



Shell Exploration NZ Limited

Emissions Trading Group Ministry for the Environment
PO Box 10362
Wellington 6143

Shell New Zealand Limited
3 Queens Wharf
PO Box 2091
Wellington
New Zealand
Tel +64 4 498 0082
Internet www.shell.co.nz

15th December 2008

Dear Sir or Madam

Our ref: Draft Climate Change (Stationary Energy and Industrial Processes) Regulations 2008

Shell New Zealand ("Shell") appreciates the opportunity to make submissions to the Ministry for the Environment on the Draft Climate Change (Stationary Energy and Industrial Processes) Regulations 2008.

As previously submitted, Shell favours an Emissions Trading Scheme ("ETS") as an efficient way to reduce carbon emissions from the stationary energy and industrial processes sectors. Further, Shell considers it is vital that Governments in both the developed and developing world urgently develop market based policies and supporting legislation that recognise the need to meet the world's growing energy demand and to address climate change issues.

One aspect that Shell considers to be crucial in developing a successful ETS is reducing the amount of political and regulatory uncertainty to enable market participants to have confidence in operating in the developing carbon markets.

We understand that officials are using the consultation process as an opportunity for participants to provide more accurate asset specific emissions factors that can be used within the appropriate schedules of the draft regulations. Shell is currently undertaking a number of tests to enable us to provide more accurate emissions factors to officials but does not expect to have this data until early next year, with the view of being able to use these emissions factors rather than the current default emissions factors. We will liaise with the appropriate officials to ensure that our data is provided before the regulations are finalised.

Methodology for emissions calculations

Shell notes that officials considered three potential methodologies for participants to calculate their emissions. The methodologies considered are:

- Option 1: detailed methodology outlining what participants must collect and how that data is used to calculate actual emissions is specified in the regulations for each Stationary Energy and Industrial Processes ("SEIP") activity;
- Option 2: create default emission factors for group participants and allow participants to calculate their actual emissions using the default factors; and
- Option 3: create default emission factors, but allow individual participants to apply for unique emission factors that are specific to their activity.

On balance, Shell agrees with the methodology as outlined in option three whereby participants use the appropriate default emissions factors (“DEF”) and there is a process included in the SEIP regulations to apply for and use unique emissions factors (“UEF”) if participants wish to do so.

We note that Part 4 s164 of the Climate Response Act provides regulatory powers for participants to apply for a UEF. Shell also note that under the SEIP regulations the regulatory powers have not been included in the draft SEIP regulations and we are unsure whether this is an omission or not.

Shell considers that it is important that the process to apply for a UEF is included in the SEIP regulations to ensure that all SEIP participants have a clear understanding and are consulted on the process to apply for UEF. As officials are aware, the current default natural gas emission factors prescribed under Schedule Two (Table 5) of the regulations are clearly erroneous and significantly over-calculate the actual CO_{2e} emitted. While Shell appreciates that officials are expecting participants to provide more accurate emissions factors for their assets, the incorrect default emissions factors highlight the need for a simple and robust process to be included in the SEIP regulations that enable participants to apply for a UEF.

A provision in the regulations for periodic review and re-assessment of UEFs is also important as the composition of gas from reservoirs can and does change over time as reserves are extracted. The change in composition of gas is particularly relevant to the mining of natural gas, and gives more cause for the process to apply for a UEF to be included in the SEIP regulations.

In view of the time-variant nature of the composition of produced gas, and of the products separated out during gas processing, Shell recommends that the SEIP regulations be amended to include biennial tests using a representative sample based on data collection points stipulated in the draft regulations to ensure the emissions factors are adjusted where necessary in order to remain accurate. Shell considers that stipulating a testing regime in the regulations will help ensure the accuracy of the DEFs and UEFs.

