

NY-BEST Bench to Prototype Solicitation Program Opportunity Notice (PON) 2458 \$8,325,000 Available

PROPOSAL DUE DATES:

Round 1: May 21, 2012 Round 4: June 2, 2014 Round 2: Nov 27, 2012 Round 5: Dec 15, 2014 Round 3: Sep 16, 2013 Round 6: June 1, 2015

Received by 5:00 pm Eastern Time*

All, some, or none, of the available funds could be awarded in any one round

Program Summary: This New York State Energy Research and Development Authority (NYSERDA) Program Opportunity Notice (PON) 2458 seeks proposals to transition new energy storage technologies with proven technical feasibility to a working prototype. Eligible technologies are energy storage technologies that utilize electrical or electrochemical processes and include batteries, ultracapacitors, fuel cells and related components that integrate these technologies into complete systems. This solicitation is intended to advance promising energy storage technologies with already proven technical feasibility to a working prototype. Technologies should already have passed TRL 3 or higher, and proposed work should help transition the technology toward commercialization. Proposals will be evaluated on the basis of addressing market needs, the potential of the proposed solution, and benefits to New York State.

Funding: Six solicitation rounds are scheduled and total available funding is \$8,325,000. All, some, or none, of the available funds may be awarded in any round. The maximum project award is \$250,000 in NYSERDA funds, which must be matched by at least an equal amount through cash and/or in-kind co-funding, so that NYSERDA support is no more than 50 percent of the total project cost. Approximately \$3,295,000 of the \$8,325,000 remains available after the conclusion of round 3 of this solicitation (note: the amount remaining may increase if previous awards are not contracted or projects are terminated).

Eligibility: The funding provided through this solicitation resulted from Clean Air Interstate Rule proceeds that were identified to help establish the New York Battery and Energy Storage Technology (NY-BEST) TM Consortium. NY-BEST was organized to help position New York as a global leader in energy storage technology for heavy-duty transportation, electric grid, and other storage applications. This solicitation is open to any member of NY-BEST. Membership in NY-BEST is open to any organization with an interest in advancing the energy storage industry in New York State. Information on becoming a member, included required dues, can be found at www.ny-BEST.org. In order to be eligible to submit a proposal, an applicant must be a paid member of NY-BEST by the proposal due date under which it is submitting an application and remain a member during the term of an award.

Proposal Submission: Proposers must submit two signed copies of the proposal with a completed and signed Proposal Checklist attached and a CD which contains a scanned copy or pdf of the entire proposal as assembled in the paper copy, as well as editable copies of the work plan and budget to assist with review and contract development. Proposals must be clearly labeled and submitted to:

Roseanne Viscusi, PON 2458 NYS Energy Research and Development Authority 17 Columbia Circle Albany, NY 12203-6399 **Questions:** If you have technical questions concerning this solicitation, contact the individuals listed below by e-mail or by phoning (518) 862-1090 and selecting the appropriate extension:

Jason Doling Matt Windt Richard Drake
Sr. Project Manager Project Manager Program Manager

Ext. 3558 Ext. 3627 Ext.3258

jhd@nyserda.ny.gov mew@nyserda.ny.gov rld@nyserda.ny.gov

Contractual questions should be directed to: Nancy Marucci, Contract Manager, at (518) 862-1090, ext. 3335, or nsm@nyserda.ny.gov.

No communication intended to influence this procurement is permitted except by contacting the Project Managers listed above (Designated Contacts). Contacting anyone other than these Designated Contacts (either directly by the proposer or indirectly through a lobbyist or other person acting on the proposer's behalf) in an attempt to influence the procurement: (1) may result in a proposer being deemed a non-responsible offerer, and (2) may result in the proposer not being awarded a contract.

*Late proposals will be returned. Incomplete proposals may be subject to disqualification. It is the bidder's responsibility to ensure that all pages have been included in the proposal. Faxed or e-mailed proposals will not be accepted. Proposals will not be accepted at any NYSERDA location other than the address above. If changes are made to this solicitation, notification will be posted on NYSERDA's web site at www.nyserda.ny.gov.

This solicitation includes the following sections:

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I. INTRODUCTION

The New York State Energy Research and Development Authority (NYSERDA) is a public benefit corporation established by the New York State Legislature in 1975. Its mandate is to use innovation and technology to solve some of New York's most difficult energy and environmental problems in ways that improve the State's economy. NYSERDA does this through research and development programs and consumer-oriented efforts.

The New York Battery and Energy Storage Technology Consortium (NY-BEST) was organized to help position New York as a global leader in energy storage technology including medium and heavy-duty transportation, electric grid, and other applications. NYSERDA is helping to seed this industry-focused consortium with approximately \$25 million through Clean Air Interstate Rule proceeds.

