

Proposals Due: May 11, 2010 by 5:00 pm Eastern Time*

The New York State Energy Research and Development Authority (NYSERDA), in collaboration with the U.S. Environmental Protection Agency Region 2 and others promoting use of best available emission control technology and clean construction practices in NYS (the NY Interest Group) requests proposals to create a useful, web-based clearinghouse and database to allow contractors and regulators to access information detailing entity-approved best available emission control technology (BAT) applications for construction equipment, which can be expanded geographically and broadened to other non-road applications, and can be self sustaining based on demonstrated value.

Proposals are sought from a team with experience and expertise in the areas of: relational database models; web-based information clearinghouses; business planning; diesel emission control technologies; in-use activity/emissions testing, and emission inventories that have a demonstrated ability to engage stakeholder groups in clearinghouse design.

The Contractor working with NYSEDA's project manager (with input from a project advisory group), will be engaged in a number of activities including: establishing administrative and quality control and assurance protocols; developing a means to broaden stakeholder interest in the clearinghouse; designing, creating and populating the database with information gathered initially from entities in the NYC metropolitan area who are implementing mandatory or environmental performance commitment programs specifying the use of BAT; designing and implementing means to assess the usefulness and value of the database to clearinghouse data contributors and other potential users; pursuing a strategy to build a sustainable clearinghouse web service; and gathering sources of in-use duty cycle and activity data.

The \$500,000 available, together with any in-kind and third party support offered by the prospective Contractor subcontractors or other parties, is expected to cover all costs associated with the above mentioned activities and to support the operation of the clearinghouse for a 2-year period. Supplementary support for a 3rd year may be available depending on progress made by the Contractor during the first year and one-half of the project. NYSEDA intends to award one contract under this solicitation.

As is detailed in RFP 1666, NYSEDA requests proposals stating qualifications, experience, and ideas for how to create a useful and sustainable non-road clearinghouse database for construction applications. The proposer should provide sufficient cost information on a task/activity basis to allow for adjustment of project activities, if desired.

Proposal Submission: Proposers must address program requirements detailed in the complete solicitation and submit twelve (12) 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, RFP 1666
NYS Energy Research and Development Authority
17 Columbia Circle
Albany, NY 12203-6399**

Technical questions should be directed to Barry Liebowitz, ext.3248, e-mail bnl@nyserda.org. Proposers are encouraged to contact Barry Liebowitz if they have any questions after reviewing this solicitation document. Contractual questions should be directed to Nancy Marucci at (518) 862-1090 ext. 3335 or e-mail nsm@nyserda.org

No communication intended to influence this procurement is permitted except by contacting Barry Liebowitz (Designated Contact) at (518) 862-1090, ext. 3248 or bnl@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 NYSEDA location other than the address above. If changes are made to this solicitation, notification will be posted on NYSEDA's web site at www.nyserda.org.

I. INTRODUCTION

Goal: Create a useful, web-based, clearinghouse and database (Clearinghouse) that will provide users with the ability to ascertain approved best available emissions control technology (BAT) for construction equipment applications in New York State, by approving entity, which can be expanded geographically and broadened to cover other non-road applications and become self sustaining based on demonstrated value. By creating a master inventory of entity-approved BAT, the burden of research into appropriate and effective pairings of engines and devices is intended to be minimized for both contractors and regulators.

The effect of non-road sector emissions on ambient air quality substantially exceeds its contribution based on net energy consumption. While non-road sources in New York State are responsible for about 11 percent of net transportation-sector energy consumption¹ in New York State, non-road vehicles were responsible for 2.5 to 14 times more emissions than on-road vehicles on a unit energy basis. Moreover, emissions from these sources tend to be released in populous areas increasing human exposure to direct emissions.

In an effort to address this problem, New York City and several neighboring counties have adopted requirements that contractors working on municipally funded projects must use **best available emissions control technology** (BAT). In addition, several other entities engaged in Lower Manhattan Reconstruction have adopted environmental performance commitments that specify the use of BAT. These entities constitute the NY Interest Group, which pay some premium for use of BAT but have no means to share information and support the development of a mutually-accessible database. The Clearinghouse is expected to help reduce the cost of BAT discovery, promote consistency in BAT determinations, and provide a “bottom-up” inventory or registry of clean diesel construction equipment and control technology assets in the region. There is interest on the part of the entities engaged in specifying the use of BAT in NYS to collect more information on BAT use including maintenance history, performance, activity and other parameters.

