

Submissions received

- Gardner M
- Gardner M
- Gasnier G
- Gasnier J
- Genesis Energy
- Gibson J and M
- Goodin N and C

Submission by

M Gardner

From:

Sent: Sunday, 28 May 2006 5:47 p.m.

To: Info Electricity Commission

Subject: Submission on draft Decision on Traspowers 400kV line

To: Electricity Commission

From: MARILYN GARDNER

Submission on draft decision on Traspowers 400kV line. My submission relates to a transmission corridor.

I am firmly against this suggestion.

If such a corridor existed today, Transpower would not have encountered the resistance of present day land owners and the 400 kV line would be going ahead. As your research has shown, it is not necessary until 2017.

If in the future a 400kV line is required, Transpower should negotiate with the land owners at that time.

The corridor suggestion would make Transpower's work easier in the future.

Electricity users now would be paying for a possible future project.

Your research has shown it may not be required as time passes and more possible generation closer to Auckland.

Marilyn Gardner

Submission by

M Gardner

From:

Sent: Sunday, 28 May 2006 5:54 p.m.

To: Info Electricity Commission

Subject: Submission on Draft Decision on Transpowers 400kV line

To: [The Electricity Commission](#)

From: Maurice Gardner,

Submission on draft decision on Transpowers 400kV line.

My submission relates to the suggestion of a transmission corridor.

ABSOLUTELY NOT!

Even if such a corridor was never used it would still decrease the value of my property. A blot and a red light on the title of the land deterring prospective purchasers in the future.

Land with the corridor will become second class because no one with any common sense would want to purchase it, knowing that there would be no course of action to object to whatever may be built on the corridor in the future, with compensation having previously already been paid out.

[MAURICE GARDNER.](#)

Submission by

G Gasnier

From:**Sent:** Thursday, 1 June 2006 12:00 p.m.**To:** Info Electricity Commission**Subject:** "Transpower's Auckland 400kV grid investment proposal: draft decision"
To The Electricity Commission.

Dear Sirs,

I write in support of your decision to turn down Transpower's application to construct a 440kV power line from Whakamaru to Auckland.

However, I am concerned that pressure, both from the Government and from Transpower, may cause you to amend your initial decision in favour of a very similar application from Transpower when a final announcement is made by you in July.

I have no technical knowledge of electricity, the production and supply thereof, but as an ordinary New Zealander I feel strongly that should Transpower be allowed to plunder the New Zealand countryside with their proposal for 70m pylons, it will be the beginning of the end for many of our most beautiful landscapes. I understand that this particular line is just the first of a number that Transpower have in mind.

Of course I understand that we need an adequate power supply throughout the country, but New Zealanders are an enterprising people, surely we can ensure our electricity supply without blighting our most glorious countryside. If these new lines are built great swathes of land will be written off, both in value and in appearance. And if, as suggested, a route for use in the future is earmarked, then that land too will be hugely devalued in every way.

I encourage you to adhere to your draft decision. I cannot believe that the only solution to our power supply involves desecrating our beautiful land.

Yours sincerely,

Glynis Gasnier

Submission by

J Gasnier

31 May 2006

Jenny Walton
Electricity Commission
Level 7, ASB Bank Tower
2 Hunter Street
Wellington

Dear Jenny

Auckland 400kv Investment Proposal

Interim Decision

I am writing in support of the interim decision by the Electricity Commission to reject Transpower's proposal for a 400kv line through the Waikato.

I totally agree with the decision and urge the commission to ratify its decision as soon as possible. This abhorrent proposal must not be built at all. Quite rightly the commission has identified alternatives that are cheaper and lessen the environmental impact that these huge towers would have had along the route.

Future generation closer to Auckland will have a major bearing on any new or upgraded transmission lines and without a doubt new generation will certainly be built within the next 5 years. The country could well be faced with a transmission line to nowhere should the new generating stations not be built in the "right" place to utilise the 400kv route.

Transpower's Revised Option

Transpower have indicated that they may lodge an amended application to the Electricity Commission that will be cheaper in the initial phase. The Commission cannot consider any amendments to the original proposal. Any revised options must start at the beginning of the consultation process and be subject to the Grid Investment Test criteria that is in operation at the time the proposal is lodged.

The revised Transpower proposal would still utilise 70 metre tall pylons on flat land and by their own admission, would be upgraded eventually to carry 400kv lines. This is a cynical attempt to bend the rules and try to outflank the interim decision by the Electricity Commission. Transpower now know the costings that are being used by the Commission and are merely trying to demonstrate that they can bring their hideous proposal in under budget.

The original proposal from Transpower must stand or fall on its own merits and must not be subject to variations and horse trading from outside parties. The independence and public credibility of the Electricity Commission is riding on this major test case.

Transmission Corridor

I am totally opposed to measures being taken at present to identify a possible transmission corridor for future development.

To try and establish such a corridor would not “provide greater certainty for landowners”, but would indeed blight properties for ever, with the threat of having high voltage lines near their properties in the future, no matter how far distant that may be!

Any proposed corridor could well be in the wrong place when the time eventually came to build a transmission line. Affected properties would then have been unfairly marked with subsequent greatly reduced property values.

The question of identifying a corridor would also have to address the size of easement that would need to be considered. At present Transpower are working with a 70 metre wide easement for their 400kv lines. Recent published research in the UK has confirmed that there are definite harmful effects from high voltage lines. The study recommends an easement of 200 feet on either side of 400kv lines, this equates to a corridor some 122 metres wide! The study also recommends the removal of all housing within this corridor.

Should any high voltage lines be considered, notice must be taken of the UK research and a much wider easement must be factored into any cost modelling exercise. Undergrounding must be considered as the first and only choice for any new transmission lines within New Zealand. Science has proven that this technology greatly reduces the effect of EMFs on human and animal populations and reduces the unsightly environmental impact on our clean green country.

Conclusion

The Electricity Commission must confirm its “No” decision on Transpower in July.

No revised proposals should be considered by the Commission, should Transpower wish to amend its proposals, then a fresh application must be made.

No corridor planning should be carried out.

The Electricity Commission must stand firm and prove that it is truly independent and capable of making binding decisions for the electricity industry.

Yours sincerely

Jack Gasnier

Submission by

Genesis



SUBMISSION BY
GENESIS POWER LIMITED
trading as Genesis Energy

ON

Draft decision on Transpower's Auckland 400kV Grid
Investment Proposal (for the purposes of consultation under
section III of Part F of the Electricity Governance Rules 2003)

23 June 2006

SUBMISSION BY
GENESIS POWER LIMITED
trading as Genesis Energy
ON
Draft Decision on Transpower's Auckland 400kV Grid Investment Proposal

To: Jenny Walton
Electricity Commission
PO Box 10041
Wellington

E-mail: info@electricitycommission.govt.nz

Date: 23 June 2006

Name: Genesis Power Limited

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Introduction

1. Genesis Power Limited trading as Genesis Energy welcomes the opportunity to provide comments to the Electricity Commission on the recently released draft decision on Transpower's Auckland 400kV grid investment proposal.
2. Genesis Energy is a state-owned enterprise with a diverse electricity generation portfolio and is one of New Zealand's largest energy retailers. It operates 1,600MW of electricity generation including New Zealand's largest thermal power station at Huntly, hydro stations at Tongariro and Waikaremoana, a wind farm in the Wairarapa and co-generation facilities at large industrial sites. As a retailer, Genesis Energy has a substantial retail base of approximately 685,000 electricity and gas customers located predominantly in the North Island.