NY-BEST has three primary strategies to build the battery and energy storage industry in New York State: (1) facilitating product development and commercialization partnerships; (2) providing members with access to testing, characterization, and prototyping capabilities; and (3) promoting research and development of energy storage technologies. In turn, these activities will help to expand the energy storage industry in New York State, create economic growth and jobs, and reduce emissions through electrified transportation and electric grid storage.

Since the first round of NY-BEST research and development awards in 2009, NYSERDA staff has gathered feedback from a number of sources to identify technology development needs that the remaining funds could best address. These sources included past applicants, the NY-BEST Board, NY-BEST members, and attendees at conferences and meetings. NYSERDA also surveyed NY-BEST members to obtain their input into developing a solicitation that most effectively used the remaining research funds to advance a broad spectrum of technologies across the energy storage value chain. Feedback from these sources is incorporated into this solicitation. In particular, the NY-BEST member survey identified these potential benefits from the types of seed stage projects that this solicitation will support:

- Focus resources on promising technologies that are the most commercially viable
- Have a third party partner augment the applicant's staff to evaluate a new technology
- Bring a technology to a point where additional funding can be attracted
- Bring a technology to a point where customer interest is increased
- Explore a new partnership at a relatively low financial risk
- Explore a promising technology idea that the applicant may not have the resources to support at this time
- Work with customers to validate the technology or product

NYSERDA's goal through this solicitation is to advance several dozen promising energy storage technologies for which technical feasibility has already been proven at the lab scale, into a working prototype to assess whether the technology has commercial potential. Demonstrating a working prototype is an important stage that can interest additional funders including federal agencies and private capital. A Technology Readiness Levels classification (TRLs) is being used to define the types of technology development this solicitation targets and evaluate progress under awards. These stages are defined in Section II. The concept of TRLs was initially developed by NASA and is now used by U.S. and foreign government agencies, research institutions, and private companies to evaluate their technology portfolios. Economic impacts are expected to accrue in the State of New York resulting from the activities proposed. Metrics that will be used to assess project performance are described in Section III, #7.

II. PROGRAM REQUIREMENTS

Eligibility: This solicitation is open to any member of the NY-BEST Consortium to advance an eligible promising energy storage technology from proven technical feasibility to a working prototype as defined in the "Project Scope and Technology Readiness Levels" section below. Membership in NY-BEST is open to any organization with an interest in advancing the energy storage industry in New York State. Membership information and benefits can be found at: www.ny-best.org. In order to be eligible to submit a proposal, an applicant must be a paid member of NY-BEST by the proposal due date under which it is submitting an application and remain a member during the term of an award.

Funding and Project Timeframe: Approximately \$8,325,000 is available in total under this solicitation, which covers the six funding rounds identified on the cover page. Up to \$250,000 in NYSERDA funds may be requested per application under this solicitation for contract terms up to 24 months. While there is no limit to the number of proposals that an applicant may submit, due to the competitive nature of this solicitation proposers are <u>strongly encouraged</u> to only submit what they consider to be their most responsive and highest-priority proposals.

Required Co-Funding: Applicants are required to provide co-funding at least equal to the NYSERDA investment, so that NYSERDA's funds represent no more than 50 percent of the total project cost. Co-funding may include cash or in-kind labor, materials, equipment, facilities, and other resources, subject to reasonable and verifiable valuation. Co-funding may be from the proposer, partners, or other private or government sources. Contributions of direct labor (for which the laborer is paid as an employee) and purchased materials may be considered "cash" contributions. Unpaid labor, indirect labor, or other general overhead may be considered "in-kind" contributions. Review criteria will assess whether the applicant's co-funding contributions are appropriate with respect to the degree of risk, potential to benefit from the work, and stage of maturity of the organization.

Eligible Technologies: Eligible technologies are energy storage technologies that utilize electrical or electrochemical processes including batteries, ultracapacitors, fuel cells and related components that integrate these technologies into complete systems. Any software development must relate to power management systems for the specific energy storage product.

Project Scope and Technology Readiness Levels: The following Technology Readiness Levels, based upon those used by the U.S. Department of Energy, will be used in this solicitation and to manage progress on awards. Since this solicitation is intended to advance promising energy storage technologies with <u>already proven</u> technical feasibility to a working prototype, technologies are expected to already have passed TRL 3 or later, and proposed work should help transition the technology toward commercialization.

Summary of Technology Readiness Levels Scale:

Relative Level of Technology Development	TRL	TRL Definition	Description
System Operations	TRL 9	Actual system operated over the full range of expected conditions	Actual operation of the technology in its final form, under the full range of operating conditions.
System Commissioning	TRL 8	Actual system completed and qualified through test and demonstration	Technology has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development.
	TRL 7	Full-scale, prototype system demonstrated in a relevant environment	Prototype full scale system. Represents a major step up from TRL 6, requiring demonstration of an actual system prototype in a relevant environment.
Technology Demonstration	TRL 6	Engineering/pilot-scale prototype system validation in a relevant environment	Representative engineering scale model or prototype system, well beyond the lab scale tested for TRL 5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness.
Technology Development	TRL 5	Lab scale, similar system validation in relevant environment	The basic technological components are integrated so system configuration is similar to the final application in almost all respects. Examples include testing a "high fidelity" system in a simulated environment.
	TRL 4	Component and/or system validation in lab environment	Basic technological components are integrated to establish that the pieces will work together. This is relatively "low fidelity" compared with the eventual system. Examples include integration of "ad hoc" hardware in a lab and testing with a range of simulants.
Research to Prove Feasibility	TRL 3	Analytical and experimental critical function and/or characteristic proof of concept	Active research and development is initiated. This includes analytical studies and lab studies to physically validate the analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
Basic Technology Research	TRL 2	Technology concept and/or application formulated	Invention begins. Once basic principles are observed, practical applications can be invented. Applications are speculative, and there may be no proof or detailed analysis to support the assumptions. Examples are still limited to analytical studies.
	TRL 1	Basic principles observed and reported	Lowest level of technology readiness. Scientific research begins to be translated into applied research and development. Examples might include paper studies of a technology's basic properties.

Source: U.S. Department of Energy

All applicants are required to complete a Technology Readiness Level calculator which is contained in Attachment G and must be completed and submitted with your proposal as Appendix 1.

TRL Definitions:

High Fidelity: Addresses form, fit and function. High-fidelity lab environment would involve testing with equipment that can simulate and validate all system specifications within a lab setting.

Low Fidelity: A representative of the component or system that has limited ability to provide anything but first order information about the end product. Low fidelity assessments are used to provide trend analysis.

Model: A functional form of a system generally reduced in scale, near or at operational specification. Models will be sufficiently developed to allow demonstration of the technical and operational capabilities required of the final system.

Prototype: The first early representation of the system that offers the expected functionality and performance expected of the final implementation. Prototypes will be sufficiently developed to allow demonstration of the technical and operational capabilities required of the final system.

Relevant Environment: Testing environment that simulates the key aspects of the operational environment.

Technology Transfer and Commercialization Activities: All awards must include business development, technology transfer and commercialization activities to simultaneously advance the commercial readiness of the technology. These could include meetings with potential investors and commercialization partners, presentations at technical conferences, articles in peer-reviewed journals, invention disclosures and patent applications. In order to help excite the next generation workforce about the opportunities available in the energy storage industry, applicants are also encouraged to participate in STEM (science, technology, engineering and math) presentations at the middle and high school level at least once each year.

All applications must demonstrate evidence that individuals with commercial expertise in the subject technology are included in the project team. In order to ensure that the technology development path addresses commercial need, <u>an industry representative with relevant expertise should be included</u> in progress reviews and providing guidance into the stages of development and next steps. Academic and research institutions are strongly encouraged to ensure this is the case with their proposal team.

Project Partners: Partnering arrangements are encouraged, where practical, to enhance the likelihood of project success. Partners may include potential customers, commercial firms, research organizations, universities, government agencies, end-users, and other stakeholders. The most successful applicants have demonstrated market interest by including strong letters of support from potential customers who have expressed interest in evaluating the results of the project and/or seriously considering the resulting prototype. The more advanced the TRL, the more explicit a potential customer's commitment should generally be.

Principles of Effective Industry/Academic Collaboration: Applications that include industry / academic partners should consider the following examples of key principles that were identified by NY-BEST members as important to a successful partnership:

- Ability of the corporate partner to interview graduate students and Post Docs who will work on the project.
- Including a schedule agreed to by all parties for recurring status meetings throughout the course of the project.
- Including in the sponsored research agreement the ability to adjust the project tasks as the project progresses. Proposed changes in the project tasks should be discussed with the NYSERDA Project Manager before embarking on new tasks.

- Execution of a master Intellectual Property agreement.
- Flexibility of both parties in moving beyond a one-size-fits-all approach including with regard to intellectual property (for instance, rather than exclusive rights to any resulting IP, parties could consider granting exclusive rights within the company's field of use).

Other Considerations: In addition, please note that:

- A proposal may be considered non-responsive if it fails to comply with the requirements above, the Proposal Requirements of Section III, or the General Conditions of Section V.
- Prior to contract execution, applicants may be required to demonstrate the current TRL of the
 technology, access to sufficient financial resources to perform the proposed work, technical
 experience, and adequate facilities or the ability to access such facilities, a good performance
 record, and the ability to qualify for an award under applicable laws and regulations. At
 NYSERDA's discretion, go/no-go stages may be included in awards to differentiate between
 TRLs and key milestones.

III. PROPOSAL REQUIREMENTS

Excluding required appendices, the total proposal should be kept to <u>15 pages or less</u>. Suggested page limits for each section are provided below. The proposer's goal should be to concisely present the information needed to fully address the evaluation criteria described in Section IV. Unnecessary attachments beyond those sufficient to present a complete, comprehensive, and effective proposal generally reduce, rather than increase, a proposal's evaluation. Proposals that grossly exceed the page limits or fail to follow the format guidelines may be rejected as non-responsive.

