



SUBMISSION  
ON  
THE ELECTRICITY COMMISSION'S  
GRID INVESTMENT TEST

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## **1. Background**

NGC (formerly known as Natural Gas Corporation) is an energy infrastructure and services company formed in 1967 and publicly listed in 1992. It has significant businesses in:

### **Gas Transportation**

Owning, operating or managing approximately 3,420 km of high pressure gas and petroleum product pipelines, and 2,739 km of pipeline networks. NGC's networks supply approximately 58,000 customers in over 30 towns and cities in the North Island.

### **Gas Processing and Natural Gas**

Owning and operating gas treatment and conditioning facilities and selling the LPG, natural gasoline and carbon dioxide produced from them. Holding long-term entitlements to gas supply from the Maui, Kapuni, Pohokura and Kahili fields.

### **LPG**

Producing, wholesaling, retailing and transporting approximately 210,000 tonnes per annum of LPG and other gas liquids.

### **Energy Metering**

Providing independent electricity metering services to over 860,000 homes and businesses, energy data management services to more than 8000 electricity customers in New Zealand and Australia and gas metering to around 55,000 homes and businesses and industrial premises.

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## **2. Introduction**

NGC welcomes the opportunity to make a submission to the Commission on its Draft Grid Investment Test (GIT). As an energy infrastructure company, NGC has a strong interest in ensuring current and future private sector infrastructure investment is appropriately represented in policy and regulatory discussion and decision making.

NGC believes a robust electricity system in New Zealand is necessary and that strengthening the grid is one important element of ensuring this is achieved. NGC's main concern is to ensure the full suite of options is considered to ensure the most cost effective solutions are supplied to the end use consumer.

NGC favours market solutions and investment incentives being undistorted by inappropriate regulatory decision making. NGC believes that the Commission should focus its efforts on ensuring economically efficient outcomes through appropriate market structure and investment incentives.

New Zealand is at a significant crossroads in the development of its energy infrastructure. It is important that a long term strategic view incorporating as many opportunities as possible is taken. This not only spans the electricity supply chain but other areas of the energy supply chain from fuel sources to end users.

NGC believes gas transmission complements electricity transmission in transporting energy to where it is needed. The Commission should not overlook these complementary roles. Specific alternatives to electricity transmission NGC believes are worth serious consideration by the Commission includes:

- Increased distributed generation and peaking plant;
- Increased direct gas use;
- Increased gas pipeline capacity; and
- Demand management and smart metering.

### **3. Broad Comment on the Electricity Commission's Process**

NGC supports market solutions and the encouragement of private sector investment in New Zealand's energy infrastructure wherever possible. To this end NGC prefers that this would entail having appropriate incentives and structures were in place to drive appropriate investment to meet national and regional energy demand needs in a timely fashion.

The Commission will be familiar with a key tension that exists in formulating such a framework - the extent to which market driven responses interface with regulatory ones. NGC understands the Commission has a duty of care to ensure that its processes do not favour normally less efficient investment through regulatory measures over efficient investment through market and competitive processes.

While recognising the unique circumstances that have led to the current oversight of electricity transmission, NGC believes the Commission should be wary of its impacts on private sector investment when establishing and making its decision making frameworks. As an observation, NGC believes the Grid Investment Test chosen by the Commission should have an overriding impact on making it clear where grid investment is needed and where alternatives can be put in place to avoid the cost of a transmission upgrade.

#### *Commission's Consideration of Alternative Energy Sources*

As discretionary fuels, gas and other energy sources often compete with electricity, and that the outcomes from the Commission's decision making in this area will likely have a large impact on the future investment decisions of both investors in the gas sector, other fuel suppliers and energy end use customers.

#### *Importance of Clear Understanding of Opportunities*

The clear counterfactual for market responses to operate from is the Commission's Statement of Opportunities. This document is not due for publication until March 2005.

NGC raises this point more in reference to Transpower's proposal seeking alternatives to its Auckland transmission upgrade, prior to the release of any Statement of Opportunity. While NGC appreciates the need for decisions to be taken, the order of events appears to hinder the possibility of alternative options being independently considered.

NGC believes both parties would benefit from a meeting to canvas the issues raised and discuss possible options. It would also be relevant to discuss the

interdependencies and spill over effects of electricity and gas transmission investment more generally.

#### **4. Commission's Interpreted Objective of the Grid Investment Test**

NGC appreciates that the purpose of this process is to allow the Commission to decide if a proposal for electricity grid investment is appropriate. The Commission has derived an objective for the Grid Investment Test based on EG rules Part F objectives.

However NGC does not agree with the Commission's interpretation of the rules for the reasons outlined below. In brief, NGC disagrees with the Commission's determination that only the net benefits to the electricity market are relevant and that this interpretation should be directly elevated to the level of primary objective of the Grid Investment Test. Other aspects raised by other EG rules and supporting legislation require due consideration.

