CLIMATE CHANGE TECHNOLOGY EARLY ACTION MEASURES (TEAM)

SMART Lite Guidance to Develop GHG Estimates to Accompany a TEAM Proposal Application

The purpose of the *SMART Lite* is to provide a transparent and consistent basis to consider the estimated GHG emission reduction (or removal enhancement) potential of TEAM proposals. The *SMART Lite* is designed as a relative quick and simple approach based on to the SMART (System of Measurement and Reporting for Technologies). As part of the application for TEAM funding, the project proponent prepares the *SMART Lite* in collaboration with the TEAM Operations Office. The *SMART Lite* consists of the following steps.

Step 1:
The project proponent shall complete the TEAM proposal application form before proceeding to step 2.

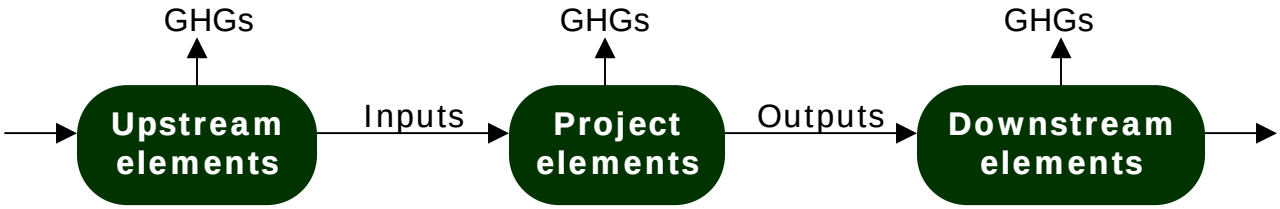
Step 2:
The project proponent shall consider the information provided in the TEAM proposal application form, specifically the objectives, and use a systems approach to identify project elements (i.e. technology, process, activity, etc.) for the purpose of quantifying, monitoring and reporting technical and GHG information. The project proponent shall consider relevant upstream (e.g. source of feedstock, energy, etc.) and downstream (e.g. end use, disposal, etc.) activities in the identification of elements attributable to the project. The elements should be identified as direct (owned/controlled by the project proponent) or indirect (not owned/controlled by the project proponent).

If appropriate, the project proponent shall present a mass balance and/or energy balance of the project elements, including inputs and outputs for each element, using an annotated process flow diagram.

Note – Although it is preferred to have an annotated process flow diagram to demonstrate transparent technical information about the technology and project, if the project proponent does not already have a process flow diagram, then the project proponent shall provide a simplified process flow diagram. The following figure presents a simplified process flow diagram illustrating the technology project with upstream and downstream elements. The project proponent is encouraged to be transparent, accurate and complete as possible when providing information to allow TEAM to assess the funding application as quickly as possible. Data for inputs and outputs for

each corresponding element should based on previous work that was measured and documented (e.g. R&D stage and/or prototype stage).

Example of a simplified process flow diagram:



Step 3:
The project proponent shall select and justify the baseline(s) (i.e. the benchmark reference) used for comparison, including appropriate information to support the justification for the selected baseline. The project proponent shall identify baseline elements and, as appropriate, provide information as is specified for project elements in Step 2.

Step 4:
The project proponent shall identify the methodologies used to estimate GHG emissions and/or removals for each of the project elements and baseline elements.

The project proponent shall estimate GHGs separately for each type of relevant GHG (e.g. CO_2, CH_4, N_2O, SF_6, PFC, HFC), as well as CO_2e, and for each element. The project proponent shall calculate GHG estimates according to (baseline GHG intensity X baseline level of activity) – (project GHG intensity X project level of activity). The project proponent should provide calculations in a MS EXCEL spreadsheet.

The project proponent should present all other relevant factors (e.g. output/year, energy output/year, activity/year, energy saved, process parameters, etc.), assumptions, formulae and sample calculations (full calculations, including the references (documents, websites, contacts, etc.), assumptions and conversion factors, should be presented in an appendix), units, conversion factors (state whether conversion factors affecting the heat or carbon content of fuels, such as lower or higher heating values, have been used in deriving the emission factors).

Note – GHG intensity is the emissions/unit of activity and level of activity is the number of units of activity. Examples of units for GHG intensity include tonnes of CO_2e emitted per unit of energy output, tonnes of CO_2e emitted per unit of material output, tonnes of CO_2e per unit of person kilometre

travelled, etc. Emission factors can be time dependent, for example, an aggregated emission factor for a national electricity mix changes as the fraction of each fuel used to generate electricity changes, as well as changes in the stated carbon intensity of fuels.

If some of the information requested is presented elsewhere within the proposal, then a clear reference should be stated (e.g. Section XXX, Paragraph YYY, Table ZZZ, etc.).

Step 5:
In order to estimate potential GHG emission reductions or removal enhancements based on expected replication of the project/technology, the project proponent shall provide a business plan and shall present a table of the total potential market, including the identification of all the potential locations, plants, installations, etc. that have replication potential (if data is not available, then a reasonable estimate, based on appropriately referenced documentation, is a minimum). The project proponent shall justify the expected replication potential (i.e. 10% market share) including the timeline for replication (i.e. locations, plants, number of systems expected to be replicated.

The project proponent shall estimate the potential GHG emission reductions for each replication project in accordance with the approach used for the proposed TEAM project and shall present methodologies used to adjust calculations (if necessary) of the proposed TEAM project for the replication projects (i.e. all subsequent locations, plants, number of systems are same in scale/scope as the initial proposed project, or subsequent locations, plants, number of systems differ explicitly by, for example, types, number of components, energy displaced, etc.).

The project proponent shall present a summary table of the estimated potential GHG emission reductions for the proposed project and potential replication scenarios for year 2008 and 2012, including annual potential GHG emission reduction (tonnes of CO_2e/year) for the proposed TEAM project, in 2008, and in 2012, as well as other relevant factors (i.e. energy saved, process parameters, etc.). GHG emissions (or removals) and emission reductions (or removal enhancements) should be stated as ANNUAL from annual installations/operations and ANNUAL emissions from cumulative installations/operations (it is important NOT to include cumulative emissions (i.e. not annual)). Units of measure should be metric, for example, a metric tonne (1 tonne = 1000 kg = 2205 lb) rather than a short ton (1 ton = 2000 b).

If the project is an international project, the following questions should also be closely examined:

a) Has the project proponent considered proceeding with the Clean Development Mechanism (CDM) or Joint Implementation (JI) as part of this project?
b) If the project proponent has considered the CDM angle of this project, are they familiar with the approval and registration procedures required for CDM projects? Has the project proponent contacted the Canadian CDM/JI office concerning these procedures or for any other technical assistance?
c) Has the project proponent previously received funding from the CDM/JI office for any project related analysis or due diligence?
d) If reduction credits are being considered as part of this project (resulting from either CDM or JI), have they been included as part of a contractual arrangement with the proponent's partner?
e) In the case of CDM projects, has the project proponent devised an appropriate baseline methodology that conforms to the approval criteria of the CDM Executive Board?