Executive Summary

3. The Electricity Commission, in a document entitled 'Draft Decision on Transpower's Auckland 400kV Grid Investment Proposal for the Purposes of Consultation under Section III of Part F of the Electricity Governance Rules 2003' dated 27 April 2006, has invited submissions from interested parties on this issue. Genesis Energy welcomes the ability to put its views to the Electricity Commission on this important matter.
4. Genesis Energy appreciates that on 1 June 2006, the Electricity Commission suspended consideration of Transpower's proposal for a 400 kV line between Whakamaru and Auckland. However, the Electricity Commission stated that it will still actively consider any information put to it through the consultation process. Genesis Energy's submission is mindful of these changed circumstances. In particular, given Genesis Energy's desire not to create yet another grid-planning function and replicate the analysis that has already been undertaken by two agencies, Genesis Energy has sought to provide a range of relatively high-level comments that, while provided in the specific context of the Electricity Commission's analysis of the now defunct proposal, are intended to assist the Electricity Commission in its future deliberation of the amended_Transpower proposal once it has been submitted.
5. In this light, Genesis Energy has purposefully sought not to 'take-sides' in terms of whose proposal is 'the best', but rather to simply provide a relatively dispassionate critique of the analysis provided, and in some cases, its generic views about what lessons can be learnt for the new process from the failures of the first consultation round. The nature of these comments broadly range across the technical, economic and regulatory spheres and canvass both short and long term issues and solutions. With a few notable exceptions, it is difficult to criticise the Electricity Commission for failing to have due regard to its tasks and by-and-large it appears to have taken a systematic and methodical approach to its work.
6. However, having said that, Genesis Energy contends as a result of the process and complexity of the analysis that industry participants have been placed in an almost impossible position – that of having to digest and interpret the outcome of an extremely lengthy and complex dialogue between the Electricity Commission and Transpower within a very short timeframe, and to then reach an informed view on the 'best' way forward.¹ This is unreasonable both because of the substantial information asymmetries as well as participant resource constraints (both in terms of availability and expertise).

¹ To all intents and purposes, in order to satisfy themselves of the efficacy of the draft decision, industry participants have essentially been asked not only to replicate the work of Transpower and the Electricity Commission, but also that of the reviewers of the decision such as that undertaken by The Allen Consulting Group which reviewed the Electricity Commission's regulatory process, economic issues and draft decision.

7. Industry participants should not have been placed in this untenable position and Genesis Energy is both extremely frustrated and dissatisfied with the regulatory process that has delivered us to this point.² Transpower and the Electricity Commission must work co-operatively together to find a better way to engage with industry participants. By the very complex nature of the tasks, this must be focused at the strategic oversight level of industry participants being assured that Transpower has met the Electricity Commission's clearly articulated and reasonable requirements, and that the Electricity Commission has peer-reviewed Transpower's analysis against those requirements. This process would enable industry participants to make an informed view on the Electricity Commission's decision as to whether Transpower has met the requirements or not. To do otherwise serves only to put industry participants into the invidious position of having to second-guess others conflicting economic and technical analysis.
8. Given this, Genesis Energy seeks changes to the current regulatory process - both in terms of immediate day-to-day practices for the next round, and medium term clarifying changes to the framework itself for future grid upgrade plans. Ultimately, Genesis Energy's interest is in ensuring that the best long term interests of New Zealand are paramount. Therefore the Electricity Commission's decisions eventually made with respect to the upgrade must be consistent with a long term strategic vision of promoting growth, and of progressing New Zealand's economic transformation to a high-income, knowledge-based market economy.

The Role of Infrastructure in the Economy

9. Before getting into the specifics of the 400kV upgrade proposals, Genesis Energy considers that it is worthwhile reminding ourselves about the role of infrastructure in the economy in general and the role of transmission infrastructure has to play more specifically. This is not only pertinent because of the need to remember the strategic context in which the Electricity Commission is making its decisions on the 400kV proposal, but also in light of the recent massive outages into Auckland city.

Infrastructure and its Contribution to the Economy

10. Infrastructure has the potential to make a significant contribution to achieving New Zealand's sustainable development objectives. Sound, growing economies need well-functioning markets which in turn need sound infrastructure. Infrastructure provides services that support economic growth by increasing the productivity of labour and capital thereby reducing the costs

² Disconcertingly, as things currently stand, other than the ability for Transpower to pursue interim grid upgrades to deliver on its grid reliability obligations, there appears to be no obvious path that will provide industry participants with a reasonable degree of certainty that Transpower will be able to meet the Electricity Commission's reasonable expectations and bring forward a successful proposal that will not be 'guzumped' by a fictional alternative option. The regulatory uncertainty that this creates is highly undesirable.

of production and raising profitability, production, income and employment. The appropriate infrastructure investment and consumption of infrastructure services have significant implications for achievement of sustainable development objectives, as infrastructure services:

- a. Encourage new investment across the economy;
 - b. Underpin many aspects of economic and social activity;
 - c. Facilitate the flow of ideas, goods and services;
 - d. Facilitate regional economic growth;
 - e. Are critical to maintain an inclusive, healthy and productive workforce;
 - f. Involve large scale investment with significant environmental impacts; and
 - g. Generate a range of externalities in their production and consumption.
11. Infrastructure investment can increase productivity by promoting efficient resource allocation through easier access to goods and services, and allowing alternative activities, employment opportunities and investment to emerge. However, to achieve this, infrastructure investment needs to be timely – that is early enough to avoid bottlenecks and promote investor and consumer confidence. In this regard, it is widely recognised that government can have a role in facilitating and promoting investment where bottlenecks are likely to be particularly costly in eroding confidence.

The Role of Transmission Infrastructure

12. The transmission grid is to a certain extent, no different to other infrastructural services such as transport, water and telecommunications – a robust grid can be expected to provide the platform on which competitive, well-functioning markets can prosper.
13. More specifically, Genesis Energy considers that an effective and efficient transmission system is a fundamental underpinning to fully-functioning competitive electricity generation and retail markets. Without such base infrastructure, the energy market can neither operate effectively, nor provide the required level of security. Indeed, the energy market (generation and demand-side response) alone can only produce an adequate level of security at relatively high cost, by forcing the matching of load and generation at each location.
14. Over recent years, it is well documented that there has been inadequate investment in transmission capacity to reduce congestion and to support robust competitive wholesale and retail markets in New Zealand. This failure to provide a robust transmission platform has reduced the geographic extent of competition between generators at different locations and increasingly resulted in investors across the economy protesting that arrangements for the provision and regulation of transmission infrastructure don't give them the confidence to commit funds to new projects.

The Role of the Electricity Commission

15. Genesis Energy recognises that the Electricity Commission is constrained in its consideration of these strategic issues by the rules in Part F. However, Genesis Energy contends that there is sufficient flexibility, should the Electricity Commission wish to exercise it, under its empowering legislation, regulations and rules that enable consideration of a long-term strategic view. Genesis Energy would encourage this in order to secure the national interest.

