

# Energy Efficiency And Solid Waste Diversion Activities Within The Quebec Sustainable Community Monitoring Report



Document Prepared By Will Solutions Inc., formerly Gedden  
in collaboration with CertiConseil Inc.

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|                          |                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Title</b>     | Energy Efficiency And Solid Waste Diversion Activities within the Quebec Sustainable Community                                                                                                                         |
| <b>Version</b>           | 2.0                                                                                                                                                                                                                    |
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| <b>Project ID</b>        | VCS project database ID 929                                                                                                                                                                                            |
| <b>Monitoring Period</b> | 01 January 2010 to 31 October 2013                                                                                                                                                                                     |
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## Definitions

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Client Facility                      | A large range of small companies or business units that contract the Sustainable Community Service Promoter to manage their GHG emitting services. Client Facilities may include commercial, institutional, residential and industrial buildings/facilities including but not limited to warehouses, apartment buildings, hotels, restaurants, educational buildings, shopping malls, food manufacturing plants, chemical manufacturing facilities, and light industrial plants. Client Facilities are typically located in regional or state clusters. |
| Project Unit                         | A project activity instance wherein the equipment, processes and facilities are being serviced and impacted by the energy efficiency and waste diversion processing project. The Project Unit must be clearly defined and justified by the project proponent. All non-Project Unit items are covered under the heading of facility operation.                                                                                                                                                                                                           |
| Generic Project Activities Instances | Generic Project Activity Instance whose characteristics have been validated and whose attributes, if met by subsequent PAI, will qualify any further occurrences in the Sustainable Community project.                                                                                                                                                                                                                                                                                                                                                  |
| Project Activities Instances         | Further occurrences of a Generic PAI which fulfills all the eligibility criteria defined and therefore is qualified in the Sustainable Community project.                                                                                                                                                                                                                                                                                                                                                                                               |

## Numbering Convention

*To facilitate the reading of the document, the following convention has been applied:*

- *Generic Project Activity Instance (PAI) is identified by Roman Number (from I to X)*
- *Client Facility is identified by ordinal number.*

## PROJECT DETAILS

### 1.1 Summary Description of the Implementation Status of the Project

The Energy Efficiency and Solid Waste Diversion Activities within the Quebec Sustainable Community project document was prepared by Will Solutions Inc. (formerly Gedden) to allow Will Solutions as project proponent (Sustainable Community Service Promoter (SCSP)), to quantify and originate GHG emission **reductions** in conformance with VCS Methodology VM0018 Energy Efficiency and Solid Waste Diversion Activities within a Sustainable Community (Version 1.0). This project targets a large range of Client Facilities, all located inside the Province of Quebec, mainly small to medium sized companies (each one have  $\leq 25\,000\ tCO_2e$  of GHG emission /year/facility, Small Final Emitters -SFEs), part of the industrial, commercial or institutional (ICI) sector, and/or property of several and different owners and grouped together inside a "Sustainable Community" within a Territory.

This project has been designed to be simple, yet rigorous to apply, measure, and monitor. Even though the activities of SFEs vary, energy consumption and waste disposal are similar across many businesses and organizations. The main Project objectives are:

- To gradually group together inside a "Sustainable Community within a Territory", up to 10,000 Clients Facilities, located inside the Province of Quebec, that will achieve together a potential  $22\,852\,000\ tCO_2e$  of GHG emission reductions for the period 2010-2019;
- To stimulate and reward Industrial Commercial Institutional (ICI) business units – large or small facilities – for their efforts to reduce GHG emissions, by giving them access to the internationally recognized voluntary carbon credits market;
- To collect ground data in real time, and consequently, stimulate and enhance Industrial Commercial and Institutional (ICI) facilities for a better sustainable behaviour;
- This approach stimulates and rewards all the small actions carried out by each of the ICI sites: to divert industrial and commercial waste from landfill, for a more efficient waste recovery and for increasing energy efficiency in buildings.

#### Will's Sustainable Community Solution



- At the Sustainable Community Service Promoter (SCSP), the project is implemented since January 1<sup>st</sup>, 2010. At the Client Facility level, there are different situations:
  - A majority of Project Units/Project Activity Instances (PAI)/Business Units have adhered to the SC project and running Project Units/PAI. The efforts over the coming months will focus on converting these members and have them to have their Project Units/PAI recorded into the ICT platform. For a portion of Client Facility, PAI are on their way, whether at the conception and development or at early implementation.  
The Group Approach imposes a progressive phasing of the PAIs, and future monitoring report will account for all the new PAIs which will be integrated to the SC between the time of the first verification and the subsequent ones.
- The total GHG emission reductions for the PAIs including in this Monitoring Report are 75,675 tCO<sub>2</sub>e.

## 1.2 Sectoral Scope and Project Type

The Sectorial Scopes are 3, 13 and it is a grouped project.

## 1.3 Project Proponent

|                   |                                     |
|-------------------|-------------------------------------|
| Organization name | Will Solutions Inc.                 |
| Contact person    | Martin Clermont                     |
| Title             | President and CEO                   |
| Address           | 116 Desjardins, Beloeil, QC, Canada |
| Telephone         | +1 514-990-2124 ext 1               |
| Email             | mclermont@solutionswill.com         |

## 1.4 Other Entities Involved in the Project

|                     |                                          |
|---------------------|------------------------------------------|
| Organization name   | CertiConseil Inc                         |
| Role in the project | Technical Advisor and Validator          |
| Contact person      | Christophe Kaestli                       |
| Title               | Senior Adviser                           |
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| Email               | christophe.kaestli@certiconseil.com      |

## 1.5 Project Start Date

*The project starting date is January 1<sup>st</sup> 2010.*

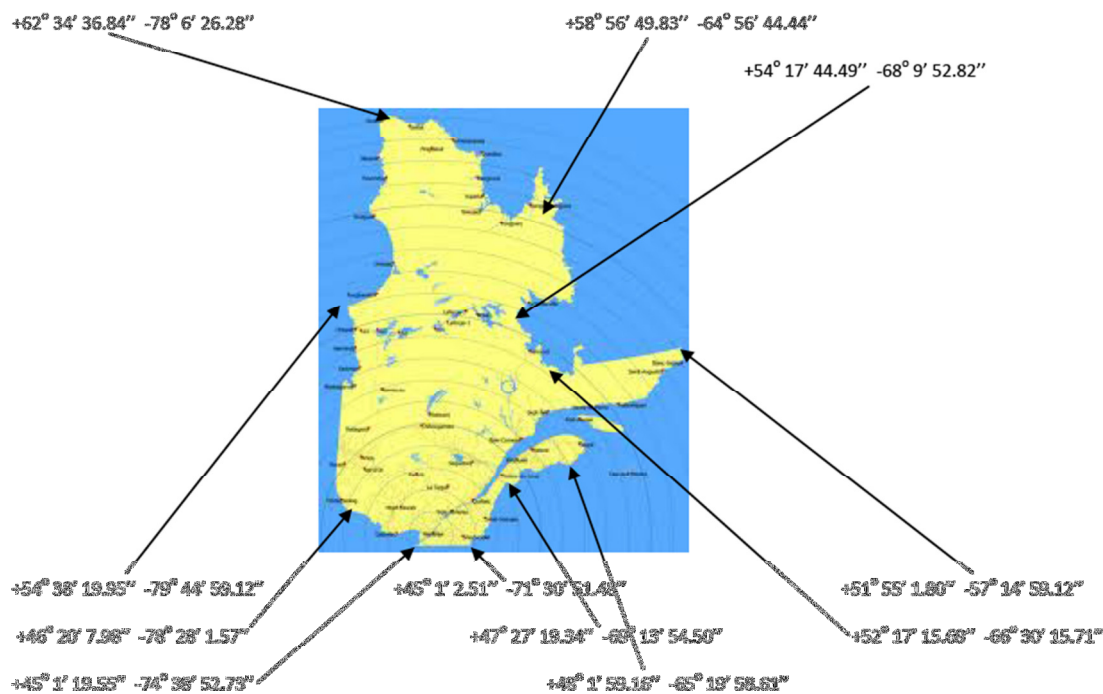
## 1.6 Project Crediting Period

The project crediting period is 10 years, renewable for 10 years. The starting date is January 1<sup>st</sup> 2010 and will end December 31<sup>rd</sup> 2019, renewable for another 10 years.

## 1.7 Project Location

All ICI's Clients Facilities associated to the project will be located inside the province of Quebec's territory in Canada. This grouping of Client Facilities bind them to a common geographic cluster (the territory of Province of Quebec), where the regional conditions (i.e. electricity source, climate, waste processing schemes, etc.) and regulations (i.e. waste and emission regulations, etc.) are similar for the different Clients Facilities.

The geographical map shown here represents the Province of Quebec and its territory. This Province shares more than 12,000 km of lands, rivers, and marine borders with Ontario, Nunavut, Newfoundland and Labrador, Prince Edward Island, New Brunswick, Nova Scotia, and United States.



## 1.8 Title and Reference of Methodology

The title of the selected methodology is Energy Efficiency and Solid Waste Diversion Activities within a Sustainable Community; it is referenced VM00018 in VCS and it was released in 2012.

## 1.9 Other Programs

Not applicable. Will Solutions does not participate to any other GHG Programs.

