



Petroleum Accountants Society of Canada

**Joint Venture Green House Gas
Cost/Credit Allocation Guidelines
For Facility Operators and Owners**

Interim Accounting Guideline

Petroleum Accountants Society of Canada

400, 1040 - 7 Avenue SW
Calgary, AB T2P 3G9

April 7, 2008

TABLE OF CONTENTS

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

I. FORWARD.....	1
II. RECOMMENDED APPROACH FOR FISCAL 2007	1
III. DEFINITIONS.....	2
IV. INTRODUCTION	5
V. INTERPRETATION AND BASIS FOR GHG COSTS.....	6
VI. COMPLIANCE METHODS / OPTIONS	7
1. ALLOCATION METHODOLOGY OPTIONS.....	7
2. GHG COST ALLOCATION.....	11
3. TRUE-UP OBLIGATIONS AND OPTIONS	12
4. GHG REPORTING OR RECORDS	15
VII. INTRA-FACILITY GHG COST ALLOCATION	16
VIII. LIMITATIONS ON THE APPLICATION OF THIS GUIDELINE	17
IX. REFERENCES	18
X. CONTRIBUTORS.....	19

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

I. FORWARD

This Accounting Guideline was developed to encourage as much consistency among Facility Operators and Owners as possible regarding the methodology for cost allocation to comply with the Alberta Government's greenhouse gas (GHG) emission reduction program and regulatory compliance. These guidelines are intended to be applied to Facilities in the upstream oil and gas industry only.

Federal regulations specific to climate-change have not been written and are not expected to come into effect until 2010. Therefore, discussions regarding this issue are not part of this document and will be considered when the Federal regulation has been issued.

Each Facility Operator is responsible to comply with the GHG regulations, but the Producers incur the liability, therefore the interests of the parties are not necessarily aligned. The existing JV agreements are generally silent on GHG compliance cost/credit treatment other than to allow it as an environmental charge under joint operating agreements. This guide deals with the allocation of GHG Costs to the Producers using a Facility but does not address the allocation of costs upstream of that Facility (to the well or partner level).

Each Facility will have to decide which allocation method is appropriate for their circumstances and the levels of materiality, which would cause the Facility Owners to change to a simpler or more complex allocation method.

As this is a preliminary guideline, and the industry has not gone through a fiscal compliance period, it is anticipated that the document will be updated in the fall of 2008. Comments received from industry will be gathered and incorporated, after completing the allocation process for the first compliance period and 2007 GHG Costs have been allocated to the Producers in the covered Facilities. Learnings, experiences and examples will be used to expand the guideline to provide an appropriate level of guidance to the industry.

In the event that the contents in this accounting guideline and the Regulations are in conflict, the Regulations will supersede.

II. RECOMMENDED APPROACH FOR FISCAL 2007

Given the framework of options provided for in the Legislation and the compliance deadline of March 31, 2008, it is recommended that Facility Operators and Owners use a monetary basis only as a means for achieving compliance and for sharing GHG Costs for fiscal 2007, notwithstanding the discussion within this Guide on "True Up Obligations and Options". Monetary settlement is the most practical option to removing any roadblock to achieving compliance at a cost base of \$15 per tonne, as opposed to the non-compliance penalty of \$200 per tonne.

This recommendation extends only to the method of settlement to attain compliance. The flow through of the settlement amount from the Facility Operator to Facility Owners and Producers, needs to be beneficially determined and agreed to by the stakeholders as provided for under the governing agreements. Given the complexity of facilities with multiple functional

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

units, a decision on an equitable GHG cost allocation requires careful analysis and in that regard, the section on "Compliance Methods / Options" provides an outline of the issues to be considered in the decision-making process.

III. DEFINITIONS

All terms shall have the meaning as set forth in the Regulations. If a term is defined in the Regulations, the definition within the Regulations shall prevail, and to the extent a term and definition is provided below it is for ease of reference only. In addition, the following terms used in this guideline have the indicated meaning.

Baseline Emission Intensity: is calculated by dividing total annual greenhouse gas emissions (TAE) by the annual production of the Facility.

Baseline Emission Intensity is calculated as follows:

For Established Facilities

$$BEI = \frac{\left(\frac{TAE_{2003}}{P_{2003}} + \frac{TAE_{2004}}{P_{2004}} + \frac{TAE_{2005}}{P_{2005}} \right)}{3}$$

where

BEI is baseline emissions intensity;
TAE is total annual GHG emissions for the year indicated;
P is production for the year indicated

For New Facilities

$$BEI = \frac{TAE_3}{P_3}$$

where

TAE₃ is total annual GHG emissions for the 3rd year of commercial operation;
P₃ is production for the 3rd year of commercial operation;

Carbon Dioxide (CO₂): Carbon dioxide is a colourless, odourless gas found in the air. It is absorbed by plants and exhaled by animals. Carbon dioxide is also a greenhouse gas that traps infrared radiation in the atmosphere. The main human activity that produces carbon dioxide is the combustion of fossil fuels such as coal, oil, natural gas in power plants, vehicles and industrial facilities.