Issues of Relevance to the Electricity Commission's Consideration of Transpower's 400kv Proposal

16. Genesis Energy has a number of general concerns regarding the nature of the decision on Transpower's 400kV proposal. We recognise that the Electricity Commission's suspension (in response to a request from Transpower) of consideration of Transpower's proposal effectively makes any comments on the specifics of the Electricity Commission's draft decision moot. However, while the Electricity Commission must re-run its analysis in light of the amended proposal it is going to receive from Transpower, Genesis Energy understands that with the exception of timing, the nature of the revised proposal is fundamentally the same. To this end, Genesis Energy sees merits in providing the Electricity Commission with its views on the following issues:

- a. Economic issues, such as:
 - i. the Grid Investment Test;
 - ii. adequate consideration of competition benefits;
 - iii. the impact on dynamic efficiency;
 - iv. the role of the Statement of Opportunities;
 - v. the derivation of option values; and
 - vi. an emphasis on 'just-in-time' delivery;
- b. Technical issues, such as:
 - i. meeting the grid reliability standards; and
 - ii. the consideration of alternative projects and transmission alternatives; and
- c. Regulatory issues that emerged from the application of the current framework.

17. Genesis Energy canvases each of these issues briefly, below.

Economic Issues

18. Overall, it would appear that the Electricity Commission has done a thorough job of its economic analysis and Genesis Energy expects that a significant

degree of 'on-the-job' learning, both by the Electricity Commission and Transpower, will be reflected in the process and analysis of the next Transpower proposal. However, having said that, there are a number of areas that warrant comment.

The Grid Investment Test

19. Genesis Energy considers it useful to start its comments on the economic analysis by placing them into the context in which they were initially developed – in this case, by the Electricity Commission Establishment Unit (the 'ECEU') of the Ministry of Economic Development. In its consultation paper on Part F, the ECEU set out three objectives for what it called the grid economic test. Of the four objectives set out objective (c) was:

“promoting a climate of investment certainty for proponents of investment in transmission, generation and transmission alternatives by ensuring there is transparency and predictability in the application of the test”³

20. The ECEU noted that “objective (c) is intended to encourage a less contentious and more certain process for application of the economic test over time.”⁴ Finally, the ECEU stated that, in terms of the implementation of the test, its expectations were that:

“The forward work plan must achieve a balance between:

- ensuring a timely process for finalising the grid economic test to support planning of transmission investments;
- achieving transparency, predictability, and an open process to review the application of the test (which will be supported by simplicity); and
-

21. While Genesis Energy recognises that a reasonable amount of 'water has gone under the bridge', Genesis Energy believes that the views expressed by the ECEU continue to be useful 'touch-stones' against which the current situation can be measured. When assessing the current position against these 'touch-stones' Genesis Energy struggles to give the outcome of the current process a 'pass-mark'.

³ Draft Transport Rules (Part F of the Electricity Governance Rules 2003), Prepared by the Electricity Commission Establishment Unit, Ministry of Economic Development, page 25, paragraph 70.

⁴ Op cit, page 26, paragraph 78.

22. Given the passage of time, it is also useful to look to the current rules. The purposes of the rules in section III are to:
- “2.1 facilitate **Transpower’s** ability to develop and implement long term plans (including timely securing of land access and resource consents) for investment in the **grid**;
 - 2.2 assist **participants** to identify and evaluate investments in **transmission alternatives**;
 - 2.3 facilitate efficient investment in generation;
 - 2.4 facilitate any processes pursuant to Part 4A of the Commerce Act 1986; and
 - 2.5 enable the cost of approved investments to be recovered through the **transmission pricing methodology** applied in **transmission agreements**.”
23. Genesis Energy has two comments to make in light of this purpose statement. These are:
- a. The object failure of the process to date to deliver on the objectives set out in rules 2.1, 2.2 and 2.3. The process to date has neither:
 - i. facilitated Transpower’s ability to develop and implement long term plans; nor
 - ii. assisted participants to identify and evaluate investments in transmission alternatives – as its focus has been on grid-based alternatives; nor
 - iii. facilitated efficient investment in generation – as without a robust grid, the platform for effective competition on the grid is absent; and
 - b. The apparent disconnect between the objective statements in the rules and the actual application of the GIT which clearly favours shorter term, just-in-time, piecemeal investments (that is, is *purely* economic). To this extent, we concur with the views expressed by Commissioner Close in his note⁵ regarding the overall interpretation and application of the GIT. While the purpose of the consultation is to receive comment on the draft decision, it invites the question as to the appropriateness of the GIT with the draft decision as a worked example of the outcomes it gives.

⁵ Electricity Commission consultation paper entitled ‘Draft Decision on Transpower’s Auckland 400kV Grid Investment Proposal (for the purposes of consultation under section III of part F of the Electricity Governance Rules 2003)’ dated 27 April 2006, Appendix 3, Concurring Opinion, with Reservations of Commissioner David Close, page 98.

24. Finally, with respect to the GIT, Genesis Energy has some concerns about some specific assumptions in the GIT analysis. A major concern is the assumption in the extreme summer scenario that Huntly operates one unit at 243 MW and two units at 80 MW. Our concerns are that:
- a. This situation may lead to voltage issues; or
 - b. In an extreme river heating event and assuming the availability of a cooling tower, Genesis Energy could only operate one unit at 200 MW; or
 - c. If the river was at or above 25 degrees Celsius and the ambient wet bulb temperature was above 21 degrees Celsius, then Huntly units 1 to 4 would be shut down - cooling tower or no cooling tower (while Genesis Energy didn't have a cooling tower in 2005, it was very close to these conditions).

Competition Benefits

25. Genesis Energy is unconvinced that the Electricity Commission's decision not to consider competition benefits in the Grid Investment Test (the 'GIT') is appropriate. Consistent with Genesis Energy's view expressed in previous submissions, Genesis Energy considers that an effective and efficient transmission system is a fundamental underpinning to a fully-functioning competitive electricity market. Without such base infrastructure, the energy market can neither operate effectively, nor provide the required level of security. An effective grid can be expected to contribute towards the reduction in the level of constraints and provide benefits at a regional level. What is particularly relevant to the consideration of this issue is the "real value" option of a more open, competitive platform on which generation can compete in the market, to the benefit of end-consumers and consistent with the Electricity Commission's objective of downward pressure on prices. Accordingly, Genesis Energy encourages the Electricity Commission not to 'under-weight' this aspect in the application of the GIT.
26. In this regard, Genesis Energy is concerned with the Electricity Commission's apparent reliance on a report by M-co⁶ and what the Electricity Commission may have concluded as a result of it. In clause 6.11.4 of the consultation paper, the Electricity Commission states that the analysis performed by M-co shows that there has not been any historical anti-competitive behaviour and that this historic behaviour does not indicate what future behaviours may be exercised by participants. Genesis strongly agrees with both of these statements. In essence, Genesis Energy does not think that the report is a good basis for concluding that anti-competitive behaviour could not be a problem in Auckland in the future and therefore, that the level of competition benefits would be the same across all options.

⁶ M-co report to the Electricity Commission entitled 'Review of Wholesale Price Separation: Whakamaru to Otahuhu', dated April 2006.

