



Advanced Clean Energy (ACE) Exploratory Research  
Program Opportunity Notice (PON) 3249 Concept Paper

Applications accepted through November 30, 2018 by 5:00 PM Eastern  
Time or until all funds are committed \*

**Approximately \$3 Million\* Available**

**Summary/Concept Papers**

The Advanced Clean Energy Exploratory Research Program (ACE Program) invites proposals for applied research projects that will explore and develop new concepts for transformational and disruptive improvements in energy technologies and energy business models. The ACE Program employs a two-step application process. Applicants must initially submit a 4-page concept paper **using the Concept Paper Template** format shown in Attachment A. Following an evaluation, NYSERDA may invite an applicant whose project concept has been selected for further consideration to submit a more extensive “Full Proposal.” Concept Papers must be **received by NYSERDA** on or before 5:00 PM on November 30, 2018.

Eligibility under the ACE Program is limited to proposals that: (1) support the Clean Energy Fund goals (see Introduction, below), and (2) for which, at the time of submittal of a Concept Paper, there is no current or upcoming NYSERDA solicitation for which the proposal would be eligible. A listing of the Current and Upcoming (expected to open within 12 months) Focus Area Topics can be found in Attachment C.

The ACE Program also provides an opportunity for the submittal of Concept Papers requesting a NYSERDA funding commitment for inclusion in a proposal submission to a competitive federal opportunity, such as Advanced Research Projects Agency (ARPA-e). Concept Papers submitted for this purpose must support the Clean Energy Fund goals, but are **NOT** subject to the “Current and Upcoming Focus Area Topics” restrictions under (2) above.

Awards based on Full Proposals will support contract research of innovative concepts, providing NYSERDA with information useful for the subsequent development of focused technology development programs or proof-of-concept research to develop a unique concept. Up to \$1 million of NYSERDA funding is available per project. Efforts requesting more than \$250,000 of NYSERDA funds will be phase funded.

\* NYSERDA may at its discretion elect to extend and/or add funds to this solicitation.

**Concept Paper Submission:** Electronic submission is preferable. NYSERDA will also accept Concept Paper submittals by mail or hand-delivery. If submitting electronically, proposers must submit in either PDF or MS Word format. Proposal PDFs should be searchable and should be created

by direct conversion from MS Word, or other conversion utility, rather than scanning. For ease of identification, all electronic files must be named using the proposer's entity name in the title of the document. Proposals may be submitted electronically by following the link for electronic submissions found on this solicitations webpage, which is located in the "Current Opportunities" section of NYSERDA's website (<http://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities.aspx>).

Instructions for submitting electronically are located in Attachment B to this solicitation. If mailing or hand-delivering, proposers must submit two (2) paper copies of their proposal with a completed and signed Proposal Checklist, along with a CD or DVD containing both a PDF and a MS Word digital copy of the proposal, following the above guidelines. Mailed or hand-delivered proposals must be clearly labeled and submitted to:

**Jill Baxter, PON 3249**  
**New York State Energy Research and Development Authority**  
**17 Columbia Circle, Albany, NY 12203-6399**

If you have technical questions concerning this solicitation, contact Richard Drake (518) 862-1090 ext. 3258 ([richard.drake@nyserda.ny.gov](mailto:richard.drake@nyserda.ny.gov)). If you have contractual questions concerning this solicitation contact Nancy Marucci at (518) 862-1090 ext. 3335 ([nancy.marucci@nyserda.ny.gov](mailto:nancy.marucci@nyserda.ny.gov)).

No communication intended to influence this procurement is permitted except by contacting Richard Drake (Designated Contact) at (518) 862-1090 ext. 3258. Contacting anyone other than this Designated Contact (either directly by the proposer or through a lobbyist or other person acting on the proposers behalf) in an attempt to influence the procurement may result in a proposer being deemed a non-responsive offerer and may result in the proposer not being awarded a contract.

