



**Institutionalizing Integrated Solutions Supporting  
Accessible Multimodal Transportation Networks**

**Program Opportunity Notice No. 2881  
\$3,000,000 Available**

**PROPOSALS DUE: May 29<sup>th</sup>, 2014 by 5:00 pm Eastern Daylight Time\***

In partnership with the New York State Department of Transportation (NYSDOT), the New York State Energy Research and Development Authority (NYSERDA) seeks proposals that have the potential to reduce the energy consumption and associated greenhouse gas (GHG) emissions of the existing multi-modal transportation system in New York State. Total available funding is \$3,000,000. All, or none, of the available funding may be awarded.

In funding this solicitation, the sponsors seek to promote an integrated, multi-faceted, energy-efficient, and sustainable transportation system through the identification of innovative strategies, policies, emerging technologies and partnerships, and through useful demonstrations and system designs that validate underutilized commercial products in NY State. Strategies and demonstrations are being sought that have the potential to offer effective transportation choices and sustainable, integrated network designs that enhance connectivity of alternative transportation options resulting in reduced reliance on personal vehicles and the achievement of economies-of-scale that support broader deployment and the maximization of energy security and efficiencies. Proposals should focus on research, results, or strategies that can be transferred and implemented throughout the State to further the objectives of improved energy efficiency and reduced GHGs.

**Proposal Submission:** Proposers must submit twelve (12) paper copies and one (1) electronic media copy (CD) of the proposal in Microsoft Word format (appendices may be in PDF format) with a completed and signed Proposal Checklist (Attachment A) attached to the front of each copy, one of which must contain an original signature. **Proposals must be received by NYSERDA on or before 5 pm on May 29th, 2014.** Proposals must be clearly labeled and submitted to:

**Roseanne Viscusi, PON No. 2881  
NYS Energy Research and Development Authority  
17 Columbia Circle, Albany, NY 12203-6399**

If you have technical questions concerning this solicitation contact Joe Tario at (518) 862-1090, ext. 3215 or [jdt@nyserda.ny.gov](mailto:jdt@nyserda.ny.gov). If you have contractual questions concerning this solicitation, contact Nancy Marucci at (518) 862-1090, ext. 3335 or [nsm@nyserda.ny.gov](mailto:nsm@nyserda.ny.gov).

No communication intended to influence this procurement is permitted except by contacting Joe Tario (Designated Contact) at (518) 862-1090, ext. 3215 or [jdt@nyserda.ny.gov](mailto:jdt@nyserda.ny.gov). Contacting anyone other than this Designated Contact (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 other NYSERDA location other than the address above. If changes are made to this solicitation, notification will be posted on NYSERDA's web site at <http://www.nyserda.ny.gov>.

## ***I. INTRODUCTION***

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The rest of this decade will be a period of change in New York as issues of transportation mobility, reliability, energy-efficiency, sustainability, and resiliency have to be addressed. Against a backdrop of continued demand for a high level of personal mobility and the need to conserve energy in a world of dwindling resources, there is also the recognition that safe and efficient freight transportation is essential to support economic productivity, community well being, and overall sustainability. There is also the recognition that NY's transportation network is vulnerable to the direct and destructive effects of hurricanes, nor'easters, winter storms, and other extreme weather conditions that are occurring with ever increasing severity and frequency. These challenges have overwhelmed the transportation network in ways that have jeopardized NY's mobility, economy, and way of life.

The need exists to adapt the transportation system by better integrating and extending the reach and effectiveness of solutions that improve overall mobility, accessibility, and travel time reliability; mitigate travel congestion; save fuel; and reduce energy use. Adapting to these challenges comes at a time of fiscal constraints that demand the use of better decision making tools and prudence in the way public resources are managed. The need also exists to put in place new processes, concepts, tools, and solutions alongside well-established ones in ways that facilitate greater participation and partnerships by government agencies and the private sector.

New approaches are needed that address transportation mobility, traffic congestion, energy conservation, and sustainability challenges in ways that are equitable, sustain NY's economy, and accommodate future growth. Long-range planning processes as well as short-term pragmatic actions are needed that result in the implementation of multimodal and sustainable strategies. Smarter and more sustainable solutions have to be put in place for moving people and freight and adapting to emerging vulnerabilities that impact the operations of NY's transportation system and health and safety of the traveling public. The bottom line is multi-faceted approaches must be implemented that institutionalize new ways of doing business and transform transportation decision making by focusing on convenient and safe multi-modal travel, accessibility, eco-driving, management of transportation networks, and efficient use of land and energy resources.

The four specific focus areas that will be considered for funding are:

1. Transportation Resiliency and Adapting to Emerging Vulnerabilities;
2. Active Transportation and Demand Management;
3. Integrated Corridor Management; and
4. Freight Transportation and Mobility.

These four focus areas are more fully described in the next section, but project objectives that cut across all four areas might include:

- Partnering to research and develop solutions, strategies, and plans to solve pressing and immediate transportation needs in order to protect NY's travelers and infrastructure.
- Promoting integrated strategies across organizations/modes.
- Managing, reducing, and avoiding congestion by emphasizing multi-modal options and network management through engineering and operational improvements and other strategies
- Providing predictability and capacity increases focused on travel that supports transportation sustainability, energy efficiency, and economic productivity.
- Promoting location efficiency by better integrating transportation and land uses in order to reduce single-occupancy vehicle trips and to shorten average trip length and time.
- Enabling other agencies or communities to replicate project concepts.
- Supporting the customization and enhancement of existing best practice applications or standards targeted to specific local or community settings.