27. While a historical view of observed prices at wholesale level is interesting, what appears to be missing from the Electricity Commission's analysis is the richer forward-looking story of the balance between customer load and its growth in the Auckland region and generating capacity. Presently Genesis Energy is in the unenviable position of being both required to have a minimum number of units dispatched for security of supply to Auckland while being constrained in output at the top end if any of the circuits going to Auckland are removed from service. This is seen in the market as a separation of price between Whakamaru and Auckland with the Huntly node being lower than both. Under these circumstances to manage the constraint Genesis Energy must price up Huntly volume to bring the Huntly price back towards that of the market. This is a very strong economic driver for Genesis Energy and is one reason that M-co did not find evidence price separation. Once the Huntly East bus is commissioned, Genesis Energy will no longer need to be backed-off when transmission is constrained into Auckland.
28. The example above demonstrates that without good transmission investment, productive efficiency can and is lost. That is, in order to manage the constraint, Genesis Energy must give up production to a competitor at a higher price. This resultant productive inefficiency is a loss of benefits to both Genesis Energy and all consumers.
29. In Genesis Energy's opinion to look for examples of market power abuse you need to look at the complete supply chain from wholesale to retail. Whether a participant is wielding the market power they have is not the issue for the retailer that does not have any influence in that region. The fact remains that while another participant has the ability to exercise market power at the wholesale market level in a region, other players have to adopt a more conservative approach in what they do in that region at a retail level.
30. Genesis Energy contends that there are competition benefits from transmission investment and that these accrue due to the reduction of regional power at a wholesale level. In turn, that flows into the risk position a retailer can take when developing tariffs in that region and ultimately to the consumer in the form of choice from a number of truly competitive retail prices.
31. Genesis Energy's analysis suggests that the competitive situation of the electricity market will be enhanced by the early presence of the additional capacity provided by a 400kV line relative to other options.

Dynamic Efficiency Effects

32. It is important that the Electricity Commission consider the dynamic efficiency effects that are likely to arise from any constraints post 2010. Should prices continue to separate then logic implies that dynamic inefficiencies may arise as generators seek to invest in Auckland to take advantage of the increased prices (relative to those that would apply if there were no transmission

constraints). Triggering investment in new thermal generation in Auckland is problematic as it is likely to be more expensive than other generation options further south (that is, south of Taupo). Therefore, the Electricity Commission needs to assure itself that its analysis of the relatively cheaper transmission options incorporates the possible dynamic inefficiency created by inappropriate investment in Auckland as this is, in Genesis Energy's view, likely to count in favour of the 400kV sooner, rather than later.⁷

The Statement of Opportunities

33. While not necessarily relevant to the Electricity Commission's impending consideration of Transpower's amended proposal, Genesis Energy remains unconvinced of the future value of the Statement of Opportunities (the 'SoO') in its current form as the basis for the GIT. As the Electricity Commission reconsiders its approach to regulating Transpower's investment, it should reassess whether the uncertainties that persist in the generation scenarios effectively prevent any co-optimisation of transmission and generation.
34. Genesis Energy's view is that it may be better instead to encourage Transpower to plan for a core grid that is robust to a wide variety of possible generation expansion futures. If the SoO process can be justified going forward, then Genesis Energy suggests that the basis of the scenarios should be changed. The initial SoO scenarios have been based on particular types of generation. A more realistic approach would be to have scenarios for fuel costs and then simulate the generation expansion path likely to evolve commercially.
35. Comprehensive 'fuel cost' scenarios would involve specifying the level and structure of likely fuel costs, as well as the effects of any carbon taxes. Genesis Energy highlights cost structure because fuel supply arrangements can involve different combinations of fixed and variable costs. The different combinations can take the form of take-or-pay provisions, maximum off-takes, resale opportunities etc.⁸ Variable costs affect how plants can be offered into the market and thus affect their profitability and likelihood of proceeding.
36. To model the new generation mix likely to flow from the fuel price scenarios, it will be necessary to move beyond a simple baseload LRMC supply curve. It would be more realistic to allow for the different profitability of plants with

⁷ Genesis Energy considers that policy makers, in the development of the Government Policy Statement, were alive to this very issue of dynamic efficiency when noting that "(p)oorly designed policies may, for example, encourage inefficient investment in generation, which would waste scarce capital resources and cause unnecessary environmental effects." Government Policy Statement on Electricity Governance, page 20, paragraph 79.

⁸ The capital costs of different generation plant options are still somewhat uncertain but may not need to spawn additional scenarios in themselves.

different fuel and capital combinations.⁹ As the Electricity Commission's modellers will know, integrals of the system price duration curve reveal the trade-off between fixed and variable unit costs in new plants.

37. Genesis Energy anticipates that this more realistic commercial simulation will show that that single fuel expansion plans are relatively unlikely. For example, additional wind generation may be attractive but there may still be a role for additional firming plants with high fuel costs. As a result, the new plants in any one scenario may still be geographically dispersed, but may also be not fuel specific. At this stage, it is difficult to be sure whether simulating the commercial responses to different fuel cost futures will reduce or exacerbate the overall uncertainty in the location of new generation.
38. This approach would appear to be consistent with the approach set out by the Victorian Energy Networks Corporation (VENCorp)¹⁰. Genesis Energy appreciates that changing the SoO process to achieve this may require a change in the rules in Part F. At a minimum, a specific study should be undertaken to assess whether the current approach is really likely to be saving money.¹¹ The material collected for the SoO (forecasts and capital cost estimates etc) may be of interest to some market participants but this is not a sufficient motivation for the SoO undertaking. The Ministry of Economic Development 'Energy Outlook' publication already serves this informational purpose.
39. Finally, with respect to Genesis Energy's comments on the SoO, while Genesis Energy is reasonably comfortable with the demand forecasts, Genesis Energy has concerns regarding the deviation from the SoO scenarios. Rule 12A.1.2 states:

12A.1.2 The forecast of **demand** at each **grid exit point** and forecast of **supply** at each **grid injection point** included in the **grid reliability report published** under 12A.1.1 must be consistent with the forecasts of **demand** and **supply** set out in the **statement of opportunities** or must be explained by reference to the forecasts of **demand** and **supply** set out in the **statement of opportunities**.

40. While rule 12A.1.2 allows for the departure from the SoO such departures must be explained. Sections 6.6.9 to 6.6.17 of the draft decision discuss the scenarios in the SoO, the scenarios Transpower has used, and the scenarios that the Electricity Commission has used. To Genesis Energy, there is no real attempt to explain the differences – other than “these differences do not

⁹In the original Spectra model, these signals for the optimal plant mix were referred to as the v_i values.

¹⁰ See Vision 2030 25 Year Vision for Victoria's Energy Transmission Networks, October 2005.

¹¹ This is a different issue to the question of whether Transpower has the internal processes to ensure that it is undertaking its planned upgrades as cost effectively as possible. For more on this issue, see below.

materially affect the Commission's decision on the appropriate MDS for GIT analysis."¹²

Capacity Benefits

41. The Electricity Commission's analysis makes the up front assumption that some factors are independent for the same capacity and others are common. In particular, the Electricity Commission contends that:
 - a. Development of lower cost generation to meet demand growth;
 - b. The Dispatch of lower cost generation; and
 - c. Competition benefits

are the same and common – in other words, independent of the transmission option, as in its view, all options provide the same capacity. However, Genesis Energy contends that capacity is not the same for all options. Indeed, the Electricity Commission appears to confuse the ability to meet projected peak demand under the various scenarios with outright capacity. The illustrations of capacity in their analysis clearly show that there is a difference in capacity between the options therefore they must offer different options to dispatch lower cost generation, different competition benefits, and different development options. The exclusion of these benefits is therefore inconsistent particularly in light of the Electricity Commission's estimation of the option value of excess capacity.