## **I. Introduction**

The goals of the Clean Energy Fund (CEF), as approved by the NYS Public Service Commission, are to complement the Commission's Reforming the Energy Vision (REV) initiative by pursuing three long-term outcomes: thriving and self-sustaining clean energy industries able to operate without subsidies; greater levels of private capital invested in clean energy and jobs in New York; and significant reductions in greenhouse gas (GHG) emissions from the state's energy sector. The CEF will help to enable the full realization and maximization of the economic opportunity presented by REV. More information about the CEF is available at <http://www.nyserda.ny.gov/><sup>1</sup>

The ACE Program is intended to augment the CEF by supporting the exploration and development of innovative new concepts for transformational and disruptive improvements in energy technology and business models that would, if successful, result in the achievement of significant improvements in energy utilization, GHG emissions, grid resiliency and utilization. Program awards will take the form of contracts for applied research, providing NYSERDA with information useful for the subsequent

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<sup>1</sup> See also and <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-m-0094&submit=Search+by+Case+Number>

For more information about REV see <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/CC4F2EFA3A23551585257DEA007DCFE2?OpenDocument>

development of focused technology development programs or proof-of-concept research to develop a unique concept not currently supported or covered by other NYSERDA programs.

Eligibility under the ACE Program is limited to proposals that: (1) support the Clean Energy Fund goals, and (2) for which, at the time of submittal of a Concept Paper, there is no current or upcoming NYSERDA solicitation for which the proposal would be eligible. A listing of the Current and Upcoming (expected to open within 12 months) Focus Area Topics can be found at Attachment C.

Projects will be evaluated on the basis of their potential energy, environmental and economic development benefits and their ability to achieve defined goals and outcomes within the scope of the NYSERDA investment. Up to \$1 million of NYSERDA funding is available per project based on a Full Proposal. Efforts requesting more than \$250,000 of NYSERDA funds will be phase funded. The maximum anticipated project duration is 36 months, and matching contractor co-funding is preferred.

Applicants must submit a four-page Concept Paper (in the form provided as the Concept Paper Template, see Attachment A). Following an evaluation, NYSERDA may invite applicants whose project concepts have been selected for further consideration to submit a Full Proposal; NYSERDA will provide, at the time of such invitation, instructions as to additional questions to be answered and information to be provided to NYSERDA, customized to the concept. The Full Proposal preparation requirements and evaluation process are described in the “Full Proposals” document, Part 2 of PON 3249 which can be found on the ACE program webpage.

Electronic submission of Concept Papers is encouraged. Instructions for submitting Electronic Proposals can be found in Attachment B. This solicitation will remain open until November 30, 2018 or until all funds are committed. Concept Papers will be evaluated on a rolling basis, as received. The purpose of an ongoing solicitation process is to ensure that all potential contractors and partners have an opportunity to propose in a timely manner meeting their individual needs.

## Eligibility

### **1. *Eligible Applicants***

Entities including universities, for-profit and not-for-profit businesses are eligible to apply as a stand-alone proposer or as the lead of a project team. Government (Federal, State, and Local) entities are eligible to participate on a project team but not as a stand-alone applicant.

### **2. *Eligible Technologies/Concepts***

This program is available to support all innovative approaches to achieving New York State’s energy goals of: reduced greenhouse gas emissions, improved performance and utilization of renewable generation, improved transportation system performance, greater customer choice and realization of outcomes envisioned through the Reforming the Energy Vision (“REV”) proceeding.

Eligibility is limited to projects that are not supported under a Current or Upcoming NYSERDA program or solicitation. Should NYSERDA determine that a proposal is not eligible under the ACE Program because a current or pending opportunity exists the applicant will be directed to the appropriate NYSERDA contact for information regarding that opportunity. Should a separate NYSERDA opportunity become available for which a proposal is eligible after the concept paper is submitted the

proposer may be provided with the opportunity to withdraw the proposal from the ACE Program and submit it under that opportunity.

