

# **Sustainable Energy Forum, Inc**

**“facilitating the use of energy for economic, environmental and social sustainability”**

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## **SUBMISSION TO the COMMERCE COMMISSION**

**Draft Determination of 26 April 2002**

on the application by

**ELECTRICITY GOVERNANCE BOARD Ltd**

for authorisation of restrictive trade practices

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## **THE SUSTAINABLE ENERGY FORUM**

1. The objective of the Sustainable Energy Forum is to facilitate the transition to sustainable energy. The Forum has about 120 members, including politicians, business people, academics and corporate members. Its principal activities are the publication of “Energywatch”, a journal of analysis and opinion on matters relating to sustainable energy, and the holding of an annual Forum, each on a particular topic in sustainable energy.
2. The Forum takes a long term view on policies on use and supply of energy and energy services. While publishing a range of views on such policies, the position of its present executive is one of increasing concern that economic necessity, resource depletion, climate change and pollution is moving New Zealand ever more efficiently towards an unsustainable energy future.
3. This submission has been finalised after receiving feedback from SEF executive members and other interested people. Due to the limited time available, it was not possible to present the full submission to the executive for approval.

## **INTRODUCTION TO THIS SUBMISSION**

### **Relevant markets**

4. The goal of the Government Policy Statement relating to this Application is to ensure that electricity is delivered in an efficient, fair, and environmentally sustainable manner to all classes of consumer. Its scope is broad. But the Application, with its economic analysis in all its detail, addresses only the outcomes to “the industry”, that is, wholesale sellers and buyers. Its scope is narrow.
5. This most important issue is: what are the relevant markets? The Applicant lists the retail market (for electricity) as relevant, but its analysis does not address it. But at the retail level, electricity is eminently substitutable by many other resources, which we term “distributed resources”.
6. These include natural gas, LPG, firewood and solar energy for space and water heating, storage water and space heaters to reduce peak demand, switching devices to turn high-load appliances on at night, insulation in ceilings and floors to reduce power bills, draught stoppers, low-flow shower heads, energy efficient lightbulbs - the list goes on. The Regulatory Assistance Project (RAP) has done much research on how such resources can be accommodated in competitive electricity markets (2 papers attached). Retail services are also needed to provide information and financial services, without which people and small businesses cannot gain advantage for themselves by participating in electricity markets.
7. EECA is prepared to subsidise many of these cost-effective technologies because of the market barriers that face them. But almost all retail power companies have removed the support for them that they gave in the early days of EECA’s Energy Saver Fund. Distributed resources installed by retail consumers reduce electricity sales and therefore profitability. Thus these “energy services” pass the “ssnip test”.

8. That the retail market is an essential part of the electricity industry is obvious at the physical level. Generators and network companies could not pursue their businesses if consumers were not there at the other end to absorb the load.

9. We therefore consider that a relevant market for this determination is the market for energy services at the retail level.

### **Outcomes at the retail level of electricity market reform**

10. The Application and accompanying expert “assessment” by LECG are founded on the oft-repeated assertion that the electricity market is doing a good job, and only needs some refining to do an even better job. We consider that that is true only from the perspective of the dominant wholesale market participants, whom the Applicant represents. Wholesale prices have generally fallen and industry profits have risen. It must be noted that smaller wholesale market participants have been frustrated by the dominance of the big market players, and consider that the proposed arrangements would be even worse for them (Todd Energy’s submission to the original Application).

11. The present electricity market has failed to benefit the retail consumer or even provide efficient pricing signals, as illustrated by the outcomes of last winter’s power crisis. Retail prices were unaffected at the time that power needed to be saved. They rose later, when power was available in plenty, because retailers who lost money had to make up their revenue requirements later. “The industry” is now warning that retail prices will need to rise still further to enable new power stations to be built, and to meet likely large increases in wholesale gas prices as Maui runs out.

12. Thus retail consumer behaviour is not being addressed through prices, but by exhortation. When supplies were short, the Minister exhorted us to save electricity. When the shortage was over and savings did not reduce costs, the industry told us to accept price hikes so they could build new power stations. This is not a market at all!

13. Customer choice has also disappointed most retail consumers. Very few consumers want to shop around for electricity, a basic bulk commodity not a “branded” product. Retailers chase high-income consumers for whom they can bundle in other services, to achieve necessary margins. Low-income consumers are left paying the higher costs of the competitive market system. Early promises of discounted supply, for example from First Electric, were not possible to maintain in the longer term. And the problems of billing - and threats of disconnection - are real detriments of competitive markets.