Option Value Analysis

42. Genesis Energy has a number of reservations concerning the use by the Electricity Commission of option value analysis. These are the:
 - a. Option value of flexibility: the first two option values, consisting of the "real option value of flexible investment timing" and the "technology option value" can effectively be coupled under deferred investment. Essentially, deferring investment allows time to assess/react to actual demand/market behaviour and also for industry research and development advancements, possibly improving industry standards, to provide for economic gains. On the face of it, the identification of these option values seems fair. However the difficult task of quantifying and then weighting of these option values in the decision making process remains clouded to the point of questioning the efficacy of their inclusion in the Electricity Commission's analysis. Genesis Energy assumes the Electricity Commission has taken into account demand forecasts, localised to the Auckland and Northland regions, as well as industry research and development advancements in

¹² Ibid, page paragraph 6.6.16.

transmission technology both available at the present and on the horizon, while also acknowledging their associated costs. Likewise their use should be coupled with a thorough understanding of the associated risks and uncertainty consumers and investors will be exposed to. These and other concerns are shared by the Allen Consulting Group.¹³ In essence, their calculation is highly speculative¹⁴; and

- b. Option value of excess transmission capacity: Genesis Energy considers that this may have been undervalued at \$5 million. The “real option value of excess transmission capacity” provides for consumer and investor security in New Zealand’s major load centre. Although increased capacity carries a diminishing benefit Genesis Energy assumes that the Electricity Commission will value highly the necessary capacity to manage industry fluctuations in both demand and generation investment, as well as providing for the necessary Grid Reliability Standards. There can be expected to be major cost adjustments required if demand growth accelerates and no new capacity can be added in time.
43. To the extent that the Electricity Commission continues to incorporate option values into its analysis, Genesis Energy considers that there are further option values that should be considered. These relate to:
- a. The real option value of the 400kV infrastructure: no allowance has been made for the option benefit of building more 400kV infrastructure (for example, a 400kV ‘backbone’ from Hayward’s to Whakamaru) and meeting demand growth beyond 2030. Once the 400kV is installed it will make it easier for future investments at that level. Also a considerable portion of the 400kV proposal will be on new equipment to interface with existing 220kV which as a 400kV network grows will become more common to the overall system – for example, the 220/400 kV interconnection transformers used at Whakamaru would not need to be added should a 400kV line from Whakamaru to Wellington be installed. Only new transformers at Wellington would need to be installed; and
 - b. A “market” option value: natural hydro variability means that Huntly generation and generation in general can swing one to two thousand GWh per year. Cumulatively, national hydro inflows vary

¹³ The Allen Consulting Group, ‘Consideration of Transpower’s Auckland 400kV Grid Investment Proposal, Review of Regulatory Process, Economic Issues and Draft Decision’, 29 May 2006, page 51.

¹⁴ To the extent that Genesis Energy seriously questioned the veracity of the Electricity Commission’s estimated deferral value of \$40.2 million that it promulgated in the context of its recent consultation paper entitled ‘Recommended Amendments to the Rules for Grid Upgrade Plans under Section III of Part F of the Electricity Governance Rules 2003’.

considerably from year to year. For example, the difference in inflows between 2004 and 2005 was approximately 5000 GWh.¹⁵ If the economic and physical analysis has a variability allowance for Huntly of only 300 GWh, then there is likely to be significant spill in wet years. Two thousand GWh of spilled water when valued at say a SRMC of \$50/MWh equates to \$100million. While the analysis includes a range of hydraulic and generation scenarios from the SoO and the centralised data set, the information presented is an average of all these generation scenarios. This makes it difficult for a third party to determine the distribution of the results and therefore masks a lot of the potential benefits in a wet year. It would be beneficial to publish one standard deviation either side of the average as this would allow participants to view 68% of all outcomes.

Just-in-time Delivery of Transmission Investment

44. Finally, Genesis Energy has concerns regarding the apparent 'just-in-time' delivery of the Electricity Commission's transmission alternative projects and the uneconomic dispatch of Huntly that is likely to result from it. As the GIT values deferment highly it models the timing of the investment to occur just as it is needed by demand. Any unexpected increase in demand growth will result in eroded grid reliability standards and demand curtailment. While it may be useful as a modelling tool to assume that if demand increases quicker than expected to 'bring forward' the construction of the circuits to accommodate this eventuality, in the real world—with a seven to eight year lead-time for investment—this bringing forward is simply not feasible. In actuality, construction and higher demand will likely coincide and cause uneconomic dispatch of plant during the time of construction and commissioning of the investment if it is planned to be delivered just in time.
45. Genesis Energy is of the view – expressed on behalf of end-consumers as the ultimate bearers of the costs - that it is better from a New Zealand-inc perspective to invest more and early in transmission than too little too late as this will allow:
 - a. Economic constrained dispatch of generation plant during construction and commissioning;
 - b. Unconstrained prices for purchasers; and
 - c. A transmission system that is able to support the market in all respects.

¹⁵ Source: M-co Hydrological Summary.

Technical Issues

46. Genesis Energy has a number of areas regarding the technical aspects of its draft decision which it considers warrants further consideration by the Electricity Commission in its reconsideration of Transpower's amended proposal. These issues are canvassed below.

Meeting the Grid Reliability Standards

47. Clause 7.1.5 of the draft decision states that for the winter peak case the Electricity Commission has modelled generation (with some exceptions) as being available at 100% output. Genesis Energy believes that this is highly unlikely to be the case for all of the twenty years modelled. While there are very good economic drivers for an asset-owner to make all of its plant available to the market during the time of greatest demand off-take there are other drivers that are more than likely to lead to planned outages in wintertime.
48. Planned outages for CCGT's are based on 'equivalent operating hours' – that is, the timing of the maintenance outage is based on the number of hours the plant has run. This planning approach to CCGT outages has a number of limitations including:
 - a. The outage time has nothing to do with when it is the most economic time of the year for the asset-owner or the market to have this outage;
 - b. To keep a long term maintenance contract with a supplier it is vital not to go past the total number of operating hours. In general, the generator can only bring outages forward but not delay them. To bring forward an outage the asset owner will incur additional cost as it will be giving up plant component life to do so; and
 - c. As 'equivalent operating hours' are made up of both actual hours in service and penalties applied due trippings start ups and under-frequency events, outages can be unexpectedly brought forward.
49. In addition to the above issues and uncertainties, the asset-owner must fit the outage into its own global outage plan and try to minimise the economic impact of its and other generation participant's outage plans plus the transmission outage plan of the Grid Owner.
50. Having considered all of the above issues, Genesis Energy believes that there is as much probability that a CCGT will be out of service for planned maintenance over the winter peak as any other time of the year.