To address the FAR 1 which was raised in the validation report of SGS, the sale of the 2 t of Reductions is on future credits: once the SCSP will get the verification report granting the VCU, 2 of them will be transferred to FEPAC (the buyer) to honor the contract.

## 2 IMPLEMENTATION STATUS

### 2.1 Implementation Status of the Project Activity

The Generic PAI Start Dates are reported in the Table 1:

| Generics PAI among Sites and related Start Date |                                                               |                |                |            |                                          | January 2010 up to October 31th 2013               |                       |                 |                       |                   |              |       |
|-------------------------------------------------|---------------------------------------------------------------|----------------|----------------|------------|------------------------------------------|----------------------------------------------------|-----------------------|-----------------|-----------------------|-------------------|--------------|-------|
| Generic PAI Reference Number                    |                                                               |                |                |            |                                          | Number of Project Units/PAI/BU per Client Facility |                       |                 |                       |                   |              |       |
|                                                 |                                                               | Generic PAI EE | Generic PAI WM |            | PAI generic SC account (On ICT platform) | Boisaco                                            | Recyc RPM Beauceville | St-Gedeon Arena | St-Gedeon Townen Hall | RPM Environnement | 780 Brewster | Total |
| Generic PAI (Appendix IX)                       |                                                               |                |                | Start Date |                                          |                                                    |                       |                 |                       |                   |              |       |
| I                                               | Biomass Energy Project                                        | ✓              |                | 1-Jan-10   |                                          | 3                                                  | 0                     | 0               | 0                     | 0                 | 0            | 3     |
| II                                              | Methane Emission Avoidance                                    |                | ✓              | 1-Jan-10   |                                          | 1                                                  | 3                     | 0               | 0                     | 0                 | 1            | 5     |
| III                                             | Torrified Biomass Combustible                                 |                | ✓              | 1-Jan-10   |                                          | 1                                                  | 0                     | 0               | 0                     | 0                 | 0            | 1     |
| IV                                              | Saving Energy on Recycling Activities                         | ✓              |                | 1-Apr-13   |                                          | 0                                                  | 8                     | 0               | 0                     | 0                 | 0            | 8     |
| V                                               | Heat Recovery                                                 | ✓              |                | 1-Jan-10   |                                          | 0                                                  | 0                     | 1               | 0                     | 0                 | 0            | 1     |
| VI                                              |                                                               |                |                |            |                                          |                                                    |                       |                 |                       |                   |              | 0     |
| VII                                             | Energy Efficiency Demand Side                                 | ✓              |                | 1-Jan-10   |                                          | 0                                                  | 0                     | 1               | 0                     | 0                 | 0            | 1     |
| VIII                                            | Fuel Switching                                                | ✓              |                | 1-Jan-10   |                                          | 0                                                  | 0                     | 0               | 1                     | 0                 | 0            | 1     |
| IX                                              | Energy Conservation                                           | ✓              |                | 1-Jan-10   |                                          | 0                                                  | 0                     | 0               | 0                     | 1                 | 0            | 1     |
| X                                               | Energy efficiency demand side New buildings/major renovations | ✓              |                | 1-Jan-10   |                                          | 0                                                  | 0                     | 0               | 0                     | 0                 | 1            | 1     |
| Total                                           |                                                               | 7              | 2              |            |                                          | 5                                                  | 11                    | 2               | 1                     | 1                 | 2            | 22    |

Table 1 Generic PAI Sites and Start Dates

## 2.2 Deviations

### 2.2.1 Methodology Deviations

There is no deviation to methodology.

### 2.2.2 Project Description Deviations

There is no deviation to methodology.

## 2.3 Grouped Project

There were a number of new additions to the Generic PAIs in the SC project. The Table 2 lists the new occurrences and confirms the eligibility of each additional PAI.

Sustainable Community Project Units/PAI/BU classification and eligibility

January 2010 up to October 31th 2013

| Sustainable Community Project Charter PAI/BU Classification and Eligibility |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
|-----------------------------------------------------------------------------|------------------------------|------------------|-----------|-----------|-------------------------------------|-----------------------------------------|------------------------------------------|----------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------|
| Generic PAI Classification and Eligibility Attributes Compliance            |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| Client Facility                                                             |                              | New PAI instance | PAI in EE | PAI in WM | Located inside the Quebec territory | Be implemented after January First 2010 | Be registered member of the SCSP project | using a similar technologies or measures as the Generic PAI based on | Be auditable and verifiable | Project Unit GHG reduction are inferior to 5 000 MT eCO <sub>2</sub> /year |
| 1                                                                           | PHP Recycling, Drummondville | 4                | 4         | 0         | ✓                                   | ✓                                       | ✓                                        | Generic PAI IV                                                       | ✓                           | ✓                                                                          |
| 2                                                                           | Recyc RPM, St Damien         | 13               | 13        | 0         | ✓                                   | ✓                                       | ✓                                        | Generic PAI IV                                                       | ✓                           | ✓                                                                          |
| 3                                                                           | 780 Brewster                 | 2                | 0         | 2         | ✓                                   | ✓                                       | ✓                                        | Generic PAI II                                                       | ✓                           | ✓                                                                          |
| 4                                                                           | Recyc RPM Beauceville        | 1                | 1         | 0         | ✓                                   | ✓                                       | ✓                                        | Generic PAI VIII et V                                                | ✓                           | ✓                                                                          |
| 5                                                                           | RPM Environment (Blainville) | 1                | 1         | 0         | ✓                                   | ✓                                       | ✓                                        | Generic PAI IV                                                       | ✓                           | ✓                                                                          |
| 6                                                                           |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 7                                                                           |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 8                                                                           |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 9                                                                           |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 10                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 11                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 12                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 13                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 14                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 15                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 16                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 17                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 18                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 19                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| 20                                                                          |                              |                  |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |
| Total Nber of Project Units/PAI/BU                                          |                              | 21               |           |           |                                     |                                         |                                          |                                                                      |                             |                                                                            |

| Generic PAI Lexique |                                               |
|---------------------|-----------------------------------------------|
| I                   | Biomass Energy Project                        |
| II                  | Methane Emission Avoidance                    |
| III                 | Torrified Biomass Combustible                 |
| IV                  | Saving Energy on Recycling Activities         |
| V                   | Heat Recovery                                 |
| VI                  |                                               |
| VII                 | Energy Efficiency Demand Side                 |
| VIII                | Fuel Switching                                |
| IX                  | Energy Conservation Demand Side: New Building |

Table 2 PAI Classification and Eligibility.

### 3 DATA AND PARAMETERS

The Data and Parameters of the SC available at the time of verification have been organized at 2 levels:

- At the Generic PAIs, at a high level
- For each Generic PAI, as it is registered in the ICT platform.

The Table 3 presents the 9 Generic PAIs

#### Generics PAI

|                           |                                                               | PAI EE | PAI WM |
|---------------------------|---------------------------------------------------------------|--------|--------|
| Generic PAI (Appendix IX) |                                                               |        |        |
| I                         | Biomass Energy Project                                        | ✓      |        |
| II                        | Methane Emission Avoidance                                    |        | ✓      |
| III                       | Torrified Biomass Combustible                                 |        | ✓      |
| IV                        | Saving Energy on Recycling Activities                         | ✓      |        |
| V                         | Heat Recovery                                                 | ✓      |        |
| VI                        |                                                               |        |        |
| VII                       | Energy Efficiency Demand Side                                 | ✓      |        |
| VIII                      | Fuel Switching                                                | ✓      |        |
| IX                        | Energy Conservation                                           | ✓      |        |
| X                         | Energy efficiency demand side New buildings/major renovations | ✓      |        |
| Total                     |                                                               | 7      | 2      |

Table 3 List of Generic PAI

## 3.1 Data and Parameters Available at Validation

The hereafter parameters are those of the SC project.