14. One difference between the proposed arrangements and the counterfactual would be the greater ability of the Minister under the latter to direct the industry to address such complaints..

### **Regulatory uncertainty**

15. NZEM has created “regulatory uncertainty” in a big way since its inception in 1996. Conceived as an ex-ante market with the demand-side taking an active part, NZEM quickly evolved into a supply-side market, with demands being forecasted by Trans Power, and consumers becoming passive price-takers. The changes were adverse to most small independent power producers. One (Trans Alta) has since sold out, and the purchaser of its generating and retail assets nearly went bankrupt during last winter’s power shortage.

16. The proposed arrangements are not deregulation, but industry self-regulation. They might add “certainty” in the short term by perpetuating the present Rulebook. But this would only increase dissention from both independent wholesale power producers and the entire retail side of the industry. As such they will create regulatory uncertainty in the longer term.

17. The Counterfactual could be seen as even more uncertain. The Minister would have power to require the Governance Board to give effect to desired outcomes - and those could change with any change in government, or at any other time.

18. The only way to achieve reasonable regulatory certainty is for wholesale market participants to negotiate with end-use consumers and energy service businesses to find an acceptable coherent commercial model of the physical electricity system, and to make successive refinements of market rules within this model.

### **Coherence of model**

19. Ways in which a practical commercial model can best be accommodated have been researched for many years, and applied in many jurisdictions. (Outhred and Kaye, “Incorporating Network Effects in a Competitive Electricity Industry: an Australian Perspective”, Chapter 9 in M. Einhorn and R Siddiqi (eds), *Electricity Transmission Pricing and Technology*, Kluwer Academic Publishers, 1996, pp. 207-228). Its application to the Australian market is described: (Hugh Outhred, “The competitive market for Electricity in Australia: Why it works so well”) (attached here).

20. A commercial model purporting to allow “discovery” of prices which balance demand with supply makes little sense if it does not count retail prices - retail consumers use 2/3 of New Zealand’s electricity and account for well over 2/3 of suppliers’ revenues. The model now used in NZEM reflects the commercial behaviour of the supply side only, and treats retail consumers as price-takers rather than participants. It ignores non-electricity energy services which may reduce electricity peak or energy demands.

21. The model embodied by the proposed arrangements approaches coherence, but only by cutting out participation from the retail side. It achieves security of supply through “ancillary services” sourced from wholesale market participants.

22. Yet retail-side adaptation to shortages, whether predictable or sudden, could be more cost-effective. This would require education of end-use consumers, and continuing availability of information, and availability of finance - implying a necessarily long transition period.

23. Recent research highlights two clearly different approaches to electricity market design. (See [www.utilitiesproject.com/documents.asp?grID=100&d\\_ID=142](http://www.utilitiesproject.com/documents.asp?grID=100&d_ID=142)). The first begins with the assumption that markets can reduce overall costs of the electricity system. The second uses mathematical modelling and physics to define costs. The first is associated with the interests of independent power producers; the second with the incumbents in the industry. Professor Hogan is associated with the second model - as he is a consultant to Transpower, this puts New Zealand’s market firmly in the second camp - one that favours incumbents at the expense of new entrants.

24. Work is continuing on creating hybrid commercial models which give more scope to new entrants and retail-side participation. This gives some promise for a constructive dialogue between the retail and the wholesale side of New Zealand’s electricity industry.

## Recommendation:

25. We recommend that the application be rejected. We consider it unlikely that a Crown Governance Board would be the result, because it is not supported by consumers or smaller independent generators.

26. We think that the most likely, and most desirable, outcome of this would be the creation of an independent regulatory function to oversee the evolution of the electricity market rules under a model that allows progressively increasing participation of retail consumers and energy service businesses.

## LIST OF QUESTIONS

1. Has the Commission appropriately defined and incorporated the ancillary provisions in its assessment of the proposed arrangements?

2. Are the markets defined by the Commission the appropriate markets for the assessment of the application?

No. The retail market is taken by the applicant as the market for electricity. In fact the retail market should be the market for end-use services provided by electricity.

The Applicant applies the “ssnip” test only to competing retailers. But small significant non-transitory increases in retail prices (averaging less than 5% per year} occurring over many years have enabled solid fuel burners and gas heaters to enter the domestic market profitably.

