Comments on the revised draft GPS on Electricity Governance dated February 2009

Submitted by Geoff Cardwell, Electrical Engineer, Christchurch. 16 March 2009

Disclaimer: These comments are my own views and should in no way be taken as criticism or allocation of responsibility for shortcomings against any party or individual referred to herein.

The following comments on specific Paragraphs of the GPS are made in the hope that a wider perspective on the main issues facing the industry will be adopted. This is needed if long term benefits can be expected from any changes to the present regulatory and market structures.

Some comments are also provided on the LECG - Business NZ Report of 4 February 2008?-9. This is certainly one of the most comprehensive reports on the industry and has many useful recommendations towards developing workable solutions for the ongoing problems.

Note: The basic electricity supply system and power project process diagrams attached to these comments were developed for the NZ Centre for Advanced Engineering, CAENZ, in mid 2007 for use in its Distributed Generation and Canterbury Regional Energy Forum projects. It is suggested that similar, more accurate, diagrams be developed for wider educational purposes.

The following Paragraph numbers refer to the draft GPS on Electricity Governance:

P1 The stakeholders are shown on the basic system diagram attached. There are more than we realise and the regulator will be unable to please all of them. There has been a costly waste of time and effort by parties pulling in different directions. We need to establish priorities and a classification system for addressing the major issues facing the industry.

P2 The Commission should use its “powers of persuasion”? This statement is likely to send a biased message to industry participants that the regulator has the final say on contentious issues. See my comments below on “executive powers” in the LECG - Business NZ report.

P3 Clear and effective regs and rules. One vital rule, the GIT, is deficient as it takes no account of the socio/community and environmental aspects so important in the larger power projects. See my comments below on the GIT referenced in the LECG - Business NZ report.

P6 Small consumers are left out of the market. They have no powers and their voice is ignored.

P7 Scope for innovation. The fact that we are dealing with a unique product and a unique delivery system is not appreciated by most people. There will be limited scope for innovation and we should not be reinventing the electricity supply wheel. The base technology is the same the world over and more care is needed on what we innovate. Regulation is not considered a suitable area for innovation as it involves too much costly experimentation and confusion.

P10 Security of supply is a major consideration. This needs to be outside any market influence.

P11 Present market mechanisms alone will not achieve these valid key security requirements. In the area of specified reliability/outage criteria, eg based on VOLL, these are not always properly applied as the multiplier effects in large CBDs make them unreliable. Coffee shops in Ponsonby and Oamaru are not the same, as shown again with the recent Auckland supply outages.

P16 See comment for P10. The present operation of the market does not help security of supply.

P20 This is an overall system planning function which should not be done by a regulator.

P26 A regulator should not be responsible for reserve energy and security of supply. This is typically carried out by a TSO, Transpower in our case.

P33 and 34 Same comment as P26 for emergency management; also a TSO function.

P35 A regulator should not be a market player and receive revenue from reserve spot prices.

P56 Duplication of effort is clearly shown in the attached simple project process diagram.

P71 Regarding low probability and high impact events where load disrupted and duration are important, the comments on VOLL for P11 above apply. Some degree of central planning is required for transmission services and the TSO should be responsible.
Regarding adequate supply diversity to larger load centres, the EEA 2000 Security Guidelines, or an agreed updated version, should be referenced and incorporated as part of the rules.

P77 This allows scope for considerable duplication of effort and confusion between the Commission and Transpower roles. See attached simple project process diagram.

P82 The responsibility for planning also shows probable conflict areas between the Transpower role and that required of the Commission as in P77.

P87 This is a step in the right direction with consideration given to increasing the level to $50M.

P88 The need for Commission approval will still unduly delay the process if disagreements arise.

P93 The RMA approval stage, as shown in the attached process diagram, is far too late and needs to be brought forward so that large projects can be assured of an early review outcome.