Further, we recommend that the DEF used to calculate emissions from the New Zealand average gas specification is tested on at least a biennial basis using a representative sample, as the composition of this gas changes depending on which gas fields are supplying gas into the transmission network. Annual variation in the emission factor for distributed gas is apparent from the data provided in the New Zealand Energy Greenhouse Gas Emissions report published by the MED.

Officials have asked for submitters to provide the direct costs of compliance with the draft regulations as proposed. Shell has not prepared any estimates of the cost to comply with the draft regulation as prescribed. However, it is our expectation that the costs involved with complying with the SEIP regulations will not be any more significant than current compliance costs both externally and internally, on the basis that the regulations are using existing information that is already required.

Point of Valuation used to collect emissions data

To calculate emissions from participants that mine natural gas, Shell understands that the Point of Valuation (“POV”) data is to be used, along with other points for flaring and venting.

Figure 1 shows the emission calculation points as identified in the draft regulations. The green circles represent emission reporting points that a participant adds to calculate their total emissions from a facility, and the orange circles are emission reporting points that enable emissions to be subtracted from the gas miners total emissions. The numbering relates to the Part 2 r15 subclauses in the regulations that identify these points.

As illustrated in Figure 1, the Kapuni and Maui fields have a POV that is upstream of processing, whilst the Pohokura field has a POV downstream of processing. Shell understands that of the twelve current oil and gas fields currently operated, Kapuni and Maui are the only two fields for which the POV is upstream of the processing plant (as specified in the Petroleum Mining Licence documentation). As drafted this introduces inconsistency into the application of these regulations, and this inconsistency also has implications for how emissions associated with “own use” and LPG supply need to be accounted for to meet the intent of the regulations (e.g. compare with Figures 2 and 3 as discussed further below).

