



Submission by Genesis Power Limited

Trading as Genesis Energy

ON

Climate Change (Stationary Energy and Industrial Process)
Regulations 2008

Draft for Consultation

22 DECEMBER 2008

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Appendix A: Emission Factors for Genesis Energy's Imported Coal

1. Executive Summary

1. Genesis Energy welcomes the release of the draft Climate Change (Stationary Energy and Industrial Processes) Regulations 2008 ('the draft regulations') and is pleased to be able to provide the Ministry for the Environment ('the Ministry') with comments on them.¹
2. Genesis Energy is also pleased that the draft regulations reflect, to a substantial degree, the co-operative efforts of the industry members of the Stationary Energy and Industrial Process Technical Advisory Group and officials. Genesis Energy was pleased to have been able to contribute to this work.
3. However, having now seen the draft regulations, their complexity has become fully apparent. This complexity is driven in large part by the prescription of methodologies that allow participants to measure and report their emissions in line with what they actually emit (as opposed to the 'deemed' emissions from the activities defined in Schedules 3 and 4 of the Climate Change Response Act 2002).
4. While this goal is welcome, the complexity and high level of prescription is not. As a result, the draft regulations will, in Genesis Energy's view, struggle to meet the Ministry's own assessment criteria, particularly that they be of least cost to the participant and the economy, pragmatic and simple.² Further, if the regulations are to prescribe and become truly representative of the complete range of stationary energy operational circumstances then they can only become even more complex.
5. Genesis Energy's understanding of the Climate Change Response Act (the 'Act') was that it was intended to mirror the approach taken to tax enforcement (that is, self-compliance and audit, guidelines and binding rulings). Instead, under the current approach, participant's risk getting the worst of both worlds and the benefits of neither – that is, strong and clear incentives to report accurately in the Act combined with an attempt at detailed prescription in the regulations.
6. Detailed methodologies, calculation rules and information requirements are unnecessary. Instead, Genesis Energy suggests that the regulations

¹ While the focus of Genesis Energy's submission is on the methodologies and information collection requirements associated with the stationary energy sector, the approach set out in this submission may have broader application to the industrial process components of the regulations.

² Emissions Trading Bulletin, Climate Change (Stationary Energy and Industrial Processes) Regulations 2008: draft for consultation, No 8, October 2008, page 2, column 2. While less clear cut, Genesis Energy also considers that the regulations as drafted will also have difficulty in meeting at least two more of the criteria – these being transparency and verifiability.

should be simplified to focus on achieving accurate reporting of the activities specified in the Act. The regulations should also allow options for participants to calculate their emissions in a way that best reflects actual emissions having regard to their operations. This approach is appropriate given that the entire trading regime is new. This approach will:

- a. make compliance significantly easier for the majority of participants whose operational processes are relatively straight-forward;
 - b. provide flexibility and choice for those participants who wish to account for operational complexities such as fuel stockpiles or any other numerous operational nuances; and
 - c. not compromise accuracy of measurement and reporting, which is also driven by the stringent compliance regime in the Act and the strong incentives embodied in it to accurately report all emissions.
7. The tax-regime type approach should enable a significant simplification of the regulations and in doing so, better balance the costs of implementation and compliance with the level of prescription required to achieve sound reporting. In light of the strictures of the Act, accuracy is virtually assured under this approach. Genesis Energy also considers that its proposed approach is more consistent with the Ministry's own criteria. As a final safety-valve, the Government always retains the sovereign right to strengthen the regulations should it not be satisfied the right outcomes are being achieved.
8. In this submission, Genesis Energy sets out a framework within which to consider issues around the level of prescription considered appropriate, and proposes how this can be done with regard to the stationary energy sector. Genesis Energy also provides the Ministry with its views on how to align the regulations drafted under the direction of an Act which is likely to change significantly over coming months.

2. General Comments

9. As a major participant in the energy sector, Genesis Energy has a number of issues that it wishes to raise regarding the specifics of the draft regulations. However, before getting into the detail of the specific issues, Genesis Energy has some introductory comments that relate to the:
 - a. relationship between the new Government's plans with regard to the form of the emissions trading scheme and the detail of the regulations currently being consulted on; and
 - b. nature of the consultation being undertaken by the Ministry.
10. Genesis Energy comments briefly on each of these below.

Convergence with the Priorities of the New National-led Government

11. Officials find themselves in an unenviable position, that is, of developing a set of regulations based on an Act passed by the previous government that the new National-led Government has announced it will change.
12. Acknowledging the current uncertainty as to the ultimate outcome of the recently established select committee process, the Act clearly guides and sets the overall 'tone' for the content of draft regulations. If the Act changes, this may well have implications for the 'tone' (if not content) of the final regulations. This could be reflected in such factors as the nature of the obligation imposed (particularly if intensity-based), its timing, and/or its stringency. If a carbon tax were to be introduced, for example, the opt-in regulations may become irrelevant.
13. Genesis Energy is not arguing, nor wishes to be seen as arguing, that a set of regulations outlining how to measure and report emissions is not required. Genesis Energy accepts this requirement as part of the current obligation on business to calculate the extent of their emissions. Genesis Energy considers, however:
 - a. it would be prudent for the Ministry not to proceed with these regulations along the lines drafted if, as a result of the review, the commencement date for the stationary sector is delayed or at least until the scope of any changes to the Act are better understood; and
 - b. for reasons of good process, the Ministry should re-consult on the draft regulations before they are finalised. Participants must be given the opportunity to review the extent to which:

- i. their initial feedback from this consultation round has been accommodated; and
- ii. the tone and content of the new or amended Act have been incorporated.³

The Consultation Process

14. Genesis Energy also wishes to express its concern at the absence of a formal consultation document. The Ministry issued the Emissions Trading Bulletin (No. 8, October 2008) which contained some high-level information about the content of the draft regulations, but failed to clearly explain officials' thinking behind the specific detail of each regulation.
15. Genesis Energy contrasts the Ministry's use of the Bulletin to that of the draft regulations recently consulted on by the Ministry of Economic Development. The Ministry of Economic Development's consultation paper attempted to work through the options and explain their pros and cons and the logic that led the Ministry to the conclusion it reached.
16. In contrast, Bulletins can be characterised as explanatory documents. The emphasis of the less formal Bulletins is on explaining what has been decided, rather than setting out the range of available options and the analysis that was undertaken to reach the position settled upon. This was reflected in the Ministry's press release accompanying the publication of the draft regulations.
17. The lack of a detailed consultation document explaining officials' thinking has, at times, made it difficult to understand and properly comment on the considerable detail of the regulations. Accordingly, Genesis Energy believes that the Ministry's approach is unsatisfactory and does not meet the legal standards for information disclosure for consultation processes.
18. Genesis Energy urges the Ministry, when re-consulting on the draft regulations during 2009, to outline its thinking more fully.

³ This reconsultation should, in Genesis Energy's view, coincide with the consultation on the application of unique emission factors. See Section 6 below for further comment on this matter.

3. Developing a Framework for an Emissions Reporting Regime

19. Genesis Energy considers that the work on the draft regulations is not appropriate having regard to the:
- a. complexity of the regime that has been developed and the likelihood of further complexity being required before the regulations are finalised; and
 - b. apparent development of the draft regulations in isolation of the stringent compliance regime set out in the Act and the incentives that the Act already creates for participants to report emissions accurately.
20. These two points are expanded upon in the following sections.

Balancing Prescription with Flexibility and Least Cost Compliance

21. The technical sub-group, of which Genesis Energy was a participant, did not address the question of who is best-placed to determine the accurate measurement and reporting of emissions, or how. Instead it was assumed that the need for methodologies implied detailed, prescriptive process descriptions.
22. It may have also have been assumed that a prescriptive approach to the regulations would give participants greater certainty regarding their precise obligations and how to meet them. This presumption was not tested by the technical sub-group.⁴
23. No evidence has been provided by the Ministry (either during the working group process or in the Bulletin) that taking a prescriptive approach to the measurement and reporting will deliver a more accurate result. This is assumed to be the case. Finally, no evidence has been presented showing how an increasing level of precision of measurement and reporting will lower the cost of New Zealand's Kyoto obligation.
24. To some degree, industry participants were complicit in arriving at the outcome set out in the draft regulations. Industry participants sought to

⁴ It is this presumption, coupled with the strong incentive of industry participants to ensure that their own particular circumstances are covered in the regulations, that will see them grow exponentially in complexity. For example, the draft regulations containing the calculations that must be used to determine the emissions from a particular class of coal imported, mined, purchased or stockpiled in a year include a requirement to calculate the "weighted average calorific value" of the class of coal. The regulations do not define how the weighted average calorific value is to be calculated or the records that must be kept to enable the regulator to verify the calculation. This information would be required in the regulations in order to more fully satisfy officials that emissions are being appropriately measured.

ensure that their own specific operational circumstances (such as fuel stockpiles) were allowed to be measured.

25. However, the end result is that the draft regulations lose their way in a mire of detail and complexity. In doing so, they remove choice and flexibility without improving, or ensuring, accuracy of measurement and reporting.
26. Fundamentally, Genesis Energy considers that the intention underlying the draft regulations of accommodating operational practices is correct. However, in seeking to accommodate such operational practices (and the extent to which these practices would result in a difference in the emissions that would be reported if calculated solely by the activity prescribed in Schedules 3 and 4 of the Act), the regulations have become over prescriptive and unwieldy.

The Requirements of the Act

27. It is helpful at this point to briefly review what the Act says about the nature of the regulations. Section 62 of the Act contains the monitoring and measurement obligations of participants. Participants are required to collect, in relation to their activities defined in Schedules 3 and 4 of the Act, the data or other information prescribed in regulations. They are also required to calculate the emissions from their activities in accordance with methodologies prescribed in regulations. These requirements are reflected in the associated regulation-making power in section 163, which enables regulations to be made prescribing:
 - a. a methodology or methodologies for calculating emissions; and
 - b. the data or other information that participants must collect, and (if relevant) the mechanism or method by which it must be collected.
28. Genesis Energy's interpretation of these provisions of the Act is that the regulations must contain at least one methodology for calculating emissions from each activity prescribed in Schedules 3 and 4 of the Act. Similarly, regulations have to prescribe, at some level, the data and information that must be collected by participants in relation to their activities. If the regulations failed to prescribe at least one methodology, or the data and information, then participants would have no way of complying with their obligation to monitor and report in accordance with the requirements in regulations.
29. This leads to the following key observation that the required methodology is for calculating emissions from an upstream stationary energy "activity". Strictly speaking, there are no emissions from many of the activities defined in the Act, for example, the importation of coal or the purchasing of

gas. Rather, emissions mainly occur as a result of any downstream process, for example, combustion.⁵ This fact underlies what the regulations need to contain - they have to contain enough detail to stipulate conventions on how emissions are to be measured, calculated and reported from a particular activity that otherwise has no emissions. This provides for a degree of flexibility regarding how emissions can be calculated and reported. In turn, information collection obligations should match and support the flexibility of the methodology obligation.