P94 In avoiding multiple smaller lines, the security requirement for true n-1 should not be diluted. There is a need for n-d for important double circuit lines, again in Auckland's case.

P99 The more complex and costly grid investments cannot be easily allocated on a user pays basis. Core grid investments will need a wider contribution base possibly using the postage stamp policy where everyone pays an agreed amount.
Incentives to minimise grid constraints, plus nodal risk, will have an impact on generator profits.

A few comments on Appendix 1: s172N Electricity Act 1992 follow:

1.a. Electricity is not being delivered to small consumers in a fair manner

2.f. Delivered electricity prices have not been subject to sustained downward pressure

2.g. These are centrally planned and executed tasks not normally done by a regulator

The following comments on the LECG - Business NZ Report may also be useful:

Bottom line of the Report (p36) –"The Electricity Commission has pursued an executive approach in determining market outcomes rather than facilitating effective market processes." The Commission is probably the only regulator in the world with such an executive approach.

Bottom line of Annex 2 on GIT (p39) – "The specification and implementation of the GIT test is in contrast to the normal net public benefits (or economic efficiency) test used internationally by competition and regulatory authorities. This change (to a net public benefit test) would enable the use of international experience and precedent related to such tests."
The non-quantifiable costs include the impact of CBD supply outages on our national image. NZ should not try to reinvent the electricity supply wheel. We are too small and really cannot afford this luxury. Our international reputation has not been enhanced in this area.

p1 Executive Summary – "the current market serves country better than alternatives" – does it??
"The GPS is revised on an annual basis and continues to underperform" – will this continue?
"Little hope of current arrangements converging to a stable set of regulations" – this is a worry!
"Draw on experiences in NZ and elsewhere" – see my comment for P7 above.

p15 Supply failure demands political response – set market price for period – no more spikes??
Industry participants **do** have an incentive to allow a shortage to be declared – generator profits!
Every price spike should be interpreted as a market failure – this is an abnormal pricing process.

