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Dear Katherine

## 2009 SEIP Regulations

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Genesis Power Limited, trading as Genesis Energy, welcomes the opportunity to provide a submission to the Ministry for the Environment (“the Ministry”) on the following draft regulations and supporting documents:

- Climate Change (Stationary Energy and Industrial Processes) Regulations 2009 (“the SEIP regulations”);
- Climate Change (Unique Emissions Factors) Regulations 2009 (“the UEF regulations”);
- Emissions Trading Bulletin No 10, June 2009 “Draft climate change regulations for stationary energy, industrial processes and liquid fossil fuels”; and
- materials from the Ministry’s gas and coal sector participant workshops held on 22 and 29 June.

This submission does not address the draft regulations on liquid fossil fuels or the draft regulations on “other removals activities”.

## Introduction

Less than six months remains before the start of the first emissions reporting period. As such, Genesis Energy's focus is on implementation and the workability of the regulations. Good progress has been made since the consultation draft last year, so this submission mainly comments on specific outstanding issues. However, the submission starts with some brief comments on the broader theme of workability.

## Workability

Measuring carbon emissions for emissions trading scheme (ETS) compliance purposes is new for New Zealand businesses and the New Zealand government. Implementing the full set of stationary energy sector measuring and reporting arrangements is a complex process, and arrangements will inevitably require adjustment and refinement through the first few reporting periods. The implications of this include that:

- the regulations must strike a realistic balance between simplicity and precision;
- compatibility with existing industry structures and arrangements is desirable; and
- the compliance regime must be implemented in a way that recognises the need for all parties to learn by doing.

Officials seem to be fully aware of the first two of these principles for the most part, and this is welcome. The remainder of this submission touches on a small number of areas where Genesis Energy believes there is scope for some adjustment in favour of simplicity and compatibility.

### Compliance Regime

In terms of the compliance regime, it would be useful for government to telegraph clearly and well in advance its intended compliance philosophy for the first reporting period. In particular, Genesis Energy believes that the ETS should allow for learning by doing. Consistent with this, officials should use any permitted discretion in implementing the compliance regime, and this should be conveyed formally to ETS participants.

The offences in the Climate Change Response Act 2002 ("the Act") mean that there is considerable risk for participants if they are judged after the fact to have reported emissions incorrectly. Genesis Energy expects that once the ETS has

matured, the compliance regime will be fit for purpose and will enhance its integrity. However, the compliance regime could be counter-productive during the scheme's introduction if applied too vigorously and punitively rather than proportionately and constructively.

Genesis Energy notes that there is the prospect that parliament will amend the Act to delay full entry for stationary energy and industrial processes (SEIP) sector participants. This could result in a lead-in period, where measurement and reporting obligations remain but there is no obligation to surrender permits. If this does occur, then officials will have greater scope to adopt a constructive "learning by doing" approach to operating the applicable parts of the compliance regime during the lead-in period.

### Calculations

Genesis Energy understands that the Ministry for Economic Development (MED) plans to develop an online system for calculating and reporting emissions, and that the online system will have a form-based website interface with a spreadsheet-based calculation engine.

Genesis Energy recommends that the MED should make the spreadsheets supporting the online system available directly to participants. This will allow participants to monitor their obligations over the year so that they can manage their permit purchases. Access to the spreadsheets will also allow participants to run "what if" scenarios to help analyse the affect of various purchase and consumption decisions on their emissions.

### **Coal**

Genesis Energy imports coal, purchases coal, maintains a stockpile, and has opted-in to the ETS as a participant for domestic coal purchases.

### Point of Sale

Genesis Energy welcomes the change from "point of valuation" to "point of sale" for measuring coal emissions, and expects that this will simplify the operation of the scheme.

The alignment of emissions factors for mined and imported coal is also welcome for the same reasons. However, aligning the emissions factors will not simplify the scheme greatly for Genesis Energy given the need to track imported and purchased coal separately regardless of their emissions factors. Genesis Energy accepts that the treatment in the Act of importing and purchasing as separate activities drives this requirement.

### Stockpile Adjustments – Methodology

Genesis Energy appreciates officials' efforts to develop a robust and workable methodology for coal stockpile adjustments. Genesis Energy operates a large mixed-class coal stockpile that is likely to have a sizeable opening balance at the start of the first reporting period.

Genesis Energy has trialled the methodology over a range of scenarios and found that it generally performs well in terms of producing appropriate adjustment factors. However, we did uncover two issues that require further attention:

- the regulations can be read as requiring participants to estimate the “pre-obligation” composition of the stockpile; and
- treatment of negative emissions, which arise in some stockpile scenarios.

