



# Greenhouse Gas Verification Report:

## Prism Farms Biomass Heating Project

April 1<sup>st</sup>, 2015

Final Version 1.0

**Prepared for:**

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IESC Project Number: G0449A

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## 1 VERIFICATION SUMMARY

### 1.1 Project Information

Project Name	Prism Farms Biomass Heating Project
Date when project began	February 14, 2006
Credit duration period:	February 14, 2006 – February 14, 2021
Location:	731 Mersea Road 7, Leamington, ON N8H 3V8, Ontario  Latitude, Longitude: 42.109658, -82.591341

### 1.2 Project Contact Information

#### 1.2.1 Main Contact (Verifier)

Name:	Livio Nichilo, P.Eng
Position/Title:	Engineering Manager, Internat Energy Solutions Canada
Email:	l.nichilo@internatenergy.com
Telephone Number:	416-628-4658 ext. 140
Mailing Address:	425 Adelaide St. West, Suite 403A Toronto, Ontario M5V 3C1, Canada

#### 1.2.2 Main Contact (Project Developer)

Name:	Kelly Parker – Blue Source Canada ULC (Authorized Project Contact)
Position/Title:	Carbon Services Project Analyst
Email:	kellyp@bluesourcecan.com
Telephone Number:	403-262-3026 ext. 260
Mailing Address:	Suite 700, 717-7 <sup>th</sup> avenue SW Calgary, Alberta T2P 3RS

### 1.3 Fundamentals

Level of assurance:	Reasonable level of assurance
Materiality threshold:	The materiality threshold is defined as $\pm 5\%$ of the GHG assertion
Objectives:	To verify the GHG emissions assertion stated in the 'Prism Farms Biomass Heating Project: Greenhouse Gas Reduction Report – For the

	Period 1 January, 2014 – 31 December, 2014” (Project Report): <ul style="list-style-type: none"> <li>▶ Is a fair and accurate representation of the reductions over the period covered in the report</li> <li>▶ That the assertion has been calculated in accordance with the method of quantification specified in the Project Report</li> <li>▶ Meets the requirements of the Verification Criteria</li> <li>▶ Meets the requirements of the CSA CleanProjects™ Registry</li> </ul>
Verification Criteria:	ISO 14064-2 Alberta Environment Specified Gas Emitters Regulation: “Quantification Protocol for Diversion of Biomass to Energy from Biomass Combustion Facilities”, version 1, September 2007.
Verification Standard:	<ul style="list-style-type: none"> <li>▶ ISO 14064-3: 2006</li> <li>▶ ISO 14065: 2013</li> </ul>
Intended users:	CSA CleanProjects™ Registry
GHG Assertion:	GHG Reduction of 7,545 t CO <sub>2</sub> e

## 1.4 Scope

Project Type:	The Project is a biomass energy generation project
Project Activities:	The installation of a biomass boiler at Prism farms for heating in December 2005, with an additional biomass boiler installed in January 2007 leading to both direct and indirect reductions in GHG emissions.
Baseline Conditions:	Prior to installation, all heat requirements of the greenhouses were produced by natural gas combustion and/or fuel oil combustion in one of the five boilers at the site. All biomass had previously been sent to a landfill for disposal where it would have undergone anaerobic decomposition.
Type of greenhouse gases:	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, SF <sub>6</sub> , HFCs, PFCs
Time period:	January 1 <sup>st</sup> , 2014 – December 31 <sup>st</sup> , 2014

## 1.5 Verification Team Members

Lead Verifier	Livio Nichilo, P.Eng, M. Eng, EPT(GHG)
Internal Peer Reviewer	Andrea Sabelli, BA, MA, EPT(GHG)
Team Member	Kevin Tse, MES
Conflict of Interest Auditor	Fiona Jiang
Appeals/Complaints/Disputes Representative	Erick Lachapelle, B.S.Sc., PhD

## 2 INTRODUCTION

Blue Source retained Internat Energy Solutions Canada (IESC) to conduct a verification of the Project Report submitted by Blue Source Canada for the Prism Farms Biomass Heating Project ('Project') located in Southern Ontario.

Blue Source was responsible for the collection of data used in the calculations, data management, completion of calculations, presentation of the information within the Project Report, and for preparing the supporting technical documents.

IESC is a qualified third party verifier, accredited with the American National Standards Institute (ANSI), a member of the International Accreditation Forum (IAF) in accordance with ISO 14064 (Accreditation ID #1001). IESC was responsible for planning and executing the verification in order to deliver an opinion as to whether the Project Report is presented fairly and in accordance with the verification criteria.

## 3 PROJECT DESCRIPTION

### 3.1 Location

Prism farms is located near the town of Leamington at:

731 Mersea Road 7,  
Leamington, ON  
N8H 3V8, Ontario

Latitude, Longitude: 42.109658, -82.591341

### 3.2 Processes and Activities

Prism farm is a large commercial greenhouse operation consisting of 17.5 acres of covered greenhouse area. The Project, as defined in the Project Report, consists of the generation of thermal energy through a 4.6 MW Vynke boiler and a 6MW (thermal) Wicks boiler.

Biomass is delivered to the facility from a single biomass fuel supplier. The biomass is unloaded directly into a covered storage hopper that feeds the boiler via a conveyor belt. No additional drying, grinding or processing of the biomass is undertaken at the farm. Use of a front loader to push the biomass within the storage hopper is sometimes required.

Emission reductions from the project are the result of:

- ▶ The use of biomass instead of more carbon intensive fossil fuels that would have been used in the baseline to generate an equivalent quantity of thermal energy
- ▶ The avoidance of methane generated from anaerobic decomposition of the wood waste if it had reached the landfill

### 3.3 Baseline Emissions

The baseline scenario is the production of an equivalent amount of thermal energy by conventional fossil fuels. For the 2005 baseline year, 22.28% of thermal energy was generated using Fuel Oil #6 and 77.72% from Natural Gas. In addition, the biomass used for the project would have been disposed of in a landfill and undergone anaerobic decomposition resulting in methane production.

### 3.4 GHG Assertion

The GHG assertion to be verified is the amount of emissions reductions reported in the Project Report covering the period of January 1<sup>st</sup> 2014 to December 31<sup>st</sup>, 2014.

The total GHG reductions claimed during the crediting period is **7,222 t CO<sub>2</sub>e**. The table below displays the baseline and project emissions sources and final GHG assertion.

