

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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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:

- i. 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;
- ii. 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;
- iii. To collect ground data in real time, and consequently, stimulate and enhance Industrial Commercial and Institutional (ICI) facilities for a better sustainable behaviour;
- iv. 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 1st, 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 tCO₂e.

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
Address	4124 rue St Hubert, Montréal, QC, Canada
Telephone	+1 514-839-8788
Email	christophe.kaestli@certiconseil.com

1.5 Project Start Date

The project starting date is January 1st 2010.

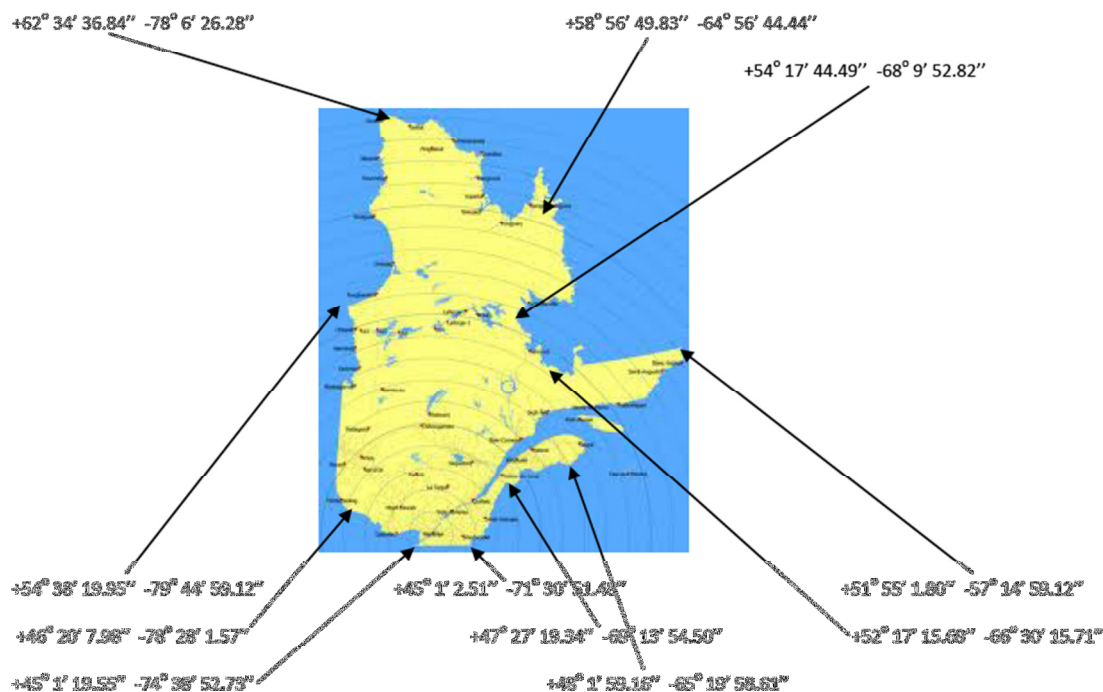
1.6 Project Crediting Period

The project crediting period is 10 years, renewable for 10 years. The starting date is January 1st 2010 and will end December 31rd 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		Generic PAI EE	Generic PAI WM	Start Date	PAI generic SC account (On ICT platform)	Number of Project Units/PAI/BU per Client Facility						Total
	Generic PAI (Appendix IX)					Boisaco	Recyc Beauceville	RPM St-Gedeon Arena	St-Gedeon Townen Hall	RPM Environnement	780 Brewster	
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 31st 2013

Sustainable Community Project Entry Form - 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 ₂ /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 Nbr 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_{CO2e}</i>
Data unit:	<i>Kg CO_{2e} per GJ</i>
Description:	<i>CO_{2e} 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_{2e} 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 CH₄, N₂O and CO₂ 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"> • The Calculation of baseline emissions • The Calculation of project emissions
Comments	-

Parameter:	<i>EF Fuel_{i N2O}</i>
Data unit:	<i>Kg N₂O per L, m³, or other</i>
Description:	<i>N₂O emissions factor for combustion of each type of fuel (EF Fuel_{i N2O})</i>
Source of data:	<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 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.</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 CH₄, N₂O and CO₂ 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>This is one of the most comprehensive fuel emission factor databases available.</i>
Purpose of the data	<p><i>The EF Fuel are used for:</i></p> <ul style="list-style-type: none"> <i>The Calculation of baseline emissions</i> <i>The Calculation of project emissions</i>
Comments	-

