

TRANSPower NEW ZEALAND LIMITED

Initial submission on the application for
authorisation of EGBL electricity market
arrangement

February 2002

T R A N S P O W E R



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Executive Summary

1. Transpower does not support the authorisation of the proposed EGBL electricity market arrangement (the “Arrangement”). Transpower believes that the Arrangement will reduce competition (compared to a regulatory alternative) without delivering countervailing public benefits. Furthermore, the Arrangement does not address the issues facing the industry effectively or efficiently.
2. Transpower notes that the scope of the Application remains unclear. In particular, the Application purports to relate only to specific provisions as currently drafted, thereby excluding the effect of the Arrangement as a whole and excluding the potential for rule changes. However, the Applicant claims all future benefits arising from the Arrangement, including those relating to rule changes. Transpower has commented on specific provisions, but has taken a holistic approach in assessing overall detriments and benefits arising out of the Arrangement.
3. The likely counterfactual is a Crown EGB established by regulation. The Crown EGB would recommend mandatory rules (and rule changes) to the Minister. It is likely that the Rulebook under such a counterfactual would initially be operationally similar to (although not the same as) the Rulebook under the Arrangement. However, the governance structures and their effect on the operation of the rules in the long-term would be different.
4. To support its claim that industry self-regulation will deliver benefits surpassing detriments the Applicant compares an idealised view of industry self-regulation against a caricature of the potential negatives of government regulation. In contrast, Transpower has provided a more realistic comparison in terms of a comparative institutional analysis. This sets out the conditions for successful self-regulation and concludes that, as those conditions are not present in the electricity industry, self-regulation is not appropriate.
5. The critical difference between the Arrangement and the counterfactual is that, under the former, control is held by industry incumbents. This provides those incumbents with the opportunity to act in accordance with their commercial incentives by applying and developing Rules that favour them, and restricting changes that are to their disadvantage. The “independence” of the EGB is illusory, given industry parties’ rights to override its decisions in critical areas, and to appoint and remove Board members.
6. The inevitable result of vesting control of industry rules and decision-making in the industry is that these rules will be used and will develop in a less competitive way than under the counterfactual of government regulation. The ability that incumbent industry participants (or groups of them) will have under the Rules to prevent or delay rule changes will be likely to eliminate, prevent or deter competition.
7. The Application and its conclusions in respect of governance stem from a misapprehension of the nature of the market processes encompassed by the Arrangement. The Applicant suggests that the various trading arrangements that comprise the New Zealand electricity market, and hence the rules for which some type of governance is required, involve primarily voluntary commercial arrangements between willing buyers and sellers. This is not the case in respect of the content of the Rulebook.

8. While the Rulebook does include trading rules, the bulk of the market rules are about the functions performed by the system operator and other market service providers, including the mechanisms by which the system operator maintains grid security, common quality standards and overall reliability.
9. The essential grid co-ordination functions that are performed by the system operator are best characterised as a natural monopoly. As such, these natural monopoly functions require efficient management, independent governance and careful regulatory oversight. It is not simply a matter of facilitating commercial trading between market participants.

1.1 Introduction

10. Transpower New Zealand Ltd ("Transpower") does not support the authorisation of the Rulebook (in its current form) and associated documents comprising the Arrangement. Transpower believes that the Arrangement will reduce competition (compared to a regulatory alternative) without delivering countervailing public benefits. Furthermore, the Arrangement does not address the issues facing the industry effectively or efficiently.
11. Transpower notes that the Applicant has based its application on assertions that incorrectly represent both the physical requirements of the electricity system and how they are currently met, and the process leading to the Rulebook. Transpower provides some additional information in Appendix 1 which is important to the Commission's gaining an understanding of the electricity industry and the nature of electricity markets in particular. The misapprehension of the nature of the physical requirements of the electricity system and therefore the nature of the market rules is also the theme of the opinion offered by Transpower's advisors, expert in international competitive electricity market design (Appendix 3).

1.2 Scope of authorisation

12. As the Commission is aware, Transpower has had concerns with the scope of the authorisation sought by the Applicant. Transpower appreciates that the Applicant has provided a measure of clarification on this issue.
13. However, there are a number of inconsistencies in the Applicant's approach, notwithstanding the recent clarification of scope it provided. The major inconsistency is in the way detriments are limited to those arising out of specific provisions but benefits are not so limited. Furthermore, the Applicant has stated that any anti-competitive rule change is outside the scope of the authorisation.
14. Thus the Applicant goes on to claim that any future detriment arising from rule changes does not need to be counted, because it would not be covered by this authorisation. However, in assessing benefits, the focus of the Applicant's argument rests on those very same future changes. The Applicant claims industry self-regulation will result in more timely, efficient and effective rules in future.
15. Excluding any anti-competitive future effects from the scope of the authorisation but including all (purportedly) competitive future effects is clearly inconsistent, and results in inflated benefits and/or reduced detriments. To be consistent, either (1) the detriments from the whole Arrangement as against the counterfactual (including the potential for future developments) must be counted or (2) the benefits that flow from rule changes or from provisions other than those for which authorisation is specifically sought must be excluded. Transpower believes that the first approach is the correct one for assessing detriments and benefits for the purposes of considering an application for authorisation of a restrictive trade practice. This submission follows that comprehensive approach.

16. A further issue raising concern is the Applicant's admission that the Rulebook is not yet in a complete and final form. The Applicant has stated that if the Rulebook is amended during the authorisation process then "the Applicant may, in consultation with the Commission, seek authorisation for the revised Rulebook".¹ The Applicant asserts that such amendments "would be unlikely to have any competitive impact...".
17. Transpower wishes to highlight the difficulty of preparing a response to an application based on incomplete and changing documents. Given the interrelated nature of all parts of the Rulebook, and of the Rulebook with the other parts of the Arrangement, it is difficult to comment on Rules (or any changes to the Rules) in isolation. Any changes may have an impact on the Arrangement as a whole.
18. Transpower also considers that it is not appropriate for the Applicant alone to determine whether such changes will have a competitive effect. If the Rulebook were to be authorised, Transpower agrees that the Rulebook requires further amendment to make it workable, but assumes that if changes are made all interested parties will be given a full opportunity to comment and, if they consider appropriate, make further submissions and that the authorisation process will be rescheduled in such a manner as to enable this to occur.

1.3 The objectives of the arrangement

19. The current structure of the electricity market has a number of deficiencies, which are generally recognised by industry participants. Transpower set out its views on these deficiencies in detail in its submission to the Ministerial Inquiry into the Electricity Industry². Many of Transpower's concerns were reflected in the Ministerial Inquiry Report³. Other participants have referred to these deficiencies both in the Inquiry process and in this authorisation process.
20. The Government also has additional issues that it wishes to see addressed⁴. These are set out in a section 26 statement. The Government has indicated that it regards these matters as sufficiently important that, if the industry cannot develop its own self-regulatory structure (based on the section 26 statement) to deal with them satisfactorily, then the Government will regulate.
21. These deficiencies include the following⁵:
 - (a) The existing market arrangements for enforcing the essential mandatory nature of rules for the wholesale physical market are subject to multiple and, in some cases narrowly representative, governance arrangements. There is considerable overlap, and therefore potential for inconsistency, between the operational rules contained in the different arrangements (for instance metering standards are dealt with in both MARIA and NZEM,

¹ See page 3 of letter from Russell McVeagh to the Commerce Commission of 5 February 2002.

² Transpower New Zealand, Submission to The Ministerial Inquiry into the Electricity Industry (<http://www.transpower.co.nz/>)

³ See, for example, Chapter Ten "Summary of Conclusions and Recommendation" of the *Report to the Minister* of Energy Inquiry into the Electricity Industry, June 2000.

⁴ These are set out in the Government Policy Statement "Further Development of New Zealand's Electricity", December 2000 (the "GPS"). The GPS was received by the Commerce Commission as a section 26 statement ("the section 26 statement") on 12th December 2000.

⁵ Transpower has set out these deficiencies in greater detail in its submission to the Ministerial Inquiry into the Electricity Industry, March 2000 (see footnote reference above).

dispatch rules are located in both NZEM and the Common Quality Obligations in Transpower's contracts, etc).

- (b) The lack of an independent or broadly representative governance structure for the wholesale physical market risks "capture" of the rule making and administrative procedures in a manner that might be used to protect the interests of incumbents and inhibit change and innovation.
- (c) Transpower's inability to withhold services from its customers (largely because of the impact disconnection from the grid would have on third parties, particularly consumers) means there is little incentive for customers to sign Transpower's contracts. The absence of signed contracts has led to difficulties in enforcing the common quality standards set out in the Common Quality Obligations section of Transpower's contracts. Common quality standards are essential for the operation of the grid system and the lack of enforceability compromises the efficient achievement of real-time security.
- (d) There is mixed accountability for ensuring a reliable electricity supply with accountability and liability for a reduction or loss of supply to consumers being poorly defined.
- (e) The absence of a clear framework to establish a pricing methodology for allocating transmission costs and to enforce associated transmission charges and terms and conditions. The typical absence of signed transmission connection contracts creates significant costs in dispute resolution and litigation and exposes Transpower to the costs of ensuring a reliable supply of electricity without the ability to recover those costs.
- (f) The absence of an enforceable, regulated investment "backstop" which incentivises grid users to delay investment decisions in the expectation that Transpower will invest and will, as a result of lack of contractual enforcement, subsequently be unable to recover some or all of the resulting investment costs.
- (g) The extent of vertical integration between generation and retail. While vertical integration does not, of itself, threaten the efficiency of the market, it does represent a restriction of the competitive dynamic between sellers and buyers expected in a market. It also further narrows the governance representation, and could limit the effectiveness of the incentives on retailers to "represent" the interests of consumers in the market place.

22. Taking account of these deficiencies, the objective of the Arrangement (and any counterfactual market arrangement) must be to deliver the following benefits:

- (a) Capture of network economies – to create an efficient structure that will allow the various components of the electricity system to:
 - (i) achieve their own appropriate levels of economies of scale and scope;
 - (ii) be operated by different commercial entities; and
 - (iii) be co-ordinated to realise the gains from interconnection;
- (b) Completeness and enforcement of market rules and of contracts – to create a set of arrangements that are:

- (i) appropriate to the purpose;
 - (ii) extensive enough to cover the likely eventualities; and
 - (iii) designed to allow for simple, reliable and low cost enforcement;
- (c) Ongoing governance of industry arrangements – to carry through the establishment of a set of decision processes that will, in line with the system’s fundamental objectives:
- (i) be publicly accountable for the system and its workings; and
 - (ii) allow development and improvement of the system consequent on the inevitable shifts in circumstances that will occur over time, due to technology, and so on;
- (d) Competition and efficiency – to provide the regulatory structure necessary, because of the physical characteristics of electricity, to allow:
- (i) vigorous competition, within the various sub-elements of the different electricity markets;
 - (ii) entry of innovative and efficient alternatives to existing market participants by minimising structural and behavioural barriers to entry;
 - (iii) controls, to protect the technical and key design features of the arrangements;
 - (iv) encourage efficiency, by the creation of incentives and structures enabling dynamic improvements; and
 - (v) independent oversight to ensure competition is maximised and public interests are preserved.
23. These objectives provide a framework within which to measure whether the likely outcomes of the Arrangement (compared to the counterfactual) deliver "benefits".