## **II. PROGRAM REQUIREMENTS**

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### **Focus Area 1: Transportation Resiliency and Adapting to Emerging Vulnerabilities.**

Hurricane Sandy was the largest Atlantic hurricane on record, as well as the second-costliest Atlantic hurricane in history, surpassed only by Hurricane Katrina in 2005. As such, it exposed vulnerabilities within the transportation infrastructure. Flooded tunnels, washed out roads and rail tracks, shuttered fuel supply lines, and electricity outages combined to cripple transportation in the NYC metropolitan region for months. After the storm, Governor Cuomo reassured the public that “*we will rebuild the subway system and it will be better than before.*” In a changing climate characterized by more frequent and intense storms, NY’s transportation systems have to be stronger and more resilient, or otherwise risk falling into a costly cycle of perpetual repair as devastating storms hit again.

In response to the recent and unprecedented severe weather events in NY State and the surrounding region, namely, Hurricanes Sandy and Irene and Tropical Storm Lee, Governor Andrew Cuomo introduced two key initiatives:

1. In his 2013 State of the State address, Governor Cuomo introduced NY Rising, calling for immediate steps that protect transportation systems against future storm events and strengthen NY’s fuel delivery system and utilities. For additional information, visit: <http://www.governor.ny.gov/sites/default/themes/governor/sos2013/2013SOSBook.pdf>
2. The NYS 2100 Commission’s Report *Recommendations to Improve the Strength and Resilience of the Empire State’s Infrastructure* examined and evaluated key vulnerabilities in the State’s critical infrastructure systems, recommending actions that should be taken to strengthen and improve the resilience of those systems. Numerous cross-cutting and sector-specific recommendations were made to improve the State’s built (hard) infrastructure, natural (soft) infrastructure, institutions, and information systems. Specific recommendations were made in the transportation and energy areas, among others. These recommendations, if implemented, would provide a broad and resilient framework with the potential to improve the day-to-day functioning of critical systems by creating needed redundancies, enhancing the efficiency of normal operations, and optimizing the benefits of recommended investments. For additional information, visit: <http://www.governor.ny.gov/assets/documents/NYS2100>

The objective of this focus area is to support research initiatives and projects having the potential to increase the resiliency of NY’s multimodal transportation system and its adaptation to emerging vulnerabilities. In addition to strengthening and diversifying infrastructure, transportation resiliency addresses a system’s ability to function before, during, and after major disruptions through reliance upon multiple mobility options. Transportation resiliency is also about evacuation planning, mitigation, response, and recovery. The importance of having a resilient transportation system becomes more apparent during disasters where multiple options for mobility are necessary for moving both passengers and goods due to the potential loss of one or more modes. Because resilient systems are defined by both a set of shared characteristics and particular projects, the use of a resilience framework encourages flexibility and creativity in decision making and implementation. These features are necessary for a system’s ability to withstand and recover from shocks and stresses.

To rectify these key vulnerabilities, proposals may focus on addressing elements such as but not limited to:

- Protecting, upgrading, expanding, and strengthening existing transportation systems, infrastructure, and networks in strategic ways that create redundancies
- Developing and strengthening statewide or region-specific risk assessments of NY’s transportation and energy infrastructure that reduce key vulnerabilities
- Planning, designing, and rebuilding in more sustainable ways (i.e., replacing or enhancing transportation systems or network operations with better options and alternatives)

## ***II. PROGRAM REQUIREMENTS, continued***

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- Encouraging use of 'Green' and 'Natural' infrastructure that protects existing transportation systems and creating new incentive programs to encourage resilient behaviors
- Identifying needs and developing requirements for emergency preparedness planning, management, and evacuation that consider:
  - Institutional guidelines, standards, policies, procedures, coordination, and criteria that promote integrated planning and decision making
  - Engineering, capital improvements and investments, operational requirements, and active transportation and demand management strategies that enhance traffic systems, multi-modal operations, and evacuation planning (e.g., contraflow lanes)
  - Improving data, mapping, visualization, and communication systems that rectify system vulnerabilities
  - Planning, communications, and mobilization for carless and vulnerable populations
  - Interoperability (e.g., creating shared equipment and resource reserves)
  - Coordinated multi-agency responses to emergencies
  - Integrated incident management systems (e.g., mobile devices to report & receive incident information)

### **Focus Area 2: Active Transportation and Demand Management (ATDM).**

The Federal Highway Administration has embarked on an effort to develop and institutionalize ATDM programs in various cities throughout the U.S., including San Diego, Dallas, Seattle, and New York. ATDM is the dynamic management, control, and influence of travel demand, traffic demand, and traffic flow of transportation facilities. Its goal is to better integrate the transportation planning process by balancing the policies, plans, technologies, and resources needed for optimal operations in key transportation and economic corridors. By using existing tools and building upon available assets, ATDM is able to leverage existing capital investments by extending the service life of existing transportation assets. <http://ops.fhwa.dot.gov/atdm/about/program.htm>

ATDM is a collective approach for dynamically managing travel and traffic demand and available capacity of transportation facilities, based on prevailing traffic conditions, using one or a combination of operational strategies that are tailored to real-time and predicted conditions in an integrated fashion. When implemented together and alongside traditional traffic demand management strategies, these operational strategies help maximize the effectiveness and efficiency of transportation facilities and result in improved safety, trip reliability, and throughput. An ATDM philosophy dictates that the full range of available operational strategies be considered including the various ways these strategies can be combined and integrated with existing infrastructure to actively manage the transportation system so as to achieve system performance goals. Strategies include traditional traffic management and ITS technologies as well as new technologies and non-traditional traffic management technologies used outside of the United States.