The Role of Alternative Projects and Transmission Alternatives

51. There are two further counterfactual issues of relevance in the Electricity Commission's analysis. These are:
 - a. The role of 'alternative projects' (that is, different 'wires' solutions) in the GIT analysis; and
 - b. The broader role of 'transmission alternatives' (that is, demand side and local generation options that defer transmission upgrades), if any, in the application of the GIT.
52. In terms of the role of alternative projects in the GIT analysis, Genesis Energy has considerable doubts that the alternatives against which the Electricity Commission has assessed Transpower's proposal are credible in terms of likely implementation (as opposed to in theory). The Electricity Commission itself has recognised in earlier consultation papers that it is important for the alternatives to be credible. Indeed, an "alternative project" which includes transmission alternatives requires a number of tests as set out in rule 19 of part F, section III, schedule F4 to be met. These are set out in paragraph 6.13.3 of the draft decision report.
53. Of particular importance in terms of the criteria set out in rule 19 is rule 19.3 which states that any alternative must be reasonably likely to proceed if neither the proposed investment, nor any other alternative project proceeds and unlikely to proceed if the proposed investment does proceed. This dual test¹⁶, when combined with the other tests set out in this and other rules,¹⁷ provides a stringent hurdle to be met before consideration as a part of the GIT.
54. No obvious consideration of whether the alternative projects are likely to proceed is evident and despite the information provided by the Electricity Commission, Genesis Energy remains to be convinced that the alternatives will actually materialise. It is Genesis Energy's previously stated view that there should be a formal process for any project to be considered an alternative. In other words, such projects should be formally proposed by some representative body which has given some commitment or bond to proceed with the project and can confirm that it can comply with the stated requirements of a defined transmission alternative.

¹⁶ In Genesis Energy's view, if one or other of these dual tests fails then the project is not a transmission alternative and can not be considered as such. This has significant implications for the range of alternatives proposed by the Electricity Commission as Genesis Energy contends that they are unlikely to meet the first 'leg' of the test.

¹⁷ Most notably Rule 21 of part F, section III, schedule F4 which expands on the definition of "reasonably likely to proceed" with reference to real world pragmatic indicators.

55. The doubts held by Genesis Energy regarding this are simply magnified when this issue is placed in the context of the Electricity Commission's:
- a. Inability to require Transpower to deliver any of the alternative projects without Transpower's prior consent;
 - b. Admission that it is not in a position to propose detailed investment projects and so the alternatives considered are necessarily represented as generic technologies¹⁸; and
 - c. Recognition that the alternative projects that it has modelled are neither optimal nor necessarily the most cost-efficient – that they are simply alternatives that are *more* cost-efficient than the Transpower proposal.
56. As set out in paragraph 22 above, the role of transmission alternatives (as opposed to alternative projects *including* transmission alternatives) features prominently in the purpose statement of the grid upgrade and investment rules. Similarly, transmission alternatives also feature prominently in rule 6.3 of part F of section III – the objectives of the GIT as well as in rule 3.1 of part F, section III, schedule F4. Given this, it is unclear to Genesis Energy, with the predominant emphasis on transmission-based alternatives:
- a. Whether it was the intent of the original policy makers that the focus was to be placed on these alternatives, and not generation or demand-side transmission alternatives. If this was not their intent (and it is certainly arguable that it was not), Genesis Energy also wonders about the overall efficacy of the debate around the benefits of one transmission option over the other and the extent to which the debate is one of 'angels dancing on a pinhead'; and
 - b. What role generation or demand-side transmission alternatives (that is, transmission alternatives as broadly defined in the rules) will have to play in the future, and the policy implications this draft decision has for that role.
57. Finally, Genesis Energy notes the Electricity Commission statement that it has not yet reached a conclusion about whether generation-based alternatives are viable or capable of implementation within the planning period because the transmission-based alternatives alone were sufficient for effective GIT analysis. Such a statement not only raises concerns for generators, but would provide absolutely no assurance to Transpower, should it proceed to submit a revised proposal, that the Electricity Commission will not 'work-up' some generation-based alternatives as both viable, or capable of implementation within the planning period.

¹⁸ Ibid, page 54, paragraph 6.13.45.

Other Technical Issues

58. Finally, Genesis Energy wishes to note two other technical issues which it considers warrant mentioning. These are:
- a. 'Over-compensation': Genesis Energy has some concerns that the Electricity Commission's alternatives require voltage support above that normally considered appropriate or for the operation of the grid to a reasonable level of care. Genesis Energy considers that a high reliance on compensation/voltage support gives rise to another mechanism for grid failure or collapse, and notes that this issue was raised by GE Energy in its peer review of the Auckland Transmission Alternatives Reports;¹⁹ and
 - b. The Electricity Commission's proposed use of a reactive power controller: while there is use of a reactive power controller in Wellington to help with voltage stability in the Wellington area under high DC transfer, Genesis Energy understands that these are not common internationally for the level of complexity contemplated for Auckland. The idea of an external organisation interfering in Genesis Energy's commercial operation – that is instructing Genesis Energy regarding how many units to run and at what loads (unit voltage support capability is number of units and unit load dependent) is anathema to Genesis Energy and should this be the proposal, it would be strongly resisted.

Regulatory Framework Issues

59. As noted above, the nature of the issues that we have raised in terms of both the economic and technical aspects, while important to the overall quality of the analysis to be undertaken by the Electricity Commission, are generally suggested as refinements to the application of the existing framework rather than fundamental concerns with it. Unfortunately, the same cannot be said of our concerns regarding a regulatory framework that has seriously blurred accountability between regulator and grid planner, created, rather than diminished investment uncertainty and has delivered an outcome that appears to 'hard-wire' in delay at a time when assertive action is required.
60. For clarity's sake, Genesis Energy does not consider these issues to be the sole responsibility of the Electricity Commission, but of both it and Transpower. Each must take equal responsibility for the outcome to date. As a keenly interested stakeholder in the grid investment process, Genesis Energy's external view on the operation of the regulatory framework is that:
- a. It has been combative and competitive, rather than collaborative and co-operative;

¹⁹ Letter to Electricity Commission entitled 'Subject: Review of Auckland Transmission Alternatives Reports', dated 12 April 2006.

- b. The reputation of both agencies has suffered in the failure to date to reach a strategically aligned, mutually agreeable outcome; and
 - c. There is clear and growing frustration by government, officials and industry participants with its implementation to date and that a failure to heed these signals in future will potentially be to the Electricity Commission's and Transpower's detriment.
61. However, more importantly, Genesis Energy fears that unpredictable changes to the regulatory framework that are borne of frustration, risk being to the wider detriment of the industry. Given this, Genesis Energy wishes to provide some comments regarding the structure of the current transmission regulatory framework and how it can be improved in the short and medium-term.

Will the Real Grid Planner Please Stand-up?

62. In a number of previous submissions to the Electricity Commission, Genesis Energy has expressed its strong reservations about the role of the Electricity Commission in grid planning and the apparently increasingly invasive reassessment of Transpower's analysis. These reservations have been borne out in practice, with the Electricity Commission to all intents and purposes having stretched its role into the grid planning space. This can only be interpreted in one of two ways. Either:
- a. The current regulatory powers and policy direction under which the Electricity Commission operates is being appropriately interpreted by the Electricity Commission and a contestable grid planning function is desirable to ensure robust operational outcomes;
- or
- b. The current regulatory powers and policy direction under which the Electricity Commission operates is faulty and needs to be clearer in terms of the respective roles of the two organisations.
63. All other things being equal, the Electricity Commission's interpretation of the regulatory framework under which it operates and its draft decision must be seen as a direct criticism of Transpower and its ability to deliver on its core function as grid planner. This is a significant (if not well understood) implication of the draft decision. Under this framework, it would appear that the Electricity Commission developed and interpreted its rules in such a way that it saw the development of a contestable grid planning function as necessary to achieve a robust and reliable result that would otherwise not be secured without its direct intervention.