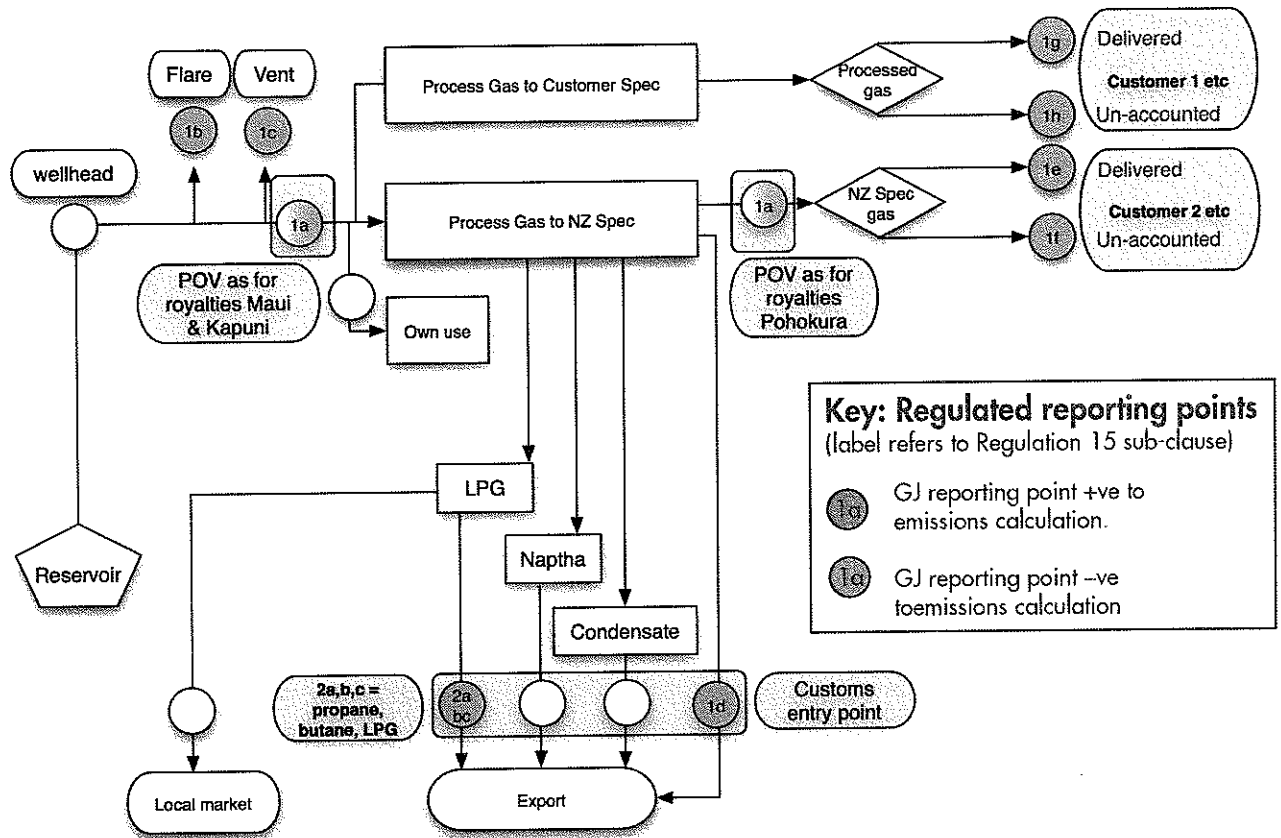


Figure 1: Schematic summary of draft regulations for natural gas mining

With an upstream (near well head) POV, as would occur for Maui and Kapuni fields under the draft regulations, all emissions related to the eventual combustion of the gas stream (including LPG, naptha and condensate produced from the gas stream) are indirectly accounted for. Hence additional reporting points are required for condensate and naptha production (which are liquid fossil fuels and not covered by the SEIP regulations) and perhaps also an opt-in point for large LPG customers that distribute LPG into the domestic market. This is illustrated schematically in Figure 2. However, for the majority of producing fields the POV occurs downstream from the gas processing unit. In order to account for “own-use” (i.e. the burning of gas as fuel in the gas processing facilities) and LPG destined for combustion in the New Zealand market then these additional reporting points would need to be specified. This is illustrated schematically in Figure 3. Note that this leads to an overall simplification in terms of the number of reporting points, as there would be no requirement to account for exported products that are separated out upstream of the POV.

Shell considers that these inconsistencies could be removed by specifying the Point of Sale instead of the POV as is currently proposed. The Point of Sale is a defined term under the Minerals Programme for Petroleum, and corresponds to a reporting point for the quantity of Gross Sales gas for the purpose of the royalties calculation. This is equivalent to the gas volumes that are metered as injected into the gas transmission system and/or sold to customers, including those customers provided with the rights to opt-in under the ETS regulations (i.e. “downstream” with respect to the processing unit as illustrated in Figure 3).