Carbon Dioxide Equivalent (CO₂e): Carbon dioxide equivalent is the concentration of CO₂ that would cause the same amount of absorption of infrared radiation in the atmosphere as another greenhouse gas. CO₂e is calculated by multiplying the emissions of a greenhouse gas by an

***JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS***

established global warming potential to get an equivalent quantity of carbon dioxide. Using CO_{2e} permits the calculation of total greenhouse gas emissions for a particular source.

Climate Change and Emission Management Fund (the Fund): fund valued at \$15 per tonne of CO_{2e} which will be directed to projects or technology aimed at reducing greenhouse gas emissions in Alberta.

Direct Emissions: The release of specified gases from sources actually located at a Facility, expressed in tonnes on a CO_{2e} basis.

Emission Credits: Credits that are generated from Facilities in Alberta that have not attained their emission intensity target; this “credit” is the amount with the Facility / company must true-up.

Established Facility means a Facility in Alberta that completed its first year of commercial operation prior to January 1, 2000, or has completed eight consecutive years of commercial operation.

Facility: Any plant, structure or thing where an activity listed in section 2 of the Schedule of Activities to the Environmental Protection and Enhancement Act occurs, and a site or one or more contiguous or adjacent sites that are operated and function in an integrated fashion where an activity listed in any of sections 3 to 11 of the Schedule of Activities to the Environmental Protection and Enhancement Act occurs, including all the buildings, equipment, structures, machinery and vehicles that are an integral part of the activity.

Facility Joint Account: means the account showing the charges paid or credit received as a result of Joint Operations and which are to be shared by the Facility Owners.

Facility Operator: The party that operates the Facility on behalf of the Facility Owners.

Facility Owner: The party(s) that owns the Facility or functional unit of the Facility that handles or processes the Producers product.

Flaring Emissions: Flaring emissions are direct emissions from the controlled combustion of a gas or liquid stream produced on site not for the purpose of producing energy and includes without limitation emissions arising from waste petroleum incineration, hazardous emissions prevention systems (whether in pilot or active mode), well testing, natural gas gathering systems, processing plant operations, crude oil production, pipeline operations, petroleum refining and chemical fertilizer and steel production.

Greenhouse Gases (GHG): Greenhouse gases are any gas that absorbs infrared radiation in the Earth’s atmosphere. Greenhouse gases can come from both natural and human activities. Common greenhouse gases that result from human activities include carbon dioxide, methane and nitrous oxide.

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

Greenhouse Gas Account (GHG Account): Means the account showing the charges paid or credit received related to GHG in Alberta and which are to be shared by the Producers and/or Owners.

Greenhouse Gas Costs (GHG Costs): All costs and or credits incurred in complying with the Regulations

Indirect Emissions: The release of specified gases from sources of purchased power, most frequently sources of electrical power.

Industrial Process Emissions: means direct emissions from an industrial process involving chemical or physical reactions, other than combustion, and where the primary purpose of the industrial process is not energy production.

Kilotonne: One thousand tonnes.

New Facility means a Facility that completed its first year of commercial operation on or after December 31, 2000 or a subsequent year and has completed less than eight years of commercial operation, or a Facility designated as a new Facility under subsection (2) of the Specified Gas Emitters Regulation (source: Specified Gas Emitters Regulation).

Offset Credits: Offsets that are generated from projects by facilities not subject to the Regulation. Offsets must be from Alberta-based projects which occurred after January 1, 2002.

On-site Transportation: On-site transportation is a greenhouse gas source category with direct emissions resulting from fuel combustion in machinery used for the on-site transportation of products and material integral to the production process. Examples are the transportation of raw or intermediate products and materials within the production process; such as equipment used at an oil sands operation to mine and/or move materials to subsequent on-site processing, or equipment used at above or below ground mining operations to mine and/or move mined materials or other intermediate products or materials to different on-site production processes.

Other Fugitive Emissions: Other fugitive emissions are direct emissions that do not fall under stationary fuel combustion emissions, industrial process emissions, venting emissions, flaring emissions, on-site transportation emissions, or waste and wastewater emissions and includes without limitation intentional or unintentional releases of gases arising from the production, processing, transmission, storage and use of solid, liquid or gaseous fuels. In general, emissions from other fugitive sources are a result of the handling or processing of various types of fuel in the fossil fuel industry. Other fugitive sources include leaks from natural gas transmission lines and processing plants, accidental releases from oil and gas wells and releases from the mining and handling of coal.

