

The Secretary
Ministry for the Environment
PO Box 10362
Wellington 6143

Dear Sir,

Todd Energy Comments on Revised Draft of Climate Change (Stationary Energy and Industrial Processes SEIP) Regulations 2009

Thank you for the opportunity to comment on the draft SEIP Regulations.

1. Introduction

Todd Energy is a privately-owned New Zealand energy company. It is New Zealand's largest domestically-owned energy business and the second largest contributor to the country's energy supply.

The company has diversified interests in oil and gas exploration and production, natural gas and LPG wholesale and retail, electricity generation (gas co-generation, hydro and geothermal) and retail and solar energy.

As a gas miner/producer, Todd Energy is a mandatory *participant* in the Emissions Trading Scheme as defined in Schedule 3 of the Climate Change Response Act 2008 and, because of the volume of gas that it produces, has major liabilities under the Act.

Todd Energy is the primary gas and oil producer from the McKee and Mangahewa fields in Taranaki and is the owner and operator of the McKee-Mangahewa Production Station. The company also has substantial joint venture interests in the Pohokura, Kapuni, Maui and Maari fields.

In considering the practical application and effects of the proposed SEIP Regulations on Todd business, we have focused on the implications for measurement recording and assessment activities at the McKee-Mangahewa Production Station (100% ownership), and this is reflected in the following comments.

In terms of our joint venture interests (above), we record here that we have major concerns in respect of the interpretation and effects of s.157 of the Climate Change Response Act when read against the proposals embodied in the draft SEIP Regulations. In our view, the requirement that the joint venture entity (rather than the individual JV companies) be the "participant" and that the individual companies be jointly and severally liable for the obligations of the participant has serious negative implications for

the workability of the Regulations and the portions of the ETS that apply to the gas sector. It is our intention to address these concerns by way of direct representations to Ministers and they will not be dealt with further here.

2. General Support for Revised Regulations

We consider that the second draft of the regulations is a substantial improvement on the first iteration and, in this respect, we appreciate the efforts of officials in coming up with a more workable set of proposals in a relatively short timeframe.

The report of the Centre for Advanced Engineering CAENZ on default emission factors and related issues (commissioned by MFE and developed in discussion with industry) was, in our view, a very constructive input to refinement of the regulations. Since release of the second draft for comment, a gas sector workshop convened by the Ministry has resulted in a degree of consensus concerning possible further adjustments to the regulations.

Todd Energy is generally supportive of the “new directions” embodied in the second draft of the regulations and also supports some of the suggested amendments arising from the workshop. In particular, we support:

- The proposed approach to, and formulae for, calculating the emissions liability of both mandatory participants (gas miners) and voluntary opt-in participants under draft regulations 16 and 49 respectively
- The post-workshop proposal to remove both the oxidation factor and the factor for losses from the liability equations
- Making the point of measurement the “point of sale”(rather than the point of valuation)
- Defining the point of sale (POS) as the first *fiscal* meter outside the production station
- Making the point of sale the point of measurement for both the gas miner and the voluntary opt-in participant
- The use of continuous gas chromatography analysis (GCA) to measure gas properties at the point of sale into the Maui gas pipeline
- The use of standard hydro-carbon accounting systems (involving the periodic sampling and GCA analysis of samples) to gather the requisite information from (a) certain points of sale, and (b) flaring, venting and own use streams

We have indicated below why we support these initiatives and why we do not support certain optional approaches.

3. The Term “Mined Natural Gas”

We note that the term “mined natural gas” is not defined in the regulations yet is used extensively in both headings and within the body of regulations 14-16. The term,

particularly when considered against the definition of “natural gas” in the CCR Act, seems to imply that it is referring to raw natural gas at the wellhead, prior to processing, but application of the term to a variety of gas streams (mostly processed) in regulation 15 indicates that this is not in fact the case. The term appears to be being used primarily to make it clear that liability for the emissions content of the subject gas rests with miners as opposed to opt-in participants , the term “opt-in natural gas” being used in regulations 47-50 .

On the face of it, then, there appears to be no need to define the term “mined natural gas” (see also discussion in section 6 below).

4. Regulation 16 – Method of Calculating Emissions from Natural Gas Mined other than for Export

The method for calculating emissions from gas mining, in particular the equation in 16(2) has been substantially revised and Todd Energy supports the approach that has been adopted. The calculation method resolves a lot of the concerns raised in submissions on the first draft.

We agree with the proposal that the gas sector should be excluded from the purview of the Unique Emissions Factors (UEF) Regulations, including the need to apply to MFE , and agree that the adopted approach of requiring participants to calculate actual emissions effectively provides for field-specific or production facility-specific unique emissions factors.

We do not agree with the use of default emissions factors as they are inaccurate and they mute price signals, particularly so in the case of ‘NZ specification’ gas. We understand why a downstream participant such as Vector might wish to adopt an “averaging” approach (via the application of a default factor to say Kapuni gas) but in our view such an approach would undermine the integrity of the ETS. We consider that the only default factors needed are those used in the liability equations for methane and nitrous oxide.