1.4 Transpower’s understanding of scope and effects of authorisation

24. Transpower's understanding of the Application is that the Applicant considers that the Arrangement will meet the need for the collective components of the electricity industry to act together in certain commercial and technical areas, which is necessary because of the physical way electricity operates, and the particular economics of generation, transport, distribution and retail of electricity. To ensure a safe, reliable and efficient approach to the generation, transport, distribution and retailing of electric power a number of multilateral agreements are required.
25. We understand that the Applicant is seeking authorisation to enable the inclusion of the following features:

- (a) Common standard setting by industry participants – so that there is no need for alternative, costly mechanisms to be used;
- (b) Collective determination of contract terms and prices for services – to reduce transaction costs for the many and largely repeated deals that are involved;
- (c) Industry agreed processes for cost allocation and pricing – to reduce potential protracted disputes over these contentious areas, by creating collective incentives to come to agreement;
- (d) Mechanisms to collectively enforce payment – to lower risks of non-settlement, and thus uncertainty, in an environment where conventional risk control devices are ruled out;
- (e) Process for industry development of rule changes and possibly imposition of such changes – as these are seen as having advantages over other decision-making methods; and
- (f) Reconstitution of existing MARIA, MACQS and NZEM agreements – to ensure that there are no inconsistencies between the details of the way these agreements operate in practice.

26. Transpower questions whether the Arrangement will achieve all these aims but has analysed the Arrangement on the basis that this is what it is intended to cover (see further discussion below).

1.5 The counterfactual

27. Transpower acknowledges the prime importance of the counterfactual in providing a benchmark against which to assess the detriments and public benefits of the Arrangement.

1.5.1 A Regulated EGB and Rulebook

28. Transpower agrees with the Applicant that the likely alternative to the Arrangement (as defined by the Applicant) is a regulatory counterfactual - as has been clearly signalled by the Government. Such a regulatory counterfactual would almost certainly involve an EGB, established by regulation pursuant to the Electricity Act (as amended by the Electricity Amendment Act 2001) (a “Crown EGB”). The Crown EGB would recommend to the Minister a set of industry rules (and, from time to time, changes to such Rules), which would be promulgated through further regulations or rules. The Crown EGB is also likely to be delegated a number of decision-making functions within those rules (e.g. in determining sanctions or technical standards) but it is difficult to predict the degree of any such operational scope. The exact degree to which such delegation will occur is unlikely to be crucial to an evaluation of the relative merits of the Arrangement and the counterfactual.

29. The Applicant has observed that a regulatory regime is likely to codify the current Rulebook. From this, the Applicant has deduced that the starting position under the Arrangement and the counterfactual would be the same, and that the only issue relates to the dynamics of future rule development. Transpower disagrees with this analysis.

30. Transpower agrees that the operational rules promulgated by a Crown EGB would probably be similar to the Rulebook, at least initially. However, the difference in governance would result in critical differences from day one between an industry EGB (the Arrangement) and a Crown EGB (the counterfactual). These critical differences have either not been fully dealt with by the Applicant, or have been incorrectly assessed. While the likely incentives and outcomes of each are discussed in more detail further on in this submission, Transpower wishes to highlight these critical differences up front as follows:
- (a) the industry EGB has very limited decision-making powers and even then these can be over-ridden by an industry vote⁶. In contrast, under the counterfactual decisions would be made by a neutral and independent EGB. Transpower envisages that there would be no mechanism for EGB decisions to be overridden by industry interests under the counterfactual;
 - (b) the Arrangement purports to be voluntary but still able to deliver comprehensive coverage. Comprehensiveness is vital (as explained in Appendix 1) and voluntary industry self-regulation cannot deliver this. A Crown EGB would impose mandatory rules on all industry participants by way of regulation;
 - (c) there are flow-on differences between the Arrangement and a Crown EGB resulting from these points. These include:
 - (i) the Rule providing for transitional dispensations for existing asset owners, thus exempting them from the need to comply with common quality standards⁷;
 - (ii) different investment-making decisions with the Arrangement requiring Transpower's customers to agree to new investment in the grid while the counterfactual is likely to give the Crown EGB reserve decision making powers; and
 - (iii) differences in enforcement provisions (industry sanctions including Court actions against non-members based on quantum meruit compared to regulated compliance);
 - (iv) other Rules that benefit industry participants without contributing to efficiency, such as the de minimis rule⁸.

1.1.21.5.2 Impact of the Differences

31. The crucial difference between the Arrangement and the counterfactual stems from the source of decision-making power. As an industry EGB will ultimately be under industry control, decision-making under this model will be driven by the private interests of industry-participants. The Applicant has asserted that this will deliver benefits because an industry-driven EGB is more likely to act efficiently. Transpower disputes this and believes a neutral Crown EGB is more likely to deliver nationally efficient outcomes than an industry EGB which will be subject to decision rights exercised by private, incumbent interests.

⁶ See for example Rule 1.14 Section IV Part A that enables members holding 25% of relevant votes to put a decision of the Board on a rule change to an industry vote.

⁷ This is discussed in detail at paragraph 46 and 47.

⁸ See paragraph 94 for discussion of the de minimus rule in this context.

32. The Commission has sought Transpower's view on whether it considers that a regulatory EGB would impose mandatory rules on all industry participants. As discussed with the Commission, the answer is "yes". As comprehensive coverage is seen by almost all players to be necessary, and regulation provides a simple and effective means of imposing such coverage, it seems almost inevitable that if the Government does regulate this will include mandatory rules. The difference between this and the impracticability of delivering comprehensiveness through the industry is dealt with at paragraphs 78-80.
33. As well as highlighting the differences between the Arrangement and the counterfactual of a Crown EGB, it is useful to record the similarities. In particular:
- Some of the potential members of the industry EGB are likely to be the same as potential members of the Crown EGB (albeit that the accountability and control of the members will be markedly different between the two cases);
 - the existence and make-up of working groups is likely to be the same under each, and their day-to-day roles of collecting information and making recommendations to aid the operation of the EGB will be similar;
 - in both cases there will be a system of sanctions applied by an industry-specific body;
 - the EGB under the Arrangement and the counterfactual would operate in a similar environment of continued legitimate political interest in the electricity market. The Applicant has ignored this similarity; painting the industry EGB as operating in a bubble of self-contained expertise and efficiency in contrast to a Crown EGB subject to political interference. In fact, the real difference in environment is with the contrasting incentives and accountabilities, factors which both work to the advantage of a Crown EGB when it comes to delivering efficient outcomes. These issues are detailed in paragraphs 70-71, and 100-102 of this submission.
34. Several of the Applicant's claimed benefits rely on drawing distinctions between the industry EGB and Crown EGB that are not significant or are unlikely in fact to exist. For example it is claimed that the Crown EGB could extend regulations into areas not covered by the proposed Arrangement. In practice the Crown EGB would be constrained by the extent of regulation making powers specified in relevant legislation. Indeed, in contrast, it is noted that there are no explicit restrictions on the evolution of the scope of an industry Rulebook.

1.1.31.5.3 Timeframe for Competition Assessment

35. At the outset, the only significant difference between the Rulebook under the Arrangement and the Rules under a Crown EGB is governance: notably the contrasting authority of the Governance Board and the effective enforcement under the Crown EGB of essential mandatory rules. Operational rules, aside from enforcement mechanisms and some of the rules highlighted elsewhere in the submission, are likely to be similar on day one. However, the difference in governance will lead to increasingly different operational rules. It is therefore necessary to compare the two over a reasonable period of time. Transpower considers that given the relatively lengthy timeframes relevant to the electricity industry, the minimum period for comparison should be five years.

1.6 Market definition

36. For the purposes of the application, Transpower is in broad agreement with the Applicant's market definitions. Any possible debate around the boundaries of the market definitions is unlikely to materially affect the competition analysis. However, the interrelationship between markets is critical. Appendix 1 provides a description, in particular, of the nature of the wholesale markets for energy and transmission and describes the critical and unique inter-dependency between them. This is a factor which differentiates electricity from all other commodity markets, even those which exhibit significant network economies.

1.7 Substantial lessening of competition

37. The Applicant has claimed that the Arrangement does not substantially lessen competition, other than through the deeming effect of section 30 in relation to pricing to non-members. Transpower disagrees. There are several elements of the Arrangement that have the likely effect of substantially lessening competition. These elements are set out in the paragraphs below.
38. The Applicant's entire argument - that there is no lessening of competition - appears to be based on the likely similarity of the operational rules under the Arrangement and the counterfactual. It is incorrect to assume that this initial similarity means that there will be no likely lessening of competition. In practice, the outcome from rules governed by industry participants is likely to differ significantly from those subject to decision-making authority that can be exercised independently of such interests.
39. Transpower considers that the different governance structures are likely to result in application and modification of these rules in a manner that is more anti-competitive under the Arrangement than the counterfactual.
40. The reason for this competitive difference is a combination of opportunity (industry has control in the Arrangement compared to an independent Crown EGB) and incentive. The Crown EGB will seek to apply and evolve the Rules in a way that maximises competition and reduces barriers wherever possible. This is supported by the objectives set out in the section 26 statement.⁹ In contrast, industry will seek to use and evolve the Rules in a way that serves the commercial interests of incumbents. Transpower has provided examples in this submission of instances where this has already occurred (refer for example paragraph 94 and the setting of a de minimus level for exemption of generation from common quality standards).
41. In the longer term, these differences are likely to be more marked and the lessening of competition much greater under the Arrangement. The scope for industry rules to be used to restrict competitive innovation and new market entry is much greater under the Arrangement. This is particularly likely in relation to innovation, as the controlling parties have every incentive to restrict the activities of innovators and entrants that would otherwise be a competitive threat. Under the industry proposal these parties gain the ability to use rule setting arrangements to prevent or restrict competition.

⁹ See for example outcomes (h) and (j) of page 2 of the section 26 statement.

1.1.11.7.1 Key elements

42. The key elements of the Arrangement that can and will substantially lessen competition are those Rules¹⁰ that provide for:
- (a) mandating of common standards and standard setting by industry incumbents;
 - (b) collective fixing of prices for crucial industry services and imposition of those prices and terms on all-comers; and
 - (c) the vesting of control of rules (and rule changes) in industry incumbents.
43. In addition, the reconstitution of several existing agreements as a part of the Arrangement raises the additional risk that by bringing these agreements within the same regime of industry incumbent control they too will substantially lessen competition.
44. Taking each of the broad areas of concern for competition in turn, the potential for a substantial lessening of competition is significant.