Baseline Emissions			t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O	tCO <sub>2</sub> e	TOTAL (CO <sub>2</sub> e)
SS	B9&10	Decomposition of Biomass and Methane Collection/Destruction		106.32			2,658.09
SS	B12	Thermal Energy Produced	4,252.9	0.1	0.1		4,279.22
SS	B13	Fuel Extraction & Processing	211.2	4.2	0.0	73.2	392.21
<b>SUB TOTAL</b>			<b>4,616.4</b>	<b>94.7</b>	<b>4,464.1</b>	<b>110.6</b>	<b>0.1</b>
Project Emission			t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O	tCO <sub>2</sub> e	TOTAL (CO <sub>2</sub> e)
SS	P12	Biomass Combustion		0.4	0.3		99.1
<b>SUB TOTAL</b>				<b>0.4</b>	<b>0.3</b>		<b>99.1</b>
Emissions Offset Credits Created			t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O	tCO <sub>2</sub> e	TOTAL (CO <sub>2</sub> e)
ALL			<b>4,464.1</b>	<b>110.1</b>	<b>-0.2</b>	<b>65.6</b>	<b>7,222.0</b>

## 4 VERIFICATION METHODOLOGY

### 4.1 Verification Objectives

To verify the GHG emissions assertion stated in the Project Report for the period January 1, 2014 – December 31, 2014:

- ▶ Is a fair and accurate representation of the reductions over the period covered in the report
- ▶ That the assertion has been calculated in accordance with the method of quantification specified in the Project Report
- ▶ Meets the requirements of the Verification Criteria
- ▶ Meets the requirements of the CSA CleanProjects™ Registry

## 4.2 Level of Assurance

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The CSA CleanProjects Registry requires that the verifier conduct the verification to a reasonable level of assurance. The verification was planned and executed accordingly.

## 4.3 Verification Criteria

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IESC has conducted our verification in order to express a reasonable level of assurance opinion as to whether the Project satisfies the requirements of the:

- ▶ CSA CleanProjects Registry
- ▶ Alberta Environment Specified Gas Emitters Regulation: “Quantification Protocol for Diversion of Biomass to Energy from Biomass Combustion Facilities”, version 1, September 2007.

## 4.4 Verification Standard

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The verification was conducted in accordance with ISO 14064-3, and ISO 14065:2013, with specific guidance from the CSA GHG CleanProjects Registry.

## 4.5 Verification Scope

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The verification involves the Project period of January 1<sup>st</sup>, 2014 to December 31<sup>st</sup>, 2014.

The verification covers the following GHG’s: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs and SF<sub>6</sub>

## 4.6 Materiality

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During the verification, individual errors, omissions or misrepresentatives (referred to as discrepancies) will be evaluated qualitatively and quantitatively.

The materiality threshold defines the level at which discrepancies in the GHG Assertion precludes the issuance of a verification statement at a reasonable level of assurance.

The materiality threshold has been defined at 5% of the GHG assertion. Aggregate discrepancies were analyzed and determined if the materiality threshold had been breached.

## 4.7 Verification Plan

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A copy of the final verification plan is provided in Appendix A. The activities described therein were executed during the course of the verification. The sampling plan, a subset of the verification plan, is outlined along with the final results in Section 7 of this report.

# 5 VERIFICATION TEAM: QUALIFICATIONS, ROLES AND RESPONSIBILITIES

Role	Name	Responsibilities
Lead Verifier	Livio Nichilo, P.Eng, M. Eng, EPT(GHG)	Lead and delegate verification duties

Internal Peer Reviewer	Andrea Sabelli, BA, MA, EPt(GHG)	Independent review of verification deliverables and supporting documentation to confirm all verification activities have been completed and conclude whether the GHG assertion is free of material discrepancy. Also will conclude on whether the activities completed provide the required level of assurance
Team Member	Kevin Tse, MES	Complete verification duties as required by Lead Verifier. Responsibilities may include planning, preparing and conducting the site visit, preparing the verification plan under the direction of the Lead Verifier, developing the verification report.
Conflict of Interest Auditor	Fiona Jiang	Provide an independent assessment on whether there is a potential for a conflict of interest for any members of the verification team
Appeals/Complaints/ Disputes Representative	Erick Lachapelle, B.S.Sc., PhD	Representative outside of the project team that will provide third party oversight for resolution of any appeals, disputes or complaints

## 6 VERIFICATION PROCEDURES

### 6.1 Review of Documents

A desktop review of the Compliance Report, GHG emissions assertion, and supporting data was completed. This involved:

- ▶ Review of the GHG assertion, and the methodologies employed and assessing them against the program criteria
- ▶ Completed an assessment of the risk associated with the GHG assertion (inherent, control and detection)
- ▶ Assessing the control environment and the corporate governance process
- ▶ Review of each of the emission sources and data for errors, omissions or misrepresentations
- ▶ Review of the data management system and assessment of the data traceability and consistency

### 6.2 Risk Assessment

Based on the review of documentation, controls procedures and data, IESC assessed the risks, including inherent risk, control risk, detection risk and materiality. The following tables provide a risk assessment based on the amount of emissions (tonnes CO<sub>2</sub>/year) from each SSR (source, sink, reservoir) included in the project and baseline. When an SSR represents a small percentage of the overall emission, the risk of an error being material is minor compared to a major source. The data used to calculate major sources is assessed in more detail because a potential error may cause a material discrepancy.

**Table 3: Summary of SSRs for Project GHG Report**

Relevant Project SSR's	Emissions (t CO <sub>2</sub> e/ year)	% Total	Comments	Risk (H/M/L)
P12 – Biomass Combustion	99.1	100%	Invoices from biomass delivered to project site is compiled and converted to GHG emissions using emission factors with high	L

Relevant Project SSR's	Emissions (t CO <sub>2</sub> e/ year)	% Total	Comments	Risk (H/M/L)
			accuracy, while the SSR represents all of the project level emissions, this is small compared to the baseline emissions.	

Relevant Baseline SSR's	Emissions (t CO <sub>2</sub> e/ year)	% Total	Comments	Risk (H/M/L)
B9&B10 – Decomposition of Biomass and Methane Collection/ Destruction	2,658.09	36%	Invoices from biomass delivered to project site is compiled and converted to GHG emissions using the calculation methodology from the AENV and, emission factors from the AENV, and the IPCC Guidelines for National Greenhouse Gas Inventories. The SSR represents a moderate portion of total emissions	M
B12 – Thermal Energy Produced	4,279.22	58%	The amount of biomass delivered is converted into a fossil fuel energy equivalent by first converting the mass of biomass into biomass thermal energy utilizing HHV values from material source sampling, and the boiler efficiency (based on testing from “C&B Combusting Testing Biomass Boiler”). Then the biomass thermal energy is converted into fossil fuel energy based on the fossil fuel boiler efficiency. The baseline amount of fuel oil and natural gas is then calculated using the 2005 energy proportions of fuel oil and natural gas on the project site. The SSR represents a high portion of total emissions.	H
B13 – Fuel Extraction & Processing	384.59	5%	Based on the calculated consumption of fuel oil and natural gas from B12, fuel extraction and processing emission factors derived from Environment Canada NIR 2014, were used to calculate the GHG emissions. The SSR represents a small portion of total emissions	L

IESC conducted a preliminary assessment of the potential risk associated with this verification that informs the development of the verification procedures. There are three types of risk that is assessed, which are inherent, control, and detection risk.