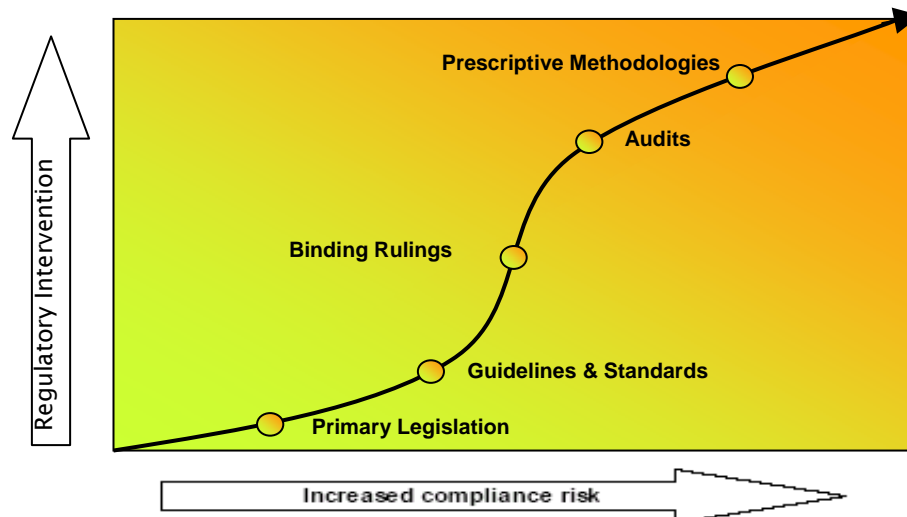
30. Genesis Energy believes that in order to have an enduring regime that will accommodate existing varied and complex operations of participants and also changing operational practices and technologies in to the future, the draft regulations not only need to be, but can be, recast away from detailed prescription and back to the minimum required under the Act – the activities set out in Schedules 3 and 4 of the Act. Rather than commencing with over-prescriptive, complex regulations from the outset, simplicity, ease of understanding and application, and minimisation of compliance costs should be given more weight.
31. This is not special pleading for a reduced obligation. Genesis Energy is strongly of the view that all emitters must fairly face their share of the burden. Instead, it seeks to place the degree of prescription set out in the regulations into context.
32. Genesis Energy appreciates that the Ministry has gone some way towards simplifying the draft regulations (emission factors for coal, for example, could have been set at the level of the mine), but believes that further steps can be taken in this direction while preserving the overall integrity of the emissions reporting regime. These steps are outlined in Sections 4 and 5 below.
33. Finally, Genesis Energy believes that taking the draft regulations back to the activities set out in Schedules 3 and 4 of the Act will not reduce the accuracy of what is reported by participants. Quite the contrary. Genesis Energy considers that accuracy will be assured. This contention is based on:
 - a. the fact that accuracy of emissions reported is intended and required to be based on the activities set out in Schedules 3 and 4 of the Act; and
 - b. the extremely strong incentives in the Act to report emissions from all emitting activities.

⁵ Genesis Energy appreciates that there are also upstream activities that result in emissions, such as mining coal and gas. However, these instances do not, in Genesis Energy's view, detract from the point being made – that the nature of the Act allows for a substantial simplification of the regulations as currently proposed.

Taking a Risk-adjusted Approach to Determining the Appropriate Level of Prescription

34. Before moving on to Genesis Energy's proposed approach, it is worthwhile briefly touching on how Genesis Energy generally thinks about what degree of prescription is desirable.
35. Prescriptive rules are not necessarily the best mechanism to manage compliance risk. A clear framework under which to choose the most appropriate regulatory tool is required to help ensure that the outcome is robust, defensible against criticism and (until circumstances suggest otherwise) durable. A potential framework is outlined in Figure 1 below.

Figure 1: Matching Risk to Regulatory Mechanisms Adopted



36. This diagram outlines a simple risk-adjusted framework. It shows that as the compliance risk increases (in this case, the risk of material under-statement of emissions required to be reported), so too should the strength of the regulatory mechanism used. The higher the potential impact of the compliance risk and the greater its likelihood of eventuating, the more appropriate prescription becomes. The onus is on the Ministry to demonstrate that the risks of non-compliance (under-reporting) are such that a detailed prescription of what is sought is warranted.
37. An increasingly complex and technologically-orientated issue does not necessarily require more detailed rules and detailed prescription seeking to address all aspects of measurement and reporting is not the only path available.
38. Subpart 4 (offences and penalties) of the Act sets out a rigorous and potentially onerous compliance regime (this regime is well known to

officials and so is not repeated here). In addition, this regime provides for the use of 'tax-regime like' compliance tools of guidelines and standards, binding rulings and audits. Genesis Energy believes that when considered as an overall package, these tools provide sufficient incentive to participants to appropriately measure and report their emitting activities and that prescription should only be relied upon as a last resort.