The NY Interest Group includes, but is not limited to: New York State Department of Environmental Conservation (NYSDEC), New York City Department of Environmental Protection (NYCDEP), the Port Authority of New York and New Jersey (PA), the Metropolitan Transit Authority (MTA), the Lower Manhattan Development Corporation (LMDC), and some colleges and universities, such as Columbia University, which have adopted environmental performance commitments including the use of BAT for construction and other activities as part of contract specifications.

This solicitation will obtain the services from a team with experience and expertise in the areas of: relational database models; web-based information clearinghouses; business planning; diesel emission control technologies; in-use activity and emissions testing; and emission inventories that have a demonstrated ability to engage stakeholder groups in clearinghouse design.

Pre-Proposal Webinar/Teleconference.

NYSERDA will conduct a webinar/teleconference, entitled, “**Information Session on RFP 1666**” on **April 20, 2010** starting at **1:00 pm Eastern Standard Time**. Participants can join the webinar, up to 30

¹ NYSERDA Clean Diesel Technology: Non-Road Field Demonstration Program – Interim Report, Table 2-1 2002 NYS Non-Road Emissions by Fuel Type, http://www.nyserda.org/publications/InterimReport_Final_2007-02-09.pdf, and Patterns Trends New York State Energy Profiles: 1993 - 2007 Table 2-12b New York State Net Transportation Consumption of Energy by Fuel Type, http://www.nyserda.org/energy_information/patterns%20&%20trends%201993-2007.pdf.

minutes before start time. NYSERDA will review and answer questions on RFP 1666, the proposal requirements, and evaluation process.

The webinar address is <https://nyserda.ilinc.com> . To join the webinar: **click “public sessions”**; then **click the “join” tab**; and then **click “join” next to the event “Information Session on RFP 1666”**. Registration is not required. The webinar is set up so that participants are anonymous, however, the webinar leader will allow anyone who wishes to identify themselves and their interests to do so.

Use your telephone for the audio portion of the webinar by calling **1-888-394-8197**. The participant code is **303066**.

Objectives:

(1) Create and initially populate the Clearinghouse working with the New York Interest Group and others using existing data records within the first three- to six-months of the project;

(2) Establish best strategies to populate the Clearinghouse database by stakeholders on an on-going basis, including specific data import protocols/deliverables, and utilization of controlled vocabularies with look up tables referenced to established data sources, such as U.S. Environmental Protection Agency’s (EPA) engine tier system and California Air Resources Board (CARB)/EPA’s verified control technologies within the first six months of the project;

(3) Establish a working dialogue, demonstrate the web site’s utilization, and disseminate information on the value and benefits of the Clearinghouse, concurrent with Task 1, with a wide stakeholder group to expand the quantity and quality of clearinghouse information. Targeted groups include EPA Office of Transportation & Air Quality (OTAQ), Regional Diesel Collaborative organizations, state and local energy and air quality or regulatory agencies, manufacturers of emission control equipment, engine and equipment manufacturers, environmental groups and national/international associations within six to nine months;

(4) Publicize the availability and assess the usefulness of the Clearinghouse to New York stakeholders and others within in three to six months;

(5) Pursue a strategy designed to sustain the Clearinghouse for its useful life beyond NYSERDA’s possible 3-year support based on the availability of private and public sources of revenue including, but not limited to, government agencies, environmental groups and other interest groups.

Funding

The \$500,000 available, together with any in-kind and any third party support proposed, is expected to cover all costs associated with the above mentioned activities and to support the operation of the Clearinghouse for a 2-year period. Supplementary support for a 3rd year may be available depending on progress made by the Contractor during the first year and a half of the project. NYSERDA intends to award one contract under this solicitation.

II. BACKGROUND

Energy and Environmental Context (Regional & Statewide): Within the Northeast and Mid-Atlantic

States², the transportation sector (on-road plus non-road) accounts for about 30 percent of total energy consumption in 2006³. Non-road sources conventionally include about 300 equipment types used in mining, agriculture, logging, construction, airport ground operations, commercial operations, industrial operations, lawn and garden care, and recreational vehicles as well as pleasure craft. Aircraft, rail transport, and commercial marine vessels are also non-road sources, but they are typically accounted for separately.