##### *Interpretation of the Term "Market Benefits"*

The Commission has interpreted the term "market benefits" from the EG rules. NGC does not consider this to be an appropriate interpretation, as the rules clearly articulate the Commission's consideration of benefits to consumers. It is somewhat self evident that consumers could benefit, in some cases quite significantly, from non market actions. NGC believes that the purpose statement in the Electricity Act, the expansive nature of the Commission's objectives in the Act and the in the EG rules compels the Commission to consider a broader analysis.

NGC believes a broader approach is best articulated in economic terms as being a "net public benefits" approach, rather than a "net benefit to acquirers" approach, which it has articulated in its consultation document.

In carrying out a net public benefits test, the Commission should consider the most efficient outcomes to energy users as a whole, and not concern itself with wealth transfers between parties.

##### *Wording of Rule 6.3.4*

- 6.3.4 Enabling selection of transmission upgrade options that maximise the total net benefits to those who produce, distribute and consume electricity after taking into account transmission alternatives.

The second half of the sentence articulating this rule requires consideration of alternatives prior to the consideration of net benefits to the electricity market. The way in which the alternatives are to be considered is at the discretion of the Commission.

NGC sees no reason for the Commission to consequently derive an objective for the test in isolation from the consideration of the net benefit of alternatives. Nor does NGC believe the Commission will have appropriately fulfilled its role if it does not compare its consideration of alternatives with the cost benefit of any grid investment proposal.

##### *Consideration of Other Rules in Interpreting Objectives*

A number of other rules would appear to direct the Commission to consider the benefits to other sectors outside the electricity market as discussed below.

#### *Regarding End Use Customers*

Rule 6.3.2 specifically refers to the Commission reflecting the interests, as far as practicable, of end use customers, and having regard to the cost to end use customers.

The total net benefits to end use customers may be far greater through investment in alternative energy transportation, fuel switching or a peaking plant rather than a transmission upgrade. The peaking plant and associated fuel supply and supporting infrastructure may include benefits to sectors other than the electricity market e.g. alternative energy suppliers – biomass, solar water heating, natural gas, LPG, CNG etc.

For the Commission not to consider the costs and benefits of alternative suppliers that substitute directly for electricity use could lead to significant perverse and inefficient outcomes, leading to significant cost increases for end use customers. NGC therefore believes through this rule the Commission has a duty of care to consider the net benefits of alternatives that directly substitute for electricity demand.

#### *Consideration of Wider Benefits*

Rule 6.3.1 specifically mentions the terms economic and energy efficiency, a broader concept than electricity, which should point the Commission toward a wider cost benefit analysis. This has been raised by the Commission but effectively given lower status than the first half of rule 6.3.4.

The Commission has incorrectly drawn a line around the electricity market which excludes suppliers of fuel to electricity generators. This has the potential to obfuscate a significant proportion of a key risk component of New Zealand's electricity and supporting infrastructure – fuel risk, e.g. gas supply risk.

While electricity generators consider fuel risk as a buyer in the market, fuel risk for the supply sector, and in a practical sense, any means by which the fuel supply sector can assist in managing or mitigating that risk appears to be excluded. This could easily lead to sub optimal outcomes for the economy as a whole in the Commission's assessment of counter party risks.

#### *NGC recommendations to the Commission*

- a. Change the objective of the Grid Investment Test to consider the net public and private benefits to the public of New Zealand, rather than only the electricity market and participants therein.
- b. Construct an analytical framework that reflects a more expansive consideration of benefits mentioned above, including calculation of alternative energy sources and non-market net benefits.
- c. Specifically ensure the analysis in the Grid Investment Test includes net benefits to both suppliers of fuel to electricity generators and suppliers of services that directly substitute for electricity where those costs and benefits are reasonably easily quantified and credible.

## **5. Consideration of Risks Associated with Projects**

While the Commission has included Government policies with explicit price consequences it is unclear how the Commission will factor in risks associated with other environmental legislative impacts, such as likely success or failure under the RMA, for example Meridian Energy's difficult experience with Project Aqua. To illustrate, the net environmental effects of directly substitutable alternatives may be considerably smaller than electricity transmission, which will have a strong influence over the risks of achieving resource consent for that option. For example, transporting gas via pipeline has negligible visual impact – nearly all gas transmission pipeline in New Zealand is between one and two metres underground, with associated easements with landowners.

*NGC recommendation to the Commission*

- d. Include and quantify where possible, risks of project success under all clearly possible legislative scenarios, including likely time delays.

## **6. Concluding Remarks**

NGC appreciates the Commission has a large number of issues to deal with that have been sitting unresolved for some time. NGC looks forward to further engaging with the Commission where appropriate to aid its consideration of these issues.