Parameter:	$EF_{Fuel\ i\ CH_4}$
Data unit:	$Kg\ CH_4\ per\ L,\ m^3,\ or\ other$
Description:	CH_4 emissions factor for combustion of each type of fuel ($EF_{Fuel\ i\ CH_4}$)
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 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.
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 CH_4, N_2O and CO_2 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 EF_{Fuel} are used for:</p> <ul style="list-style-type: none"> The Calculation of baseline emissions The Calculation of project emissions
Comments	-

Parameter:	<i>EF Fuel_{iCO2}</i>
Data unit:	<i>Kg CO₂ per L, m³, or other</i>
Description:	<i>CO₂ Emissions Factor for combustion of each type of fuel (EF Fuel_{iCO2})</i>
Source of data:	<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>
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 CH₄, N₂O and CO₂ 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>This is one of the most comprehensive fuel emission factor databases available.</i>
Purpose of the data	<p><i>The EF Fuel are used for:</i></p> <ul style="list-style-type: none"> <i>The Calculation of baseline emissions</i> <i>The Calculation of project emissions</i>
Comments	-

Parameter:	<i>OX</i>
Data unit:	-
Description:	<i>Oxidation factor (reflecting the amount of soil or other material covering the waste)</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 CH₄, N₂O and CO₂ 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><i>The OX factor is used for:</i></p> <ul style="list-style-type: none"> <i>The Calculation of baseline emissions</i> <i>The Calculation of project emissions</i>
Comments	-

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 CH_4, N_2O and CO_2 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"> • The Calculation of baseline emissions • The Calculation of project emissions
Comments	-

Parameter:	<i>DOC_j</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"> • <i>The Calculation of baseline emissions</i> • <i>The Calculation of project emissions</i>
Comments	-

Parameter:	<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 CH₄, N₂O and CO₂ 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"> • <i>The Calculation of baseline emissions</i> • <i>The Calculation of project emissions</i>
Comments	-

Parameter:	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 CH₄, N₂O and CO₂ 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"> • <i>The Calculation of baseline emissions</i> • <i>The Calculation of project emissions</i>
Comments	-

3.2 Data and Parameters Monitored

Here are the Data and Parameters monitored.

Data Unit / Parameter:	Volume or Quantity of Fuel _i
Data unit:	L, m ³ , 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"> Flow meters installed on tanker. By law, such flow meters are to be calibrated regularly. Supplier sealed flow meters installed at client facility, such gaz meter.

QA/QC procedures to be applied:	The SPSC system applies the following QC/QA procedures: <ul style="list-style-type: none"> Data comparison with past performance Data comparison with similar Project Unit Data comparison with standard benchmark (Ashrae 90.1, Model National Energy Code for Building MNECB,...) Data comparison with sector association. Project Unit Investigation for root cause analysis of data profile if outside range Project Unit Physical audit to validate the measurement devices conditions and collect related evidence.
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. 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 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 . Evidences will be recorded on Invoices.
Value applied:	-
Monitoring equipment:	The monitoring equipment includes: <ul style="list-style-type: none"> 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.
QA/QC procedures to be applied:	The SPSC system applies the following QC/QA procedures: <ul style="list-style-type: none"> Data comparison with past performance Data comparison with similar Project Unit Data comparison with standard benchmark (Ashrae 90.1, Model National Energy Code for Building MNECB,...) Data comparison with sector association. Project Unit Investigation for root cause analysis of data profile if outside range Project Unit Physical audit to validate the measurement devices conditions and collect related evidence.
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:	

Data Unit / Parameter:	Quantity of waste
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. Evidences will be recorded on Invoices.
Value applied:	-
Monitoring equipment:	The monitoring equipment includes: <ul style="list-style-type: none"> Weighting balance.
QA/QC procedures to be applied:	The SPSC system applies the following QC/QA procedures: <ul style="list-style-type: none"> Data comparison with past performance Data comparison with similar Project Unit Data comparison with Data comparison with sector association. Project Unit Investigation for root cause analysis of data profile if outside range