In New York State, the transportation sector was responsible for about 28 percent of total energy consumption in 2006. Although non-road equipment was responsible for about 11 percent of net transportation-sector energy consumption in 2002⁴ in New York State, non-road vehicles were responsible for 2.5 to 14 times more emissions than on-road vehicles on a unit energy basis depending on the emission-parameter. Based on 2002 emissions inventory data, the percentage contributions of non-road equipment to the total transportation sector emissions of priority pollutants are as follows: 24% of Carbon Monoxide (CO); 28% of oxides of nitrogen (NOx); 31% of Volatile Organic Carbon and hydrocarbons (VOC, HC); 58% of sulfur oxides (SOx); 58% of particulate matter greater than 10 micron aerodynamic diameter (PM₁₀); and 66% of PM_{2.5}.⁵ In addition to criteria pollutants, the non-road sector is also a source of toxic air pollutants. Therefore, the effect of non-road sector emissions on ambient air quality substantially exceeds its contribution based on net energy consumption. Moreover, emissions from these sources are released in populous areas increasing human exposure to direct emissions.

Non-road Diesel (National Context): Nationally, the EPA has developed a number of programs to further the development and introduction of emission control technologies for on-road and non-road applications including an environmental technology verification program, and a voluntary program through the National Clean Diesel Campaign to introduce verified retrofits into non-road applications. The EPA and the California Air Resources Board (CARB) through a memorandum of understanding have agreed to reciprocally recognize verified technologies, however, they are not prohibited from requiring compliance with other retrofit program elements or criterion.

In 2004, the EPA promulgated new regulations in CFR Parts 9, 69, et al. entitled, “Control Emissions of Air Pollution from Non-road Diesel Engines and Fuel; Final Rule”. The rule requires new non-road diesel engines starting with the 2008 model year and phasing in over a number of years to reduce particulate matter and oxides of nitrogen by 95% and 90%, respectively. Hence, over time the introduction of these new diesel engines with emission control technologies will greatly reduce these emissions as the existing fleet of equipment is replaced. **However, existing diesel engines and equipment used in non-road applications such as construction equipment have long useful life, and improvements in local ambient air quality may be significantly delayed.**

Non-road Diesel (Other states and countries): Some states such as California have supported the replacement of older diesel engines with newer cleaner engines used in on-road applications, and are engaged in programs to demonstrate the use of retrofits in non-road equipment. In 2007, the CARB approved a regulation to reduce emissions from existing non-road diesel vehicles in construction, mining, and other industries. Beginning in 2010, over successive years, the regulation requires small, medium

² Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Vermont, Virginia, and West Virginia.

³ U.S Department of Energy, Energy Information Agency, State Energy Data System
<http://www.eia.doe.gov/emeu/states/seds.html>

⁴ NYSERDA Clean Diesel Technology: Non-Road Field Demonstration Program – Interim Report, Table 2-1 2002 NYS Non-Road Emissions by Fuel Type, http://www.nyserdera.org/publications/InterimReport_Final_2007-02-09.pdf, and Patterns Trends New York State Energy Profiles: 1993 - 2007 Table 2-12b New York State Net Transportation Consumption of Energy by Fuel Type, http://www.nyserdera.org/energy_information/patterns%20&%20trends%201993-2007.pdf.

⁵ Based on analysis of emission inventory data provided by NYS Department of Environmental Conservation (NYSDEC).

and large fleets to meet successively lower average emission rate targets for oxides of nitrogen and particulate matter.

The Texas Commission on Environmental Quality's (TCEQ) Texas Emission Reduction Plan (TERP) has supported equipment replacement and repowering as well as the deployment of control technologies for on-road and non-road equipment aimed at reducing emissions of oxides of nitrogen. In some cases, the TERP requires grantees to install equipment with global position systems to assess impact on meeting emission reduction goals. The TCEQ's New Technology Research & Development (NTRD) program supports the development of technologies to reduce oxides of nitrogen from non-road diesel equipment used in marine, locomotive, transport and construction.

In Europe: Switzerland, Germany and Austria have adopted mandatory requirements for the use diesel particle filters for all construction equipment. Filter verification started in the 1990's with "VERT"- a program of Swiss and German organizations to curtail emissions at tunnel sites. VERT qualified filters and test protocols are posted on the Swiss Agency for the Environment, Forests, and Landscape (BUWAL) website.