To integrate retail electricity and those energy services that compete with purchased electricity into New Zealand’s electricity market, we need to begin with an appropriate model of the physical electricity system, and create an appropriate commercial model which allows costs and risks to be managed. We are confident that the task is achievable in the New Zealand context, and would result in a stabilisation of retail electricity prices, instead of the rising path that is being predicted today.

3. Does the wholesale pricing mechanism in the proposed arrangements breach s 30?

This and many other questions are about whether the proposed arrangement would lessen competition. The implication is that competition is all that is needed to protect consumers. We reject, as consumers face many market barriers to cost-effective energy efficiency and fuels alternative to electricity. EECA is funded to work towards overcoming those barriers, but their funding (\$3m/yr) for that is a tiny proportion of the funding that supports those barriers.

As noted in the introduction, competition has not benefited retail consumers - yet the costs of the elaborate competitive wholesale market have added to retail prices.

When the competitive electricity market was first designed, there was a belief that retailers would compete for the business of all domestic (and small commercial and industrial) consumers. In fact those customers have become “customer blocks” that get bought and sold from company to company like herds of cattle. The reasons why companies cannot profit from competing for small consumers are persuasively argued by Coyle (attached).\*

In the absence of effective competition, some regulation of retail businesses would seem necessary, to ensure their prices reveal the true costs electricity as far as

possible (for the sake of price-efficiency) while offering them the risk management options that they will require.

The submission by Todd Energy of 22 February on the earlier application shows that even at the wholesale level, the proposed arrangements would entrench the market power that the large retailer-generators already wield. Particularly persuasive is their point that the Market Surveillance Committee and MARIA Control Committee, which now have independent membership, would be combined into a committee of Market Participants only. This committee would effectively control all rule-making. That submission gives examples of many ways in which even wholesale market participants other than the largest players are frustrated by the present market rules. It predicts continuing discord between present Market players, which would make a completely different system both likely and desirable. Such a system would have Market Rules controlled by an independent Regulator, instead of by vote of Market Participants.

4. Does the transmission pricing methodology in the proposed arrangements breach s 30?

Appropriate transmission pricing, and risk management are essential to ensure effective competition in even wholesale markets (Outhred and Kaye, op.cit). The transmission pricing used in New Zealand gives very precise indications of Transpower's view of costs at each location at each half-hour. This makes risks essentially unmanageable commercially; it is like Transpower saying, "here are our costs, now you pay them.". Transpower's hard line in pricing negotiations has been referred to in nearly every electricity market seminar I have attended over many years.

An article on electricity restructuring [http://www.utilitiesproject.com/documents.asp?grID=100@d\\_ID=142](http://www.utilitiesproject.com/documents.asp?grID=100@d_ID=142) describes two "opposing perspectives" amongst various competitive electricity markets. One supports the development of a robust commodity market with a real-time mechanism to balance supply and demand. This facilitates demand side management and independent power producers. The other supports central control for security of supply, with wholesale markets operating around the edges, a system which favours incumbents. One major difference between the two is the way that transmission risks are managed.

New Zealand's market began down the first track in 1996, but the required ex-ante market was not supported by participants and it has moved onto the second track to the benefit of the incumbent suppliers. The article considers that a hybrid between the two is possible and desirable.

Thus we answer question 4 by saying that New Zealand's transmission pricing is now anticompetitive, through the whole structure of the wholesale market, and favours incumbents over independent generators and suppliers of energy services.

5. Do the cost allocation provisions in the proposed arrangements fall within the ambit of s 30?

6. Has the Commission correctly applied the provisions of s 30 to the proposed pricing arrangements?

7. In the absence of the proposed arrangements, would the most likely scenario be likely to include a Crown EGB established under the EAA, with the Guiding Principles contained in the GPS and with operational rules similar to those in the proposed arrangements?

No. A Crown EGB is opposed by so many interested parties that it is unlikely to get off the ground. Privately owned generators will say that state-owned generators would be unfairly favoured by a Crown EGB. Consumers will be concerned that the Crown is self-interested in higher electricity prices as a tax-gathering mechanism. The likely result if the application were declined is stalled negotiations, with continuation of the status quo

arrangements. Sooner or later, a form of regulation is most likely to be introduced, as was done in the matter of control of lines businesses.

8. Would a change to the proposed Guiding Principles so that they were more closely aligned with the principles and objectives in the GPS be likely to enhance competition or otherwise increase consumer welfare?