**Inherent risk** is the risk of error due to the complexity of the project or the capacity of staff involved with the project.

**Control risk** is the risk that the proponent's control system will not detect and rectify a discrepancy.

**Detection risk** is the risk that IESC will not identify a material discrepancy.

The following table describes the inherent and control risks analyzed by IESC and the corresponding verification procedure(s) outlined in the following section that have been designed to address these risks.

### 6.3 Risk Assessment

ISO 14064-2 Requirements	Inherent Risk (H/M/L)	Control Risk (H/M/L)	Detection Risk (H/M/L)	Overall Risk (H/M/L)
Relevant Programs, Good Practice Guidance	L – Guidance is readily available	L - Sufficient information provided for desk top review	L- Approved methodology for this type of project	L
Project Design	L – Relatively basic project	L – Relatively basic project	L – Basic project, IESC has verified this project in the past	L
Identifying SSRs attributable to the project	M – Biomass to heating projects are not common, however typical SSRs are known	L – Project developer is experienced in industry. Project document outlines SSR's and justifies exclusion or inclusion in quantification	L – Basic project, not complex to assess	L
Determining the Baseline Scenario	L – Relevant barriers and justifications were given for 2 alternative baseline scenarios	L – Annual and monthly data available for baseline year	L – Procedures used to determine baseline are not difficult to verify	L
Identifying SSRs attributable to the baseline	L – Typical, common SSRs	L – Pre-project data available	L – Common SSRs	L
Selecting SSRs for Monitoring or Estimation	L – Not many SSRs involved in the project	L – Data is available and has been provided on SSRs	L – Not many SSRs involved for project	L
<b>Quantifying GHGs</b>				
<i>Project SSRs</i>				
P6, P8 to P11, P13, P14, and P15 - Facility Operation	N/A – Not included in Quantification Methodology as no additional transport/ processing of biomass is required on-site	N/A	N/A	N/A
P12 - Combustion of Biomass –	L – Emission factors and process is well known	M – Measurements of the weight of a representative number of loads of	M – HHV of sample of loads received on-site, quantification	M

ISO 14064-2 Requirements	Inherent Risk (H/M/L)	Control Risk (H/M/L)	Detection Risk (H/M/L)	Overall Risk (H/M/L)
		biomass received	procedures are different than protocol, but are well understood. Not difficult to verify	
<b>Baseline SSRs</b>				
B9 & B10 - Decomposition of Biomass and Methane Collection/Destruction	L – Emission factors are based on IPCC values and Environment Canada guidelines	L – Weight of individual loads of biomass received collected	M – Weight of loads measured off-site, quantification procedures are common	L
B12 - Thermal Energy Produced	L – Standard practice	L – Monthly invoices reviewed following internal procedures	L – Common SSR, not difficult to verify	L
B13 - Fuel Extraction and Processing	L – Common practice to use continuous metering/monthly reconciliation and Environment Canada EFs	L – Quality controls are in place	L – Common SSR, not difficult to verify	L
<b>Monitoring the Project</b>				
<b>Project SSRs</b>				
Thermal Energy Produced – P12	L – Quantity of biomass combusted is tracked through measured biomass weight delivered	L – High frequency of data collection	L – Not difficult to verify through weight tickets	L
<b>Baseline SSRs</b>				
Thermal Energy Produced – B12	M – Utilized a historical benchmark intensity approach instead of a projection based approach	L – Data and data quality is sufficient	L – Not difficult to verify through inspection	
<b>Meter Maintenance and Calibration</b>				
Natural Gas Consumption	L – Calibrated by Union Gas,	L – High accuracy standard as per	L – Not difficult to verify calibration	L

ISO 14064-2 Requirements	Inherent Risk (H/M/L)	Control Risk (H/M/L)	Detection Risk (H/M/L)	Overall Risk (H/M/L)	
	common practice	Measurement Canada requirements	records		
	HHV of Natural Gas	L – Calibrated by Union Gas, common practice	L – High accuracy standard as per Measurement Canada requirements	L – Not difficult to verify calibration records	L
	Mass of Biomass	M – Calibrated by third party, no accuracy rating is given	L – Annual third party calibration	L – Not difficult to verify calibration records	L
	Biomass Energy Content	L – Well developed methodology and clear calibration schedule	M – Energy content tested 1 out of 4 truckloads delivered	L – Not difficult to verify testing records and accuracy	L
<b>Managing Data Quality</b>					
	Project SSRs	M – Manual quantification of biomass consumed, based on monthly reconciliation of invoices	L – Project Proponent has a well-documented data management system and manual checking is conducted on an annual basis by a third party	L – Process is well understood and can be verified	L
	Baseline SSRs	M – Natural Gas and Fuel Oil use is common practice	L – Monthly invoices are available and are reviewed	L – Process is well understood and can be verified	L

We assessed the initial verification risk as **Low**. The final verification risk is deemed to be **Low** based on the verification procedures developed.

## 6.4 Verification Approach

With the verification risk determined to be low, IESC has designed the Verification Plan and Sampling Plan to achieve an overall low level of audit risk. The Verification Plan describes IESC's verification process that was executed

The final verification schedule was as follows:

**Table 1: Verification Schedule**

Verification Activity	Responsible Party	Date of Completion
Kick-off Call/Meeting with Blue Source	IESC / Blue Source	March 10 <sup>th</sup> , 2015
IESC to receive documentation	Blue Source	March 11 <sup>th</sup> , 2015
Initial Desktop Review	IESC	March 13 <sup>th</sup> , 2015
Provide Verification Plan	IESC	March 12 <sup>th</sup> , 2015
Site Visit	IESC / Blue Source / Prism Farms	March 16 <sup>th</sup> , 2015
Receive any additional documentation/clarifications	IESC / Blue Source	March 20 <sup>th</sup> , 2015
Draft Verification Report	IESC	March 27 <sup>th</sup> , 2015
Address Follow-up Items	IESC / Blue Source	March 31 <sup>st</sup> , 2015
Finalize Verification Report, Statement of Verification, Conflict of Interest Forms, Verification Plan	IESC	April 1 <sup>st</sup> , 2015

## 6.5 Site Visit

Livio Nichilo and Kevin Tse conducted the site visit at the Project site on March 16<sup>th</sup>, 2014. The following individuals from Prism Farms and Blue Source were interviewed during the site visit:

- ▶ Ryan Tiessen, Prism Farms Ltd.
- ▶ Kelly Parker, Blue Source, Carbon Services Project Analyst

The tour of the site was led by Ryan Tiessen who has in-depth knowledge of the facility. During the tour, the Verification Team performed procedures to identify project boundaries, confirm GHG sources, look for additional sources, visually confirm the presence of boilers, meters, and equipment, as well as inquire about Project operations and the GHG data management system.

