

## Synthesis Research: Urban Emissions and Emissions from the Oil & Gas Sector

Recent research investments under the AC4 Program and other programs in observations of emissions from the urban environment and from oil and gas production have been highly productive, producing, in addition to their scientific findings, new and valuable insights on how these measurements can be made useful to society. It seems clear, however, that there is still more that could be learned from a more expansive analysis of that data. The goal of this AC4 solicitation is then to foster a synthesis, analysis, and comparative study of data that will improve the understanding of the extent and influence of anthropogenic emissions of methane and other carbon gases on the Earth System. Focused, follow-on research that extends and/or completes a synthesis of the data is, therefore, solicited. Of relevance are both national level analyses for verification and reporting purposes, and local assessments for mitigation purposes.

Activities and infrastructure essential to the support of synthesis research, including data preparation, management, and distribution may be proposed as part of a scientific synthesis study. Proposals offering support infrastructure only, with no scientific synthesis research, will be considered nonresponsive to this program announcement. PIs are encouraged to work with the user community, e.g. local, regional or national representatives in the utilization of the results. Studies should involve synthesis teams consisting of PIs representing different sectors or regions, using perhaps workshops to broaden community participation. Each proposal should focus on several aspects of a particular geographical region or sector or involve a synthesis across several geographical regions or sectors with common science objectives. The syntheses should focus on existing as opposed to new data. A strong management plan must be included in the Project Description. The plan should clearly delineate responsibilities among the collaborating institutions and set milestones.

Projects can be 2 or 3 years in length and total project costs cannot exceed \$1,500,000, over the lifetime of the project. AC4 management anticipates that approximately 2 projects will be selected. PIs are strongly encouraged to submit Letters of Intent following the guidance in the Federal Funding Opportunity (FFO). Letters of Intent should be emailed to AC4 Program Managers Monika Kopacz ([Monika.Kopacz@noaa.gov](mailto:Monika.Kopacz@noaa.gov)) and Kenneth Mooney ([Kenneth.Mooney@noaa.gov](mailto:Kenneth.Mooney@noaa.gov)).