Please review the proprietary information guidelines in Section V. To the extent it is necessary to include proprietary information in the proposal, ensure that you follow these instructions and clearly mark proprietary information. This includes checking the appropriate box on the proposal checklist, marking information as proprietary throughout the proposal, and including a written request to except the information from disclosure explaining the reasons why the information should be excepted.

Proposers must submit two signed copies of the proposal with a completed and signed Proposal Checklist attached and a CD which contains a scanned copy or pdf of the entire proposal as assembled in the paper copy, as well as editable copies of the work plan and budget to assist with review and contract development. These items must be submitted to the attention of Roseanne Viscusi at the address on the front of this Program Opportunity Notice. A completed and signed Proposal Checklist must be attached as the front cover of your proposal and must contain an original signature. Late proposals and proposals lacking the appropriate completed and signed Proposal Checklist will be returned. Faxed or e-mailed copies will not be accepted.

Each page of the proposal should state the name of the proposer, the PON number, and the page number. Please assemble the proposal in the following format with items in the order shown.

Proposal Checklist: Complete the Proposal Checklist attached to this PON as Attachment A and include it as the front cover of the proposal. The Checklist must bear an original signature. Do not use a Proposal Checklist from any other NYSERDA Program Opportunity Notice. Note the following:

☐ Mark the Proposal Checklist to indicate whether you accept the standard terms and conditions contained in the attached Sample Agreement (Attachment F). Applicants are strongly encouraged to review these terms and conditions with their attorney prior to submitting an application. Contract development will be prioritized for applicants that accept these standard terms and conditions without exception. An applicant that does not accept the standard terms and conditions must provide alternate terms with justification based on the risk and benefit to NYSERDA and New York State. Due to NYSERDA's desire

to NYSERDA's standard terms and conditions may be terminated if these issues are not resolved in a reasonable amount of time, as determined by NYSERDA.

Mark whether any proprietary information is contained in the proposal. Applicants are reminded to strictly follow the instructions in Section V to clearly identify and document any information considered proprietary.

for projects to begin quickly, contract negotiations that have significant unresolved exceptions

□ Be sure the individual signing the Proposal Checklist is authorized to commit the applicant to the proposal as submitted.

Potential Conflicts of Interest: Identify the nature of any potential conflicts of interest among team members in providing services to NYSERDA under this PON. Fully discuss possible conflicts of interest, actual and perceived, which could arise in connection with performance by team members. Describe how these potential conflicts will be managed. In the event that NYSERDA determines that a team member may have a conflict of interest or the appearance of such, NYSERDA may: (1) take this into consideration in evaluating the proposal; (2) exclude the proposer from consideration for an award; (3) adjust the scope of work to avoid the conflict or appearance of conflict; or (4) negotiate other appropriate actions with the team member to avoid the conflict or appearance of conflict.

Proposal Format and Sections:

Include the following sections in your proposal.

- **1. Executive Summary (1 page maximum; all non-proprietary information):** The Executive Summary should contain a <u>non-proprietary</u> summary of your proposal using the following outline:
 - Include a one line objective statement that summarizes the entire proposed project.
 - Objectives: describe the technical and business challenges being addressed.
 - Background: describe the history behind development of the particular technology and the applicant's experience in this sector. .
 - Scope: describe the key activities that will be conducted to accomplish the objectives, the
 current state of development including the TRL, the TRL you realistically expect to achieve at
 the conclusion of the project, and an assessment of additional funding and time required to
 reach commercialization, including where you expect to receive follow-on funding.
 - Benefits: provide an estimate of the impact the project will have in New York State during the project as well as more broadly if commercialization is successful, based on the impacts described in Section 8 below.
 - Uniqueness: describe what is technically unique about your approach and why is it better than alternatives.
 - Team Members: identify significant participants and describe the team's relevant qualifications and expertise that makes them well suited to carry out this project.
- 2. Project Goals and Objectives (2 pages): Describe the market need that this technology is attempting to fulfill. Describe customer engagement activities that you have undertaken to assess market need. Indicate the specific requirements and performance parameters including cost that must be met for the technology to meet customers' needs. Note that letters of support from potential customers are generally the most effective way to demonstrate interest. Identify existing solutions that this technology will compete against for adoption in the marketplace. Identify others who could be viewed as competitors to the solution proposed.