4. Guidelines for Developing Methodologies

39. In light of the comments above, Genesis Energy suggests that the approach outlined below be used to underpin the Ministry's refinement of the draft regulations.
40. Rather than seeking to prescribe methodologies which accommodate and address the various operational practices of all participants, the regulations should better reflect the balance between the:
- a. basic monitoring and reporting needs for the majority of participants;
 - b. unique operational circumstances of a small number of participants; and
 - c. incentives these participants will have to accurately comply with reporting obligations.
41. In essence, a more targeted approach is desirable:
- a. for most participants, the application of the regulations will be reasonably straight-forward, concerning one upstream 'activity' and one class of fuel. The activity methodologies (or calculations) can enable such participants to focus simply on the activity as defined in the legislation. Given its simplicity, accuracy is virtually assured;
 - b. it should avoid attempting to completely specify how particular information is to be collected, calculated and recorded for the full range of participants as:
 - i. this will make the regulations unwieldy; and
 - ii. prescribing detailed calculations will prove inflexible and costly and ultimately act to the detriment of achieving compliance and accurate measurement and reporting; and
 - c. where more sophisticated methods of measurement are desirable for major emitters, these should be facilitated in the regulations, but not specified by way of calculations. The requirements for those wishing to adopt more complex methods of calculation generally involves moving further downstream towards the point of combustion. This flexibility will enable the use of measurement methods that more accurately reflect the level of actual emissions

compared to the 'deemed' emissions and be more practical thereby ensuring compliance.

42. In addition, such an approach should:

- a. place greater reliance on the flexibility mechanisms already contained in the Act such as the use of guidance notes and standards, and rulings. Where participants do not wish to bear the risk of their calculation being subsequently shown to be incorrect, or wish to reduce the uncertainty in the application of it, they must be able to seek a binding emissions ruling. Similarly, the regulator should be proactive in issuing guidelines and standards. The current draft regulations do not authorise the regulator to issue such guidelines and standards, and this oversight should be rectified;
- b. adopt a consistent and easily verifiable unit of measurement. The draft regulations defines 'energy content' as gross energy content measured in joules and Genesis Energy considers that its common use across the energy sector makes it ideal as the appropriate unit of measurement. Emissions are most easily derived from joules multiplied by the appropriate emission factor; and
- c. seek to use, where possible, information flowing from commercial arrangements, such as invoices, as the appropriate supporting sources of information. This is an easy and reliable source of verification information.

43. Genesis Energy considers that adopting these guidelines in the refinement of the draft regulations would have a number of advantages. Adoption of the guidelines would result in regulations that:

- a. better meet the Ministry's own assessment criteria set out in the Bulletin;
- b. focus on what was sought under the Act – the prescribed upstream activities;
- c. allow for measurement to take account of downstream activities nearer the point of combustion, where operational circumstances suggest this is sensible to do;
- d. rely on the strong incentives set out in the Act to ensure participants report all emitting activities accurately;
- e. let businesses determine the least cost form of compliance;

- f. be the simplest way of delivering on the objective of efficient and accurate measurement and reporting of emissions;
- g. accommodate changing operational practices and technologies;
- h. allow for continuous evolution should material problems with under or over-reporting arise; and
- i. provide participants with sufficient protection against the risk of regulatory opportunism.

5. Implementing the Suggested Approach

44. Genesis Energy considers that the regulations relating to the activities of importing coal, mining coal, importing natural gas, mining natural gas, purchasing coal and purchasing natural gas can all be simplified to the following calculation (for each class and aggregated as appropriate at the appropriate point of measurement):

$$E = \sum GJ_1 \times EF_1 + GJ_2 \times EF_2 + \dots + GJ_n \times EF_n^6$$

45. The key determinant of how emissions from each activity are then to be calculated and reported would become the content of the regulations regarding the:
- source from which the 'relevant' GJs would be derived; and
 - prescribed data and information to be collected to verify that source.
46. The regulations could prescribe that GJs may be derived from tonnages multiplied by calorific values of fuel imported, mined, purchased by or sold to opt-in participants, vented or flared or exported as the case may be, with the possibility of making an adjustment (for example, for storage or stockpiles).⁷ Any adjustments would result in reported emissions more closely reflecting a participant's actual emissions (for example, upon combustion) than what would in effect be their 'deemed' emissions from an upstream activity (for example, importation). In doing so, the regulations would provide participants with a 'menu' of choices about how to calculate their emissions while preserving the overall integrity of the emissions reporting regime.
47. For most participants, the identification of relevant GJs will be straight-forward. But for others, such as Genesis Energy, the process will be much more complex. The 'GJ menu' approach suggested by Genesis Energy gives participants the flexibility to choose the method most suited to their circumstances, and to perform the calculations in a manner that is not only accurate and verifiable, but also cost-effective.
48. In terms of the information to be collected, the regulations could simply prescribe that the information to be collected is the information actually

⁶ Where the references to 'GJ' and 'EF' are defined, as appropriate in the redrafted regulations.

⁷ However, Genesis Energy also believes that for practical reasons, not all emissions may be able to be captured – at least in the near term and for existing operations. In these cases, some emissions may need to be verified by way of approved deemed quantities where either simply not measurable or not without substantial cost. Examples are venting and flaring for mined natural gas and fugitive emissions for coal mining.

relied upon by the participant to derive the relevant GJs. The various sources of acceptable information, and the methods for collecting it, could be left to standards and guidelines. This could greatly facilitate compliance, since compliance with the guidelines is deemed compliance with the information requirements in the regulations.