### Treatment of Stockpiled Pre-Obligation Coal

In developing a spreadsheet to test the stockpile adjustment methodology, Genesis Energy found that it would be necessary to estimate the composition of the stockpile as at 31 December 2009. There are two difficulties with this:

- while Genesis Energy tracks what coal enters its stockpile, it cannot accurately track (and has not historically tracked) the composition of the coal leaving the stockpile. This means that the initial composition of the stockpile cannot be assessed with any degree of accuracy; and
- the ETS is not retrospective, so the emissions properties of coal mined or imported prior to commencement of the ETS should not alter obligations. This means that in principle it should not be necessary to estimate starting composition.

Genesis Energy recommends that the formulae in Schedule One of the SEIP regulations should be amended so that the initial stockpile composition reported at the end of the first year in which a participant uses a stockpile adjustment period should reflect the composition of the coal added during that year. This approach would ensure that “pre-obligation” coal does not alter a participant's obligations, and would be flexible enough to suit participants that chose not to adopt a stockpile adjustment factor from the beginning of the ETS.

Genesis Energy understands that the Ministry intends to clarify the meaning of the term “stockpile” so that it refers only to post-2009 “obligation coal”.

Genesis Energy supports this intent, but suggests that rather than referring to post-2009, the definitions should link to the year in which the participant starts using a stockpile adjustment factor.

This approach would be flexible enough not to require re-visiting if parliament amends the ETS to delay permit surrender obligations but retain existing dates for measurement and reporting obligations. However, in this scenario the Ministry should advise participants against using a stockpile adjustment factor for any years in which they don't face a permit surrender obligation.

#### Negative Adjustment Factors

Although the stockpile adjustment methodology performs well over the scenarios we tested, it produces negative adjustment factors in scenarios where the volume of coal consumed in the first year is less than the starting volume of the stockpile. This is consistent with the principle of the stockpile adjustment and participant's obligations not being affected by pre-obligation coal (in either composition or, in this case, volume).

In this scenario, the sum of emissions calculated over the number of years taken to consume the entire stockpile will only be correct if the initial negative number is included in the tally. In other words, if the negative number were simply zeroed (by not being carried forward to subsequent years) then the participant would in effect face an obligation corresponding to stockpiled "pre-obligation" coal. Genesis Energy therefore recommends that any negative obligation should be carried forward to the following reporting year(s).

The ability to carry forward a negative obligation could be implemented at the reporting level by making specific provisions in the regulations. Alternatively, the same affect could possibly be achieved at the permit level through operational procedures adopted by the MED. Genesis Energy recommends the former option as a more robust and transparent approach.

#### Stockpile Adjustments

Genesis Energy uses a weight-based measurement system to track the volume of coal removed from its stockpile for operational purposes. Periodically, the volumes recorded via this method are reconciled and adjusted against a survey-based measurement of the remaining stockpile size. This can result in periodic accounting adjustments to the volume of stockpiled coal.

Genesis Energy recommends that the reporting system should be able to accommodate periodic stockpile adjustments of this nature. This is not a matter

for the regulations directly, but should be recognised as part of the reporting guidelines and forms, as well as the audit and compliance regime.

#### UEF Threshold

The Ministry proposes to set default emissions factors (DEFs) above its best estimate of actual mean emissions factors to account for the “adverse selection” phenomenon associated with the unique emissions factor (UEF) mechanism (whereby participants only apply for a UEF if emissions are lower than the applicable DEF).

The Ministry also proposes a 2% reduction threshold for UEF eligibility. Genesis Energy understands that this is intended to:

- ensure that UEFs reflect materially lower emissions given sampling and testing uncertainties;
- produce a fiscally neutral outcome (based on assumptions regarding the distribution of emissions factors and the behaviour of emitters in applying for UEFs); and
- ensure small emitters that cannot afford to apply for a UEF are not unduly disadvantaged.

Genesis Energy recommends that the regulations should be amended so that a UEF will be granted in cases where the 2% threshold is not met, but the applicant can demonstrate that emissions are materially different from the applicable DEF. To prove their case, the applicant would need:

- sufficiently rigorous sampling, testing, and ongoing measurement processes such that confidence intervals can be assessed; and
- to show that emissions differ from the applicable DEF by a statistically significant margin.

Genesis Energy recommends that this approach is more flexible, and may provide more accurate information in the long run on emissions properties. This approach avoids penalising large emitters for whom a small reduction in the applicable emissions factor could have significant financial benefits.

In terms of fiscal neutrality, Genesis Energy notes that the information base on which the Ministry has determined the DEF values and the threshold is very poor. It is not clear that the information base (including assumptions on which participants will apply for UEFs) supports the argument that the Ministry can

engineer fiscal neutrality with respect to UEFs and DEFs. The Ministry should have a better information base when it reviews the DEFs after the ETS has bedded in.

Genesis Energy is not convinced that the Ministry should go out of its way to tailor the UEF scheme and the DEF offsets to suit small emitters. Economies of scale are a not a phenomenon that requires a regulatory fix.