Non-road Diesel (New York State Mandatory and Environmental Performance Commitment Programs): New York State, through the Diesel Emission Reduction Act⁶ (NYSDERA), requires non-exempted heavy duty vehicles that are owned, leased or operated on behalf of the state agencies and other state entities to use ultralow sulfur diesel and best available technologies (BAT) to reduce particulate matter to the greatest extent possible. Most heavy duty construction equipment is, however, exempted under NYSDERA. New York City, through Local Law 77, administered by the NYC Department of Environmental Protection (NYCDEP), requires contractors working on projects funded by the municipality to use BAT as determined by the Department. Several counties in the NYC Metro Area have also done the same. In addition, a number of public authorities such as the Port Authority of New York and New Jersey (PA) and the Metropolitan Transit Authority (MTA), the Lower Manhattan Development Corporation (LMDC), some colleges and universities, such as Columbia, have adopted environmental performance commitments including the use of BAT for construction and other activities as part of contract specifications. These entities, "the NY Interest Group," have advocated for the creation of a Clearinghouse to facilitate decision making in the specifying best available technologies in construction projects in the NYC metropolitan area.

Entity-Approved Best Available Technologies may be considered those certified or verified to remove pollutants (such as particulate matter, volatile organic compounds, oxides of nitrogen) at the highest level possible for a given piece of equipment. Contractors must provide a justification for the use of less effective pollution control devices.

The determination of, or at least acceptance of, best available technology is the responsibility of the individual regulatory agency (i.e., NYCDEP, NYSDEC), County Governments, Public Authorities (such as PA-NYNJ, MTA) or construction contract "owners" with active voluntary policies (i.e., Columbia University). Some will base BAT on EPA/CARB verified/certified technologies while others consider VERT verified filter technologies or even unverified applications. **Hence, non-road BAT for construction equipment are those considered as approved by various regulatory agencies, public authorities or private owners.**

Diesel Retrofit Certification/Verification programs as administered by CARB, EPA, or VERT are designed to determine the performance of control technologies on engine applications using steady state and transient test cycles as new and after 1000 hours of operation (2000 hours under the VERT program).

⁶ www.dec.ny.gov/regulations/47297.html

Time-over-temperature is specified for passively regenerated systems. Hence, BAT/construction equipment application determinations depend on knowledge about control device and the equipment application.

Existing Databases: There are several databases that provide some information on BAT for non-road sources: <http://www.arb.ca.gov/bact/bact.htm>; <http://www.arb.ca.gov/msprog/ordiesel/vdecs.htm>; <http://www.akpf.org/db/> ; <http://www.bafu.admin.ch/luft/00596/06906/index.html?lang=en> ;and <http://www.tercairquality.org/NewTechnologyResearchDevelopmentNTRD/ResearchProjects/DieselDataBaseProject/tabid/757/Default.aspx> , however, these do not provide operational data and are not structured to assist in environmental project management.

Proposed Database Clearinghouse Model: An example relationship diagram can be found on Figure 1 (attached), which was created using MS Access. In developing the Clearinghouse, consideration should be given to open-source software. The Tables and typical fields to be captured are included on this diagram and outlined below. These tables and fields should not be considered all-inclusive. The design of the database should be capable of meeting the needs of a wide variety of stakeholders. Joins and table relationships in Figure 1 are provided for guidance. The database is to be designed as a tool for environmental managers to track equipment in-use at various construction projects. The types of Tables, Fields, Reference tables and Queries include, but are not limited to:

A. Tables and Fields:

- project information (e.g., contract/contractor ID, project name, project sponsors, and site ID/name);
- non-road equipment information (e.g., equipment ID, manufacturer ID, type ID, model year, age, tag numbers, owner, and owner contact information);
- engine information (e.g., type, engine family, manufacturer, tier number, number of cylinders, serial number, and model year);
- retrofit information (e.g., retrofit ID number type, manufacturer, model name and number, regeneration mode);
- retrofit performance (e.g., certified or verified performance or reduction levels, expected energy penalty, expected life, maintenance cycle);
- retrofit to equipment “Fit” details (installation and removal dates, installation and equipment cost, serial number details, and maintenance cost);
- equipment tracking (e.g., location, site name, project name, start and end dates); and
- BAT approval and inspection information (e.g., approvals of “Fits,” date of expiration (assumes BAT lasts for 3 years), and approval sticker numbers.

In-use performance data that can be tracked include:

- equipment usage hours of operation (e.g., project specific, and/or cumulative hours);
- equipment fuel consumption;
- maintenance history (e.g., type and actual event); and
- operational issues (e.g., start-up, power levels, and work performance).

Potentially, in-use activity, performance and emission data may be gathered, including:

- duty cycle characterizations (qualitative or quantitative descriptions such as power/activity profile);
- time over temperature with respect to duty cycles;
- activity data (e.g., idle hours, total hours in-use, miles, percent idling, and percent time at

- various loads ; and
- in-use emission factor data.