49. Use of this approach would:

- a. make use of the incentives which the Act firmly places on participants to accurately calculate and report emissions in accordance with the regulations. The strong incentives present would ensure that participants accurately monitor and record those elements of the activity from which the GJ numbers are derived (and ultimately emissions);
- b. accommodate the fact that some participants face unique and/or changing operational circumstances (such as Genesis Energy);
- c. provide for the flexibility for participants to account for their emissions in a participant-specific manner (for example, the ability to adopt some form of proportional method where the extent of different classes of fuel in a single stockpile is not known, as is the case with Genesis Energy's coal stockpile⁸); and
- d. enable readily available information from, for example, invoices based on metered, weighed or contracted quantities to be used to verify GJs purchased and sold.

Comments on the Specific Methodologies

50. Should the Ministry wish to adopt the approach suggested by Genesis Energy, the key element of the approach is stipulating what the reference to GJs is allowed to be. This aspect is important as it is the 'menu' of options for the calculation of GJs that underpins the benefits that will flow from the approach.

51. In this section, Genesis Energy has, in tabular form, outlined for each of the methodologies relevant to it, the menu of options that should be included in the regulations, as well as the information requirements that would be needed to support them.

⁸ While Genesis Energy knows what tonnages of coal type (imported, domestic) has been placed on its stockpile, Genesis Energy has, to date, only recorded the tonnages taken off it and not the coal type used. Therefore, it will not know with any precision what its opening stockpile balance as at 1 January 2010 by coal type is. For the same reason, it will not know with any degree of precision what its closing stockpile balance by coal type will be as at 31 December 2010 without the implementation of complex and costly processes. Therefore, as drafted, Genesis Energy could not exercise the choice of including a stockpile adjustment, despite doing so being the intent of the regulations.

Methodology	Information requirements
<p><u>Importing Coal</u></p> <p>The reference to 'GJs' could relate to any combination of imported tonnages and calorific values, movement in GJ stockpile balances, GJs exported or GJs combusted</p>	<p>The information requirements for all of these activities are essentially the same - the regulations should prescribe that the information to be collected is the information relied on by the participant to derive the relevant GJ number. It is likely that at a minimum, this should include at least some data or information generated independently from the participant (for example, sale invoices).</p>
<p><u>Mining Coal</u></p> <p>The reference to 'GJs' could relate to any combination of tonnages mined and calorific values, movement in GJ stockpile balances, GJs exported, sold to opt-in participants, combusted, gifted, flared, vented or released as fugitive methane</p>	
<p><u>Importing Natural Gas</u></p> <p>The reference to 'GJs' could relate to any combination of GJs at the point of customs entry, movement in GJ stock balances, or GJs exported</p>	
<p><u>Mining Natural Gas</u></p> <p>The reference to 'GJs' could relate to any combination of processed GJs at the metered point of sale, movement in GJ stock balances, GJs exported, processed non-specification or specification sold to opt-in participants, combusted, flared, or vented</p>	
<p><u>Purchasing Coal</u></p> <p>The reference to 'GJs' could relate to any combination of tonnages and calorific values, movement in GJ stockpile balances, GJs exported or combusted</p>	
<p><u>Purchasing Natural Gas</u></p> <p>The reference to 'GJs' could relate to any combination of processed non-specification or specification GJs purchased at the point of sale, movement in GJ stock balances, GJs exported, or combusted</p>	

Comments on Two Specific Methodologies

Mining Natural Gas

52. While Genesis Energy's suggested approach to the calculation for mining natural gas may on the face of it appear overly simplistic, Genesis Energy has the following comments which underpin the simplification:

- a. the fundamental point of measurement for mined natural gas should be the Point of Sale (the 'PoS'). This is a more appropriate point of recording this information than the Point of Valuation (the 'PoV') for the following reasons:
 - i. the PoV is:
 1. a notional point used in accounting calculations to determine costs taken into account for the purpose of calculating royalties and does not appear to be well-suited to the purpose of the draft regulations;
 2. defined by the Minister of Energy in consultation with the permit holder. Genesis Energy understands that it took eight years to settle on the Maui PoV;
 3. not necessarily a fixed metered point. As such it is likely to vary according to field and plant configuration and for each product from the wellstream; and
 4. not a point at which volumes are measured; and
 - ii. the PoS is a measured quantity, generally with a third-party involved and therefore provides a degree of certainty around the measured volumes of gas. The simplified calculation reflects the regulated activity of mining gas as at the PoS;
- b. the categories or classes of natural gas can be simplified. Genesis Energy sees no need for the three categories of unprocessed, processed and specification gas, nor their associated emission factors (for a discussion of the emission-factor issue see section 6 below).

All gas at the PoS (and downstream of the PoS) is processed gas and, with the exception of some direct-supply non-specification gas

from Kapuni, is also specification gas. Genesis Energy is unaware of any material use of other processed, non-specification gas. The use of an unprocessed class of gas appears unnecessary, and any use of unprocessed coal seam gas is for the foreseeable future likely to be extremely small and should only be included in the regulations once material in scale. Emissions associated with gas which is vented or flared can be accounted for separately at their own emission factors if physically measureable (which Genesis Energy understands in most cases is unlikely with any degree of reliability or accuracy) before the PoS thereby ensuring that emissions between the wellhead and the PoS are captured; and

- c. unaccounted-for-gas can be ignored for the purposes of these regulations. Two factors are relevant to this point, these being:
 - i. losses on the high pressure transmission are extremely low and likely to be under any reasonable margin of error; and
 - ii. measurement of all emissions should notionally be at the PoS (including for opt-in participants) such that in the unlikely event that there is a difference at the producer's PoS between metered quantities delivered to an opt-in participant and the metered quantity of gas at the PoS this would be dealt with in the same way as gas vented and flared. That is:
 - 1. responsibility for the emissions should remain with the producer; and
 - 2. the cost of any residual emission obligation (that is, differences between production and delivered sales) should be allocated via commercial negotiations.

