



Energy-Related Air Quality and Health Effects Research
Program Opportunity Notice (PON) 2981
\$2,000,000 Available

Proposals Due: December 2nd, 2014 by 5:00 PM Eastern Time*

The New York State Energy Research and Development Authority (NYSERDA) has developed a long-term research plan for the Environmental Monitoring, Evaluation, and Protection (EMEP) program (available through NYSEDA's website at <http://www.nyserda.ny.gov/Energy-and-the-Environment/Environmental-Research/Research-Planning.aspx>). 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. Targeted research topics are:

- A. Monitoring, Characterization, and Understanding of Atmospheric Processes
- B. Trends Analysis – Tool Development and Accountability Analysis
- C. Emissions Inventory – Micro-Inventory
- D. Particulate Matter Component Exposure Characterization
- E. Localized Ambient Particulate Matter and Co-Pollutant Exposure Characterization.

This PON also offers a competitive fellowship program to support up to two (2) 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.

\$2,000,000 is available for projects. Awards are limited to no more than \$350,000; NYSEDA anticipates making multiple awards addressing multiple targeted research areas. Project durations are expected to be in the range of one (1) to three (3) years. Total funds available may not be sufficient to fund all proposals received. Cost-sharing by proposers of at least 25% is preferred. Leveraging of other research funding is strongly encouraged. In-kind cost-sharing is acceptable.

Proposal Submission: Proposers must submit five (5) paper copies and one (1) CD of the proposal with a completed and signed Proposal Checklist (Attachment A) attached to the front of each copy, one of which must contain an original signature. Proposals must be clearly labeled and submitted to:

Roseanne Viscusi, PON 2981
NYS Energy Research and Development Authority
17 Columbia Circle
Albany, NY 12203-6399

If you have technical questions concerning this solicitation, contact Ellen Burkhard at (518) 862-1090, ext. 3332 or Ellen.Burkhard@nyserda.ny.gov. If you have contractual questions concerning this solicitation, contact Nancy Marucci at (518) 862-1090, ext. 3335 or Nancy.Marucci@nyserda.ny.gov.

No communication intended to influence this procurement is permitted except by contacting Ellen Burkhard (Designated Contact) at (518) 862-1090, ext. 3332 or Ellen.Burkhard@nyserda.ny.gov. Contacting anyone other than this Designated Contact (either directly by the proposer or indirectly through a lobbyist or other person acting on the proposer's behalf) in an attempt to influence the procurement: (1) may result in a proposer being deemed a non-responsible offerer, and (2) may result in the proposer not being awarded a contract.

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

I. Introduction

This PON seeks proposals for research projects that further the understanding of the links between energy-related emission sources and ambient concentrations of and exposure to ozone, ozone precursors, particulate matter (PM), PM precursors, PM components and other energy related emissions in New York environments.

Proposals will be considered responsive to this solicitation only if they address targeted research areas. Preferred projects are those that: provide data in a form that is useable by policy analysts and policymakers; 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 key policy-relevant questions related to air quality research. They should build upon or coordinate with existing efforts, and not duplicate work by others. When appropriate, selected proposers may be asked to work with a Project Advisory Committee.

II. Program Requirements – Targeted Research Areas

A. Monitoring, Characterization and Understanding of Atmospheric Processes

Problem Statement: The production and use of energy results in emissions of many gaseous and solid chemical species. These emissions may be involved in numerous complicated atmospheric processes, including ozone production or aerosol formation. 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 chemical processing. 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.

Research Focus:

- Perform highly time-resolved measurements of NO_y , NO_x , HNO_3 , HONO, PAN, H_2O_2 , CO, O_3 , NH_3 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.
- Review and interpret existing oxidant measurements in selected urban and rural sites and combine with photochemical modeling to look for improved measurement coverage and indicators of anomalies that could influence O_3 chemistry.
- Expand VOC and PM-OC (particulate matter-organic carbon) speciation measurements to include quantitative tracers of biogenic or natural components primary OC and secondary OC versus anthropogenic components to include at least two regionally representative rural sites and New York City.
- Measure ambient ammonia to identify its spatial and temporal distribution, source types, and its role in secondary particle formation.
- 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.
- Improve remote-sensing data for New York State and the region. Research is needed regarding 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 $\text{PM}_{2.5}$, but the correlation between these two measurements is complex and a better understanding is needed.