The objective of this focus area is to integrate active traffic management (ATM), active demand management (ADM), and active parking management (APM), three sets of distinct but complementary strategies that dynamically manage, control, and influence traffic demand, travel demand, and traffic flow on congested highway facilities. These ATDM categories are further defined as:

1. ATM includes a suite of strategies that actively manage traffic on a facility. Some examples include use and deployment of centralized traffic management center controls, fully variable speed limits, dynamic message signing, dynamic shoulder use/hard shoulder running, adaptive ramp metering, dynamic queue warning and merge controls, adaptive traffic signal controls, and variable lane use controls.

## ***II. PROGRAM REQUIREMENTS, continued***

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2. **ADM** includes a suite of strategies intended to redistribute travel demand to alternate modes or routes or to reduce or eliminate travel altogether by changing travel behavior and demand. Active demand management seeks to influence more fluid, daily travel choices in order to support more traditional mode selections. Some examples include use of predictive traveler information systems (e.g., 511 NY) that provide comparative multi-modal travel times displayed to induce in-route mode shifts; on-demand transit; dynamic ridesharing through use of smart phone applications and ride-matching; and dynamic pricing/incentive approaches that increase mass transit and HOV usage.
3. **APM** includes a suite of strategies designed to affect the demand, distribution, availability, and management of parking. Examples include dynamic parking pricing, real time parking availability, and dynamic parking reservation systems.

While a single ATDM approach can be deployed in order to capitalize on a specific benefit, multiple, active strategies produce additional, optimal benefits across the entire transportation system. Proposals can focus on ATDM approaches relying on robust, dynamic, and integrated traffic, travel, and parking management capabilities, addressing such elements as proactive research, technical analysis tool development and guidance, and outreach/training components related to:

- Institutional, organizational, and policy development
- Good analytical planning, research, operations, engineering, and design
- Real-time and forecasted information requirements
- Analysis, data, modeling, and simulation
- Decision support systems development
- Performance measurement, monitoring, and evaluation
- State-of-the-art systems operations, technologies, and strategies
- Implementation, integration, and management across system elements, jurisdictions, and modes
- Business processes, culture, collaboration, and organization/workforce efficiencies capable of managing all of the aforementioned elements

### **Focus Area 3: Integrated Corridor Management (ICM).**

A corollary initiative to ATDM is ICM, the combined application of technologies and a commitment of network partners working together to transform the way corridors are operated and managed. Recent advancements in intelligent transportation systems (ITS) technologies have led to a tremendous opportunity to integrate operations and better manage total corridor capacity. Use of ICM strategies and optimization of NYSDOT's infrastructure is part of a holistic approach that complements its preservation and maintenance-first strategies. By focusing on preserving and optimizing its existing infrastructure, NYSDOT is positioning itself to take advantage of opportunities to operate and optimize entire transportation systems as opposed to single networks. <http://www.its.dot.gov/icms/index.htm>

ICM consists of the operational coordination of multiple transportation networks and cross-network connections comprising a corridor, and the coordination of institutions responsible for corridor mobility. The goal of ICM is to improve mobility, safety, and other transportation objectives for travelers and goods. ICM may result in the deployment of actual transportation management centers (TMCs) connecting the individual network-based transportation management systems or it may just be a set of operational procedures – agreed to by the network owners – with appropriate linkages between their respective systems.

The objective of this focus area is to ensure transportation networks within a larger transportation or economic corridor operate at optimal performance, given the available capacity of each network.



## ***II. PROGRAM REQUIREMENTS, continued***

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ATDM approaches typically need to be applied to realize the vision of ICM. This usually involves the need for operational coordination of multiple transportation networks and cross-network connections comprising a corridor and the coordination of institutional partners responsible for corridor mobility. Partner agencies and stakeholders manage the corridor as an integrated asset in order to improve travel time reliability and predictability; achieve fuel usage reduction goals as specified in the NYS Energy Plan; help manage congestion; scale services appropriately to support emergency transportation operations; and empower commuters and travelers through making available better information and more choices.

Proposals may focus on technology, research, planning, systems operations, and partnerships that maximize transportation system capacity by encompassing several activities including, but not limited to:

- Cooperative and integrated policy among stakeholders responsible for operations
- Concept of operations for corridor management
- Communications among network operators and stakeholders
- Improving efficiencies of cross-network junctions and interfaces
- Mobility opportunities, including shifts to alternate routes and modes
- Joint real-time traffic and transit monitoring at TMCs
- Real-time information distribution (including alternate networks) on a single platform
- Congestion management (recurring and non-recurring)
- Improved incident, travel demand management, growth, and access management
- Incorporation of multiagency construction tools and work zone procedures
- Expansion of pilot adaptive and optimized traffic signal systems
- Priority treatments such as managed use lanes, bus rapid transit, and transit signal priority
- Transportation pricing and payment options, along with public awareness programs

