**Energy Sector Lead: Roles and Responsibilities**

In implementing institutional arrangements for the National Greenhouse Gas (GHG) Inventory, it is important to communicate responsibilities to all contributing staff. This document describes the major responsibilities for the **Energy Sector Lead**, whose primary role will be to manage and coordinate development of GHG emission estimates in the Energy sector. This document is part of EPA’s National GHG Inventory Toolkit, a supplementary resource to EPA’s [*Developing a National GHG Inventory System Template Workbook*](http://www.epa.gov/climatechange/EPAactivities/internationalpartnerships/capacity-building.html), in particular the Institutional Arrangements (IA) Template. This Toolkit can be used by key members of a national inventory team to help design and develop a sustainable inventory management system. The Energy Sector Lead can use this document as a reference tool during the development of the National GHG Inventory to guide him/her through the most important responsibilities of the position.

## The Energy Sector Lead Should Understand:

* their specific responsibilities as the Energy Sector Lead, including a clear understanding with their immediate supervisor/organization and the National Inventory Coordinator (NIC) on their role in producing the Energy GHG estimates for the inventory,
* the expected and required deliverables and timeline for the submission of each deliverable,
* the estimated amount of time necessary to complete the tasks of the Energy Sector Lead,
* the budget available, as appropriate to your institutional arrangements and national circumstances, such as the funds allocated by your immediate supervisor or the NIC, to develop the Energy sector GHG estimates and how these funds may be utilized in support of developing and documenting the Energy estimates, and
* the IPCC Guidelines for their sector, including default methods, data sources, basic QA/QC, uncertainty assessment, and reporting procedures.

## Energy Sector Preparation

* Review the Consultative Group of Experts’ (CGE) materials related to the Energy sector. [[CGE Materials](http://unfccc.int/national_reports/non-annex_i_natcom/training_material/methodological_documents/items/349.php)]
* Review the Energy section of the IPCC Guidelines to understand the default methods, data sources, basic QA/QC, uncertainty assessment, and reporting procedures. [[2006 IPCC Guidelines](http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html)]
* Review the UNFCCC guidance materials for additional information. [[UNFCCC Guidance](http://unfccc.int/national_reports/non-annex_i_natcom/guidelines_and_user_manual/items/2607.php)]
* Review the Energy section of the previous National GHG Inventory and other reports relevant to national GHG estimates for this sector. Reviewing the Energy section from other country’s GHG inventory reports can also be informative.
* Understand which categories in the Energy sector were identified as key categories in the previous inventory.
* Review the EPA’s Template Workbook on *Developing a National Greenhouse Gas Inventory System* and additional Toolkit Materials available on the GHG Inventory Capacity Building portal. [[EPA Template Workbook & Capacity Building](http://www.epa.gov/climatechange/EPAactivities/internationalpartnerships/capacity-building.html), [Capacity Building Portal](https://regions.ghgcapacitybuilding.com)]
* Use software packages, if applicable, that are relevant and useful for this sector.
* Be familiar with the National Communication (NC) development process.

## Energy Sector Responsibilities and Activities

* Review the [*IPCC Guidelines*](http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html) *for National Greenhouse Gas Inventories* and *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.*
  + Understand the GHG categories that are sources in the Energy sector.
  + At minimum understand the Tier 1 methodologies, data needs, and other requirements for developing GHG estimates for the Energy sector, and become familiar with those for Tier 2.
* Collaborate with the NIC to manage the Energy sector budget and develop a/an Energy sector-specific workplan and schedule that coincides with deliverables acknowledged in the overall National Inventory Schedule.
* Develop and implement an Energy sector-specific plan for archiving all relevant information and materials, in coordination with the archiving coordinator and adhering to any existing archiving guidance materials for your national inventory.
* Oversee the establishment and arrangements between Energy sector data collectors and third-party data providers.
  + If required, develop agreements such as Memorandums of Understanding (MOU) with necessary organizations (e.g., Ministry of Energy, Ministry of Transportation, universities) to assist with activities required by the Energy Sector Lead (e.g. data collection, generating GHG estimates), as appropriate.
  + Develop Statements of Work (SOW) to issue to engage contractors, and/or sector experts. Manage the work being carried out under these contracts to ensure it is meeting the requirements and needs of your GHG inventory sector.
* Coordinate with the energy data providers for fossil fuel combustion to determine how fuel was consumed and electricity was generated for each source category (e.g., energy industries, manufacturing industries, and other sectors).
* Coordinate with the Industrial Processes Sector Lead to determine if there will need to be any adjustments made for Energy fossil fuel combustion activity data.
* Coordinate with the Waste Sector Lead to determine the amount of waste incinerated used for electricity generation.
* Consider potential improvements identified in the previous inventory for this sector and assess whether to implement improvements based on the contribution to overall national emissions (by conducting a Key Category Analysis) and availability of resources.
* Oversee development of GHG estimates from all categories in the Energy sector.
  + Determine the most appropriate IPCC methodology to be used to estimate GHGs for each category.
  + Oversee choice and/or development of emission factors.
  + Document all methodologies and assumptions.
* Complete both the sectoral and reference approaches to calculating GHG emissions from fossil fuel combustion in the Energy sector and compare the two results.
* In consultation with the QA/QC coordinator, convene Energy sector working group to review calculations and perform initial Quality Assurance/Quality Control (QA/QC).
  + QA includes review procedures conducted by personnel not involved in the inventory development process (e.g., experts not involved with estimate development, the public, other relevant agencies, non-governmental organizations, universities, etc.).
  + QC includes routine reviews implemented by the inventory development team to measure and control the quality of the inventory as it is prepared (e.g., sector leads and supporting experts involved with estimate development).
* Coordinate the response to comments received from QA (external) reviews of the Energy sector GHG estimates and update the inventory if necessary.
* Review the final Energy sector GHG estimates and the narrative describing the assumptions, methodologies, and results.
* Oversee the development of the uncertainty analysis for the Energy sector.
* Identify and document any improvements needed for subsequent inventories, related to activity data, emission factors, methodologies, or other components of developing the estimates.