B. Reference Tables: It is anticipated that the database will include the following reference/look up tables:

- Established lists of verified emissions reduction equipment from CARB, EPA and VERT;
- Verified emission reduction percentages for after-treatment devices;
- Off road engine families, models, and manufacturers;
- Engine tier ratings, and emissions factors;
- Conversion factors, units and default assumptions for emissions calculations when actual data such as run-time (hours) and fuel consumption data are not available; and.
- Any other data that lends itself to the creation of reference tables.

C. Queries:

A set of queries to be pre-established are described below. Again, these queries should not be considered all-inclusive, but provide some general concepts of the data and calculation needs. The ability to create custom queries is also expected, as are exporting and reporting capabilities.

- Baseline emissions per pollutant (CO, HC, NMHC+NO_x, NO_x, PM, CO₂) for example, per equipment, project, site, contract, or other parameter. For emissions calculation, the solution verifies the accuracy of Tier level by evaluating horsepower, model year and 2/4 strokes. With accurate designations of engine Tier levels, baseline emission inventories can be calculated using Tier-specific emissions factors, actual run time hours or fuel consumption, or made using default assumptions of work hours.
- Post-retrofit emissions per pollutant per equipment, project, site, contract, etc:
 - Utilizes CARB/EPA/VERT verified percent reduction numbers for specific retrofit devices
 - Indicates whether the tail pipe device is specifically verified for that engine family.
- Overall emissions reductions generated by retrofitting or other strategies (Baseline minus Retrofitted) per pollutant per equipment, project, site, contract, etc.
- BAT fit expirations.

Data Population: Existing data records from the NY Interest Group will also be migrated into the Clearinghouse. These are “flat file” spreadsheet inventories that may require extensive verification, manual data entry, or processing to import. Examples can be found in Figures 2A & 2B, (attached).

For future data population, the Proposer will need to develop a means that provides both ease of entry and accuracy of inputted data. Examples of possible routines include:

- Electronic Data Deliverable (EDD) structure that can be imported into the Clearinghouse database after being examined for accuracy of technical content. This structure can then be supplied to contractors for population and delivery as a contract submittal
- Easy to use data entry forms including drop down menus for the selection of information from controlled vocabularies where applicable.
- A wizard driven system, where applicable, drawing in horsepower, model year and 2/4 strokes to

select accurate engine Tier assignments

The on-going population of the Clearinghouse may be called for by the NY Interest Group, because it is key to expanding the reach and user base of the Clearinghouse. A web interface will allow access to the Clearinghouse. Bandwidth should be adequate to accommodate 100 concurrent users. The Clearinghouse database and its admin/security should allow power users to create custom queries, track usage, assign rights and manage accounts through the web interface.

III. PROGRAM REQUIREMENTS

Clearinghouse Development, Testing, and Marketing Services

Specific Requirements: In addition to meeting the project goals and objectives defined previously, the proposer will be responsible for providing a strategy to expand and sustain the Clearinghouse for its useful life beyond NYSERDA's possible 3-year support. The proposer should engage stakeholders beyond the NY Interest Group in developing provisional Clearinghouse protocols. Protocols and procedures need to be developed that address Clearinghouse access, data importing, data quality assurance, and data quality standards. A balance needs to be maintained between expanding data entry privileges, third party quality control and self policing. A committee structure should be considered as a means to expand opportunities for stakeholder involvement to address the diversity of perspectives.

The proposer should develop milestones to assess the achievement of project objectives, and provide a budget management strategy to allow NYSERDA's project manager to re-allocate resources across project tasks, if necessary. The proposer will be required to operate the Clearinghouse for NYSERDA for a two-year period making provision to allow transfer of management to another entity, if necessary. Once information on the use of entity-approved BAT in construction projects is coalesced in NYS, a descriptive report should be produced that describes the prevalence of BAT technology by equipment application. The Contractor will be responsible for developing means to convey the value of the Clearinghouse to database users and using this as a tool to expand stakeholder interest.

The selected Contractor will be required to grant NYSERDA a license to use, modify, distribute and permit others to use, modify and distribute all software and other materials developed as part of the development, operation and maintenance of the CD-Clearinghouse.

Proposer Qualifications: The proposer should provide sufficient background for NYSERDA to judge proficiency in all aspects of work outlined in the Statement of Work, and particularly in managing stakeholder involvement leading to the development of consensus on technical/policy issues. Potential stakeholders include the EPA Office of Transportation & Air Quality (OTAQ), Regional Diesel Collaborative organizations, state and local energy and air quality or regulatory agencies, manufacturers of emission control equipment, engine and equipment manufacturers, environmental groups and national/international associations such as the Association of General Contractors and American Association of Port Authorities, etc. Proposers should convey a solid understanding of issues at play in building a useful Clearinghouse, explaining the impediments and barriers and how they may be overcome or converted into strengths. Proposals must include 2 brief examples how principle team member's experience has been employed to address similar issues in other areas. The proposer does not have to have an interest in operating the clearinghouse long term.