Yes. The proposed Guiding Principles make only minimal references to the social objectives which are contained in the GPS.

But to give operational meaning to such changes, major changes in the market rules would be needed, which would transfer some of the commercial risk inherent in electricity markets from consumers back to generators and network operators. It is this risk-averse behaviour which, in my opinion, has driven the market to its present state.

9. Would the proposed voting arrangements be likely to lessen the likelihood of the implementation of desirable pro-competitive rule changes?

Yes. The voting arrangements for changes in market rules are one of the major weaknesses of the present governance system. They give voting rights to wholesale market participants but not retail ones, and should not be continued.

This would amount to a very major change, but one which is necessary for good governance. No corporate entity to my knowledge carries out its detailed business by majority vote of shareholders (in this case, market participants). Voting is confined to the Board of Directors, and any Director who cannot live with the majority decision is free to resign. Companies leave detailed implementation of strategy to management. This is the model that should be followed in the electricity market rules.

Regarding questions 9-14, a Crown EGB would be subject to intense lobbying. Historically industry has been more successful in lobbying than consumer groups (e.g. major industrial electricity users were allowed to be subsidised in the 1968 Electricity Act, and this trend is reinforced in the recent greenhouse policy decision to exempt “competitiveness-at-risk” businesses from carbon taxes). This is one reason I consider consumers are unlikely to support a Crown EGB.

10. Under what circumstances would affected parties be likely to have sufficient commonality of interest to vote collectively against recommended pro-competitive rule changes?

Under most circumstances. The fact that retailers are also generators makes them fundamentally incapable of representing interests of retail market participants. The Commission has noted a number of important checks on the incumbents’ voting rights, but notes that desirable rules may not even be introduced. From the retail perspective this observation is even truer - as the retail side is not effectively represented in the working parties or even in the commercial model that the Rulebook embodies.

11. What examples are there in existing NZEM, MACQS and MARIA governance arrangements of pro-competitive rule changes being voted down?

The most interesting examples are those that occurred in the early days of NZEM. Above all, the ex ante market that would have allowed meaningful demand-side participation was not supported by market participants. Spot prices spiked sharply and the participants were not prepared to create risk management mechanisms to prevent the spikes. Market participants voted down the ex ante market. An ex ante market is strongly recommended by Regulatory Assistance Project (paper attached)\*, to enable “distributed resources” to effectively compete with centralised generation and transmission.

In the pre-market days, Trans Alta was the largest intending independent power producer; they purchased the Stratford resource consents with the intention (subsequently carried out) of building a new power station. They strongly supported NZEM as being truly

pro-competitive. The original market, though complex, was coherent and could have been modified to be more tractable but still pro-competitive. Successive votes on the market rules however led to incumbent generators' ability to load risks onto independent power producers, in diverse ways. Trans Alta will have been particularly concerned about the transmission constraints, a concern we do not necessarily share. But the many problems of smaller generating companies led finally to Trans Alta's exit from the market. The purchaser of the generating and retailing assets, NGC, found Trans Alta's chickens came home to roost, and the wholesale market pinch in 2001 led to a \$300 million loss for the company.

Todd Energy's submission reinforces this picture of a market now unfriendly to smaller market participants.

12. What examples are there under NZEM, MACQS and MARIA of pro-competitive rule changes being implemented?
13. What rules in the proposed Rulebook have the potential to be changed in a way that would enhance competition?
14. From the consumer perspective, do the proposed voting arrangements give rise to any concerns, and if so in what areas?

End consumers have no vote in proposed market rule changes now, and neither the Applicant's proposal or the counterfactual would change that. Retailer-generators are not appropriate agents to represent the interests of end-consumers, because their business interests, in particular their profitability, depends far more on their generation business than on their retail business. Indeed their ability to use effectively-captive consumers to hedge their generation risks makes a nonsense of the assumption that small consumers can enjoy the benefits of competition.

The applicant's assertion (section 109) "it is not necessarily correct to presume that large integrated companies would vote against competition-enhancing measures" is not persuasive. We do not have to presume that; we observe it.

Thus regulation of electricity retail businesses to mirror the outcomes from hypothetical retail competition is a priority, both for consumers and for businesses that compete with purchased electricity.