Draft regulations 16(1) and 16(2) identify several *classes* of mined natural gas that must be accounted for, viz gas:

- sold
- exported
- sold to opt-in participants
- flared
- used before the POS (“own use”)
- vented

We note, however, that the definition of “class” in regulation 3A, whilst it appropriately captures gas passing through a point of sale meter and any LPGs, does not appear to capture gas streams being flared, vented or subject to own use. Given the construction of 16(1), and other references to “classes” in the regulations, we suggest it should.

In respect of the regulation 16(2) formula, we would support amendment of the default emissions factor for methane to .001 (from the current .0013) to bring the number into line with IPCC Guidelines.

In respect of 16(2), we note that there is no definition of “venting” in the draft regulations and suggest that there could be merit in including one. Our understanding is that venting is the release of gas on a more or less continuous basis and/or in significant quantities (eg a vent depressurization stack like the Maui A Platform). We would regard venting on site in relation to glycol regeneration for both McKee and Mangaheva as insignificant volumes with low methane, carbon dioxide and nitrogen oxide concentrations....which would therefore not be regarded as venting for the purposes of the SEIP Regulations.

We are supportive of the proposal to remove both the oxidation factor (OF) and the factor for losses (L) in regulations 16(2) and 14(4) for the reasons alluded to in an MFE memo (Katherine Wilson, 02/07/09).

5. Regulation 15 – Collection of Information for Purposes of Calculating Emissions for Natural Gas Mined Other than for Export

This regulation specifies information that must be collected for the purposes of inputting to the liability equation in regulation 16 (above). Information has to be recorded for every class of sales gas, flared gas, own use gas and vented gas.

At the McKee/Mangaheva Production Station, there are 3 classes of sales gas – the gas injected into the Maui Pipeline, gas sold to Todd subsidiary Bay of Plenty Energy (BOPE) for firing the Mangaheva thermal electricity generation plant (on site generation, export of electricity), and gas sold to BOPE to fuel the on site co-generation plant.

Regulations 15(1) (a)-(c), relating to classes of gas sold/exported/sold to opt-in participants, make it clear that the information referred to must be collected *at the point of sale*.

Point of sale (POS):

There has been considerable debate around the appropriate specification of the point of sale. The current definition defines the point of sale as “the point at which the sale of gas is deemed to have occurred in accordance with generally accepted accounting practices”. This potentially means the point of legal transfer remote from a production station.

Todd Energy has a strong preference for the definition of POS discussed at the recent MFE workshop (viz “The first fiscal meter outside the process station”), or similar, on the basis that it ensures that everything downstream is accounted for.

It appears hat such a definition would be sufficiently flexible to capture non-network (Maui pipeline) classes of sales gas of the type referred to above at McKee.

In the case of McKee/ Mangahewa, the first fiscal meter outside the processing station is the “welded point” connection to the Maui Pipeline at Tikorangi; the pipeline receives about 90% of the station’s production. This is the nominated POS under the Maui Pipeline Operating Code (MPOC). At this point, treated gas streams from the McKee and Mangahewa fields have been mixed to provide effectively one “class” of sales gas from the M-M production facility [Note: McKee and Mangahewa are independent fields and have individual unique field compositions. Both fields have continuous monitoring of gas composition, volumetric and energy flow totals (before they are co-mingled into the sales pipeline) at McKee for hydro-carbon allocation purposes, including Tikorangi accuracy validation].

The meters at McKee are identical to the ones at Tikorangi but at Tikorangi there is continuous monitoring of gas composition via gas chromatography (GCA). So we already have on-line GCA for 90% of the M-M gas.

We strongly agree with the proposition that the liabilities of the gas miner/producer and any opt-in participant should relate to the *same* point, namely the POS. This avoids the “orphan” issues referred to by CAENZ and simplifies reconciliation between information provided by mandatory and opt-in participants. We would go further and say that the integrity of the overall scheme, for gas, rests on having a common and consistent point of measurement.

Regulation 15(3) sets out the standards for sampling and testing using gas chromatography analysis (GCA) to obtain the information referred to in clauses 15(1)(f) and 15(2)(b). But it is somewhat vague as to its intent . We also note that the specification of GCA by laboratories accredited to ISO 17025:2005 is not a typical approach to online continuous GCA in the industry. Bulletin 10 indicates that the revised methodology is based on *continuous* measurement, which covers off the issue of accounting for short or long term variations in gas composition and effectively enables a field-specific emissions factor to be calculated.