### **Focus Area 4: Freight Transportation and Mobility.**

Trucks transport 70% of all goods by weight in the United States and emit approximately three-quarters of freight GHG emissions. In the past thirty years GHG emissions from freight trucking and the amount of weight shipped by trucks have almost doubled. Millions of tons of goods are shipped through NY's multi-modal gateways on a daily basis. New York is a hub of distribution centers and warehouses in North America, facilitating global supply chains and regional economic value. In recognition of this tremendous growth and the related impacts on energy security, supplies, and economies of scale, NYSDOT and NYSERDA, in association with the Port Authority of New York and New Jersey and numerous other partners and stakeholders, are participating in the development of a proposed regional goods movement program in the NY/NJ metropolitan region. The program recognizes the significance of freight flows within and through the nation's largest metropolitan area and its premier East Coast import/export hub. While generating vital economic benefits for the NY metropolitan region, freight and goods movements place substantial pressure on its complex, congested transportation network. The regional goods movement program seeks to establish a framework and action plan for the identification and prioritization of collaborative, dynamic, creative, and targeted freight strategies and projects. <http://www.panynj.gov/about/studies-reports.html>

Moving travelers efficiently and reliably in New York, especially in its urban areas, is only half the challenge when overcoming traffic congestion and increasing mobility. It's often easy to overlook and lose track of commercial freight movement. Freight transportation and mobility has become increasingly problematic and has created three categories of challenges that have to be overcome:

## ***II. PROGRAM REQUIREMENTS, continued***

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1. 'First and last mile' challenge – similar to getting travelers to use public transportation, this challenge for moving freight is even more problematic, caused by urban congestion and double-parking when trucks aren't well managed during the first and last mile of pick-up and delivery.
2. Environmental mitigation – moving urban freight has contributed significantly to the environmental impacts of freight movements and management and is directly correlated with the current stringent national and state fuel efficiency/emission standards and emissions reductions programs.
3. 'Hub dilemma' – the additional layer of commercial traffic often accruing at NY's ports and rail facilities has contributed to the classic urban freight problem of partly full trucks that take up space on urban roadways.

The objectives of this focus area are to improve the flow and reliability of freight transportation in New York, increase energy efficiency, and reduce the GHG emissions of freight transportation. Dense development patterns have translated into cost and community pressures that have pushed essential distribution and intermodal transfer facilities farther away from customers and direct connections with transportation corridors. Freight movement and mobility has to be a collaborative, dynamic, creative, and targeted process that involves the cooperation of multiple agencies, local governments, and the private sector. Managing and enhancing goods movement lifelines across the state, and especially in the NY metropolitan region, can be achieved and is critical to meeting future economic, sustainability, and livability prospects and goals.

Proposals can focus on vehicles, technology, infrastructure, supply chain operations, logistics, safety and security, governance and policies, modal shifts, funding and finance, land use/environmental connections, public/private partnerships, and community involvement by addressing elements such as but not limited to the following:

- Defining, developing, and managing core regional multimodal freight networks
- Providing network resiliency, redundant capacity, safety, and security of goods moving through supply chains
- Shifting freight traffic away from congested facilities and to off-peak periods
- Employing a systems and operations approach to freight network management with appropriate technology – that is, use 'big data' analytics/insights, artificial intelligence, and innovations in management, supply chain, and operational logistics
- Implementing efficient lane and parking management strategies
- Harmonizing freight network legislation and regulations across jurisdictions and agencies
- Enhancing performance by improving monitoring, measurement, and evaluation tools and methodologies
- Expanding access to capital to enhance freight infrastructure
- Pursuing new and alternative revenue sources to supplement freight investment
- Preserving and improving existing freight properties and their multimodal connections
- Fostering new business models for distribution and consolidation
- Implementing land use or other policies that enhance and support management of core regional freight networks
- Developing and promoting public freight systems management capacity
- Building support for, seeking public/private sector cooperation, and negotiating pacts directly with companies and operators for efficient goods movement among local jurisdictions, business, and labor

## **II. PROGRAM REQUIREMENTS, continued**

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- Prioritizing and incentivizing less carbon-intensive operations
- Incentivizing and promoting sustainable, freight-appropriate land use and development decisions

**Funding Categories.** Five categories of projects will be considered for funding:

Five categories of projects (and maximum NYS support) will be considered for funding:

1. Education and Technology Transfer (\$30,000 max). Outreach activities to advance the awareness of the general public, policy makers, and municipal planning organizations on the issues, consequences, objectives and resources, associated with transportation energy/emissions.
2. Policy Research and Feasibility Studies (\$150,000 max). Analytical research to develop and evaluate new strategies and policies for New York State that have the potential to achieve reductions in transportation energy/emissions.
3. Demonstrations of Underutilized Strategies and Policies (\$200,000 max). Demonstrations that have not been previously deployed in New York State to any significant extent which have the potential to reduce transportation energy/emissions and that require only minor amounts of equipment and/or materials purchased for implementation (< 30% of the total project budget).
4. Integration of Existing Mobility Strategies Through Collaborative Partnerships (\$300,000 max). Larger collaborations that incorporate numerous and diverse public and private entities working together to reduce transportation energy/emissions.
5. Demonstrations of Underutilized Commercial Technologies (\$500,000 max). Demonstrations that have not been previously deployed in New York State to any significant extent which have the potential to reduce transportation energy/emissions and that require significant amounts of equipment and/or materials purchased for implementation (> 30% of the total project budget).

