



**Environmental Monitoring, Evaluation and Protection (EMEP) Program: Air Quality Research**

**Program Opportunity Notice (PON) 1179  
\$2.5 Million Available**

**Proposals Due: November 6, 2007 by 5:00 PM Eastern Time\***

NYSEERDA, with the assistance of the New York Academy of Sciences and external working groups, has developed long-term research plan for the EMEP program (available through NYSEERDA's website at [www.nyserda.org/environment/EMEP/emepplan2007.pdf](http://www.nyserda.org/environment/EMEP/emepplan2007.pdf)). This PON builds on the EMEP research plan and supports research to improve the scientific and technical foundation for addressing key policy-relevant questions related to air quality research. Research topics in priority order are:

- A. Combustion Products—Improve Monitoring, Characterization, and Understanding of Processes Involving Organic Species in Ambient Air
- B. Atmospheric Species—Improve Monitoring, Characterization, and Understanding of Processes
- C. Emissions Inventory—Better Characterization of Currently Poorly Characterized Sources
- D. Emissions Inventory—Micro-Inventory
- E. Integrated Framework for Improved Air Quality Forecasting and Management
- F. Emissions Inventory—Improved Estimation of Seasonal Emissions
- G. Improved Energy and Environmental Modeling, Including Multi-Pollutant Control Strategies

This PON also offers a competitive fellowship program to support one or more Ph.D. students or post-doctoral fellows of academic institutions located in New York State doing research in support of the goals of this PON. Subsequent solicitations will support research on health effects related to air quality; acid deposition and mercury pollution; climate change; and environmental impacts of alternative energy.

**\$2,500,000 is available for projects.** Although there is no pre-defined cost limit per funded project, NYSEERDA anticipates making multiple awards and addressing many of the targeted research areas. Project durations are expected to be in the range of one to three years. Total funds available may not be sufficient to fund all proposals received. Cost-sharing by proposers of at least 25% is desired. Leveraging of other research funding is strongly encouraged. In-kind cost-sharing is acceptable.

**Proposal Submission:** Proposers must submit ten (10) copies of the proposal with a completed and signed Proposal Checklist attached to the front of each copy, one of which must contain an original signature. Proposals must be clearly labeled and submitted to:

**Roseanne Viscusi, PON 1179  
NYS Energy Research and Development Authority  
17 Columbia Circle, Albany, NY 12203-6399**

Technical questions regarding this solicitation should be directed to Ellen Burkhard (518) 862-1090, ext. 3332 or [egb@nyserda.org](mailto:egb@nyserda.org). For contractual questions, contact Diane Vogel at (518) 862-1090, ext. 3299 or [drv@nyserda.org](mailto:drv@nyserda.org).

No communication intended to influence this procurement is permitted except by contacting Ellen Burkhard (Designated Contact) at (518) 862-1090, ext. 3332 or [egb@nyserda.org](mailto:egb@nyserda.org). 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 and proposals lacking the appropriate completed and signed Proposal Checklist will be returned.** Faxed or e-mailed proposals will not be accepted. Proposals will not be accepted at any other NYSEERDA location other than the address above. If changes are made to this solicitation, notification will be posted on NYSEERDA's web site at [www.nyserda.org](http://www.nyserda.org).

## I. Introduction

Proposals will be considered responsive to this solicitation only if they support the goals of the EMEP program. Proposals should address one or more of the targeted research areas below. The target areas are listed in priority order. See the NYSERDA Environmental Research Plan on the NYSERDA website at [www.nyserda.org/environment/EMEP/emeplan2007.pdf](http://www.nyserda.org/environment/EMEP/emeplan2007.pdf) for more comprehensive information on each research topic. Preferred projects are those that: provide data in a form that is useable by policy analysts and policy makers; utilize research/analytical capabilities in New York State; are comprised of interdisciplinary teams including environmental and social scientists, and public policy analysts; and leverage out-of-State, federal or other resources to address critical environmental issues in New York State. Projects should support research that helps improve the scientific and technological foundation to address the following key policy-relevant questions:

- What are the weaknesses in the energy-related emissions estimates for New York, which, if addressed, would improve the assessment of emissions reductions strategies for ozone precursors and particulate matter (PM<sub>2.5</sub>)?
- What is the optimal mix of local and regional emission-control measures for PM<sub>2.5</sub> constituents that will represent a cost-effective means of achieving the annual and daily PM<sub>2.5</sub> standards in New York?
- What are the links between emission sources and ambient concentrations of components of particulate matter, specifically in New York environments?
- What are the local and regional implications for energy production and use from potential composition-specific PM<sub>2.5</sub>-standard proposals in the next decade?
- What are the local and regional implications for energy production and use from a decrease in the 8-hr ozone and daily PM<sub>2.5</sub> National Ambient Air Quality Standards in the next decade?

## II. Program Requirements - Targeted Research Areas

### A. Combustion Products—Improve Monitoring, Characterization, and Understanding of Processes Involving Organic Species in Ambient Air

#### **Problem Statement**

Energy production and use involves multiple fuels that, when combusted, emit gaseous and particulate carbon compounds (organic carbon [OC] and elemental carbon [EC]). These carbonaceous species affect the formation of secondary aerosol particles and ozone. The chemistry and nature of the OC aerosols are the least well characterized of all air pollutants, yet carbon comprises more than 40 percent of the PM<sub>2.5</sub> mass in New York City on an annual basis. Understanding the sources and processes by which carbon compounds form particulate matter (PM) is critical for developing effective control strategies.

Advancing our knowledge about the carbon in air pollution depends on combined measurements of speciated volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and secondary organic aerosols (SOAs). Only with combined measurements can a complete description of the organic fraction in air be determined.

#### **Research Focus**

Projects will be considered that address:

PM: Improved spatial and temporal measurements of speciated organic aerosols are needed to assist in identifying the sources and concentration gradients of organic aerosols in New York State. In addition,

highly time-resolved data of organic PM species may assist in identifying diurnal patterns of secondary aerosol production and the processes involved. The interpretation of this ambient data will need to be supplemented with ambient VOC measurements and emissions inventory data.

VOCs: Improved information is needed with respect to VOC sources, role in aerosol formation, role in ozone formation, control technology options, and data gaps. In addition, highly time-resolved measurements of speciated ambient VOCs are needed for both anthropogenic and biogenic species, to estimate the significance of their impact on photochemical oxidant cycles leading to ozone and secondary organic aerosol, regionally and locally. This may also require measuring other oxidant species. Data interpretation needs to consider not only the spatial and temporal (especially seasonal) distributions of VOCs and secondary organic aerosols, but also the potential for end-product formation during atmospheric processing (e.g., formaldehyde, acetaldehyde, acrolein, organic nitrates).

## **B. Atmospheric Species—Improve Monitoring, Characterization, and Understanding of Processes**

### **Problem Statement**

The production and use of energy results in emissions of many gaseous and condensed phase chemical species. These emissions may be involved in numerous complicated atmospheric processes, including ozone production or aerosol formation. In addition to A (above), which focuses on organic species, much information is needed to characterize atmospheric species, including trace gas concentrations, particle size distributions, and chemical composition of aerosols. The species of interest in the atmosphere include not only those species that are directly emitted or that are formed through atmospheric chemistry, but also intermediate species that can provide insights into the chemistry. Beyond ground-based measurements, the vertical profile and synoptic-scale spatial distributions of aerosols and gases are needed for improved understanding of atmospheric processing and air quality management. (Note: Mercury research needs are addressed in PON 1141.)

### **Research Focus**

Projects will be considered that:

Perform highly time-resolved measurements of NO<sub>y</sub>, NO<sub>x</sub>, HNO<sub>3</sub>, HONO, PAN, NH<sub>3</sub>, H<sub>2</sub>O<sub>2</sub>, organic peroxides, and VOCs in urban and regional atmospheres in New York State to improve the quantitative understanding of atmospheric oxidation cycle and ozone production. Explore possibilities for monitoring on a routine basis.

Characterize particle-size distributions in New York State on a highly time-resolved basis to identify source types and dynamics in particle production and growth. These measurements should be performed alongside detailed measurements of gaseous compounds and speciated aerosols in the ultrafine, accumulation mode, and coarse thoracic size ranges.

Develop innovative methods for interpreting remote-sensing data for New York State and the region. Research is needed into multi-sensor data analysis from different instruments, which can potentially improve the spatial and temporal resolution and quality of aerosol optical data, for estimating coarse/fine-mode fractions, and separating absorbing and non-absorbing aerosols.

Develop methodologies for interpreting satellite data in terms of air quality parameters of interest (surface quantities). For example, aerosol optical depth has been used as a proxy for surface PM<sub>2.5</sub>, but the correlation between these two measurements is complex and needs to be better understood.

Measure PM<sub>2.5</sub> species using a high temporal resolution for better source apportionment, process studies, support of health studies, and trend analysis. Samples for analysis may include archived samples from previous studies, to maximize research value.

### **C. Emissions Inventory—Better Characterization of Currently Poorly Characterized Sources**

#### **Problem Statement**

Much of the current emissions inventory is based on emission factors that in some cases are 20 years old. Due to changes in technology, activity patterns, and emissions of interest, there is a need to evaluate the current inventory to identify those sources that are poorly characterized and to improve the inventory by improving emissions factors and activity data. A recent assessment by NARSTO, "Improving Emission Inventories for Effective Air Quality Management Across North America," identified many areas in need of improvement. Due to regional variations in air quality and source types, and the cost of measuring emission factors, efforts to improve the emissions inventory should have a regional focus and involve U.S. EPA and adjacent states and provinces. A Regional Emissions Inventory Workshop sponsored by NYSERDA and others is planned for fall 2008 to address this objective.

#### **Research Focus**

Projects will be considered that address the following need:

Research should focus on identifying and evaluating those emissions inventories and activity patterns with greatest uncertainties. Examples of energy-related sources in need of improved inventories are: stationary diesel engines; stationary commercial and residential boilers and furnaces; and electrical generating peaking units. In addition, emissions from back-up generators need better characterization because of their use on high-electricity-demand days. Emissions of primary particle size, speciated PM emissions, PM precursors, hazardous air pollutants, and ammonia were identified as high priorities for improvement in the NARSTO Assessment ([www.narsto.org](http://www.narsto.org)). This characterization includes understanding emissions outside the average operation such as upsets, start-ups, and shut-downs. Satellites and other remote-sensing techniques may provide improved measurements of temporal variability in emissions. Sources not to be addressed here include wood combustion and mobile sources because they are addressed elsewhere in NYSERDA's programs.

