

## REQUEST FOR PROPOSAL

### **Emissions Inventory Assistance Commercial Marine Vessels on the Great Lakes and Major Midwest Rivers**

The Lake Michigan Air Directors Consortium (LADCO) is seeking contractor assistance to update the emissions inventory for Commercial Marine Vessels on the Great Lakes and major Midwest rivers for the 2014 NEI year and to help with development of future year emissions inventories (2020 and 2030). This information will be used to update emission inventories being used by LADCO to conduct regional photochemical modeling for ozone, fine particles (PM2.5), and regional haze.

You are invited to submit a proposal for this emissions inventory work. Proposals must be received no later than 5 p.m. CDT on July 10, 2015. An electronic copy (Word or pdf) of the proposal is required and should be sent to:

Mr. Rob Kaleel  
Executive Director  
Lake Michigan Air Directors Consortium  
9501 W. Devon Avenue, Suite 701  
Rosemont, IL 60018  
e-mail: [kaleel@ladco.org](mailto:kaleel@ladco.org)

No late proposals will be accepted, and the offer shall remain effective for a period of 60 days from the date of the mailing.

Your response to this Request for Proposal (RFP) should include a complete technical proposal to describe your approach for accomplishing the activities outlined below in the Scope of Work. The response should include a draft work plan, which clearly describes your technical activities, schedule, and deliverables, and should include a summary of your organization's capability and experience in the field of work. Please limit the technical proposal to 15 pages (12-point font). In addition, your technical proposal may include an appendix with supplemental information, such as references, resumes, and descriptions of recent relevant work. Please also provide a complete cost proposal with a detailed breakdown of projected expenditures by task, including person hours by labor category, travel, and other direct charges.

All contracts will be issued by LADCO and managed by LADCO's Executive Director. It is anticipated that LADCO will award a "time and materials" contract as a result of this solicitation. LADCO may consider awarding another type of contract, provided that its use is consistent with the objectives and interests of the States.

Funds available for this contract are federal funds from the U.S. Environmental Protection Agency (EPA) and contractors must meet requirements associated with the use of federal funds. All information and data produced and delivered under this

contract will be in the public domain. No intellectual property is expected to be produced or delivered pursuant to this work.

All inquiries regarding this RFP should be directed to Rob Kaleel either in writing at the above address or via e-mail at [kaleel@ladco.org](mailto:kaleel@ladco.org). Written responses to inquiries will be sent to all organizations on the interested bidders list for this work. If your organization would like to be included on the interested bidders list for this and subsequent work, then please send an email to [kaleel@ladco.org](mailto:kaleel@ladco.org) with your email address and contact information.

### **Scope of Work**

The LADCO States are conducting photochemical modeling to support the development of State Implementation Plans for ozone, PM<sub>2.5</sub>, and regional haze. Additionally, the LADCO States are preparing submissions of their 2014 emissions inventories for incorporation in U.S. EPA's National Emissions Inventory (NEI). Current emissions inventories are needed in this modeling for a 2014 base year and two projection years (e.g., 2020, 2030).

Contractor assistance is needed both to update the emissions inventory for Commercial Marine Vessels on the Great Lakes and major Midwest rivers for the 2014 NEI year and to help with development of future year emissions inventories (2020 and 2030). The current Great Lakes commercial marine inventory prepared for LADCO is summarized in "Commercial Marine Emissions in the LADCO Region Final Report", September 16, 2011, [http://www.ladco.org/reports/technical\\_support\\_document/references/commercial\\_marine\\_emissions\\_LADCO\\_final\\_report.pdf](http://www.ladco.org/reports/technical_support_document/references/commercial_marine_emissions_LADCO_final_report.pdf)

The contractor shall review the methodology and emission factors used in the previous work, recommend improvements of the methodology (including consideration of activity levels, spatial and temporal allocation of the emissions, and the expected effects of recent commercial marine engine and fuel standard), and apply the recommended methodology to produce the updated 2014, 2020, and 2030 emissions inventories for VOC, NO<sub>x</sub>, SO<sub>2</sub>, PM, and CO. The inventory shall cover the Great Lakes and major Midwest rivers (Mississippi, Ohio, and relevant parts of Illinois River). As necessary, the contractor shall work with appropriate shipping companies and associations, such as the U.S. Coast Guard and the Lake Carriers Association.