- Measure PM_{2.5} species and gases using a high temporal resolution for better source apportionment, process studies, identification of contributions by major events (e.g. wildfires), support of health studies, and trend analysis. Samples for analysis may include archived samples from previous studies to maximize research value.

B. Trends Analysis – Tool Development and Accountability Analysis

Problem Statement: Trends analyses are needed to assess whether regulatory programs aimed at reducing pollution are having a positive impact on air quality. Determination of trends in air quality measures has been difficult because insufficient data are available to verify emission reductions, and ambient data collections are limited by spatial and temporal coverage of observations. The determination of trends is further complicated by the complexities of atmospheric chemistry, which often creates non-linear relationships between emissions and ambient observations. Innovative techniques are needed to establish credible trends.

Research Focus:

- Develop approaches for dynamic and probabilistic evaluation of models for air quality management to determine:
 - o how well models simulate changes in air quality induced by changes in weather versus emissions
 - o the ability of air quality models to accurately estimate the emissions reductions needed to comply with standards
- Analyze changes in PM_{2.5}, PM components, NO_x, NO_y, NH_x, VOCs, ozone, and other trace gases to determine trends resulting from regulatory programs (e.g., NO_x SIP call, New York State Acid Deposition Reduction Act and changes in fuel use). Approaches may include trends analysis of data from ground-based measurements and emerging remote-sensing techniques, including satellite measurements. Analysis should have sufficient temporal and spatial scope to capture the possible impacts of the regulatory implementation on ambient concentrations and exposure levels for New York State residents. A large database of measurements exists for Whiteface Mountain, Rochester, Pinnacle State Park, and Queens College and is available for trends analysis.
 - o Investigate O₃ trends and the smaller than anticipated reduction in response to downward trends in emissions.
 - o Conduct trends analysis of major gas and particle pollutants using National Emissions Inventory and Canadian inventories.
 - o Evaluate whether and to what extent worldwide air quality impacts O₃ trends in NYS.
 - o Investigate why long-term measurements from the Queens College site indicate a decrease in PM_{2.5}, sulfate and nitrate but an increase in OC. What are likely sources or atmospheric processes that have resulted in this observation?
- Perform accountability analyses to evaluate how changes in regulations, policies, technologies or energy use patterns change emissions, and effect local or regional air quality, exposure, and public health. One approach is to follow a population during a period of this change.

C. 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, liquid bio-fuels or biomass 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: 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 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.

D. PM Component Exposure Characterization

Problem Statement: While it is now well established that exposure to PM_{2.5} causes adverse health effects, what remains unclear is whether specific components of PM_{2.5} and associated co-pollutants are responsible for the observed effects. Atmospheric PM is a complex mixture of chemical compounds resulting from the mixed composition of numerous sources. Studies are needed to improve understanding of the relationships between exposure and health effects and specific components of PM and co-pollutants. Health effects considered may be acute or chronic health effects (e.g., acute cardiovascular, reproductive, neurological, chronic pulmonary).

Research Focus:

- Support efforts to augment the available ambient PM speciation data in New York for use in health exposure studies. The focus should be on size and chemical components of PM_{2.5} and associated gas-phase organic precursors. Personal monitors and crowdsourcing may be a valuable tool.
- Review and interpret the progress in PM_x exposure and health studies including exposure and health trends since the last federal state of the science report. From this evaluation, indicate the strengths and weaknesses of current state of knowledge and its application to New York conditions. Recommend key studies to address weaknesses in the state of the science.

Projects of interest might include, but are not limited to, expansion of analytical capabilities of ongoing studies, analyses of archived samples using multi-element/chemical analysis techniques, or intensive but short-duration monitoring campaigns focused around hot-spots of particular concern. Projects might address relationships between personal and ambient exposure, augment and strengthen ongoing epidemiologic studies, or support source-apportionment analyses, particularly where epidemiological studies are being considered. To the extent possible, projects should use state-of-the-art analytical methods and capabilities.