Performance Credits: credits that are generated from Facilities in Alberta that have reduced their emission intensity below their target and that are available for the Facility Owners to sell or bank.

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

Producer: The party(s) that owns the product that is delivered to and or flows through the Facility or functional unit of the Facility

Producer Account: means the account showing the charges paid or credit received by the Facility Operator in the process of managing GHG emissions which are to be shared by the Producers.

Regulation: means the Specified Gas Emitters Regulation

Stationary Fuel Combustion Emissions: Stationary fuel combustion emissions are direct emissions resulting from non-vehicular combustion of fossil or biomass fuel for the purpose of producing energy but do not include biomass combustion CO₂ emissions. Stationary fuel combustion is a common source of greenhouse gas emissions and is produced in most industrial sectors. The stationary fuel combustion source category includes on-site waste incineration if the waste is combusted for the purpose of energy production.

Vented Raw Gas: means direct emissions of carbon dioxide that is recovered or is recoverable at a well from an underground reservoir and that is gaseous at the conditions under which its volume is measured or estimated. This source category includes, but is not limited to, CO₂ emissions vented from gas sweetening and formation gas.

Venting Emissions: Venting emissions are direct emissions from intentional releases to the atmosphere of a waste gas or liquid stream and includes without limitation emissions of casing gas, associated (or solution) gas, treater, stabilizer, dehydrator off-gas, blanket gas and emissions from pneumatic devices which use natural gas as a driver, compressor start-up, pipeline and other blowdowns and metering and regulation station control loops, but does not include vented raw gas emissions.

IV. INTRODUCTION

The Alberta Regulations:

Starting July 1, 2007 the *Climate Change and Emissions Management Act* and its accompanying *Specific Gas Emitters Regulation* (the “Regulations”) came into effect in Alberta. The Regulations apply to all industrial Facilities that have emitted more than or equal to 100,000 tonnes per year, in any year since 2003, which are calculated in terms of carbon dioxide equivalent (CO₂E).

Established Facilities are those that completed their first year of commercial operation before January 1, 2000, or have completed eight years of commercial operation. For Established Facilities, under the Regulations, a 12% intensity reduction will be applied to the average of that Facility’s 2003-2005 baseline emissions intensity. New Facilities are those that completed the first year of commercial operation on December 31, 2000 or a subsequent year and have completed less than eight years of commercial operation. Emission intensity reductions for new Facilities will be phased in over a 6-year period. The baseline emissions intensity for new

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

Facilities will be established based on the third year of commercial operation. New Facilities are required to reduce emissions starting with the fourth year of commercial operation by 2%, and then by an additional 2% every year after, until the 12% reduction target has been achieved.

The Regulations provide a number of compliance options for industry. In addition to facility projects that reduce greenhouse gas emission intensity, the options include the purchase of performance and offset credits, and technology fund credits (Emission Credits). Please refer to the Regulations for further details.

Failure to comply with the Regulations by the compliance date will result in a fine of \$200 for every tonne of CO₂E by which the total release of greenhouse gases exceeds the target for each Facility.

V. INTERPRETATION AND BASIS FOR GHG COSTS

Producers are responsible for all regulatory costs and taxes that are attributed to or levied against their product or any of the components in their product. In addition to these costs, oil and gas Producers are also responsible for any regulatory costs and taxes that are attributed to or levied against the handling and processing of their product. These obligations have not been previously addressed in Facility ownership, transportation or processing agreements because such costs were not anticipated when the agreements were executed, except to the extent of the general cost category of ecological and environmental costs as provided in prior PASC Accounting Procedures. While referred to within the contracts, the methodology of sharing costs other than on the basis of Facility Ownership or as otherwise may be specified in the contract with respect to the general basis for cost sharing, the methodology by which GHG Costs are to be shared has not been specifically addressed. As a result of the recent introduction of the Regulations by the Government of the Province of Alberta as a means of encouraging the reduction of GHG Emissions, there is a need to address these obligations in a common manner across the industry.

The GHG Costs are based upon the cost incurred to comply with the Regulations when the Facility GHG emission exceeds the intensity target that is established for that Facility. The regulations obligate the Facility Operator to calculate the Facility GHG emissions for the applicable period. If emissions, after any Facility performance improvements, exceed the target, Emission Credits need to be acquired to offset the excess emissions. If emissions are below the target, then Performance Credits are created. Based upon the Producer's obligations discussed above, each Producer then has their proportionate share of the cost to acquire or create these credits or has their proportionate share of the Performance Credit as agreed to by the Facility Owners.