Budget: A maximum of \$500,000 of NYSERDA funds is anticipated to be available for this project.

IV. PROPOSAL REQUIREMENTS

Proposers must submit one electronic copy as a pdf file and twelve (12) copies of the completed proposal the address on the front of this Request for Proposals. A completed and signed Proposal Checklist (Attachment A) must be attached as the front cover of each 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.

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. Suggested page limits are offered for each of the sections of the proposal. Each page of the proposal should state the name of the proposer, the RFP number, and the page number. The proposal must be in the following format:

- **Proposal Checklist**
- **Procurement Lobbying Requirements - State Finance Law sections 139-j and 139-k**

Procurement lobbying requirements contained in State Finance Law sections 139-j and 139-k became effective on January 1, 2006. (The text of the laws is available at: <http://www.ogs.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, an additional form (or 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.

- **Proposer Background, Qualifications and Experience (2 - 5 pages maximum excluding short biographical summaries and business/academic information)**

What type of organization are you (e.g., not-for-profit, for-profit, marketing, evaluation, educational/academic, and/or other (specify).

Describe the business activity, approximate size and experience of your organization.

Describe how the proposed project fits into your portfolio of ongoing work.

List key personnel and areas of expertise (include 1-page resumes for key personnel as an appendix).

Describe the most important features and possible functions the Clearinghouse can provide, and explain how this translates into building stakeholder interest and participation.

Describe the chief barriers and weaknesses of the Clearinghouse as conceived in this program and discuss how these barriers and weaknesses can be overcome, mitigated, or converted into strengths.

Describe what strategy you would take to establish an ongoing business or non-profit operation with public support. What are the milestones that need to be accomplished for this strategy to succeed?

What features of the described database model, if any, would you change for the better – how and why.

Describe how team member experience and expertise are aligned with the goals and objectives of the program and well matched to the activities outlined in the Scope of Work. Selected additional business and professional background information such as resumes may be included as Appendices.

- **Examples of Experience and References (3 pages maximum)**

Provide examples of two (2) related projects with references you and each team member have been engaged in that are comparable to the activities outlined in the Statement of Work. These examples should be summarized briefly and should not exceed more than 2 pages. Electronic links to full reports, if available, are encouraged.

Provide references; names, email address, and phone numbers for each of the projects listed.

- **Statement of Work (5 pages maximum)**

These tasks are provided as a starting point and should be adjusted to better represent your vision of the project. Where appropriate describe key milestones or project deliverables. Identify procedures you plan to use to ensure strict oversight of team members' work and quality control.

- 1. Clearinghouse Database: Data Review, Design, Management, and Data Collection**

The Contractor, in consultation with NYSERDA Project Manager, shall:

Review non-road/retrofit data inventories currently held by the NY Interest Group.

Design, create and establish a web-based data base platform.

Host and publish a preliminary dataset to demonstrate functionality of the website for review by NYSERDA Project Manager and representatives of the NY Interest Group.

Develop an advisory panel structure to provide for facilitate stakeholder involvement, beyond the NY Interest Group, on refining Clearinghouse design, operation, and management issues. Clearinghouse issues to be considered, include but are not limited: how to administer quality control and assurance of database content based on a diversity of database users and contributors; defining commonly used queries and reports; should there be different levels of privileges regarding data entry and data retrieval based on the class of clearinghouse user; to what extent are data publicly available or restricted; how can the clearinghouse be designed to allow for sharing information on best clean construction environmental management practices, new fuel blends, electrification, use of best available emission control technology as well as idle reduction technologies; and how should the Clearinghouse be designed to allow for expansion beyond the focus of construction equipment to other non-road sector equipment.

Develop forms and data transfer templates to allow transfer of data to the Clearinghouse. Establish best strategies to populate the Clearinghouse database by stakeholders on an on-going basis, including specific data import protocols/deliverables, and utilization of controlled vocabularies with look up tables referenced to established data sources, such as EPA's engine tier system, as well as California Air Resources Board (CARB), EPA, and European certified and/or verified emission control technology lists.