1.7.2 Common standards

45. The Arrangement provides for industry parties to set common standards for connection to the power system, among other things. Participation in the New Zealand electricity industry in any manner that is of competitive relevance to other participants is impossible without connection to the power system which consists of the grid, and distribution networks connected to it, and generation connected to the grid or “embedded” within distribution networks. While the externalities associated with operation of the power system necessitate common standards (and thus there will be common standards under the counterfactual) the process for setting the standards under the Arrangement is unlikely to deliver security and quality in a comprehensive optimal and efficient manner. Instead decisions favouring incumbents are far more likely.
46. Under the Arrangement there is a risk that the Rules for setting common standards will be used as a barrier to innovation and entry. Evidence to date indicates this is not a theoretical risk but a reality. The proposed Arrangement provides for “grand-fathering” of incumbents’ assets which do not otherwise comply with the Rules through the use of a “transitional dispensations regime”. Any additional ancillary services costs incurred as a result of the dispensation from compliance with the Rules will be borne by the industry as a whole (and ultimately all consumers) not by the “non-compliant” asset owner. Dispensations apply for the remaining life of the plant, which can be twenty years or more. Accordingly, although these are termed “transitional” dispensations, their use has a long-term competitive effect.

¹⁰ Transpower wishes to emphasise to the Commission that it is raising these issues (and other examples of potentially anti-competitive use of the Rules) to illustrate its real concerns that the Rules could be used to restrict competition. Transpower’s intention is not to use the Commission forum to revisit or renegotiate the commercial aspects of these matters. In fact, even if the Applicant were to change or reverse the relevant Rules, this would not address the fundamental problem of the industry controlling decisions on these issues and having the opportunity and incentive to use this power in an anti-competitive manner.

47. After the new Rules come into effect, new entrants or incumbents can apply for dispensations if their new assets will not be compliant with the Rules but the cost of purchasing any additional ancillary services resulting from the “non-compliance” is borne by the applicant for the dispensation. The granting of the transitional dispensations allows incumbents a significant cost advantage over new entrants, creating a barrier to new competition and raising rivals’ costs. Incumbents receiving such dispensations at the outset are not subject to these costs.¹¹ The inclusion of transitional dispensations in the Rulebook is a prime example of Rule manipulation that suits incumbents, creates barriers and does not appear to have any economic efficiency benefit. In contrast, while there may still be scope for dispensations under the counterfactual, there would be no incentives to include dispensations that have no economic benefit and simply advantage incumbents over new entrants.

1.1.31.7.3 Collectivity

48. Collective contracting and fixing of contract terms, including prices, forms a significant part of the Arrangement. Transpower disagrees that it is only pricing to non-members that amounts to a substantial lessening of competition.

Wholesale Electricity Prices

49. The Applicant has argued that the price determination process for wholesale electricity prices does not amount to price-fixing, and so the Commission should decline jurisdiction, as occurred in Commission Decision 280 relating to the price determination process under NZEM.
50. The price discovery mechanism in the Arrangement differs from that in NZEM because it is effectively mandatory (if the Applicant is correct in its claims of comprehensive coverage). One of the key factors in the Commission's finding that the NZEM price discovery mechanism did not amount to price-fixing was that it was voluntary. The NZEM Rules (unlike the Rulebook) specifically provided for bypass through the use of bilateral contracts^{12,13}.
51. Furthermore, the control by industry participants of the operation of the wholesale market increases the risk that tacit collusion in relation to bid levels or restriction of output by participants will drive up electricity prices. Although a similar price determination process is likely to exist under the counterfactual, the neutrality of the Crown EGB and the inclusion of more direct and transparent lines of accountability provide a disincentive for such collusion, and a greater likelihood that any such collusion would be identified and disclosed to the Commerce Commission.

Provision of Services to Non-Members

52. The one area in which the Applicant acknowledges a clear breach of the Commerce Act is the rules for determining the price that members must charge non-members for services, which could be provided under the Rulebook.

¹¹ See Part I, Section III Rule 2 of the Rulebook for the rules dealing with transitional dispensations.

¹² See paragraphs 147 and 176 of Decision 280.

¹³ Transpower notes that the “bypass” of NZEM is in reality only partial as, while aspects such as governance of NZEM can be bypassed, some decisions made under NZEM such as those relating to dispatch order affect non NZEM members as well. This point is expanded upon in Appendix 1.

53. The Applicant claims that, because there would be no need to address the provision of services to non-members under the counterfactual, as the Rulebook will be compulsory, these pricing rules do not substantially lessen competition. Transpower disagrees. The pricing of services to non-members under the Arrangement is less competitive than the counterfactual, under which the same pricing determination would apply to everyone. The pricing to non-members includes a penalty. This distorts competition by raising the costs of non-members.
54. Furthermore, members are required to provide all services to non-members on the same terms as they would provide them to members. This goes beyond price to prevent members from providing services to non-members on any different terms. This goes further than the counterfactual, which presumably would impose baseline terms but would not preclude parties from agreeing on higher standards.

Industry control of change

55. The decision rights and incentives of the controlling industry parties under the Arrangement are such that, in the longer term, the scope for industry rules to be used to restrict competitive innovation and new market entry is much greater. The controlling parties have every incentive to restrict the activities of innovators and entrants that would otherwise represent a competitive threat. Under the industry proposal these parties gain the ability to use rule-setting arrangements to prevent or restrict competition or, at the very least, use the procedures for making rule changes to delay and blunt such competitive pressures.
56. The Applicant has dealt with the rule-making process only in terms of changes to the Rules. It has not addressed the competitive impact of a failure to change the Rules. Given that the Rules as drafted have been determined by industry incumbents, lack of change also has the potential to affect competition compared to the counterfactual.
57. An example of where failure to change the rules could limit competition arises in relation to the dispatch process. The current process is designed for the needs of hydro and gas powered generation plant but may not suit new forms of energy, including wind, which are highly environmentally dependent. The Government has stated that it seeks to "ensure that the use of new electricity technologies and renewables ... is facilitated and that generators using these approaches do not face barriers".¹⁴ The Applicant has admitted that a Crown EGB is more likely to be focused on wider Government objectives and so it is reasonable to assume that a Crown EGB would be more likely to promulgate a rule change enabling wind and other innovative forms of generation to compete in the market. In contrast, industry incumbents (i.e. generators using existing forms of generation) are unlikely to accommodate such a rule change, which is of no benefit to them and would allow new entrant competition.

¹⁴ See point "j" at page 2 of the section 26 statement.

58. While the electricity industry is probably not the most dynamic part of the economy, it has still undergone major changes over recent years. Future changes are highly likely as the industry completes adjustment to new structures. It is also likely that further change will be driven by rising demand; new generating, transmission and demand-side technologies; retailing innovations; demands for energy conservation and efficiency and so on. A number of these dynamic factors are likely to require changes to the industry's rules. However, under the Arrangement, industry incumbents control such changes. In effect, parties seeking a rule change are obliged to seek industry approval. This requirement is likely to forewarn of competitive threats and, even if rule changes are not blocked, industry parties will have time and information that will afford them an ability to adjust to a competitive threat that would not otherwise be available. This will potentially lessen the commercial return to innovators and entrants, and diminish their incentives to compete. Unless an innovation is available to all or a majority of any affected class of participant, it will be possible to accumulate a blocking minority to stop or delay change. The operation of an industry agreement as proposed allows significant scope to restrict innovators and entrants directly.

Reconstitution of existing rules

59. The reconstitution of a number of existing rules in the proposed Arrangement is not competitively neutral. As part of a new comprehensive industry regime rules that were, in the past, either innocuous, beyond the Commission's jurisdiction, or suitable for Commission authorisation, may not be so benign under the conditions pertaining to the Arrangement. The fact that, in the past, an agreement was found to have no or minimal effect on competition, or was granted authorisation, does not imply that the same conclusion will be drawn when the same rules are considered as a part of the current proposal.
60. For example, the NZEM Rules were previously considered by the Commission in the context of the existence of "alternatives". In a physical sense all industry participants are already subject to the economic consequences of the NZEM dispatch, and Transpower's attempts to require (through its connection contracts) all industry participants to be members of one or other of the reconciliation and settlement processes in NZEM and MARIA. Together these requirements represent, in effect, a single settlement and reconciliation arrangement - given the linkages between reconciliation and settlement for NZEM and MARIA. However, it is important to recognise that bringing these existing arrangements under a single unified dispatch, settlement and reconciliation process that is governed by industry incumbents does more than bring these existing agreements together. It effectively creates a single system, with no alternatives for membership or governance, with financial and economic consequences that will affect all industry participants - whether or not they elect to become members of the Arrangement. The Applicant claims that this unified and universal process can, without competitive effect or loss of public benefit, be subject to similar decision rights as those that currently apply to rule making in the voluntary NZEM.

1.8 Basis for considering authorisation: assessing benefits and detriments versus counterfactual

61. The Applicant's argument for authorisation is based on two premises that, taken together, are inconsistent:
- (a) as the Rules under the Arrangement will essentially be the same as the counterfactual, there are no detriments. In reaching this conclusion, the Commission can ignore future rule changes because these are outside the scope of the authorisation;
 - (b) the Rules of the Arrangement will, in future, be more timely, appropriate and efficient because of the difference between the Arrangement (industry self-regulation) and the counterfactual (government regulation). The benefits of future rule development under industry self-regulation must all be counted.

It is illogical to exclude future detriments and include future benefits.

62. Transpower has adopted an alternative and internally consistent approach. A true comparison with the counterfactual requires examining how the Arrangement as a whole (i.e., industry self-regulation) as against the counterfactual will affect the Rules both initially and in the medium to long term. This is how the Applicant has assessed benefits so it makes sense to take the same approach for detriments. Transpower has provided a brief appendix setting out its quantification of benefits and detriments at Appendix 2.
63. This assessment requires a careful and detailed analysis of the features and impact of both industry self-regulation and government regulation. However, the Applicant has distorted the comparison by contrasting an idealised view of industry governance, which denies all parties' commercial incentives and scope for anti-competitive actions, with a caricature of government regulation.
64. In reality, no institution is perfect. It is, however, not good enough to focus on the risks of government failure. It is equally important to consider the risks for failure of self-regulation. Realistic comparative institutional analysis comes from the position that no institution is perfect. The real question is which one will deliver greater benefits (i.e. overcoming the identified market deficiencies) and fewer detriments.
65. The Applicant has not provided any evidence to support its assertions that industry self-regulation is inevitably preferable to government regulation. In contrast, Transpower submits that evidence available from other jurisdictions that have experimented with industry-controlled processes for rule development and governance suggests this form of regulation is problematic. This evidence, most recently drawn from events in California and other parts of the United States, support the contention that entrusting development and maintenance of market rules to participant-controlled governance arrangements leads to dysfunctional market design, coupled with an inability (or unwillingness) of the industry governance structure to reform its own rules.

1.9 Public detriments

66. The Applicant submits that there are no detriments arising from the Arrangement (see paragraph 31.4 of the Application). Transpower disagrees. The Applicant reaches this conclusion because it argues that, other than pricing to non-members, the Arrangement does not substantially lessen competition and, therefore, there are no detriments. In relation to pricing to non-members, the Applicant argues that any detriment is theoretical, due only to the deeming provisions in section 30 and no actual detriment arises when compared to the counterfactual. Transpower has set out the ways in which the Arrangement does substantially lessen competition, at paragraphs 37-60 of this submission. If the Commission finds that there is a substantial lessening of competition, then detriments must follow.
67. The Arrangement gives rise to several types of public detriment when compared to the counterfactual. These can be summarised as follows:
- (a) lock-in of existing structures;
 - (b) distortion of investment decisions and reduction in dynamic efficiency;
 - (c) a reduced likelihood of achieving outcomes in the public interest;
 - (d) higher transaction costs;
 - (e) potential price rises;
 - (f) co-ordinated conduct resulting in inefficiencies;
 - (g) the inefficiencies and reduction of competition resulting from attempts to impose the Rulebook on non-members.