E. Localized Ambient PM and Co-Pollutant Exposure Characterization

Problem Statement: While general air quality has improved over the past 30 years as a result of regulatory control programs, geographic areas exist where high-emitting or highly concentrated sources may cause consistently higher concentrations of air pollution than other areas. For example, recent health studies in New York City have shown adverse health effects associated with PM components or co-pollutants. Detailed spatial and temporal characterization of concentrations of PM components and co-pollutants is needed to aid exposure studies in areas of major sources such as residual oil-fired power plants, back-up generators, distributed generation technologies, major express highways, warehouse staging areas with high numbers of diesel vehicles, residential communities impacted by wood smoke, or other locations heavily impacted by energy-related sources. Spatially-intensive air monitoring is needed to assess concentration gradients, contributions from important source types, exposure assessments, and potential health effects. Activities in these areas could be coordinated with or extend research conducted as part of a micro-inventory.

Research Focus:

- Assess the potential health relevance of pollution exposure hot-spots in New York State. There should be a defined residential or occupational population nearby that is potentially impacted by the hot-spot. These might include, but would not be limited to, areas in and around the port of New York, neighborhoods impacted by high-volume road traffic, areas affected by a high density of diesel generators or power production, neighborhoods impacted by high concentrations of wood smoke.
- Characterize the spatial and temporal patterns of air pollutant concentrations in the vicinity of the hot-spot, e.g., through receptor modeling efforts, by spatially intensive air monitoring, or personal monitoring to characterize personal exposures and to assess human health risks.

- Review and interpret current status of studies investigating the combined exposure to PM_x and O₃ (possibly including PM speciation and other oxidants) applicable to New York urban and non-urban conditions.

III. Proposal Requirements for Targeted Research Areas

Proposers must submit one (1) CD containing a complete proposal and Proposal Checklist (Attachment A) in PDF format. Proposers must also submit five (5) complete paper copies of the proposal with a completed and signed Proposal Checklist attached to the front of the proposal. At least one Proposal Checklist must contain an original signature. Proposals must be sent to the attention of Roseanne Viscusi at the address on the front of this PON.

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 2981 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 (Attachment C), 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 proposal requirements.**

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

Proposal Format:

PART 1: Project Summary (Four pages total)

- A. Proposal Checklist Cover Sheet: A signed and completed Proposal Checklist (Attachment A) must be attached to the front of the proposal. (One page) *Proposals lacking the appropriate completed and signed Proposal Checklist will be returned.*
- B. Project Summary and Policy Relevance: Summarize the proposed project and its policy implications. Briefly describe how the proposed project will address one or more of the Targeted Research Areas. Describe any air quality policy issues this research would potentially inform. Detail 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 or use of energy. Maximum coordination with other national, state or local cooperative environmental research initiatives is desirable. Explain how the project will make use of other relevant data and coordinate with other initiatives where possible to provide maximum value to New York State. (One to two pages)
- C. Summary of Project Methods: Summarize the proposed project methods and overall research design. 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 the scientific community and policy making organizations, or otherwise demonstrated to be valid. (One page)

PART 2: Statement of Work (Five to seven pages total)

- A. Tasks: The Statement of Work is the primary contractual document that identifies the task sequence, deliverables, and provides the basis for progress payments. It is an action document, divided by the individual tasks or procedures required to accomplish the project objectives. Each task should be identified with a description of its objective, how it will be performed, and the anticipated deliverables and milestones. As appropriate, tasks should include a brief description of general operating procedures, quality control and quality assurance measures, and analytical procedures and statistical analyses to be used to optimize the quality of the data and project results. (Three to five pages)
- B. Information Transfer and Dissemination Plan: The Statement of work must 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 task: presentations at meetings and completing quarterly progress reports, a comprehensive final technical report, and articles for submission to peer-reviewed journals. In addition, each principal investigator will be required to prepare a short paper summarizing the usefulness of their research findings for environmental 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 (in Albany, NY) arranged by NYSERDA staff.