## II. Concept Papers

### Submitting a Concept Paper

**1. Prior to Submittal.** Prior to submitting a Concept Paper to this solicitation, applicants may communicate with NYSERDA's Designated Contact to discuss their research concept and its potential eligibility and responsiveness to this solicitation. Potential applicants are **encouraged to contact NYSERDA** (Richard Drake (518) 862-1090 ext. 3258 ([richard.drake@nyserda.ny.gov](mailto:richard.drake@nyserda.ny.gov))) to ascertain (1) whether their concept fits within the Clean Energy Fund goals, and (2) whether, at the time of submittal, there is an Current or Upcoming NYSERDA solicitation for which the proposal would be eligible

**2. Concept Paper Submittal.** Applicants may submit Concept Papers at any time during the open period of this solicitation. Proposers will have the opportunity to resubmit a Concept Paper one time if the initial Concept Proposal is not selected. However, applicants are limited to having one pending Concept Paper before NYSERDA at any one time and will be allowed to submit a maximum of two (2) Concept Papers in any 12 month period. Firms submitting Concept Papers not selected for full proposal submission will receive a short written summary of the results of the review and, subject to **the limitations stated above**, may resubmit the Concept Paper one time as their second submittal during the 12 month period. Additional submittals will be deemed ineligible. Proposers can expect a preliminary response from NYSERDA indicating whether a Concept Paper has been accepted and a Full Proposal can be submitted within 30 business days Once a Concept Paper is submitted, any communications regarding that submission must be through the Designated Contacts.

**3. Content and Form of Concept Papers.** Submission of a Concept Paper is required for initial consideration under this solicitation. Concept Papers must conform to the following requirements:

- Concept Paper submitters are required to use the format of the **Concept Paper Template** application provided as Attachment A. The intent of the template is to lead the proposer through the requirements in an orderly, organized manner, without repeating, or restating necessary information. Accurate completion per the Template (Attachment A) is a requirement of a complete and responsive proposal. Concept Papers using a different format may be deemed unresponsive.
- The Concept Paper Narrative (Attachment A) must be complete. If a required question is not answered, the proposal may be deemed unresponsive and may be returned. The proposer must use the Concept Paper Template Format.
- Concept Papers must be submitted in Adobe PDF format, be written in English, be single spaced, use black 12 point Times New Roman font (except in Figures and Tables), and be formatted to fit on 8.5 inch by 11 inch paper with margins no less than 1 inch;
- Concept Papers shall not exceed four (4) pages in length including graphics, figures, and/or tables;

- Concept Papers must prominently display on each page the Principle Investigator’s Last Name and be completed in accordance with the Electronic Submittal Instructions, Attachment B).

**4. Concept Paper submittals:** Concept Paper narratives (per the template format) are to be submitted, preferably electronically, per the instructions provided in Attachment B, or alternatively by hand or US Mail.

**5. NYSERDA Funding/Endorsement.** The ACE Program also provides an opportunity for the submittal of Concept Papers requesting a NYSERDA funding commitment for inclusion in a proposal submission to a competitive federal opportunity, such as Advanced Research Projects Agency (ARPA-e). Concept Papers submitted for this purpose must support the Clean Energy Fund goals, but are NOT subject to the “Current or Upcoming” restrictions stated under Section I(2) above. Concept Papers seeking NYSERDA funding or endorsement for this purpose must include a link to the relevant federal opportunity.

### **III. Responsiveness Criteria**

The following types of Concept Papers will be deemed **nonresponsive** and/or ineligible and will not be scored.

- Applications that have been submitted in response to other currently issued NYSERDA solicitations, found here: *[insert link]*.
- Applications that are responsive to and fit within a current or upcoming focus area solicitation as identified on Attachment C.
- Applications aimed solely at basic research or focused solely on discovery/or fundamental knowledge generation.
- Applications for large scale, multi-site demonstration projects.
- Application for technologies and approaches that represent small incremental improvements to existing technologies.
- Applications that are not based on sound scientific principles.
- Applications that are not adequately distinct from existing products.
- Applications for advanced technologies that do not have the potential to have significant, measureable and competitive positive impact.

### **IV. Evaluation of Concept Papers**

Concept Papers determined compliant with application procedures and eligible and responsive to the ACE Program will be subject to technical review by technical experts under established NYSERDA merit review procedures. Eligible Concept Papers will be reviewed and scored per the criteria and point system below. **A score of 85 Points or higher must be obtained to receive an invitation to submit a Full Proposal.**

#### **(1) New York State Impact (25 points)**

- Is the proposed approach a transformational (not incremental) advancement over existing solutions which, if successful, will result in truly significant improvements in energy technology and in energy utilization, GHG emission reductions, grid resiliency and utilization in New York State?