These detriments are discussed in more detail below.

68. A principal effect of the proposed Arrangement is to more strongly lock-in existing and initial structures and arrangements than would be the case under a regulatory counterfactual. This arises through resistance to change and ability to block change as discussed at paragraph 55. In order to avoid detriment this lock-in effect also requires that established arrangements are more likely to be superior to future alternatives – again it is unclear why that would be the case.
69. The Arrangement is particularly inimical to dynamic efficiency due to several factors, including in particular:
- (a) incumbent control of amendments to rules;
 - (b) the ease of formation and power of blocking coalitions (for example the effective generator veto over almost all parts of the Rulebook)¹⁵ and the use of voting rights to prevent competitive innovations;
 - (c) limited consumer voice on critical issues;
 - (d) the costs and delay associated with obtaining collective approvals from competing industry parties (some of which are likely to have strong vested interests); and

¹⁵ Taking into account the fact that the major generators together control the majority of retailer votes.

- (e) lessened external pressures on market incumbents due to the dampening of competition that results from collective industry action.
70. It is likely that a regulatory regime which has primary accountability to the Crown (with its clear and explicit recognition of the public interest) would be more likely to produce outcomes that accord with that public interest than a regime that is controlled by industry incumbents. Unlike a regulatory solution, an industry arrangement does not have the statutory and regulatory safeguards that would exist under the counterfactual. The incentives of controlling interests are also likely to diverge from national interest and not be balanced by effective consumer and other independent voices. In the past retailers may have acted as a proxy for consumer interest, but the fact that the retailers are now combined with generators mitigates against such a role.
71. The use of an industry self-regulatory model also raises other concerns in the interaction between government and industry. Political influence is present in either option. The existence of a private regulatory arrangement will not insulate the electricity industry from “ad hoc” government interventions in policy areas such as climate change or energy conservation, nor should it. However, under a regulatory model, accountability to the public is embedded in parliamentary and other governmental processes. The accountabilities in industry self-regulation, such as that proposed, are often hidden and uncertain.
72. Investment in production of industry services is also likely to be distorted by industry control. Where collective approval of investments is required, for example investment in provision of grid services, it is likely that under-investment will occur given that practical accountability will lie with parties that do not have control of relevant decisions. For instance practical accountability for under-investment in the grid is likely to lie with the grid owner rather than the group of grid customers who collectively have decision-making power. Furthermore, any accountability that does exist for industry participants is likely to be so diffused as to be ineffective. This disconnection between accountability and decision-making could have negative long-term effects on the efficiency of the power system e.g. as there is no clear accountability for security, parties can vote in their short-term interest to avoid costly investment without being held accountable for the long-term consequences. These consequences could ultimately include system failure through under-investment.
73. Similarly, where investment opportunities exist to relieve constraints, some private industry interests would be likely to favour under-investment as the presence of constraints “regionalises” the transmission grid and enhances generators’ abilities to exercise market power. Conversely, a Crown EGB could be expected to factor in the benefits of relieving constraints in increasing competition and enhancing overall public benefit when making judgements over investments.
74. A comparison of likely transaction costs between a regulatory and industry governance approach also suggests detriments from the Arrangement. There are several areas where the likely costs of operating a regulatory model will be less than the Arrangement. For example, there are significant costs in achieving industry agreement that are likely to be greater than required to make regulatory decisions.

75. Compared to the counterfactual, electricity prices and the prices of industry services are likely to be higher, rather than lower, under the Arrangement due to weakened competition, reduced productive efficiency, greater transaction and co-ordination costs, and slower adoption of cost reducing innovations. Any cost reducing factors, in particular those that require a rule change to be implemented, are likely to be more slowly implemented under an industry controlled arrangement than under the counterfactual. Even when cost reducing factors are available on an industry wide basis, these are much more likely to flow to market participants' bottom lines than to be reflected in lower consumer prices due to dampened competitive pressures.
76. In the Applicant's submissions the likelihood that the Arrangement will result in reduced industry transparency is conceded. However, in the application this is presented as a benefit. Generally greater transparency of price information - that can be used to identify alternative purchase options or indicate relative supplier costs - enhances competitive pressures and informs entrants. While reduced transparency, especially in relation to bid levels, may reduce the prospects of co-ordinated industry conduct to some extent, this gain is likely to be minor compared to the detriments that flow from denying the market information that would otherwise be available under the counterfactual. We understand that industry participants are already well aware of the identity of bidders and the bid levels offered. Extending the availability of this information to consumers and other interested parties is unlikely to further facilitate co-ordinated conduct.
77. While the Applicant claims that some benefits flow from denying industry parties information that would facilitate co-ordinated conduct, it then ignores the numerous opportunities for co-ordinated conduct, or outright collusion, that exist as a result of the many industry forums that will be required to manage the industry Arrangement. Similar forums may exist under the counterfactual but it is less likely that these will afford the same opportunities for collusion, given the likely increased representation of consumer interests and/or other members that are independent of private industry interests.
78. The inability of industry self-regulation to impose mandatory rules is a significant detriment compared to the counterfactual. The Rulebook seeks to achieve comprehensive coverage through what the Applicant terms "incentives". These include:
- (a) specifying terms on which members may deal with non-members, including a penalty element and bundling of services to non-members;
 - (b) providing a process by which non-members can be sued for non-payment (quantum meruit); and
 - (c) limiting resignation of members (by requiring acceptable alternative arrangements to be in place prior to resignation as well as continuation of membership liabilities).

79. The means for enforcement of the Rulebook on non-members is a critical source of detriments when this is properly compared to the counterfactual. Enforcement depends upon the industry EGB taking a quantum meruit action through the Courts for payment. The Applicant assumes that this spectre will provide a sufficient incentive to achieve comprehensive coverage. Transpower has grave reservations about relying on the threat of action under quantum meruit as a means of creating incentives for industry participants to join the Arrangement and as an effective enforcement mechanism for payment. It is dependent on the successful application of complex, artificial and unproven rules. It is subject to the uncertainties and expense inherent in any Court action (including the appeal process) particularly one without comparable precedents. At best quantum meruit will take a considerable time to develop into an operational mechanism for determining and enforcing appropriate charges. More likely, such an approach will result in sporadic case-by-case determinations, each of which risks a failure that would undermine the whole viability of reliance on quantum meruit as a mechanism to achieve comprehensive coverage.
80. Even assuming quantum meruit can be applied to the issue of payment, it does not provide a mechanism for enforcement of terms not related to payment – such as quality and security. Thus the existing deficiencies and uncertainties in the physical electricity market will not be fully resolved under the Arrangement. In contrast, a Crown EGB, that establishes mandatory compliance through regulation, will not have to deal with these issues and so will, by comparison, be efficient and timely with lower transaction costs.

1.1.11.9.1 Conclusion on Detriments

81. Rather than being of universal benefit, as suggested by the Applicant, even in static terms the Arrangement, when compared to the counterfactual, seems more likely to produce significant detriments due to a substantial lessening of actual and potential competition and the consequential reductions in allocative and productive efficiency. In dynamic terms, the detriments are also significant. Under the Arrangement innovators and entrants are likely to be deterred and as a result dynamic efficiency is likely to be significantly reduced.

1.10 Assessment of claimed public benefits

82. The Applicant has set out a series of public benefits that it claims will arise from the Arrangement. As a general comment Transpower considers that:
- (a) both the likelihood and the magnitude of the benefits is overstated;
 - (b) the underlying assumption that industry self-regulation as against Government regulation will necessarily lead to benefits is simplistic and in many cases not true;
 - (c) the comparison is not a balanced or realistic one. It pits a best-case industry EGB against a worst-case Crown EGB.

1.1.11.10.1 A Comparative Institutional Analysis

83. The proposition that self-regulation is always better than government regulation is clearly nonsense. There are many instances when government regulation is more appropriate, just as there are numerous instances when self-regulation works better.
84. The key determinant is assessing the relative risks of each form of regulation. On the one hand, government regulation creates the risk of bureaucratic ineptitude, costly acquisition of information and the resulting ossification of industry. On the other hand, self-regulation creates the risk of control by a small number of insiders, resulting in reduced competition and ossification of the industry. Which risk is higher in the present case?
85. Self-regulation is generally less risky, and thus preferable, if it has the following characteristics: (a) it is voluntary; (b) it reduces transaction costs and information acquisition costs; and (c) private decision-making structures produce collective interest in gains from innovation and improved efficiency. All three of these conditions are absent in the Arrangement.
86. The attempt to design the Rulebook as voluntary in an industry that requires a single set of comprehensive Rules has resulted in an Arrangement that is neither truly voluntary nor likely to be comprehensive. Truly voluntary self-regulation can only operate where joining is an option that provides benefits, but the functioning of the industry is not dependent on everyone joining¹⁶. The attempt to label the Arrangement "voluntary" while at the same time delivering comprehensiveness may be more dangerous than open compulsion, since it will reduce scrutiny and accountability.
87. Secondly, the Arrangement does not reduce transaction costs. Industry negotiations are costly, as evidenced by the development of the Rulebook itself¹⁷. Experience shows that electricity industry rule making has always required tacit pressure and leadership from the government (Refer to Appendix 1).
88. Lastly, as discussed elsewhere, voting rules do not create incentives for efficient rule changes. Widely dispersed consumer interests are likely to be under-represented. Insiders have effective control and no incentive to let more efficient outsiders in.
89. The absence of these three conditions indicates that self-regulation is not an appropriate option for the electricity industry. The Applicant has failed to analyse the specific conditions of the industry and the nature of the Arrangement and instead has elected to simply assert the benefits of self-regulation in blanket terms regardless of these specific factors.

1.1.21.10.2 Specific Benefits

90. Transpower wishes to address each of the specific benefits set out by the Applicant in paragraph 32.1 of the application. They are not linked to the provisions for which the Applicant seeks authorisation. As noted above, they focus on future developments that the Applicant has excluded from its consideration of the detriments.

¹⁶ For example, the Master Builders Federation.

¹⁷ The present status of funding for the establishment of EGBL and progress toward completion of the Rulebook can be found in EGEC paper "Budget and Funding", 31st January 2002.

