



**Transformative Technologies for Energy-Efficient Manufacturing (TTEEM)
Program Opportunity Notice (PON) 2736
\$4.5 Million Available**

*This PON is **NOT** limited to facilities that pay the System Benefits Charge (SBC)*

Proposals must be received by 5:00 PM Eastern Time* on the following dates:

Round 1: July 16, 2013 – Round 2: January 16, 2014

All, or none, of the available funds could be allocated to projects selected from any one due date.

The New York State Energy Research and Development Authority (NYSERDA) invites proposals for projects that develop, demonstrate or commercialize transformative technologies that provide an energy benefit to a manufacturing process. The solicitation seeks proposals from:

- (1) **Technology Developers** who intend to produce a transformative product/service in New York State (NYS), that will provide a significant energy benefit for manufacturing processes (“**Product Development**”) *or*
- (2) **Technology Users** who intend to use a transformative manufacturing process in NYS that will provide a significant energy benefit (“**Process Improvement**”).

Manufacturing improvements for clean-energy technologies** are preferred.

Product Development proposals can be for Feasibility Studies, Demonstrations or Commercialization projects.

Process Improvement proposals can be for Feasibility Studies or Demonstration projects.

For each selected **Feasibility Study**, NYSERDA will provide up to \$100,000, or 50% of total project cost, whichever is less. Feasibility Studies include: proof-of-concept investigations, prototype design and development, or preliminary market assessment.

For each selected **Demonstration or Commercialization project**, NYSERDA will provide up to \$400,000, or 50% of the total project cost, whichever is less. Such product development or process improvement projects typically include: field demonstrations at industrial sites in NYS, performance testing, manufacturability analysis, commercial design development, certification, development of production systems, or development of commercialization strategies.

Technology Developers may be required to repay NYSERDA through a royalty agreement.

Proposers must submit seven (7) copies of the proposal with a completed and signed proposal checklist attached to the front of each copy, one of which must contain an original signature. Proposals must be clearly labeled and submitted to:

Roseanne Viscusi, PON 2736
NYS Energy Research and Development Authority
17 Columbia Circle
Albany, NY 12203-6399

For technical questions for PON 2736, contact one of the following Project Managers:

Miriam Pye: (518) 862-1090 ext. 3370, MEP@nyserda.ny.gov
Scott Larsen: (518) 862-1090 ext. 3208, LSL@nyserda.ny.gov
Davetta Thacher: (212) 971-5342 ext. 3603, DMT@nyserda.ny.gov

For contractual questions for PON 2736, contact Venice W. Forbes, Ext. 3507, VWF@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 and proposals lacking the appropriate completed and signed Proposal Checklist will be returned. Faxed or emailed proposals will not be accepted. Proposals will not be accepted at any other NYSERDA location other than the address above. If changes are made to this solicitation, notification will be posted on NYSERDA’s website at www.nyserda.ny.gov

** Clean energy technologies are technologies that have a demonstrably low environmental impact, reduce dependence on fossil fuels and reduce the embodied energy in manufactured goods.

I. Program Overview

NY State's industrial sector continues to struggle with high energy costs and increased foreign competition. PON 2736 solicits proposals that involve potentially disruptive, transformative technologies that will result in significant energy and productivity benefits in manufacturing processes, including:

- feasibility studies, demonstrations or commercialization of transformative technologies being developed in NYS to be used to provide a significant energy benefit for a manufacturing process; or
- feasibility studies or demonstrations of transformative technologies that provide a significant energy benefit to a manufacturing process in NYS.

Transformative technologies are considered to be those that change how goods are manufactured in ways that significantly reduce energy use, greenhouse gas emissions, and environmental footprint, while increasing value-based productivity and site capacity. Technologies that improve the manufacturing process of clean-energy technologies are preferred. Examples of potentially transformative technologies that can significantly reduce process time, energy, and environmental footprint include, but are not limited to: additive manufacturing; novel approaches to producing and using biopolymers; microwave sintering of ceramics; and innovative applications of laser, ultraviolet and electron beam processing.

The intent of PON 2736 is to defray the risk associated with developing transformative technologies, developing new applications for existing products or processes, or being a first-time user of a transformative technology that provides an energy benefit for a manufacturing process. **NYSERDA encourages the use of systematic techniques (such as biomimicry), where applicable, to minimize the risks associated with developing new technologies.** NYSERDA encourages participants in PON 2736 to work synergistically towards mutually beneficial outcomes. Projects should focus on applied research, development, demonstration and commercialization (not basic research) and should be structured to lead to near-term commercial growth in NYS. Academic/industrial partnerships are encouraged to integrate science and innovation into manufacturing practices and to transform applied research into business advantages. Industrial partners should also consider cooperation versus competition to bring transformational technologies to market sooner and more affordably than could be accomplished separately.