|                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter:                                                                                    | <i>EF Thermal Energy<sub>CO2e</sub></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Data unit:                                                                                    | <i>Kg CO<sub>2e</sub> per GJ</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Description:                                                                                  | <i>CO<sub>2e</sub> emissions factor for local generation of thermal energy</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Source of data:                                                                               | <i>For the Territory of interest, the project proponent must identify the most appropriate CO<sub>2e</sub> emission factor for the source of thermal energy used under the project scenario. Regional data (for example: US Department of Energy's Form EIA-1605 Appendix N. Emission factors for Steam and Chilled/Hot Water) shall be used. In its absence, IPCC defaults must be used from the most recent version of IPCC Guidelines for National Greenhouse Gas Inventories providing they are deemed to reasonably represent local circumstances. The project proponent must choose the values in a conservative manner and justify the choice.</i> |
| Value applied                                                                                 | <i>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. All reference to the use of EF are described in the Appendix 6. These EF are taking account of the CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub> emissions. All values applied and used for the calculations are described for each generic project activity instance in the Appendix 9.</i>                                                                                                                                                                           |
| Justification of choice of data or description of measurement methods and procedures applied: | <i>Thermal Energy generation characteristics are likely to remain relatively stable over a year's time.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Purpose of the data                                                                           | The EF Thermal Energy are used for: <ul style="list-style-type: none"> <li>• The Calculation of baseline emissions</li> <li>• The Calculation of project emissions</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Comments                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter:                                                                                    | $EF_{Fuel, N_2O}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Data unit:                                                                                    | $Kg\ N_2O\ per\ L,\ m^3,\ or\ other$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Description:                                                                                  | $N_2O$ emissions factor for combustion of each type of fuel ( $EF_{Fuel, N_2O}$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Source of data:                                                                               | For both mobile and stationary fuel combustion for the Territory of interest, the project proponent must identify the most appropriate emission factors for the source of thermal energy used under the project condition. Regional data (for example: EPA's AP 42, Compilation of Air Pollutant Emission Factors) shall be used. In its absence, IPCC defaults must be used from the most recent version of IPCC Guidelines for National Greenhouse Gas Inventories providing they are deemed to reasonably represent local circumstances. The project proponent must choose the values in a conservative manner and justify the choice. |
| Value applied                                                                                 | <p>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. All reference to the use of EF are described in the Appendix 6. These EF are taking account of the <math>CH_4</math>, <math>N_2O</math> and <math>CO_2</math> emissions.</p> <p>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</p>                                                                                                                                        |
| Justification of choice of data or description of measurement methods and procedures applied: | This is one of the most comprehensive fuel emission factor databases available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Purpose of the data                                                                           | <p>The <math>EF_{Fuel}</math> are used for:</p> <ul style="list-style-type: none"> <li>The Calculation of baseline emissions</li> <li>The Calculation of project emissions</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Comments                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameter:</b>                                                                                    | <i>EF Fuel<sub>i CH4</sub></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Data unit:</b>                                                                                    | <i>Kg CH<sub>4</sub> per L, m<sup>3</sup>, or other</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description:</b>                                                                                  | <i>CH<sub>4</sub> emissions factor for combustion of each type of fuel (EF Fuel<sub>i CH4</sub>)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source of data:</b>                                                                               | <i>For both mobile and stationary fuel combustion for the Territory of interest, the project proponent must identify the most appropriate emission factors for the source of thermal energy used under the project scenario. Regional data (for example: EPA's AP 42, Compilation of Air Pollutant Emission Factors) shall be used. In its absence, IPCC defaults can be used from the most recent version of IPCC Guidelines for National Greenhouse Gas Inventories providing they are deemed to reasonably represent local circumstances. The project proponent must choose the values in a conservative manner and justify the choice.</i> |
| <b>Value applied</b>                                                                                 | <p><i>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. All reference to the use of EF are described in the Appendix 6. These EF are taking account of the CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub> emissions.</i></p> <p><i>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</i></p>                                                                                                                                        |
| <b>Justification of choice of data or description of measurement methods and procedures applied:</b> | <i>This is one of the most comprehensive fuel emission factor databases available.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Purpose of the data</b>                                                                           | <p><i>The EF Fuel are used for:</i></p> <ul style="list-style-type: none"> <li><i>The Calculation of baseline emissions</i></li> <li><i>The Calculation of project emissions</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Comments</b>                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameter:</b>                                                                                    | <i>EF Fuel<sub>iCO2</sub></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Data unit:</b>                                                                                    | <i>Kg CO<sub>2</sub> per L, m<sup>3</sup>, or other</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description:</b>                                                                                  | <i>CO<sub>2</sub> Emissions Factor for combustion of each type of fuel (EF Fuel<sub>iCO2</sub>)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source of data:</b>                                                                               | <i>For both mobile and stationary fuel combustion for the Territory of interest, the project proponent must identify the most appropriate emission factors for the source of thermal energy used under the project scenario. Regional data (for example: EPA's AP 42, Compilation of Air Pollutant Emission Factors) shall be used. In its absence, IPCC defaults can be used from the most recent version of IPCC Guidelines for National Greenhouse Gas Inventories providing they are deemed to reasonably represent local circumstances. The project proponent must choose the values in a conservative manner and justify the choice.</i> |
| <b>Value applied</b>                                                                                 | <p><i>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. All reference to the use of EF are described in the Appendix 6. These EF are taking account of the CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub> emissions.</i></p> <p><i>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</i></p>                                                                                                                                        |
| <b>Justification of choice of data or description of measurement methods and procedures applied:</b> | <i>This is one of the most comprehensive fuel emission factor databases available.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Purpose of the data</b>                                                                           | <p><i>The EF Fuel are used for:</i></p> <ul style="list-style-type: none"> <li><i>The Calculation of baseline emissions</i></li> <li><i>The Calculation of project emissions</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Comments</b>                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameter:</b>                                                                                    | <i>OX</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Data unit:</b>                                                                                    | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description:</b>                                                                                  | <i>Oxidation factor (reflecting the amount of soil or other material covering the waste)</i>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source of data:</b>                                                                               | <i>This factor is determined using the CDM's "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site (Version 05.1.0)" (CDM, 2011)..</i>                                                                                                                                                                                                                                                                                                                     |
| <b>Value applied</b>                                                                                 | <p><i>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. All reference to the use of EF are described in the Appendix 6. These EF are taking account of the CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub> emissions.</i></p> <p><i>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</i></p> |
| <b>Justification of choice of data or description of measurement methods and procedures applied:</b> | <i>The most used tool for calculation landfill gas emission reductions.</i>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Purpose of the data</b>                                                                           | <p><i>The OX factor is used for:</i></p> <ul style="list-style-type: none"> <li><i>The Calculation of baseline emissions</i></li> <li><i>The Calculation of project emissions</i></li> </ul>                                                                                                                                                                                                                                                                                                            |
| <b>Comments</b>                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter:                                                                                    | $DOC_1$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data unit:                                                                                    | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Description:                                                                                  | <i>Fraction of degradable organic carbon (DOC) that can decompose</i>                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Source of data:                                                                               | <i>This factor is determined using the CDM's "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site (Version 05.1.0)" (CDM, 2011)..</i>                                                                                                                                                                                                                                                                                                                              |
| Value applied                                                                                 | <p><i>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. All reference to the use of EF are described in the Appendix 6. These EF are taking account of the <math>CH_4</math>, <math>N_2O</math> and <math>CO_2</math> emissions.</i></p> <p><i>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</i></p> |
| Justification of choice of data or description of measurement methods and procedures applied: | <i>The most used tool for calculation landfill gas emission reductions.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Purpose of the data                                                                           | <p>The DOC factor is used for:</p> <ul style="list-style-type: none"> <li>• The Calculation of baseline emissions</li> <li>• The Calculation of project emissions</li> </ul>                                                                                                                                                                                                                                                                                                                                     |
| Comments                                                                                      | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|                                                                                               |                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameter:</b>                                                                             | <i>DOC<sub>j</sub></i>                                                                                                                                                                     |
| Data unit:                                                                                    | -                                                                                                                                                                                          |
| Description:                                                                                  | <i>Fraction of degradable organic carbon (by weight)</i>                                                                                                                                   |
| Source of data:                                                                               | <i>This factor is determined using the CDM's "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site (Version 05.1.0)" (CDM, 2011)..</i>        |
| Justification of choice of data or description of measurement methods and procedures applied: | <i>The most used tool for calculation landfill gas emission reductions.</i>                                                                                                                |
| Purpose of the data                                                                           | <i>The DOC factor is used for:</i> <ul style="list-style-type: none"> <li>• <i>The Calculation of baseline emissions</i></li> <li>• <i>The Calculation of project emissions</i></li> </ul> |
| Comments                                                                                      | -                                                                                                                                                                                          |

|                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameter:</b>                                                                             | <i>MCF</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Data unit:                                                                                    | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Description:                                                                                  | <i>Methane correction factor</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Source of data:                                                                               | <i>This factor is determined using the CDM's "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site (Version 05.1.0)" (CDM, 2011).</i>                                                                                                                                                                                                                                                                                                                     |
| Value applied                                                                                 | <p><i>All emission factors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. If reference to the use of EF are described in the Appendix 6. These EF are taking account of the CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub> emissions.</i></p> <p><i>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</i></p> |
| Justification of choice of data or description of measurement methods and procedures applied: | <i>The most used tool for calculation landfill gas emission reductions.</i>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Purpose of the data                                                                           | <i>The MCF factor is used for:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|          |                                                                                                                                                         |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | <ul style="list-style-type: none"> <li>• <i>The Calculation of baseline emissions</i></li> <li>• <i>The Calculation of project emissions</i></li> </ul> |
| Comments | -                                                                                                                                                       |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameter:</b>   | $k_j$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Data unit:          | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Description:        | <i>Decay rate for the waste type j</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Source of data:     | <i>IPCC 2006 Guidelines for National Greenhouse Gas Inventories (adapted from Volume 5, Table 3.3)</i>                                                                                                                                                                                                                                                                                                                                                                                                |
| Value applied       | <p><i>All emissionfactors (EF) required and used to the calculation of this item are described inside the Appendix 9 for each generic project activity instance of this project. Il reference to the use of EF are described in the Appendix 6. These EF are taking account of the CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub> emissions.</i></p> <p><i>All values applied and used for to the calculations are described for each generic project activity instance in the Appendix 9.</i></p> |
| Purpose of the data | <p><i>The MCF factor is used for:</i></p> <ul style="list-style-type: none"> <li>• <i>The Calculation of baseline emissions</i></li> <li>• <i>The Calculation of project emissions</i></li> </ul>                                                                                                                                                                                                                                                                                                     |
| Comments            | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 3.2 Data and Parameters Monitored

