgf/mm2			**Recommended Method:** ASTM E345-16 – "Standard Test Methods of Tension Testing for Metallic Foil"
Elongation	%			**Recommended Method:** ASTM E345-16 – "Standard Test Methods of Tension Testing for Metallic Foil"
Electrical Conductivity (in-plane)	S/m			**Recommended Method:** ASTM B193-16 - "Standard Test Method for Resistivity of Electrical Conductor Materials."
Surface roughness (Rz)	µm			**Recommended Method:** ISO 5436-1- "Geometrical product specifications (GPS) — Surface texture: Profile Method; Measurement standards – Part 1: Material measures"
Surface tension (wettability)	Dyne/cm			**Recommended Method:** ASTM D8597- "Standard Test Method for Surface Wettability of Coatings, Substrates, and Pigments by Contact Angle Measurement Using Portable Goniometers"
Anti-oxidization	-			**Recommended Method:** *Developer - Please specify test method to be used* E.g. Visual check
Electrochemical stability	V vs Li/Li+			**Recommended Method:** *Developer - Please specify test method to be used.* E.g. Linear or Cyclic Voltammetry (or comparable procedure). **Goal:** Material interaction with traditional lithium-ion battery cell electrolyte, solvents, etc.

4) Packaging Materials Properties Comparison Chart

Parameter	Unit	Benchmark Baseline	Proposed Technology	Comments:
Cost @ yearly production volume	$/kg $/m^2			**Goal:** Specify capable annual production volume
Density	g/cm^3			**Recommended Method:** *Developer - Please specify test method to be used*
Mechanical Strength	MPa			**Recommended Method:** ASTM D3039 – "Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials" **Goal:** Quantification of orthotropic materials properties (Tensile, Yield, etc.)
Thermal Conductivity	W/(m-K)			**Recommended Method:** ASTM D5470 – "Standard Test Method for Thermal Transmission Properties of Thermally Conductive Electrical Insulation Materials" **Goal:** Quantification of orthotropic materials properties
Formability / Moldability Max forming depth Max formed edge radius	mm			**Recommended Method:** *Developer - Please specify test method to be used* **Goal:** Quantification of material depth and edge shape resolution
Reactivity	non-dimensional			**Recommended Method:** *Developer - Please specify test method to be used* **Goal:** Material interaction with traditional lithium-ion battery cell electrolyte, solvents, etc.
Gas permeation / permeability	cc/m²-day			**Recommended Method:** ASTM D1434 – "Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting" **Goal:** Quantification of material gas permeability characteristics
Seal quality	-			**Recommended Method:** *Developer - Please specify test method to be used* **Goal**: Observation of packaging seal locations (e.g. edges, external tab interface, etc.) and durability through cell life
Dielelectric strength/breakdown voltage	V/cm			**Recommended Method**: ASTM D149 – "Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies" **Goal**: Quantification of material through-thickness dielectric characteristics
Thermal Propagation / Flammability	mm/minute			**Recommended Method**: ASTM D635 – "Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position" **Goal**: Observation of packaging material flammability characteristics

For reference: USABC EV Cell performance targets

USABC Goals for Advanced Batteries for Light Duty Electric Vehicles (EVs)

End of Life Characteristics at 30°C	Units	EV Cell Level
Peak Discharge Power Density 30 s Pulse	W/L	1500
Peak Specific Discharge Power, 30 s Pulse	W/kg	700
Peak Specific Regen Power, 10 s Pulse	W/kg	300
Useable Energy (U.E.) Density[1]	Wh/L	700
Useable Specific Energy	Wh/kg	300
Calendar Life	Years	15
DST Cycle Life	Cycles	1000 (100% Fast Charge)
Cost @ 250k Units	$/kWh	60[2]
Fast Charge at 30°C (80% U.E. Target)	Minutes	10 min
Fast Charge at -10°C (80% U.E. Target)	Minutes	30 min
Unassisted Operating at -20°C	%	>70% Specific Useable Energy
Operating Environment	°C	-30° to +65°
Survival Temperature Range, 24 Hr.	°C	-40° to +75°
Minimum operating Voltage	V	>0.55Vmax
Maximum Self-discharge	%/month	<1

1. The definition of useable energy (U.E.) can be found in the “USABC Battery Test Manual for Electric vehicles” on USABC website.
2. The cost calculation should be based on US production, meeting IRA requirements.
3. The definition of useable energy (U.E.) target can be found in the “USABC Battery Test Manual for Electric vehicles” on USABC website.