64. Genesis Energy takes a relatively simple approach to this issue. There *should* be only one grid planner - economic efficiency demands that this be so – and there *is* only one grid planner – currently Transpower.
65. Genesis Energy has no comment to make on Transpower's planning competency as it is not best-placed to do so. However, Genesis Energy can unequivocally state that if doubts regarding Transpower's grid planning competency did, in any way drive the process taken by the Electricity Commission and contributed towards the outcome, then it is wholly inappropriate to address that by the development of a contestable grid planning capability by the Electricity Commission. If the key issue is Transpower's management of its capital projects – for whatever reason – be it the management of cost over-runs or the ability to factor in new and unanticipated information regarding demand or technology, then developing a contestable grid planning function by the Electricity Commission would not appear to be the answer to this.
66. Genesis Energy contends that a well thought-through and implemented transmission regulatory regime would, as its core objective, aim at ensuring that those parties best able to manage the risks associated with project implementation be accountable for their management. On the face of it, this suggests to Genesis Energy that the agency accountable for the design, build and operation of the grid should have such accountability sheeted home to it and not have that accountability undermined. In Genesis Energy's view, the more appropriate response to any corporate governance problem (either real or imaginary) relates to addressing the incentives faced by Transpower to 'get it right first time' and to have it (or its shareholders) bear the consequences should this not eventuate.
67. This view is underpinned by the understanding that it is standard corporate governance procedure to review capital projects as they progress and that such reviews are generally driven by two factors – changes in costs and changes in the environment. If the problem is that Transpower is unlikely to do this, or to do it sufficiently well, then this would be a failure of Transpower's corporate governance processes and should be addressed directly by government, and not indirectly by the Electricity Commission.
68. Indeed, a key risk to a continuation of the current approach is the implied separation of responsibility from accountability and the potentially perverse outcomes that may eventuate from doing so. In Genesis Energy's view, such a separation will see the Electricity Commission increasingly assume de facto responsibility for both grid planning *and* its implementation while Transpower in reality will remain accountable for both functions. This can in practical terms only lead to the continued erosion of Transpower's accountability and management of its projects. Such an outcome is not sustainable and will undoubtedly, should it eventuate, result in an increasingly untenable position for Transpower's Board.

69. At the very least, the Electricity Commission must demonstrate that its own governance and accountability is superior to Transpower's, and that its project management and supervision skills are likely to exceed those of Transpower.
70. This is not to say, however, that the Electricity Commission should not have a strong role to play in this regard. However, it does suggest that the Electricity Commission should only be accountable for ensuring that Transpower's proposals are robust and economically sound. The Electricity Commission's accountability should not stretch into that of a corporate governance best practice watch-dog. Such a role is clearly inappropriate.
71. To this end, the key point Genesis Energy wishes to make is that any problem definition should focus on why and how transmission regulation in New Zealand might be preventing Transpower from implementing the most efficient transmission options (including transmission alternatives, if necessary). In Genesis Energy's view, setting up duplicate regulatory interventions is likely to be both distortionary and inefficient.
72. Unsurprisingly, these views raise questions about the clarity of the regulatory framework under which the Electricity Commission currently operates and the Electricity Commission's interpretation of the rules such that it could proceed along such a path.

Moving this Issue Forward

73. In light of the above, Genesis Energy contends that from a more practical operational perspective, there are a number of potential avenues that both government and the Electricity Commission could pursue in parallel to improve the current regulatory framework. These are:
 - a. The Government should assure itself that Transpower is the appropriate grid planning entity;²⁰
 - b. In reality, the Electricity Commission has significant discretion as to how it interprets the rules under which it operates. This means that it is possible for the Electricity Commission to change how it assesses future investment proposals. A welcome starting point for immediate changes in regulatory practice is set out in the Allen Consulting Group report.²¹

²⁰ Irrespective of the outcome of such an assessment, Genesis Energy is convinced that the Electricity Commission, as regulator of the electricity industry, is not the appropriate agency to undertake a grid planning function.

²¹ Ibid, chapter 4, pages 32 – 46.

In particular, Genesis Energy strongly encourages:

- i. the Electricity Commission to set clearly articulated and reasonable expectations of Transpower;
- ii. Transpower to be provided with the reasonable ability to meet the Electricity Commission's expectations; and
- iii. the Electricity Commission to peer-review Transpower's analysis against those requirements via an audit role (checking Transpower's consideration of alternatives and peer review processes etc).²²

It is Genesis Energy's hope that such a process would result in the interaction with industry participants being focused at the strategic oversight level with industry participants being able to make an informed view on the Electricity Commission's decision as to whether Transpower has met the requirements or not; and

- c. While signals of intent to change current practices are both necessary and welcome, Genesis Energy doubts that this is sufficient as such an approach remains based on individual's interpretation of rules by both Transpower and the Electricity Commission. As such it is largely subject to the goodwill of those directly involved. In light of past practice, Genesis Energy would prefer that such vagary be removed, to the extent that Genesis Energy's preference is for clarity to be provided via a revised Government Policy Statement and rules. We note the recent support for such an option announced by the Minister of Energy. Critical issues to be addressed are the need for:
 - i. the audit and review role and Transpower's accountability for grid planning to be made explicit;
 - ii. development of an accountability regime on the Electricity Commission to incentivise it to make appropriate long-term choices and trade-offs, and to correctly evaluate the

²² The absence of this or a similar process not only creates uncertainty for generators, but more importantly potentially gives rise to a powerful disincentive for Transpower to invest. While Transpower is best placed to comment on the practical implications of the Electricity Commission's current processes, they will undoubtedly be difficult to manage operationally. No consideration appears to be given in the draft decision to the operational impact such an outcome will have on Transpower, in terms of contracting and build costs. While Genesis Energy is unaware of the specifics of Transpower's operational practices, Genesis Energy can only assume that a piecemeal approach to grid development will have significant costs associated with it. While the operational details are a matter for negotiation between Transpower and the Electricity Commission, we urge the Electricity Commission not to underestimate the likely cost associated with entrenching such uncertainty into the grid development process.

balance of risks between over and under-investment in the context of a long term strategic infrastructure plan;²³ and

- iii. the ability to better align the risk appetites, not only of the Electricity Commission and Transpower, but also of the other various participants (including generators and lines companies); and
- d. The Electricity Commission's independence from political pressure to be assured. Genesis Energy considers it imperative that at a minimum the independence of the Electricity Commission, in a similar manner enjoyed by the Commerce Commission is put in place.

Conclusion

- 74. The only practical outcome of this Electricity Commission-Transpower process has been to impose unnecessary costs on industry participants as they have been forced to attempt to find a way through a morass of claim and counter-claim regarding whose grid upgrade plan is better. As a result this has been extremely frustrating and Genesis Energy is disappointed that the two protagonists could not find a way of resolving their differences to the advantage of both the industry and New Zealand as a whole.
- 75. Industry participants and investors don't need gratuitous uncertainty. Both need to be able to make commercial decisions against a backdrop of an unambiguous application of a clear regulatory framework. As a general over-arching principle, Genesis Energy considers that it is important that both can have confidence in the Electricity Commission's regulatory decision making processes and that arbitrary and inefficient outcomes will not result.
- 76. Unfortunately this has not been the case. Indeed, it appears that New Zealand-inc got the worst possible outcome – regulatory uncertainty with no evident prospect of how the cycle will be broken. It is also highly likely that the outcome is inconsistent with the Electricity Commission's principal objective – downward pressure on prices – as well as one of the Electricity Commission's key objectives from the Government Policy Statement – that of maintaining a regulatory environment that is conducive to investment in all