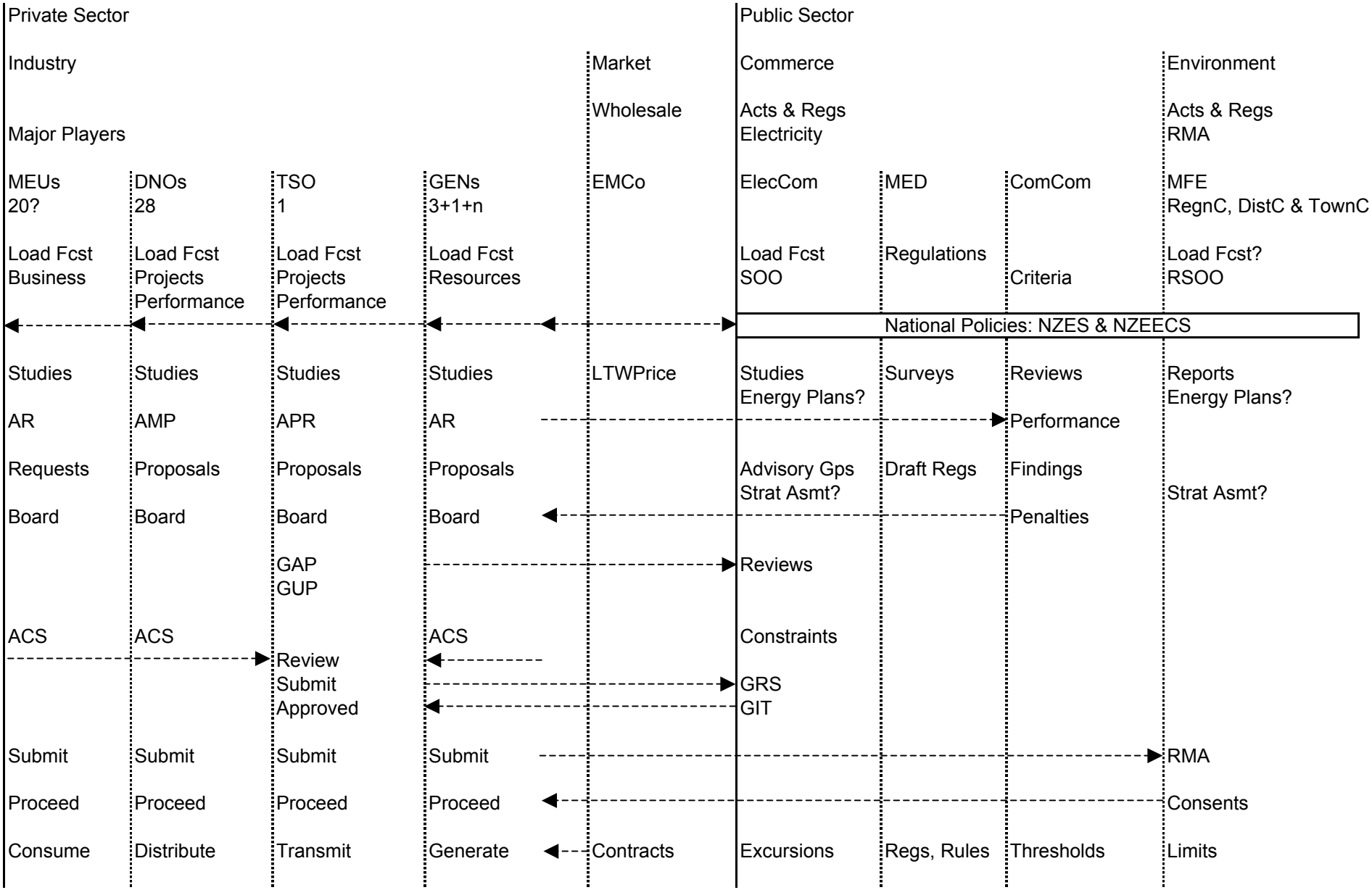
p18 "Cooperation among competitors can risk collusion. When supply is tight relative to demand, generators can also be in a strong position to exercise market power, because both supply and demand are very inelastic." – again see my comment for P7 above.

p23 "Large economies of scale raise the prospect of limited competition for some services."
The power supply system has inherent economies of scale. We should make more use of them.