Gather and quality assure data to populate the Clearinghouse, working initially with entities in New York State to populate the data base. NYS entities include, but not limited to, PA, Federal Transportation Agency (FTA) sponsored Lower Manhattan Construction with activity related data managed by the

Lower Manhattan Construction Command Center (LMCCC), NYS Department of Transportation (DOT), the Metropolitan Transit Authority (MTA), Columbia University, the New York City Department of Environmental Protection (NYCDEP), the New York State Department of Environmental Conservation (DEC), New York City Office of Sustainability, as well counties such as counties in outside of New York City including Nassau, Rockland, Suffolk and Westchester Counties that have passed laws requiring the use of Best Available Control Technologies for county-funded construction projects.

Explore and incorporate in-use activity and emissions data from public sources that supports finding appropriate matches of control technologies to construction equipment. Develop a simplified scheme to relate construction equipment work activities in construction parlance with engineering metrics of work activity. Engage construction equipment and emission control technology manufacturers and encourage sharing activity and performance data that allow equipment owners and environmental managers to more easily make best available technology determinations.

2. Expand Stakeholder Involvement

The Contractor, in collaboration with NYSERDA Project Manager, shall:

Develop a plan describing activities over the duration of the project that builds on the advisory panel structure in Task 1 to expand potential stakeholder involvement nationally and internationally, if warranted. The goal of this task to deepen the information to be found on the Clearinghouse regarding the use of retrofit emission control technologies in non-road construction equipment as well as clean construction best management practices from a broad range of potential stakeholders . This is necessary to create conditions that may sustain Clearinghouse activity without further NYSERDA support in the future.

In addition to the entities implementing the use of Best Available Emission Control technology on construction equipment and Best Management Practices for Clean Construction in New York State the Contractor shall widen Stakeholders (information users and/or providers) including, but not limited to: USEPA; Regional Diesel Collaborative(s); State and Local Air Quality or Regulatory Agencies; Port Authorities, Manufacturers of Emission Controls; Engine and Equipment Manufacturers; Equipment rental firms; National and local associations representing these as well as affected groups and interested parties such as Environmental Advocacy Groups, Association of General Contractors, the American Association of Port Authorities (AAPA-Ports).

In developing a plan consideration shall be given to conducting information sharing meetings for interested parties via web-conferencing or via workshops at topical conference venues such as the U.S. Department of Energy's (DOE's) Directions in Engine Efficiency and Emissions Research Conference (DEER), Air & Waste Management Association Annual conference and or the Coordinating Research Council (CRC) On-Road Diesel Emission Workshop.

Note: non-road equipment manufacturers and control technology vendors have access to equipment duty cycle information e.g., load duration curves, time at idle, time over temperature curves for non-road construction equipment applications, which would help reduce the uncertainty in finding appropriate pairings of emission control technology and construction equipment.

The Contractor shall assess the value of incorporating data from other databases including, but not limited to: the Texas Commission on Environmental Quality database managed by the Houston Advanced Research Center (TCEQ/HARC); CARB emission control certification program database; the EPA Environmental Verification Program database; and the Association of European Diesel Particle Filter

Manufacturers (AKPF) database of diesel particle filter applications and estimate the effort needed to incorporate these data.

3 Evaluate the Clearinghouse value to NYS users

The Contractor in collaboration with the NYSERDA Project Manager shall develop a plan to assess the value of the Clearinghouse to users implementing use of best available technology including, but not limited to:

- Evaluating the reduction in time/cost of decision making;
- Evaluating the extent change order premiums are eliminated; and
- Evaluating the usefulness of Clearinghouse data to improve emission inventory estimates.

The plan should describe the data to be sought, how these data are to be collected and how these data would be analyzed.

The Contractor shall develop a plan to assess the incremental cost and the cumulative effect of implementing mandatory and voluntary best available control technology programs in NYS has had on reducing emissions of priority pollutants.

Based on approval of the NYSERDA Project Manager, the Contractor shall conduct the activities outlined in these plans and provide a report that describes the methodology and results.