An additional visit was conducted to the offices of the source of the biomass (Ecostrat Inc.), on March 19<sup>th</sup>. The following individuals from Ecostrat and Blue Source were present during the visit

- ▶ Joe Matri, Ecostrat, Finance and Administration
- ▶ Kelly Parker, Blue Source, Carbon Services Project Analyst

An interview with Joe Matri was conducted to understand the calibration of truck scales in the delivery of the biomass to the Project, the sampling that is conducted to determine the heating values used in the

calculations, and the data management system responsible for providing the biomass consumption totals used in the calculations.

## 6.6 GHG Data Management and Control System Review

The verification team developed a thorough knowledge of the GHG data management and control system utilized through a review of the Project Report, observation and interviews with key Project personnel during the site visit. The diagram outlines the flow of project data and the custody of control.

## 7 VERIFICATION FINDINGS

Item		Specific Activities	Findings
1.	Ownership	1. Review proof of ownership of emissions reductions being asserted	1. <b>Satisfactory:</b> The Project Report indicates that Prism farms own the offset credits. IESC reviewed supporting evidence to establish that Prism farms owns the biomass boiler and the environmental attributes associated with them
2.	Project Report	1. Compare each emission source and sink listed in the Project Report to those listed in the Protocol considering all equipment and activities 2. Compare data collection/handling procedures used in practice to those described in the report 3. Through site visit, evaluate any emission sources or sinks that were not considered	1. <b>Immaterial Qualitative Discrepancy:</b> Though there is no additional processing, or drying of the biomass at the facility (P6, P8 to P11, P13, P14, and P16), the Project Report does not include other emissions from facility operations, such as: conveyor belt that feeds the boiler, and front loader that occasionally pushes biomass in the storage hopper 2. <b>Immaterial Qualitative Discrepancy:</b> Parts of the Data collection/handling procedures were outdated, and did not reflect current practices 3. <b>Immaterial Qualitative Discrepancy:</b> Additional sources of emissions were identified on-site that were not identified in the Project Report: <ol style="list-style-type: none"> <li>Electrical usage of the biomass delivery system that pulls biomass onto the moving floor that feeds the biomass boiler</li> <li>Fuel usage of the front loader used to push the biomass</li> </ol>
3.	Demonstration of Applicability	Review Project Report for evidence of applicability for each requirement described by the Protocol: 1. The energy produced from biomass	1. <b>Satisfactory:</b> Confirmed that energy produced from biomass is offsetting fossil fuel generated energy

		<p>is offsetting fossil fuel generated energy;</p> <ol style="list-style-type: none"> <li>2. If claiming further emission reductions from avoided anaerobic decomposition, the project developer must provide evidence that baseline condition of either stockpiling, storing or landfilling the biomass was the most likely alternative to combustion.</li> <li>3. If claiming further emission reductions from avoided anaerobic decomposition the project developer must provide evidence the biomass claimed to have been diverted from stockpile, storage or landfill would have undergone anaerobic decomposition either in long-term storage or in a landfill as confirmed by an affirmation from the biomass supplier</li> <li>4. The quantification of reductions achieved by the project is based on actual measurement and monitoring (except where indicated in this protocol) as indicated by the proper application of this protocol; and</li> <li>5. The project must meet the requirements for offset eligibility as specified in the applicable regulation and guidance documents for the Alberta Offset System.</li> </ol>	<ol style="list-style-type: none"> <li>2. <b>Satisfactory:</b> Confirmation from biomass provider that the most likely baseline conditions would have been landfilling of the biomass.</li> <li>3. <b>Satisfactory:</b> Confirmation from biomass provider that under baseline conditions the wood material destined for landfill would have undergone anaerobic decomposition</li> <li>4. <b>Satisfactory:</b> The quantification of reductions is based on measurements taken by the biomass provider. The data is based on scale measurements, is monitored by the biomass provider and monthly summaries are provided to Blue Source for calculation of the GHG assertion.</li> <li>5. N/A for this project, as the project is not under the requirements of the Alberta Offset System and the SGER</li> </ol>
4.	Review of Operating Conditions	<ol style="list-style-type: none"> <li>1. Evaluate and compare emission sources over time</li> <li>2. Evaluate and compare key metrics over time</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> No additional emission sources have been added, emission sources are consistent with previous reports</li> <li>2. <b>Satisfactory:</b> Confirmed operation size and evaluated EUI for the facility over time</li> </ol>
5.	Biomass Delivery Invoices	<ol style="list-style-type: none"> <li>1. Review of original data used in the calculator</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> Confirmed values of biomass delivery invoices on-site.</li> <li>2. <b>Satisfactory:</b> 72 entries in calculator, verified 9 of the values through invoice records which were all correct</li> </ol>
6.	Calibration of Weigh Scales	<ol style="list-style-type: none"> <li>1. Check calibration history of all weight scale</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> Scale certification document provided for trucks serving US biomass sources, and for trucks serving Ontario biomass sources</li> </ol>
7.	Biomass Heating Value Sampling	<ol style="list-style-type: none"> <li>1. Check biomass heating value for 2 sources that have had updated sampling taken in October 2014</li> <li>2. Verify sampling frequency of ¼ loads as per Project Report</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> Two sampling records were obtained for October 2014 test results and matched those used in the calculator</li> <li>2. <b>Immaterial qualitative</b></li> </ol>

		3. Compare sampling results from previous testing to current values used	<p><b>discrepancy:</b> Through conversation with biomass supplier, Project Report is outdated and should be updated. Sampling frequency is now conducted on an as required basis. No longer contractually obligated to conduct as frequent sampling as what was stated in the Project Report. Upon further inquiry with biomass supplier, the supply has undergone some changes since 2007 and the HHV values typically differ during the winter and the summer (moisture content will be different).</p> <p><b>3. Satisfactory:</b> Average HHV values from 2007-2009 were compared with the ones used in the current calculator. For sources where sampling was completed during both time periods, there was a difference of -7% to 1%.</p>
8.	GHG Data management system	<ol style="list-style-type: none"> <li>1. Assess whether GHG data management system, including quality control, is adequate</li> <li>2. Review monitoring systems on-site, conduct personnel interviews, inspect quantification spreadsheet and supporting documentation.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> GHG data management system and quality control systems are in place and adequate</li> <li>2. <b>Satisfactory</b></li> </ol>
9.	GHG Data Retention	<p>Assess whether there is sufficient document storage and retention by</p> <ol style="list-style-type: none"> <li>1. Obtaining a copy of 'Data Retention Policy at Blue Source'</li> <li>2. Determine if policy and records meet requirements of AENV protocol</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Information Request:</b> Data Retention Policy was not available in Project Plan</li> </ol>
10.	Emissions Reduction Calculation - Appropriate Methodology	<ol style="list-style-type: none"> <li>1. Compare quantification formulae and estimation calculations described by the Protocol against those described in the Project Report</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> Formulae used match calculations described in Protocol and those described in Project Report</li> </ol>
11.	Re-performance of Calculation	<ol style="list-style-type: none"> <li>1. Check emission factors used in GHG calculator</li> <li>2. Re-performance of emission reduction calculations using data collected through verification process</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Immaterial quantitative discrepancy:</b> Incorrect formula used in tab B13 of calculator. Cell J25 contains an incorrect reference leading to 0 t CO<sub>2</sub>e baseline fuel oil emissions for January</li> <li>2. <b>Satisfactory</b></li> </ol>
12.	GHG Reduction Assertion	<ol style="list-style-type: none"> <li>1. Review Project Report for completeness and consistency</li> <li>2. Review annual asserted emission reduction and compare to values calculated in the calculation spreadsheet</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Satisfactory:</b> Overall, Project Report is complete and consistent with requirements of Protocol, and Registry</li> <li>2. <b>Immaterial Quantitative Discrepancy:</b> GHG Assertion in project report does not match</li> </ol>