Here are the Data and Parameters monitored.

| Data Unit / Parameter:                                           | Volume or Quantity of Fuel <sub>i</sub>                                                                                                                                                                                                                           |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data unit:                                                       | L, m <sup>3</sup> , kg or MT                                                                                                                                                                                                                                      |
| Description:                                                     | Volume or weight of each type of fuel combusted. This volume or weight of fuel is adjusted for both functional equivalence and units of productivity.                                                                                                             |
| Source of data:                                                  | The volume of fuel is determined by supplier meters (which are regularly calibrated) and reported on bill of lading and invoices, consolidated monthly or at each tanking.                                                                                        |
| Description of measurement methods and procedures to be applied: | The Bill of Lading and the Invoice of each Fuel delivery is consolidated. End of period residual fuel volume evaluation could be estimated.                                                                                                                       |
| Frequency of monitoring/recording:                               | At each delivery, or a monthly basis, the volume or quantity of Fuel is measured and recorder. Evidences will be recorded on Bill of Lading and Invoices.                                                                                                         |
| Value applied:                                                   | -                                                                                                                                                                                                                                                                 |
| Monitoring equipment:                                            | The monitoring equipment includes: <ul style="list-style-type: none"> <li>Flow meters installed on tanker. By law, such flow meters are to be calibrated regularly.</li> <li>Supplier sealed flow meters installed at client facility, such gaz meter.</li> </ul> |

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| QA/QC procedures to be applied: | The SPSC system applies the following QC/QA procedures: <ul style="list-style-type: none"> <li>Data comparison with past performance</li> <li>Data comparison with similar Project Unit</li> <li>Data comparison with standard benchmark (Ashrae 90.1, Model National Energy Code for Building MNECB,...)</li> <li>Data comparison with sector association.</li> <li>Project Unit Investigation for root cause analysis of data profile if outside range</li> <li>Project Unit Physical audit to validate the measurement devices conditions and collect related evidence.</li> </ul> |
| Calculation method:             | In case where fuels are tanked, end of period adjustment would be assessed with Client Facility internal gauge: the incertitude linked to this assessment is reduced by the number of time the tank is filled during the period.<br>In case Project Unit is supplied by Client Facility tank, the apportion is justified by evidences.                                                                                                                                                                                                                                                |
| Any comment:                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Data Unit / Parameter:                                           | Electricity                                                                                                                                                            |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data unit:                                                       | kWh                                                                                                                                                                    |
| Description:                                                     | The amount of electricity consumed from the grid.                                                                                                                      |
| Source of data:                                                  | The amount of electricity consumed from the grid is determined by the supplier calibrated kWh meter.                                                                   |
| Description of measurement methods and procedures to be applied: | The Bill of Lading and the Invoice of each Fuel delivery is<br>The amount of electricity consumed from the grid is determined by the Hydro-Québec calibrated kWh meter |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency of monitoring/recording: | Monthly or bi monthly, with consumption statement .<br>Evidences will be recorded on Invoices.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Value applied:                     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Monitoring equipment:              | The monitoring equipment includes: <ul style="list-style-type: none"> <li>Electric meters installed at the entry of Client Facility/Project Unit electricity supply.. By law, such electric meters are sealed and are to be calibrated regularly.</li> </ul>                                                                                                                                                                                                                                                                                                                          |
| QA/QC procedures to be applied:    | The SPSC system applies the following QC/QA procedures: <ul style="list-style-type: none"> <li>Data comparison with past performance</li> <li>Data comparison with similar Project Unit</li> <li>Data comparison with standard benchmark (Ashrae 90.1, Model National Energy Code for Building MNECB,...)</li> <li>Data comparison with sector association.</li> <li>Project Unit Investigation for root cause analysis of data profile if outside range</li> <li>Project Unit Physical audit to validate the measurement devices conditions and collect related evidence.</li> </ul> |
| Calculation method:                | If internal meters are required for the Isolation Parameter Measurement option, electrical consumption is determined by meters which are calibrated as per the manufacturer's schedule. Alternatively the energy consumed by the related electrical devices will be equal to nominal power of the devices over the time of operations.                                                                                                                                                                                                                                                |
| Any comment:                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Data Unit / Parameter:</b>                                    | <b>Quantity of waste</b>                                                                                                                                                                                                                                                                                                                                               |
| Data unit:                                                       | Kg or MT                                                                                                                                                                                                                                                                                                                                                               |
| Description:                                                     | Weight of waste which is diverted form landfill for being recycled, re-use.                                                                                                                                                                                                                                                                                            |
| Source of data:                                                  | The weight is determined by scale at recycling premises and/or at Project Unit. The weight is reported on the Bill of Lading for each shipment.                                                                                                                                                                                                                        |
| Description of measurement methods and procedures to be applied: | The weight of waste is reported on the Bill of Lading and the Invoice of each shipment.                                                                                                                                                                                                                                                                                |
| Frequency of monitoring/recording:                               | At each shipment or a monthly basis.<br>Evidences will be recorded on Invoices.                                                                                                                                                                                                                                                                                        |
| Value applied:                                                   | -                                                                                                                                                                                                                                                                                                                                                                      |
| Monitoring equipment:                                            | The monitoring equipment includes: <ul style="list-style-type: none"> <li>Weighting balance.</li> </ul>                                                                                                                                                                                                                                                                |
| QA/QC procedures to be applied:                                  | The SPSC system applies the following QC/QA procedures: <ul style="list-style-type: none"> <li>Data comparison with past performance</li> <li>Data comparison with similar Project Unit</li> <li>Data comparison with Data comparison with sector association.</li> <li>Project Unit Investigation for root cause analysis of data profile if outside range</li> </ul> |

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <ul style="list-style-type: none"> <li>Project Unit Physical audit to validate the measurement devices conditions and collect related evidence.</li> </ul> |
| Calculation method: | Waste weight could be expressed in other than SI units, such ST, Lbs: conversion is made to have waste weight expressed in Kg or MT..                      |
| Any comment:        |                                                                                                                                                            |

Each PAI is monitored specifically as follows in the herebelow tables:

January 2010 up to October 31th 2013

## 3. Data and Parameters: Generic PAI | Biomass Energy Project

| Generic PAI Reference Number |                                        | Biomass Energy Project                                                                                                                             |  |  | Biomass Energy Project                                                                                                                             |  |  | Biomass Energy Project                                                                     |  |  |
|------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------|--|--|
| Description of Generic PAI   |                                        | Biomass Energy Project                                                                                                                             |  |  | Biomass Energy Project                                                                                                                             |  |  | Biomass Energy Project                                                                     |  |  |
| 3.1                          | Data/Parameter available at validation | EF Propane ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t eCO <sub>2</sub> /L                                                        |  |  | EF Butane ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t eCO <sub>2</sub> /L                                                         |  |  | EF Diesel ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t eCO <sub>2</sub> /L |  |  |
| a                            | unit                                   | Combined Emission Factor for Propane<br>IPCC, Environment Canada, AEE                                                                              |  |  | Combined Emission Factor for Butane<br>IPCC, Environment Canada, AEE                                                                               |  |  | Combined Emission Factor for Diesel<br>IPCC, Environment Canada, AEE                       |  |  |
| b                            | Description                            | 0.001544                                                                                                                                           |  |  | 0.001764                                                                                                                                           |  |  | 0.002789                                                                                   |  |  |
| c                            | Source of data                         | IPCC-UNFCCC / Env. Canada / AEE                                                                                                                    |  |  | IPCC-UNFCCC / Env. Canada / AEE                                                                                                                    |  |  | IPCC-UNFCCC / Env. Canada / AEE                                                            |  |  |
| d                            | Value applied                          | 0.001544                                                                                                                                           |  |  | 0.001764                                                                                                                                           |  |  | 0.002789                                                                                   |  |  |
| e                            | Purpose of data                        | Official Emission Factors Determination Parameters for Baseline and Project Em.                                                                    |  |  | Official Emission Factors Determination Parameters for Baseline and Project Em.                                                                    |  |  | Official Emission Factors Determination Parameters for Project Emission                    |  |  |
| 3.2                          | Data/Parameter monitored               | Propane                                                                                                                                            |  |  | Butane                                                                                                                                             |  |  | Diesel                                                                                     |  |  |
| a                            | Data                                   | Option A                                                                                                                                           |  |  | Option A                                                                                                                                           |  |  | Option A                                                                                   |  |  |
| b                            | Option A or Option B Measurement       | B7 and P7                                                                                                                                          |  |  | B7 and P7                                                                                                                                          |  |  | P7                                                                                         |  |  |
| c                            | Source/Sink identification             | L                                                                                                                                                  |  |  | L                                                                                                                                                  |  |  | L                                                                                          |  |  |
| d                            | Data Unit                              | Used in Dryer 1, 2 and 3                                                                                                                           |  |  | Used in Dryer 1, 2 and 3                                                                                                                           |  |  | At time of tanking                                                                         |  |  |
| e                            | Description                            | Meter from distributor                                                                                                                             |  |  | Meter from distributor                                                                                                                             |  |  | Meter from Boisaco Tank Station                                                            |  |  |
| f                            | Source of data                         | Amount of Propane delivered                                                                                                                        |  |  | Amount of Butane delivered                                                                                                                         |  |  | Volume of Diesel tanked in the loader                                                      |  |  |
| g                            | Description of measurement             | At each delivery                                                                                                                                   |  |  | At each delivery                                                                                                                                   |  |  | At time of tanking                                                                         |  |  |
| h                            | Frequency                              | Liters                                                                                                                                             |  |  | Liters                                                                                                                                             |  |  | Liters                                                                                     |  |  |
| i                            | Value monitored                        | Fuel Distributor Meter                                                                                                                             |  |  | Fuel Distributor Meter                                                                                                                             |  |  | Fuel Distributor Meter                                                                     |  |  |
| j                            | Monitoring equipment                   | Delivery in line with Tank nominal value                                                                                                           |  |  | Delivery in line with Tank nominal value                                                                                                           |  |  | Delivery in line with tank nominal value                                                   |  |  |
| k                            | QA/QC procedures                       | Baseline scenario for drying PMP                                                                                                                   |  |  | Baseline scenario for drying PMP                                                                                                                   |  |  | Project scenario biomass moving                                                            |  |  |
| l                            | Purpose of data                        | Propane Volume consumed                                                                                                                            |  |  | Butane Volume consumed                                                                                                                             |  |  | Usage portion estimate                                                                     |  |  |
| m                            | Calculation method                     | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |  |  | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |  |  | Project scenario for drying PMP                                                            |  |  |
| n                            | Comments                               |                                                                                                                                                    |  |  |                                                                                                                                                    |  |  | Nominal Aggregate Electrical Motor installed                                               |  |  |