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. Efforts to increase access to, or use of data collected, is encouraged. Outreach or education about project findings is also encouraged. (One Page)

- C. Master Schedule: Complete a schedule showing start 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. The Schedule should be realistic and reflect the nature of environmental research. (One Page)
- D. Contract Pricing Proposal Form: Complete the attached Contract Pricing Proposal Form (Attachment C) 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 preferred.** Leveraging of other research funding is preferable. In-kind cost-sharing is acceptable. (Not included in page count)

PART 3: Supporting Documentation (Three pages total)

- A. 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)
 - Related Projects – Provide a sample of 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)
 - Resumes - 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 page count)

- B. Letters of Commitment or Support: If you are relying on other organizations or businesses to do work, provide services or equipment, data or share in the non-NYSERDA cost, include a letter from that organization or business describing their commitment. If the use of unpublished data from other researchers is necessary for the project to be successful, letters of support showing the availability of these data must be included. **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 page count)
- C. Disclosure of Prior Findings of Non-Responsibility Form: (See General Conditions, below)
- D. Cost Sharing: A cost-share of at least 25% of the total project cost is preferred. 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 that 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
NYSERDA	\$	\$	\$
Proposer	\$	\$	\$
Others (list individually)	\$	\$	\$
Total	\$	\$	\$

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.

Annual Metrics Reports – If awarded, the proposer will be required to submit to NYSERDA's Project Manager on an annual basis, a prepared analysis and summary of metrics addressing the anticipated energy, environmental and economic benefits that are realized by the project. All estimates shall reference credible sources and estimating procedures, and all assumptions shall be documented. Reporting shall commence the first calendar year after the contract is executed. Reports shall be submitted by January 31st for the previous calendar years activities (i.e. reporting period). Please see Attachment E: Sample Metrics Reporting Guides for the metrics that you will be expected to provide and the reporting duration. NYSERDA may decline to contract with awardees that are delinquent with respect to metrics reporting for any previous or active NYSERDA agreement.

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. **If an investigator(s) identified in a proposal is an investigator on one (1) or more current NYSERDA-funded projects, performance on these projects will be considered in the evaluation of the current proposal.**

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? 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? To what extent will 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? Are the Tasks reasonable and clearly described?

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? Have letters of support demonstrating the availability of data and agreement to participate been included?

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 a 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 also be reviewed to determine whether they reflect the overall mission of 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.
- If applicable, the responsiveness of the proposer in conducting other NYSERDA-funded work.

Proposals submitted under the Targeted Research areas that are deemed to be duplicative of a proposal submitted under the EMEP Fellowship area will not be funded in both instances.

V. Program Requirements – EMEP Fellowship

NYSERDA PON 2981 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 Research areas. Post-doctoral fellows must be doing research in an area that aligns with one of the Targeted Research areas as well. Fellowships will provide support for up to two (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 up to two (2) fellowships through PON 2981. Proposals must be submitted through the student's research advisor.

VI. Proposal Requirements for EMEP Fellowship

Proposers must submit two (2) compact disks, each containing a complete proposal and Proposal Checklist (Attachment A) in PDF format. Proposers must also submit one (1) complete paper copy of the proposal with a completed and signed Proposal Checklist attached to the front of the proposal. The signed copy must contain an original signature. Proposals must be sent to the attention of Roseanne Viscusi at the address on the front of this PON. **Late proposals and proposals lacking the appropriate completed and signed Proposal Checklist will be returned.** Faxed or e-mailed copies will not be accepted.

Proposals should not be excessively long or submitted in an elaborate format that includes expensive binders or graphics. Unnecessary attachments beyond those sufficient to present a complete, comprehensive, and effective response will not influence the evaluation of the proposal. Each page of the proposal should state the name of the proposer, PON 2981, and the page number.