Purchasing Natural Gas

- 53. Similar to the methodology for mining natural gas, Genesis Energy considers that there is no need to account for unaccounted-for-gas in this regulation. Measurement of all emissions as at the PoS removes the need to address any gas lost in the transmission system as it is already adequately captured. Any further losses in relation to the quantity of gas contracted to be delivered to the opt-in participant will automatically be the responsibility of the opt-in participant.
- 54. Genesis Energy considers that the liability of the opt-in participant should also be measured at the PoS for the amount allocated to the participant

under the transmission regime. This is because participants will not always refer to the point of delivery. Unders and overs of amounts delivered (as compared to allocated) are carried forward and most importantly, readily verifiable information for determining the amount of gas delivered to each opt-in participant can be supplied in the form of *existing* documentation used to determine the amount of gas transmitted and delivered.

Issuance of Standards, Guidelines and Binding Rulings

55. An important corollary to the approach suggested by Genesis Energy is the full utilisation of the compliance tools available to the regulator.
56. In addition to the stringent penalty regime, two other compliance tools are available under the Act. These tools are aimed at providing both the regulator and participant's greater certainty regarding the Annual Emissions Returns, and are:
 - a. the Act allows for regulations to authorise the regulator to issue standards and guidelines about the data or information that must be collected, and to state that adherence with the standards or guidelines is to be treated as compliance with the requirement in the regulations (s.163(1)(d)). This does allow the regulator some flexibility about how he or she expects data and information to be collected, and may allow different approaches for different participants/situations. This ability only applies to the requirements for collecting data and information, not to how the calculations are to be carried out; and
 - b. it is possible for a participant to seek a binding emissions ruling from the regulator determining the correct application of any provision contained in a regulation to a particular matter (s.107). Emissions rulings would be helpful to reduce uncertainty in the application of any methodology.
57. Genesis Energy considers that the power to issue standards and guidelines be included in the final regulations for their use will contribute in no small way towards the elimination of the risk of regulatory opportunism. Similarly, the regulator should be adequately resourced, from the outset, to issue binding rulings as these may be sought prior to the commencement of the scheme for the stationary energy sector.

6. Matters of Detail

Emission Factors

58. Genesis Energy has a number of concerns regarding the proposed emission factors set out in Schedule 2 of the draft regulations. These concerns relate to the:

- a. poor consultation process concerning unique emission factors;
- b. uncertainty created by the process; and
- c. the use of multiple emission factors for natural gas.

59. Genesis Energy canvasses each of these issues below.

Consideration and Development of Unique Emission Factors: Process

60. Genesis Energy notes that the Bulletin (column 2 of page 3) states that:

“Officials are working on developing an appropriate method for establishing unique emission factors for use in SEIP activities and will develop regulations outlining the process by mid-2009. Further consultation will be undertaken on the proposals for unique emissions in 2009.”

61. As a matter of principle, Genesis Energy considers it extremely poor practice to have separated the consultation on these draft regulations from consultation on proposals for unique emission factors. Genesis Energy can only presume that the haste with which these regulations were released prior to the election prevented the inclusion of such a discussion. Genesis Energy urges the Ministry to release its view of emission factors in concert with the default factors when it re-consults on the entire package, as recommended by Genesis Energy, during 2009.

Consideration and Development of Unique Emission Factors: Uncertainty

62. In addition to the purely process point above, Genesis Energy considers that the absence of clarity about the potential inter-relationship between default and unique emission factors creates uncertainty for participants. As Genesis Energy understands, it is likely that the two types of factors are connected – that is, a move to a unique factor by one participant may well affect the factors used by other participants for that activity. As such the picture presented in the regulations is slightly misleading as the default factors in the regulations may be subject to change.

63. This creates unnecessary uncertainty for those who would otherwise use the default factors. Genesis Energy considers that the implications of the use of unique emission factors should have been developed and released for comments so that it could have been assessed by submitters in the broader context of the current draft regulations.
64. A particular outcome of the way in which the Ministry has dealt with the issue of unique emission factors is the questions raised in light of the review of the Act announced by the new Government. In particular, participants to whom unique emission factors would be helpful (such as Genesis Energy) must now harbour some doubt as to whether the follow-up consultation will even occur, or whether the concept of unique emission factors will remain. For these reasons, Genesis Energy proposes that unique emission factors for its imported coal be included in the draft regulations now as default factors.
65. Owing to the specific design of the Huntly Power Station units 1 - 4, Genesis Energy's coal requirements are for a reasonably specific grade of sub-bituminous coal. This means that the coal imported fits within a reasonably tight emissions factor range similar to that of local Waikato sub-bituminous coal. Presently Genesis Energy only imports coal from the Indonesian territory of Kalimantan. Attached in Appendix A is a table of results for the calculations of emissions factors from some analysis carried out for shipments in 2005 (note that no Oxidisation Factor, CH₄ or N₂O factor has been applied to these figures). While Genesis Energy may look to other countries for imported coal in the future, its plant specific requirements mean that there will only be relatively minor variations in the quality of coal sourced.
66. As can be seen from Appendix A, the emissions factors are considerably lower than that proposed in Schedule 2 of the draft regulations for imported coal, and some sources have associated emissions factors that are actually lower than sub-bituminous coal mined in New Zealand.
67. Genesis Energy also wishes to stress that application of the default factors for Genesis Energy's imported coal is not without cost. Genesis Energy's calculations show that the cost of its obligation to surrender permits for its emissions would increase by over one million dollars per annum were it required to use the default factors set out in the draft regulations.
68. Genesis Energy also understands that the importation of coal is currently confined to only one other participant in New Zealand. Considering the relative volumes, Genesis Energy would currently be the largest importer of coal by a factor of about five to six times. It would therefore seem more appropriate to set the default factor in the regulations that is more closely

aligned with observed experience. Genesis Energy contends that there is no good reason to stipulate emissions factors for New Zealand based on the IPCC report where it clearly has little relevance to current domestic practices.

