



Submission to

Ministry for the Environment

On the Draft

**Climate Change (Stationary Energy and Industrial Processes)
Regulations 2009**

And the Draft

Climate Change (Unique Emissions Factors) Regulations 2009

From

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Summary

For the Stationary Energy and Industrial Processes regulations, Contact submits that we:

- support the shift to point of sale as the criteria for gas measurement, but recommend the definition of point of sale align with where title for gas passes from miner to purchaser;
- recommend the use of a default emissions factor (based on specification gas) for gas purchases at this revised point of sale, recognising that this will align the ability to control emission-creating activities with liability for those emissions;
- believe that such a default factor will align with the contractual realities facing the majority of gas market participants and their customers; as customers typically purchase and ship specification gas;
- disagree with the proposal to remove the oxidation factor and losses factor from the methodology for gas miners;
- support the storage adjustment provision, but request assurance that the default emissions factor applied in the regulations will still apply to gas taken out of storage in later years;
- recommend that all default emissions factors be kept outside of the regulations, so that they can be adjusted without requiring alterations to the regulations;
- support the movement to continuous measurement of gas emissions through gas chromatography by miners to ensure that total emissions in the supply chain are accounted for;
- recommend that in instances where downstream participants are required to rely on information supplied by miners (including where default emissions factors may not apply), that measures be put in place to manage the reliability and transfer of this information;
- recommend that in similar instances, downstream participants not be penalised where errors are encountered in information provided by miners;
- recommend the explicit addition of emissions factors for domestic propane and butane to ensure that they are not only accounted for indirectly via obligations on natural gas;
- suggest a change to the methodology for accounting for emissions from propane and butane to allow for the variations in mix of LPG supply that are a reality in the market;
- recommend users of geothermal fluid for industrial heat be defined to exclude small users from the regulations;

- recommend that non-emitting geothermal plants be exempted;
- object to the use of Ngawha for the default emissions factor, as this is not representative of emissions from geothermal plants; and
- recommend the inclusion of diesel powered stationary energy plant be included in the regulations.

For the Unique Emissions Factors regulations, Contact submits that we:

- support the provision in the geothermal methodology for re-injection of dissolved gases;
- recommend the use of ASTM standards for geothermal sampling be broadened to accept use of equivalent standards;
- recommend clarification of abbreviations used in emission factor formulae for geothermal emissions;
- recommend the definition of a contractor for the purposes of verification be refined
- question the suitability of a chartered accountant to act as a verifier;
- question the value of external verification of activities that have been undertaken by accredited laboratories; and
- do not support the discretionary ability of the Chief Executive to decline an application, when the applicant has no right of appeal

Gas

Aligning obligations with ability to control

Contact believes that it is efficient to align obligations under the regulations with ability to control activities that generate emissions and/or ownership.

A lack of such alignment can create inefficiencies in some situations where parties have no ability to manage activities that create emissions but are potentially liable. Conversely, a party with an ability to control such activities, but no liability would have limited incentives to manage activities that produce emissions.

With a clear intent inherent in the wider regulations being to provide a least cost solution to emissions reductions, this alignment is essential to the success of the scheme.

The points outlined below concerning natural gas support this central theme.

Measurement at point of title transfer

Contact supports the update to the regulations changing gas measurement to the point of sale. However, we recommend defining the point of sale at the upstream flange of the gas export pipeline i.e. the point at which gas is delivered by the miner to the gas purchaser.

It has been suggested in industry workshops that the point of sale be measured at the first fiscal meter after the plant. Contact does not support this view, as the title to gas typically transfers from a producer to the gas purchaser at the upstream flange. Having the point of sale at the first fiscal meter after the plant would mean the miner is absolved of the emissions liability for the gas at the first fiscal meter, but still has control of it while it reaches the export pipeline. In this situation there is no incentive for the miner to mitigate carbon emissions between the first fiscal meter and the upstream flange.

Resulting requirement for default emissions factors based on specification gas

As we noted above, we believe that the regulations will be more efficient where parties that are able to control emissions generating activities face the associated liability.

Our recommendation that the revised point of sale be the upstream flange of the gas export pipeline therefore aligns with a recommendation that default emissions factors be used for all gas purchased by opt-in participants at this point of sale. Gas purchasers typically take title/ownership of gas at this point, and hence could realistically be expected to have a liability based on this volume – the gas that they can physically use and hence combust.

This is backed up by the realities of the domestic gas market, which for gas purchasers (both those who may elect to opt in and those who may purchase gas from opt in participants) is almost entirely based around specification gas. The vast majority of gas transmission arrangements require only the transmission of specification gas, and thus the market realities would align best with default emissions factors based on this specification gas.

Again, the regulations are more likely to produce an efficient outcome where they align with the realities of the market.

Oxidation factor and losses

Contact does not support the proposal to remove the provision for losses and the oxidation factor from the emissions formulae. The oxidation factor that is applied to the opt-in purchaser's emissions formula is to account for gas that is not completely combusted downstream. Contact contends that tolling should be based on the volume of gas that we have an ability to control i.e. the amount that we combust.