Several methods to appropriately share the GHG Costs at a Facility are defined later in this accounting guideline. These methods are based upon the GHG emissions for the Facility, the compliance costs to address these emissions and the materiality of these compliance costs.

To ensure a common basis for GHG emission management for all Facilities, the Regulations require the baseline and annual GHG emission calculations to include emission values for the

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

categories in Table 1. As a result, for each emission category at a Facility, the Producers are obligated to address their share of any GHG emission that exceeds the baseline target. Calculating the emission values and targets at the category level will address the situation where the Producer participation for each category is not uniform for the Facility. This guideline recommends a balanced approach where credits generated without investing incremental capital should be allocated to those parties that are responsible for the compliance cost.

Not all Facilities are expected to have emissions for each category in Table 1. Additionally, some of these categories will not have material emissions or material compliance costs (credits). Where the resulting costs are not material for a given Facility, the operator may select a cost distribution method that simplifies the administration of the cost until such time the cost is sufficiently material to warrant a more rigorous allocation method. Each Facility that pursues a simplified method should determine the material limit when a more rigorous allocation will be used.

Table 1 – Emission Source Categories

- | |
|---|
| <ol style="list-style-type: none">1. Stationary Fuel Combustion Emissions2. Industrial Process Emissions3. Venting Emissions4. Flaring Emissions5. Other Fugitive Emissions6. On-Site Transportation Emissions7. Waste and Wastewater Emissions8. Vented Raw Gas Emissions |
|---|

The scope of this accounting guideline is limited to those emission management activities that affect all the Producers using a Facility or Facility functional unit. Activities like hedging on credits that are primarily for the benefit of an individual Producer are excluded. As such, the effort and related cost to obtain or market emission credits for the joint account are included in the scope of this accounting guideline but the effort and related cost to obtain or market emission credits for an individual Producer are excluded.

This accounting guideline recommends that an administration charge be applied to all eligible direct GHG Costs. Each Facility will need to determine which costs are to be direct charges to the Producers and which costs are to be covered by the administration charge. The cost allocation section of this bulletin provides more information on these choices.

VI. COMPLIANCE METHODS / OPTIONS

1. ALLOCATION METHODOLOGY OPTIONS

As Facility Operators look to implement policies and procedures to address the handling of GHG Costs, the approach taken will vary from a very basic approach to a very

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

complex approach. The decision of which allocation method is best suited to each Facility will depend on the following factors:

- **Facility complexity**

A Facility with one process or similar inlet composition could equitably allocate GHG Costs using the simplest allocation method. As the level of complexity of a Facility increases the need to utilize a more complex allocation method to maintain equitable allocation of the GHG Costs increases.

- **Business Complexity**

The Facility Operator should be mindful that the level of complexity for GHG Cost allocation may impact the level of detail that is used to create the baseline submission. It would be advantageous to have the baseline application backup documentation, to the level of detail that the allocation method requires, completed before the baseline application is submitted.

- **Characteristics of inlet streams**

Where the composition of inlet streams are similar, the simple approach would be adequate. However, for a Facility that has a wide variance in composition of inlet streams a more complex method of addressing GHG Emission issues may be needed to maintain equity for all Producers. Examples of Facilities that may need to use a complex allocation method are; sweet and sour gas, high and low pressure inlet gas stream, only some of the sweet gas going through the sour system, etc.

- **Facility ownership**

Facilities that have similar Facility ownership and product ownership are suited to the simpler allocation methods. Facilities with significant differences in the Facility ownership and the product ownership may find it difficult to make a simplistic approach work as they try to balance the need to keep administrative costs down with the need to provide equity.

- **Administrative/Compliance costs**

The cost associated with managing GHG Emission issues increases exponentially with the complexity of methodology selected. For Facilities where the compliance costs are low, the administrative cost for a more complex allocation methodology may exceed the cost of compliance. At some point the administrative saving using a simple allocation methodology will be outweighed by the inequity amongst owners so that using a more complex methodology is required.

- **Use of Existing Product Allocation Procedures**

Regardless of the GHG allocation method chosen for the Facility, all existing allocation procedures should be the starting point for the GHG allocation. For example the allocation of Stationary Fuel Combustion Emissions should utilize the fuel gas

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

allocation process that exists at the plant. It is not intended that new allocation procedures be generated if existing procedures will equitably distribute the GHG Costs or credit.