			calculator (7,222 in calculator, 7,545 in Project Report). A +4% discrepancy compared to the calculator
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## 7.1 Identified Discrepancies and Resolutions

Identified Misstatement	Material/Immaterial	Resolution
<b>Facility operations:</b> Biomass transferred from the hopper to the biomass boiler through the conveyor system and the occasional use of the front end loader.	<b>Immaterial Qualitative discrepancy</b> <ul style="list-style-type: none"> <li>▶ Emissions from electricity use from conveyor system and use of the front end loader not disclosed in Project Report</li> </ul>	<b>Not Resolved</b>
<b>Project Report - Data Collection and Handling:</b>	<b>Immaterial qualitative discrepancy</b> <ul style="list-style-type: none"> <li>▶ Data collection/handling procedures in Project Report were outdated, and did not reflect current practices</li> </ul>	<b>Resolved:</b> Blue Source updated data management and collection procedures in Project Report to reflect current practices
<b>Biomass Heating Value Sampling – Frequency:</b>	<b>Immaterial qualitative discrepancy</b> <ul style="list-style-type: none"> <li>▶ Suitable sampling was found for 2014, however current sampling frequency does not reflect what is written in the Project Report. Though no material discrepancy is expected, there are concerns over future sampling frequency procedures to ensure that any changes to supply or differences in moisture content are reflected in HHV used in the GHG assertion</li> </ul>	<b>Resolved:</b> Blue Source updated calibration schedule in Project Report to reflect current practices
<b>Re-performance of Calculation:</b> January Baseline Fuel Oil Emissions are not included in calculation	<b>Immaterial Quantitative Discrepancy:</b> <ul style="list-style-type: none"> <li>▶ Incorrect formula used in tab B13 of calculator. Cell J25 contains an incorrect reference leading to 0 t CO<sub>2</sub>e baseline fuel oil emissions for January</li> <li>▶ Represents a change of +7.61 tCO<sub>2</sub>e or 0.1% of emissions</li> </ul>	<b>Not Resolved</b>
<b>GHG Reduction Assertion:</b>	<b>Immaterial Quantitative Discrepancy:</b> <ul style="list-style-type: none"> <li>▶ GHG Assertion in project report does not match calculator (7,222 in calculator, 7,545 in Project Report)</li> <li>▶ A +4% discrepancy compared to the calculator</li> </ul>	<b>Resolved:</b> Blue Source updated GHG Assertion to match calculator

## 7.2 Aggregate Materiality

The sum of all immaterial discrepancies does not result in a breach of materiality ( $\pm 5\%$  of the total GHG assertion)

## 8 STATEMENT OF VERIFICATION

April 1<sup>st</sup>, 2015

### **Re: Prism Farms Biomass Heating Project (January 1<sup>st</sup>, 2014 – December 31<sup>st</sup>, 2014)**

Blue Source contracted Internat Energy Solutions Canada. (“IESC”) on behalf of Prism Farms to review the ‘Prism Farms Biomass Heating Project – Greenhouse Gas Emissions Reduction Report’ and supporting evidence , covering the period January 1st, 2014 – December 31st, 2014 (‘GHG Assertion’).

The report assertion specifies a claim of 7,222 tonnes CO<sub>2</sub>e emission offset over the aforementioned period. Blue Source is responsible for the preparation and presentation of the information within the HG Assertion. IESC’s responsibility is to express a conclusion as to whether anything has come to our attention to suggest that the Assertion is not presented fairly in accordance with the methodology outlined in the Quantification Protocol for Diversion of Biomass to Energy from Biomass Combustion, Version 1 (“the Protocol”) and ISO 14064 Part 2: Greenhouse gases – Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements (“the Standard”)

We planned and performed our work in accordance with ISO 14064 Part 3: Greenhouse Gases: Specification with guidance for the validation and verification of greenhouse gas assertion. We planned and performed our work to provide a reasonable level of assurance, rather than absolute assurance with respect to the GHG Assertion. We reviewed the Project Report, and all associated documentation in accordance with the relevant criteria and approved quantification protocols. We believe our work provides a reasonable basis for our conclusion.

Based on the procedures conducted, IESC found the GHG emission reductions claimed in the GHG Assertion for the aforementioned period to be free from material discrepancies in accordance with the Protocol, the Standard and the requirements of the CSA CleanProjects Registry.



**Livio Nichilo, P.Eng**  
Lead Verifier  
Internat Energy Solutions Canada



## APPENDIX A – FINAL VERIFICATION PLAN

## Verification Plan:

### Prism Farms Biomass Heating Project – 2014

#### 1. INTRODUCTION

This verification plan is drafted in accordance with the requirements of the GHG CleanProjects™ Registry. The verification plan includes the fundamentals, the proposed verification team, the verification schedule, the risk assessment, the draft verification procedure, sampling plan and finally the draft site visit agenda. The document is intended to provide the project proponent with an understanding of the preliminary issues identified during the preliminary review of the information provided and to ensure that all required personnel and information required for the site visit are prepared and available.

The person responsible can contact Internat Energy Solutions Canada (IESC) with questions or comments concerning the content of this document and the planned verification activities.