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- **3. Technology Background (1 to 2 pages):** Describe the proposed technology/product concept and the technical basis behind the concept. Be concise, but provide enough detail to allow evaluation of the concept's technical feasibility. Include the following:
 - Background/history: provide a concise history of the technology's development including timeframes and pertinent team members, including third parties.
 - Current involvement/funding: indicate the amount and relevant sources of funding that have brought the technology to this point.
 - Relevant intellectual property: list any IP that has already been developed and for which an
 invention disclosure or patent has been filed or received. Include the patent number for any
 existing IP.
 - Projected risk: identify the technical risks associated with your concept and how you plan to address these risks.
 - Uniqueness: describe what makes your approach unique compared to competitors' approaches.
- **4. Current and Projected Technology Readiness Levels (1 page):** Attach the report published from the Results Tab of the completed Technology Readiness Calculator (contained in Attachment G to this solicitation) which describes the current TRL. Include the complete TRL calculator (Excel file) in your electronic submission. In addition, describe the current TRL stage of development and the anticipated TRL that is realistically projected to be achieved if this project is awarded. Provide sufficient detail to substantiate the current TRL. For instance, "we are in TRL 4 because we have produced X units with Y performance at a rate of Z per day. We will be able to get to TRL 6 where we can produce XX units with YY performance at a rate of ZZ per day with the requested funding".
- 5. SWOT Analysis (1 to 2 pages): Provide a mini SWOT analysis that addresses:
 - Strengths of this technology and project team that give it an advantage over others.
 - Weaknesses or limitations that place the technology or project team at a disadvantage relative to others, and plans to address or mitigate these weaknesses.
 - Opportunities or external factors that may improve likelihood of success.
 - Threats or external elements that could impede progress on this project, and plans to mitigate these threats.
- **6. Proposer Qualifications (1 to 2 pages):** Identify primary members of the team including subcontractors and advisors. Indicate the relationship between team members and identify key individuals including the individual who will serve as Project Manager. Include qualifications and the commercialization track record of the applicant and partner organizations as well as key members of the team. Identify the unique capabilities that the team can provide compared to competitors. Identify any NYSERDA contracts awarded to the proposer during the past five years and the status of these contracts.

Include resumes, CVs, or biographical sketches for key members of the team as Appendix 3 to the proposal. *Note: Subcontracts of \$50,000 or more are subject to competitive bid procedures except where the proposal identifies a specific subcontractor as an integral participant in the proposed work.* Refer to Article V of the Sample Agreement (Attachment F) for additional information.

All teams must include individuals with commercial expertise in the subject technology. In order to ensure that the technology development path addresses commercial need, an appropriate industry representative should be included in progress reviews and in providing guidance into the stages of development and next steps. Academic and research institutions are strongly encouraged to ensure

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this is the case with their proposal team. If applicable, this relationship should be documented in a letter of support.

- 7. Project Benefits (1 to 2 pages): Describe the project benefits within the State of New York that are anticipated to result from the work funded under this proposal. Also provide examples of the types of results that could be expected during the course of the project, and longer term in New York State if this technology is successfully commercialized. The following metrics will be reported annually and used to assess project performance. Other impacts and metrics may also be proposed by the applicant. All applicants should clearly define NYS value added components and services during the project along with benefits that will accrue to New York State as a result of the project.
 - Research and development jobs supported under this project:
 - (1) Engineers, principal investigators, and researchers
 - (2) Technicians, post docs, and research assistants
 - (3) Other staff
 - (4) Workforce training opportunities provided to graduate students or interns
 - Publications
- Primarily R&D Metrics

Primarily

Sales

Metrics

- Participation at technical and business conferences
- Invention disclosures and patents
- Licensing agreements and licensing revenue, particularly as it relates to licensing university-owned technology
- Cost savings such as research savings or avoided costs
- Additional development funds received including, but not limited to, federal sources, parent corporations, angel investment, venture capital, etc.

Product sales and new products commercialized

- Capital expenditures to expand company facilities in New York State
- Jobs created and retained to commercialize and manufacture product
- Energy, economic, and environmental benefits such as greenhouse gas reductions through the incorporation of energy storage technologies into transportation, the electric grid, and other applications
- **8. Proposed Statement of Work (5 to 6 pages):** Include a list of all major tasks to be accomplished along with a description of each task. This section will provide the basis for the Statement of Work, which is the primary contractual document outlining work activities and quantifying deliverables. It specifically delineates each step or procedure required to accomplish the project objectives. Therefore, each major action needs to be identified indicating who will perform it, how it will be performed and its intended result. At the end of each task, list the specific deliverable(s). Be specific and concentrate on how and not why the task will be performed. Use active voice sentence structure to make clear who is responsible for specific actions.

Progress and financial reports are required quarterly and a project kick-off, mid-point, and closeout meeting will occur in person or by phone. A final report is also required. These activities should be considered when developing your cost estimates. NYSERDA also requires annual metrics reporting for 10 years for awards under this solicitation. Refer to Attachments C and E for an example of the Statement of Work format that will be used for award recipients and the Sample Metrics, respectively. Use the following format for each task:

Task # and Title:

Description and Activities:

Responsible Party:

Description and

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Timeframe:

Deliverable(s):

Project Management: include a project management task that identifies the Project Manager and describes the process and frequency for internal project coordination including meetings with project partners once the project gets underway.

Project Schedule: include a Gantt chart of all tasks showing the timeframe within which the task will be accomplished.