In order to illustrate how these factors come together to influence the allocation of GHG Costs three sample methodologies are outlined below, varying from very simple to very complex:

(a) Method 1 – Single Variable Calculation Basis (Simplest Method)

i. Suggested Criteria for Selection

- Small Facility, and/or
- Simple large Facility, and/or
- Similar inlet composition, and/or
- Common inlet pressure, and/or
- Compliance costs of less than _____

ii. Suggested Method for GHG Cost Allocation

- 1. Plant inlet – GHG Costs allocated based on a Producer’s throughput share of production expressed in gas equivalents, or
- 2. Fuel gas – GHG Costs allocated based on the existing fuel gas allocation procedures for the Facility.

(b) Method 2 – Multiple Variable Calculation Basis (Medium Complexity)

i. Suggested Criteria for Selection

- Large Facility with similar ownership across functional units, and/or
- All sweet gas goes through the sour system, and/or
- Similar liquids content, and/or
- Similar inlet pressure, and/or
- Compliance costs of more than _____

ii. Suggested Method for GHG Cost Allocation

The Facility GHG Baseline Intensity has to be translated into separate intensity baselines for each GHG source listed in Table 1 that is reported at the Facility. A decision as to the number of sources used will be up to each Facility since all or some can be used depending on the materiality of each source.

1. Stationary Fuel Combustion Emissions (all Facilities will have this source, should be modeled after the fuel gas allocation that is in place at most Facilities)
2. Industrial Process Emissions (few Facilities, if any will have this type of GHG source)
3. Venting Emissions (methane releases from controllers, etc)
4. Flaring Emissions (These emissions are based on the reported flaring volumes. The allocation should utilize the allocation procedure already in place that was used to generate production accounting reports)
5. Other Fugitive Emissions (all Facilities will have some level of fugitive emissions from valves fittings, compressor seals, etc. In sour Facilities that would mostly come from the fuel gas system)
6. On-Site Transportation Emissions (this will mostly apply to the large trucks at oil sands mines)
7. Waste and Wastewater Emissions (few Facilities, if any will have this type of GHG source)
8. Vented Raw Gas Emissions (This is vented formation CO₂ that is emitted from the sulphur recovery process therefore the basis for allocation should be the CO₂ entering the sulphur recovery unit)

**(c) Method 3 – Multiple Variables at a Functional Unit Basis Calculation
(Most complex)**

i. Suggested Criteria For Selection

- Large Facility with significant differences in functional unit ownership, and/or
- Planned capital expenditures to reduce GHG emissions for one or more, but not all, functional units, and/or
- Significant variation in inlet gas composition (CO₂, H₂S, liquids, etc.) or inlet pressure, and/or
- Some sweet gas goes through the sour system and some does not, and/or
- Material financial impact on Producers if a simpler allocation method was chosen.

ii. Suggested Method for GHG Cost Allocation

- The Facility GHG Baseline Intensity has to be translated into separate intensity baselines for each functional unit.
- There is no definitive list of functional units so the list of functional units will have to be obtained from the governing agreement. Functional units with common ownership and process utilization could be combined to reduce the number of baselines to be calculated.
- Once the list of functional units has been established and a baseline intensity calculated for each functional unit, then it may be necessary to establish a GHG source baseline intensity for some or all of the functional units.
- There may need to be an adjustment to the compliance requirement to ensure that the functional unit compliance adds up to the Facility compliance.

2. GHG COST ALLOCATION

(a) Operating Costs

Costs of complying with the Regulations are to be treated as operating costs and are to be included in the operating expense forecast for the Facility. There are additional eligible costs incurred when complying with the Regulations including (but not limited to) third party auditor, leak detection and repair (LDAR) survey and internal costs for reporting and verification that are chargeable to Producers through a Producer Account created by the Facility Operator.

Once the baseline emissions intensity level for the Facility has been verified by a third party auditor, the Facility Operator may choose to bill the Producers on a monthly basis, through a 13th month adjustment or invoice separately 30 days prior to compliance deadline for the year.

(b) Administrative Costs

In lieu of the traditional overhead recovery model, an administrative fee may be added to recover overhead costs that are incurred in implementing the Regulations, depending on the complexity of the cost allocation method the Facility Operator chooses. This should be decided by each Facility. The administrative costs may vary by owner if some supply credits in kind to true-up and others supply cash.

Consideration needs to be given to a separate account code in the accounting system or at the operating cost centre level (but not included in the overhead recovery) so that costs are collected, measured, and directly charged to the Producers. The administrative costs may need to be reassessed if conditions or regulations change, and be subject to the agreement of the owners.