Table 4 Data and Parameter PAI | Biomass Energy Project

### 3. Data and Parameters: Generic PAI II Methane Avoidance Emission January 2010 up to October 31th 2013

|     | Generic PAI Reference Number           | II                                                                                                                                                 |
|-----|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Description of Generic PAI             | Methane Emission Avoidance                                                                                                                         |
| 3.1 | Data/Parameter available at validation | EF DOC <sub>j</sub> ( $\Sigma$ CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)<br>t eCO <sub>2</sub> /MT                                       |
| a   | unit                                   | Combined Emission Factor for Fraction of Degradable organic Carbon (by weight)                                                                     |
| b   | Description                            | IPCC, Environment Canada, AEE                                                                                                                      |
| c   | Source of data                         | 0,0616                                                                                                                                             |
| d   | Value applied                          | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                    |
| d   | Description of measurement             | Parameters for Baseline and Project Em                                                                                                             |
| e   | Purpose of data                        |                                                                                                                                                    |
| 3.2 | Data/Parameter monitored               |                                                                                                                                                    |
| a   | Data                                   | Volume of Biomass                                                                                                                                  |
|     | Option A or Option B Measurement       | Option A                                                                                                                                           |
|     | Source/Sink identification             | B7                                                                                                                                                 |
| b   | Data Unit                              | t                                                                                                                                                  |
| c   | Description                            | Used in Biomass Furnace                                                                                                                            |
| d   | Source of data                         | Number of Loads                                                                                                                                    |
|     |                                        | Cumulative amount of biomass in the furnace                                                                                                        |
| e   | Description of measurement             | At each load                                                                                                                                       |
| f   | Frequency                              | Loader shovel                                                                                                                                      |
| g   | Value monitored                        | Weighting bridge                                                                                                                                   |
| h   | Monitoring equipment                   | Monthly calibration of the loader                                                                                                                  |
| i   | QA/QC procedures                       | Methane Emission Avoidance                                                                                                                         |
| j   | Purpose of data                        | Comparison from B7 and P7                                                                                                                          |
| k   | Calculation method                     | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |
| l   | Comments                               |                                                                                                                                                    |

Table 5 Data and Parameter PAI II Methane Avoidance Emission

PAI III is being implemented, but not yet operational: for information only

### 3. Data and Parameters: Generic PAI III Torrefied Biomass Combustible January 2010 up to October 31th 2013

|     | Generic PAI Reference Number           | III                                                                                                                                                |
|-----|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Description of Generic PAI             | Torrefied Biomass Combustible                                                                                                                      |
| 3.1 | Data/Parameter available at validation | EF DOC <sub>j</sub> ( $\Sigma$ CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)<br>t eCO <sub>2</sub> /MT                                       |
| a   | unit                                   | Combined Emission Factor for Fraction of Degradable organic Carbon (by weight)                                                                     |
| b   | Description                            | IPCC, Environment Canada, AEE                                                                                                                      |
| c   | Source of data                         | 0,0616                                                                                                                                             |
| d   | Value applied                          | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                    |
| d   | Description of measurement             | Parameters for Baseline and Project Em                                                                                                             |
| e   | Purpose of data                        |                                                                                                                                                    |
| 3.2 | Data/Parameter monitored               |                                                                                                                                                    |
| a   | Data                                   | Volume of Biomass                                                                                                                                  |
|     | Option A or Option B Measurement       | Option A                                                                                                                                           |
|     | Source/Sink identification             | B7                                                                                                                                                 |
| b   | Data Unit                              | t                                                                                                                                                  |
| c   | Description                            | Used in Biomass Furnace                                                                                                                            |
| d   | Source of data                         | Number of Loads                                                                                                                                    |
|     |                                        | Cumulative amount of biomass in the furnace                                                                                                        |
| e   | Description of measurement             | At each load                                                                                                                                       |
| f   | Frequency                              | Torrefied Biomass Combustible Volume                                                                                                               |
| g   | Value monitored                        | Weighting bridge                                                                                                                                   |
| h   | Monitoring equipment                   | Monthly calibration of the loader                                                                                                                  |
| i   | QA/QC procedures                       | Methane Emission Avoidance                                                                                                                         |
| j   | Purpose of data                        | Comparison from B7 and P7                                                                                                                          |
| k   | Calculation method                     | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |
| l   | Comments                               |                                                                                                                                                    |

Table 6 Data and Parameter PAI III Torrefied Biomass Combustible

January 2010 up to October 31st 2013

### 3. Data and Parameters: Generic PAI IV Saving Energy on Recycling Activities

| Generic PAI Reference Number |                               | IV                                                                                                                                                | IV                                                          | IV                                                          | IV                                                          | IV                                                          | IV                                                          |
|------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| Description of Generic PAI   |                               | Saving Energy on Recycling Activities                                                                                                             |                                                             | Saving Energy on Recycling Activities                       |                                                             | Saving Energy on Recycling Activities                       |                                                             |
| 3.1                          | a) Unit                       | EF HDPE (E CO2/CH4/N2O)<br>1eCO <sub>2</sub> /1000 Lbs                                                                                            | EF PET (E CO2/CH4/N2O)<br>1eCO <sub>2</sub> /1000 Lbs       | EF PVC (E CO2/CH4/N2O)<br>1eCO <sub>2</sub> /1000 Lbs       | EF LDPE (E CO2/CH4/N2O)<br>1eCO <sub>2</sub> /1000 Lbs      | EF PP (E CO2/CH4/N2O)<br>1eCO <sub>2</sub> /1000 Lbs        | EF PS (E CO2/CH4/N2O)<br>1eCO <sub>2</sub> /1000 Lbs        |
|                              | b) Description                | Combined Emission Factor for HDPE                                                                                                                 | Combined Emission Factor for PET                            | Combined Emission Factor for PVC                            | Combined Emission Factor for LDPE                           | Combined Emission Factor for PP                             | Combined Emission Factor for PS                             |
|                              | c) Source of data             | EPA                                                                                                                                               | EPA                                                         | EPA                                                         | EPA                                                         | EPA                                                         | EPA                                                         |
|                              | d) Value applied              | 0.71                                                                                                                                              | 1.15                                                        | 0.99                                                        | 0.85                                                        | 0.775                                                       | 1.25                                                        |
|                              | e) Purpose of data            | EPA Net Emission Factor<br>Parameters for Project Emission.                                                                                       | EPA Net Emission Factor<br>Parameters for Project Emission. | EPA Net Emission Factor<br>Parameters for Project Emission. | EPA Net Emission Factor<br>Parameters for Project Emission. | EPA Net Emission Factor<br>Parameters for Project Emission. | EPA Net Emission Factor<br>Parameters for Project Emission. |
|                              | f) Calculation method         | Parameters for Project Emission.                                                                                                                  | Parameters for Project Emission.                            | Parameters for Project Emission.                            | Parameters for Project Emission.                            | Parameters for Project Emission.                            | Parameters for Project Emission.                            |
| 3.2                          | a) Data                       | HDPE                                                                                                                                              | PET                                                         | PVC                                                         | LDPE                                                        | PP                                                          | PS                                                          |
|                              | b) Source Sink identification | Option A<br>Pg                                                                                                                                    | Option A<br>Pg                                              | Option A<br>Pg                                              | Option A<br>Pg                                              | Option A<br>Pg                                              | Option A<br>Pg                                              |
|                              | c) Data Unit                  | t                                                                                                                                                 | t                                                           | t                                                           | t                                                           | t                                                           | t                                                           |
|                              | d) Description                | Volume of recycled plastic                                                                                                                        | Volume of recycled plastic                                  | Volume of recycled plastic                                  | Volume of recycled plastic                                  | Volume of recycled plastic                                  | Volume of recycled plastic                                  |
|                              | e) Source of data             | Weighting Balance or Bridge                                                                                                                       | Weighting Balance or Bridge                                 | Weighting Balance or Bridge                                 | Weighting Balance or Bridge                                 | Weighting Balance or Bridge                                 | Weighting Balance or Bridge                                 |
|                              | f) Description of measurement | Amount of HDPE delivered                                                                                                                          | Amount of PET delivered                                     | Amount of PVC delivered                                     | Amount of LDPE delivered                                    | Amount of PP delivered                                      | Amount of PS delivered                                      |
|                              | g) Frequency                  | At each delivery                                                                                                                                  | At each delivery                                            | At each delivery                                            | At each delivery                                            | At each delivery                                            | At each delivery                                            |
|                              | h) Value monitored            | t                                                                                                                                                 | t                                                           | t                                                           | t                                                           | t                                                           | t                                                           |
|                              | i) Monitoring equipment       | Calibrated weighing devices                                                                                                                       | Calibrated weighing devices                                 | Calibrated weighing devices                                 | Calibrated weighing devices                                 | Calibrated weighing devices                                 | Calibrated weighing devices                                 |
|                              | j) QA/QC procedures           | Double check: seller and buyer weight                                                                                                             | Double check: seller and buyer weight                       | Double check: seller and buyer weight                       | Double check: seller and buyer weight                       | Double check: seller and buyer weight                       | Double check: seller and buyer weight                       |
|                              | k) Purpose of data            | Emission avoided with recycled plastic                                                                                                            | Emission avoided with recycled plastic                      | Emission avoided with recycled plastic                      | Emission avoided with recycled plastic                      | Emission avoided with recycled plastic                      | Emission avoided with recycled plastic                      |
|                              | l) Calculation method         | HDPE Volume delivered                                                                                                                             | PET Volume delivered                                        | PVC Volume delivered                                        | LDPE Volume delivered                                       | PP Volume delivered                                         | PS Volume delivered                                         |
|                              | m) Comments                   | Project Units PAI using similar technology may use different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |                                                             |                                                             |                                                             |                                                             |                                                             |