1.10.3 Efficient Decision Making

91. The Applicant claims the industry would be more likely to make efficient decisions than a Crown EGB as it "has the necessary information and faces the appropriate incentives". In fact day to day decision-making (i.e. decisions other than those related to rule-changes) will be carried out by the industry EGB. As it is not practicable for the industry to vote on day to day decisions it must delegate such decisions to the industry EGB. In assessing decisions that are not rule changes the real comparison is between the relative decision making abilities of the industry EGB and the Crown EGB.
92. Assessing the claimed information and incentive benefits in this context, the Crown EGB is likely to have the same access to information (and quality of decision-making) as the industry EGB. Participants will still need to provide information to the EGB in either case. However, under a Crown EGB (given that accountability is to the Minister, not the industry) there is a greater likelihood that information can be kept confidential from the competitors (e.g. similar to Commerce Commission applications). This will enable the EGB to make appropriate decisions.
93. The Applicant's reference to "industry" decision-making is essentially an acknowledgement that for rule change decisions there is no real distinction between the industry and the industry EGB. The industry EGB will be appointed by, and can be dismissed by, the industry, and its decisions on rule changes may be overruled by the industry. In terms of incentives, the Applicant does not specify what the "appropriate incentives" are. If anything, the control of the industry EGB by industry participants with vested interests may interfere with appropriate and efficient decision-making.
94. The Applicant has assumed that the exercise of decision rights by affected parties will result in overall economic efficiency. This is only true if the interests of the major voting blocks are aligned with overall economic benefit. If industry participants have interests that do not concur with overall economic benefit, commercial interests will prevail. An example of industry decision-making to serve its own commercial interests ahead of overall economic welfare is provided by the Rulebook's approach to the "de minimis" rule. This is a rule under the Common Quality Obligations that exempts generation plant whose generation capacity is below a certain level from certain quality standards. The Rulebook would raise the level from the existing 5 MW to 30 MW so that some small-scale generation plant would be exempted from the requirement to join the Rulebook and to be subject to the standards membership would impose. Transpower estimates that, as a result of such a change, an aggregate 400MW of generation would fall outside the common quality standards. Transpower, as system operator, would consequently have to purchase additional ancillary services, or operate the power system to a lower quality standard, in order to "accommodate" this aggregate capacity of "non-compliant" plant. In either case, the increased cost or increased risk incurred as a result of the non-compliant plant is borne, ultimately, by the end consumer.
95. Transpower considers that a Crown EGB would not endorse such a change, as it is driven by the commercial needs of industry players, not the overall efficiency of the system.

96. The attempt by generators to take control of the allocation of loss and constraint rentals through an NZEM rule change voted on only by generator/retailers is another example of how industry blocks will act in their own interest, not necessarily those of the industry as a whole (let alone overall public benefit). At present, the revenue stream arising from rentals passes to Transpower as grid owner. Transpower passes on these rentals in full to its customers (distributors, direct connects and generators) and seeks to allocate the rentals in a manner which is least distortionary to the marginal-cost based price signals from the wholesale market. It is proposed that rentals will be used to fund Financial Transmission Rights (FTRs) and the income from auctioning FTRs be allocated to Transpower's customers. Notwithstanding the interests of Transpower, distributors and direct connects in the rules dealing with treatment of loss and constraint rentals, generator/retailers effectively control changes to the relevant rules under both the NZEM and the Rulebook. Transpower is currently challenging an NZEM rule change proposal to take the rentals away from the grid owner.

1.1.41.10.4 More Efficient Rules

97. The Applicant spends some time setting out the process for future development of the Rules under the Rulebook, but does not clearly articulate how or why this will result in better outcomes. Transpower thinks that the Applicant's argument can be summarised as four key points:
- (a) the argument relied on above in relation to decisions i.e. that industry rule making will be efficient because the industry faces appropriate incentives;
 - (b) the Crown EGB would be inappropriately politically influenced;
 - (c) the industry process is quicker; and
 - (d) the industry is less susceptible to regulatory capture.

Each of these is discussed in turn below.

Incentives resulting in Appropriate Outcomes

98. The Applicant asserts that rule changes under the Arrangement will have greater public benefit because they are more likely to be aimed at industry efficiency whereas the Crown EGB will be subject to the furtherance of wider political objectives. The Applicant is (1) assuming that industry efficiency is the only form of public benefit that is valid in the Commission's cost/benefit analysis, and (2) that exercise of decision rights by affected parties will result in overall efficiency gains. Neither assumption is correct. The flawed reliance on industry decision-making is discussed at paragraphs 91-96. On the former point, the Commission has stated that wider public benefits of a less tangible nature are relevant, although they may be harder to quantify¹⁸. The fact that they may be harder to quantify does make the analysis more difficult but it does not disqualify them.

¹⁸ See for example the Commission's acknowledgement in Decision 364B that "avoidance of community disharmony" could be a public benefit. Transpower considers that much more specific and measurable benefits are at issue here, and merely raises this to counteract the Applicant's overly narrow limitation of benefits.

99. Incentives under the industry EGB may not be "appropriate" as they are more likely to be biased against consumer interests and demand reduction¹⁹. Although consumer interests are purportedly represented, it is difficult to see how they would be able to use the voting system effectively. It is highly unlikely that any but a few of the largest consumers will become voting members. Even if they did, consumers' interests are so disparate that it would be difficult for them to act collectively and use their votes effectively.

Political Pressure

100. It is naïve to assume that an industry EGB would be free from political pressure as such pressure will exist in either governance framework. Industry accountabilities to government (to the extent they exist) will be more opaque under an industry EGB whereas a Crown EGB will involve open and transparent accountability to government. In this context, the Applicant has presented the counterfactual as a bogey of "political interference", against which the Rulebook is presented as a model of efficient and appropriate decision making. The assumption is that political interference is always irrational, and will always damage the performance of the regulatory process. In reality, the role of political influence needs to be considered in the context of all other interests involved in any particular setting. In this case, political incentives are likely to lie with the interests of consumers and outsiders. Under industry self-regulation, these voices will be under-represented. The counterfactual allows for additional external pressure to be brought on the industry in two ways:

- (a) in the absence of an effective consumer voice, an arrangement which allows more direct and transparent political influence is more likely to reflect a better balance of interests; and
- (b) outsiders facing unreasonable barriers to entry are also more likely to find a sympathetic ear with a politically influenced regulator.

101. In essence, the issue of political influence is the issue of accountability. Under the Arrangement, the regulatory body will be primarily accountable, and subject to, private industry interests. Under the counterfactual, wider accountability to the broader public interest will explicitly be present.

102. Under the counterfactual, the Government's implicit leadership in rule making will become explicit. There is little doubt that progress on controversial rule development critically depends on pressure from the Government, including the threat of regulation. Under the proposal, the Government is not directly accountable for any errors it makes in this process. The counterfactual would put greater pressure on the Government to perform. A direct and explicit role for the Government may also reduce transaction costs.

Industry Capture

103. After claiming a Crown EGB would be subject to political pressure, the Applicant goes on to claim that there is a risk of industry capture of the Crown EGB. Industry capture is a risk in any regulatory framework but is total under the form of industry self-regulation proposed. Therefore to the extent that the Applicant thinks industry capture is a bad thing, (and Transpower agrees), it is a far greater detriment of the Arrangement than the counterfactual.

¹⁹ Consumer welfare and demand side management are both objectives of the section 26 statement – see objective 1 on page 1, outcome 1 on page 2, among other references.

Timeliness

104. The Applicant compares the rule change process under the two models (see paragraphs 32.9 - 32.15 of the Application) but does not specify how rule changes under the Industry EGB will be more efficient. In terms of process, the evidence of the development of the Rulebook itself does not give credence to the claim that development of Rules under an industry EGB will be significantly more efficient than via regulation.
105. The argument by the Applicant for the efficiency and timeliness of rule changes is inconsistent. At paragraph 32.22 the Applicant states that rule changes "need not be subject to resolution under the Arrangement", contrasting this with the Crown EGB's requirement to consult with affected parties. However, at paragraph 32.14 the Applicant claims that one of the benefits of the Arrangement is that "there is clear industry involvement in the process for rule changes under the Arrangement".

1.1.51.10.5 Competitive Pressure of Alternative Arrangements

106. The Applicant claims that the possibility of alternative arrangements for the electricity industry will act as a competitive pressure on the Industry EGB, keeping it efficient. This claim is an attempt by the Applicant to "have its cake and eat it too". The Applicant claims the Rulebook delivers the advantages of comprehensive coverage, which is a necessary (although not sufficient) condition for an efficient and secure wholesale physical market. Comprehensive coverage cannot be maintained alongside the development of co-existing alternative arrangements. Given the physical nature of the electricity system there can only be one mandatory arrangement – an alternative arrangement might replace the Arrangement but it could not sit alongside it. Thus any claimed benefits from alternative arrangements must be discounted (or alternatively the benefits of comprehensive coverage must be excluded from the analysis)²⁰.
107. The only relevance of alternative arrangements is the likelihood of the development of new and better replacements for the Rulebook. It is much more likely that this would occur under regulation than under an industry EGB. Industry is unlikely to be prepared to relinquish a governance structure that gives it the degree of control it has under the Arrangement, in favour of an alternative structure. An alternative that results in greater overall efficiency is likely to do so at the expense of incumbent participants.

1.1.61.10.6 Greater Level of Compliance

108. The Applicant claims greater compliance incentives under the Arrangement than under regulation as a result of "commitment" by members and the continuing relevance of sanctions.

²⁰ In any case, Transpower disputes the claim that alternatives will place pressure on the Arrangement. This might be the case in a truly competitive market where industry participants were free to join an alternative at any time. This is not the case under the Arrangement. The Rules enable the EGB to determine whether a member can resign to join an alternative arrangement after an assessment of the merits of that alternative and so effectively development of alternatives that threaten the status quo can be blocked. Therefore in practice significant alternatives are unlikely to emerge.

109. This does not reflect the reality of the Arrangement which is not voluntary in effect (assuming the Applicant's own arguments on the effectiveness of incentives to join are correct). Simply being a member does not necessarily reflect commitment to the Arrangement's requirements. A member may have requirements imposed on it because it has no vote under the relevant part or because it is outvoted. Involvement in the process or development of Rules is no guarantee that a member's concerns will be addressed.
110. In contrast, regulation as a legal instrument is usually an effective means of gaining compliance (at least in New Zealand's business culture). Many companies have a strong aversion to being found in breach of regulations, but are happy to engage in contractual disputes.
111. Sanctions are no more likely to be relevant under the industry model than regulation. If anything, certain parties may have a vested interest in developing and/or applying inappropriate sanctions (either to protect themselves or to punish others) under an industry EGB. Under a Crown EGB participants will have less ability to do this.

1.1.71.10.7 Contestable Service Provider Contracts

112. The Applicant has argued that one of the negative aspects of the counterfactual would be the Government's reluctance to contract out service functions. In-house production is deemed to be less efficient due to lack of competitive pressures. It is not obvious why the Applicant believes the Government would behave this way. In fact, it is clear from the observation of how government agencies actually behave that most service functions are likely to be contestable.
113. The Applicant also suggests that a major dynamic difference between the proposal and the counterfactual is the possibility that under the proposal the system operator function may be contracted out under the Arrangement but not under the counterfactual. The Applicant goes on to claim that the Crown EGB would want to engage Transpower as the permanent system operator to maximise the information available to it. There is simply no basis to support this assertion. Rather, there is unlikely to be any difference between the counterfactual and the proposal in this regard and no benefit accrues.

1.1.81.10.8 Lower Risk of Excessive Investment

114. The Applicant asserts that excessive investments are less likely under the Arrangement because under the counterfactual the Crown EGB may become an investor of last resort. Experience suggests that under-investment in transmission and security of supply is a greater concern. The complications of undertaking efficient investment in an interconnected network in which physical property rights cannot be defined and in which complex externalities arise are well understood. In addition investment by Transpower is disincentivised by the fact that there is no effective means of securing agreement to, or enforcing the costs of, investment in the grid – especially where multiple parties are affected. Furthermore, under the Rulebook no one party is responsible for long term grid security. This lack of clear accountability and enforcement under the Arrangement is unlikely to aid proper investment decision-making and may lead to transmission customers not voting for improvements (to avoid cost increases) without fear of being held accountable for the effect of under-investment on the security of the power system.