(c) Capital Costs

One of the options to reduce GHG emissions is improvement to Facility operations. Examples of improvements include installing more efficient boilers, acid gas injection etc. Capital costs are paid by the Facility Owners and these costs are added to the existing cost base calculation.

If the Facility Operator selects the functional unit calculation basis, the capital costs will be paid by the owners of the functional unit. If a Performance Credit is generated from a functional unit due to the capital costs, the credits can be used to offset another functional unit's Emission Credits in the same Facility.

(d) Gas Cost Allowance

Operating and capital expenditures for the purposes of GHG emission reductions are eligible as allowable costs for royalty deductions as long as they are incurred in the gathering, compression or processing of natural gas. These costs would not be allowable if the capital assets related to the expenditures were already approved under other royalty credit programs such as the CO₂ Projects Royalty Credit Program.

Any changes in the rules of the gas cost allowance will be documented in the Alberta Natural Gas Royalty Guidelines.

(e) Goods and Services Tax (GST)

The Facility Operator will evaluate and determine the impact of GST on GHG Costs.

3. TRUE-UP OBLIGATIONS AND OPTIONS

The Facility Owners will determine the settlement or true up options available to the Producers.

Figure 1 below illustrates how the GHG Costs may flow and assists with the description below.

Producers that process their production at a Facility that emits GHG to the environment has an obligation to settle or true up its Producer Account related to that Facility or functional unit within the Facility. The settlement or true up options for the Producer are monetary, Performance or Offset Credits, or a combination of monetary and Emission Credits. Producers that provide Performance or Offset Credits must guarantee them by entering into an agreement with the Facility Operator, whereby the Producer indemnifies the Facility Operator and Facility Owners against harm and assumes the liabilities associated with these Performance or Offset Credits, if the regulator deems the Emission Credits are unacceptable.

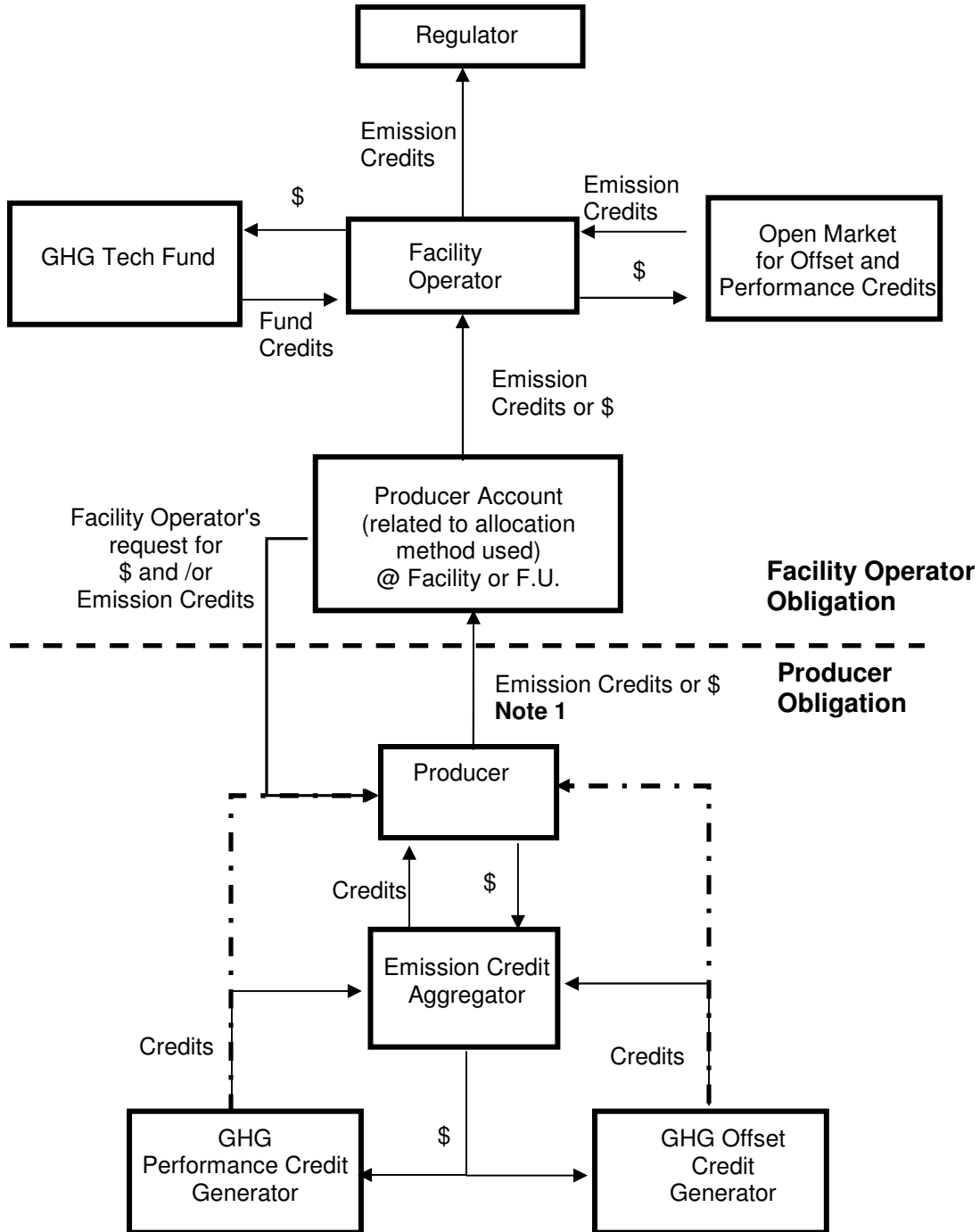
***JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS***