Table 7 Data and Parameter PAI IV Saving Energy on Recycling Activities

### 3. Data and Parameters: Generic PAI V Heat Recovery

January 2010 up to October 31th 2013

|     | Generic PAI Reference Number           | V                                                                                                                                                     | V                                                                      |
|-----|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
|     | Description of Generic PAI             | Heat Recovery                                                                                                                                         | Heat Recovery                                                          |
| 3.1 | Data/Parameter available at validation | EF Propane ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )                                                                                    | EF Electricity ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ ) |
| a   | unit                                   | t eCO <sub>2</sub> /L                                                                                                                                 | t eCO <sub>2</sub> /kWh                                                |
| b   | Description                            | Combined Emission Factor for Propane                                                                                                                  | Emission Factor for Electricity                                        |
| c   | Source of data                         | IPCC, Environment Canada, AEE                                                                                                                         | AEE                                                                    |
| d   | Value applied                          | 0,001544                                                                                                                                              | 0,000003                                                               |
| e   | Purpose of data                        | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                       | Official Emission Factors Determination                                |
|     |                                        | Parameters for Baseline and Project Em                                                                                                                | Parameters for Project Emission                                        |
| 3.2 | Data/Parameter monitored               |                                                                                                                                                       |                                                                        |
| a   | Data                                   | Propane                                                                                                                                               | Electricity                                                            |
|     | Option A or Option B Measurement       | Option A                                                                                                                                              | Option A: nominal                                                      |
|     | Source/Sink identification             | B7 and P7                                                                                                                                             | P7                                                                     |
| b   | Data Unit                              | L                                                                                                                                                     | kWh                                                                    |
| c   | Description                            | Used for Heating buildings                                                                                                                            | Used for Heating buildings                                             |
| d   | Source of data                         | Meter from distributor                                                                                                                                | Meter from HydroQuebec                                                 |
| e   | Description of measurement             | Amount of Propane delivered                                                                                                                           | Number of kWh used                                                     |
| f   | Frequency                              | At each delivery                                                                                                                                      | At each HQ billing period                                              |
| g   | Value monitored                        | Liters                                                                                                                                                | kWh                                                                    |
| h   | Monitoring equipment                   | Fuel Distributor Meter                                                                                                                                | HQ Electricity Meter                                                   |
| i   | QA/QC procedures                       | Delivery in line with Tank nominal value                                                                                                              | Ex-ante comparison                                                     |
| j   | Purpose of data                        | Baseline scenario for heating Building                                                                                                                | Baseline scenario for heating Building                                 |
| k   | Calculation method                     | Propane Volume consumed                                                                                                                               | Installed Nominal Electrical Equipement                                |
| l   | Comments                               | Project Units/PAI using similar technology may used different fossil combustibles.<br>In such instance, Emission Factors will be defined accordingly. |                                                                        |

Table 8 Data and Parameter PAI V Heat Recovery

### 3. Data and Parameters: Generic PAI VII Energy Efficiency Demand Side

January 2010 up to October 31th 2013

| Generic PAI Reference Number |                                        | VII                                                                                                                                                | VII                                                                                                      |
|------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Description of Generic PAI   |                                        | Saving Energy on Recycling Activities                                                                                                              | Saving Energy on Recycling Activities                                                                    |
| 3.1                          | Data/Parameter available at validation | EF Oil N°6 ( $\Sigma$ CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)<br>t eCO <sub>2</sub> /L                                                 | EF Electricity ( $\Sigma$ CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)<br>t eCO <sub>2</sub> /kWh |
|                              | a unit                                 |                                                                                                                                                    |                                                                                                          |
|                              | b Description                          | Combined Emission Factor for Oil N°6                                                                                                               | Emission Factor for Electricity                                                                          |
|                              | c Source of data                       | IPCC, Environment Canada, AEE                                                                                                                      | AEE                                                                                                      |
|                              | d Value applied                        | 0,001544                                                                                                                                           | 0,000003                                                                                                 |
| 3.2                          | d Description of measurement           | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                    | Official Emission Factors Determination                                                                  |
|                              | e Purpose of data                      | Parameters for Baseline and Project Em                                                                                                             | Parameters for Project Emission                                                                          |
|                              | a Data                                 | Oil N°6                                                                                                                                            | Electricity                                                                                              |
|                              | Option A or Option B Measurement       | Option A                                                                                                                                           | Option A: nominal                                                                                        |
|                              | Source/Sink identification             | B7                                                                                                                                                 | P7                                                                                                       |
| 3.2                          | b Data Unit                            | L                                                                                                                                                  | kWh                                                                                                      |
|                              | c Description                          | Used in Furnace to heat building                                                                                                                   | Used to heat building                                                                                    |
|                              | d Source of data                       | Meter from distributor                                                                                                                             | Meter from HydroQuebec                                                                                   |
|                              | e Description of measurement           | Amount of Oil N°6 delivered                                                                                                                        | Number of kWh used                                                                                       |
|                              | f Frequency                            | At each delivery                                                                                                                                   | At each HQ billing period                                                                                |
| 3.2                          | g Value monitored                      | Liters                                                                                                                                             | kWh                                                                                                      |
|                              | h Monitoring equipment                 | Fuel Distributor Meter                                                                                                                             | HQ Electricity Meter                                                                                     |
|                              | i QA/QC procedures                     | Delivery in line with Tank nominal value                                                                                                           | Ex-Ante Comparison                                                                                       |
|                              | j Purpose of data                      | Baseline scenario for heating building                                                                                                             | Baseline/Project scenario for lighting and heating building                                              |
|                              | k Calculation method                   | Oil N°6 Volume consumed                                                                                                                            | Nominal Electrical Heater installed                                                                      |
| 3.2                          | l Comments                             | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |                                                                                                          |