Category 1 will help fund outreach activities and materials, including workshops, webinars, publications, guidebooks, and brochures. Outreach may focus on implementing new strategies or technologies, as well as seek to modify the behavior of NY State residents.

Category 2 is designed to fund specific plans and studies, which may or may not include field and/or market data collection. Plans and studies may comprise feasibility assessments, engineering studies, and related analysis necessary to establish the energy, environmental, and additional benefits of a relevant policy, strategy, product or technology. Examples of additional benefits include financial impacts, as well as potential impacts in the areas of operations, maintenance, safety, reliability, mobility, and security.

Category 3 seeks to demonstrate underutilized strategies, plans, and policies, which have been proven to be effective elsewhere, nationally or internationally. The intent, however, is to replicate fundamental changes in system operations, which can be readily implemented without major equipment expenditures. For this category, proposed purchases of materials and equipment are limited to 30% of the total project budget.

Examples of qualifying Category 3 demonstration proposals might include: a) improved data collection, analysis, and dissemination capabilities related to the value of emergency preparedness, mitigation, and evacuation; b) ADM strategies such as dynamic ridesharing, on-demand transit, dynamic pricing, predictive traveler information, and route and departure time diversion programs; c) ATM strategies such as dynamic lane use/shoulder controls, dynamic speed limits, queue warnings; and d) innovative freight delivery strategies such as shifting traffic on congested facilities to off-peak periods, identifying solutions for more efficient first mile/last mile pickups and deliveries, implementing efficient intra-urban lane and parking management strategies, employing a systems approach to freight network management with appropriate ITS architecture and technology, and fostering new business models for distribution and consolidation that yield optimal returns on investment.



## ***II. PROGRAM REQUIREMENTS, continued***

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Category 4 seeks to support and implement larger Collaborative Partnerships that integrate and leverage across modes, strategies, agencies, and sectors. Innovations and opportunities are rapidly evolving and encompassing numerous aspects of commuting and traveling, urban goods movement and supply chain management, telecommunications, use of wireless technologies, e-business and social media, real estate and land use patterns, and design (products, services, technologies, and community). The quality of the Collaborative Partnership is as important as the transportation issue being addressed and proposers should establish diverse, innovative collaborations exploring social and business opportunities, as well as the emerging strategies and technologies being deployed. Examples of Collaborative Partnerships are transportation management associations (TMAs), which are non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center, or industrial park. TMAs are generally public-private partnerships consisting of area businesses with local government support.

Category 5 is similar to Category 3, but differs in the amount of materials and equipment required to be procured for the demonstration. Category 5 is designed to fund the limited demonstration of existing underutilized commercial technologies that have been successfully deployed in other states or countries, but have not been previously deployed in NY State to any significant extent. In contrast to Category 3, it is recognized that significant procurement of material and equipment may be necessary. This category is aimed at finding new and emerging “best practices,” which have yet to be significantly deployed in NY State. The intent is not to research the existing technology per se, but to quantify and validate potential benefits and identify specific barriers to adoption for NY State.

Category 3 and 5 proposers will be required to establish that their proposed strategy or technology is truly underutilized in NY State. Proposers should conduct a review of available literature, news articles, and internet sites and published studies to present a convincing case for the value in a NY State demonstration.

Category 5 proposers will be required to establish that the transportation technology is fully commercial and that no significant product development is required. Transportation technologies requiring additional product development should be proposed to NYSERDA’s Advanced Transportation Technologies solicitation, which is issued annually and specifically targets transportation product development. A commercial technology is defined to be a product, such as an item, material, component, subsystem, or system, applicable to transportation and sold or traded in reasonable quantities on the open market within the course of normal business operations at prices based on established catalog or market prices with industry-standard deliveries, terms, and warranties.

**Project Scope.** To be selected for funding, proposals must:

- Offer readily quantifiable reductions in transportation energy and GHG emissions in NY State
- Emphasize the ultimate deployment of technical solutions rather than conducting basic research
- Document accessibility, sustainability, mobility, reliability, environmental, economic, safety and/or security benefits in NY State
- Be consistent with metropolitan transportation plans in NY State and with transportation-related regulations at the federal or state level
- Provide the minimum required amount of cost-sharing by the proposer or third parties in the form of cash or in-kind labor, materials, equipment, facilities, and other resources, subject to reasonable and verifiable valuation. Co-funding may be from the proposer or other private or government sources. NY State funds cannot be used to reimburse or replace normal expenses of other government organizations.

## ***II. PROGRAM REQUIREMENTS, continued***

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Due to the objectives of PON 2881, teaming arrangements are not only encouraged but may be necessary to achieve project success. Proposal teams may include commercial firms, industry associations or research organizations, universities, government agencies, end-users, and other stakeholders. Letters of Commitment from each identified team member should be included in an appendix to the proposal. The lack of such letters, especially in cases where co-funding is indicated, is viewed as a very serious proposal deficiency and will be judged accordingly in the technical evaluation process.

## ***III. PROPOSAL REQUIREMENTS***

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Total proposal length should not exceed 20 pages, plus resumes, company qualifications, and ancillary information in an appendix. Double-sided printing is preferred and suggested page limits for each section are provided below in parentheses. Rigid bindings and other elaborate presentation material should not be used - a single staple in the upper left corner is preferred. Your goal as a proposer should be to concisely present the information needed to fully address the evaluation criteria (see Section IV). Proposals that grossly exceed the page limits or fail to follow the format guidelines may be rejected as non-responsive.