Tech Transfer and Commercialization Strategy: include a task in the Statement of Work that describes the applicant's business plan and strategy for commercialization. Include appropriate business-development activities that will increase the ultimate commercial success of the technology. Please be specific in identifying ways in which potential funders and customers will be kept abreast of project progress. Describe activities to promote this technology such as meetings with potential investors, commercialization partners, and customers; presentations at trade shows or conferences; articles in peer-reviewed journals; invention disclosures and patent applications; and other activities. Describe the team's anticipated plans for commercialization. For example, is the plan to manufacture the product, use a contract manufacturer, or license the technology? Include a brief description of additional work beyond the proposal that will be necessary to reach commercialization, including timeframe, anticipated funding needs, and funding sources that will be pursued. Finally, describe any plans to participate in STEM (science, technology, engineering and math) activities to showcase the career opportunities available in the energy storage sector.

9. Budget: A Contract Pricing Proposal Form (CPPF), with instructions, is included as Attachment D to this PON. Each proposal must include a completed CPPF and the following co-funding table as Appendix 4. This cost-share table should reasonably allocate costs by task and will be used for budgetary and project management purposes. Refer to Section II for specific requirements and allowable forms of cost share. NYSERDA will not pay for efforts that have already been undertaken. The proposer or proposing team cannot claim as co-funding any expenses that have already been incurred. Present the cost-sharing plan in the following format.

Cost-Sharing Table					
Task	NYSERDA Funding	Contractor Cost-Share	Total Task Funding		
Task 1: Project Management and Reporting	\$	\$	\$		
Task 2: [insert task title]	\$	\$	\$		
Task 3: [insert task title]	\$	\$	\$		
[insert as many tasks as necessary]	\$	\$	\$		
TOTAL	\$	\$	\$		

Indirect Costs: Attach supporting documentation to justify indirect cost (overhead) rates included in your proposal as follows:

- Describe the basis for the rates proposed (e.g., based on prior period actual results; based on projections; based on federal government or other independently-audited and approved rates).
- If rate(s) is approved by an independent organization, such as the federal government, provide a copy of such approval.
- If rate(s) is based on estimated costs or prior period actual results, include calculations to support proposed rate(s). Calculation should provide enough information for NYSERDA to

evaluate and confirm that the rate(s) is consistent with generally accepted accounting principles for indirect costs.

NYSERDA reserves the right to audit any indirect rate presented in the proposal and may require rate adjustments. NYSERDA may require proposers to provide financial statements or other substantiating financial information prior to awarding a contract.

- **10.** Letters of Support: Include letters of support that describe planned participation or substantiate the information contained in your proposal as Appendix 2. Absence of letters of support for organizations identified as key participants in the proposal will be interpreted as the proposer not having support from the subject parties.
- **11. Appendices:** Include the following required appendices with your proposal. Additional appendices should be as brief as possible and relate directly and succinctly to the information provided in this proposal. Superfluous and unnecessary information will be discarded and may result in the proposal being deemed non-responsive.

Appendix 1 – Technology Readiness Level Calculator including the completed comments field within each series of questions to substantiate the current TRL. Select "Publish Report" from the Results tab and include this report with your full proposal. In addition, include an Excel version of the complete TRL calculator with your submission.

Appendix 2 – Letters of Support

Appendix 3 – Resumes for Key Team Members

Appendix 4 – Contract Pricing Proposal Form (CPPF) and Budget Items

Appendix 5 – Exceptions to the Terms and Conditions (if applicable) – see note * below

Appendix 6 – Written Request to Except Information from Public Disclosure (if applicable) (refer to Section V below for specific information that must be provided)

Any other pertinent appendices

* Note regarding Exceptions to the Terms and Conditions: Contract development will be prioritized for applicants that accept these standard terms and conditions without exception. An applicant that does not accept the standard terms and conditions must provide alternate terms with justification based on the risk and benefit to NYSERDA and New York State. Due to NYSERDA's desire for projects to begin quickly, contract negotiations that have significant unresolved exceptions to NYSERDA's standard terms and conditions may be terminated if these issues are not resolved in a reasonable amount of time, as determined by NYSERDA.

IV. PROPOSAL EVALUATION

Proposals that meet Proposal Requirements will be reviewed by a program-area-specific Technical Evaluation Panel (TEP) using the Evaluation Criteria identified below. After the proposals are reviewed, NYSERDA will issue a letter to each proposer indicating the proposal evaluation results. Proposers receiving favorable evaluations will be invited to enter into contract negotiations with NYSERDA. NYSERDA may also ask a proposer to address specific questions or recommendations of the TEP before awarding funding.

EVALUATION CRITERIA:

Proposed Solution:

 Does the proposal address an eligible technology that has achieved TRL 3 or higher? Is the current TRL reasonable, and is the TRL proposed to be attained under the project realistic?