	<ul style="list-style-type: none"> Project Unit Physical audit to validate the measurement devices conditions and collect related evidence.
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 ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t eCO ₂ /L			EF Butane ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t eCO ₂ /L			EF Diesel ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t eCO ₂ /L		
a	unit	Combined Emission Factor for Propane IPCC, Environment Canada, AEE			Combined Emission Factor for Butane IPCC, Environment Canada, AEE			Combined Emission Factor for Diesel 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			Meter from Boisaco Tank Station		
e	Description	Meter from distributor			Meter from distributor			Volume of Diesel tanked in the loader		
f	Source of data	Amount of Propane delivered			Amount of Butane delivered			At time of tanking		
g	Description of measurement	At each delivery			At each delivery			At each HQ billing period		
h	Frequency	Liters			Liters			kWh		
i	Value monitored	Fuel Distributor Meter			Fuel Distributor Meter			HQ Electricity Meter		
j	Monitoring equipment	Delivery in line with Tank nominal value			Delivery in line with Tank nominal value			Ex-ante comparison		
k	QA/QC procedures	Baseline scenario for drying PMP			Baseline scenario for drying PMP			Project scenario for drying PMP		
l	Purpose of data	Propane Volume consumed			Butane Volume consumed			Nominal Aggregate Electrical Motor installed		
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 Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly.		
n	Comments									

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 _j (Σ CO ₂ /CH ₄ /N ₂ O) t eCO ₂ /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 _j (Σ CO ₂ /CH ₄ /N ₂ O) t eCO ₂ /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	Data Parameter available at validation	EF HDPE (E CO2/CH4/N2O) 1eCO ₂ /1000 Lbs Combined Emission Factor for HDPE EPA 0.71 EPA Net Emission Factor Parameters for Project Emission.	EF PET (E CO2/CH4/N2O) 1eCO ₂ /1000 Lbs Combined Emission Factor for PET EPA 1.15 EPA Net Emission Factor Parameters for Project Emission.	EF PVC (E CO2/CH4/N2O) 1eCO ₂ /1000 Lbs Combined Emission Factor for PVC EPA 0.99 EPA Net Emission Factor Parameters for Project Emission.	EF LDPE (E CO2/CH4/N2O) 1eCO ₂ /1000 Lbs Combined Emission Factor for LDPE EPA 0.85 EPA Net Emission Factor Parameters for Project Emission.	EF PP (E CO2/CH4/N2O) 1eCO ₂ /1000 Lbs Combined Emission Factor for PP EPA 0.775 EPA Net Emission Factor Parameters for Project Emission.	EF PS (E CO2/CH4/N2O) 1eCO ₂ /1000 Lbs Combined Emission Factor for PS EPA 1.25 EPA Net Emission Factor Parameters for Project Emission.
3.2	Data Parameter monitored	HDPE Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of HDPE delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic HDPE Volume delivered	PET Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of PET delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic PET Volume delivered	PVC Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of PVC delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic PVC Volume delivered	LDPE Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of LDPE delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic LDPE Volume delivered	PP Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of PP delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic PP Volume delivered	PS Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of PS delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic PS Volume delivered
		PCABS MDPE Option A Pg t Volume of recycled plastic Weighing Balance or Bridge Amount of PCABS MDPE delivered At each delivery t Calibrated weighing devices Double check: seller and buyer weight Emission avoided with recycled plastic PCABS MDPE Volume delivered					
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 ₂ /L	t eCO ₂ /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. 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 (Σ CO ₂ /CH ₄ /N ₂ O) t eCO ₂ /L	EF Electricity (Σ CO ₂ /CH ₄ /N ₂ O) t eCO ₂ /kWh
	a unit	Combined Emission Factor for Oil N°6 IPCC, Environment Canada, AEE	Emission Factor for Electricity AEE
	b Description		
	c Source of data		
	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
	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
	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
	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