- Is the proposed approach likely to enable benefits at scale, that is, if developed, could supplant existing technology and/or create entirely new marketplaces in New York State, stimulating clean technology manufacturing and business growth and improving consumer choice?
- Does the proposed approach fall within this solicitation's Eligibility Criteria (see section I.2.)?
- Is the proposed concept consistent with NYSERDA programmatic goals and mission?

**(2) Innovation (20 Points)**

- Is the proposed approach unique and innovative?
- Is the proposed approach technically sound?
- Is the proposed approach aimed at the development and commercialization of technology or innovative business practice, as opposed to basic research aimed at discovery and fundamental knowledge generation?

**(3) Competitive Landscape and Market Barriers (20 Points)**

- Does the applicant demonstrate an understanding of existing and other emerging solutions?
- Has the market been identified and characterized and are there sufficient markets or needs for the concept/technology, project, or study?
- To what extent has the proposer engaged the market? To what extent does the proposer understand the market?
- How significant are the barriers to market entry or adoption of the concept, product, or technology?
- Is the value proposition sufficient that the concept or technology will likely be successful in the target market?

**(4) Risks and Challenges (15 Points)**

- Does the proposal clearly identify the technical and techno-economic risks and challenges?
- Have key technical challenges been identified and prioritized?
- Is there an understanding of competitive options being developed by others?

**(5) Project Plan (10 Points)**

- Does the proposal clearly outline how the key risks and challenges will be addressed?
- Do the proposed project objectives, if achieved, validate the proposed concept?
- Can the proposed work be reasonably accomplished for the amount of time, effort, and resources proposed?

**(6) Team (10 Points)**

- Does the proposed team have the necessary expertise and resources to carry out the proposed work?

**V. Review and Selection Process**

Selected Concept Paper applicants will be invited to submit Full Proposals. Only those demonstrating significant and clear technical merit and market viability will result in an invitation from NYSERDA to submit a Full Proposal. NYSERDA may (1) choose not to further consider the concept paper; (2) invite the applicant to submit a full proposal; or (3) request that the applicant submit further information to aid NYSERDA in determining technical merit.

Ineligible and nonresponsive Concept Papers will be rejected and not scored.

Notification of whether an applicant is invited to submit a Full Proposal will be sent by email to the technical and administrative points of contact designated on the application cover sheet within 30 business days of submission.

## **VI. Full Proposal Requirements and Contract Award**

Full proposals will be reviewed by an Investment Evaluation Panel (IEP). The IEP may develop specific questions and request that the proposing team make a presentation of their proposed effort addressing those questions. Such a presentation may be conducted by phone or web conference or in person at a mutually agreeable time and location.

See Part 2 of PON 3249 on the ACE Program webpage for a complete description of the Full Proposal submittal process, evaluation criteria, contracting process and rules.

## **VII. 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://www.nyserda.ny.gov/About/-/media/Files/About/Contact/NYSERDA-Regulations.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  
625 Broadway  
Albany, NY 12207

A directory of certified minority- and women-owned business enterprises is available from:

Empire State Development  
Minority and Women's Business Development Division  
625 Broadway  
Albany, NY 12207

**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 new 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** - 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](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 perspective contractor prior to contacting and filed with NYSERDA. *See*, ST-220-CA (available at [www.tax.ny.gov/pdf/current\\_forms/st/st220ca\\_fill\\_in.pdf](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** - 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 offer 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 may at its discretion elect to extend and/or add funds to any project funded through this solicitation. 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 (proposers/applicants) in approximately 4 weeks from the receipt of proposal submission whether your proposal has been selected to receive an award. NYSERDA may decline to contract with awardees that are delinquent with respect to any obligation under any previous or active NYSERDA agreement.

