

30 March 2007

Draft Strategy Submissions  
Energy Efficiency and Conservation Authority  
PO Box 388  
Wellington

By email: [feedback@eeca.govt.nz](mailto:feedback@eeca.govt.nz)

## **SUBMISSION ON THE DRAFT NZ ENERGY EFFICIENCY AND CONSERVATION STRATEGY**

- 1 Orion New Zealand Limited (Orion) welcomes the opportunity to provide our comments on the *Draft New Zealand Energy Efficiency and Conservation Strategy – Making it happen (the Draft Strategy)*.

### **Background on Orion**

- 2 Orion owns and operates the electricity distribution network in central Canterbury between the Waimakariri and Rakaia rivers, and from the Canterbury coast to Arthur's Pass. A reliable and safe supply of electricity is of critical importance to the community we serve. Our priority is the continued cost-effective improvement of our network performance.
- 3 Our ultimate shareholders are:
  - 3.1 Christchurch City Council (89.3%); and
  - 3.2 Selwyn District Council (10.7%).
- 4 Christchurch has significant smog problems in winter months. The Government's clean air measures will reduce this problem. However, these measures will also increase demand on our network and increase the amount of electricity we deliver across it.
- 5 These factors mean that Orion is keen to assist the Government to create an energy strategy that reduces CO<sub>2</sub> emissions and improves energy efficiency in both the transport and the electricity sectors, thereby

delivering gains to New Zealand.

## **SUBMISSION RESPONSE**

- 6 The Draft Strategy outlines several questions on page 55. We answer these questions below, however we answer the last question (14) first, as we believe this question is particularly significant.

**14 Are there any big opportunities that have been overlooked in this draft?**

- 7 We believe the draft overlooks / does not focus sufficiently on three primary opportunities. We outline these opportunities below under the headings:

7.1 'price signalling';

7.2 'local generation and demand side management'; and

7.3 'information programme for consumers'.

### *Price signalling*

7.4 On page 47, under the objective of '*smart electricity networks – getting the most from our electricity sector*', the Draft Strategy states that the objective "*seeks to increase the price responsiveness of consumers, including improved demand-supply information flows...*".

7.5 Yet the following page, which sets out the means to achieve this objective, does not mention efficient pricing. We strongly believe that efficient pricing is a low-cost method which would significantly help to achieve this goal.

7.6 Efficient pricing is a difficult concept to explain in one sentence; however it can be simplified as pricing that lets customers know what it costs to deliver electricity to them at different times of the day and year. For example, we believe customers should be aware that it typically costs more to deliver electricity to them at 5pm on a winter evening than at midday on a summer day.

7.7 Price signals employing 'time of use' pricing structures encourage off-peak system use and voluntary load reduction during peak demand periods. Orion has successfully used such pricing since the

mid 1990's to signal investment cost implications to major customers (investment costs are greatest during periods of peak demand).

- 7.8 Because we inform major customers when peak demand occurs, and when the electricity industry's costs are greatest, these customers have developed innovative solutions to minimise their energy usage and maximum demand requirements.
- 7.9 This price signalling is still lacking in the residential and small business sector. Here, Orion correctly signals the investment cost implications to electricity retailers in our delivery pricing structure. However, retailers then 'rebundle' these price signals and 'average them out'. This means the end-customer does not see any price signals to show when electricity costs (including delivery costs) are high or low. At best they only see a different price for day and night.
- 7.10 We believe significant potential exists to signal the 'true costs' of electricity to customers. At the very least, this could be some form of summer/winter pricing, although ideally such pricing would be more reflective and would show customers the limited number of hours per annum when electricity costs are very high. We believe this would serve two purposes. It would:
- (a) reduce electricity usage at these high cost times; and
  - (b) increase public awareness of energy efficiency and show the public how they can benefit from conserving energy.
- 7.11 Cost-reflective pricing does not bring:
- (a) an increase in the overall price of electricity; or
  - (b) an increase in final bills to customers.

It simply results in a reallocation of charges; lower in summer and higher in winter. Consequently it is a very low 'cost-to-the-economy' means of achieving energy efficiency.