Proposers must submit the appropriate number of copies of the completed proposal 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, one of which must contain an original signature. **Proposals must be received by NYSERDA on or before 5 pm on May 29<sup>th</sup>, 2014. Late proposals will be returned and proposals lacking the appropriate completed and signed Proposal Checklist will be returned. Faxed or e-mailed copies will not be accepted.**

Proposals should not be excessively long or submitted in an elaborate format that includes expensive binders or graphics. Unnecessary attachments beyond those sufficient to present a complete, comprehensive, and effective response will not influence the evaluation of the proposal. Each page of the proposal should state the name of the proposer, the PON number, and the page number. The proposal must be in the following format and should present the items in the sequence indicated below.

**Proposal Sections.** Sections of your proposal should be as follows and assembled in the order indicated:

**1. Proposal Checklist.** Complete the specific Proposal Checklist attached as part of this PON (Attachment A), and include it as the front cover of the original and each copy of the proposal. Note the following:

- Indicate whether you accept the standard terms and conditions as contained in the attached Sample Agreement. If you do not accept the standard terms and conditions, provide alternate terms with justification based on the risk and benefit to NY State. NYSERDA reserves the right to consider only exceptions to terms that are specifically included with the proposal. Any negotiation of terms will be at NYSERDA's sole discretion.
- Do not leave any blanks. If a specific question is not applicable, indicate N/A.
- Be sure the individual signing the Proposal Checklist is authorized to commit the proposer's organization to the proposal as submitted.

**2. 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>.

### **III. PROPOSAL REQUIREMENTS, continued**

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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.

**3. Executive Summary (two pages maximum).** Indicate the Focus Area (1, 2, 3, or 4) and the Funding Category (1, 2, 3, 4, or 5) to which your proposal is being submitted. Briefly summarize the team members, the related problem or opportunity, the proposed solution and its innovative characteristics, and the potential for energy and GHG reductions in NY State. Strictly limit the Executive Summary to two pages and use the following outline: 1.) Team Members; 2.) Background; 3.) Objective and Scope of Proposed Project; and 4.) Project Benefits.

**4. Background and Proposed Approach (two to three pages).** Provide a narrative of the transportation sector being impacted, how it currently operates and what opportunities exist for improvement. Explain fully how the transportation energy and GHGs will be reduced and how the efficiency of the existing NY State transportation system will be enhanced. If applicable, discuss your solution's relevance to any metropolitan transportation plan or transportation-related regulation.

For Category 3 funding, proposers must include a proposal section documenting the NY State underutilization of their strategy. This should include the results of literature reviews and internet scans as previously discussed and contrast NY State to other areas where higher utilization has been achieved.

For Category 5 funding, proposers must include a proposal section documenting the commercial availability and NY State underutilization of their technology. This should include previous sales and deployments, and include client references and contact information. As previously discussed, this solicitation seeks to demonstrate Underutilized Commercial Technologies. Pre-commercial prototypes, requiring additional product development, should be proposed to NYSERDA's annual *Advanced Transportation Technologies* solicitation, which specifically targets transportation product development.

**5. Proposed Statement of Work and Schedule (three to four pages).** The Statement of Work (SOW) is the primary contractual document that outlines work activities and specifies deliverables. It delineates each step required to accomplish the project objectives. Therefore, each 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 description, specific task deliverable(s) must be listed. Be sure to identify the task deliverable, as this will be a measure of your performance. Be clear and specific: concentrate on "how" and not "why". Use "active voice" sentence structure to make clear who is responsible for specific actions. Use the following phrase to start the description of every task and subtask ("The Contractor shall..."). The SOW structure should include:

#### **Task 1.0 Project Management.**

**Subtask 1.1 Subcontracts.** The Contractor shall enter into the following agreements. Describe all required subcontracts, even if the subcontractor is yet to be defined.

**Subtask 1.2 Meetings.** The Contractor shall hold a Kick-Off Meeting, Interim Review Meetings (as warranted), and a Wrap-Up Meeting at the end of the project.

**Subtask 1.3 Progress Reports.** NYSERDA and NYSDOT will expect to receive written monthly or quarterly progress reports, as part of the project management task. These activities should be considered when developing your cost proposal. Such reports shall describe any difficulties encountered during the reporting period and shall include a statement of the Project Director setting forth the cost of the work during the reporting period.

### **III. PROPOSAL REQUIREMENTS, continued**

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Subtask 1.4 Data Collection and Benefit Reporting. For Category 1 and 2 Outreach/Study Projects, NYSERDA will require two brief annual updates on the effectiveness of the information dissemination (e.g. conference presentations, workshops, publications, citations, etc.). A simple, web-based PDF form will be provided for electronic filing (Attachment E1).

For Category 3, 4, and 5 Implementation/Demonstration Projects, the proposal should include a detailed plan to collect data and provide reporting to validate the claimed transportation benefits. Depending on the project, this may require periodic data collection and reporting activities, conducted by the proposer or subcontracted to an unbiased third party. This is an important aspect of a properly-crafted project and it will benefit the proposer and NY State if done properly.

For Category 3, 4, and 5 Implementation/Demonstration Projects, NYSERDA will also require five brief annual updates on the effectiveness and additional replication of the Strategy/Technology. A simple, web-based PDF form will be provided for electronic filing (Attachment E2 for a finite demonstration or E3 for an ongoing business development).