Proposals seeking to implement incremental increases in energy efficiency and productivity of conventional manufacturing methods will not be funded under PON 2736. For underutilized, off-the-shelf energy-efficient technologies or incremental improvements to conventional manufacturing methods, implementation incentives are available through NYSERDA's Industrial and Process Efficiency Program [PON 2456](#).

It is important to follow "Proposal Requirements" carefully and answer all questions. When in doubt about eligibility or proposal requirements, contact one of the Project Managers listed on the first page of this PON.

II. Proposal Requirements

- Proposers must submit seven (7) copies of their completed proposal (double-sided preferred) to Roseanne Viscusi at the address indicated on the first page of this PON.
- A completed and signed Proposal Checklist must be attached as the front cover of your proposal, one of which must contain an original signature.
- ***Bindings, report covers, or other presentation materials should not be used (a single staple in the upper left-hand corner is preferred).***
- ***Limit your proposal to 10 pages (12-point font) excluding letters of support, resumes, and NYSERDA forms (Attachments A, B, and C).***
- Do not include unnecessary attachments beyond those sufficient to present a complete, comprehensive, and effective response.
- Each page of the proposal should state the name of the proposer, the PON number, and the page number.
- **Late proposals and proposals lacking the appropriate completed and signed Proposal Checklist will be returned.**
- Faxed or e-mailed copies will not be accepted.

Procurement Lobbying Requirements - State Finance Law sections 139-j and 139-k: Procurement lobbying requirements contained in State Finance Law sections 139-j and 139-k became effective on January 1, 2006. (The text of the laws is available at: <http://www.ogs.ny.gov/aboutogs/regulations/advisoryCouncil/StatutoryReferences.html>). In compliance with §139-j and §139-k of the State Finance Law, for proposals submitted in response to this solicitation that could result in agreements with an annual estimated value in excess of \$15,000, additional forms must be completed and filed with proposals: (1) a signed copy of the Proposal Checklist including required certifications under the State Finance Law and (2) a completed Disclosure of Prior Findings of Non-Responsibility form. Failure to include a signed copy of the Proposal Checklist referenced in this solicitation will disqualify your proposal.

Please provide the information requested in each section below.

Each required section below is followed by questions, which are the criteria by which the Technical Evaluation Panel (TEP) will evaluate your proposal.

1. Executive Summary (one page) - Provide a brief response to each of the following:

- The problem or opportunity you are addressing and its background.
- What you are trying to do to address the problem/opportunity, and how you are going to do it?
- Likely energy, environmental and/or economic benefits to you and New York State.
- Team qualifications.

2. Problem Statement and Proposed Solution – Please discuss:

- The problem or opportunity you are addressing and its background.
- The proposed solution and how it addresses the problem/opportunity, including:
 - description of technology and project;
 - transformative characteristics;
 - current stage of research/development/commercialization;
 - alternative solutions and why the proposed solution is superior, and
 - barriers to success and/or project risks.

Criteria:

- ☐ Are the problem and proposed solution described clearly?
- ☐ Is the concept practical and technically feasible?
- ☐ Is the technology transformative?
- ☐ Is the technology better than other options?

3. Project Benefits:

- Quantify estimated energy benefits anticipated (e.g., kWh, kW, Btu, \$).
- Estimate other benefits, for example:
 - increased: revenue, product quality, productivity, units sold, or new/retained jobs; or
 - decreased: greenhouse gas emissions, maintenance costs, waste, capital, etc.
- Provide a cost/benefit projection.
- Discuss what entity/entities will reap these benefits.
- **Upon conclusion of the project, benefits must be quantified and reported to NYSERDA for five years. Discuss your plan for quantifying the *actual* project benefits.**

Criteria:

- ☐ Are energy benefits significant (for the proposer and New York State)?
- ☐ Are environmental and economic benefits significant for the proposer and New York State?
- ☐ Do estimates of benefits seem reasonable?
- ☐ Is the cost/benefit projection reasonable?
- ☐ Is there a plan to quantify actual benefits after project completion?