### **D. Emissions Inventory—Micro-Inventory**

#### **Problem Statement**

Emissions inventories tend to represent broad geographical areas and relatively long time intervals. As a result, the data are of more limited value to air quality modeling and exposure studies on shorter time intervals. There are localized geographical areas of high emissions density where concentrations cannot be predicted by the inventory. These hotspots often are located in densely populated areas. Exposure to residents is a result of many individual sources, such as commercial buildings burning residual oil for domestic hot water and space heating, highly congested roadways, construction equipment, and industrial facilities. Changing energy-use patterns, emerging technologies such as combined heat and power, condensing boilers, and increased use of low-sulfur fuels or bio-fuels will change source profiles from buildings. Improvement in the inventory of emissions sources, fuel types, and activity patterns is essential for improved pollution-mitigation planning, air quality forecasting, and exposure assessments.

#### **Research Focus**

Projects will be considered that:

Develop “micro-inventories” through pilot-scale studies (including method development) with the goal of improving or ground-truthing the current inventory (e.g., boiler size, commercial activities, back-up generators) and supporting concurrent or subsequent exposure studies at the community-level scale. These studies must resolve and/or estimate the emissions and activity patterns at much finer spatial (a few hundred meters) and temporal (an hour or less) scales than traditional inventories, which are generally at the county level and are based on annual or seasonal averages.

## **E. Integrated Framework for Improved Air Quality Forecasting and Management**

### **Problem Statement**

Because regulations now require spatial prediction, there is a need for an integrated air quality observation system that coherently brings together air monitoring measurements and 3-D chemical transport models for better air quality forecasts. The ultimate system will be able to make air quality predictions with multiple observations from different platforms. Of particular energy relevance are those times of high electricity usage coinciding with stagnant meteorological conditions.

### **Research Focus**

Projects will be considered that:

Address the need for development of a regional, integrated air-quality monitoring system in and around New York State to meet NYS air quality regulatory and policy needs. This would require the creation of partnerships to pull together ongoing research and development in surface sampling and speciation, remote sensing of aerosol and trace gases (including satellite measurements), and chemical transport modeling.

## **F. Emissions Inventory—Improved Estimation of Seasonal Emissions**

### **Problem Statement**

Energy-related emissions vary seasonally depending on fuel use, fuel availability, home heating needs, electrical demand, and meteorological conditions. Improved emissions inventories and activity patterns are needed to adequately describe these changes and improve emissions estimates. One special case is high-electricity-demand days (HEDD). These days occur during the summer when conditions are very hot, air conditioning use increases, and the demand for electricity is very high. This leads to emissions of PM and ozone precursors at levels higher than modeled by air quality planners, due to increased generation at some plants and the start-up of “peaking” plants (often combustion turbines or diesel engines) to meet the increased load. To add to the situation, back-up generators in highly populated areas that have much higher emissions rates than central station plants are used to curtail load on the electrical grid. The meteorological conditions during these periods are generally stagnant for a few to several days, preventing emissions from dispersing quickly. This results in high ozone and PM in the ozone transport region, often close to or exceeding the NAAQS. Improved emission estimates are needed for these days in order to develop emissions-reduction strategies, including increased energy efficiency and renewable energy, and to improve air quality forecasting.

### **Research Focus**

Projects will be considered that:

Provide substantial improvements in systematic estimation of emissions by season using innovative methods, with high spatial and temporal resolution.

Build upon the recent work done by the Northeastern states on the quantification of emissions on high-

electricity-demand days. In addition to emissions from single-cycle gas/oil turbines, speciated emissions from oil- and gas-fired boilers and stationary diesel engines should be quantified. Where practical, these efforts should be coordinated with the micro-inventory effort. Research is also needed to identify the meteorological and other conditions that result in the operation of these peaking units, as well as emissions from start-up and shut-down operations. Understanding these conditions can provide the basis for more accurately predicting emissions from these units.

## **G. Improved Energy and Environmental Modeling, Including Multi-Pollutant Control Strategies**

### **Problem Statement**

Enhancement of New York's electricity-sector modeling capability is necessary to more fully evaluate the impacts of existing and proposed environmental regulations and policies on the electricity-generation sector. Critical issues include emissions, system operation, markets, wholesale prices for energy and capacity, allowance prices, fuel use and diversity, imports and exports, new capacity needs, new technologies, plant retirements, and system reliability. It is important to further develop and refine the capability and tools to analyze both generation and transmission systems. This capability will enable the comprehensive analysis of New York policies as well as policies developed at the regional and national levels, informing decision-makers in developing sound environmental policies.

### **Research Focus**

Projects will be considered that:

Enhance the model representation of overall operation of electric-generation units and their associated emissions. This may include improvements in the capability to model the operation of oil/gas steam-generation units and their associated air emissions. Factors to consider and quantify may include reliability rules, local operation requirements due to load pockets, fuel availability/supply disruptions, fuel-storage capability, start-up and ramp-up times, short-term environmental limitations, short-term price and supply expectations, extreme weather, forced outages, transmission constraints, unplanned transmission outages, and monthly, weekly, daily, and hourly load shapes.

Improve the capability to model operation of gas-turbine peaking units and the associated air emissions that impact air quality at critical times.

Improve the capability to model imports and exports to and from the region. Imports are largely dependent on appropriate representation of the transmission system.

Improve the representation of new generation and transmission technologies, renewable sources and markets, end-use energy-efficiency technologies, combined heat and power, and emission-control technologies.

Improve the capability to develop links between various models, whereby output from one model becomes critical input for another model with a different function. For example, yearly new-generation requirements estimated by the multi-year Integrated Planning Model (IPM) can be used as input data for the detailed, single-year Multi-Area Production Simulation (MAPS) model. Another critical link is the capability to use hourly point-source emission output data from MAPS as input to the multi-dimensional episodic air quality model.

Model high-electricity-demand days by evaluating the hourly emissions impacts on a single design peak day to estimate impacts of controls on specific generation units, demand-response programs that

temporarily reduce electricity load, and permanent demand reductions due to energy-efficiency programs.

Model the impacts of achieving proposed energy-efficiency and renewable targets and proposed appliance and equipment standards.

Model the impacts of various national and regional environmental policy proposals on New York.

Model multi-pollutant strategies to evaluate the degree to which various programs interact with each other in achieving environmental goals.

### **III. Proposal Requirements for Targeted Research Areas (See Section V for EMEP Fellowship proposal requirements)**

Proposers must submit ten (10) copies of the completed proposal to the attention of Roseanne Viscusi at the address on the front of this Program Opportunity Notice/Request for Proposal. A completed and signed Proposal Checklist must be attached as the front cover of your proposal, one of which must contain an original signature. **Late proposals and proposals lacking the appropriate completed and signed Proposal Checklist will be returned.** Faxed or e-mailed copies will not be accepted.

#### **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 are available at: <http://www.ogs.state.ny.us/aboutogs/regulations/advisoryCouncil/StatutoryReferences.html>). In compliance with §139-j and §139-k of the State Finance Law, for proposals submitted in response to this solicitation that could result in agreements with an annual estimated value in excess of \$15,000, additional forms must be completed and filed with proposals: (1) a signed copy of the Proposal Checklist including required certifications under the State Finance Law and (2) a completed Disclosure of Prior Findings of Non-Responsibility form. Failure to include a signed copy of the Proposal Checklist referenced in this solicitation will disqualify your proposal.

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, "PON 1179", and the page number.

Proposals should follow the format below and provide sufficient and succinct information to complete the required descriptions and answer the questions described in the Proposal Evaluation criteria listed in Section IV. The preferred length of each proposal section is shown. **Proposals are subject to return without evaluation if more than 15 pages are submitted** (not including the Checklist Cover Sheet, Contract Pricing Proposal Forms, one-page letters of commitment, and resumes), or if a font smaller than 11 point is used. **Proposers may contact Ellen Burkhard at 518-862-1090, ext. 3332 before preparing a proposal to discuss program goals and proposal requirements.**

#### **Proposal Format**

**A. Proposal Checklist Cover Sheet** - A signed and completed Proposal Checklist must be attached to the front of the proposal. **Proposals lacking the appropriate completed and signed Proposal Checklist will be returned.**

**B. Abstract** - Summarize the proposed project. Briefly summarize the anticipated usefulness of the project and the proposed methods for conducting the project. **(Half page)**

**C. Targeted Research Area to be Addressed** - Identify the Targeted Research Area(s) to be addressed (by letter and title) from Section II. Briefly describe how the proposed project will address one or more of the Targeted Research Areas. Address how the proposed research would provide the scientific or technological foundation of one or more of the policy questions listed on page 2 of this solicitation. Include the impact if NYSERDA did not provide funding. **(Half page)**

**D. Usefulness and Value of Project Results** - Identify the project goals and major objectives. Explain how the project results will address in a timely manner a problem/opportunity facing New York State with respect to pollutants associated with the generation of electricity. **Maximum coordination with other national and state environmental research/monitoring initiatives is desirable. Explain how the project will make use of other relevant data and coordinate with other research/monitoring initiatives (e.g. with field sampling and data analysis), where possible, to provide maximum value to New York State. (One page)**

**E. Soundness of Project Methods** - Describe the proposed project methods and overall research design. Briefly explain why the equipment, models, methods, and other aspects of the work are expected to be capable of meeting objectives. Describe the extent to which these have been accepted by policy making organizations, or otherwise demonstrated to be valid. **(Two pages)**

**F. Statement of Work and Schedule** - The Statement of Work is the primary contractual document that identifies the deliverables and provides the basis for NYSERDA payment. It is an action document that specifically delineates each step or procedure required to accomplish the project objectives. Therefore, each action should be identified with a description of its objective, who will perform it, how it will be performed, and the anticipated deliverables. **(Three to five pages)**

- **Task Objectives, Methods and Deliverables** - Proposed Work Statement tasks should identify specific objectives, methods and quantifiable and measurable deliverables or targets that define success of each task and that can be evaluated at project completion. The task descriptions should identify the persons responsible for completing the task and the methods to be used. In addition, include a brief description of general operating procedures, quality control and quality assurance measures, analytical procedures and statistical analyses to be employed to optimize the quality of the data and project results.
- **Technology Transfer Plan** - Include a task for reporting and information transfer. The following baseline reporting and information transfer work will be required for each project and should be considered in allocating resources for this tasks:

Baseline reporting and information transfer shall be accomplished through presentations at meetings and completing quarterly progress reports, a final technical report, and an article for a peer-reviewed journal. In addition, each principal investigator will be required to prepare a short paper summarizing the usefulness of their research findings for policy formulation. Principal investigators are strongly encouraged to collaborate with social scientists/policy analysts in preparing these policy papers, and a technical editor for all final documents. Findings to date shall be presented to the EMEP Program Advisory Group and invited guests at annual meetings arranged by NYSERDA staff in Albany, NY. Electronic access to project data shall also be provided after appropriate quality assurance.