Generic PAI Reference Number		VIII Fuel Switching		VIII Fuel Switching	
Description of Generic PAI		Fuel Switching		Fuel Switching	
3.1	Data/Parameter available at validation	EF Propane ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t eCO_2/L	EF Oil N° 2 ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t eCO_2/L	EF Electricity ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t eCO_2/kWh	
a	unit				
b	Description	Combined Emission Factor for Propane	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	0,001544	0,002734	0,000003	
d	Description of measurement	IPCC-UNFFCC / Env. Canada / AEE	IPCC-UNFFCC / Env. Canada / AEE	Official Emission Factors Determination	
e	Purpose of data	Parameters for Baseline and Project Em	Parameters for Baseline and Project Em.	Parameters for Project Emission	
3.2	Data/Parameter monitored				
a	Data	Propane	Oil N° 2	Electricity	
	Option A or Option B Measurement	Option A	Option A	Option B	
	Source/Sink identification	B7 and P7	B7 and P7	B7 and P7	
b	Data Unit	L	L	kWh	
c	Description	Used in Dryer 1, 2 and 3	Used in Furnace to heat building	Meter from HydroQuebec	
d	Source of data	Meter from distributor	Meter from distributor	Number of kWh used	
e	Description of measurement	Amount of Propane delivered	Amount of Oil N° 2 delivered	At each HQ billing period	
f	Frequency	At each delivery	At each delivery	kWh	
g	Value monitored	Liters	Liters	HQ Electricity Meter	
h	Monitoring equipment	Fuel Distributor Meter	Fuel Distributor Meter	Ex-Ante Comparison	
i	QA/QC procedures	Delivery in line with Tank nominal value	Delivery in line with Tank nominal value	Baseline/Project scenario for heating building	
j	Purpose of data	Baseline/Project scenario for heating building	Baseline/Project scenario for heating building	Nominal Electrical Lighting and Equipement	
k	Calculation method	Propane Volume consumed	Oil N° 2 Volume consumed		
l	Comments	Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined accordingly.			

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 (Σ CO ₂ /CH ₄ /N ₂ O) t eCO ₂ /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 Project Units/PAI using similar technology may used different fossil combustibles. In such instance, Emission Factors will be defined 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 31th 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 ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t CO_2/M^3	EF Oil N° 2 ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t CO_2/L	EF Electricity ($\Sigma \text{CO}_2/\text{CH}_4/\text{N}_2\text{O}$) t CO_2/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	Oil N°2	Electricity		
	b	Option A or Option B Measurement Source/Sink identification	Option A	Option A	Option A: nominal		
	c	Data Unit	P7	B7	B7 and P7		
	d	Description	M ³	L	kWh		
	e	Source of data	Used in Furnace to heat building	Used in Furnace to heat building	Used to light and heat building		
	f	Description of measurement	Meter from Gaz Metro	Meter from distributor	Meter from HydroQuebec		
	g	Frequency	Number of M ³ used	Amount of Oil N°2 delivered	Number of kWh used		
	h	Value monitored	At each Gaz Metro billing period	At each delivery	At each HQ billing period		
	i	Monitoring equipment	M ³	Liters	kWh		
	j	QA/QC procedures	Gaz Metro Meter	Fuel Distributor Meter	HQ Electricity Meter		
	k	Purpose of data	Ex-Ante	Delivery in line with Tank nominal value	Ex-Ante		
	l	Calculation method	Project scenario for heating the building	Baseline scenario for heating building	Baseline/Project scenario for lighting and heating		
	m	Comments	Gaz Nat Volume consumed	Oil N°2 Volume consumed	Nominal Aggregate Electrical Motor installed		