## **Gas**

Genesis Energy is a purchaser of gas and, as part of a joint venture, a gas miner. In future, Genesis Energy may also consider becoming an opt-in gas participant but to date has chosen not to opt-in.

### Point of Sale

Genesis Energy welcomes the change from “point of valuation” to “point of sale” for measuring gas emissions, and expects that this will simplify the operation, and enhance the accuracy, of the scheme.

Most gas sales are via one or more transmission systems, and there are multiple points along the delivery chain where gas is able to be sold and therefore gas title can change. Furthermore, the emissions properties of a volume of gas will alter as it mixes into a shared transmission system. If point of sale is defined as per generally accepted accounting practice, then opt-in could occur at any one of multiple points along the delivery chain. Given these factors, Genesis Energy suggests that the “point of sale” (where gas is to be measured) should be at a revenue-grade meter located where the gas leaves the producer’s processing/production facility. This point of measurement would be clearer, and would provide a workable point at which to determine the applicable emissions factor for sales gas and from which to deduct opt-in gas emissions.

### Gas Analysis Information – Opt-in Participants

One of the critical issues for opt-in participants is access to transparent, verifiable, gas analysis information that can be relied on for reporting and emissions liability calculation purposes.

The amendment to the point of sale definition suggested above would make it clear which gas stream must be analysed, but opt-in participants are unlikely (under existing long term gas arrangements) to have contractual rights to the required analysis information held by the miner. Similarly, it is unlikely that they will have a contractual right to access the site or meter to obtain their own samples for analysis.

The need to rely on information from the miner also raises concerns in relation to the penalty liability, which would lie with the opt-in participant (following an opt-in) where information provided by a miner is incorrect and has resulted in an incorrect calculation of emissions liability. While these penalties may be reduced (pursuant to section 135 of the Act) on the basis that the participant has relied on all the information that was available to them, this reduction is subject to the discretion of the chief executive and there is no indication as to how such discretion would be exercised.

Given these difficulties, Genesis Energy recommends that a pragmatic solution would be for the MED to publish “official” emissions factors for each sales gas stream from a field, based on the previous year’s returns from the relevant miner or, alternatively a general emissions factor for specification gas (as is used for the gas storage calculation), which in either case would be used for the purpose of calculation by an opt-in participant of the emissions liability (regulation 49) and for the “EO” deduction in regulation 16(4). Field-specific default factors may mean that emissions factors for opt-in purchasers would lag changes in emissions factors for miners, however Genesis Energy considers that any potential disadvantage from this short lag time is outweighed by the benefits.

The benefits would be transparent, reliable, accurate information for reporting purposes and limited administrative costs. This approach would ensure that there are not significant barriers to use of the provision in the Act for gas opt-in. Use of officially published default factors for gas opt-in would also facilitate transparency for downstream contractual arrangements, as emissions liabilities may be passed contractually to industrial and wholesale gas consumers.

Genesis Energy also notes that some clarification of the definition of “class of gas” in regulation 3A(d)(i) is desirable if subsection (i) is intended to refer to the sales gas (measured at the sales gas point of sale) from a specific field (with LPG, propane and butane covered by the later subsections of the definition).

#### Gas Analysis Information – Miners

Genesis Energy expects that it will not be practical for miners to provide accurate figures for the volumes of CO<sub>2</sub> and CH<sub>4</sub> within vented gas streams. Similarly, it may not be practical to capture accurate information with respect to flared gas streams. Accordingly, Genesis Energy would support default factors for the calculation of these volumes, which, if possible, uses existing reported information

### Downstream Losses

Genesis Energy supports the Ministry's proposal<sup>1</sup> to remove the losses term from the equation in regulation 16(4) and to, in effect, change the oxidation factor in regulation 16(2) from 0.95 to 1.0 (by removing the "OF" term). This is a pragmatic simplification of the measurement obligation for miners.

### Verification Requirements for Sampling and Testing of Gas

The Ministry has acknowledged that there are no verification requirements for the testing and sampling regime for gas and is seeking feedback on an appropriate process.

A robust and transparent process is required to ensure that the information to be collected and used for emissions liability calculations is representative of the gas stream from the relevant field, ensures the correct accounting of emissions embedded in the relevant gas stream, and does not encourage behaviour which may detrimentally alter the commercial incentives of parties.

Genesis Energy recommends that the regulations specify parameters relating to the number of samples to be collected and the intervals and timing of the collection of such samples (which may have to relate to the operational activities of the processing plant). Further, the sampling and testing should be subject to verification procedures similar to those in the UEF regulations.

### Clarification of Regulation 16

Genesis Energy has two suggested points of clarification in the drafting of regulation 16:

- regulation 16(1)(a) should clearly indicate that it includes gas sold to opt-in participants; and
- the definition of 'C' in regulation 16(2)(1) should clearly indicate that it covers total gas for the relevant subsection only (i.e. each of the subsection (a) to (e) of regulation 16(1) separately as individual calculations), not for the sum of the subsections.