Additional methods of information transfer and reporting may be proposed for involving pertinent policy makers or regulators and other target audience representatives during the project, and for using the anticipated project results to achieve projected public benefits.

- **Master Schedule** - Complete a schedule showing starting and completion times for all major tasks, in terms of months after project initiation. Include major milestones and meetings, tests, demonstrations, reports, and other key deliverables.

**G. Management Plan and Qualifications**

**Organizational Chart** - Prepare an organizational chart listing all key personnel. Include any subcontractors and other sponsors involved in the project, showing their roles and responsibilities. **(One page)**

**Tasking Chart** - Prepare a tasking chart, describing approximately in hours or days the effort contributed by each of the key personnel to each task and the total effort. **(One page)**

**Resumes** - Identify key project personnel. Submit relevant portions of resumes of all key project personnel, including those of proposed subcontractors. Include education and experience that are relevant to the proposed work. **(One page each - not included in total)**

**Related Projects** - List related projects that have been undertaken by the proposer and/or subcontractors. For each project, provide a brief summary, describing its title, scope, funding amount and client contact numbers. NYSERDA may contact listed clients. **(One page)**

**H. Contract Pricing Proposal Form** - Complete the attached Contract Pricing Proposal Form for the entire project, including any in-kind contributions and other cost-sharing. **The degree of cost-sharing will be considered in the evaluation of proposals.** Cost-sharing of at least 25% is desired. Leveraging of other research funding is preferable. In-kind cost-sharing is acceptable.

Cost Sharing - While cost-sharing is not required, a cost-share of at least 25% of the total project cost is desired. Cost sharing can be from the proposer, other team members, and other government or private sources. Contributions of direct labor (for which the laborer is paid as an employee) and purchased materials may be considered "cash" contributions. Unpaid labor, indirect labor, or other general overhead may be considered "in-kind" contributions. NYSERDA will not pay for efforts which have already been undertaken. The proposer or proposing team cannot claim as cost-share any expenses that have already been incurred. If applicable, show the cost-sharing plan in the following format (expand table as needed):

	Cash	In-Kind Contribution	Total
<b>NYSERDA</b>	\$	\$	\$
<b>Proposer</b>	\$	\$	\$
<b>Others (list individually)</b>	\$	\$	\$
<b>Total</b>	\$	\$	\$

**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).
- 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 for such difference. Requests for financial statements or other needed financial information may be made if deemed necessary.

**I. Letters of Commitment or Support** - If you are relying on other organizations or businesses to do work, provide services or equipment, or share in the non-NYSERDA cost, include a letter from that organization or business describing their commitment. **Absence of letters of commitment or support will be interpreted as the proposer not having commitment/support from those parties. (One page each - not included in total)**

#### **IV. Proposal Evaluation Criteria For Proposals Addressing Targeted Research Areas**

Proposals that meet Proposal requirements will be reviewed by a Technical Evaluation Panel (TEP) using the Evaluation Criteria below. Fellowship Program Proposals will be evaluated separately (see below).

##### **A. Technical Evaluation Criteria** (listed in order of importance)

**Usefulness and Value of Project Results** - Does the proposal address one or more Targeted Research areas? Will the proposed project improve the scientific and technological foundation to address the key policy questions listed on page 2 of this solicitation? How useful are the project results expected to be in validating or improving New York State policies, regulations, impact assessments, models, or mitigation methods? Will the results be available in a timely manner? How well would the project use and integrate other relevant data and coordinate with other research/monitoring initiatives (e.g. with field sampling and data analysis) to provide maximum value to New York State?

**Soundness of Project Methods and Research Design /Statement of Work and Schedule** - How suitable are the proposed project methods and overall research design for meeting the project objectives and yielding accepted results? How comprehensive, realistic, and explicit is the Statement of Work with respect to the project objectives and proposal requirements? Are specific measurable targets of success provided where applicable?

**Management Plan and Qualifications** - How well has the proposer organized a management plan and a project team with the necessary educational, technical, operations, technology transfer, financing, and administrative experience for successfully completing the project? Does

the team include partnerships with other research groups? Has an interdisciplinary team been assembled including environmental scientists, social scientists/public policy analysts, and technologists, as appropriate? How many of the team members are located in New York State?

**Communication of Results** - How promising is the reporting and information transfer plan for successfully using project results to realize the potential benefits of the project? Has the proposer included review of the draft final report by a technical editor?

**Cost Criteria** - How justifiable and reasonable are the overall costs compared to the expected usefulness of the project results and the level of effort and duration of the project? How justified and reasonable are the proposer's cost allocations and co-funding contributions (cash, in-kind services, etc.)? To what degree does the proposal include meaningful cost-sharing from other key organizations important for the success of the project?

**B. Other Considerations** - Projects will be reviewed to determine whether they reflect the overall objectives of the **New York Energy \$mart<sup>SM</sup>** Program and NYSERDA, including:

- The balance among projects of long- and short-term benefits and risk/reward relationships, and whether similar projects are presently or have been previously funded.
- The general distribution of projects of diverse topics related to program goals.
- The ways in which the proposed project fits with currently funded projects.
- The ease of measuring project success in quantifiable ways.

## V. Program Requirements - EMEP Fellowship

NYSERDA PON 1179 offers a competitive fellowship program to support one or more Ph.D. students or post-doctoral fellows of academic institutions located in New York State that are doing research in support of the goals of this PON. To qualify, students must be in a Ph.D. degree program, with a dissertation research area that aligns with one of the targeted EMEP research areas. Post-doctoral fellows must be doing research in an area that aligns with one of the EMEP research areas as well. Fellowships will provide support for up to 2 years. Annual support will be in the form of up to a \$20,000 stipend, payable through the institution, and may be supplemented by the student's/ post-doctoral fellow's advisor or institution. See Section VI for EMEP Fellowship proposal requirements. NYSERDA anticipates funding 2-3 fellowships through PON 1179. Proposals must be submitted through the student's research advisor.

## VI. Proposal Requirements for EMEP Fellowship

Proposers must submit ten (10) copies of the completed proposal to the attention of Roseanne Viscusi at the address on the front of this Program Opportunity Notice/Request for Proposal. A completed and signed Proposal Checklist must be attached as the front cover of your proposal, one of which must contain an original signature. **Late proposals and proposals lacking the appropriate completed and signed Proposal Checklist will be returned.** Faxed or e-mailed copies will be not be accepted.

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Qualified proposers (see Section V) interested in the EMEP Fellowship Program should submit proposals (under cover letter from their university advisors) using the format below (note maximum page lengths per section):

- Project title, goals and objectives (1 page).
- Project relevance to targeted EMEP research areas identified in this PON (1 page).
- Research approach and methodology (up to 3 pages).
- Expected products and outcomes (1 page).
- Brief Budget Justification (note: cofunding not required, but allowed).
- A letter of support from research advisor.
- Statement of career goals (1 page).
- Copies of undergraduate and graduate transcripts (unofficial is fine at this stage), curriculum vitae.
- Contract Pricing Proposal form - Complete attachment C, Contract Pricing Proposal form for the entire project, including any cost-sharing. In-kind cost-sharing is acceptable.
- Disclosure of Prior Findings of Non-Responsibility form (see General Conditions, below).

## **VII. Proposal Evaluation Criteria For EMEP Fellowship Program Proposals**

Proposals will be evaluated based on the:

- Potential usefulness and value of project results as it relates to EMEP goals
- Soundness of research approach and methodology
- Qualifications of student as determined by the submitted documents

## **VIII. 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 accept 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

[www.nyserda.org/nyserda.regulations.pdf](http://www.nyserda.org/nyserda.regulations.pdf). However, NYSERDA cannot guarantee the confidentiality of any information submitted.

**Omnibus Procurement Act of 1992** - It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises, as bidders, subcontractors, and suppliers on its procurement Agreements.

Information on the availability of New York subcontractors and suppliers is available from:

Empire State Development  
Division For Small Business  
30 South Pearl Street  
Albany, NY 12245

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

Empire State Development  
Minority and Women's Business Development Division  
30 South Pearl Street  
Albany, NY 12245

**State Finance Law sections 139-j and 139-k** - NYSERDA is required to comply with State Finance Law sections 139-j and 139-k. These provisions contain procurement lobbying requirements which can be found at <http://www.ogs.state.ny.us/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.state.ny.us/pdf/2006/fillin/st/st220td\\_606\\_fill\\_in.pdf](http://www.tax.state.ny.us/pdf/2006/fillin/st/st220td_606_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 [http://www.tax.state.ny.us/pdf/2006/fillin/st/st220ca\\_606\\_fill\\_in.pdf](http://www.tax.state.ny.us/pdf/2006/fillin/st/st220ca_606_fill_in.pdf) ). The Department has developed guidance for contractors which is available at [http://www.tax.state.ny.us/pdf/publications/sales/pub223\\_606.pdf](http://www.tax.state.ny.us/pdf/publications/sales/pub223_606.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. 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 expects to notify proposers in approximately eight (8) weeks from the proposal due date whether or not the proposal has been selected to receive an award.