In addition to a final report summarizing methods and results, the contractor will develop a comprehensive set of emissions spreadsheets that clearly explain all the inputs used to make the calculations, and appropriate linkages between the calculations and the inputs. These calculations should also include links to the growth factors for the future year growth estimates, such that future year emissions and emissions outputs (reports, SMOKE outputs, etc) for years other than 2030 and 2030 can easily be generated by LADCO and the LADCO States. It is preferential that a number of tabs are used to show different calculations and input steps. For example we would like to see different tabs

that show fuels calculations, base emissions rate calculations (based on technology), growth calculations, and reformatting for SMOKE.

All estimates and methodologies should improve upon EPA's NEI V2 estimates while still staying consistent with the general formatting (SCCs, spatial scale, temporal scale).

It is our preference that emissions estimates are done by vessel and translated to individual links and ports listed in the files below. If vessel specific data is not available then estimates should be done by county and shipping lane or port. All spatial reference IDs should relate back to the shape files referenced in EPA's 2011 NEI V2.

- [2011NEIv2 Shape Fractions of County Emissions for Rail and Commercial Marine](#) (1,616 KB)
- [Rail and Commercial Marine Shape File Information for the 2011 NEI \(PDF\)](#) (25K)
- [Shape File fractions of County Emissions for Rail and Commercial Marine \(ZIP\)](#) (1.5 MB)
- [Port Shape Files, last revised August 2014. \(ZIP\)](#) (987 KB)
- [Shipping Lane Shape Files, last revised August 2014\(ZIP\)](#) (24.3 MB)

Summary reports should be generated within the spreadsheet structure as pivot tables to show activity, fuel, and emissions by state, county, and SCC, and by state and county. Emissions estimates should provide appropriate spatial and temporal resolution (daily, seasonal, annual) to allow for adequate representation in LADCO's modeling. Estimates and related material should include monthly estimates as well as day of week or hour of day adjustments specific for the different types of vessels.

Final emissions estimates ready for SMOKE should be generated in the following format with ID references to the above shape files.

[www.ladco.org/tech/emis/FlatFileExampleCMV.xlsx](http://www.ladco.org/tech/emis/FlatFileExampleCMV.xlsx)

The extensions of this format is that the following 2 fields should also be filled in:

- 12 monthly emissions values
- Projection factor for future years

For contracts issued pursuant to this RFP, the following written documentation is required: project work plan, quality assurance project plan (QAPP), a brief technical report (with appropriate tabular summaries and graphics of the emissions inventory data), and a data file in a format specified by LADCO and consistent with the NEI.

### **Level of Effort and Schedule**

The amount of funding for this work is \$25,000. All work must be completed no later than September 30, 2015. Additional funding and time considered necessary to conduct a more complete analysis should be included as options to the primary work effort.

## **Deliverables**

A kick-off conference call will be held after the contract is awarded to review the scope of work and schedule. The final project work plan will be due two weeks after the kick-off call. The work plan shall include a QAPP. An electronic copy (WORD or pdf) of the work plan shall be delivered to LADCO's Executive Director.

Periodic conference calls (in lieu of written progress reports) will be held, as needed, to review the status of the work and discuss any outstanding issues. Your proposal should assume 6 conference calls for the contract.

Complete draft electronic data files and documentation (technical memorandum) shall be delivered to LADCO's Executive Director. An electronic copy of the draft technical memorandum (word or pdf) is required.

Final complete electronic data files and documentation (technical memorandum) shall be delivered to LADCO's Executive Director. An electronic copy and three (3) paper copies of the final technical memorandum (Word or pdf) is required.

## **Key Personnel**

Please identify in your proposal the key personnel for performing this work. Please specify the amount of time for key personnel by task. Any change in key personnel shall be made only with prior written approval of LADCO's Executive Director. These conditions pertain to both prime contractor and subcontractor personnel.

## **Evaluation Criteria**

Evaluation and rating of proposals will be based on the following criteria:

1. The proposal demonstrates a thorough understanding of the overall objectives of the project.
2. The proposed technical approach, completeness of coverage with respect to the scope of work, and responsiveness to the estimated budget and schedule.
3. The experience, expertise and other qualifications of the principal investigator and other key personnel assigned to the project and the level of effort proposed for the principal investigator and other key personnel.