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 (One page).
- Project relevance to targeted EMEP research areas identified in this PON (One page).
- Research approach and methodology (up to three pages).
- Expected products and outcomes (One page).
- Brief Budget Justification (note: co-funding not required, but allowed).
- A letter of support from research advisor.
- Statement of career goals (One 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).

Proposals submitted for the EMEP Fellowship that are deemed to be duplicative of a proposal submitted under the Targeted Research areas will not be funded in both instances.

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 except it from disclosure, including a written statement of the reasons why the information should be excepted. See Public Officers Law, Section 89(5) and the procedures set forth in 21 NYCRR Part 501 <http://www.nyserda.ny.gov/About/-/media/Files/About/Contact/NYSERDA-Regulations.ashx>. However, NYSERDA cannot guarantee the confidentiality of any information submitted.

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

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

Empire State Development
Division For Small Business
625 Broadway
Albany, NY 12207

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

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

State Finance Law sections 139-j and 139-k - NYSERDA is required to comply with State Finance Law sections 139-j and 139-k. These provisions contain procurement lobbying requirements which can be found at <http://www.ogs.ny.gov/aboutogs/regulations/advisoryCouncil/StatutoryReferences.html>. The attached Proposal Checklist (Attachment A) 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 (Attachment B) includes a disclosure statement regarding whether the proposer has been found non-responsible under section 139-j of the State Finance Law within the previous four years.

Tax Law Section 5-a - NYSERDA is required to comply with the provisions of Tax Law Section 5-a, which requires a prospective contractor, prior to entering an agreement with NYSERDA having a value in excess of \$100,000, to certify to the Department of Taxation and Finance (the "Department") whether the contractor, its affiliates, its subcontractors and the affiliates of its subcontractors have registered with the Department to collect New York State and local sales and compensating use taxes. The Department has created a form to allow a prospective contractor to readily make such certification. See, ST-220-TD (available at http://www.tax.ny.gov/pdf/current_forms/st/st220td_fill_in.pdf). Prior to contracting with NYSERDA, the prospective contractor must also certify to NYSERDA whether it has filed such certification with the Department. The Department has created a second form that must be completed by a prospective contractor prior to contacting and filed with NYSERDA. See, ST-220-CA (available at http://www.tax.ny.gov/pdf/current_forms/st/st220ca_fill_in.pdf). The Department has developed guidance for contractors which is available at <http://www.tax.ny.gov/pdf/publications/sales/pub223.pdf>.

Contract Award - NYSERDA anticipates making multiple awards under this solicitation. It may award a contract based on initial applications without discussion, or following limited discussion or negotiations pertaining to the Statement of Work. Each offer should be submitted using the most favorable cost and technical terms. NYSERDA may request additional data or material to support applications. NYSERDA will use the Sample Agreement (Attachment D) to contract successful proposals. NYSERDA reserves the right to limit any negotiations to exceptions to standard terms and conditions in the Sample Agreement to those specifically identified in the submitted proposal (see Attachment A: Proposal Checklist). Proposers should keep in mind that acceptance of all standard terms and conditions will generally result in a more expedited contracting process. NYSERDA expects to notify proposers in approximately eight (8) weeks from the proposal due date whether your proposal has been selected to receive an award. NYSERDA may decline to contract with awardees that are delinquent with respect to any obligation under any previous or active NYSERDA agreement.

Limitation - This solicitation does not commit NYSERDA to award a contract, pay any costs incurred in preparing a proposal, or to procure or contract for services or supplies. NYSERDA reserves the right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest. NYSERDA reserves the right to reject proposals based on the nature and number of any exceptions taken to the standard terms and conditions of the Sample Agreement (Attachment D).

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:

- Attachment A: Proposal Checklist
- Attachment A-1: Acceptance of Standard Terms and Conditions
- Attachment B: Disclosure of Prior Findings of Non-Responsibility Form
- Attachment C: Contract Pricing Proposal Form (CPPF) and Instructions
- Attachment D: Sample R&D Cost-Share Agreement
- Attachment E: Sample Metrics Reporting Guide
- Attachment F: Solicitation Marketing Questionnaire