#### 2. VERIFICATION FUNDAMENTALS

##### Project Information

Project Name:	Prism Farms Biomass Heating Project
Date when project began:	February 14, 2006
Credit duration period:	February 14, 2006 – February 14, 2021
Location:	731 Mersea Road 7, Leamington, ON N8H 3V8, Ontario  Latitude, Longitude: 42.109658, -82.591341

##### Project Contact Information

Name:	Kelly Parker – Blue Source Canada ULC (Authorized Project Contact)
Position/Title:	Carbon Services Project Analyst
Email:	kellyp@bluesourcecan.com
Telephone Number:	403-262-3026 ext. 260
Mailing Address:	Suite 700, 717-7 <sup>th</sup> avenue SW Calgary, Alberta T2P 3RS

##### Fundamentals

Level of assurance:	Reasonable level of assurance
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Materiality threshold:	The materiality threshold is defined as $\pm 5\%$ of the GHG assertion
Objectives:	<p>To verify the GHG emissions assertion stated in the 'Prism Farms Biomass Heating Project: Greenhouse Gas Reduction Report – For the Period 1 January, 2014 – 31 December, 2014' (Project Report):</p> <ul style="list-style-type: none"> <li>▶ Is a fair and accurate representation of the reductions over the period covered in the report</li> <li>▶ That the assertion has been calculated in accordance with the method of quantification specified in the Project Report</li> <li>▶ Meets the requirements of the Verification Criteria</li> <li>▶ Meets the requirements of the CSA CleanProjects™ Registry</li> </ul>
Verification Criteria:	ISO 14064-2 Alberta Environment Specified Gas Emitters Regulation: "Quantification Protocol for Diversion of Biomass to Energy from Biomass Combustion Facilities", version 1, September 2007.
Verification Standard:	ISO 14064-3: 2006
Intended users:	CSA CleanProjects™ Registry

## Scope

Project Type:	The Project is a biomass energy generation project
Project Activities:	The installation of a biomass boiler at Prism farms for heating in December 2005, with an additional biomass boiler installed in January 2007 leading to both direct and indirect reductions in GHG emissions.
Baseline Conditions:	Prior to installation, all heat requirements of the greenhouses were produced by natural gas combustion and/or fuel oil combustion in one of the five boilers at the site. All biomass had previously been sent to a landfill for disposal where it would have undergone anaerobic decomposition.
Type of greenhouse gases:	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, SF <sub>6</sub> , HFCs, PFCs
Time period:	January 1 <sup>st</sup> , 2014 – December 31 <sup>st</sup> , 2014

## 3. VERIFICATION TEAM

Lead Verifier	Livio Nichilo, P.Eng, M. Eng, EPt(GHG)
Internal Peer Reviewer	Andrea Sabelli, BA, MA, EPt(GHG)
Team Member	Kevin Tse, MES
Conflict of Interest Auditor	Fiona Jiang
Appeals/Complaints/Disputes Representative	Erick Lachapelle, B.S.Sc., PhD

## 4. VERIFICATION SCHEDULE AND SITE VISIT AGENDA

The tables below outlines the verification schedule anticipated for the verification, and the anticipated site visit schedule

**Table 1: Verification Schedule**

Verification Activity	Responsible Party	Date of Completion
Kick-off Call/Meeting with Blue Source	IESC / Blue Source	March 10 <sup>th</sup> , 2015
IESC to receive documentation	Blue Source	March 11 <sup>th</sup> , 2015
Initial Desktop Review	IESC	March 13 <sup>th</sup> , 2015
Provide Verification Plan to Blue Source	IESC	March 12 <sup>th</sup> , 2015
Site Visit	IESC /	March 16 <sup>th</sup> , 2015
Receive any additional documentation/clarifications	IESC / Blue Source	March 20 <sup>th</sup> , 2015
Draft Verification Report	IESC	March 27 <sup>th</sup> , 2015
Address Follow-up Items	IESC / Blue Source	March 31 <sup>st</sup> , 2015
Finalize Verification Report, Statement of Verification, Conflict of Interest Forms, Verification Plan	IESC	April 1 <sup>st</sup> , 2015

**Table 2: Site Visit Schedule**

Item	Purpose	Time*
Opening Meeting and Interview with site operator	Explanation of verification process and scheduling	11:30 - 12:30
	Assess monitoring, weigh scale calibration data & records, information management procedures	
Conduct site walk through	Inspect on-site equipment, meters, records	12:30 - 2:00

\*Timing of activities may change depending on availabilities of personnel and findings throughout verification

## 5. RISK ASSESSMENT

Based on the review of documentation, controls procedures and data, the verifier should assess risks, including inherent risk, control risk, detection risk and materiality. The following tables provide a risk assessment based on the amount of emissions (tonnes CO<sub>2</sub>/year) from each SSR (source, sink, reservoir) included in the project and baseline. When an SSR represents a small percentage of the overall emission, the risk of an error being material is minor compared to a major source. The data used to calculate major sources is assessed in more detail because a potential error may cause a material discrepancy.

**Table 3: Summary of Sources for Project GHG Report**

Relevant Project SSR's	Emissions (t CO <sub>2</sub> e/ year)	% Total	Comments	Risk (H/M/L)
P12 – Biomass Combustion	99.1	100%	Invoices from biomass delivered to project site is compiled and converted to GHG emissions using emission factors with high accuracy, while the SSR represents all of the project level emissions, though this is small compared to the baseline emissions.	L

Relevant Baseline SSR's	Emissions (t CO <sub>2</sub> e/ year)	% Total	Comments	Risk (H/M/L)
B9&B10 – Decomposition of Biomass and Methane Collection/ Destruction	2,658.09	36%	Invoices from biomass delivered to project site is compiled and converted to GHG emissions using the calculation methodology from the AENV and, emission factors from the AENV, and the IPCC Guidelines for National Greenhouse Gas Inventories. The SSR represents a moderate portion of total emissions	M
B12 – Thermal Energy Produced	4,279.22	58%	The amount of biomass delivered is converted into a fossil fuel energy equivalent by first converting the mass of biomass into biomass thermal energy utilizing HHV values from material source sampling, and the boiler efficiency (based on testing from “C&B Combusting Testing Biomass Boiler”). Then the biomass thermal energy is converted into fossil fuel energy based on the fossil fuel boiler efficiency. The baseline amount of fuel oil and natural gas is then calculated using the 2005 energy proportions of fuel oil and natural gas on the project site. The SSR represents a high portion of total emissions.	H
B13 – Fuel Extraction & Processing	392.21	5%	Based on the calculated consumption of fuel oil and natural gas from B12, fuel extraction and processing emission factors derived from Environment Canada NIR 2014, were used to calculate the GHG emissions. The SSR represents a small portion of total emissions	L

IESC conducted a preliminary assessment of the potential risk associated with this verification that informs the development of the verification procedures. There are three types of risk that is assessed, which are inherent, control, and detection risk.

**Inherent risk** is the risk of error due to the complexity of the project or the capacity of staff involved with the project.

**Control risk** is the risk that the proponent's control system will not detect and rectify a discrepancy.

**Detection risk** is the risk that IESC will not identify a material discrepancy.

The following table describes the inherent and control risks analyzed by IESC and the corresponding verification procedure(s) outlined in the following section that have been designed to address these risks.