**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.

**IX. Attachments:**

- A. Proposal Checklist
- B. Disclosure of Prior Findings of Non-responsibility Form
- C. Contract Pricing Proposal Form
- D. Sample Agreement

# ATTACHMENT A - PON No. 1179 PROPOSAL CHECKLIST (MANDATORY)

Proposal Title		Due Date: 10/01/2007	
Primary Contact (Prime Contractor)		Title	
Company		Phone	Fax
Address	City	State or Province	Zip
Secondary Contact		Title	
Company		Phone	Fax
Address	City	State or Province	Zip

**THE PRIME CONTRACTOR MUST SIGN THIS FORM BELOW and ANSWER THE FOLLOWING QUESTIONS:**

Do you accept all Terms & Conditions in the Sample Agreement? (if no, explain on separate pg) \_\_ Yes \_\_ No

Have you been indicted/convicted for a felony within the past 5 years? (if yes, explain on separate pg) \_\_ Yes \_\_ No

Are you a Minority or Women-Owned Business Enterprise? \_\_ Yes \_\_ No

Does your proposal contain Minority or Women-Owned Business enterprises as subcontractors? \_\_ Yes \_\_ No

Are you submitting the required number of copies? (See proposal instructions.) \_\_ Yes \_\_ No

Is other public funding pending/awarded on this and/or very similar topic (prior and/or competing proposals)? \_\_ Yes \_\_ No  
(if yes, explain on separate page)

**ON WHAT PAGE IN YOUR PROPOSAL CAN THESE ITEMS BE FOUND?**

Abstract	_____	
Targeted Research Area to be Addressed	_____	Indictment/Conviction of Felony (if applicable) _____
Usefulness and Value of Project Results	_____	NYSERDA Contracts Awarded (if applicable) _____
Soundness of Project Methods	_____	Prior and/or Competing Proposals (if applicable) _____
Statement of Work and Schedule	_____	Exceptions to Terms & Conditions (if applicable) _____
Management Plan and Qualifications	_____	Completed & Signed Contract Pricing Proposal Form(s) _____
Contract Pricing Proposal Form	_____	Disclosure of Prior Findings of Non-responsibility Form _____
Letters of Commitment or Support	_____	

**AUTHORIZED SIGNATURE & CERTIFICATION**

I certify that the above information, and all information submitted in connection with State Finance Law §139-j and §139-k, is complete, true, and accurate, and that the proposal requirements noted have been completed and are enclosed. I affirm that I understand and will comply with NYSERDA's procedures under §139-j(3) and §139-j(6)(b) of the State Finance Law. I understand that this proposal may be disqualified if the solicitation requirements are not met. I the undersigned am authorized to commit my organization to this proposal.

Signature	Name
Title	Organization
Phone	Date

**NOTE:** This completed form **MUST** be signed and attached to the front of all copies of your proposal.

**Attachment B - PON 1179  
Disclosure of Prior Findings of Non-responsibility Form**

**(Mandatory)**

Name of Individual or Entity seeking to enter the procurement contract:	
Address:	
Date:	
Solicitation or Agreement Number:	
Name and Title of Person Submitting this Form:	
Has any Governmental Entity made a finding of non-responsibility regarding the Individual or Entity seeking to enter the Procurement Contract in the last four years? (Please indicate with an "X")	Yes
	No
Was the basis for the finding of non-responsibility due to due to a violation of §139-j of the State Finance Law? (Please indicate with an "X")	Yes
	No
Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please indicate with an "X")	Yes
	No
If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.	
Government Agency or Authority:	
Date of Finding of Non-responsibility:	
Basis of Finding of Non-responsibility: (Add additional pages as necessary)	

Has any Government al Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named Individual or Entity due to the intentional provision of false or incomplete information ? (Please indicate with an "X")	Yes
	No

(Please indicate with an "X")  
If you answered yes, please provide details below.

Government Agency or Authority:

Date of Termination or Withholding of Contract:

Basis of Termination or Withholding: (Add additional pages as necessary)

Offerer certifies that all information provided to NYSERDA with respect to State Finance Law §139-k is complete, true, and accurate.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature

Name: \_\_\_\_\_ Title: \_\_\_\_\_

## Attachment C

New York State Energy Research and Development Authority Contract Pricing Proposal Form			Solicitation/Contract No.	Page
Contractor:			Name of Proposed Project:	
Address:				
Location (where work is to be performed):			NYSERDA funding:	
			Total Project Cost:	
Cost Element		Total Project Cost	Funding & Co-funding via NYSERDA	Cost-sharing & Other Co-funding
<b>1. Direct Materials</b>				
a. Purchased Parts				
b. Other				
Total Direct Materials				
<b>2. Materials Overhead</b>				
	Rate:			
<b>3. Direct Labor (specify names/titles)</b>				
	Hours	Rate/hr		
Total Direct Labor				
<b>4. Labor Overhead</b>				
	Rate %	\$ Base		
Total Labor Overhead				
<b>5. Outside Special Testing</b>				
<b>6. Equipment</b>				
<b>7. Travel</b>				
<b>8. Other Direct Costs</b>				
<b>9. Subcontractors/Consultants</b>				
Total Subcontractors/Consultants				
<b>10. General &amp; Administrative Expense</b>				
	Rate %	Element(s)		
<b>11. Fee or Profit (If allowable) Rate:</b>				
<b>12. Total Estimated Project Cost</b>				
This proposal reflects our best estimates as of this date, in accordance with the instructions to proposers.				
Typed Name and Title:			Signature:	Date:
Has any executive agency of the U.S. government performed any review of your records in connection with any prime contract or subcontract within the past twelve months?      ___ Yes      ___ No				
If yes, identify:				



## INSTRUCTIONS FOR PREPARATION OF COST ESTIMATE

Your cost proposal may be the basis of contract negotiation; it should be specific and complete in every detail. Supporting schedules (as described in Section B) providing the basis for your estimates must be provided.

### A. GENERAL

The schedule must be submitted on NYSERDA's Contract Pricing Proposal Form.

### B. INSTRUCTIONS AND DESCRIPTION OF REQUIRED SUPPORT DETAIL

(Title each supporting schedule and cross-reference it to the item number on the Contract Pricing Proposal Form)

#### 1a. DIRECT MATERIALS - PURCHASED PARTS

Provide the following information for each proposed item with an estimated unit cost in excess of \$15,000.

- o Description of item
- o Proposed vendor
- o Quantity needed
- o Unit cost
- o Basis for cost (i.e., catalog, prior purchase, quote, etc.)
- o Total cost
- o Evidence of a competitive selection process in accordance with the requirements of the Subcontract Procedures section of the attached Sample Agreement.

#### 1b. OTHER DIRECT MATERIALS

In accordance with the requirements of the Subcontract Procedures section of the attached Sample Agreement, for all items in excess of \$5,000, provide whatever information would be necessary to understand what is being obtained, how it is being obtained, what it will cost and how the estimated cost was determined with justification for all items.

#### 2. MATERIALS OVERHEAD (also applicable to other Indirect Rate categories: 4. LABOR OVERHEAD and 10. G&A EXPENSE)

- o If Government-approved indirect rates are proposed, then supply a copy of an appropriate Government document verifying those rates.
- o If Government-approved rates are not proposed, supply the following, unless previously provided, for the years comprising the proposed period of contract performance.
  - o A description (chart or other) of the organization of the indirect cost center.
  - o The budget of indirect costs, by account, for each proposed indirect expense rate.
  - o The budget for the base, for each proposed rate, (direct labor dollars, hours, costs, etc.) itemized as to contract hours or costs, research and development hours of costs, and any other direct base effort.
  - o Actual incurred rates for the prior three years, including actual base and pool amounts.

#### 3. DIRECT LABOR

##### a. Commercial Enterprises

- (1) Attach supporting schedules showing:
  - o Each category or type of labor being estimated
  - o Applicable labor rates per hour (straight-time)
- (2) Explain the method used for computing the rates (i.e., actual of an individual, actual average of a category or other grouping, etc.) Also identify any proposed labor escalation and the bases for it.

##### b. Educational Institutions

Provide the following for each calendar year of the contract:

- (1) For individuals not on an "actual hours worked" basis:
  - o individual's name
  - o annual salary and the period for which the salary is applicable (preferably in weeks)
  - o the proportionate time to be charged to this effort.
- (2) For individuals who maintain time records as the basis for charging costs, supply the detail as requested in Instructions 3(a)(1)

4. LABOR OVERHEAD (Same as Instructions for 2. MATERIALS OVERHEAD)
5. OUTSIDE SPECIAL TESTING
  - a. Describe the effort.
  - b. Provide the units of time (hours, days, weeks), cost rates, and the vendor.
  - c. In accordance with the requirements of the Subcontract Procedures section of the attached Sample Agreement, provide the basis for selection of the vendor. Identify M/WBE vendors contacted for quotes and if none, explain why. Explain and justify the basis for any non-competitive selection.
6. EQUIPMENT

Capability to perform the work with existing facilities and equipment is assumed. It is NYSERDA's policy not to compensate for general purpose facilities or equipment. If some special purpose items are needed solely for this contract and are not available by other means (contractor assets, lease, etc.), then provide the following information for each item of required equipment.

  - o vendor
  - o model number
  - o quantity
  - o competitive selection process
  - o unit cost and source of cost/price (i.e., quote, catalog, purchase history)
  - o description of the use or application (NYSERDA dedicated, contract dedicated, other)
7. TRAVEL
  - a. NYSERDA will accept as a direct charge only that travel required to perform the statement of work.
  - b. Attach a schedule indicating the need for the proposed travel, the estimated number of person-trips required, destinations, mode and cost of transportation, and number of days subsistence per trip for each destination.
  - c. Identify and support any other special transportation costs required in the performance of this project.
8. OTHER DIRECT COSTS
  - a. Identify the type of cost (i.e. postage, telephone, publications, graphics, etc.)
  - b. Provide cost details for the amounts estimated (hours or units, rates, etc.)
  - c. If any internal service center rates are applied, provide details similar to that required in Instruction #B.
  - d. For computer costs identify the make, model and type of computer, hours of service and appropriate rates, and whether the machine is company owned or leased.
9. SUBCONTRACTORS/CONSULTANTS
  - a. Explain the specific technical area in which such service is to be used and identify the contemplated consultants.
  - b. State the number of days and the hours per day of such service estimated to be required and the consultant's quoted rate per day. Document when/where the consultant has received the proposed rate in performing similar services for others.
10. GENERAL & ADMINISTRATIVE (G&A) EXPENSE (Same as instructions for 2. MATERIALS OVERHEAD)
11. FEE OR PROFIT

List the rate proposed for profit. No fee or profit is allowed under product development, demonstration or other certain cost-sharing projects.

ATTACHMENT D - SAMPLE AGREEMENT

**New York State Energy Research and Development Authority  
AGREEMENT**

- |                                    |                           |
|------------------------------------|---------------------------|
| 1. Agreement Number:               | 5. Project Period:        |
| 2. Contractor:                     | 6. Federal ID:            |
| 3. Contact:                        | 7. Total Amount of Award: |
| 4. Award Date:                     |                           |
| 8. Commitment Terms and Conditions |                           |

This Agreement consists of this form plus the following documents:

- Exhibit A, Statement of Work;
- Exhibit B, General Contract Provisions, Terms and Conditions;
- Exhibit C, Standard Terms and Conditions;
- Exhibit D, Prompt Payment Policy Statement; and
- Exhibit E, Guidelines for NYSERDA Print Deliverables.

9. ACCEPTANCE

**[CONTRACTOR]**

**NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY**

By \_\_\_\_\_

By \_\_\_\_\_

Name \_\_\_\_\_

Jeffrey J. Pitkin  
Treasurer

Title \_\_\_\_\_

STATE OF            )  
                          ) SS.:  
COUNTY OF        )

On the \_\_\_\_ day of \_\_\_\_\_ in the year \_\_\_\_\_, before me, the undersigned, a Notary Public in and for said State, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individuals(s), or the person upon behalf of which the individual(s) acted, executed the document.