Additionally, NYSERDA may retain an independent third party to evaluate the results of funded projects in selected areas of interest. Upon such a request from NYSERDA, the Contractor shall make available project files and data for evaluation for a period of time not to exceed 5 years.

Subtask 1.5 Final Report. The Final Report is a significant project deliverable and should detail all of the work performed and task deliverables, but exclude proprietary information. The comprehensive Final Report shall cover all aspects of the project and shall merge together, and build further on, the previously generated monthly progress and benefit reports. Although not onerous, NYSERDA, NYSDOT and FHWA each have elements of required report formats, which need to be satisfied and which will be provided to successful proposers at the start of the project.

Task 2.0, 3.0, 4.0, etc. Project-specific Work Scope Tasks. Add as many tasks and subtasks as necessary to cover all actions needed to achieve the goals and objectives of the project. Each task should include a concise narrative description of the work that will be performed and how the work will be performed and specific deliverables to be provided. Typical tasks may include, but are not limited to, requirements definition, preliminary design, field testing, final design, and demonstration.

Schedule. Present a work schedule with a starting point and duration for each task and subtask. Presentation of the schedule in a table or bar chart is preferred starting with "Month 1," "Month 2," etc. along the top horizontally with tasks and subtasks running vertically down the left hand side.

**6. Proposer Qualifications (two to three pages).** Provide an overview of the relevant qualifications of the proposer, other team members and major subcontractors. Note that 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 (see Att. D: Sample Agreement). Resumes, facility qualifications, and data sheets do not belong in the body of the proposal, but should be included in the appendix. Key individuals identified in the proposal need to be available to commit to the project in the time frame proposed and subsequent personnel substitutions will require NY State approval. Additionally, discuss any NYSDOT and/or NYSERDA contracts awarded to the proposer in the past five years and identify the associated NY State project managers.

To the extent that proposed Category 5 activities include the use of any existing intellectual property (IP) assets, the proposer must describe the IP and provide details that would identify any granted patents or pending applications related to the IP. If the proposer does not own the relevant IP, but is a licensee of the IP, then the proposal must specifically identify and describe any relevant license agreements. Proposers are encouraged to provide copies of relevant IP license agreement(s) and/or letter(s) of support from licensors as attachments to the proposal. To the extent any of the above represents non-public information, please refer to the "Proprietary Information" section in Article V below.

**III. PROPOSAL REQUIREMENTS, continued**

**7. Project Benefits (one to two pages).** Discuss how the proposed project will reduce transportation energy and GHG emissions in NY State and provide estimates of the potential improvement. Quantify any additional project benefits to the extent possible: mobility and reliability benefits (e.g., congestion reduction, number of people or goods shifting to more efficient transportation modes, amount of travel variability reduced, etc.), environmental benefits (e.g., emission reductions, elimination of hazardous materials, etc.), economic benefits (e.g., jobs created or retained, reduced transportation system life-cycle costs, enhanced viability of NY State businesses, etc.), safety and security benefits (e.g., reduction in deaths, injuries and real property losses, etc.), and other benefits (e.g., lowering the cost of compliance with State or Federal regulations, enhanced quality of life issues, etc.)

**8. Budget.** A Contract Pricing Proposal Form (CPPF), with associated instructions, is provided as Attachment C to this PON. Each proposal must include a completed CPPF and also a cost-sharing table (see example below) identifying the allocation of funding by task. The net cost to NY State is one of the evaluation criteria and will be closely considered. The value of NY State funds could be reduced through greater efficiencies or through cost sharing where other funds substitute for NY State funds.

**Cost Sharing.** All proposals must provide non-NYS funding as cost share and this shall be an important evaluation criteria. Category 2 proposals seeking more than \$100,000 of NYS funds and Category 5 proposals seeking more than \$350,000 of NYS funds are required to provide a minimum of 35% of the total project cost as cost share. All other proposals must provide a minimum of 25% of the total project cost as cost share. Cost sharing can be from the proposer, other team members, other non-NYS government resources, or private sources. For example, proposals seeking \$75,000 of NYS funds are required to provide a minimum of \$25,000 in cost share, which is 25% of the total project cost of \$100,000. The proposer cannot claim as cost-share any expenses that have already been incurred and NYS funds cannot be used to reimburse or replace normal expenses of other government organizations.

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. For example, labor may be provided at discount rates, while products for commercial demonstration may be provided at a significant discount or "at cost" to the project. It is the responsibility of the proposer to adequately document the level of cost share being provided from all sources. If funded, the proposer will also need to provide cost share documentation with each invoice submitted. NY State funds will not pay for efforts that have already been undertaken. The proposer or proposing team cannot claim as cost-share any expenses that have already been incurred.

Show the cost sharing plan in the following format within your proposal (expand as needed).

PROPOSAL COST SHARING TABLE						
Proposed Funding By Task (Cash and In-Kind)					Project Total	
Funding Source	Task 1 (\$)	Task 2 (\$)	Task 3 (\$)	...	Cash (\$)	In-Kind (\$)
NY State						
Proposer						
Co-Funder (identify)						
Co-Funder (identify)						
Task Total (\$)						

**Indirect Costs.** Attach supporting documentation to support indirect cost (overhead) rate(s) included in your proposal as follows:

- 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).