ISO 14064-2 Requirements	Inherent Risk (H/M/L)	Control Risk (H/M/L)	Detection Risk (H/M/L)	Overall Risk (H/M/L)
Relevant Programs, Good Practice Guidance	L – Guidance is readily available	L - Sufficient information provided for desk top review	L- Approved methodology for this type of project	L
Project Design	L – Relatively basic project	L – Relatively basic project	L – Basic project, IESC has verified this project in the past	L
Identifying SSRs attributable to the project	M – Biomass to heating projects are not common, however typical SSRs are known	L – Project developer is experienced in industry. Project document outlines SSR's and justifies exclusion or inclusion in quantification	L – Basic project, not complex to assess	L
Determining the Baseline Scenario	L – Relevant barriers and justifications were given for 2 alternative baseline scenarios	L – Annual and monthly data available for baseline year	L – Procedures used to determine baseline are not difficult to verify	L
Identifying SSRs attributable to the baseline	L – Typical, common SSRs	L – Pre-project data available	L – Common SSRs	L
Selecting SSRs for Monitoring or Estimation	L – Not many SSRs involved in the project	L – Data is available and has been provided on SSRs	L – Not many SSRs involved for project	L
<b>Quantifying GHGs</b>				
<i>Project SSRs</i>				
P6, P8 to P11, P13, P14, and P15 - Facility Operation	N/A – Not included in Quantification Methodology as no additional transport/ processing of biomass is required on-site	N/A	N/A	N/A

ISO 14064-2 Requirements	Inherent Risk (H/M/L)	Control Risk (H/M/L)	Detection Risk (H/M/L)	Overall Risk (H/M/L)
P12 - Combustion of Biomass –	L – Emission factors and process is well known	M –Measurements of the weight of a representative number of loads of biomass received	L – HHV of sample of loads received on-site, quantification procedures are common. Not difficult to verify	L
<b>Baseline SSRs</b>				
B9 & B10 - Decomposition of Biomass and Methane Collection/Destruction	L – Emission factors are based on IPCC values and Environment Canada guidelines	L –Weight of individual loads of biomass received collected	M – Weight of loads measured off-site, quantification procedures are common	L
B12 - Thermal Energy Produced	L – Standard practice	L – Monthly invoices reviewed following internal procedures	L – Common SSR, not difficult to verify	L
B13 - Fuel Extraction and Processing	L – Common practice to use continuous metering/monthly reconciliation and Environment Canada EFs	L – Quality controls are in place	L – Common SSR, not difficult to verify	L
<b>Monitoring the Project</b>				
<b>Project SSRs</b>				
Thermal Energy Produced – P12	L – Quantity of biomass combusted is tracked through measured biomass weight delivered	L – High frequency of data collection	L – Not difficult to verify through weight tickets	L
<b>Baseline SSRs</b>				
Thermal Energy Produced – B12	M – Utilized a historical benchmark intensity approach instead of a projection based approach	L – Data and data quality is sufficient	L – Not difficult to verify through inspection	
<b>Meter Maintenance and Calibration</b>				
Natural Gas Consumption	L – Calibrated by Union Gas, common practice	L – High accuracy standard as per Measurement	L – Not difficult to verify calibration records	L

ISO 14064-2 Requirements	Inherent Risk (H/M/L)	Control Risk (H/M/L)	Detection Risk (H/M/L)	Overall Risk (H/M/L)
HHV of Natural Gas  Mass of Biomass  Biomass Energy Content		Canada requirements		
	L – Calibrated by Union Gas, common practice	L – High accuracy standard as per Measurement Canada requirements	L – Not difficult to verify calibration records	L
	M – Calibrated by third party, no accuracy rating is given	L – Annual third party calibration	L – Not difficult to verify calibration records	L
	L – Well developed methodology and clear calibration schedule	M – Energy content tested 1 out of 4 truckloads delivered	L – Not difficult to verify testing records and accuracy	L
<b>Managing Data Quality</b>				
Project SSRs	M – Manual quantification of biomass consumed, based on monthly reconciliation of invoices	L – Project Proponent has a well-documented data management system and manual checking is conducted on an annual basis by a third party	L – Process is well understood and can be verified	L
Baseline SSRs	M – Natural Gas and Fuel Oil use is common practice	L – Monthly invoices are available and are reviewed	L – Process is well understood and can be verified	L

### Risk Statement:

The verification and sampling plans for this facility were developed considering our assessment of the verification risk for the engagement. We assessed the initial verification risk as **Low**. The final verification risk is deemed to be **Low** based on the verification procedures developed.

## 6. VERIFICATION PROCEDURE AND SAMPLING PLAN

Item	Type of Evidence	Verification Objective (specific principle)	Specific Activities	Sampling Plan/ Relevant Documentation	Sample Size Justification
1. Ownership	Documentation	Completeness, Transparency	1. Review proof of ownership of emissions reductions being asserted	N/A	N/A
2. Project Plan	Documentation	Completeness, Relevance	<ol style="list-style-type: none"> <li>1. Compare each emission source and sink listed in the project plan to those listed in the Protocol considering all equipment and activities</li> <li>2. Compare data collection/handling procedures used in practice to those described in the report</li> <li>3. Through site visit, evaluate any emission sources or sinks that were not considered</li> </ol>	<ol style="list-style-type: none"> <li>1. All sources and sinks listed will be reviewed</li> <li>2. Will be verified on-site for each SSR</li> <li>3. N/A</li> </ol>	N/A
3. Demonstration of Applicability	Documentation, Confirmation	Completeness, Relevance	<p>Review Project Plan for evidence of applicability for each requirement described by the Protocol:</p> <ol style="list-style-type: none"> <li>1. The energy produced from biomass is offsetting fossil fuel generated energy;</li> <li>2. If claiming further emission reductions from avoided anaerobic decomposition, the project developer must provide evidence that baseline condition of either stockpiling, storing or landfilling the biomass was the most likely alternative to</li> </ol>	N/A	N/A

				<p>combustion.</p> <p>3. If claiming further emission reductions from avoided anaerobic decomposition the project developer must provide evidence the biomass claimed to have been diverted from stockpile, storage or landfill would have undergone anaerobic decomposition either in long-term storage or in a landfill as confirmed by an affirmation from the biomass supplier</p> <p>4. The quantification of reductions achieved by the project is based on actual measurement and monitoring (except where indicated in this protocol) as indicated by the proper application of this protocol; and</p> <p>5. The project must meet the requirements for offset eligibility as specified in the applicable regulation and guidance documents for the Alberta Offset System.</p>		
4.	Review of Operating Conditions	Documentation, Observation, Inquiry	Consistency	<p>1. Evaluate and compare emission sources over time</p> <p>2. Evaluate and compare key metrics over time</p>	<p>Inquire about planting area expansion or contraction.</p> <p>Obtain and compare 2014, 2013, 2012, 2011 and 2010,</p>	

					annual biomass, natural gas and fuel oil consumption	
<b>Data Collection and Quality Controls</b>						
5.	Biomass Delivery Invoices	Documentation, Inquiry	Accuracy, Transparency, Conservativeness	1. Review of original data used in the calculator	Invoices for February, March, July, August will be compared with values in calculator	Manual transfer of data from invoices to calculator, four out of the twelve months will be verified
6.	Calibration of Weigh Scales	Documentation, Inquiry	Accuracy, Transparency	1. Check calibration history of all weight scale	Obtain evidence that annual third party calibration of Truck Scales has been completed.	Calibration is conducted annually.
7.	Biomass Heating Value Sampling	Documentation	Accuracy, Transparency	1. Check biomass heating value for 2 sources that have had updated sampling taken in October 2014	Request for sampling results for "G" and "S" samples, completed in October of 2014	Heating values have not changed from previous verification except for these 2 new samples that were taken
8.	GHG Data management system	Documentation, Inquiry	Consistency, Completeness, Transparency	1. Assess whether GHG data management system, including quality control, is adequate 2. Review monitoring systems on-site, conduct personnel interviews, inspect quantification spreadsheet and supporting documentation.	Entire system for completeness, accuracy, and validity	N/A
9.	GHG Data Retention	Observation, Inquiry	Consistency, Transparency	Assess whether there is sufficient document storage and retention by	Biomass invoices for March 2007	Records from a single month will be sufficient to