4. Undertake Strategy to Build a Sustainable Clearinghouse Web Service

The Contractor shall:

- Refine the strategy proposed to build a sustainable Clearinghouse
 - ◆ Describe the business model envisioned to sustain the operation of the Clearinghouse for the long term;
 - ◆ Compare and contrast envisioned Clearinghouse financial requirements to what is known of existing commercial and not-for-profit information sharing web-sites that serve emission control, air quality and diesel-related technology communities;
 - ◆ Identify strategic partners whose support is needed to sustain the Clearinghouse;
 - ◆ Outline the steps that need to be taken and the milestones that need to be achieved in the refined strategy; and
 - ◆ Provide updates to the NYSERDA for review and consideration describing progress and refinements made to building a sustainable Clearinghouse on a monthly basis.
- Undertake steps outlined in the refined strategy
 - ◆ Based on the results of Task 1, 2, 3 and 4 prepare an assessment by month-12 and month-18 of the progress made in attaining a sustainable Clearinghouse beyond NYSERDA support. The assessment should characterize what are the strongest features of Clearinghouse, what is the level of interest in and support of the Clearinghouse beyond the NY Interest Group, who are the most supportive stakeholders and what does this imply for establishing support for the Clearinghouse in the long term, and identify what are greatest weaknesses of Clearinghouse that stand in the way of its future.

- ◆ Provide the assessment to the NYSERDA Project Manager for review and consideration.
- Develop milestone budgets to cover the cost of transferring operation of the Clearinghouse to other website operators including setting up, testing and transferring database content.
 - ◆ Provide milestone budgets as described to the NYSERDA Project Manager for review and consideration.

- **Budget**

Complete and attach the Contract Pricing Proposal Form (CPPF) to show how the total project budget for consulting services will be spent per year over a two year period in accordance with the accompanying “Instructions for Preparation of Cost Estimates.” Proposers may also propose alternate CPPFs to show how the total budget for consulting services will be spent per year over a period greater than two years considered by the proposer to better utilize NYSERDA funds to build a sustainable clearinghouse web service. The budget should state the number of hours of work for each staff person that would be completed under a budget capped at \$500,000 of NYSERDA funds.

Travel budgets should be identified, with number of roundtrips listed.

For each subcontractor receiving more than \$10,000 in expected costs, a separate CPPF should be included.

Provide a Task/Hour matrix that estimates the labor hours for each task by each team member.

Provide a Task budget matrix that estimates the overall costs by Contractor and subcontractor associated for each task.

- **Cost Sharing**

Cost Sharing - Cost sharing is not a requirement for eligibility, but is encouraged and will be included in part as an evaluation criterion. Cost-sharing can be from the proposer, other team members, or government, institutional 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. 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:

1. Describe the basis for the rates proposed (i.e., based on prior period actual results; based on projections; based on federal government or other independently-approved rates).
2. If rate(s) is approved by an independent organization, such as the federal government, provide a copy of such approval.
3. If rate(s) is based on estimated costs or prior period actual results, include calculations to support proposed rate(s). Calculations 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 adjustments for such differences between actual and projected indirect rates. Requests for financial statements or other needed financial information may be made if deemed necessary.

V. PROPOSAL EVALUATION

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

Proposer Understanding & Creativity

- Does the proposer(s) demonstrate the creativity, understanding and insight needed in working with stakeholders in building a useful and sustainable web-based information Clearinghouse?
- Does the proposer(s) articulate a persuasive case for the best way of building wide stakeholder involvement/support for a Clearinghouse as described in this solicitation?
- Does the proposer(s) demonstrate a superior understanding and insight as to how identified barriers or limitations to the Clearinghouse can be minimized or overcome?
- Does the proposed Statement of Work adequately address the program Requirements?

Proposer Qualifications

Does the proposer(s) have the relevant and necessary qualifications, background, and experience in:

- consortium and consensus building;
- database design & management;
- non-road equipment operation and use; and
- emission-control technology needed to build, refine and operate the Clearinghouse as described in this solicitation?

Project Team Coordination & Cost Sharing

- Does the proposer(s) demonstrate resourcefulness, cooperation and team work based on past experience?
- Does the proposer(s) offer unique resources and/or cost sharing to support the overall effort?

VI. 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 www.nyserda.org/about/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.nystax.gov/pdf/2007/fillin/st/st220td_507_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.nystax.gov/pdf/2007/fillin/st/st220ca_507_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.

Contract Award - NYSERDA anticipates making one (1) award 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 terms. The budget that has been allocated represents NYSERDA's best estimate of the cost to deliver the specified activities. Proposals will not receive points for offering to deliver the specified activities under the budget amount allocated. NYSERDA may request additional data or material to support proposals. NYSERDA will use the Sample Agreement to contract successful proposals. NYSERDA expects to notify proposers in approximately 8 weeks from the May 11th, due date whether your 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.

VIII. ATTACHMENTS:

Attachment A - Proposal Checklist
Attachment B - Disclosure of Prior Findings of Non-Responsibility
Attachment C - Contract Pricing Proposal Form
Attachment D - Sample Agreement
Figures 1, 2A & 2B