Table 9 Data and Parameter PAI VII Energy Efficiency Demand Side

## 3. Data and Parameters: Generic PAI VIII Fuel Switching

January 2010 up to October 31th 2013

|                              |                                        | VIII                                                                                                                                               |  | VIII                                                                                                                                               |  |
|------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Generic PAI Reference Number |                                        | Fuel Switching                                                                                                                                     |  | Fuel Switching                                                                                                                                     |  |
| Description of Generic PAI   |                                        | Fuel Switching                                                                                                                                     |  | Fuel Switching                                                                                                                                     |  |
| 3.1                          | Data/Parameter available at validation | EF Propane ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t eCO <sub>2</sub> /L                                                        |  | EF Oil N° 2 ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t eCO <sub>2</sub> /L                                                       |  |
| a                            | unit                                   | Combined Emission Factor for Propane                                                                                                               |  | Combined Emission Factor for Oil N° 2                                                                                                              |  |
| b                            | Description                            | IPCC, Environment Canada, AEE                                                                                                                      |  | IPCC, Environment Canada, AEE                                                                                                                      |  |
| c                            | Source of data                         | 0,001544                                                                                                                                           |  | 0,002734                                                                                                                                           |  |
| d                            | Value applied                          | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                    |  | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                    |  |
| d                            | Description of measurement             | Parameters for Baseline and Project Em                                                                                                             |  | Parameters for Baseline and Project Em.                                                                                                            |  |
| e                            | Purpose of data                        | Parameters for Baseline and Project Em                                                                                                             |  | Parameters for Baseline and Project Em.                                                                                                            |  |
| 3.2                          | Data/Parameter monitored               | Propane                                                                                                                                            |  | Oil N° 2                                                                                                                                           |  |
| a                            | Data                                   | Option A                                                                                                                                           |  | Option A                                                                                                                                           |  |
| b                            | Option A or Option B Measurement       | B7 and P7                                                                                                                                          |  | B7 and P7                                                                                                                                          |  |
| c                            | Source/Sink identification             | L                                                                                                                                                  |  | L                                                                                                                                                  |  |
| d                            | Data Unit                              | Used in Dryer 1, 2 and 3                                                                                                                           |  | Used in Furnace to heat building                                                                                                                   |  |
| e                            | Description                            | Meter from distributor                                                                                                                             |  | Meter from distributor                                                                                                                             |  |
| f                            | Source of data                         | Amount of Propane delivered                                                                                                                        |  | Amount of Oil N° 2 delivered                                                                                                                       |  |
| g                            | Description of measurement             | At each delivery                                                                                                                                   |  | At each delivery                                                                                                                                   |  |
| h                            | Frequency                              | Liters                                                                                                                                             |  | Liters                                                                                                                                             |  |
| i                            | Value monitored                        | Fuel Distributor Meter                                                                                                                             |  | Fuel Distributor Meter                                                                                                                             |  |
| j                            | Monitoring equipment                   | Delivery in line with Tank nominal value                                                                                                           |  | Delivery in line with Tank nominal value                                                                                                           |  |
| k                            | QA/QC procedures                       | Baseline/Project scenario for heating building                                                                                                     |  | Baseline/Project scenario for heating building                                                                                                     |  |
| l                            | Purpose of data                        | Propane Volume consumed                                                                                                                            |  | Oil N° 2 Volume consumed                                                                                                                           |  |
| m                            | Calculation method                     | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |  | Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly. |  |
| n                            | Comments                               |                                                                                                                                                    |  |                                                                                                                                                    |  |

### 3. Data and Parameters: Generic PAI IX Energy Conservation

January 2010 up to October 31th 2013

|     | Generic PAI Reference Number           | IX                                                                                                                                                                                         |
|-----|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Description of Generic PAI             | Energy Conservation                                                                                                                                                                        |
| 3.1 | Data/Parameter available at validation | EF Oil N° 2 ( $\Sigma$ CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> O)<br>t eCO <sub>2</sub> /L                                                                                        |
| a   | unit                                   |                                                                                                                                                                                            |
| b   | Description                            | Combined Emission Factor for Oil N° 2                                                                                                                                                      |
| c   | Source of data                         | IPCC, Environment Canada, AEE                                                                                                                                                              |
| d   | Value applied                          | 0,000822                                                                                                                                                                                   |
| d   | Description of measurement             | IPCC-UNFFCC / Env. Canada / AEE                                                                                                                                                            |
| e   | Purpose of data                        | Parameters for Baseline and Project Em                                                                                                                                                     |
| 3.2 | Data/Parameter monitored               |                                                                                                                                                                                            |
| a   | Data                                   | Oil N°2                                                                                                                                                                                    |
|     | Option A or Option B Measurement       | Option A                                                                                                                                                                                   |
|     | Source/Sink identification             | P7                                                                                                                                                                                         |
| b   | Data Unit                              | L                                                                                                                                                                                          |
| c   | Description                            | Avoided emissions from Oil N° 2 extracti                                                                                                                                                   |
| d   | Source of data                         | Volume of Oil N° 2 recovered                                                                                                                                                               |
| e   | Description of measurement             | Amount of Oil N°2 delivered                                                                                                                                                                |
| f   | Frequency                              | At each delivery                                                                                                                                                                           |
| g   | Value monitored                        | Liters                                                                                                                                                                                     |
| h   | Monitoring equipment                   | Volume determined by drums                                                                                                                                                                 |
| i   | QA/QC procedures                       | Delivery in line with Tank nominal value                                                                                                                                                   |
|     |                                        | Avoided emissions from Oil N° 2                                                                                                                                                            |
| j   | Purpose of data                        | extraction                                                                                                                                                                                 |
| k   | Calculation method                     | Oil N°2 Volume recovered<br>Project Units/PAI using similar<br>technology may used different fossil<br>combustibles. In such instance,<br>Emission Factors will be defined<br>accordingly. |
| l   | Comments                               |                                                                                                                                                                                            |

Table 11 Data and Parameter PAI IX Energy Conservation

### 3. Data and Parameters: Generic PAI X Energy Efficiency Demand Side: New Buildings

January 2010 up to October 31st 2013

|     | Generic PAI Reference Number | X                                            |                                                                                                   |                                                                                                  | X                                                                                                     |                                              |                                              |
|-----|------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|
|     |                              | Energy Efficiency Demand Side: new buildings | Energy Efficiency Demand Side: new buildings                                                      | Energy Efficiency Demand Side: new buildings                                                     | Energy Efficiency Demand Side: new buildings                                                          | Energy Efficiency Demand Side: new buildings | Energy Efficiency Demand Side: new buildings |
| 3.1 | a                            | Data/Parameter available at validation unit  | EF Gaz Nat ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t $\text{eCO}_2/\text{M}^3$ | EF Oil N° 2 ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t $\text{eCO}_2/\text{L}$ | EF Electricity ( $\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$ )<br>t $\text{eCO}_2/\text{kWh}$ |                                              |                                              |
|     | b                            | Description                                  | Combined Emission Factor for Gaz Nat                                                              | Combined Emission Factor for Oil N° 2                                                            | Emission Factor for Electricity                                                                       |                                              |                                              |
|     | c                            | Source of data                               | IPCC, Environment Canada, AEE                                                                     | IPCC, Environment Canada, AEE                                                                    | AEE                                                                                                   |                                              |                                              |
|     | d                            | Value applied                                | 0,001902                                                                                          | 0,002734                                                                                         | 0,000003                                                                                              |                                              |                                              |
|     | e                            | Purpose of data                              | IPCC-UNFFCC / Env. Canada / AEE                                                                   | IPCC-UNFFCC / Env. Canada / AEE                                                                  | Official Emission Factors Determination                                                               |                                              |                                              |
| 3.2 | a                            | Data/Parameter monitored                     | Gaz Nat<br>Option A<br>P7<br>M <sup>3</sup>                                                       | Oil N°2<br>Option A<br>B7<br>L                                                                   | Electricity<br>Option A: nominal<br>B7 and P7<br>kWh                                                  |                                              |                                              |
|     | b                            | Source/Sink identification                   | Used in Furnace to heat building                                                                  | Used in Furnace to heat building                                                                 | Used to light and heat building                                                                       |                                              |                                              |
|     | c                            | Description                                  | Meter from Gaz Metro                                                                              | Meter from distributor                                                                           | Meter from HydroQuebec                                                                                |                                              |                                              |
|     | d                            | Source of data                               | Number of M <sup>3</sup> used                                                                     | Amount of Oil N°2 delivered                                                                      | Number of kWh used                                                                                    |                                              |                                              |
|     | e                            | Description of measurement                   | At each Gaz Metro billing period                                                                  | At each delivery                                                                                 | At each HQ billing period                                                                             |                                              |                                              |
|     | f                            | Frequency                                    | M <sup>3</sup>                                                                                    | Liters                                                                                           | kWh                                                                                                   |                                              |                                              |
|     | g                            | Value monitored                              | Gaz Metro Meter                                                                                   | Fuel Distributor Meter                                                                           | HQ Electricity Meter                                                                                  |                                              |                                              |
|     | h                            | Monitoring equipment                         | Ex-Ante                                                                                           | Delivery in line with Tank nominal value                                                         | Ex-Ante                                                                                               |                                              |                                              |
|     | i                            | QA/QC procedures                             | Project scenario for heating the building                                                         | Baseline scenario for heating building                                                           | Baseline/Project scenario for lighting and heating                                                    |                                              |                                              |
|     | j                            | Purpose of data                              | Gaz Nat Volume consumed                                                                           | Oil N°2 Volume consumed                                                                          | Nominal Aggregate Electrical Motor installed                                                          |                                              |                                              |
|     | k                            | Calculation method                           |                                                                                                   |                                                                                                  |                                                                                                       |                                              |                                              |
|     | l                            | Comments                                     | In such instance, Emission Factors will be defined accordingly.                                   |                                                                                                  |                                                                                                       |                                              |                                              |

Table 12 Data and Parameter PAI X Energy Efficiency Demand Side: New Buildings

### 3.3 Monitoring Plan

The monitoring plan will be applied to all Project Units as follow:

#### Sustainable Community: monitoring

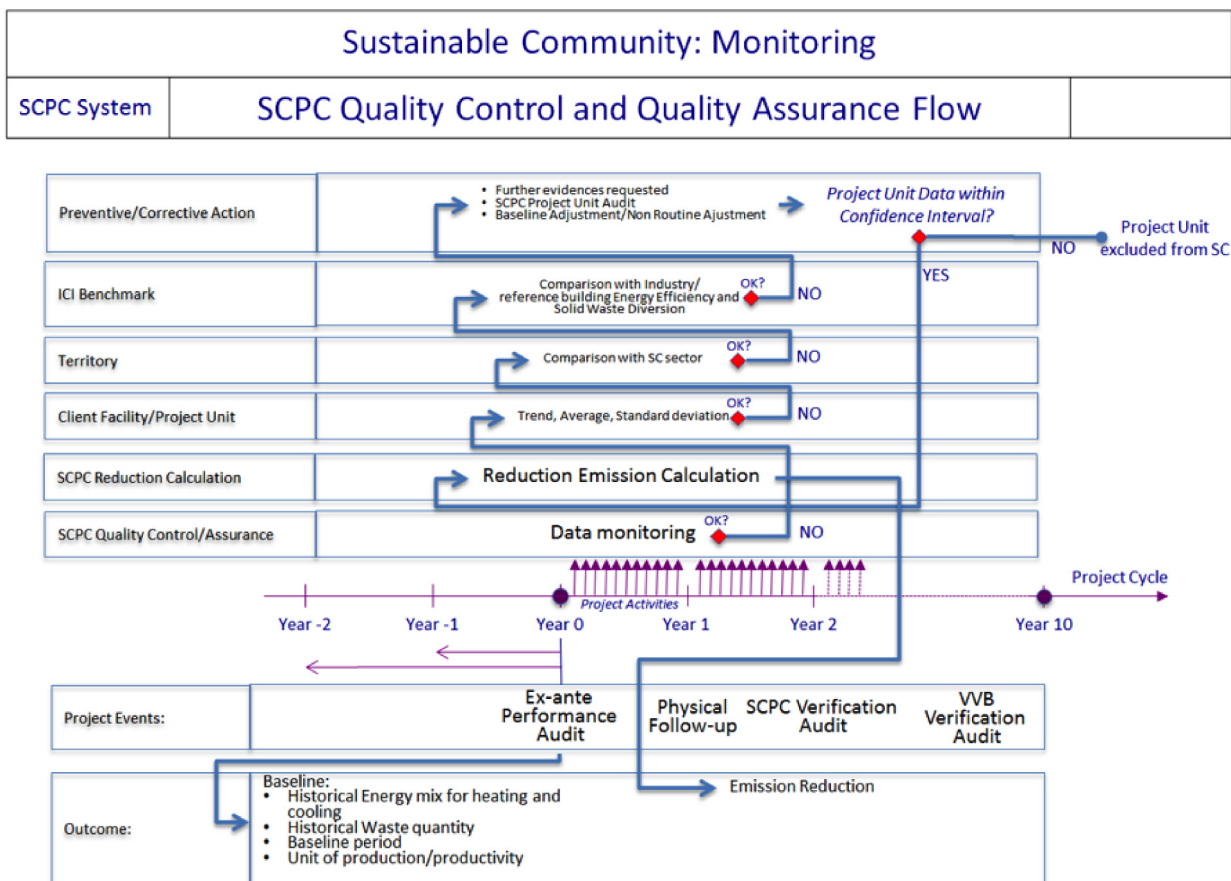
| Category                            | Activity                                                                         | Measure Option                                                                   | Project             |                                |                                                   |                          |                                                 | Impact on reduction                                                             | Adjustment                                |
|-------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------|--------------------------------|---------------------------------------------------|--------------------------|-------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------|
|                                     |                                                                                  |                                                                                  | Baseline Adjustment | Parameter                      | Instrument                                        | Frequency                | Incertitude                                     |                                                                                 |                                           |
| Energy Efficiency                   | Fuel switching                                                                   | Biomass boiler                                                                   | Option B            | Mass of processed biomass      | loader bucket                                     | consolidation every week | estimate of the average mass in the bucket      | none                                                                            | Process Yield                             |
|                                     | Heat Recovery: process                                                           | Heat Recovery: process                                                           | Option A            | Volume of fuel                 | Volume/Quantity on invoice*                       | continuous               | negligible as measure devices calibrated        | none                                                                            |                                           |
|                                     |                                                                                  | Heat Recovery: process                                                           | Option B            | T* and Debit (Enthalpy)        | Thermometer Debitmeter                            | continuous               | negligible as measure devices calibrated        | none                                                                            |                                           |
|                                     | Heat Recovery: process                                                           | Heat Recovery: process                                                           | Option A            | Volume of fuel                 | Volume/Quantity on invoice* when tanking          | transaction based        | Residual inventory at the end of the period     | materiality, decrease with tank filling turnover, compensate on the next period |                                           |
| Energy Efficiency: building heating | Energy Efficiency: building heating                                              | Energy Efficiency: building heating                                              | Option A            | Volume of fuel                 | Volume/Quantity on invoice*                       | continuous               | negligible as measure devices calibrated        | none                                                                            | Commercial building: unit of productivity |
|                                     |                                                                                  | Energy Efficiency: building HVAC                                                 | Option A/Option B   | Volume of fuel/energy          | Volume/Quantity on invoice*                       | continuous               | negligible as measure devices calibrated        | none                                                                            | Commercial building: unit of productivity |
|                                     |                                                                                  | Energy Efficiency: envelope enhancement                                          | Option A            | Volume of fuel/energy          | Volume/Quantity on invoice*                       | continuous               | negligible as measure devices calibrated        | none                                                                            | Commercial building: unit of productivity |
|                                     | Energy Efficiency: envelope enhancement                                          | Energy Efficiency: envelope enhancement                                          | Option B            | Volume of fuel                 | Volume/Quantity on invoice* when tanking          | transaction based        | Residual inventory at the end of the period     | materiality, decrease with tank filling turnover, compensate on the next period | Commercial building: unit of productivity |
| Waste                               | Energy Efficiency: building lighting                                             | Energy Efficiency: building lighting                                             | Option A            | Light intensity                | Manufacturer technical data                       | at the time installation | negligible as measure devices calibrated        | none                                                                            |                                           |
|                                     | Waste diversion                                                                  | Waste diversion                                                                  | Option B            | Waste mass/volume              | mass: balance volume: container                   | transaction based        | weight calculation from volume                  | materiality as company charged on container                                     |                                           |
|                                     | Waste reduction: substitution of single wood pallets by reusable carboard pallet | Waste reduction: substitution of single wood pallets by reusable carboard pallet | Option B            | Number of pallets and reuseage | Number of travel written on pallet/Bill of Lading | Monthly consolidation    | wood pallet end of life at point of destination | Max: energy substitution if burn                                                |                                           |

\*Energy suppliers have to have their debitmeters reguslay calibrated: th invoice is then based on the calibrated debitmeter reading

In addition a Quality Control of the data will be performed as follows:

- At the time of registration the project unit: a physical audit of the Project Unit premises takes place, and physical evidence necessary to determine the baseline scenario will be collected;
- At each entry in the SCPC system, controls will be run to compare entry to historical data, sectorial SCPC benchmark and to external benchmark;
- Investigation may be necessary to get physical evidences of the data entered into the SCPC system;
- Impact of a possibly recurrent issue will be looked at for all the concerned Project Units;
- For each baseline period, a random sample of Project Units will be audited during the course of the project. The sample size will be the square root of the Project Units participating to the SCPC system. Evidence of the audit are kept: discrepancies will be analysed as well as potential impact on related Project Units;

The figure below provides the SCPC validation/verification data workflow:



In terms of organization, there are six levels that potential problems can be escalated, with different level of responsibility of the organization. Should the system require, a recourse/appeal will be set in place.

## 4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

### 4.1 Baseline Emissions

The Baseline Emissions of the Generic PAI and other PAI have been fully documented in the 2013 11 13 Monitoring Nov 13 V11.xlsx Excel spreadsheet.

The Generic PAI I to X are fully documented in their respective tab.

Finalisation of the figures is up to October 31<sup>st</sup> 2013. This is underlined in the All PAI BP Emissions Tab with red figures.

### 4.2 Project Emissions

The Project Emissions of the Generic PAI and other PAI have been fully documented in the 2013 11 13 Monitoring Nov 13 V11.xlsx Excel spreadsheet.

The Generic PAI I to X are fully documented in their respective tab.

Finalisation of the figures is up to October 31<sup>st</sup> 2013. This is underlined in the All PAI BP Emissions Tab with red figures.

### 4.3 Leakage

At Project Unit level, the leakage is de minimus.

### 4.4 Net GHG Emission Reductions and Removals

The net GHG Emission Reductions of the Sustainable Community project are as follows:

| Year         | Baseline emissions or removals (tCO <sub>2</sub> e) | Project emissions or removals (tCO <sub>2</sub> e) | Leakage emissions (tCO <sub>2</sub> e) | Net GHG emission reductions or removals (tCO <sub>2</sub> e) |
|--------------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------|--------------------------------------------------------------|
| <b>2010</b>  | 41 952                                              | 19 989                                             | De minimus                             | 21 962                                                       |
| <b>2011</b>  | 42 999                                              | 19 948                                             | De minimus                             | 23 051                                                       |
| <b>2012</b>  | 39 110                                              | 18677                                              | De minimus                             | 20 434                                                       |
| <b>2013</b>  | 21 321                                              | 11 092                                             | De minimus                             | 10 228                                                       |
| <b>Total</b> | <b>145 382</b>                                      | <b>69 707</b>                                      |                                        | <b>75 675</b>                                                |

Montreal, February 3<sup>rd</sup>, 2014.

**APPENDIX X: 2014 01 02 MONITORING JAN 14 V11.XLSX EXCEL SPREADSHEET**