Choose 4a (Process Improvement) or 4b (Product Development):

Although feasibility studies may have less detail (than demonstration or commercialization projects) in section 4, we do expect feasibility study proposals to reflect a certain amount of thought into tech transfer or commercialization.

4a. Technology Transfer for Process Improvement Projects:

- Discuss other potential users of your process change in New York State.
- Discuss your plan to transfer project results to this audience (e.g., on-site public demonstrations; presentations at appropriate meetings; preparation of fact sheets, articles or case studies; etc.).

Criteria:

- ☐ Is the technology transfer plan adequate to disseminate appropriate information to the appropriate New York State audience?

4b. Commercialization Plan for Product Development Projects:

- Provide a timeline showing the paths, activities, milestones, resources, cost and timing estimated to take the technology from its current state of development to the next stage, and ultimately to commercial deployment.

Criteria:

- ☐ How likely is it that this product will be commercially viable in 3 years or less?

Marketing:

- Define your target markets (in and outside of NYS) and their relevant characteristics, e.g., size, competition, trends (regulatory, technological, etc.).
- Discuss your marketing strategy to these markets and why you think it will be successful.
- Estimate the price of the product or service that will be commercialized and compare the price to that of competing products or services.
- Discuss the customer's economic motivation for buying the new product or service, versus alternatives.

Criteria:

- ☐ Is there market demand for the product?
- ☐ Does the proposed market strategy seem effective?

Design & Production:

- Discuss technical development steps remaining prior to starting manufacturing or deployment.
- Discuss plans for setting up facilities for manufacturing or other deployment activities, including key issues such as: need for specialized production equipment or strategic alliances; critical make/buy decisions or cost/volume issues; and plans for ancillary activities such as service support functions.

Criteria:

- ☐ Does design & production plan seem adequate?

Finance:

- Estimate funds required to go from the current stage of development to a financially self-sustaining level of commercialization; include funding for R&D, initial marketing, and manufacturing/deployment programs. Identify potential funding sources and strategic partners.

Criteria:

- ☐ Is funding adequate to achieve plan?

5. Scope of Work and Schedule:

- **Describe each task required** to accomplish goals and who will perform each task; *and*
- Prepare a schedule of when each task will be performed, milestones and budget for each milestone, using the format below (add as many lines as necessary; give total on bottom line):

Milestone Description	Labor (hours)	Labor (\$)	Materials & Equipment (\$)	Other (\$)	Total (\$)	Start Date	End Date

Total milestone budget should be the same as the total budget on the Contract Pricing Proposal Form.

Criteria:

- ☐ Is the approach likely to meet the proposal's goals?
- ☐ Is the schedule reasonable?
- ☐ Does the statement of work include tasks for:
 - ☐ technology transfer (for process improvements) or commercialization (for product development), *and*
 - ☐ quantification of benefits, including methodology?

6. Cost Sharing:

- The proposal should show non-NYSERDA funding of **at least 50%** of the total cost of the project. Cost sharing can be from the proposer, other team members, and other government or private 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.
- NYSERDA will not fund efforts that have already been undertaken. The proposing team cannot claim as cost-share any expenses that have already been incurred.
- Show the cost-sharing plan in the following format (expand table as needed).

Source	Cash	In-Kind Contributions	Total
NYSERDA	\$		\$
Proposer	\$	\$	\$
Others (list individually)	\$	\$	\$
Total	\$	\$	\$

If you include indirect costs in your budget, you MUST attach supporting documentation to support indirect costs and/or (overhead) rate(s) in your proposal as follows:

1. Describe the basis for the rates proposed (i.e., based on prior period actual results; based on projections; based on federal government or other independently approved rates).
2. If rate(s) is approved by an independent organization, such as the federal government, provide a copy of such approval.
3. 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 rate(s) is consistent with generally accepted accounting principles for indirect costs.

NYSERDA reserves the right to audit indirect rates presented in the proposal and adjust for differences. Requests for financial statements or other financial information may be made if deemed necessary.

Product developers may be required to repay NYSERDA through a royalty agreement.

Criteria:

- ☐ Does the level, type and source of cost sharing indicate a sufficient commitment to the project by the proposer and proposing team?

7. Budget - Complete the **Contract Pricing Proposal Form** (Attachment C) (see CPPF instructions). Indicate requested NYSERDA funding in the column labeled "Funding & Co-funding via NYSERDA." Include non-NYSERDA cash and in-kind contributions in the column labeled "Cost-sharing and other co-funding."