**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.

**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.

#### IV. Attachments:

Attachment A - Concept Paper Template

Attachment B - Instructions for Electronic Proposal Submission

Attachment C - Current/upcoming solicitation areas (topics not eligible)

**Attachment A**  
**Concept Paper Template**  
**PON 3249 Advanced Clean Energy (ACE)**  
**Exploratory Research**  
**PROJECT TITLE (250 characters or less)**

Principal Investigator, Lead Organization  
Mailing Address, Email Address, Phone Number

**1. OVERVIEW**

NYSERDA Contact:	Enter the name of any NYSERDA contact spoken to about the proposed concept prior to applying (if any).
Funding Request:	Enter the funding request in U.S. dollars (no more than \$1,000,000).
Project Duration:	Enter the project duration in months (no longer than 36 months).
Project Abstract:	Write brief abstract (1-3 sentences, 2000 characters or less) that describes the proposed concept, the problem that it solves, and the impact it could have on energy.

**2. IMPACT**

- What is the current NYS energy problem this concept will address?
- If this concept is successful, will it matter? Quantify how this concept will make a positive impact on at least one of the State’s Energy Goals (see Section I.2 of PON 3249 Concept Paper).

**3. INNOVATION**

- What is the new idea or information that will be obtained?
- How does it work? Describe in detail how the new concept works, with no jargon. Use a diagram if appropriate.
- Has this concept been tried before? If so, what new developments will enable a working concept or overcome past failures?

**4. STATE OF THE ART**

- Describe your understanding of the market (your potential customers) you are targeting and the market’s problem or pain point that you are addressing?
- What solution is practiced today? What other competing technologies are being developed?
- Why is the current technology insufficient or undesirable?
- What is the value that your solution will provide over and above current solutions (including the ‘do nothing’) option?
- If successful, how would the proposed technology/work advance the state of the art? To the extent possible, provide quantitative metrics in a table that compares the proposed technology to commercial and other competing technologies.

**5. RISKS AND CHALLENGES**

- What makes the proposed technology/work a significant challenge? What are the technical risks for the proposed concept?
- Does the approach require one or more entirely new innovations to be successful? (e.g.; a never-before-demonstrated fabrication technique, greater-than-previously-shown subcomponent performance, or material property for a yet-unknown material).

- What techno-economic challenges must the proposed technology overcome to be relevant in the marketplace?

## 6. PROJECT PLAN

- What will be accomplished by the end of the project? What are the objectives and performance characteristics of the proposed effort? Indicate the technical goals and anticipated results using appropriate metrics for the project.
- What work will be associated with the proposed effort? (e.g.; algorithm development, prototyping, modeling and simulation, architecture definition, study, etc.).

## 7. TEAM

- What organizations will be involved with the proposed effort and what will each contribute?
- Who are the key team members on the proposed effort? For each key team member, include their name, position, institution, and 1-2 sentences about the skills or experience that make them ideally suited for the proposed effort.

### CONCEPT PAPER TEMPLATE INSTRUCTIONS

#### CONTENT REQUIREMENTS:

- (1) The above Concept Paper template and content provided should be used to prepare Concept Papers.
- (2) Applicants should ensure the accuracy of their Concept Paper by reviewing and/or printing prior to the proposal submission.
- (3) Confidential, proprietary, or privileged information should be indicated by including in the footer of every page the following: "Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure." In addition, every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.
- (4) Delete these template instructions and the prompt questions in Sections 2-7 above prior to submitting Concept Papers.

#### FORMAT REQUIREMENTS:

- (1) Concept Papers must be submitted in Adobe PDF format, be written in English, use black 11 point Times New Roman font, use 8.5 inch by 11 inch paper, be single-spaced, and have margins no less than 1 inch.
- (2) Concept Papers shall not exceed four (4) pages in length including graphics, figures, and/or tables.
- (3) Concept Papers must have the Principle Investigator's (PI's) Last Name in the upper right corner of each page.