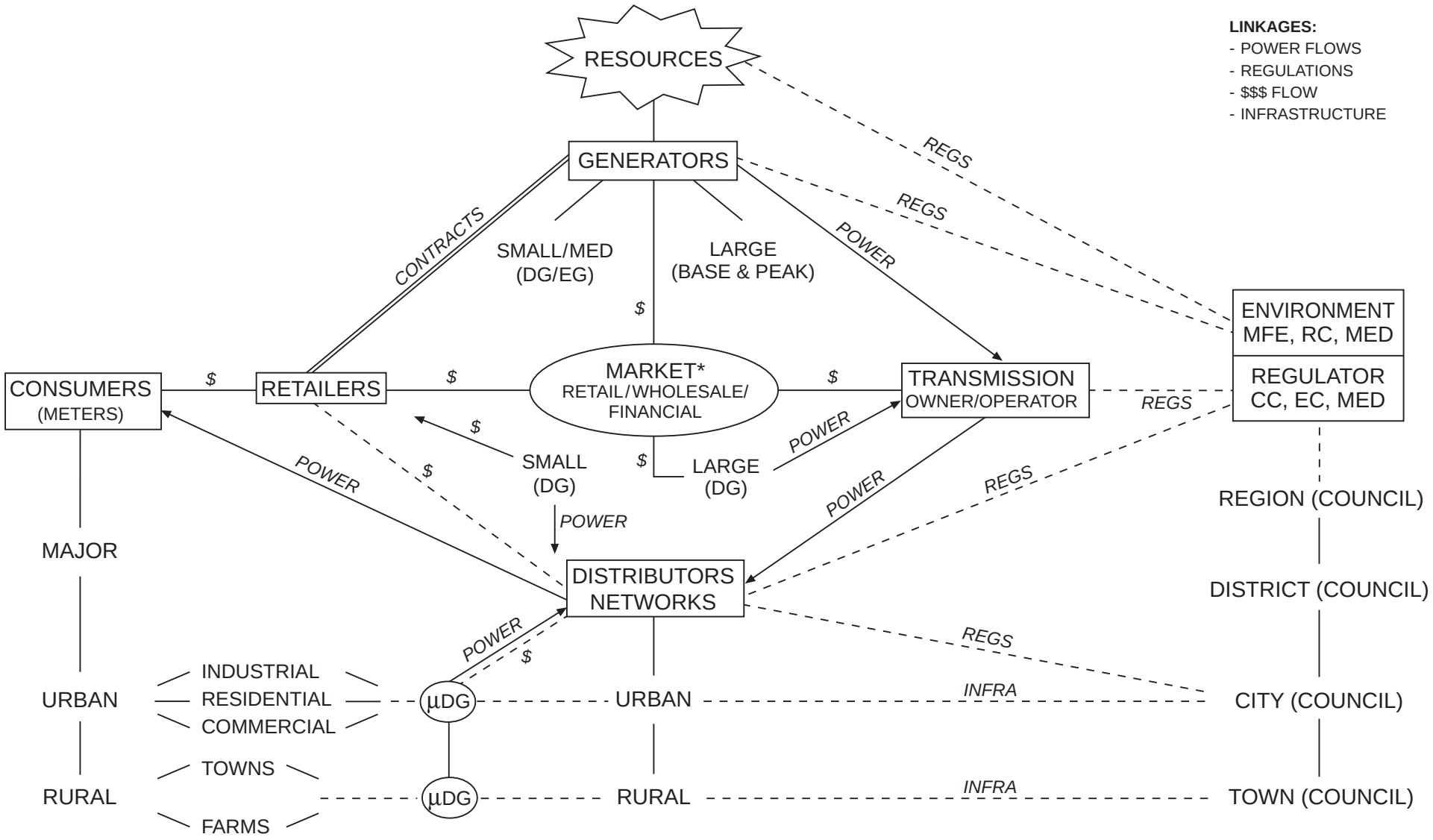
p29 "The Electricity Commission relies on the Grid Investment Test (GIT) to reflect the preferences of customers. The Electricity Commission describes the GIT as a form of cost-benefit test. However, the scope of the benefit/cost assessment in the GIT has been defined narrowly. The Electricity Commission excludes from its assessment the impact of transmission investments on non-electricity sectors of the economy, and hence the externalities and 'public good' aspects of transmission services; it excludes most non-quantifiable benefits; and it excludes most competition benefits."
The GIT is deficient as it excludes the non-quantifiable socio-communal and environmental aspects of power projects. Although the EC relies on other public bodies to address these aspects separately, it does not allow an overall/holistic approach with all relevant inputs to be applied. This means the GIT is the only criterion on which the EC bases its approval for new projects.

p31 "However, the Electricity Commission implements the SOO as if its role was to shadowplan the transmission system. The central planning approach adopted in the SOO is incompatible with competitive market processes to guide the timing and location of generator investments."
Some central planning approach is necessary as the market clearly does not provide the proper timing and location for new investments. Why would a generator invest in new plant knowing it will/should reduce the longer term energy price it can expect; as the market approach should rightly deliver? This has not happened and energy prices are unlikely to decline in the future.

Overview of Electricity Supply Industry Business Process Model **Rev: 1** **Date: 13 July 2007**



NZ ELECTRICITY SUPPLY INDUSTRY – PARTICIPANTS & LINKAGES



LINKAGES:
- POWER FLOWS
- REGULATIONS
- $$$ FLOW
- INFRASTRUCTURE

CONSTRAINTS TO BE ADDED

* Aggregate - no details