Criteria:

- ☐ Is cost reasonable when measured against project goal, scope of work, and expected benefits?
- ☐ Are costs clearly specified?

8. Business Description:

- Describe your business: number of employees; what you produce and how much per year, or what services you provide; what kind of facilities you have; how many locations you have, whether you are part of a larger organization, and total revenues for 2012.
- Discuss how much of your revenues resulted from sales, grants and other sources (identify).
- Identify any investments from, or discussions with, venture capital firms, investment bankers, etc.
- If your proposed project involves additional demonstration sites, identify the site(s) (location, facilities, product, employees, revenues, etc.).

Criteria:

- ☐ Is the business financially sound?

9. Project Team:

- List team members, including the project manager, subcontractors, other participants and cofunders involved in the project.
 - Explain their roles and responsibilities.
 - Describe qualifications and relevant experience or expertise.
- Identify any special facility, equipment or capability possessed by project participants that is relevant to the project.

Criteria:

- ☐ Does the project team have the qualifications and resources needed to succeed?

10. Letters of Commitment or Support:

- If other organizations or businesses are doing some of the work, providing services or equipment, serving as a demonstration site, or share in the non-NYSERDA cost, include a signed letter from that organization or business (on their letterhead) describing their commitment (**include cash/in-kind dollar commitment if applicable**). If you are developing a product, include letters of interest from potential customers.

Criteria:

- ☐ If applicable, do letters of support exist and do they reflect the level of involvement (e.g., co-funding, potential interest in buying product, services, etc.) from the supporter(s)/potential customer(s)/ partner(s)?

OTHER CONSIDERATIONS

Proposals will be reviewed to determine if they reflect NYSERDA's overall objectives, including: risk vs. reward relationships, potential for complementing similar ongoing or completed projects, the general distribution of NYSERDA projects among organizations, and the distribution of projects within New York State.

V. GENERAL CONDITIONS

Proprietary Information - Careful consideration should be given before confidential information is submitted to NYSEDA 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 NYSEDA 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 NYSEDA 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 exempt it from disclosure, including a written statement of the reasons why the information should be exempted. 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/NYSEDARegulations.ashx>. However, NYSEDA 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, sub-contractors, 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 - NYSEDA 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 Non-responsibility 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 - NYSEDA is required to comply with the provisions of Tax Law Section 5-a, which requires a prospective contractor, prior to entering an agreement with NYSEDA 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 NYSEDA, the prospective contractor must also certify to NYSEDA 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 NYSEDA. See, ST-220-CA (available at http://www.tax.ny.gov/pdf/current_forms/st/st220ca_fill_in.pdf). The Department has developed guidance for contractors which is available at <http://www.tax.ny.gov/pdf/publications/sales/pub223.pdf>.

Contract Award - NYSEDA anticipates making one or more 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 offer should be submitted using the most favorable cost and technical terms. NYSEDA may request additional data or material to support applications. NYSEDA will use the Sample Agreement to contract successful proposals. NYSEDA 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. NYSEDA expects to notify proposers in approximately eight weeks from the proposal due date whether your proposal has been selected to receive an award. NYSEDA may decline to contract with awardees that are delinquent with respect to any obligation under any previous or active NYSEDA agreement.

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

Recoupment - For any new product development projects requesting NYSERDA funding over \$50,000, NYSERDA will require a royalty based on sales of the new product developed. For feasibility studies over \$50,000 involving Product Development activities, if subsequent funds are awarded for a commercialization effort, at NYSERDA's discretion the contract for the commercialization phase may include a provision for recoupment of the feasibility study funds in addition to a provision for recoupment of the commercialization phase funds. NYSERDA's standard royalty terms are 1.5% of sales for products produced in New York State (for a period of fifteen years or until the Contractor pays NYSERDA an amount equal to the amount of funds paid by NYSERDA to the Contractor, whichever comes first) and 5% of sales for products produced outside of New York State (for a period of fifteen years or until the Contractor pays NYSERDA an amount equal to three times the amount of funds paid by NYSERDA to the Contractor, whichever comes first).

Attachments

Attachment A: Proposal Checklist

Attachment B: Disclosure of Prior Findings of Non-responsibility Form

Attachment C-1: Contract Pricing Proposal Form (CPPF)

Attachment C-2: CPPF Instructions

Attachment D: Sample Agreement

Attachment E: Solicitation Marketing Questionnaire

Attachment F: Sample Metrics Reporting Guide