The Facility Operator has an obligation to settle or true up with the appropriate regulator. It is assumed that the Fund functions as a separate business entity established by the Regulations. The settlement or true up options for the Facility Operator is to provide the regulator with Fund Credits purchased with cash from the Producers, Performance or Offset Credits received from the Producers or purchased on the open market, or a combination of the aforementioned.

The Facility Operator subject to the approval of the Facility Owners will determine the open market credit purchase options. The purchase options may include an auction process, closed bid process, direct purchase at market based pricing, or a combination of the aforementioned.

Each Facility will decide if Producers can provide Emission Credits in kind vs. pay cash only. There will probably be a practical lower limit below which it would not be economic for a Producer to pay the additional administrative costs associated with supplying Emission Credits in-kind. The need for agreement up front as to the administrative costs associated with Producer supplied Emission Credits plus the rules of delivery, timing, missed deadlines, unacceptable credits, procedure to supply in-kind credits to other Producers, etc.

Figure 1: True up Obligations and Options



Note 1: Producer must provide indemnification agreement to Facility Operator with Offset and Performance Credits.

4. GHG REPORTING OR RECORDS

The reporting of GHG Emissions and the costs associated with compliance with the Regulations should be handled in the same manner as other government reports prepared for the Producers Account. The GHG Costs, if material, should be included in the annual budget and have a separate general ledger code set up to support the costs.

(a) Submissions to the regulator on behalf of the Facility Joint Account.

The Facility Operator is required to submit a baseline application then a compliance report for each compliance year.

- i. The baseline application establishes the Baseline Emission Intensity that will be used to determine if the Facility is in a credit or debit position for the compliance year.
- ii. The compliance report contains the emissions and emissions intensity for the compliance year.
- iii. This report will be prepared on behalf of and paid for by the Producers Account therefore the Producers are entitled to receive a copy, upon request.

(b) Annual Budgets

- i. If the cost is material, the estimated cost to comply with the Regulations in effect for the upcoming year should be shown as a separate line item in annual budget forecast.

(c) Accounting Codes

i. GHG Costs

The general rule as to materiality in the Producers Account should determine the level of detail that GHG Costs are shown as separate accounting cost codes. The need for accounting code detail will probably change as the cost of Emission Credits increases. The codes could include the following:

1. Fund Credit purchases
2. Performance Credits
3. Purchase of other types of credits
4. Third party costs for reporting and verification
5. Operator internal cost for reporting and verification

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

ii. Capital costs that will reduce GHG Emissions

There are capital projects that can be undertaken by the Facility Operator that will reduce the GHG Emissions. They can be stand alone projects or be a component of a larger project. The procedure to obtain approval and recover the costs would be same as any other capital project, which terms should be set out in the governing agreement between the parties. To enable companies to report to their stakeholders as to the amount of capital spent on GHG reduction the Facility Operator may be asked to identify the GHG reduction portion.

VII. INTRA-FACILITY GHG COST ALLOCATION

The intent of the Regulations is to provide financial incentive to Facility and Producers to reduce GHG Emissions; therefore any costs or credits generated should be allocated to those parties that would have been responsible for the compliance cost, reduction in compliance cost or credits generated. When emissions are reduced to the point that Performance Credits are generated, either through a specific capital project or through changing inlet composition, it is suggested that they be allocated by the following methods.