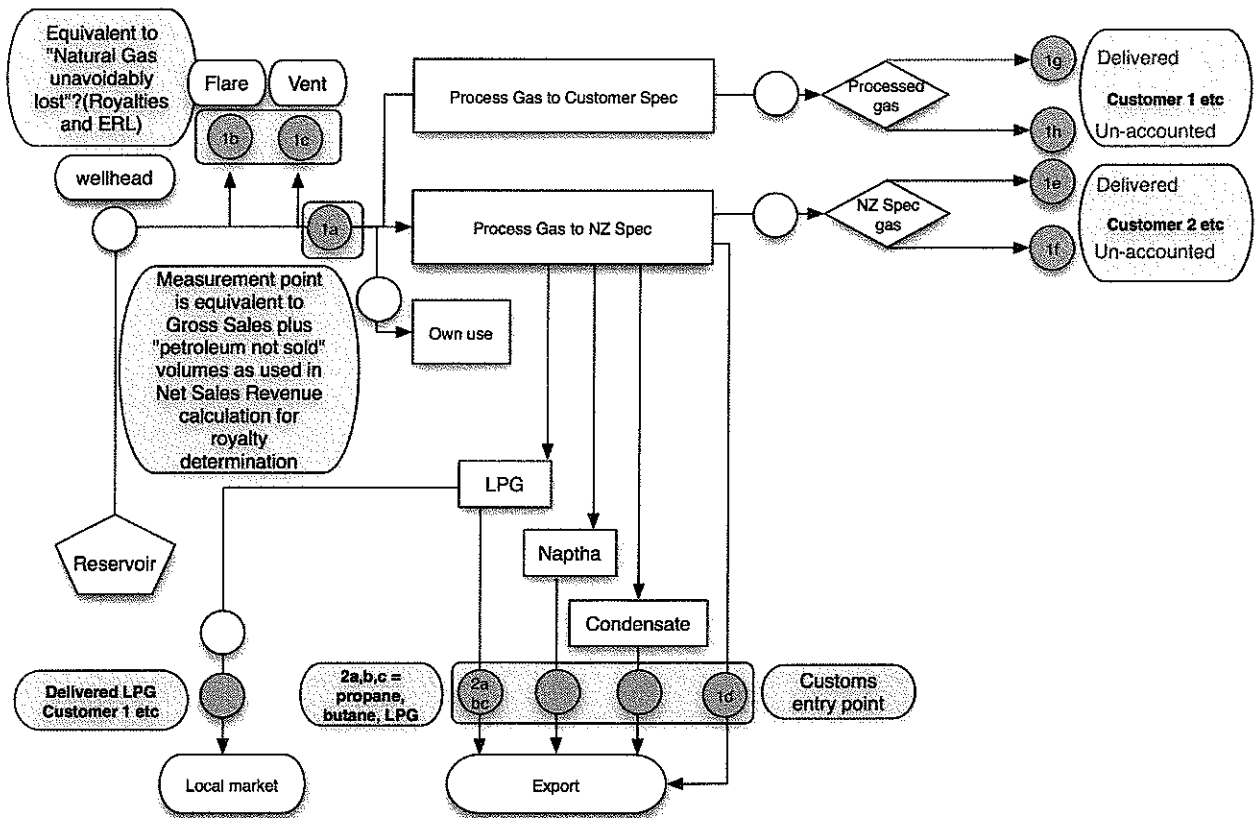


Figure 2: Schematic for facilities with “upstream” POV

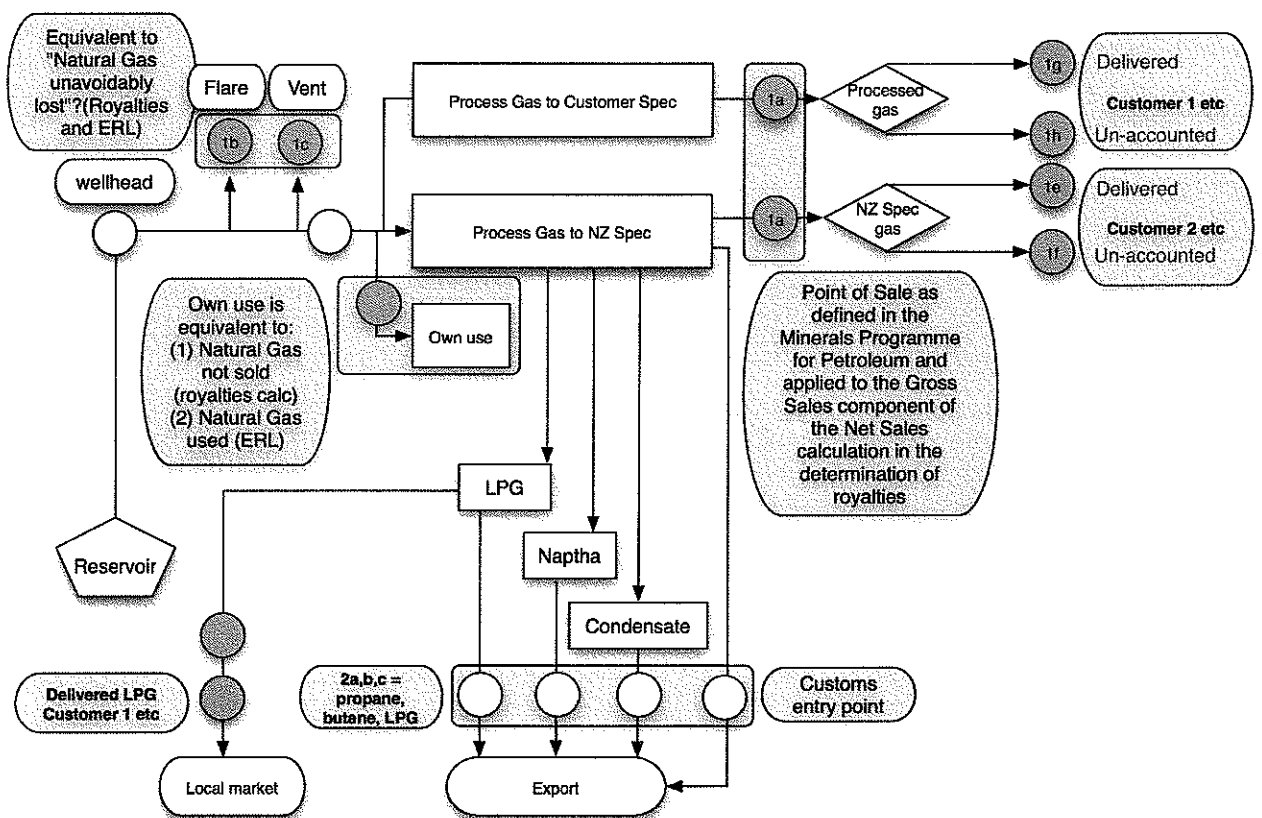


Figure 3: Schematic for facilities with “downstream” POV

The alternative, if the reporting scheme illustrated in Figure 2 were preferred, would be to make the upstream (near well-head) reporting point correspond to the Gross Sales plus “petroleum not sold” volumes as used in the Net Sales revenue calculation for royalties determination.

To address these inconsistencies, Shell considers that the regulation be amended to ensure that:

- The reporting point currently defined by r15 (1) (a) of the draft regulations is redefined so as to apply consistently to all gas producing facilities irrespective of how the POV is defined in the permit documentation. We have suggested two alternative ways in which this could be done and have identified additional (or reduced) reporting points that would be required to keep the accounting of emissions “whole” (ref our figures 2 and 3).
- If an upstream (near-well head) reporting point is chosen, then consideration should be given to allowing for LPG customers to opt-in for the emissions associated with LPG being consumed in the domestic market. This would result in an equivalent credit to the gas producers total emissions calculation, and would require an additional reporting point for LPG sold to domestic distributors.
- If a downstream reporting point is chosen (point of sales) then additional reporting for own-use gas consumption and for LPG sales to the domestic market would need to be specified in order to keep the accounting for emissions “whole”. However, there would be no requirement for the reporting of exported LPG or exported gas - currently clauses 15 (2) (a), (b), (c) and 15 (1) (d).

Shell recommends that the draft regulations be amended to have a downstream reporting point at the point of sale, with additional clauses for reporting own use gas consumption and for LPG sales to the domestic market as outlined in Figure 3.

Opt-in participants use NZ Spec Gas emissions factor

Shell notes that draft SEIP regulations proposed that customers and opt-in participants use a DEF based on the emissions from NZ specification gas (NZS 5442:1999), and for gas producers to use asset specific emissions factors. Whilst this appears a sensible approach, we would be concerned as to whether the remaining carbon liability can be passed through to the gas buyer to give the correct cost signals to emitters.