				<ol style="list-style-type: none"> <li>1. Obtaining a copy of 'Data Retention Policy at Blue Source'</li> <li>2. Determine if policy and records meet requirements of AENV protocol</li> </ol>		determine if proper document retention has been carried out by Blue Source
10.	Emissions Reduction Calculation - Appropriate Methodology	Documentation	Completeness, Transparency, Consistency	<ol style="list-style-type: none"> <li>1. Compare quantification formulae and estimation calculations described by the Protocol against those described in the Project Plan</li> </ol>	All calculations in spreadsheet to be compared against Protocol and those described in the Project Plan	N/A
10.	Re-performance of Calculation	Re-performance	Accuracy, Transparency, Conservativeness, Completeness	<ol style="list-style-type: none"> <li>1. Check emission factors used in GHG calculator</li> <li>2. Re-performance of emission reduction calculations using data collected through verification process</li> </ol>	N/A	N/A
11.	GHG Reduction Assertion	Documentation	Consistency, Completeness, Accuracy, Transparency, Conservativeness	<ol style="list-style-type: none"> <li>1. Review Project Report for completeness and consistency</li> <li>2. Review annual asserted emission reduction and compare to values calculated in the calculation spreadsheet</li> </ol>	N/A	N/A

## 7. VERIFICATION EXECUTION

Based on the Verification and Sampling Plans, the verification procedures will be implemented. This process will involve collection and review of documentation as well as a site visit to collect evidence, test controls, and conduct substantive testing. During the verification process, the Verification and Sampling Plans may change; the final Verification and Sampling Plans to be provided in the final Verification Report will be updated to reflect the verification parameters and procedures that were actually executed.

### Clarification and Information Requests

During the course of the verification process, additional documentation and data will be required by the verification team. To facilitate this process, a consolidated request for additional information will be developed and issued to the Project Proponent. The requests and responses will be summarized and used to document the verification team's assessment of each response to be included in the final Verification Report.

	Name / Signature	Position	Date
<b>Prepared By:</b>	Kevin Tse	Team Member	April 1 <sup>st</sup> , 2015
<b>Approved By:</b>	Livio Nichilo	Lead Verifier	April 1 <sup>st</sup> , 2015

**APPENDIX B – CONFLICT OF INTEREST CHECKLIST**

Internat Energy Solutions Canada	Conflict of Interest Checklist	Form F107.1.1
		Version 1.2
		1 of 2

<b>Project:</b>	Prism Farms Biomass Heating Project – 2014	<b>Project No:</b>	G0449A
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<b>Circumstance Requiring the Development of a COI Management Plan</b>	<b>True</b>	<b>False</b>
The relationship(s) between my organization and the Project Proponent requesting the verification activity compromise or pose an unacceptable threat to the impartiality / independence of my organization.		X
The finances and sources of income of my organization compromise the impartiality of my organization.		X
The personnel my organization has scheduled to participate in the verification may have an actual or potential conflict of interest.		X
Details:		
My organization provided greenhouse gas consultancy services to the Project Proponent. Greenhouse gas consultancy services include: <ul style="list-style-type: none"> <li>designing, developing, implementing or maintaining a GHG inventory;</li> <li>developing a GHG quantification protocol or project application form on behalf of the Project Proponent;</li> <li>developing project-specific GHG emission factors or other GHG related engineering analysis;</li> <li>preparing GHG related documents, including guidance documents or procedures;</li> <li>designing or developing a GHG information system or related controls; and</li> <li>advising on matters related to GHG or carbon markets, appraising GHG liabilities or assets and/or completing GHG related analysis on behalf of the Project Proponent.</li> </ul>		X
My organization will use personnel that have, are, or will be employed by the Project Proponent.		X
My organization offers products or services that pose an unacceptable risk to impartiality		X
Other (provide details):		
<b>Circumstances Resulting in Automatic Disqualification</b>		
My organization will outsource the issuance and/or review of the verification statement		X
My organization provided greenhouse gas consultancy services for the specific GHG assertion requiring verification, including, but not limited to: <ul style="list-style-type: none"> <li>Validation of the GHG assertion</li> <li>Contributing to the development of the Offset System Quantification Protocol for the project type on behalf of the Project Proponent;</li> <li>Completing or submitting the project application form on behalf of the Project Proponent;</li> <li>Developing guidance documents or procedures for the project on behalf of the Project Proponent;</li> <li>Completing or assisting in the compilation of information in the Greenhouse Gas Assertion that is the subject of the verification; or</li> <li>Contributing to the development of the project, including but not limited to, developing project-specific greenhouse gas emission factors, performing other greenhouse gas related engineering analysis for the project; and</li> </ul>		X

Internat Energy Solutions Canada	Conflict of Interest Checklist	Form F107.1.1
		Version 1.2
		2 of 2

designing or developing the greenhouse gas information system or related controls for the project.		
My organization has provided verification services to the Project Proponent for the same project over any stipulated limitations by the GHG program. This can be due to limits to the consecutive reporting periods, or passage of time since last verification for the project		X

### Conflict of Interest Management Plan (if applicable)

<b>Description of the circumstance(s) that poses/pose a real or perceived conflict of interest and the threat to impartiality:</b>
<b>Activities or processes in place for neutralizing or mitigating the real or perceived conflict of interest (include a description of the organization's structure to maintain impartiality):</b>
<b>Description of policies and procedures related to maintaining impartiality over the course of the verification activities:</b>

### Declaration

I have personally examined and am familiar with the information submitted in this Conflict of Interest Assessment. I hereby warrant that the submitted information is true, accurate and complete to the best of my knowledge and belief, and that all matters affecting the validity of this Conflict of Interest Assessment have been fully disclosed.

	Name/Signature	Position	Date
Prepared By:	Fiona Jiang	Conflict of Interest Auditor	March 9 <sup>th</sup> , 2015
Approved By:	Livio Nichilo	Lead Verifier	March 9 <sup>th</sup> , 2015