1. Year to year changes in gas composition entering gas plants could result in a decrease in Facility intensity to the point where there is no compliance true-up cost with the regulator. Conversely the gas composition could result in an increase in Facility intensity to more than the 12% listed in the Regulations. These changes could have occurred equally throughout the Facility or occurred at a particular functional unit. The latter would result in a requirement for an inter-functional unit true-up.
2. Where a capital project, regardless of the primary objective of the project, results in reduced GHG Emissions the options available are,
 - a. At the planning stage of the project there should be clear communication with the Facility and Producers the nature of the work to be done and the impact to the GHG intensity. Any charges that will not be in line with existing agreements should be agreed to before the project starts.
 - b. The recovery of capital spent, reduced or increased operating costs and Emissions Credits generated or reduced compliance costs should be clarified.

By example, an acid gas injection project that is undertaken could be a new functional unit. The acid gas injection could cause the Facility to earn Performance Credits. Each of the other functional units would true-up relative to that functional unit baseline intensity. The acid gas injection project would be allocated the Facility generated Performance Credit from the true-up with the regulator. In addition they may be entitled to receive additional credits from the other functional units.

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

3. Where Emission Credits or GHG Costs are generated by the Facility, not attributable to a specific project, whether through a change in operations, a change in inlet composition or other.
 - a. The pass through of the costs or credits will be determined by the relevant agreement. Under Allocation Method 1, they would be reflected in the operating costs, increase or decrease as the case may be, unless otherwise directed by the Facility Owners.
 - b. When credits are generated, they should be allocated to the Producer Account, unless otherwise directed by the Facility Owners.
 - c. Performance Credits deemed to have been generated by a specific functional unit may be exchanged with other functional units, unless otherwise directed by the Facility Owners.

VIII. LIMITATIONS ON THE APPLICATION OF THIS GUIDELINE

This guide does not address:

- a) the impact of the allocation of GHG Costs to the provision of gas processing service to Producers under a fixed fee arrangement
- b) the use of external credits used for internal transfers or the true-up between Producers

As such the Facility Operators and Owners will need to assess the impact and decide if and how these items will be handled.

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

IX. REFERENCES

The following documents have been considered in preparation of this Guideline:

1. Climate Change and Emissions Management Act:
http://www.qp.gov.ab.ca/documents/Acts/C16P7.cfm?frm_isbn=9780779723386
2. Specific Gas Emitters Regulation:
http://www.qp.gov.ab.ca/documents/Regs/2007_139.cfm?frm_isbn=9780779725403

Summary of GHG emissions by facility (source: Environment Canada):

http://www.ec.gc.ca/pdb/ghg/onlinedata/DataAndReports_e.cfm

http://www.ec.gc.ca/pdb/ghg/onlinedata/docs/t3y2006_e.pdf

Alberta Environment Report on 2006 Green House Gas Emissions:

http://environment.alberta.ca/documents/2006_GHG_Report.pdf

**JOINT VENTURE GREEN HOUSE GAS COST/CREDIT ALLOCATION GUIDELINES
FOR FACILITY OPERATORS AND OWNERS**

X. CONTRIBUTORS

CAPP WORKING GROUP ON INDUSTRY JV GHG COST ACCOUNTING PRACTICES

Dayle Chadbourne	SemCAMS	CAPP	Chair Drafting Team
David Daly	CAPP	CAPP	
Ron Laing	CNRL		Drafting Team
Orest Kotelko	CNRL	CAPP	Association Rep Drafting Team
Lee Wahl	CNRL	PJVA	
Willie Chung	Devon Canada		Drafting Team
Brian Zimmer	Imperial Oil	PJVA	Drafting Team
Susan Rubin	Imperial Oil	CAPPA	
Debbie Reinholdt	Imperial Oil	PASC	
Josh Carter	Keyera	PJVA	Association Rep Drafting Team
Pete Adams	Nexen Inc	PJVA	
Angelina Tsukishima	Nexen Inc	PJVA	Drafting Team
Diana Sheprak	PennWest Petroleum		
Debbie Shelstad	SemCAMS		
Gord Kubcik	SemCAMS	PJVA	
Richard Lyster	SemCAMS	PJVA	
Dana Baillie	SemCAMS		
Nello Serani	SemCAMS	PJVA	
Tunde Yusuf	Shell	PASC	Association Rep Drafting Team
Al Balfour	Shell	Royalties	
Terry O'Connor	Silverwing Energy	CAPL	
James Ritchie	Talisman Energy	PJVA	Drafting Team
Maricar Cheung	Talisman Energy	PJVA	Drafting Team

PASC JV GHG COST ALLOCATION SUB-COMMITTEE

Chair: Tunde Yusuf, Shell

PASC JOINT VENTRE AUDIT COMMITTEE

Chair: Shirley Cooke, Suncor

PASC JOINT INTEREST RESEARCH COMMITTEE

Chair: Lynda MacNeill, EnCana