Appendix B. Attributes of Cell Technology

Cell Level Attributes (supplied by developer)	Units	Current State (baseline) (BOL)	End of Program Target (BOL)
Cell Capacity (C/3 Rate discharge)	Ah		
Cell Volume (without terminals/tabs)	Liter		
Cell Mass	kg		
V_{min} continuous, V_{max} continuous (0 and 100% SOC)	V, V		
V_{min} pulse, V_{max} pulse (10 sec pulses)	V, V		
$V_{nominal}$ (Wh/Ah)	V		
Cell format (cylindrical/prismatic)	can/pouch/etc.		
Cell dimensions: (height x width x thickness)	mm x mm x mm		

Appendix C. Testing Plan

This testing is subject to change and based on the nature of the program, an example of a testing plan can be found in the table below.

Example of a testing plan:

	Performance Testing	Timing	Test Location	Cell Count
Gen 1 Cells	Capacity and Energy	Month 17-18	National Labs & Developer	3
	HPPC	Month 17-18	National Labs & Developer	
	Peak Power Test	Month 17-18	National Labs & Developer	
	Discharge Rate Capability	Month 17-18	National Labs & Developer	
	Cold Crank	Month 17-18	National Labs & Developer	
	Cycling	Month 17-23	National Labs & Developer	9
	Calendar Life	Month 17-23	National Labs & Developer	9
	Abuse Test	Month 17-23	National Labs	15
	Quantity of Cells Delivered to USABC			**36**

Appendix D. RFPI Checklist

Applicants should note that the RFPI process involves multiple steps, including two phases of document submission. All applicants are required to submit the **Phase 1** documents as part of their complete proposal. Applicants with the most promising proposals may be encouraged to submit the additional **Phase 2** documents.

a. **Phase 1: Initial RFPI Proposal Documents**
   The documents listed under this phase **must be submitted** with the applicant's initial RFPI Proposal.
b. **Phase 2: Final Application Documents**
c. The documents listed under this phase **may be requested** by USABC from selected applicants as part of the process for establishing a potential subrecipient agreement.

*All forms are available for download under the **Forms** section of the USABC website.*

Phase 1: Initial RFPI Proposal Documents	
3.1-3.6 RFPI Proposal Submission	Required
4.1 Financial Documents / Statements (three years)	Required
4.2 Potentially Duplicative Funding Notice Form	Conditional
4.3 Other Collaborating Organizations Form	Conditional
4.3.b. Waiver for Work Outside the U.S. Note a	Conditional
4.4 Covered Individual: Current and Pending Support Form(s) with Biographical Sketch/Resume	Required
4.5 Transparency of Foreign Connections Form Note a	Required
4.6 EERE Location(s) of Work Template Note a	Required
4.7 Environmental Questionnaire Note a	Required
4.8 Cost Share Commitment Letter Note a	Required
4.9 Disclosure of Lobbying Activities	Required
4.10 EERE T 540.132 01 Budget Justification Note a	Required
6. Signed RFPI Agreement	Required

Phase 2: Final Application Documents Note b	
U.S. DOE Financial Assistance Certifications and Assurances	Required
Assurances – Non-Construction Programs	Required
Pre-award Information Sheet	Required
Indirect Rate Submission / Indirect Rate Proposal	Required
List of Project Participants	Required

Note a *Submit document for any planned 2nd Tier subrecipient when applicable.*
Note b *This does not include requests by USABC or DOE for additional documentation, information, or update to previously submitted materials that may be requested to support the DOE Risk Review, Due Diligence, or other contractual compliance processes.*