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

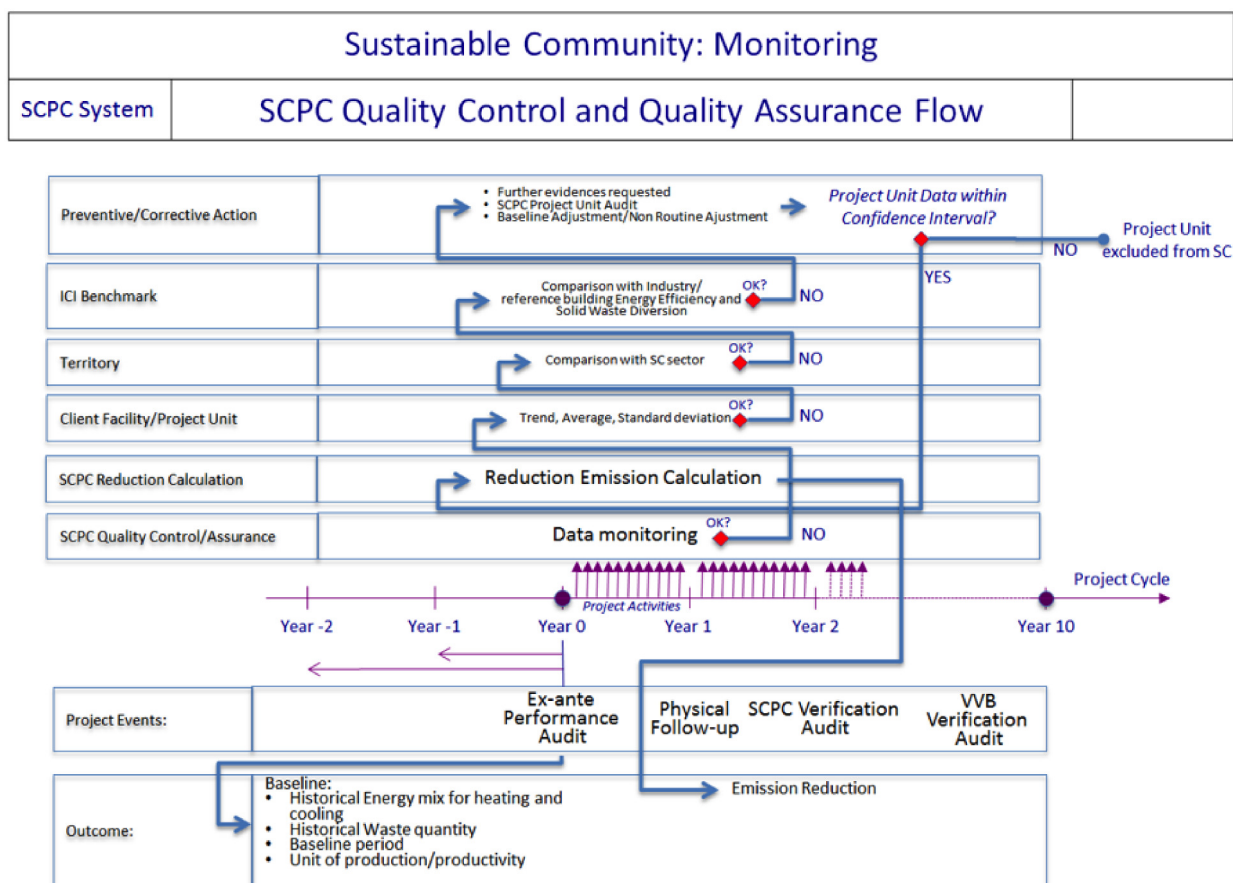
Category	Activity	Measure Option	Project					Impact on reduction	Adjustment
			Baseline Adjustment	Parameter	Instrument	Frequency	Incertitude		
Fuel switching	Biomass boiler	Option B		Mass of processed biomass	loader bucket	consolidation every week	estimate of the average mass in the bucket	none	Process Yield
	Heat Recovery: process	Option A	Process yield	Volume of fuel	Volume/Quantity on invoice*	continuous	negligible as measure devices calibrated	none	
Energy Efficiency	Heat Recovery: process	Option B	Process Yield	T* and Debit (Enthalpy)	Thermometer Debitmeter	continuous	negligible as measure devices calibrated	none	
	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	Option A	Unit of productivity	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	Unit of productivity	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 A	Unit of productivity	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 B	Unit of productivity	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	Waste diversion	Option B	Light intensity	Nominal Wattage	Manufacturer technical data	at the time installation	negligible as measure devices calibrated	none	
	Waste reduction: substitution of single wood pallets by reusable carboard pallet	Option B		Waste mass/volume	mass: balance volume: container	transaction based	weight calculation from volume	materiality as company charged on container	
				Number of pallets and reuseage	Number of travel written on palette/Bill of Lading	Monthly consolidation	wood palette 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 31st 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 31st 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 ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2010	41 952	19 989	De minimus	21 962
2011	42 999	19 948	De minimus	23 051
2012	39 110	18677	De minimus	20 434
2013	21 321	11 092	De minimus	10 228
Total	145 382	69 707		75 675

Montreal, February 3rd, 2014.

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