115. Accordingly, to avoid under-investment some form of regulatory authority to undertake investments with multi-lateral effects and to efficiently allocate the costs of those investments is needed. This will not occur under the Arrangement. The risk of a loss of public benefit through under-investment under the Arrangement is, in Transpower's view, a greater risk than any risk of loss of public benefit from over investment under a Crown EGB.

1.11 Conclusion

116. In conclusion, Transpower reaffirms its position that the Applicant has not shown that the likely benefits will outweigh the anti-competitive detriments from the Arrangement, and that, in fact, the reverse is true.

Appendix 1

Industry Background and Reform

Applicant's Approach

Section 3 of the Application purports to provide an overview of present market arrangements to provide some context to the proposed Arrangement. This description is incomplete and, in parts, misleading. The most notable factual omission – and one that is critical to an appreciation of the competition and efficiency arguments under consideration by the Commission – is the failure of the Applicant to note the mandatory nature of the present market arrangements. The physical requirements for mandatory compliance with rules to ensure outcomes that are both secure and efficient are universal for reasons described below. This Appendix then goes on to describe how, sometimes with limited success, the current arrangements attempt to deal with these requirements.

Section 2 of the Application also provides some detail on the historical evolution of the electricity industry. The Application attempts to put the Arrangement in a context that suggests that the present application is simply the natural evolution from industry driven reforms that have occurred to date. Transpower takes issue with this characterisation of the past evolution of reform in the electricity industry, in particular the underplaying of the role of government leadership.

Transpower considers it useful to the Commission if it outlines its views on the reform process and current market arrangements in order to give a more balanced context in which the Commission can evaluate the benefits and detriments of the Rulebook.

Physical Requirements of the Electricity System

The wholesale physical market is the market that determines the physical basis, i.e. the actual power flows, for the allocation of transmission capacity as well as providing the mechanism for the real-time trading of electricity. These critical functions are achieved through a single integrated process centred on the physical process of dispatch. The New Zealand power system – like any other – is highly integrated, with all participants and the physical assets that make up the system interacting with and affecting each other. There is a single common dispatch process co-ordinated by the system operator. The dispatch ensures standards of quality and security that are common to all users of the transmission system. Energy flows are metered to a common set of metering standards providing the data for a common reconciliation of volumes injected and taken from the grid. These elements are part of a single process – sometimes called the wholesale physical market – which co-ordinates and integrates all physical aspects of wholesale electricity trading and allocation of transmission capacity²¹.

All participants are bound to the physical and economic consequences of this system, at the centre of which is a bid-based, security constrained economic

²¹ Through the mathematical formulation of the dispatch based on nodal prices (refer below) the intra-locational trading of electricity is both physically and financially the same as the buying and selling of transmission capacity. These two concepts or descriptions are just two alternative ways of explaining what is mathematically one formulation.

dispatch²². The dispatch process discovers nodal prices (also called locational marginal prices; in other words marginal cost-based prices that reflect both the marginal energy cost and the marginal cost of transmission usage). Through this single process, and the integrated and consistent discovery of prices for energy and for allocating transmission capacity, efficient price signals are provided for both consumption and investment decisions. The efficiency and consistency of these pricing signals underpins the allocative and dynamic efficiency of the entire industry – including, importantly, providing the means for efficient trade-offs to be made in the alternative utilisation of, and investment in, generation, transmission or demand-side assets.

It is important to distinguish between the physical market, which requires mandatory participation by all physical market participants, and the so-called financial markets. Participation in financial markets can be voluntary. Energy contracts (including what are commonly referred to as bilaterals) for the delivery of specified quantities of electricity at specified locations at a contracted price are purely financial arrangements forming part of these financial markets.

The relationship between the spot market and other financial contract markets (e.g forward markets) is analogous to that found in the trading of other commodities. However, there are essential characteristics – arising from the physical nature of electricity and not typical of other commodities – that require the careful regulation of the spot market (i.e. the wholesale physical market) for electricity. These characteristics include that:

- (a) Electricity cannot be (commercially) stored. Accordingly, it is essential that there is precise real-time balance between production and consumption. Otherwise, the “quality” of electricity fluctuates outside allowable limits with, for example, the risk of excessive variation in system frequency with intolerable consequences for machinery connected to the power system.
- (b) The flow of electricity obeys “Kirchoff’s Law”. This means that every action causing a change to the flow of energy on any part of the network will have an effect on the flows everywhere else on the network. These interactions are both complex and ubiquitous. The economic and commercial implications of these interactions include the occurrence of complex externalities such as the impossibility of any meaningful definition of property rights either for energy or for transmission capacity and are at the root of the multi-lateral nature of many of the commercial issues faced in the electricity industry.
- (c) Moreover, the physical interaction and inter-dependency between energy flows and transmission capacity couple the markets for transmission capacity and energy (as well as ancillary services) in a unique and complex manner. To achieve an allocation efficiently industry relies on

²² This extended description of the dispatch process incorporates its key aspects. It is:

- “bid-based” i.e. based on the voluntary bids and offers submitted by energy traders;
- “security constrained” i.e. the dispatch incorporates the need to ensure standards of quality and security can be maintained under normal conditions and preserved under a contingent event such as sudden and significant equipment/plant failure; and
- “economic” i.e. the dispatch is formulated to an economic objective of, in effect, achieving least cost dispatch (given the price inputs of generators and suppliers of ancillary services and subject to satisfying the security criteria described above)

the simultaneous co-optimisation of generation inputs, demand offtake and transmission capacity through a single real-time dispatch process (see above).

The "glue" that holds together the key features of the wholesale physical market is the set of common standards and rules for its real-time operation. Because the transmission grid is interconnected, and because all the key features interact, the standards and rules must be common, co-ordinated and comprehensively applied to all industry participants. The need for comprehensive compliance with a set of physical market rules is a feature of any workable electricity system including New Zealand (see below).

Description of Current Market Operation

Section 3 of the Application purports to provide an overview of present market arrangements to provide some context to the proposed Arrangement. This description is incomplete and, in parts, misleading. Notably it emphasises the trading arrangements of the NZEM and MARIA while failing to give adequate recognition to the rules required to maintain grid security and common quality and their mandatory nature. Section 3 makes no reference to Transpower's contracts with customers physically connected to the grid, although these contracts currently contain most of the security and common quality rules.

The physical requirements for mandatory compliance with rules to ensure outcomes that are both secure and efficient are underpinned under the current arrangements in New Zealand through requirements in Transpower's connection contracts. Notably:

- (a) the Common Quality Obligations (CQOs) document requiring all asset owners connected to the power system to comply with certain technical standards necessary to achieve quality and security standards; requiring payment for ancillary services purchased by Transpower to achieve quality and security standards; and requiring generators to be subject to real-time dispatch thus ensuring that power quality and security standards can be maintained.
- (b) Requiring all trading parties to be a member of a recognised reconciliation and settlement agreement (which in effect requires membership of either NZEM or MARIA). By this requirement – and the mechanisms that link reconciliation of NZEM and MARIA – there is a means, albeit one with enforceability problems, to ensure that all market participants are bound to the physical and economic consequences of the single common dispatch.

In theory at least, Transpower's contracts offer a means for mandatory compliance as all participants in the wholesale physical market are either directly connected to the grid, connected to a distributor itself connected to the grid, or trade with one of these categories of participant. However, a key deficiency in the current arrangements is that, in the absence of signed contracts, Transpower has been unable to enforce the requirements set out in the CQO. This has led to non-compliance with some of the key elements of the physical requirements outlined above, as participants in the wholesale physical market receive the benefits of grid security and common quality whether or not they themselves comply with the mandatory rules.

The Application does refer to MACQS. MACQS is a rule-setting arrangement, that has not yet come into operation (the rules it was in the process of developing have been incorporated into Part C), for determining the common quality standards currently dealt with in the CQO. The rules developed by MACQS were to be implemented through Transpower's contracts once MACQS become operational and processed a set of common quality rules. The decisions of MACQS would therefore be vulnerable to the same problems with enforcement currently faced by Transpower. The Rulebook itself faces these difficulties in achieving compliance by any industry participants who refuse to join as members.

A further deficiency in the current industry arrangements is the overlap, and therefore potential for inconsistency, between the multiple arrangements dealing with the standards and rules of the wholesale physical market. One example of overlap is metering standards which are applied by both the NZEM and MARIA, and in practice determined by the latter arrangement. Dispatch rules are set out in both the voluntary NZEM and the "mandatory" CQO. Transpower deals with this overlap by providing that compliance with the NZEM's requirements constitutes satisfaction of the CQO's requirements in relation to dispatch. Electricity dispatched outside the NZEM is subject to a section of the CQO dealing with dispatch which largely reflects and is consistent with the NZEM rules on dispatch. The system operator's costs of dispatch are recovered from NZEM members through a service provider contract with the NZEM, and from non-NZEM members through a charge under the CQO. Aside from dispatch other elements of common quality, such as provision of ancillary services, are dealt with for both NZEM and MARIA members under the CQO rather than the NZEM²³. The Application is therefore incorrect in suggesting at paragraph 23.12 that the voluntary NZEM "allows MARIA members to utilise the system operated by NZEM" and in suggesting that MARIA members do not pay for common quality.

In summary the industry's existing contractual arrangements, largely through the CQO, do attempt to establish mandatory compliance with a single set of common standards and rules for the real time operation of the wholesale physical market. The relationships between the different contractual arrangements are complex and overlapping, and there are significant problems with non-compliance.

The Application contains a number of other incomplete or highly questionable statements, including:

- (a) Noting that the nodal prices from the NZEM pool provide investment signals to NZEM members – whilst true it would be more pertinent to note that these signals are sent to all industry participants reflecting the fact that the dispatch process is a single process common to the entire industry; not one to which alternatives can develop in competition or to which non-members can shield themselves from the economic consequences²⁴.
- (b) The claim that NZEM is not a spot market. The dispatch process, which forms part of the NZEM rules, is the process for the discovery of the clearing or spot price at which real-time buying and selling of energy takes place. The spot market is administered by the system operator (or Grid

²³ Although the NZEM does include rules for a market setting a price for the instantaneous reserves purchased by Transpower under procurement contracts and provided by it under the CQO.

²⁴ Whilst exposure to the dispatch prices cannot be avoided, price risk can of course be managed through commercial mechanisms such as the entering into of financial price hedging contracts or through vertical integration.

operator in NZEM parlance) derived from the offers/bids from market participants, which are used by the system operator to organise a security-constrained dispatch. Generators providing energy to this physical dispatch are compensated, and loads charged using nodal prices as the basis for settlements.

Industry Reform to Date

A key point to note is that present industry arrangements have not evolved of their own account. While there has been significant and essential industry input in order to develop the various arrangements that comprise the current industry structures, the Government has been a key driver in initiating all of the significant reform events and is a specific driver for the Arrangement. The narrative set out at Section 7 of the Application underplays the role of the Government, particularly in initiating the establishment of the NZEM and MACQS.