**NYSERDA - INSTRUCTIONS FOR SUBMITTING ELECTRONIC PROPOSALS**

**Please read the following instructions before submitting a proposal.**

1. Submit one proposal for each session.
2. Enter your e-mail address and click the “Validate Email” button.
3. You will receive an automatic email containing a link to validate your email address. Click the link to be taken back to the Funding Opportunity to begin the online submission process.
4. Upload as many files as needed, one at a time.
5. The electronic file names should include the proposing entity’s name in the title of the document. The character limit is **100** characters.
6. You may submit Word, Excel, Zip, or PDF files. Individual files should be less than **1GB** file size.
7. PDF files must be searchable and therefore should be converted directly from an electronic document to PDF, rather than scanned.
8. After clicking the “Upload File” button, a list of your files will appear on the web page. You can delete files from this list if needed.
9. After all necessary files have been uploaded; review the list of documents to ensure that your proposal is complete and accurate.
10. Click the “Submit Proposal button.”
11. You will then be brought to a confirmation page listing the files received. Please print and save the confirmation page.
12. An auto-generated confirmation e-mail will be sent to the e-mail address you entered. Please save this e-mail.
13. When choosing to submit files electronically, the award/non-award notification letter will be sent to the e-mail address of the **Primary Contact listed on the Proposal Checklist.**

**Important Reminders:**

1. **The electronic proposal system closes promptly at 5pm Eastern Time on the due date of the solicitation.** Files in process or attempted for submission after 5pm will be locked out of the system. Please allow at least 15-30 minutes to submit proposals.
2. E-mail or facsimile submittals will not be accepted.

**If you make an error:**

If after you click “Submit Proposals” you discover that the document(s) you submitted are incomplete or inaccurate follow these instructions:

1. Start the process over again and **resubmit the entire proposal.** You will receive another confirmation e-mail.
2. Immediately forward both confirmation e-mails (original and resubmission) to [proposals@nyserda.ny.gov](mailto:proposals@nyserda.ny.gov) with the subject line of “**Resubmittal**” and the PON/RFP/RFQ number.
3. NYSERDA will accept the second submission as your proposal. The first submission will be disregarded.

**If you need help:**

If you need help with this electronic proposal submission process, please contact Jill Baxter at [Jillina.Baxter@nyserda.ny.gov](mailto:Jillina.Baxter@nyserda.ny.gov) or 518-862-1090 ext. 3279 and the Program contact listed in the solicitation.

Attachment C, (Last Updated 06-02-2016)  
Current and Upcoming Focus Area Topics (12 months from last update)  
(topics not eligible for the Advanced Clean Energy Program)  
NYSERDA may periodically update this list

Applicants may contact designated Technical Contacts in each area to inquire about eligibility to these solicitations.

**Strategic Area –Transportation- Technical Contact: Adam Ruder 518 862-1090 ext. 3411**

**(1) Electric vehicles**

Projects in this area focus on one of the following concepts:

- Advanced electrification technologies for medium- and heavy-duty vehicles;
- Cost reductions and usability improvements to EV charging stations and station installation procedures
- Business models and partnerships that improve the value proposition of EV battery packs through innovative second-life uses.

**(2) Public Transportation**

Projects in this area focus on one of the following concepts:

- Innovative light-weighting of rail cars;
- Advances in wayside energy storage for capturing and dispensing energy generated from regenerative braking of rail cars;
- Advanced bus efficiency and electrification technologies;
- Approaches to standardize and aggregate energy-saving technology purchases across multiple transit agencies.

**(3) Smart Mobility**

Projects in this area focus on one of the following concepts:

- Smart infrastructure sensing and communication technologies that enable the economically viable implementation of advanced parking or improved traffic flow;
- Connected vehicle technologies that improve traffic efficiency through communication with other vehicles, roadside infrastructure, and/or mobile devices used by pedestrians and bicyclists;
- Hardware/software combinations for connected infrastructure that enable functionality across different open source platforms and operating systems.

**(4) Transportation Demand Management**

Projects in this area focus on one of the following concepts:

- Technologies enabling the improved operability of shared mobility services and the provision of real-time public transportation information;
- Small-scale TDM services, such as car- and bike-sharing provided by a single employer, a multi-family housing complex, or a business improvement district.