- Is the proposed work based on sound science, technically feasible, innovative and cost effective?
- How appropriate or realistic are the proposed cost, technical and performance goals of the technology, and how likely is the technology to achieve these goals?
- Does the proposal articulate a business and commercialization strategy that is appropriate for this stage of development? Are appropriate technology transfer and commercialization activities proposed along with technical activities?
- Are the technical risks clearly articulated, appropriately addressed, and balanced by project benefits?
- If the proposed work is a follow-on project to a previously funded NYSERDA project, what was the outcome of the earlier project?

New York State Impact:

- What are the expected economic benefits in New York State in the form of commercial sales, job creation, and other factors that support economic growth?
- To what extent is value added within New York State during the project (participants, sourcing, testing, etc.)?
- How well has the proposal quantified the potential benefits to New York State?
- Are the projected impacts within New York State realistic and appropriate given the scope of the project?
- Will the proposed project lead to subsequent commercial activity in New York State?

Proposer Qualifications:

- Are the roles of the project team, including external team members, clearly defined? Is the team's experience appropriate for carrying out the project? Applications that include industry/academic partners should include key principals that will help ensure an effective partnership.
- Does the applicant's track record enhance its likelihood of success on this project?
- To what degree does the project team demonstrate access to the necessary technical and business background to accomplish the goals of this solicitation, including sufficient financial resources to perform the proposed work, technical experience, and adequate facilities?
- Are commitments from partners and subcontractors firm, as evidenced by letters of support and/or financial commitments?
- If applicable, what has been the proposer's past performance on NYSERDA awards?

Path to Market:

- Does the applicant present a thorough understanding of the market's needs and challenges?
- Does the applicant exhibit an understanding of existing solutions and competing technologies?
- Does the proposal adequately address potential customers who would use this technology and a path to market? Are potential customers included in identifying requirements and participating in project reviews, as evidenced by letters of support?
- Does the applicant demonstrate experience with past commercialization success directly or through partners?

Project Cost and Value:

- Are the applicant's co-funding contributions (sources, cash vs. in-kind, amounts) appropriate
 with respect to the degree of technical and commercial risk, potential to benefit from the work,
 and stage of maturity of the organization?
- How firm are commitments from essential participants, co-funders, and others as reflected by funding commitments and/or letters of support?
- Is the project cost justified and reasonable?
- Are labor rates reflective of the industry and is the budgeted skillset appropriate? Are
 equipment, facility, material, travel, and other costs reasonable and appropriate for the work
 proposed? If applicable, are the overhead rates reasonable and supported with appropriate
 documentation?

Programmatic Considerations – Proposals will be reviewed to determine if they reflect NYSERDA's overall objectives, including: risk/reward relationships, similar ongoing or completed projects, and the general distribution of projects among categories, technologies, industries and other organizations, and geographically within New York State.

V. GENERAL CONDITIONS

Proprietary Information: Careful consideration should be given before confidential information is submitted to NYSERDA as part of your proposal. Review should include whether it is critical for evaluating a proposal, and whether general, non-confidential information, may be adequate for review purposes. The NYS Freedom of Information Law, Public Officers Law, Article 6, provides for public access to information NYSERDA possesses. Public Officers Law, Section 87(2) (d) provides for exceptions to disclosure for records or portions thereof that "are trade secrets or are submitted to an agency by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise." Information submitted to NYSERDA that the proposer wishes to have treated as proprietary and confidential trade secret information, should be identified and labeled "Confidential" or "Proprietary" on each page at the time of disclosure. This information should include a written request to except it from disclosure, including a written statement of the reasons why the information should be excepted. See Public Officers Law, Section 89(5) and the procedures set forth in 21 NYCRR Part 501 http://nyserda.ny.gov/~/media/Files/About/Contact/NYSERDARegulations.ashx. However, NYSERDA cannot guarantee the confidentiality of any information submitted.

Omnibus Procurement Act of 1992: It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises, as bidders, subcontractors, and suppliers on its procurement Agreements. Information on the availability of New York subcontractors and suppliers is available from: Empire State Development, Division for Small Business, 30 South Pearl Street, Albany, NY 12245. A directory of certified minority- and women-owned business enterprises is available from: Empire State Development, Minority and Women's Business Development Division, 30 South Pearl Street, Albany, NY 12245.

State Finance Law sections 139-j and 139-k: NYSERDA is required to comply with State Finance Law sections 139-j and 139-k. These provisions contain procurement lobbying requirements which can be found at http://www.ogs.ny.gov/aboutogs/regulations/advisoryCouncil/StatutoryReferences.html
The attached Proposal Checklist calls for a signature certifying that the proposer will comply with State Finance Law sections 139-j and 139-k and the Disclosure of Prior Findings of Nonresponsibility form includes a disclosure statement regarding whether the proposer has been found non-responsible under section 139-j of the State Finance Law within the previous four years.