Policies affecting the electricity industry have always been high up the agenda of governments as the electricity industry is a large contributor to the New Zealand economy and efficiency levels in the electricity industry have major effects on New Zealand's economic performance.

The present wholesale physical market arrangements have evolved over the last ten years in response to regulation and policy objectives of previous governments that were, in large part, consistent with the current Government's objective: *"to ensure that electricity is delivered in an efficient, reliable and environmentally sustainable manner to all classes of consumer²⁵"*.

The Government has issued a number of statements of policy setting out its objectives for industry agreements, including statements of economic policy issued under Section 26 of the Commerce Act. The Government has also influenced the development of industry arrangements indirectly through its ownership of industry participants. The establishment of both NZEM and MACQS was as a result of Government initiatives using these means of influence.

The establishment of the NZEM was a direct result of the package of Government actions described at paragraph 2.10 of the Application, which also included the issuing of a June 1995 Government Policy Statement entitled "Pool development and governance". This set out objectives for the pool arrangement and asked the Chairmen of EMCO (then owned by Transpower ECNZ and ESANZ) and Transpower to brief the Minister of Energy regularly on progress in the development of pool rules and whether the outcomes were compatible with the Government public policy objectives. The Government followed the June 1995 policy statement with a December 1995 Section 26 statement entitled "Development of a Competitive Wholesale Electricity Market".

There were few privately owned industry participants at the time of the NZEM's establishment, Transpower, ECNZ and Contact were Government owned, and most electricity supply companies were community owned. The ownership of industry participants has changed since 1996 and privately owned participants are unlikely to place public welfare considerations over their shareholder's interests. The lines/energy split resulting from the Electricity Industry Reform

²⁵ Section 26 statement... Para 1..." Government's Policy Objective for Electricity").

Act 1998 has also altered the composition of the industry significantly and changed the drivers underlying the behaviour of industry participants.

The establishment of MACQS was also initiated by the Government through officials asking for changes to Transpower's 1997/8 SCI. This change required Transpower to involve "an appropriate majority" of customers in determining the quality of shared services. The change in the SCI led to Transpower establishing the Interim Grid Security Committee.

Subsequent reforms have evolved in a light-handed regulatory environment where the government has relied on the threat of regulation to drive industry reform. Reforms such as the introduction of retail profiling and customer switching were industry's response to strong pressure from the government to deliver effective retail competition.

The commitment by successive governments to a light handed regulatory environment has meant that most of the reforms have been implemented through the mechanism of self-governing regimes. Nonetheless, the regulatory influence of government has continued in the arrangements; for example through the threat of industry specific regulation (such as that now enacted for electricity lines businesses).

The influence of Government either directly or through ownership of key participants is significant because it negates the perspective that, left to its own devices, industry will develop in an efficient way for the benefit of overall economic welfare.

Appendix 2

Quantification of Detriments and Benefits

Introduction

The Applicant claims the public benefits from the Arrangement for which authorisation is sought are “substantial” based on illustrations provided in its economic experts’ report. The Applicant claims there are no detriments.

As is the case with the rest of the discussion of detriments and benefits in both the application and the supporting economic report, the attempt to quantify the public detriments and benefits of the proposed arrangement compared with the likely counterfactual involves comparing an idealised view of “private regulation” with a negative caricature of “public regulation”.

As set out in the body of this submission, this is unrealistic, and in the particular circumstances of the New Zealand electricity industry, is highly likely to understate the detriments associated with the proposal and grossly overstate the benefits. The applicant’s view of benefits is set out in Table 12 of their economic report, reproduced below.

Table 12: Summary of expected NPVs under the proposed arrangement

	<i>Allocation efficiency</i> (\$m)	<i>Production efficiency</i> (\$m)	<i>Dynamic efficiency</i> (\$m)	<i>Total</i>
<i>Electricity market</i>				
Enhanced competition	12	52	89	154
Transactions cost	-	17	-	17
Non-economic objectives	-	12	-	12
Price cap	24	-	-	24
Disclosure of offer prices	24	-	-	24
Subtotal	60	81	89	231
<i>Transport market</i>				
Enhanced competition	-	52	33	85
<i>Service markets</i>				
Contestable system operator services	-	6	2	8
Contestable market services	-	2	1	3
NPV of public benefits from market analysis	60	142	124	326
NPV of public benefits based on cost of capital (Table 4)				95 - 238

Given the nature of the comparison made, it is unsurprising that significant benefits are found to exist in dollar terms. However, it is impossible to divorce the Applicant’s quantification from its assumptions that the Arrangement is universally superior in all dimensions to a Crown EGB that is accountable to the government/public, especially the assumption that the proposed private regulation of the electricity system is likely to enhance competition and efficiency. If these assumptions are replaced with recognition of the ability and incentives industry parties have to restrict competition under the private regulatory regime proposed, the balance of detriments and benefits changes significantly. In fact many, if not all, of the claimed benefits are in actuality

detriments from reduced, rather than enhanced, competition and efficiency compared to the counterfactual.

Benefits and detriments if competition effects are considered

It is possible to provide some quantification of detriments if, as we suggest, competition is weaker, rather than stronger, under the proposed private regulatory arrangement than a public regulation counterfactual. This is set out in the table below.

In calculating the values for detriments and benefits we have used the same assumptions about elasticities of demand for electricity, discount rates and likely industry differences in industry performance (output levels, price differences and efficiency levels) under “weak” or “strong” competition, as the Applicant. The Applicant’s estimates of these underlying values are at least as good as any others and there is no reason to consider that these values would be markedly different under the changed assumptions about the competitive implications of the Arrangements.

The levels of “weakness” or “strength” of competition resulting from private or public regulation under the Applicant’s and our scenarios may be different, but by how much is unclear, and we simply prefer to assume a reasonable degree of symmetry in the absence of any better evidence.

Likely Benefits and Detriments

	Allocative efficiency effects (\$m)	Productive efficiency effects (\$m)	Dynamic efficiency effects (\$m)	Total (\$m)
Detriments				
Weaker competition in electricity markets	12	52	89	153
Failure to disclose offer prices				0-24
<i>Total detriments</i>				153-177
Benefits				
Lower compliance or transaction costs				0-17.4
Avoiding non-economic objectives in operation of electricity markets				0
Imposition of price caps in "dry years"				0
Imposition of price cap in all years				0-24
Competition for Transmission services		0-52	0-32.6	0-84.6
Contestable contracting for market services		0-2.2	0-0.6	0-2.8
Contestable contracting for system operator services		0-5.9	0-2	0-7.9
<i>Total benefits</i>				0-136.7

There may be some lessening of transaction and similar costs compared to the counterfactual due to incumbent industry parties’ greater enthusiasm for the proposal. These are, however, likely to be offset in whole or in part by the costs associated with the processes for securing agreement among private parties, which are in practice likely to often lead to a lack of resolution or stalemate.

On balance these factors might give rise to some small net benefit, but they are likely to be modest at best. We have included estimates of these in the table above.

There are also likely to be additional benefits available under the counterfactual that are absent in the Arrangement. An obvious example is the cost of imposing rules on non-members, which are likely to be significantly greater under the proposal (using Courts to enforce nebulous common law rules) than under the counterfactual (where rules are imposed by regulation and membership is not an issue). These costs are both direct and indirect as a consequence of the time delays and uncertainty introduced.

Greater costs associated with the proposal compared to the counterfactual are properly considered as detriments. Some of these effects will contribute to the “weakness” of competition that we suggest results from the proposed private regulation of the electricity industry and should not be counted again. However, there are likely to be some additional effects of this type we have not accounted for and to that extent the estimate of detriments is understated.

There are also a number of benefits claimed by the Applicant that seem very likely to arise under both the Arrangement and the counterfactual. Where a similar likelihood, and extent, of benefit would occur under either, it should be assigned a zero value as a benefit. At the other end of the range of benefits, we have adopted the Applicant’s claimed level. This of course assumes no benefit of that kind would accrue unless the proposal is allowed. We think that this is unlikely to be the case; the upper levels of the ranges therefore significantly overstate likely benefits and in our view benefit levels are generally closer to the zero end of the ranges.

On balance, the likely detriments from the Arrangement exceed even the most optimistic assessment of benefits.

Regulatory risks and costs of capital

In addition to the usual consideration of detriments in efficiency terms, the Applicant also suggests an alternative framework for assessing detriments (the benefits assessed under this approach are not additional to those assessed above). This approach presumes that regulatory risk associated with public regulation will affect the cost of capital for the entire electricity industry by 10 or 25 basis points. This gives rise to supposed benefits in avoiding such cost of between \$95 and 238 million.

As with the more familiar approach, this result is keyed to the assumption that public regulation is inferior to private regulation in the case of the New Zealand electricity industry and as a result “capital markets” will place a risk premium on a public regulatory regime compared to a private regulatory regime.

We have no difficulty with the notion that a premium is applied where there is greater risk, but we are unable to evaluate the rest of the basis for the Applicant’s conclusions. It seems to us that many factors would cause bond rates to differ across the US and, while perceptions of regulatory risk may be a factor, we would be surprised if it was the dominant influence. We have not seen the Spiller *et al* material referred to, but from the description contained in

the Application material, we would be doubtful that the conclusions translate to the present situation as well as is apparently suggested. We have no idea of the basis on which the Applicant supposes that “capital markets” would align private regulation of the New Zealand electricity market with the best (less risky) regulatory regimes adopted by individual US states and public regulation with the worst.

Also, we also fail to see why “capital markets” should regard the proposed private regulation of the market in New Zealand as less risky than a properly formulated public regulatory alternative. The opposite assumption seems to be, at least, plausible. It may be that the “capital markets” recognise that the profits of industry participants are likely to be greater, and they will have greater ability to prevent or delay competition, under the proposed scheme, and this gives rise to less risk. That, of course, is not a benefit in terms of the Commerce Act.

We consider it likely that, were the private regulatory model to be adopted, significant residual likelihood of government regulation would remain. Therefore, given that a public regulatory scheme could be less susceptible to additional government intervention, it might, in fact, be argued that regulatory risk was less under the counterfactual.

We think the suggested alternative approach to quantification shares many of the problems of the Applicant’s approach to the more conventional assessment. In addition it involves a series of additional, unproven, assumptions about the thinking of “capital markets”. We consider this approach provides a highly speculative and unsound basis for assessment of likely detriments or benefits of this proposal as required under the Commerce Act authorisation process.

Appendix 3

Assessment of the Proposed EGBL Electricity Market Arrangement

by Prof. William W. Hogan and John Chandley²⁶

February 21, 2002

We support Transpower's recommendation that the Commerce Commission reject the Application for Authorization of the Industry Rules, including the current version of the Rulebook and the associated documents comprising the Arrangement. The Application's proposed governance structure fails to meet the public interest objectives clearly set forth in the recently amended Electricity Act and embodied in the Government Policy Statement. The proposed Arrangement relies on an industry-dominated governance structure without appropriate regulatory oversight. In comparison to an independent governance structure (as could be achieved through a Crown Board) with appropriate regulatory oversight, the Arrangements are likely to reduce competition without delivering countervailing benefits.