- 7.12 We note that one of the operational policies in the Draft Strategy is to increase the uptake of smart metering. However, we question the value of this uptake if efficient 'smart' pricing is not also adopted. The two need to occur in unison.
- 7.13 We recommend that the final strategy contain a policy to encourage energy retailers, electricity networks and Transpower to adopt cost-

reflective pricing. It may be necessary to consider, as a last resort, the use of regulation to implement this, however in principle we consider that the use of regulation must be kept to a minimum.

*Local generation and demand side management*

- 7.14 The following operational policy is listed under the objective of 'Smart electricity networks – getting the most from our electricity sector' on page 48 of the Draft Strategy:

*'Investigate and implement policy as required to enable investment in economic local generation and demand-side management to defer or augment investment in transmission.'*

- 7.15 We note that this is the only operational policy that is not carried forward into the 'Quick guide to the action plans'. We are concerned that this indicates that the Draft Strategy does not place as much weight on this policy as on the others listed. This would be unfortunate as this policy is critical to maintain security of supply.
- 7.16 It is essential to 'keep the lights on' during the 'transitional' period when New Zealand moves to a more energy efficient and renewable society. If blackouts occur in this period through a lack of generation or transmission capacity, then the New Zealand public will lose faith in energy efficiency/renewables and we will lose the benefit of many years of hard work by various agencies.
- 7.17 It is important therefore that economic local generation (including peak generating plant) and demand side management be encouraged. We particularly believe that local generation plant has a strong role to play, as the diversity offered by local plant (as opposed to distant large scale generation) strengthens security of supply.

*Information programme for consumers*

- 7.18 We welcome the measures in the Draft Strategy to increase energy efficiency in homes and commercial buildings.
- 7.19 We particularly highlight the proposal to:
- (a) *'develop an information programme to provide consumers with advice on how to be energy efficient in the home';* and

(b) *'launch Smart Build website to provide sustainable home building and renovation information to homeowners, occupiers and the building industry'.*

- 7.20 We are unaware of the content of the Smart Build website and we perceive a real need for consumer information about the energy efficiency measures that could be incorporated into new house plans.
- 7.21 The HERS scheme and the retrofit programme proposed in the Draft Strategy both deal with homes after they have been built. It is equally important to ensure new homes are built to the best possible standard. While the Building Code establishes certain guidelines, these are minimum guidelines. Currently it is very difficult for a new home builder to obtain independent, non-commercially biased information on additional efficiency measures to undertake beyond building code minimum standards.
- 7.22 In effect, we need to ensure that a new home builder can easily access information to assess the HERS star rating of their home, prior to building the home. Information on the measures they could undertake to improve the star rating is also important. New home builders could then be certain that their home would be highly energy efficient, prior to building. This service could be charged to the home owner or could be provided free by an agency.
- 7.23 Also, in relation to new homes, we see no reason why smart meters should not be installed in all new homes. This technology is readily available and it seems short-sighted not to ensure that new homes are constructed with this technology in place.

**1 Within each sector, do we have the right mix of actions?**

- 8 Orion considers the mix of actions to be broadly correct, subject to the discussion above about giving greater priority to efficient pricing, local generation and more information for new builds.

**2 Do you have suggestions for prioritising actions within each sector?**

- 9 Orion considers that prioritising actions is a key part of the strategy. It is essential that the strategy prioritise actions across all sectors, not just within each sector.

- 10 Actions must be prioritised to achieve the greatest increase in energy efficiency and conservation over time, at least cost to society as a whole.
- 11 We are concerned about the lack of detail in relation to the cost benefit of each of the proposed actions. The report does provides some detail on energy savings and green house gas reductions, together with a present value of cumulative savings by objective, but not by individual actions. In several cases even this detail is yet to be evaluated (e.g. increased energy productivity in industry and more efficient fuel use) or does not appear to be included.

**3 Have we assigned accountability for actions to the right agencies? If not, who should be responsible for those actions?**

- 12 To the extent of our knowledge of the various Government departments/agencies assigned responsibility, Orion considers the responsibilities are correctly assigned.