Tax Law Section 5-a: NYSERDA is required to comply with the provisions of Tax Law Section 5-a, which requires a prospective contractor, prior to entering an agreement with NYSERDA having a value in excess of \$100,000, to certify to the Department of Taxation and Finance (the "Department") whether the contractor, its affiliates, its subcontractors and the affiliates of its subcontractors have registered with the Department to collect New York State and local sales and compensating use taxes. The Department has created a form to allow a prospective contractor to readily make such certification. See, ST-220-TD (available at http://www.tax.ny.gov/pdf/current_forms/st/st220td_fill_in.pdf). Prior to contracting with NYSERDA, the prospective contractor must also certify to NYSERDA whether it has filed such certification with the Department. The Department has created a second form that must be completed by a prospective contractor prior to contacting and filed with NYSERDA. See, ST-220-CA (available at http://www.tax.ny.gov/pdf/current forms/st/st220td fill in.pdf). The Department developed quidance contractors which has for available http://www.tax.ny.gov/pdf/publications/sales/pub223.pdf.

Contract Award: NYSERDA anticipates making multiple awards under this solicitation. It may award a contract based on initial applications without discussion, or following limited discussion or negotiations pertaining to the Statement of Work. Each proposal should be submitted using the most favorable cost and technical terms. NYSERDA may request additional data or material to support applications. NYSERDA will use the Sample Agreement to contract successful proposals. NYSERDA, at its sole discretion, will decide whether to contract successful projects using time and material or milestone payment terms. NYSERDA reserves the right to limit any negotiations to exceptions to standard terms and conditions in the Sample Agreement to those specifically identified in the submitted proposal (see Proposal Checklist). Proposers should keep in mind that acceptance of all standard terms and conditions will generally result in a more expedited contracting process. NYSERDA expects to notify each proposer approximately 10 weeks from the proposal due date whether its proposal has been selected to receive an award. NYSERDA may decline to contract with awardees who are delinquent with respect to any obligation under any previous or active NYSERDA agreement.

Recoupment: Recoupment for New York State Products will be waived for this solicitation. Upon a Sale of a Product that does not qualify as a New York State Product (See Attachment F, Sample Agreement, Section 1.01 (b) Payments to NYSERDA Definitions), or at such time as Licensing Revenue becomes due to the Contractor with respect to a Product that does not qualify as a New York State Product, Contractor shall pay to NYSERDA: (i) five percent (5%) of the Sales Revenue, or (ii) sixty percent (60%) of all Licensing Revenues accruing to the Contractor. The Contractor's obligation to make payments to NYSERDA shall extend (i) from the date the Contractor first receives Sales Revenue or Licensing Revenue and continue for a period of fifteen (15) years thereafter; or (ii) until the amount paid by Contractor to NYSERDA, whether or not derived from any Sales Revenue or Licensing Revenue, is equal to three times the amount of funds actually paid by NYSERDA to the Contractor under this Agreement; whichever occurs first. Refer to the Sample Agreement included as Attachment F for specific definitions, terms and conditions.

Annual Metrics Reports: On an annual basis, the Contractor shall submit, to NYSERDA's Project Manager, a prepared analysis and summary of metrics addressing the anticipated energy, environmental and economic benefits that are realized by the project. All estimates shall reference credible sources and estimating procedures, and all assumptions shall be documented. Reporting shall commence the first calendar year after the contract was executed. Reports shall be submitted by January 31 for the previous calendar year's activities (i.e. reporting period). Please see Attachment E: Sample Metrics Form for the metrics that you will be expected to provide and the reporting duration. <a href="https://www.nyser.nys

Limitation: This solicitation does not commit NYSERDA to award a contract, pay any costs incurred in preparing a proposal, or to procure or contract for services or supplies. NYSERDA reserves the

right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest. NYSERDA reserves the right to reject proposals based on the nature and number of any exceptions taken to the standard terms and conditions of the Sample Agreement.

Disclosure Requirement: The proposer shall disclose any indictment for any alleged felony, or any conviction for a felony within the past five years, under the laws of the United States or any state or territory of the United States, and shall describe circumstances for each. When a proposer is an association, partnership, corporation, or other organization, this disclosure requirement includes the organization and its officers, partners, and directors or members of any similarly governing body. If an indictment or conviction should come to the attention of NYSERDA after the award of a contract, NYSERDA may exercise its stop-work right pending further investigation, or terminate the agreement; the contractor may be subject to penalties for violation of any law which may apply in the particular circumstances. Proposers must also disclose if they have ever been debarred or suspended by any agency of the U.S. Government or the New York State Department of Labor.

VI. ATTACHMENTS TO THIS SOLICITATION

Attachment A – Proposal Checklist (required form)

Attachment B – Disclosure of Prior Findings of Non-Responsibility Form (required form)

Attachment C – Statement of Work Format

Attachment D – Contract Pricing Proposal Form (required form)

Attachment E – Sample Metrics Form

Attachment F – Sample Agreement with Exhibits

Attachment G – Technology Readiness Level Calculator (required form)

PON 2458: NY-BEST Bench to Prototype Solicitation