Other similar imposts in the gas industry support Contact's view. For example, the MED levy is charged on the volumes of gas actually consumed.

Gas storage

Contact supports the provision in the draft regulations for a storage adjustment. We agree that fuel that passes the measurement point is not necessarily combusted in the same compliance period and therefore should not be counted until such time it is removed from storage for use.

Contact also supports the use of a default emissions factor for storage, as applying the same factor when gas is injected and removed will produce a neutral result. However, Contact recommends the regulations state that the emissions factor applied when the gas is

injected into storage be the same as the emissions factor that is applied when the gas is removed from storage. This is to allow for the potential situation where the default emissions factor for storage gas is changed at a later date.

Location of default emissions factors outside of the regulations

While the default emissions factor for storage is made explicit in the draft regulations, we believe that it would be more appropriate for any default factors to be located outside of the regulations to allow them to be more easily amended if required.

This includes default emissions factors for specification gas that we recommend be adopted for gas purchased by opt in participants at the revised point of sale.

Balancing miner and opt-in figures

An obvious consequence of our recommendation for default emissions factors (based on specification gas) for gas purchased by opt in participants at the revised point of sale is that miners will be responsible for emissions outside this, up to that point of sale. Contact sees this as aligning with the intent of the regulations and wider scheme, as miners should be incentivised to reduce emissions prior to this point of sale. The miner should acquire the benefit, or face any cost, that results from any variance between specification gas and the gas that is supplied to the pipeline.

Contact believes that in order to reinforce these incentives, and to ensure that the overall levels of emissions are accounted for in the supply chain, that measurement prior to the revised point of sale be backed up via the regulations. As a result, Contact supports the movement to continuous measurement of gas emissions through gas chromatography by miners.

In instances where opt in participants are required to rely on information provided by miners (including in instances where default emissions factors may not apply), rules covering information to be supplied by the miner need to be provided. An outline in the regulations of information that must be provided by the miner to the purchaser will ensure opt-in participants are not unduly prevented from meeting their reporting requirements. Further, the draft regulations do not indicate whether an opt-in participant will be penalised for providing an incorrect return based on data supplied by the miner. Contact seeks clarification on the repercussions of filing returns in good faith using information supplied by

a miner that is later found to be incorrect in any instances where a default emissions factor does not apply. Contact suggests that regulations would need to provide opt-in participants with procedures to assure that data supplied by the miner is accurate and fair.

Testing and accreditation

Paragraph 48(2) outlines the testing and accreditation required to be provided by opt-in participants. As this information will already have been provided by the gas miner, additional testing by the opt-in participant will increase compliance costs without providing any new information. Contact recommends that the regulations be amended so that opt-in participants will not be required to undertake tests further to those already performed and verified by gas miners.

Clarification of reference year terminology

The references to different years in the NGP and NGL section of the losses formula require clarification (paragraph 16(4)). The use of *previous year* and *preceding year* creates ambiguity, as it is not clear if the terms preceding and previous are referring to different years. Contact recommends using defined terms such as Year, Year-1 and Year-2 to create a clearer distinction between the periods.

LPG

While imported natural gas emissions factors are made explicit in the draft regulations, the analogous factors for domestically sourced LPG are only provided for via the provisions for natural gas.

As a result, Contact recommends the explicit addition of emissions factors for domestic propane and butane. As with natural gas, we believe these factors to be best located outside of the regulations themselves.

Contact also recommends that the methodology for calculating emissions from LPG be revised to reflect that the ratio of propane and butane varies between shipments. If a shipment is 70 percent propane and 30 percent butane two calculations should take place - the first for the propane content and the second for the butane content. This reflects the realities of the LPG market whereby the composition of the final production is varied.

Geothermal

Response to feedback requested by Ministry for the Environment (MfE)

In forums associated with the release of the draft regulations, MfE have questioned whether geothermal emissions can be monitored by continuous measurement, as proposed in the draft regulations for natural gas participants. While modern plants may well be set up for that degree of monitoring, this is not the case at older plants such as Wairakei. As a result, if continuous measurement was introduced to the regulations, the ability to resort to a default emissions factor would need to remain for geothermal users that do not have the necessary infrastructure to undertake more rigorous monitoring.

MfE have also enquired as to what material change would be necessary before a unique emissions factor is no longer relevant. Contact recommends that no explicit measure be introduced that would necessitate a revision to a unique emissions factor. The incentives on participants with geothermal assets should be to reduce emissions levels, and hence apply for a revised factor once measures are put in place that do create a material change in the level of emissions.

This is supported by the difficulty that is likely to arise in trying to set an explicit factor that would necessitate a revision. For example, the 5 percent threshold that applies in clause 11 (2) of the unique emissions factor regulations could be within the sampling error that is associated with such measurements. In addition, Resource Consent monitoring requirements utilise a potential variance of plus or minus 10 percent, recognising the difficulties inherent in monitoring geothermal steam.