15. What services would be likely to be provided on a competitive basis under a Crown EGB? How does this situation compare with the proposed arrangements?
16. Would the proposed provisions relating to the pricing of services to non-members result in a lessening of competition compared with the situation in the Commission's counterfactual?

The Rulebook is designed to give strong incentives, for example through pricing of services, for non-members to join. Yet smaller Market Participants have been ineffective to date in getting the Rules to reflect their interests, and many have quit NZEM as a result. It appears that such pricing of services is another anti-competitive technique.

Whether the counterfactual will give a better deal to smaller energy businesses depends on how the Crown balances its interests in broadly-defined economic efficiency against its interests as a revenue-gatherer. It also depends on whether the Crown's information and analysis will continue to come from the supply-side, as it does today - to say nothing of lobbying. We are not optimistic about the Crown's willingness to take the broader view.
17. Would the provisions of Part C of the Rulebook relating to common quality lessen competition compared with the counterfactual?



18. Would the provisions of Part D of the Rulebook relating to metering arrangements lessen competition compared with the counterfactual?

19. Would the provisions of Part E of the Rulebook relating to registry information and customer switching lessen competition compared with the counterfactual?

20. What are the likely differences in ability between an Industry EGB and a Crown EGB to assess pricing methodologies, and what would be the benefits and detriments associated with any differences?

A Crown EGB would have less competence to assess pricing methodologies than an “industry” EGB. But the more important imbalance is that retail consumers are not resourced with money or expertise to pursue their interests in electricity markets.

The Crown is badly conflicted as it benefits from higher prices, as argued above. It will likely side with generators instead of consumers for that reason. That proved to be the case in the early days of EMCO, when ECNZ representatives supported policies that shifted price risk onto consumers.

If a Crown EGB were devote sufficient resources to facilitate active retail participation in the market, this may give benefits to consumers and energy service providers. However such benefits might not be sustainable, as those benefits would reduce profits of generators (see RAP references attached), and another Government could well pull away from such support.

21. If there are any existing pricing inefficiencies relating to the HVDC link, would they be likely to be addressed as effectively by an Industry EGB as by a Crown EGB?

It is my understanding that pricing of the HVDC link was essentially politically determined; a judgement call that could be rationalised by a very crude commercial model of the physical reality, but which does not actually reflect the detailed costs involved. A coherent model is needed to address all transmission constraints - not only of HVDC but of the two or three other constraints that can divide the national grid into sub-systems at times.

It would seem likely that a Crown EGB might be more easily pressured than an industry one to retain the present HVDC pricing.

22. The Commission invites comment on its assessment of the arrangements for pricing and investment decisions under the counterfactual.

This question appears to refer to transmission investment - a most sensitive issue because it directly affects costs and profitability of generators. Transpower is now delaying investment until the parties who want constraints removed are willing to pay in full (the Crown is risk-averse, again!). It may well be that a Crown governance board would call for earlier investment to remove constraints. This risks being politicised and seems unlikely to remove the many barriers to distributed resources which could reduce the peak demands that are of concern.

23. The Commission invites comment on its assessment of the impacts on transmission investment in the proposed arrangements relative to the counterfactual.

See above. We agree with the Commission that a Crown Board is more likely than an industry board to over-invest in transmission, as security of supply is such a publicly sensitive issue. This outcome is economically inefficient, as investment in “distributed resources” is likely to be more cost-effective than expanding the centralised generators and transmission network.

24. The Commission invites comment on its assessment that the transmission pricing methodology is likely to be similar under either governance arrangement.

If the Application is granted, there seems little incentive to work towards more effective contesting of transmission investment. Either a Crown GB or a system of market rules administered by an independent regulator may well lead to an improvement.

25. Would the provisions of Part G of the Rulebook relating to trading arrangements lessen competition compared with the counterfactual?
26. Would the provisions of Part H of the Rulebook relating to clearing and settlement lessen competition compared with the counterfactual?
27. Would the provisions of Part I of the Rulebook relating to implementation and transitional issues lessen competition compared with the counterfactual?
28. Notwithstanding the Commission's usual approach of not counting transfers of wealth between one group and another either as a benefit or detriment, having regard to the principles of the GPS which emphasise the wellbeing of consumers, is there a case in this instance for recognising transfers from consumers to producers in this assessment of detriments? If so, what weight should be given to this factor when assessing detriments against benefits?

Transfers of wealth are a fact of life in electricity pricing, as discussed in the introduction to this submission, and supported by the attached paper by Coyle.