## **Strategic Area – Advanced Buildings Technical Contact: Joseph Borowiec 518 862-1090 ext. 3381**

### **(5) Next Generation HVAC**

Projects in this focus area will target activities related to:

- Solutions that improve the value proposition of cold climate heat pumps
- Compressor-less cooling systems that reduce electric demand compared to incumbent solutions while maintaining comparable efficiency, emissions, CapEx, and OpEx.
- Innovative control systems that results in a HVAC load reduction of 25% and enables real time optimization (e.g. arbitrage including dispatching of behind the meter renewables and modulation of HVAC operation)
- Reduction in thermal distribution system losses.
- Alternative/novel cooling methods for low-load Buildings.

### **(6) Smart Buildings**

Projects in this focus area will target activities fostering innovations that:

- Improve communication, control and interoperability between the various building loads, onsite generation, storage, and the Grid.
- Enable energy management, demand resource (DR) capabilities, building to grid interaction (trans active energy), building occupant comfort and productivity, and provide resiliency.

## **Strategic Area- Renewable Generation: Contact Ravi Tetambe; 518 862-1090 ext. 3110**

### **(7) Renewables Value improvement**

Projects in this area will focus on innovations that will increase the economic viability of renewable resources by developing and demonstrating solutions that improve:

- capacity factors,
- energy value,
- balance-of-system hardware costs,
- O&M costs at existing and new sites for solar PV and wind power.

### **(8) Energy Storage Technology & Product Development**

Projects in this area will focus on technologies that will:

- Improve the value proposition and accelerate the adoption of solar PV and wind power renewable technologies by fully monetizing grid benefits via integrating storage at distribution and load side
- Reduce costs of energy storage product hardware and balance of system,
- Increase energy storage product performance and safety Increase grid resiliency and improve grid asset utilization.

### **(9) Water Resources Recovery Facilities- Net Zero Energy**

Projects in this area will focus on activities that will:

- Energy Master Plans developed for the State's largest WRRFs.
- Maximized installation of best practices at the State's largest WRRFs resulting in up to 40% lower energy consumption at the WRRFs
- Reduced costs of installing best practices at large WRRFs.
- Greater utility involvement in large WRRF projects.
- New business models for public private financing of WRRF project.
- Increased generation of on-site energy from biogas resulting in reduction of energy requirements by up to 35%.
- New policies that facilitate interconnection of WRRF DERs to utility grid.
- Improved understanding of regulatory, feedstock supply, and economic issues associated with co-digestion of high strength organic wastes in WRRF AD systems.
- Improved understanding of physical impacts to AD systems associated with co-digestion of high strength organic wastes.
- Increased co-digestion of high strength organic wastes in the State's largest WRRFs.
- Use of low-energy nutrient removal technologies that result in up to 50% lower energy consumption at the largest WRRFs in the State required to perform such treatment.
- Use of low-energy technologies that have shown promise elsewhere to achieve current and anticipated environmental goals set by state and federal regulatory agencies.

**Strategic Area- Smart Grid, Technical Contact: John Saintcross 518 862-1090 Ext. 3384**

**(10) DER Integration and Community Engagement**

Projects in this focus area will target activities leading to the following outcomes:

- Integration of DER at scale
- 5+% increase in system asset utilization
- Expand capabilities of DER to provide grid benefits
- Increased community-scale, resilient energy systems
- Tools to measure and improve resiliency developed and tested
- 

**(11) Smart Grid systems – Efficiency and Performance**

Projects in this focus area will target activities leading to the following outcomes:

- 5+ % increase in asset utilization
- Increased system-wide efficiency (reduced CAPEX and OPEX)
- Reduced transmission congestion
- Improvement in fault prediction, detection and accelerated service restoration
- Reduction in customer outage impacts (number and duration)

**Strategic Area Innovation Capacity, Technical Contact Jeffery Peterson 518 862-1090 ext. 3288**

**(12) Investor Engagement**

Projects in this focus area will build networks that can mobilize early-stage investment capital necessary to commercialize clean energy technologies and produce the following expected outcomes:

- Design and implementation of a program to de-risk venture and growth capital investments in cleantech startup companies through independent, third-party technical (commercialization) and business (market) screening/due diligence support.
- Programmatic and operational support for clean energy incubators in New York State.
- Design and implementation of an Ignition Grant program that would position incubator client companies to better attract and secure sufficient follow-on capital to commercialize cleantech products and bring them to market.