²³ Genesis Energy urges the development of a comprehensive, strategically-focused grid development plan that sets out a transmission 'road map' for the future. In particular, Genesis Energy is deeply concerned that the focus on the 400kV proposal between Whakamaru and Otahuhu has not only acted to the detriment of due consideration being given to other fast growing areas (such as the Wairarapa) as well as every other fast growing area but also to the development of a holistic (that is, New Zealand-wide) plan. Genesis Energy is concerned that it may see a repeat of the current debate when the transmission line between Wellington and Whakamaru is in need of upgrading when in reality this should, to the extent it can be, almost be pre-ordained as a part of a larger strategic plan.

types of generation and that minimises any undue barriers to competition in generation and retail.²⁴

77. Given this, and the absence of the application of a strategic understanding of the role of infrastructure in a vibrant economy, Genesis Energy contends that there is now an urgent need to quickly move to a more fundamental consideration of the nature of the over-arching regulatory environment in which the key players in the transmission sphere operate, the appropriate incentives on them to manage the risks associated with transmission planning appropriately, and the accountability mechanisms to enforce this. Genesis Energy has made a number of suggestions in this regard.
 78. In our by now commonly known view, the asymmetric risk associated with delaying the grid upgrade far outweighs the risk that the grid upgrade is approved when it should not be. Ultimately, it is better to invest too much, too early in transmission, than too little, too late.
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²⁴ Ibid, Government Policy Statement, Foreword.

Appendix One: A Transmission Corridor

1. The Electricity Commission has, in its consultation paper, posed the following question:

“Do you consider there may be value in progressing at this stage a transmission corridor that would accommodate a range of overhead line technologies? Do you consider that such a corridor could be implemented under current legislation? If not, what changes do you consider would need to be made?”
2. Both the Electricity Commission and Transpower have firmly identified the need for a transmission corridor into the Auckland load centre as a means to serve forecast demand growth. The issues raised via this consultation relate not to “if” a transmission corridor is needed but “when”.
3. In terms of the development of our response to this particular question, Genesis Energy is unclear from the limited contextual information surrounding the question as to *who* precisely the Electricity Commission is suggesting would progress with the transmission corridor. Given this limitation, Genesis Energy has assumed (rightly or wrongly) that as the grid planner currently has the ability (subject to Electricity Commission approval) to purchase as a normal course of its business, land for grid developments, the question implies the Electricity Commission²⁵ taking the option to purchase land because – in the light of uncertainty around decision-timeframes – the grid planner would not be able to purchase it at that time.
4. Without the in-depth knowledge of legislation and statutory rights surrounding the process of securing the required land rights for such a project Genesis Energy presumes any difficulties imbedded in this process would be addressed in a timely and appropriate manner.
5. However, while Genesis Energy believes it would be prudent to progress the securing of land and gaining of the required resource consents providing for such a transmission corridor, the key issue for Genesis Energy is who should have the accountability to do this. Consistent with the views that:
 - a. There should be a long-term strategic grid development plan developed;
 - b. The Electricity Commission should have an audit and review role rather than a grid planning role; and
 - c. Accountability for grid planning should rest firmly with the grid planner, including accountability for implementing grid plans and for any attendant operational errors

Genesis Energy contends that the grid planner should undertake the function of securing a land corridor once its plans have been approved by the Electricity

²⁵ Or potentially some other third party other than the grid planner.

Commission. Any land procurement and the risks associated with it should be managed by and reside with the grid planner.

6. The separation by the Electricity Commission of the purchasing of land from the other operational activities of the grid planner would be no different in principle from the separation of any of its other 'important' operational activities – such as, for example, separation of the procurement of copper wire, on the basis that it is a strategically important input in to the eventual implementation of a robust grid. Neither would it potentially be any different in principle from the Electricity Commission purchasing land for future generation sites. It was, in Genesis Energy's experience, this very sort of seductive centralised thinking that resulted in the pre-privatised New Zealand Railways Department deciding that it should build its own vehicles as it would provide greater certainty to it operationally and it held the required coach-building skills available to do it – a decision that was patently inefficient.

Submission by

M and J Gibson

Submission on the Electricity Commission's draft 'no' decision to turn down Transpower's proposal to build a new 400kV line between Whakamaru and Auckland.

Sender: John and Mary Gibson

Dear Roy,

Thank you for the opportunity to comment on the draft decision.

We fully support the draft decision based on the findings that significant savings can be made and that there are alternatives which could supply the same level of security when compared to the proposed 400kV line. By carrying out the investments already approved by the Commission and the indicative additional projects before 2017, we believe Auckland could be assured of a secure level of supply before 2010 which is the crunch time for the city's electricity needs. The alternative proposal which Transpower plans to submit on the other hand is not due for completion until 2012, thereby placing Auckland at severe risk of power shutdowns in the interim. What plans do Transpower have to meet this shortfall between 2010 and 2012?

Critics of the draft decision are choosing to ignore the words "unless new generation is built close to Auckland or load growth declines", and in doing so are making misleading statements that those who oppose the pylons going over their land need to expect the inevitability of a new transmission line. Between now and 2017 it is more than likely we will witness significant technological advances in transmission and generation, and also the likelihood of new generation near Auckland. The failure in transmission equipment that took place in Auckland on June 12 we believe strengthens the argument for building new generation plants north of Auckland, thereby supplying an alternative entry point for power into the city, and providing a preferred level of security for the future.

Our views on the desirability and practicality of acquiring a transmission corridor in advance of the need for a new transmission line, are that we would be totally opposed to this suggestion. We would have to question what impact this would have on our property and us personally. Would a designated corridor for a utility designed for the present day still be the appropriate model for requirements say 10 years further on., and would it be in the right place? How could an agreed figure for compensation based on injurious affection, still be appropriate at some future date or would it be inflation adjusted? Also what would be the intended width of the corridor and what restrictions would apply? We do not believe that a "corridor" would provide any certainty to landowners but that it would be contrary to our best interests.

Kind regards
John and Mary Gibson

Submission by
N and C Goodin

ND and C M Goodin

16 June 2006

Electricity Commission
P O Box 10041
Wellington 6036

Submission re:
Transpower's Auckland 400kV grid investment proposal: draft decision"

This submission presents arguments against Transpower's proposal for upgrade of the 400kV grid.

- Transpower's proposals have been manipulated to adapt to the Electricity Commission's regulatory requirements rather than providing a proposal that fulfils the complete and long-term solutions for Auckland's power requirements.
- Proposed compensation by way of easement is not considered an adequate trade
 - Easement conditions are onerous for the tenant yet place no restrictions upon others that reside nearby.
 - Land will be defaced by unattractive towers
 - Areas of the property which are most saleable at present will become unsaleable.
- Health issues have not been completely and accurately assessed.
 - For people and animals
 - What provision will be made in the case that evidence arises to prove emissions from the lines impact upon quality of agricultural produce eg dairy milk?
- Provision of resources should be sourced as closely as possible to the area of demand so that those who benefit are also the ones to wear any negative impacts.
- New Zealanders should be making every effort to maintain and improve New Zealand's ecological advantages rather than continuing to deface and destroy them.
- The draft decision by the Commission and the consultation questions which have arisen from it are all based upon quantitative analysis of the proposal by Transpower. There is NO reference to the qualitative arguments submitted such as those relating to aesthetics and impact upon quality of life.

Christine and Neil Goodin