---

Notary Public

## EXHIBIT B

### GENERAL CONTRACT PROVISIONS, TERMS AND CONDITIONS

#### Article I

##### Definitions

Section 1.01. Definitions. Unless the context otherwise requires, the terms defined below shall have, for all purposes of this Agreement, the respective meanings set forth below, the following definitions to be equally applicable to both the singular and plural forms of any of the terms defined.

Agreement: The Agreement and Exhibits A, B, C, D and E hereto, all of which are made a part hereof as though herein set forth in full.

Budget: The Budget set forth in Exhibit A hereto.

Contract Administrator: NYSERDA's Director of Contract Management, Cheryl L. Earley, or such other person who may be designated, in writing, by NYSERDA.

Contract Data: Technical Data first produced in the performance of the contract, Technical Data which are specified to be delivered under the contract, or Technical Data actually delivered in connection with the contract.

Contractor: The Contractor identified in Item 2 of page one of the Agreement.

Effective Date: The effective date of this Agreement shall be the date appearing in Item 4 of page one of the Agreement.

Person: An individual, a corporation, an association or partnership, an organization, a business or a government or political subdivision thereof or any governmental agency or instrumentality.

Proprietary Data: Technical Data which embody trade secrets developed at private expense, such as design procedures or techniques, chemical composition of materials, or manufacturing methods, processes, or treatments, including minor modifications thereof, provided that such data:

- (i) are not generally known or available from other sources without obligation concerning their confidentiality;
- (ii) have not been made available by the owner to others without obligation concerning its confidentiality; and
- (iii) are not already available to NYSERDA without obligation concerning their confidentiality.

Statement of Work: The Statement of Work attached hereto as Exhibit A.

Subcontract: An agreement for the performance of Work by a Subcontractor, including any purchase order for the procurement of permanent equipment or expendable supplies in connection with the Work.

Subcontractor: A person who performs Work directly or indirectly for or on behalf of the Contractor (and whether or not in privity of contract with the Contractor) but not including any employees of the Contractor or the Subcontractors.

Technical Data: Recorded information regardless of form or characteristic, of a scientific or technical nature. It may, for example, document research, experimental or developmental, or demonstration, or engineering work, or be usable or used to define a design or process, or to procure, produce, support, maintain, or operate material. The data may be graphic or pictorial delineations in media such as drawings or photographs, text in specifications or related performance or design type documents or computer software (including computer software programs, computer software data bases, and computer software documentation). Examples of Technical Data include research and engineering data, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identification, and related information. Technical Data as used herein does not include financial reports, cost analyses, and other information incidental to contract administration.

Unlimited Rights: Rights to use, duplicate, or disclose Contract Data, in whole or in part, in any manner and for any purpose whatsoever, and to permit others to do so.

Work: The Work described in the Exhibit A (including the procurement of equipment and supplies in connection therewith) and the performance of all other requirements imposed upon the Contractor under this Agreement.

## Article II

### Performance of Work

Section 2.01. Manner of Performance. Subject to the provisions of Article XII hereof, the Contractor shall perform all of the Work described in the Statement of Work, or cause such Work to be performed in an efficient and expeditious manner and in accordance with all of the terms and provisions of this Agreement. The Contractor shall perform the Work in accordance with the current professional standards and with the diligence and skill expected for the performance of work of the type described in the Statement of Work. The Contractor shall furnish such personnel and shall procure such materials, machinery, supplies, tools, equipment and other items as may reasonably be necessary or appropriate to perform the Work in accordance with this Agreement.

Section 2.02. Project Personnel. It is understood and agreed that the "Contact Person" identified in Item 3 of page one of the Agreement shall serve as Project Director and as such shall have the responsibility of the overall supervision and conduct of the Work on behalf of the Contractor and that the persons described in the Statement of Work shall serve in the capacities described therein. Any change of Project Director by the Contractor shall be subject to the prior written approval of NYSERDA.

### Article III

#### Deliverables

Section 3.01. Deliverables. All deliverables shall be provided in accordance with the Exhibit A Statement of Work.

### Article IV

#### Payment

Section 4.01. Compensation. In consideration for this Agreement and as full compensation for the costs for the performance of all Work and in respect of all other direct and indirect costs, charges or expenses incurred in connection therewith, NYSERDA shall pay to the Contractor the actual cost incurred as set forth in the Budget up to a maximum amount set forth in Item 7 of page one of the Agreement, subject to the provisions and restrictions contained herein. Such amount shall be paid only to the extent that costs are incurred by the Contractor in performance of the Work in accordance with the provisions of this Agreement, the Budget and the following:

(a) Staff Charges: The Contractor shall be compensated for the services performed by its employees under the terms of this Agreement at the employee's actual wage rate.

(b) Direct Charges: The Contractor shall be reimbursed for reasonable and necessary actual direct costs incurred (e.g., equipment, supplies, travel and other costs directly associated with the performance of the Agreement) to the extent required in the performance of the Work in accordance with the provisions of the Budget. Travel, lodging, meals and incidental expenses shall be reimbursed for reasonable and necessary costs incurred. Costs should generally not exceed the daily per diem rates published in the Federal Travel Regulations. Reimbursement for the use of personal vehicles shall be limited to the Internal Revenue Service business standard mileage rate.

(c) Indirect Costs: The Contractor shall be reimbursed for fringe benefits, overhead, general and administrative (G&A), and other indirect costs included in the Budget at such rates as the Contractor may periodically calculate, consistent with appropriate federal guidelines or generally accepted accounting principles.

Furthermore, NYSERDA shall have no liability under this Agreement to the Contractor or to anyone else beyond funds paid to NYSERDA by third parties for the purposes of this Agreement.

Section 4.02. Progress Payments. The Contractor may submit invoices for progress payment no more than once each month or no less than once each calendar quarter for Work performed during such period. Invoices shall be addressed to NYSERDA, "Attention: Accounts Payable." Such invoices shall make reference to the Agreement number shown in Item 1 of page one of the Agreement. Invoices shall set forth total project costs incurred. They shall be in a format consistent with the cost categories set forth in the Budget. Invoices shall provide reasonable documentation for the above to provide evidence of costs incurred, including:

(a) Staff charges: for each employee, the name, title, number of hours worked, hourly rate and labor extension;

(b) Direct charges: all direct costs shall be itemized on the invoice and supported by documentation, such as vendor invoices, travel vouchers or other documentation; and

(c) Indirect charges: indirect cost rates and method by which rates are applied.

The Contractor shall be notified by NYSERDA in accordance with Section 504.4 (b)(2) of NYSERDA's Prompt Payment Policy Statement, attached hereto as Exhibit D, of any such information or documentation which the Contractor did not include with such invoice.

In accordance with and subject to the provisions of such Exhibit D, NYSERDA shall pay to the Contractor, within the prescribed time after receipt of an invoice for a progress payment, 90% of NYSERDA's share of the amount so requested, unless NYSERDA should determine that any such payment or any part thereof is otherwise not properly payable pursuant to the terms of the Agreement or the Budget.

Section 4.03. Title to Equipment. Title shall vest in NYSERDA to all equipment purchased hereunder.

Section 4.04. Final Payment. Upon final acceptance by NYSERDA of all deliverables contained in Exhibit A, Statement of Work, pursuant to Section 6.02 hereof, the Contractor shall submit an invoice for final payment with respect to the Work, together with such supporting information and documentation as, and in such form as, NYSERDA may require. In accordance with and subject to the provisions of NYSERDA's Prompt Payment Policy Statement, attached hereto as Exhibit D, NYSERDA shall pay to the Contractor within the prescribed time after receipt of such invoice for final payment, the total amount payable pursuant to Section 4.01 hereof, less all progress payments previously made to the Contractor with respect thereto and subject to the maximum commitment set forth in Item 7 of page one of the Agreement.

Section 4.05. Release by the Contractor. The acceptance by the Contractor of final payment shall release NYSERDA from all claims and liability that the Contractor, its representatives and assigns might otherwise have relating to this Agreement.

Section 4.06. Maintenance of Records. The Contractor shall keep, maintain, and preserve at its principal office throughout the term of the Agreement and for a period of three years after acceptance of the Work, full and detailed books, accounts, and records pertaining to the performance of the Agreement, including without limitation, all bills, invoices, payrolls, subcontracting efforts and other data evidencing, or in any material way related to, the direct and indirect costs and expenses incurred by the Contractor in the course of such performance.

Section 4.07. Maximum Commitment. The maximum aggregate amount payable by NYSERDA to the Contractor hereunder is the amount shown in Item 7 of page one of the Agreement. NYSERDA shall not be liable for any costs or expenses in excess of such amount incurred by the Contractor in the performance and completion of the Work.

Section 4.08. Audit Adjustment. NYSERDA shall have the right from time to time and at all reasonable times during the term of the Agreement and such period thereafter to inspect and audit any and all books, accounts and records at the office or offices of the Contractor where they are then being kept, maintained and preserved pursuant to Section 4.06 hereof. Any payment made under the Agreement shall be subject to retroactive reduction for amounts included therein which are found by NYSERDA on the basis of any audit of the Contractor by an agency of the United States, State of New York or NYSERDA not to constitute an allowable charge or cost hereunder.

## Article V

### Assignments, Subcontracts and Purchase Orders

Section 5.01. General Restrictions. Except as specifically provided otherwise in this Article, the assignment, transfer, conveyance, subcontracting or other disposal of this Agreement or any of the Contractor's rights, obligations, interests or responsibilities hereunder, in whole or in part, without the express consent in writing of NYSERDA shall be void and of no effect as to NYSERDA.

Section 5.02. Subcontract Procedures. Without relieving it of, or in any way limiting, its obligations to NYSERDA under this Agreement, the Contractor may enter into Subcontracts for the performance of Work or for the purchase of materials or equipment. Except for a subcontractor or supplier specified in a team arrangement with the Contractor in the Contractor's original proposal, and except for any subcontract or order for equipment, supplies or materials from a single subcontractor or supplier totaling under \$25,000, the Contractor shall select all subcontractors or suppliers through a process of competitive bidding or multi-source price review. A team arrangement is one where a subcontractor or supplier specified in the Contractor's proposal is performing a substantial portion of the Work and is making a substantial contribution to the management and/or design of the Project. In the event that a competitive bidding or multi-source price review is not feasible, the Contractor shall document an explanation for, and justification of, a sole source selection. The Contractor shall document the process by which a subcontractor or supplier is selected by making a record summarizing the nature and scope of the work, equipment, supplies or materials sought, the name of each person or organization submitting, or requested to submit, a bid or proposal, the price or fee bid, and the basis for selection of the subcontractor or supplier. An explanation for, and justification of, a sole source selection must identify why the work, equipment, supplies or materials involved are obtainable from or require a subcontractor with unique or exceptionally scarce qualifications or experience, specialized equipment, or facilities not readily available from other sources, or patents, copyrights, or proprietary data. All Subcontracts shall contain provisions comparable to those set forth in this Agreement applicable to a subcontractor or supplier, and those set forth in Exhibit B to the extent required by law, and all other provisions now or hereafter required by law to be contained therein.