### ***III. PROPOSAL REQUIREMENTS, continued***

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- 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) are consistent with generally accepted accounting principles for indirect costs.

NYSERDA reserves the right to audit any indirect rate presented in the proposal and to make adjustment, if warranted. Requests for financial statements or other financial information may be made if deemed necessary.

**9. Annual Metrics Reports.** If awarded, the proposer will be required to submit to NYSERDA's Project Manager on an annual basis, 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 is executed. Reports shall be submitted by January 31 for the previous calendar year's activities (i.e. reporting period). Please see Attachments E1, E2, and E3: Sample Metrics Reporting Guides for the metrics that you will be expected to provide and the reporting duration. NYSERDA may decline to contract with awardees that are delinquent with respect to metrics reporting for any previous or active NYSERDA agreement.

**10. Appendices.** Include any resumes, company qualifications, or ancillary information which is deemed necessary to support your proposal. As appropriate, also include:

**Letters of Commitment.** If you are relying on any other organization to provide services, equipment or cost share, include a letter from that organization describing its planned participation. Where appropriate, proposed field demonstrations should include Letters of Commitment from the host site or vehicle fleet owner. Absence of Letters of Commitment will be interpreted as the proposer not having support from the identified parties.

**Letters of Support.** Also include Letters of Support from other organizations that are not on the Project Team, but that are critical to the success of the project. However, due to their active sponsorship of this solicitation, Letters of Support should not be solicited from NYSDOT or NYSERDA personnel. Credible Letters of Support carry considerable weight in the evaluation process.

### ***IV. PROPOSAL EVALUATION***

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**Requirements.** Proposals will be reviewed by a Technical Evaluation Panel (TEP) and will be scored and ranked according to the Evaluation Criteria listed below. A negative response to any one of the questions identified below may eliminate the proposal from further consideration. Does the proposal:

- ✓ Have the potential to reduce transportation energy and GHG emissions in NY State?
- ✓ Adequately document the commercial availability and/or underutilization of the technology/strategy to be demonstrated?
- ✓ Provide the minimum required amount of cost share by the proposer or third parties?
- ✓ Provide additional mobility and reliability, environmental, economic, safety and security benefits in NY State?
- ✓ Provide Letters of Commitment/Support from all co-funders/key stakeholders?

All five funding categories will be evaluated together. 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. The proposer



#### ***IV. PROPOSAL EVALUATION, continued***

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will be required to submit a detailed statement of work, budget, and schedule, and may be asked to address specific questions or recommendations of the TEP before contract award.

##### **Evaluation Criteria.**

- **Proposed Solution/Scope.** How significant is the issue or opportunity for NY State? Is the proposed concept likely to be adopted and have the potential to reduce transportation energy and GHG emissions in NY State? If a demonstration, is the technology/strategy truly commercial and/or underutilized in NY State? Is the proposed work plan technically feasible, innovative, and superior to potential alternatives?
- **Project Benefits.** How significant is the statewide potential for transportation energy and GHG reductions in NY State? Are the expected benefits likely to be realized, given other constraints or barriers? Are there additional significant mobility, reliability, environmental, economic, safety, and security benefits? If adopted, will there be economic benefits in NY State in the form of subsequent manufacturing or technical service activity?
- **Proposer(s).** To what degree does the team have relevant and necessary technical and business background and experience? If a Collaborative Partnership, is it truly significant? Does the team include NY State businesses, thereby providing economic benefits in the form of jobs? Does the proposal contain Letters of Commitment from all essential participants, co-funders, and related businesses and other organizations?
- **Project Outcome and Cost.** Is the overall project cost justified based on the expected benefits? Relative to the project cost, how significant are the potential benefits? Has the minimum cost share requirement (25% or 35%) been met? How appropriate are the proposer's cost share contributions (sources and amounts) with respect to their potential to benefit from the work and the financial status of the proposing organization and project team?
- **Other Considerations.** Proposals will be reviewed to determine if they have submitted to the proper funding category and if they reflect NY State's overall objectives, including: risk/reward relationships, similar ongoing or completed projects, the general distribution of transportation research projects among industries and other organizations, and the distribution of projects within NY State.

#### ***V. GENERAL CONDITIONS***

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**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 NY State 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 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://www.nyserda.ny.gov/About/-/media/Files/About/Contact/NYSERDA-Regulations.ashx>.

However, NYSERDA cannot guarantee the confidentiality of any information submitted.

## ***V. GENERAL CONDITIONS, continued***

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**Omnibus Procurement Act of 1992.** It is the policy of NY State to maximize opportunities for the participation of NY 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 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 NY 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 prospective contractor prior to contacting and filed with NYSERDA. See, ST-220-CA (available at [http://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 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 Attachment A: Proposal Checklist). NYSERDA expects to notify proposers in approximately ten weeks from the proposal due date, 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.

## ***V. GENERAL CONDITIONS, continued***

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**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 NY State Department of Labor.

## ***VI. ATTACHMENTS***

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- Attachment A - Proposal Checklist
- Attachment B - Disclosure of Prior Findings of Non-Responsibility Form
- Attachment C - Contract Pricing Proposal Form and Instructions
- Attachment D - Sample Agreement
- Attachment E1 - Information Dissemination Metric Reporting Guide
- Attachment E2 - Implementation/Demonstration Metrics Reporting Guide
- Attachment E3 - Business Development Metrics Reporting Guide