However, in this respect, the following realities should be noted:

-- under the MPOC (above) not all welded points are required to have a GC installed for continuous gas property measurement (the Code provides for acceptable alternative methods for gas properties and calorific value calculations)

-- POSs not to the Maui Pipeline will generally not have a continuous GCA capacity (although some do eg the POS on the dedicated pipeline from Kapuni to Fonterra)

-- own-use gas streams will generally not have a GCA

-- venting and/or intermittent flaring systems will not have a GCA

Therefore, we suggest that regulation 15(3) needs to be revised to make it clear what approaches to measurement are acceptable under what circumstances. On the face of it, it appears that the regulation should specify that the following practices are acceptable:

- In the case of a POS at a welded point on the Maui Pipeline, either continuous GCA or any of the acceptable methods identified in the MPOC [Note: under the MPOC, the relevant section of NZS 5259 Gas Measurement shall be used as a minimum if not covered by any clause in the Code. NZS 5259 states that gas composition shall be calculated by ISO6976 (as per the Daniel GC Manual). We also note that MPOC requires GCA accuracy of 0.1% and this is met by way of weekly self-calibration and mandatory monthly calibration against an alpha standard gas; traceable to a certified testing laboratory]
- In the case of a POS not at a welded point, either continuous GCA or by taking gas samples using standard hydro-carbon accounting systems (HCAS) practices to sample fluid streams and analyse them either by way of on-site GCA (meeting the standards referred to in the regulations) or by accredited laboratories.
- In the case of flared, vented or own-use gas streams, by following HCAS practices as above

We note that the current reference in 15(3) to equivalent standards listed in the UEF Regulations 2009 introduces a list of approved standards that can be used for the physical on-line sample taking, delivery via pipe to the GC, and GCA to determine gas composition. Some of these standards also cover GCA for gas sample containers, that is gas samples periodically taken and delivered to an accredited laboratory .

The above approach should provide sufficient flexibility to enable both smaller and larger participants to meet adequate sampling and testing standards appropriate to their circumstances.

There should be a requirement to document the detail of the method adopted , for auditing purposes. (Note: in line with the “self assessment” approach, Todd Energy favours open-access ad hoc auditing rather than formal and expensive verification requirements).

6. Regulations 47-49 Obligations of Opt-in Participants

The heading that prefaces regulations 47-49 of the regulations on p37 of the draft is “Purchasing Natural Gas”. We suggest that for clarity this heading should be changed to “Opt-in Purchasers of Natural Gas” in recognition that the section does not apply to all purchasers of natural gas, only to those who are able to and choose to opt-in.

Also in the interests of clarity and avoiding confusion, we suggest that in the title of draft regulation 48 the words “natural gas mined” be replaced with the words “opt-in natural gas (currently the heading for regn 48 is exactly the same as for regn 15 even though they are clearly dealing with different issues).

We note that in its comments (a draft of which Todd has sighted), Vector has raised concerns about what it views as a terminological confusion between “mined natural gas” and “opt-in natural gas” which it says appears to have lead to a mismatch between the (opt in) emissions subtracted from the obligations of the miner [under regn 16(4)] and those accounted for by the opt-in participant under regn 49(1). With respect, we believe this is an ill-founded concern which appears to arise from the erroneous assumption that “mined natural gas” is “raw” gas (see section 3 above).

We suggest that any further confusion in this respect could avoided or minimized by including in the regulations a definition of “opt-in natural gas”as follows:

“ The amount of mined natural gas of a given class that has been purchased by an opt-in natural gas participant”

This would make it clear that the distinction between mined natural gas and opt-in natural gas is based on liability not composition. Clearly the emissions from the “mined natural gas” sold to opt-in participants under regn 16(4) is the same in volumetric and compositional terms as the emissions from each class of opt-in gas purchased by an opt-in participant under regn 49(1)(a).

7. Information supply by miner to opt-in party

The proposed methodology for calculating emissions liabilities means that the opt-in participant must have access to information concerning the properties of the gas purchased from the miner. It has been suggested that there needs to be a regulatory requirement to make it compulsory for miners to provide this information.

The information being referred to is unlikely to be commercially sensitive and is in any event supplied by the miner in returns to MED and presumably publicly available. It is therefore difficult to see why anyone would withhold it and hence the justification for regulatory requirements. The timely exchange of information could simply be the subject of an MOU or a component of a contractual arrangement.

An issue that may need to be addressed in the regulations is protection of downstream parties from the offence provisions of the legislation in the event that they were deliberately or inadvertently supplied with erroneous data.

8. Exporting natural gas

The regulations are framed in a manner which appears to assume that importers of natural gas, miners of natural gas or opt-in participants are the *only* parties who might be exporting natural gas. The liability formulae for these parties in regulations 13(1), 16(4) and 49(3) contain factors for the subtraction of each class of imported, mined or opt-in gas *exported* in the year. This means they are not liable for the cost of carbon embodied in exported products.

However, it is quite possible that gas wholesalers (eg Todd subsidiary Nova Gas) may wish to export gas, for example LPG. It could be countered that Nova Gas could “escape” this liability by opting in but there may be good reasons why Nova does not wish to be an opt-in participant or in some instances it may not be able to opt in because it is more than one step removed from the point of obligation

Consequently, there appears to be a case (based on equitable treatment of all gas exporters) for the Regulations to include a provision aimed at ensuring that parties other than importers, miners and opt-in participants can nullify or recover the cost of any liabilities associated with gas that they export.

I hope these comments are of some assistance. Please don't hesitate to contact me if there are any matters you would like to discuss.

Yours faithfully,

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