**4 Do you consider that the proposed approach towards setting targets and performance indicators, as described on page 63, is appropriate? If not, why?**

- 13 Orion agrees that:

*“Targets serve multiple purposes; the primary purpose is to set the direction and intensity of change in the relevant sectors so that outcomes can be achieved (e.g. reduced CO2 emissions). Targets also enhance programme credibility and accountability by allowing external stakeholders to make informed judgments about programme achievements, identifying the key drivers and ‘uncertainties’ affecting target outcomes, and providing government with information for further initiatives.”*

- 14 The Draft Strategy proposes economy-wide targets and sector-specific targets; however in some cases sectors have multiple obligations. In these instances we consider it necessary to set targets at the obligation level.
- 15 We also note that page 63 proposes indicators to measure progress regarding ‘smarter commercial buildings’. We are unable to see how such indicators will work for commercial buildings, other than at a regional/economy-wide level, and we are unsure if this is what the Draft Strategy intends. Will these targets be applied at an individual building level, and possibly regulated as minimum standards that a building must achieve? Indicators such as emissions per employee, or floor area, could

vary widely depending on the nature of the business (e.g compare warehousing to a call centre).

16 As a starting point, all indicators should be easily measurable and reliable and should not involve significant cost of measurement for businesses.

**5 Do you agree with how progress towards meeting targets and progress indicators will be monitored?**

17 No comment.

**6 How can local government and non-government agencies work with central government to improve the uptake of energy efficiency and renewable energy? What is needed to enable this to happen?**

18 No comment.

**7 What contribution do you think non-government organisations and business organisations can make to improve energy efficiency and enhance the uptake of renewables?**

19 Businesses can hugely improve energy efficiency in New Zealand through both the take-up and development of efficiency ideas. However, given businesses' necessary focus on the profit line, financial benefits must be available if they are to take large energy efficiency steps. Therefore, the 'pricing' must be right and benefits must be allowed to be captured and not regulated away.

**8 Have we got the right emphasis on improving technical efficiency versus influencing and modifying New Zealanders' energy purchase and use behaviours?**

20 No comment.

**9 What role do you see, if any, for energy conserving behaviour to reduce energy use and carbon emissions? Should such behaviour be encouraged:**

- all the time?
- to reduce peak electricity demand?

- **to provide greater electricity security in dry years?**

- **if oil supplies are disrupted?**

21 We strongly believe that energy conserving behaviour should be encouraged at all times. However, given the extra benefit of electricity efficiency at peak electrical demand times, as opposed to the single benefit conferred at non-peak times, it is logical to give extra emphasis to efforts to reduce energy use at peak electricity demand times.

22 In this regard we consider the Draft Strategy fails to give sufficient weight to the opportunity for 'smart pricing' (efficient pricing) within the electricity industry. See our answer above to question 14.

**10 Limited targets are currently proposed for the transport sector. There is an opportunity to include more specific transport targets that apply at a local level, e.g. increased modal share of public transport. What transport targets would be appropriate to include in the final strategy?**

23 No comment.

**11 Do you think there is an opportunity to increase the energy efficiency of freight movement? If so, how do you think this could best be achieved?**

24 No comment.

**12 Do you think we need one renewable energy target or specific sector targets? What measures are needed to achieve a target or targets?**

25 See our answer to question four above.

**13 Are there other targets we should be using for the electricity sector, e.g. a low-carbon electricity system target?**

26 We believe three additional targets could be established for the electricity sector. Such targets would be achievable, readily measurement and relatively low cost to achieve. These targets are:

26.1 X% of residential buildings receive a 'smart pricing signal';

26.2 Y% of commercial buildings receive a 'smart pricing signal'; and

26.3 Z% of new buildings have 'smart metering' installed.

27 Thank you for the opportunity to make this submission. If you have any questions relating to the submission, please contact Stephen Godfrey (Energy Projects Manager) DDI 03 363 9862 email [stephen.godfrey@oriongroup.co.nz](mailto:stephen.godfrey@oriongroup.co.nz).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Roger Sutton', with a stylized flourish at the end.

Roger Sutton  
**Chief Executive Officer**