Section 5.03. Performance. The Contractor shall promptly and diligently comply with its obligations under each Subcontract and shall take no action which would impair its rights thereunder. The Contractor shall not assign, cancel or terminate any Subcontract without prior written notification to the Contract Administrator as long as this Agreement remains in effect.

Article VI

Schedule

Section 6.01. Schedule. The Work shall be performed as expeditiously as possible in conformity with the schedule requirements contained herein and in Exhibit A, Statement of Work.

Section 6.02. Acceptance of Work. The completion of the Work shall be subject to acceptance by NYSERDA in writing of all deliverables as defined in Exhibit A, Statement of Work.

Article VII

Force Majeure

Section 7.01. Force Majeure. Neither party hereto shall be liable for any failure or delay in the performance of its respective obligations hereunder if and to the extent that such delay or failure is due to a cause or circumstance beyond the reasonable control of such party, including, without limitation, acts of God or the public enemy, expropriation or confiscation of land or facilities, compliance with any law, order or request of any Federal, State, municipal or local governmental authority, acts of war, rebellion or sabotage or damage resulting therefrom, fires, floods, storms, explosions, accidents, riots, strikes, or the delay or failure to perform by any Subcontractor by reason of any cause or circumstance beyond the reasonable control of such Subcontractor.

Article VIII

Technical Data

Section 8.01. Rights in Technical Data.

(a) Technical Data: Rights in Technical Data shall be allocated as follows:

(1) NYSERDA shall have:

- (i) Unlimited Rights in Contract Data except as otherwise provided below with respect to Proprietary Data; and
- (ii) no rights under this Agreement in any Technical Data which are not Contract Data.

(2) The Contractor shall have:

- (i) the right to withhold Proprietary Data in accordance with the provisions of this clause; and
- (ii) the right to use for its private purposes subject to patent, or other provisions of this Agreement, Contract Data it first produces in the performance of this Agreement provided

the data requirements of this Agreement have been met as of the date of the private use of such data.

The Contractor agrees that to the extent it receives or is given access to Proprietary Data or other technical, business or financial data in the form of recorded information from NYSERDA or a NYSERDA contractor or subcontractor, the Contractor shall treat such data in accordance with any restrictive legend contained thereon, unless another use is specifically authorized by prior written approval of the Contract Administrator.

## Article IX

### Warranties and Guarantees

Section 9.01. Warranties and Guarantees. The Contractor warrants and guarantees that:

- (a) it is financially and technically qualified to perform the Work;
- (b) it is familiar with and will comply with all general and special Federal, State, municipal and local laws, ordinances and regulations, if any that may in any way affect the performance of this Agreement;
- (c) the design, supervision and workmanship furnished with respect to performance of the Work shall be in accordance with sound and currently accepted construction and design standards and best engineering practices;
- (d) all materials, equipment and workmanship furnished by it and by Subcontractors in performance of the Work or any portion thereof shall be free of defects in design, material and workmanship, and all such materials and equipment shall be of first-class quality, shall conform with all applicable codes, specifications, standards and ordinances and shall have service lives and maintenance characteristics suitable for their intended purposes in accordance with sound and currently accepted construction and design standards and best engineering practices;
- (e) neither the Contractor nor any of its employees, agents, representatives or servants has actual knowledge of any patent issued under the laws of the United States or any other matter which could constitute a basis for any claim that the performance of the Work or any part thereof infringes any patent or otherwise interferes with any other right of any Person;
- (f) there are no existing undisclosed or threatened legal actions, claims, or encumbrances, or liabilities that may adversely affect the Work or the NYSERDA's rights hereunder;
- (g) it has no actual knowledge that any information or document or statement furnished by the Contractor in connection with this Agreement contains any untrue statement of a material fact or omits to state a material fact necessary to make the statement not misleading, and that all facts have been disclosed that would materially adversely affect the Work; and

(h) Contractor certifies that all information provided to NYSERDA with respect to State Finance Law Sections 139-j and 139-k is complete, true and accurate.

## Article X

### Indemnification

Section 10.01. Indemnification. The Contractor shall protect, indemnify and hold harmless NYSERDA and the State of New York from and against all liabilities, losses, claims, damages, judgments, penalties, causes of action, costs and expenses (including, without limitation, attorneys' fees and expenses) imposed upon or incurred by or asserted against NYSERDA or the State of New York resulting from, arising out of or relating to the performance of this Agreement. The obligations of the Contractor under this Article shall survive any expiration or termination of this Agreement, and shall not be limited by any enumeration herein of required insurance coverage.

## Article XI

### Insurance

Section 11.01. Maintenance of Insurance; Policy Provisions. The Contractor, at no additional cost to NYSERDA, shall maintain or cause to be maintained throughout the term of this Agreement, insurance of the types and in the amounts specified in the Section hereof entitled Types of Insurance. All such insurance shall be evidenced by insurance policies, each of which shall:

- (a) name or be endorsed to cover NYSERDA, the State of New York and the Contractor as additional insureds;
- (b) provide that such policy may not be cancelled or modified until at least 30 days after receipt by NYSERDA of written notice thereof; and
- (c) be reasonably satisfactory to NYSERDA in all other respects.

Section 11.02. Types of Insurance. The types and amounts of insurance required to be maintained under this Article are as follows:

- (a) Commercial general liability insurance for bodily injury liability, including death, and property damage liability, incurred in connection with the performance of this Agreement, with minimum limits of \$1,000,000 in respect of claims arising out of personal injury or sickness or death of any one person, \$1,000,000 in respect of claims arising out of personal injury, sickness or death in any one accident or disaster, and \$1,000,000 in respect of claims arising out of property damage in any one accident or disaster; and
- (b) Commercial automobile liability insurance in respect of motor vehicles owned, licensed or hired by the Contractor and the Subcontractors for bodily injury liability, including death and property damage, incurred in connection with the performance of this Agreement, with minimum limits of \$500,000 in respect of claims

arising out of personal injury, or sickness or death of any one person, \$1,000,000 in respect of claims arising out of personal injury, sickness or death in any one accident or disaster, and \$500,000 in respect of claims arising out of property damage in any one accident or disaster.

Section 11.03. Delivery of Policies; Insurance Certificates. Prior to commencing the Work, the Contractor shall deliver to NYSERDA certificates of insurance issued by the respective insurers, indicating the Agreement number thereon, evidencing the insurance required by this Article and bearing notations evidencing the payment of the premiums thereon or accompanied by other evidence of such payment satisfactory to NYSERDA. In the event any policy furnished or carried pursuant to this Article will expire on a date prior to acceptance of the Work by NYSERDA pursuant to the section hereof entitled Acceptance of Work, the Contractor, not less than 15 days prior to such expiration date, shall deliver to NYSERDA certificates of insurance evidencing the renewal of such policies, and the Contractor shall promptly pay all premiums thereon due. In the event of threatened legal action, claims, encumbrances, or liabilities that may affect NYSERDA hereunder, or if deemed necessary by NYSERDA due to events rendering a review necessary, upon request the Contractor shall deliver to NYSERDA a certified copy of each policy.

## Article XII

### Stop Work Order; Termination

#### Section 12.01. Stop Work Order.

(a) NYSERDA may at any time, by written Order to the Contractor, require the Contractor to stop all, or any part of, the Work called for by this Agreement for a period of up to 90 days after the Stop Work Order is delivered to the Contractor, and for any further period to which the parties may agree. Any such order shall be specifically identified as a Stop Work Order issued pursuant to this Section. Upon receipt of such an Order, the Contractor shall forthwith comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the Work covered by the order during the period of work stoppage consistent with public health and safety. Within a period of 90 days after a Stop Work Order is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, NYSERDA shall either:

- (i) by written notice to the Contractor, cancel the Stop Work Order, which shall be effective as provided in such cancellation notice, or if not specified therein, upon receipt by the Contractor, or
- (ii) terminate the Work covered by such order as provided in the Termination Section of this Agreement.

(b) If a Stop Work Order issued under this Section is cancelled or the period of the order or any extension thereof expires, the Contractor shall resume Work. An equitable adjustment shall be made in the delivery schedule, the estimated cost, the fee, if any, or a combination thereof, and in any other provisions of the Agreement that may be affected, and the Agreement shall be modified in writing accordingly, if:

- (i) the Stop Work Order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this Agreement, and
- (ii) the Contractor asserts a claim for such adjustments within 30 days after the end of the period of Work stoppage; provided that, if NYSERDA decides the facts justify such action, NYSERDA may receive and act upon any such claim asserted at any time prior to final payment under this Agreement.

(c) If a Stop Work Order is not cancelled and the Work covered by such order is terminated, the reasonable costs resulting from the Stop Work Order shall be allowed by equitable adjustment or otherwise.

(d) Notwithstanding the provisions of this Section 12.01, the maximum amount payable by NYSERDA to the Contractor pursuant to this Section 12.01 shall not be increased or deemed to be increased except by specific written amendment hereto.

#### Section 12.02. Termination.

(a) This Agreement may be terminated by NYSERDA at any time during the term of this Agreement with or without cause, upon 30 days prior written notice to the Contractor. In such event, compensation shall be paid to the Contractor for Work performed and expenses incurred prior to the effective date of termination in accordance with the provisions of the Article hereof entitled Payment and in reimbursement of any amounts required to be paid by the Contractor pursuant to Subcontracts; provided, however, that upon receipt of any such notice of termination, the Contractor shall cease the performance of Work, shall make no further commitments with respect thereto and shall reduce insofar as possible the amount of outstanding commitments (including, to the extent requested by NYSERDA, through termination of subcontracts containing provisions therefor).

(b) NYSERDA reserves the right to terminate this agreement in the event it is found that the certification filed by the Contractor in accordance with State Finance Law Sections 139-j and 139-k was intentionally false or intentionally incomplete. Upon such finding, NYSERDA may exercise its termination right by providing written notification to the Contractor as set forth in Article XV of this Agreement.