The Commission defines public benefit and detriment as relating to New Zealand. The foreign ownership of a significant amount of New Zealand electricity supply business complicates this assessment. If super-profits were not available in the electricity industry, then one might assume that foreign investment didn't matter in the calculation. However super-profits are very characteristic of electricity businesses, which is one reason it was easy to privatise part of it. Any economic analysis must address the issue of transfers of wealth outside New Zealand, even if the Commission chose to ignore transfers of wealth within New Zealand.

Regarding the Commission's general approach to public benefit and detriment, its increasing focus on what it calls "economic efficiency" is understandable. Simplifying its criteria it may well improve the apparent consistency of its decisions. But ignoring environmental and resource impacts of the electricity market discards the baby with the bathwater, as the economic parameters being used ignore real environmental costs which are yet to be priced in the market place. Some such impacts are already affecting electricity investment decisions (the increasing resource costs of natural gas) and others will eventually do so (carbon tax and other greenhouse policies required by international agreement). Note the Applicant's disparaging treatment of these real costs (LECG assessment, Dec 2001, #160ff).

The LECG study, #146, is important in understanding the scope of its analysis. "The basic premise is that the institutional structure most conducive to correct decisions will best facilitate *the efficient functioning of the electricity industry*" (emphasis added) and thereby create the maximum public benefit.

This reveals the Applicant's bias (expected of course). To the Applicant, the electricity industry is the wholesale electricity industry - supply plus major electricity users. In fact, to calculate "public benefit" requires assessment of the efficiency of use of all customers' resources, as argued in the introduction to this submission. Businesses that supply alternative services that reduce electricity use often reduce total costs to consumers - insulation is just one example. EECA has much documentation of this, and the Minister of

Energy accepts it. Thus the Applicant's calculations of benefit and detriment ignore the greater contributor to the economic outcome.

29. Is the Commission's assessment of the influence that the GPS would have on an Industry EGB relative to a Crown EGB correct?

It is easy to assume that a Crown EGB would give equal weight to the many and often conflicting obligations under the EAA. But to date the Minister has shown clear priorities - in his support for industry self-regulation, his continuing stance that retail customers will be protected through competition, his rather moderate response to self-evident gaming of the spot market, his warnings that prices must rise to enable new power stations to be built, and his continuing neglect of proper environmental pricing.

30. To the extent that influence differs, what would be the impact on benefits and detriments?

It would appear that the GPS's influence is diluted in all the options under discussion. That is not surprising as the overarching goal of sustainable development, mentioned in almost all Crown policy statements, has not been effectively implemented in the two decades since its introduction.

31. Is the Commission's assessment of the rule and decision-making capabilities of the industry relative to the Minister and Crown EGB correct?

We agree that a Crown EGB would have less detailed information available.

32. Are there other markets where the proposed arrangements are likely to have a material impact on public benefits and detriments?

This is a critical issue, in that the proposed arrangements would enhance the already dominant market power of centralised electricity suppliers, in relation to alternative services at the end-consumer level, namely energy services including enhanced energy efficiency, alternative fuels and renewable energy, as argued above.

Some of these are now cheaper for consumers even in the short term (investments such as hot water improvements), some in the medium term (wind energy in relation to gas-fired combined cycle once wholesale gas prices rise), and a great many in the longer term (even solar water heating in new installations). If the Commission accepts that the relevant market includes end-user energy services, then all these must be considered.

The difference between the factual and the Applicant's counterfactual could be considerable here, as a Crown EGB could be expected to (appropriately) promote market rules that reduced market barriers to cost-effective end-user energy services.

But a Crown EGB may not be the actual result of the Application being declined. Reversion to the status quo in the meantime, together with negotiations to introduce effective retail markets, could well lead to more public benefit and less detriment. In contrast, acceptance of the Application would entrench the existing market barriers to end-use energy services.

33. Would the cost of capital be different in the proposed arrangements relative to the counterfactual?

The discussion on cost of capital only addresses regulatory risk, and only addresses the cost of capital of wholesale energy suppliers. Cost of capital is a critical issue in the wider market that must be addressed - the market for end-use energy services. If the proposed arrangements are accepted unchanged, it can be assumed that the very high cost of capital to small consumers will continue to be one of the major barriers to investments which are more cost-effective, even in standard economic terms, than expanding supply of centralised electricity generation and transmission. Either a Crown EGB or set of rules

administered by a regulator would be more likely to ensure consumers had access to capital on normal commercial terms sufficient to at least partially overcome that barrier.@

34. Would regulatory risk affect only the cost of capital for private sector interests?
35. What weight should the Commission give to the potential effects of a Crown EGB on productive and dynamic efficiency in the generation and service provider markets?
36. Would a Crown EGB have a comparative disadvantage in deciding on recommendations to rule changes?
37. If so, would it also have an impact on allocative efficiency in the wholesale electricity market?
38. Would there be higher lobbying costs in the counterfactual?