### **Participant Thresholds**

The Ministry is seeking feedback on thresholds for becoming an ETS participant. Genesis Energy suggests that a threshold for importing coal would be sensible,

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<sup>1</sup>Set out in an email note dated 2 July 2009 sent by Katherine Wilson to all gas sector workshop participants.

and that for consistency with the coal-mining threshold, it should be set at 2,000 tonnes.

Similarly, it may be sensible to set thresholds for combustion of waste products at weights that approximate an equivalent level of emissions as combustion of 2,000 tonnes of coal. For simplicity, it would be best to set a threshold for each class of waste independently rather than trying to establish a cumulative threshold.

Using consistent thresholds would ensure that relative costs and emissions intensities drive fuel use decisions, rather than artificial incentives to avoid obligations.

### **Unique Emissions Factors**

#### Methane (CH<sub>4</sub>) and Nitrous Oxide (N<sub>2</sub>O) Factors

Genesis Energy supports in principle the proposition (raised at the coal workshop) that participants should be able to apply for UEFs with respect to CH<sub>4</sub> and N<sub>2</sub>O emissions from coal and gas combustion. These factors are boiler-specific, so allowing for UEFs could provide a price signal with respect to boiler design and operation. This would be consistent with the intent of the Act.

Units 1 to 4 at the Huntly power station are typically fuelled by a mixture of gas and coal, so Genesis Energy could not apply the continuous monitoring method in the regulations for waste combustion (regulation 18) as drafted. If the waste regulations were to be adapted for coal and/or gas, then it would be necessary to move from a continuous monitoring regime to a periodic sampling regime based on flue gases. Genesis Energy proposes that this representative sampling for UEF purposes could be carried out in one concentrated period each year, with a number of samples taken over a range of operating loads for each fuel.

As the four dual-fuel boilers at Huntly are identical, it should be acceptable to derive a UEF for all four boilers based on sampling from one of the boilers. In principle, this approach could also apply to other industrial boilers.

Notwithstanding the above, Genesis Energy appreciates that implementing UEFs for CH<sub>4</sub> and N<sub>2</sub>O is unlikely to be a priority for the first iteration of the regulations. As well as the measurement issues discussed above, such a regime would imply a need to track the end-use of opt-in fuels. For example, the gas that Genesis Energy purchases is:

- used to fuel two different gas turbines;

- blended into the Unit 1 to 4 boilers;
- traded at wholesale level; and
- sold to commercial, industrial and residential retail customers.

If we had a UEF specific to the Unit 1 to 4 boilers, then the volume of gas combusted in that plant, and the resulting emissions, would need to be accounted for separately.

### Verifiers

There was discussion at the Ministry's coal sector workshop regarding the need for an approved verifier. Genesis Energy supports the use of pre-existing statutory licensing regimes as a means of ensuring verifier integrity in preference to either developing a custom verifier approval regime, or providing verification services through the Ministry for Economic Development.

If the regulations rely on statutory licensing (such as the chartered accountant and chartered professional engineer regimes), then it shouldn't be necessary to augment these with additional criterion such as those in regulation 21(2)(b) and regulation 21(3). Similarly, it shouldn't be necessary for there to be a separate "recognition" process. These schemes already provide for competence assessment and include complaints processes for practitioners operating outside their competence. The recognition process would simply narrow the pool of verifiers and add costs.

However, it would be useful for the Ministry to maintain a simple web page listing parties that offer verification services.

### Approval Criteria

By using the word "may" in regulation 5(1), the regulations appear to provide the chief executive with discretion to decline an application for a UEF even though a participant has satisfied all of the approval criteria set out in the regulations. This residual discretion could deter participants from investing in the process of applying for a UEF.

Genesis Energy believes it would be preferable to ensure that regulation 5(1) captures all of the relevant approval criteria explicitly, and to replace "may" with "shall" or "must". This would not deprive the chief executive of discretion in how he or she assesses compliance with the listed criteria, and the chief executive would also retain the discretion to apply conditions under regulation 5(2)(b).

In conjunction with the change recommend above, the requirement in regulation 4(2)(c)(ii) for a plan for ongoing testing could be brought within the scope of the certification provided by a verifier under regulation 4(3).

Units of Measurement

Genesis Energy recommends that, as far as practicable, the units of measurement should be consistent across all sectors and activities covered by the regulations. This would help to reduce the likelihood of error, as well as allowing a consistent approach to rounding.

If you would like to discuss any of these matters further, please contact me on 04 495 3348.

Yours sincerely

A handwritten signature in black ink that reads "Ross Parry". The signature is written in a cursive, flowing style.

Ross Parry  
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Genesis Energy