(c) NYSERDA reserves the right to terminate this agreement in the event it is found that the certification filed by the Contractor in accordance with New York State Tax Law Section 5-a was intentionally false when made. Upon such finding, NYSERDA may exercise its termination right by providing written notification to the Contractor as set forth in Article XV of this Agreement.

### Article XIII

#### Independent Contractor

Section 13.01. Independent Contractor. The status of the Contractor under this Agreement shall be that of an independent contractor and not that of an agent, and in accordance with such status, the Contractor, the Subcontractors, and their respective officers, agents, employees, representatives and servants shall at all times during the term of this Agreement conduct themselves in a manner consistent with such status and by reason of

this Agreement shall neither hold themselves out as, nor claim to be acting in the capacity of, officers, employees, agents, representatives or servants of NYSERDA nor make any claim, demand or application for any right or privilege applicable to NYSERDA, including, without limitation, rights or privileges derived from workers' compensation coverage, unemployment insurance benefits, social security coverage and retirement membership or credit.

## Article XIV

### Compliance with Certain Laws

Section 14.01. Laws of the State of New York. The Contractor shall comply with all of the requirements set forth in Exhibit C hereto.

Section 14.02. All Legal Provisions Deemed Included. It is the intent and understanding of the Contractor and NYSERDA that each and every provision of law required by the laws of the State of New York to be contained in this Agreement shall be contained herein, and if, through mistake, oversight or otherwise, any such provision is not contained herein, or is not contained herein in correct form, this Agreement shall, upon the application of either NYSERDA or the Contractor, promptly be amended so as to comply strictly with the laws of the State of New York with respect to the inclusion in this Agreement of all such provisions.

Section 14.03 Other Legal Requirements. The references to particular laws of the State of New York in this Article, in Exhibit C and elsewhere in this Agreement are not intended to be exclusive and nothing contained in such Article, Exhibit and Agreement shall be deemed to modify the obligations of the Contractor to comply with all legal requirements.

## Article XV

### Publicity, Notices, Entire Agreement, Amendment

Section 15.01. Publicity.

(a) The Contractor shall collaborate with NYSERDA's Director of Communications to prepare any press release and to plan for any news conference concerning the Work. In addition the Contractor shall notify NYSERDA's Director of Communications regarding any media interview in which the Work is referred to or discussed.

(b) The Contractor shall not use NYSERDA's corporate name, logo, identity, any affiliation, or the service mark **New York Energy Smart**<sup>SM</sup>, and any related logo, without NYSERDA's prior written consent.

Section 15.02. Notices. All notices, requests, consents, approvals and other communications which may or are required to be given by either party to the other under this Agreement shall be deemed to have been sufficiently given for all purposes hereunder when delivered or mailed by registered or certified mail, postage prepaid, return receipt requested, (i) if to NYSERDA, at 17 Columbia Circle, Albany, New York 12203-6399 or at such other address as NYSERDA shall have furnished to the Contractor in writing, and (ii) if to the

Contractor, at \_\_\_\_\_, or such other address as the Contractor shall have furnished to NYSERDA in writing.

Section 15.03. Entire Agreement; Amendment. This Agreement embodies the entire agreement and understanding between NYSERDA and the Contractor and supersedes all prior agreements and understandings relating to the subject matter hereof. Except as otherwise expressly provided for herein, this Agreement may be changed, waived, discharged or terminated only by an instrument in writing, signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

EXHIBIT C

REVISED 9/06

STANDARD TERMS AND CONDITIONS  
FOR ALL NYSERDA AGREEMENTS

(Based on Standard Clauses for New York State Contracts and Tax Law Section 5-a)

The parties to the attached agreement, contract, license, lease, amendment, modification or other agreement of any kind (hereinafter, "the Agreement" or "this Agreement") agree to be bound by the following clauses which are hereby made a part of the Agreement (the word "Contractor" herein refers to any party other than NYSERDA, whether a contractor, licensor, licensee, lessor, lessee or any other party):

1. NON-DISCRIMINATION REQUIREMENTS. In accordance with Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, disability or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is an Agreement for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this Agreement shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this Agreement. If this is a building service Agreement as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this Agreement and forfeiture of all moneys due hereunder for a second subsequent violation.

2. WAGE AND HOURS PROVISIONS. If this is a public work Agreement covered by Article 8 of the Labor Law or a building service Agreement covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law.

3. NON-COLLUSIVE BIDDING REQUIREMENT. In accordance with Section 2878 of the Public Authorities Law, if this Agreement was awarded based upon the submission of bids, Contractor warrants, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting

competition. Contractor further warrants that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to NYSERDA a non-collusive bidding certification on Contractor's behalf.

4. INTERNATIONAL BOYCOTT PROHIBITION. If this Agreement exceeds \$5,000, the Contractor agrees, as a material condition of the Agreement, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the Agreement's execution, such Agreement, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify NYSERDA within five (5) business days of such conviction, determination or disposition of appeal. (See and compare Section 220-f of the Labor Law, Section 139-h of the State Finance Law, and 2 NYCRR 105.4).

5. SET-OFF RIGHTS. NYSERDA shall have all of its common law and statutory rights of set-off. These rights shall include, but not be limited to, NYSERDA's option to withhold for the purposes of set-off any moneys due to the Contractor under this Agreement up to any amounts due and owing to NYSERDA with regard to this Agreement, any other Agreement, including any Agreement for a term commencing prior to the term of this Agreement, plus any amounts due and owing to NYSERDA for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto.

6. CONFLICTING TERMS. In the event of a conflict between the terms of the Agreement (including any and all attachments thereto and amendments thereof) and the terms of this Exhibit B, the terms of this Exhibit B shall control.

7. GOVERNING LAW. This Agreement shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

8. NO ARBITRATION. Disputes involving this Agreement, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily required) without the NYSERDA's written consent, but must, instead, be heard in a court of competent jurisdiction of the State of New York.

9. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law and Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon NYSERDA's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify NYSERDA, in writing, of each and every change of address to which service of process can be made. Service by NYSERDA to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

10. CRIMINAL ACTIVITY. If subsequent to the effectiveness of this Agreement, NYSERDA comes to know of any allegation previously unknown to it that the Contractor or any of its principals is under indictment for a felony, or has been, within five (5) years prior to submission of the Contractor's proposal to NYSERDA, convicted of a felony, under the laws of the United States or Territory of the United States, then NYSERDA may exercise its stop work right under this Agreement. If subsequent to the effectiveness of this Agreement, NYSERDA comes to know of the fact, previously unknown to it, that Contractor or any of its principals is under such indictment or has been so convicted, then NYSERDA may exercise its right to terminate this Agreement. If the Contractor knowingly withheld information about such an indictment or conviction, NYSERDA may declare the Agreement null and void and may seek legal remedies against the Contractor and its principals. The Contractor or its principals may also be subject to penalties for any violation of law which may apply in the particular circumstances. For a Contractor which is an association, partnership, corporation, or other organization, the provisions of this paragraph apply to any such indictment or conviction of the organization itself or any of its officers, partners, or directors or members of any similar governing body, as applicable.

11. PERMITS. It is the responsibility of the Contractor to acquire and maintain, at its own cost, any and all permits, licenses, easements, waivers and permissions of every nature necessary to perform the work.

12. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this Agreement will be in accordance with, but not limited to, the specifications and provisions of State Finance Law Section 165 (Use of Tropical Hardwoods), which prohibits purchase and use of tropical hardwoods, unless specifically exempted by NYSERDA.

13. COMPLIANCE WITH TAX LAW SECTION 5-a. The following provisions apply to Contractors that have entered into agreements in an amount exceeding \$100,000 for the purchase of goods and services:

- a. Before such agreement can take effect, the Contractor must have on file with the New York State Department of Taxation and Finance a Contractor Certification form (ST-220-TD).
- b. Prior to entering into such an agreement, the Contractor is required to provide NYSERDA with a completed Contractor Certification to Covered Agency form (Form ST-220-CA).
- c. Prior to any renewal period (if applicable) under the agreement, the Contractor is required to provide NYSERDA with a completed Form ST-220-CA.
- d. Certifications referenced in paragraphs (b) and (c) above will be maintained by NYSERDA and made a part hereof and incorporated herein by reference.
- e. NYSERDA reserves the right to terminate this agreement in the event it is found that the certification filed by the Contractor in accordance with Tax Law Section 5-a was false when made.

EXHIBIT D

PART 504

PROMPT PAYMENT POLICY STATEMENT

Section 504.1 Purpose and applicability. (a) The purpose of this Part is to implement section 2880 of the Public Authorities Law by detailing the authority's policy for making payment promptly on amounts properly due and owing by the authority under contracts. This Part constitutes the authority's prompt payment policy statement as required by that section.

(b) This Part generally applies to payments due and owing by the authority to a person or business in the private sector under a contract it has entered into with the authority on or after May 1, 1988. This Part does not apply to payments due and owing:

(1) under the Eminent Domain Procedure Law;

(2) as interest allowed on judgments rendered by a court pursuant to any provision of law except Section 2880 of the Public Authorities Law;

(3) to the Federal government; to any state agency or its instrumentalities; to any duly constituted unit of local government, including but not limited to counties, cities, towns, villages, school districts, special districts or any of their related instrumentalities; to any other public authority or public benefit corporation; or to its employees when acting in, or incidental to, their public employment capacity;

(4) if the Authority is exercising a legally authorized set-off against all or part of the payment; or

(5) if other State or Federal law or rule or regulation specifically requires otherwise.

Section 504.2 Definitions. As used in this Part, the following terms shall have the following meanings, unless the context shall indicate another or different meaning or intent:

(a) "Authority" means the New York State Energy Research and Development Authority.

(b) "Contract" means an enforceable agreement entered into between the Authority and a contractor.

(c) "Contractor" means any person, partnership, private corporation, or association:

(1) selling materials, equipment or supplies or leasing property or equipment to the Authority pursuant to a contract;

(2) constructing, reconstructing, rehabilitating or repairing buildings, highways or other improvements for, or on behalf of, the Authority pursuant to a contract; or

(3) rendering or providing services to the Authority pursuant to a contract.

(d) "Date of payment" means the date on which the Authority requisitions a check from its statutory fiscal agent, the Department of Taxation and Finance, to make a payment.

(e) "Designated payment office" means the Office of the Authority's Controller, located at 17 Columbia Circle, Albany, New York 12203.