Yes.

Is the Commission's assessment of this potential cost of an appropriate order of magnitude? probably so.
39. Would industry input into a Crown EGB's investment decisions provide a restraint on the potential for over-investment and over-maintenance of the grid?
40. Is the Commission's assessment of the likelihood of contestable services appropriate?
41. Are there examples from other industries of the magnitude of benefits available through making services contestable?
42. Is the Commission's assessment that under a Crown EGB if services were made contestable, it would also allow competitive bypass of service providers correct? If so, would the efficiency gains from that additional competition have a material impact on net benefits?
43. What scope is there for the proposed arrangements to change over time to remove or lower entry barriers or improve efficiency in the relevant markets?

Both the proposed arrangements and the counterfactual will continue and further develop barriers to entry of cost-effective alternatives to centralised electricity supply, as discussed above. The alleged efficiency of the proposed market arrangements in fact have no real meaning as the arrangements end at the end of the wholesale chain, and do not include the link to the people who actually contribute more than 2/3 of the revenues of the industry.
44. What are the incentives on distributors to vote on reduction or elimination of grid constraints?
45. Are distributors likely to have different attitudes to elimination of transmission constraints that have security implications and transmission constraints that lead to higher energy prices?
46. Quantification of the potential range of detriments indicates that the principle detriments arise from a reduction in competition in the generation markets, and the corresponding weakening in incentives for generators to be efficient. Is the Commission's preliminary assessment that under-investment in the grid would provide strong scope for generators to exercise market power correct?

No. So long as wider markets were brought into the picture, underinvestment in the grid would enhance the value of “distributed resources” (generation, energy efficiency, energy storage and alternative fuels used at or near customers’ premises).

47. The Commission’s preliminary assessment is that the proposed arrangements are likely to allow generators to increase electricity prices above competitive levels. This would result from both the potential for strike-down of pro-competitive rules and under-investment in transmission. Apart from deadweight losses, are there other public detriments that would arise from an increase in electricity prices?

Increases in electricity prices in the short to medium term are not necessarily a public detriment. They can forestall later much greater price increases.

I would estimate that an increase in wholesale prices of 0.5 to 2 c/kWh would enable a very large increment of alternative generation, for example wind power, to enter the market. A doubling or more in wholesale gas price is confidently predicted by “the industry”, which probably equates to an increase in price on the order of \$2/GJ. This would increase the cost of combined-cycle gas generation by about 1.5c/kWh, making competition from distributed resources even more viable in conventional economic terms.

48. The Commission seeks comment on whether the issues that have been considered in this Draft Determination provide a reasonable summary of the issues of which it should be aware before making a final decision on this Application. The views of interested parties are sought on any additional issues that might be of relevance when considering the benefits or detriments to the public that might result from the proposed arrangements, should they proceed.

In summary, additional issues are:

- creating effective retail markets for energy services and linking them to the wholesale market
- replacing the mechanism of voting by wholesale market participants on detailed rules with a process that enables coherent rules to be based on an agreed commercial model of the electricity system. The present model is one that favours incumbents as argued above.

49. If the Commission chose to authorise the proposed arrangements, what condition(s) on the authorisation would address concerns about the potential for pro-competitive rule changes not being implemented and any negative downstream effects. Enhancement of consumer representation on governance board and working parties. Direct representation of retail energy service businesses on same. Consumer and energy service representatives to have access to expert opinion of their choice. If voting arrangements are maintained, they must give equal power to consumers including small consumers, and should allow small-business energy service providers to vote on rules which favour incumbent generators. (In fact this is unwieldy.)

Actualisation of certain parts of GPS, including placing risks where best managed. Inclusion of environmental externalities inside the economic model. Bottom-up redefinition of the relationship between the commercial model of the electricity system and the physical model on which dispatch etc. is based. Design of retail market to fit to this model. This must be an early workstream of the EGB!