We have several concerns in this regard:

- The Application has mistakenly applied an industry-dominated, self-governance structure to a set of natural monopoly functions that involve the System Operator, when a more independent governance structure backstopped by regulatory oversight in the public interest is indicated.
- Many of the essential functions necessary to support a competitive electricity market are strongly imbued with the public interest. But the Application's almost exclusive reliance on provisions for self-governance essentially entrusts the promotion and protection of the public interest in the hands of self-interested market participants.

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- The proposed industry-dominated governance board is likely to be less inclined to address any uncompetitive aspects of the current market rules and more inclined to tolerate rules and adopt rule changes that will, over time, erode the market's ability to achieve competitive outcomes.
- The proposed industry-dominated governance board and voting rules essentially empower incumbent market participants to use their control over market rules and rule changes to maintain or create barriers to competitive entry.

Because it fails to fully recognize the risks of an industry-dominated governance structure, the Application consistently overstates the merits of its proposed arrangements. And because the “counterfactual” against which the Application considers the merits of its proposals is only a caricature of an independent governing board backed by regulatory oversight, the Application fails to fully acknowledge the need for such independence and oversight and consistently understates the merits of the counterfactual.

Wrong Analysis, Wrong Remedy

The Application gets off track because it misapprehends the nature of the market arrangements that require effective governance. Throughout the process leading to the Application, there was an underlying assumption that the various trading arrangements that comprise the New Zealand electricity market, and hence the rules and processes for which some type of governance is indicated, involve primarily voluntary commercial arrangements between willing buyers and sellers. While such bilateral arrangements are clearly permitted under the market rules and may involve a large part of the total commercial trading, that is not what the bulk of the New Zealand market rules are about nor where oversight in the public interest is most crucial.

Were the issue exclusively or even primarily about how willing buyers and sellers contract with each other, or even how they ensure mutual performance of their essentially bilateral contract trading arrangements, then our concerns would be greatly mitigated. In that case, self-regulation by the affected participants, backstopped by access to traditional contract remedies in the case of disputes, might be the appropriate structure. But that is not the case here, where the bulk of the market rules are about the functions, markets and pricing mechanisms that are employed by what we will collectively call the New Zealand System Operator.²⁷ These mechanisms include the mechanisms by which the System Operator maintains grid security, common quality standards and overall reliability.

More than any other issue, the market rules are about the System Operator and the market's interactions with the spot markets coordinated by the System Operator, as well as how these coordinated markets relate to the maintenance of system reliability and security. The essential grid coordination functions that are performed by the System Operator are best characterized as a *natural monopoly*, and only one entity can perform these essential coordination functions in a complex electricity network. As such, these natural monopoly functions require efficient management, independent governance and careful regulatory oversight that is dedicated to the public interest. This is not simply a matter of facilitating commercial trading between

²⁷ We use the term “system operator” here in its generic sense which refers also to other essential market co-ordination functions that are undertaken in New Zealand by the Pricing Manager, [Reconciliation Manager](#) and Clearing and Settlement Manager in addition to the role of Transpower as Grid or System Operator.

market participants. As in other industries with essential monopoly functions, independent regulatory oversight, rather than industry self-regulation, is clearly indicated.

To be sure, the New Zealand market structure allows buyers and sellers to arrange voluntary bilateral transactions and facilitates those trades through MARIA as part of the market's settlement processes. Under this framework, bilateral parties can contract in forward markets without any extensive need for regulatory oversight. But when the parties to these bilateral transactions interact with the System Operator, and more particularly in the very short run (e.g., from day ahead to five-minutes ahead), sooner or later the System Operator must take sole charge and perform the necessary coordination functions that are required to keep flows within security limits and to ensure common quality and continuous real-time balance between injections and withdrawals. Of necessity, this is accomplished through a centralized (hence, monopoly) process.

To a large degree the New Zealand market rules are about how the System Operator performs these essential functions and operates the physical markets associated with those functions. The rules focus on how participants interact with the System Operator to provide the necessary resources, how they offer their plant for physical dispatch, how the Operator arranges the dispatch and schedules operating reserves and other essential grid services (ancillary services) and how the associated market coordinators price and settle the energy and other physical services bought and sold through these market mechanisms.

The operational and pricing rules cannot be simply those mutually agreed and enforced by buyers and sellers, as the Application appears to imply. That approach may be acceptable for voluntary contracting between willing parties, but it is inadequate to deal with the complexity and requirements of system operations. Rather, the operational and pricing rules must be consistent with the system operator's physical dispatch and reserve requirements, while reflecting the marginal costs of those functions as defined by the offers and bids submitted by participants. This approach assures that participants responding to those prices have incentives to make operational decisions in the short run, and investment decisions in the long run, that support the system operator's efforts to maintain reliability while assuring that consumers ultimately obtain the public interest benefits of genuine competition.

Without this consistency, no voluntary, multilateral agreement among participants will overcome the incentives individual participants have to disregard dispatch instructions or the incentives new entrants have to interconnect at locations that worsen congestion. And no industry-dominated governance mechanism will consistently support the kinds of market rules that ensure this consistency and thereby foster fair and efficient competition. To achieve these objectives, New Zealand will need mandatory rules, developed and sustained by an independent governing board that is ultimately responsible to the public interest (as articulated by the Government Policy Statement), and backed by appropriate regulatory oversight.

The Application's Arrangements Will Not Assure the Public Interest

The Application's central premise for favoring an industry-dominated self-governance framework over provisions for more independent governance and regulatory oversight in the public interest rests on a spurious assumption. The Application assumes that market participants will understand that their long-run self interests are best pursued through collective maintenance of, and mutual compliance with, a set of fair, efficient and pro-competitive market rules that promote the public interest. It follows from this optimistic view that in maintaining and revising the market rules over

time, incumbent market participants will willingly, and more or less consistently, support the public interest in competitive outcomes and efficient pricing rules. Sadly, there is little evidence or experience in any electricity market region to suggest that governance and rulemaking processes dominated by market participants will recognize these higher policy interests and systematically develop and sustain the appropriate designs and pricing rules.

In our view, the Application simply ignores both logic and ample evidence from other regions that have experimented with participant-controlled processes for rule development and governance. These experiences, most recently seen in California and other parts of the United States, suggest that entrusting the development and maintenance of market rules to governing boards dominated by market participants leads invariably to faulty designs, coupled with an inability (or unwillingness) of the industry governance structure to reform its own rules. This experience does not bode well for the proposed New Zealand arrangements that give market participants the ability to override governing board decisions. It is not surprising therefore, that initiatives for reforms of the New Zealand electricity market have tended to come from the Government and not from the industry collectively seeking to address these needs on its own.

The market designs and critical pricing rules must therefore be developed, improved and sustained over time by institutions with a strong commitment to the public interest. In particular, if the market and pricing rules for the System Operator's coordination functions are not properly designed, the complexity of the network interactions will present multiple and not always transparent opportunities for market participants to manipulate market outcomes, placing the public interest and competition itself at serious risk.

Despite the strong temptations this implies, the Application illogically assumes that governance mechanisms dominated by market participants will either have few incentives or little ability to fashion rules and pricing policies that allow interested parties to create or exploit these opportunities. In our view, however, the Application is betting the public interest on an assumption that has virtually no empirical support among existing electricity markets. Even if a region begins with a workable and reasonably efficient set of market rules – arguably the case for New Zealand²⁸ – self governance by market participants can gradually erode the broader public interests required to sustain an electricity market that is both transparent and competitive.

The Application Could Undermine Competitive Outcomes and Discourage Competitive Entry

One of the inherent problems of proposals for self-governance provisions is that they effectively empower incumbent participants to shield their incumbent positions from competitive pressures. This concern will certainly be present under the proposed arrangements. Through their control of the Industry Board's rulemaking process, incumbents would then be strategically positioned either to erect further barriers to new entrants or to effectively oppose efforts to dismantle existing barriers.

²⁸ Here the essential features of a bid-based, security-constrained dispatch and a related spot market settled at nodal prices provide a strong foundation for the New Zealand market. The potential addition of financial transmission rights will improve of this solid foundation. Of course, there are many other features needed to create and sustain a workable and competitive market, particularly appropriate mitigation of market power and a comprehensive pricing framework that assure long-run supply adequacy. The difficulty of these design issues is another reason why market rule development should be managed by institutions a strong commitment to the public interest.

Given this framework, potential new entrants will find it difficult to promote or sustain rules that are at least neutral with respect to new entry. In contrast, the empowered incumbents will find it comparatively easy to maintain existing barriers to entry or to push through new barriers designed to protect them from competitive pressures. Indeed, it is hard to imagine a scenario in which a solid majority of market participants would support rules that enlarge the competitive arena.

In this regard, it is not an acceptable answer to note that suppliers and customers may well have opposing interests that offset each other. As governing boards subject to participant-domination or override have shown in other regions, this is a recipe for stalemate. Experience elsewhere suggests that these stalemates can stifle reforms and preserve incumbent advantages.

The Application Does Not Assess the Counterfactual in an Even-Handed Manner

The Application's case for an industry-controlled Electricity Governance Board (Industry Board) is further premised on the view that the "counterfactual," including governance by a Crown-appointed Electricity Governance Board (Crown Board), would eventually result in less competitive outcomes. However, the Application's comparison of the relative merits of these two options is not even-handed in that it assumes that future detrimental changes in the rules would occur under the counterfactual, and should therefore be considered, but then fails to consider the likelihood of future detrimental changes in the rules under the industry-dominated governance proposal. Even allowing for that, the comparison is further skewed by unrealistic assumptions about how each of the two governance options would function.

The principal argument appears to be that, unlike an industry-controlled Board, an independent Crown Board would be susceptible to political interference by the government on behalf of self-interested parties. We agree that some governance structures may be more or less vulnerable to political interference than alternative structures, and that is important to promote independent governance as well as regulatory oversight approaches that limit the likelihood of inappropriate political influences. That said, however, it is not clear that the counterfactual Crown Board is necessarily more susceptible to *inappropriate* influences.

To the extent that appeals to government created the potential that political influence would be exercised on behalf of self-interested market participants, it is not clear why this influence should be deemed inappropriate when exercised indirectly but openly upon a Crown Board but deemed appropriate, even necessary, when exercised directly and with less publicity through the industry-controlled Board. Second, to the extent that political influence were exercised on behalf of parties that were not market participants, it might only be because there are public interests that may not be adequately reflected by market participants alone. As the Government Policy Statement indicates, , the government's policy objectives are not limited to those exclusively associated with market competitors but are affected by other public interests, such as sustaining environmental quality. If that is the policy of the Government, then it is simply inappropriate for the industry to establish government mechanisms designed to ignore what the country's elected representatives have deemed to be in the national interest.

The Government Policy Statement makes clear that the objectives of the national electricity market are to achieve the public interest in a competitive market, which may not always coincide with the short-run private interests of any set of market participants that might be influential on an industry-controlled Board. This is the appropriate view, as it is the benefits of *competition*, not the welfare of individual

competitors, that determines whether the exercise is in the public interest. It seems likely that an independent governing Board backstopped by regulatory oversight would be more likely to embrace and pursue this broader public interest.