(f) "Payment" means provision by the Authority of funds in an amount sufficient to satisfy a debt properly due and owing to a contractor and payable under all applicable provisions of a contract to which this Part applies and of law, including but not limited to provisions for retained amounts or provisions which may limit the Authority's power to pay, such as claims, liens, attachments or judgments against the contractor which have not been properly discharged, waived or released.

(g) "Prompt payment" means a payment within the time periods applicable pursuant to Sections 504.3 through 504.5 of this Part in order for the Authority not to be liable for interest pursuant to Section 504.6.

(h) "Payment due date" means the date by which the date of payment must occur, in accordance with the provisions of Sections 504.3 through 504.5 of this Part, in order for the Authority not to be liable for interest pursuant to Section 5.06.

(i) "Proper invoice" means a written request for a contract payment that is submitted by a contractor setting forth the description, price or cost, and quantity of goods, property or services delivered or rendered, in such form, and supported by such other substantiating documentation, as the Authority may reasonably require, including but not limited to any requirements set forth in the contract; and addressed to the Authority's Controller, marked "Attention: Accounts Payable," at the designated payment office.

(j)(1) "Receipt of an invoice" means:

(i) if the payment is one for which an invoice is required, the later of:

(a) the date on which a proper invoice is actually received in the designated payment office during normal business hours; or

(b) the date by which, during normal business hours, the Authority has actually received all the purchased goods, property or services covered by a proper invoice previously received in the designated payment office.

(ii) if a contract provides that a payment will be made on a specific date or at a predetermined interval, without having to submit a written invoice the 30th calendar day, excluding legal holidays, before the date so specified or predetermined.

(2) For purposes of this subdivision, if the contract requires a multifaceted, completed or working system, or delivery of no less than a specified quantity of goods, property or services and only a portion of such systems or less than the required goods, property or services are working, completed or delivered, even though the Contractor has invoiced the Authority for the portion working, completed or delivered, the Authority will not be in receipt of an invoice until the specified minimum amount of the systems, goods, property or services are working, completed or delivered.

(k) "Set-off" means the reduction by the Authority of a payment due a contractor by an amount equal to the amount of an unpaid legally enforceable debt owed by the contractor to the Authority.

Section 504.3 Prompt payment schedule. Except as otherwise provided by law or regulation or in Sections 504.4 and 504.5 of this Part, the date of payment by the Authority of an amount properly due and owing under a contract shall be no later than 30 calendar days, excluding legal holidays, after such receipt.

#### Section 504.4 Payment procedures.

(a) Unless otherwise specified by a contract provision, a proper invoice submitted by the contractor to the designated payment office shall be required to initiate payment for goods, property or services. As soon as any invoice is received in the designated payment office during normal business hours, such invoice shall be date-stamped. The invoice shall then promptly be reviewed by the Authority.

(b) The Authority shall notify the contractor within 15 calendar days after receipt of an invoice of:

- (1) any defects in the delivered goods, property or services;
- (2) any defects in the invoice; and
- (3) suspected improprieties of any kind.

(c) The existence of any defects or suspected improprieties shall prevent the commencement of the time period specified in Section 504.3 until any such defects or improprieties are corrected or otherwise resolved.

(d) If the Authority fails to notify a contractor of a defect or impropriety within the fifteen calendar day period specified in subdivision (b) of this section, the sole effect shall be that the number of days allowed for payment shall be reduced by the number of days between the 15th day and the day that notification was transmitted to the contractor. If the Authority fails to provide reasonable grounds for its contention that a defect or impropriety exists, the sole effect shall be that the payment due date shall be calculated using the original date of receipt of an invoice.

(e) In the absence of any defect or suspected impropriety, or upon satisfactory correction or resolution of a defect or suspected impropriety, the Authority shall make payment, consistent with any such correction or resolution and the provisions of this Part.

Section 504.5 Exceptions and extension of payment due date. The Authority has determined that, notwithstanding the provisions of Sections 504.3 and 504.4 of this Part, any of the following facts or circumstances, which may occur concurrently or consecutively, reasonably justify extension of the payment due date:

(a) If the case of a payment which a contract provides will be made on a specific date or at a predetermined interval, without having to submit a written invoice, if any documentation, supporting data, performance verification, or notice specifically required by the contract or other State or Federal mandate has not been submitted to the Authority on a timely basis, then the payment due date shall be extended by the number of calendar days from the date by which all such matter was to be submitted to the Authority and the date when the Authority has actually received such matter.

(b) If an inspection or testing period, performance verification, audit or other review or documentation independent of the contractor is specifically required by the contract or by other State or Federal mandate, whether to be performed by or on behalf of the Authority or another entity, or is specifically permitted by the contract or by other State or Federal provision and the Authority or other entity with the right to do so elects to have such activity or documentation undertaken, then the payment due date shall be extended by the number of calendar days from the date of receipt of an invoice to the date when any such activity or documentation has been completed, the Authority has actually received the results of such activity or documentation conducted by another entity, and any deficiencies identified or issues raised as a result of such activity or documentation have been corrected or otherwise resolved.

(c) If an invoice must be examined by a State or Federal agency, or by another party contributing to the funding of the contract, prior to payment, then the payment due date shall be extended by the number of calendar days from the date of receipt of an invoice to the date when the State or Federal agency, or other contributing party to the contract, has completed the inspection, advised the Authority of the results of the inspection, and any deficiencies identified or issues raised as a result of such inspection have been corrected or otherwise resolved.

(d) If appropriated funds from which payment is to be made have not yet been appropriated or, if appropriated, not yet been made available to the Authority, then the payment due date shall be extended by the number of calendar days from the date of receipt of an invoice to the date when such funds are made available to the Authority.

Section 504.6 Interest eligibility and computation. If the Authority fails to make prompt payment, the Authority shall pay interest to a contractor on the payment when such interest computed as provided herein is equal to or more than ten dollars. Interest shall be computed and accrue at the daily rate in effect on the date of payment, as set by the New York State Tax Commission for corporate taxes pursuant to Section 1096(e)(1) of the Tax Law. Interest on such a payment shall be computed for the period beginning on the day after the payment due date and ending on the date of payment.

Section 504.7 Sources of funds to pay interest. Any interest payable by the Authority pursuant to this Part shall be paid only from the same accounts, funds, or appropriations that are lawfully available to make the related contract payment.

Section 504.8 Incorporation of prompt payment policy statement into contracts. The provisions of this Part in effect at the time of the creation of a contract shall be incorporated into and made a part of such contract and shall apply to all payments as they become due and owing pursuant to the terms and conditions of such contract, notwithstanding that the Authority may subsequently amend this Part by further rulemaking.

Section 504.9 Notice of objection. Unless a different procedure is specifically prescribed in a contract, a contractor may object to any action taken by the Authority pursuant to this Part which prevents the commencement of the time in which interest will be paid by submitting a written notice of objection to the Authority. Such notice shall be signed and dated and concisely and clearly set forth the basis for the objection and be addressed to the Vice President, New York State Energy Research and Development Authority, at the address set forth in Section 504.2(e). The Vice President of the Authority, or his or her designee, shall review the objection for purposes of affirming or modifying the Authority's action. Within 15 working days of the receipt of the objection, the Vice President, or his or her designee, shall notify the contractor either that the Authority's action is affirmed or that it is modified or that, due to the complexity of the issue, additional time is needed to conduct the review; provided, however, in no event shall the extended review period exceed 30 working days.

Section 504.10 Judicial Review. Any determination made by the Authority pursuant to this Part which prevents the commencement of the time in which interest will be paid is subject to judicial review in a proceeding pursuant to Article 78 of the Civil Practice Law and Rules. Such proceedings shall only be commenced upon completion of the review procedure specified in Section 504.9 of this Part or any other review procedure that may be specified in the contract or by other law, rule, or regulation.

Section 504.11 Court action or other legal processes.

(a) Notwithstanding any other law to the contrary, the liability of the Authority to make an interest payment to a contractor pursuant to this Part shall not extend beyond the date of a notice of intention to file a claim, the date of a notice of a claim, or the date commencing a legal action for the payment of such interest, whichever occurs first.

(b) With respect to the court action or other legal processes referred to in subdivision (a) of this section, any interest obligation incurred by the Authority after the date specified therein pursuant to any provision of law other than Public Authorities Law Section 2880 shall be determined as prescribed by such separate provision of law, shall be paid as directed by the court, and shall be paid from any source of funds available for that purpose.

Section 504.12 Amendments. These regulations may be amended by resolution of the Authority, provided that the Chair, upon written notice to the other Members of the Authority, may from time to time promulgate nonmaterial amendments of these regulations.

**EXHIBIT E**  
**GUIDELINES FOR NYSERDA PRINT DELIVERABLES**

**PURPOSE**

This document briefly describes editorial and production procedures and gives electronic data-transfer information. NYSERDA's contractors prepare the reports describing NYSERDA research and development projects that NYSERDA publishes. Please direct questions about format and style to Diane Welch of NYSERDA's Technical Communications unit: (518) 862-1090, ext. 3276; fax (518) 862-1091; e-mail [dlw@nyserda.org](mailto:dlw@nyserda.org)

**COPYRIGHTS**

All material borrowed or adapted from other sources should be properly identified (i.e., document, source, date, and page). The contractor must obtain and submit to NYSERDA the copyright owner's written permission to use copyrighted illustrations, tables, or substantial amounts of text from another publication.

**GENERAL INFORMATION**

The first reference to NYSERDA should read "the New York State Energy Research and Development Authority (NYSERDA)." Subsequent references should read simply "NYSERDA." When it is clear that you are referring to New York State, use State; otherwise, use New York State or the State of New York.

- Material borrowed or adapted from external sources must be identified (i.e., document, source, date, and page). Written permission to use copyrighted illustrations, tables, or text taken from another publication must be submitted with the report.
- Avoid half-page and one-sentence paragraphs.
- Do not use contractions.
- Acronyms must be spelled out the first time used, followed by the acronym in parentheses.

**ELECTRONIC REQUIREMENTS**

- Material must be submitted in any of the following formats:
  - Compact disc
  - Iomega 100 PC-Zip disk
  - IBM personal computer-compatible 3.5-inch, double-sided (DS), high-density (HD) diskette
- Textual material should be created in a format compatible with WordPerfect 9. While other word-processing programs may be able to be converted, results may vary. Characteristics such as underlining, bold, italics, and special characters that often appear in equations may be lost if WordPerfect 9 is not used.

If you are unable to meet these electronic transfer requirements, before submitting material, please contact Diane Welch of NYSERDA's Technical Communications unit at (518) 862-1090, ext. 33276; fax (518) 862-1091; e-mail [dlw@nyserda.org](mailto:dlw@nyserda.org)

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