69. Considering the similarity in emissions factors for sub-bituminous coal that Genesis Energy has proposed in Appendix A to that proposed for the prescribed activity of mining coal, Genesis Energy further proposes that the emissions factors prescribed in the regulations are set at the same values for each activity. Given the difficulties associated with calculating stockpile balances for different classes of coal (as noted above, Genesis Energy does not have separate stockpiles nor records of the different sources of coal in its stockpile) this would have the additional benefit of simplifying the requirements to track and account separately for these coal-types.

The Implications of Different Classes of Natural Gas and Associated Emission Factors

70. An important consequence of using multiple classes of natural gas (processed, unprocessed and specification) is the implications of the use of different emission factors.
71. Part of Genesis Energy's motivation for suggesting the simplification of the classes of gases is the need to be extremely careful that the gas field specific emission factors do not - for existing fields at least – inefficiently distort the decision making around gas purchases, or create 'carbon arbitrage' opportunities. This is particularly relevant given that due to the process by which gas is transported over the high pressure transmission lines, participants are almost certain to burn specification gas and not what they may have specifically contracted to purchase.
72. Consistent with the views expressed above in the discussion of the natural gas regulations, officials need to make sure that field specific emission factors only apply in those circumstances where that field's gas is not used via the transmission system (such as upstream of the PoS or in the case of Kapuni direct supply of non-specification gas). Specification gas is what is otherwise combusted and this emission factor should be used in all other cases instead of field specific factors.
73. Genesis Energy appreciates that differences will exist between field-specific emission factors and the specification gas emission factor and that this will, in all likelihood, either slightly advantage or slightly disadvantage gas purchasers, depending on the whether the differential favours the producer or purchaser. Genesis Energy can see no alternative way around this outcome except for the use of a single emission factor.

However, having said that, Genesis Energy believes that the use of these two types of emission factors is a pragmatic, relatively simple solution and that commercial negotiations will resolve any outstanding issues (similar to the expectation regarding any costs associated with venting and/or flaring).

Defining fees and charges

74. Schedule 1 of the draft regulations contains the placeholder for the chief executive to specify fees and charges to recover the costs associated with implementing the regulations. While no details have been provided, in light of some recent experience with the Ministry of Economic Development fee setting proposals, Genesis Energy thought it appropriate to set out its expectations regarding the quality of information sought when being consulted on regarding fees and charges. These are:

- a. Genesis Energy expects the Ministry to consult on the details of this schedule when it re-consults on the entire package of regulations during 2009;
- b. Genesis Energy considers that, in accordance with the Auditor-General's *Guidelines on charging fees for public sector goods and services* (the A-G Guidelines), and The Treasury's *Guidelines for Setting Charges in the Public Sector* (December 2002) ("the Treasury guidelines"), there must be a proper analysis of the actual costs involved;
- c. consistent with the A-G Guidelines, quantification should involve the identification of matters like the goods or services being produced, the volume of each good or service to be produced in a given period, and the volume and cost of resources required to produce them in that period (see paragraph 3.17); and
- d. adequate consultation must be undertaken on the analysis. In addition to the A-G Guidelines, The Treasury's *Guidelines for Setting Charges in the Public Sector* (December 2002) ("the Treasury guidelines") similarly state that consultation is important for making charging policies acceptable to the public, and this should include giving the public ready access to the cost data (both actual and prospective) from which costs and charges have been formulated.

Other issues

75. Genesis Energy has identified a number of technical issues that it wishes to raise in its submission for clarification purposes (although it should be noted that many of these issues arise from the considerable detail in the

draft regulations and may be automatically resolved if the simplified approach recommended above is adopted). These are as follows:

- a. *draft regulation 3(1), definition of “class”*: the definition does not define “class” in relation to “purchasing coal”, even though the draft regulations require participants to measure emissions in relation to each class of purchased coal. We suspect that this is an oversight and that the definition should appear in paragraph (b), which defines “class” in relation to “mining coal” as the class of coal listed in Table 2 of Schedule 2. The classes of coal in Table 2 of Schedule 2 should also apply to purchased coal. This is logical, and consistent with the definition of “class” in relation to “mining natural gas” and “purchasing natural gas” in paragraph (d);
- b. *draft regulation 16(1)*: the word “a” should appear in the definition of ‘H’ where it refers to gas allocated to a person who is “a” participant;
- c. *draft regulation 48(3)(b)*: the word “specification” should appear before “natural gas”;
- d. *draft regulation 49(1)*: in the definition of factor “EF₅”, the words “the class of” should appear before “processed natural gas”; and
- e. *draft regulation 49(2)*: in the definition of factor “B”, the words “the class of” should appear before the words “opt-in natural gas”.