50. What would be the benefits and detriments arising from such a condition(s)? Would the imposition of such a condition(s) be consistent with the Act?

It would seem that conditions sufficient to ensure a genuine change in behaviour of wholesale market participants would not be consistent with the present Act. It would

seem more realistic to decline the Application and allow negotiations to continue to bring the retail side of the electricity market into the picture.

51. Are there any other matters which the Commission could appropriately address with conditions to an authorisation?
52. Is it appropriate to use a ten year time horizon for the purpose of calculating benefits and detriments?

No. To accord with the broad purpose of government energy policy - “consistent with sustainable development”, the time horizon used should relate at the very least to lifetimes of capital investment. Periods range from a year or two for energy-efficient light bulbs to say 50 years for residential building envelopes and hydro stations. In fact “sustainable development” is interpreted by many people, and by our executive in particular, to cover several generations into the future, during which climate change and resource depletion will make for massive change in energy supply and demand strategies.
53. Are the Commission’s assumptions on the magnitude of efficiency gains arising from the comparative advantage of industry arrangements relative to the counterfactual appropriate?

This and subsequent questions on the assumptions and data of the economic analysis of public benefits and detriments will not be addressed, because we believe the scope of this analysis is entirely inappropriate. The market is only half a market (wholesale electricity only).

It may be that we can supply an alternative outline of economic analysis when it comes time to present this submission.
54. Are the Commission’s estimates of the higher transactions costs in the counterfactual of an appropriate order of magnitude?
55. Are the Commission’s assumptions on the potential range of efficiency losses in the counterfactual of an appropriate order of magnitude?
56. The Commission invites comment on its assessment of the magnitude of efficiency losses in the counterfactual relative to the proposed arrangements.
57. The Commission invites comment on its assessment of the likelihood that service providers and system operator roles would be made contestable under the proposed arrangements, relative to the counterfactual.
58. The Commission invites comment on its assessment of the potential for price increases, relative to the counterfactual.
59. Are the assumptions on long-run supply and demand elasticities appropriate?
60. The overall detriment resulting from delayed investment is calculated to be \$1.5 million NPV, reflecting the low likelihood of a dry winter. Are there any assumptions, which, if varied appropriately, would lead to a significant difference in the result?
61. Is the Commission’s assessment of the magnitude of potential efficiency losses arising from a reduction in competitive pressure appropriate?
62. Is the Commission’s assessment of the likelihood of under-investment in transmission under the proposed arrangements, relative to the counterfactual, appropriate?

63. Are there any assumptions which, if varied appropriately, would lead to a significant difference in the calculation of detriments arising from transmission outages?

64. Are there any assumptions which, if varied appropriately, would lead to a significant difference in the calculation of detriments that could arise from inefficient location of new investment?

### **Economic analysis of public benefit and detriment.**

The inclusion of the retail market for energy services in the Applicant's economic analysis would reverse its conclusion that the "public" benefits of its proposal would outweigh the detriments. The "public" certainly includes retail end-users of energy.. The Government Policy Statement addresses both the efficiency of the price signals that reach end-users, and fairness considerations.

The analysis by Coyle describes the pricing mechanisms that characterise retail electricity businesses. He shows that price discrimination is an essential feature of these, because of the high fixed costs in the industry and the nature of electricity as an undifferentiated commodity. Efficiency is only second-best, as Ramsey-type pricing is used at the retail level in place of the desirable marginal-cost pricing which can be maintained at the wholesale level.

The Applicant's analysis specifically rejects consideration of outcomes affecting distribution of wealth (say, amongst consumer classes), and also energy efficiency, renewable energy, and greenhouse gas emissions.

The Government Policy Statement requires the Establishment Board to have regard to such matters, but not to give effect to them. In contrast the Establishment Committee has proposed a duty on the Board to actively promote outcomes that further the Guiding Principles (DD #68). However these Guiding Principles do not directly address greenhouse gas emissions, demand-side participation. To protect new electricity (narrow again!) technologies, the farthest the Guiding Principles go is a mandate against "unjustifiable bias".

The Commission (DD s 357) is inclined to agree with the narrow scope of assessment of "public" benefit and detriment - a scope which it deems "economic efficiency". We disagree, because we say retail markets are relevant and are affected by competitive strategies of electricity suppliers in ways that tie in directly with the Applicant's Rulebook, if the Government Policy Statement is to be fulfilled.