An alternative would be for opt-in participants to use the asset specific emissions factors as outlined in the regulations (i.e. an approved DEF for processed gas applied to the opt-in participant). This would be appropriate if the point of obligation for the producer calculation was “downstream” of the processing facility at the Point of Sales, as described previously (see Figure 3). Under this scenario, the application of an asset specific emission factor to both sides of the transaction at the point of sale provides for a very “clean” allocation of carbon liabilities. Emissions related to the production and processing of gas (as supplied to the opt-in participant) are attributed entirely to the producer, and emissions related to the utilisation of purchased gas are attributed entirely to the opt-in participant. However, other problems are created downstream from the pipeline, as the gas that the opt-in participants receive at their off take is a mixture of the gas from multiple producers that is supplied into the pipeline. The asset specific emissions factors may not, therefore, be accurate for the opt-in participant, at least on a day-to-day or a week-to-week basis. Arguably, though, at the end of the year (when the reporting of annual quantities for emissions calculations occurs) such short term variances will have averaged out and the emissions attributed to the annualised sales quantities reported by all individual producers as having been taken by opt-in participants will equate to, and be appropriately apportioned to, the emissions associated with the utilisation of pipeline gas taken by the opt-in participants over the year.

Emissions factors need to be based on established methodology

Shell considers that all emissions factors used in the SEIP regulations need to be calculated with reference to the standards and methodologies identified by the American Petroleum Institute (API) Compendium and Intergovernmental Panel on Climate Change (IPCC). Shell agrees that emissions factors should be adapted for New Zealand conditions.

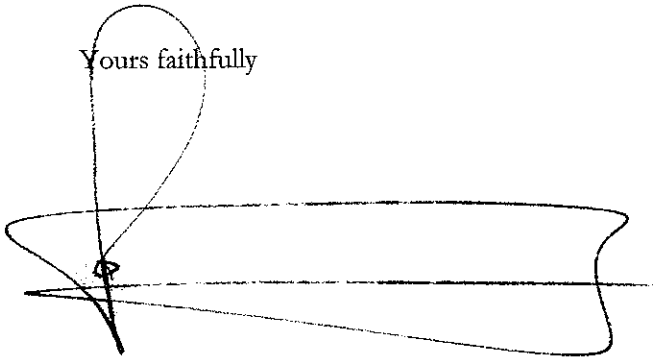
We note that in the draft regulations the emission factor for “specification gas (national average 2007)” is similar to that published in the New Zealand Energy Greenhouse Gas Emissions 1990-2007 report (published by the MED), whereas the emissions factors for processed gas from individual fields are significantly inflated with respect to the MED published data. The inflation of the asset emissions factors used for the gas producers, and the lack of inflation on the specification gas emission factor, implies that officials have more confidence in the specification gas emission factors. However, there is no rationale included in the released documentation as to why the asset emissions factors (but not the specification gas emission factor) have been inflated, other than to encourage gas producers to respond to the draft regulations.

As discussed in the previous section, we strongly recommend that provisions being made in the regulations for miners of gas to apply for unique (asset specific) emissions factors, and for these to be applied in their emissions calculation.

Involvement in any ongoing reviews

Shell is disappointed that we were not involved in the SEIP Technical Advisory Group (TAG). We note from the membership of the SEIP TAG that there is no representation from upstream gas and oil producers. Having all aspects of the SEIP industry represented is crucial to ensure that everyone has a good appreciation of the differing views within the industry. We, therefore, request involvement in any future ongoing reviews of the SEIP regulations. If the SEIP TAG is to continue, we request that the SEIP TAG chair considers inviting an appropriately qualified oil and gas expert to the TAG to represent the upstream oil and gas industry.

Yours faithfully

A handwritten signature in black ink, appearing to be 'Rob Jager', written over a horizontal line. The signature is stylized and somewhat abstract, with a large loop at the top and a long horizontal stroke.

Shell New Zealand Limited
Rob Jager