7. Conclusion

76. The Ministry needs to re-evaluate the approach that it has taken to the development of the draft Climate Change (Stationary Energy and Industrial Processes) Regulations 2008.
77. While a re-evaluation would be expected as a matter of course as a result of the change in Government and its announcement to review the Act, its need is given added impetus by the prescriptive approach taken by the Ministry.
78. Genesis Energy acknowledges that it participated in the initial officials group work but having now seen the draft regulations, considers that a more appropriate approach can be taken. This approach is one in which the methodologies are simplified to focus on the activity prescribed in the Act and that those whose operational circumstances require it are enabled in the regulations to develop methodologies which they consider best reflect their operations. This approach, when combined with the use of standards, guidelines and binding rulings, will ensure accurate measurement and reporting, as well as providing protection to participants against the risk of regulatory opportunism.
79. Continual evolution and refinement of the application of these regulations can be expected as operational practices and technologies evolve. These factors, or issues with reporting accuracy, may result in the need to make the regulations more stringent or prescriptive over time. However, this should only occur if the experience of operating under the regulations demonstrated the need for it and where the Ministry can also demonstrate that any under or over-reporting is material and affecting the cost that New Zealand faces to meet its Kyoto obligations.
80. Finally, Genesis Energy urges the Ministry to wait until the review of the Act has been completed before finalising these draft regulations. Once the review has been concluded, the Ministry should re-consult on the draft regulations, including what it proposes with regard to unique emission factors.

Appendix A: Emission Factors for Genesis Energy's Imported Coal

Indonesian Coal CO2 Emission Factors - 2005 Deliveries

Coal ID	Ship (MV)	Total Moisture %	Ash % a.r.	Sulphur % a.r.	CV MJ/kg a.r.	Carbon % dry	Carbon % a.r.	Emission factor		
								tCO2/coal	ktCO2/PJ	
Adaro	Leo Forest	25.7	1.17	0.10	21.93	72.8	54.1	1.99	90.52	
	Lodestar Forest (I)	26.3	0.86	0.09	21.42	72.8	53.7	1.97	91.93	
	Royal Forest	25.3	1.23	0.09	21.84	72.9	54.5	2.00	91.51	
	Maritime Sirinant (I)	26.1	0.89	0.09	21.51	73.5	54.3	1.99	92.67	
	Lodestar Princess (I)	26.7	1.12	0.11	21.27	72.5	53.1	1.95	91.69	
	Lodestar Forest (II)	25.5	1.13	0.08	21.55	72.2	53.8	1.97	91.60	
	Crimson Forest (I)	26.1	0.99	0.08	21.43	72.30	53.4	1.96	91.50	
	Lodestar Princess (II)	25.7	0.85	0.09	21.55	72.80	54.1	1.99	92.12	
	Royal Forest (II)	25.7	0.78	0.08	21.72	73.3	54.5	2.00	92.02	
	Lodestar Forest (III)	26.7	0.71	0.10	21.45	72.1	52.8	1.94	90.42	
	Crimson Forest (II)	25.0	0.95	0.10	21.90	73.1	54.8	2.01	91.88	
	Maritime Sirinant (III)	26.2	1.09	0.10	21.14	72.3	53.4	1.96	92.63	
	Lodestar Princess (III)	25.4	0.98	0.09	21.80	73.4	54.8	2.01	92.18	
	Maritime Sirinant (IV)	26.8	0.77	0.07	21.23	73.0	53.4	1.96	92.37	
	Crimson Forest (III)	26.0	0.76	0.08	21.49	73.1	54.1	1.99	92.38	
	Genco Sugar	26.9	0.65	0.07	21.44	73.0	53.4	1.96	91.34	
	Lodestar Forest (IV)	26.7	0.78	0.08	20.98					
	Royal Forest (III)	25.4	1.19	0.11	21.44					
	Crimson Forest (IV)	24.7	0.74	0.10	21.79					
					mean	21.52		mean	1.98	91.80
							std dev	0.02	0.65	
Kideco	Bright Star	26.8	2.13	0.09	20.05	69.5	50.9	1.87	93.12	
	Crimson Forest (II)	26.7	2.29	0.09	20.40	70.0	51.3	1.88	92.31	
	Port Pegasus	27.4	1.85	0.08	20.10	70.4	51.1	1.88	93.32	
	East Tender	27.1	1.80	0.08	20.35	70.6	51.5	1.89	92.82	
	Pacific Logger	27.5	2.32	0.08	20.08	69.6	50.5	1.85	92.23	
	Sea Harvest	28.5	1.94	0.09	19.57	69.7	49.8	1.83	93.46	
	Cook Straight	28.0	2.13	0.10	20.96	73.3	52.8	1.94	92.41	
	Sea Harvest	28.0	2.08	0.10	19.17	69.4	50.0	1.83	95.66	
	Timaru Star	26.8	2.22	0.09	20.15	69.4	50.8	1.86	92.53	
	Royal Forest	26.0	1.99	0.10	20.31	69.8	51.7	1.90	93.33	
	STX Pioneer	27.2	2.33	0.07	19.73	69.2	50.4	1.85	93.71	
	Pitt island	26.7	2.03	0.08	20.05					
	Sea Riches	26.1	2.00	0.08	20.20					
					mean	20.09		mean	1.87	93.17
							std dev	0.03	0.97	
ABK	Star Chaser	21.7	2.33	0.18	22.77	72.3	56.6	2.08	91.24	
For comparison: Solid Energy Rotowaro coal Composite for 28/11 - 2/12/05		18.7	6.64	0.21	22.05	68.2	55.4	2.03	92.29	