Default emissions factors

Contact acknowledges the need for a default emissions factor for new geothermal operations, recognising that it can act as an incentive for participants to apply for a unique emissions factor. However, Contact is opposed to the use of the Ngawha emissions factor (0.210) as a default, as it is not a realistic representation of NZ geothermal emission activity. Contact recommends that a more representative default emissions factor be used.

Currently the regulations indicate a default emissions factor for Wairakei A, B and Binary Power Plants. G14 is a 4.1MW generator which is located adjacent to (but separate from) the Wairakei B Station. It is understood that the intent of the regulations is for G14 to be included in the definition of the Wairakei operation, but for clarity this should be made

explicit in the regulations. Contact requests that the G14 plant is explicitly stated in Table 5 of the regulations.

Contact also recommends that the Binary Power Plant at Wairakei be exempt from the regulations. The Binary Plant uses only separated geothermal water with no resulting emissions as the dry steam and non condensable gases (including all greenhouse gases) have already been separated from the water and transmitted to the Wairakei A and B Stations. For clarity, table 5 should note that the Wairakei Binary plant has no greenhouse gas emissions.

Standards equivalent to ASTM

Contact supports the use of ASTM standards, but recommends that equivalent standards also be acceptable.

For sampling of 2-phase geothermal fluid Contact's sampling method meets ASTM 1675. However, for single phase (steam) sampling, Contact use the methods originally developed for the Department of Scientific and Industrial Research (DSIR) and do not sample to the ASTM standard. GNS has undertaken trials of both methods and find that Contact's current method for single phase sampling may provide better results and is safer for staff.

Instead of committing to only the ASTM standard, Contact recommends that the regulations require sampling methods be carried out to published, reputable standards.

Small user thresholds

Contact's understanding of the regulations is that they will only apply to those using geothermal fluid for the purpose of generating electricity or industrial heat. Contact recommends that industrial heat be defined in the regulations to automatically exclude those very small users with nil or negligible emissions, such as heating individual homes and swimming pools.

Defining those who must take part in the regulations is a much easier exercise than producing a definition of who will be exempt, as small users will not have the necessary equipment to measure whether they are small enough to be exempt and the costs of checking they are in compliance will outweigh the emissions they may produce.

Drafting - abbreviations and spelling

In emission factor formulae (and elsewhere), Contact recommends changing CO₂/t and CO₂e to read tCO₂/t and tCO₂e to provide greater clarity.

Contact advises the correct spelling of Wairakei for updating Table 5 in the regulations.

Diesel powered stationary energy

Contact notes that the stationary energy regulations do not include provision for diesel powered electricity production, such as that of the Crown-owned Whirinaki Power Station. For consistency, Contact recommends the regulations be amended to include emissions from diesel-powered electricity generation.

Unique Emissions Factors

Contact supports the provision added to the unique emissions factor formula for re-injection of geothermal steam.

Verification

The draft regulations require applications for UEFs be verified by a party who:

- is not a contractor to the applicant, or any person involved in the taking or testing of samples
- was not involved in taking or testing samples that support the application
- has no other relationship with the applicant, or any person involved with the taking or testing of samples

Contact recommends these conditions be relaxed, so that any of the above only requires disclosure of the relationship between applicant and a verifier. Otherwise, in a market as small as New Zealand's it may be impossible to find a verifier who is not excluded by one or more of the conditions.

Furthermore, as the applicant pays for the verifier's services, the verifier becomes a contractor to the applicant. If verification is to remain a part of the regulations, an explanation outlining that for the purposes of verification the verifier is not a contractor to the applicant, is required.

Contact queries what benefit is gained from a chartered accountant verifying the sampling and testing carried out by accredited laboratories. A chartered accountant is unlikely to have the scientific knowledge to discover faults in the sampling and testing carried out by laboratories.

If verification is simply an administrative task to ensure processes have been followed and the correct documentation has been supplied, Contact recommends the regulations be changed to either:

- require the applicant sign a statement that correct processes have been followed and provide a checklist demonstrating all necessary information is included, or
- Ministry of Economic Development (MED) verifying applications using their own staff.

The expense of using a chartered accountant for this purpose is not in line with the simple administrative nature of the role.

It has been suggested at industry workshops that an MED official verifying applications for a UEF would necessitate a fee for the service. Contact disputes the need to charge for an official checking the correct documentation has been supplied. As an official will be required to process applications, the MED workload is unlikely to change materially whether a verifier checks the documentation first or not.

Discretion of Chief Executive

Under paragraph 5(1) of the UEF Regulations the “chief executive may approve the use by a participant of a unique emissions factor... if satisfied that” the provided conditions are met. The term ‘may’ leaves some discretion with the Chief Executive, whereby they could potentially decline an application even though the conditions have been met. Unless the right of appeal is made available in the regulations, Contact recommends removing the discretion available to the Chief Executive when an application otherwise meets the conditions set out in the regulations.