



STAFF REPORT

TO: Environment & Planning Committee

FROM: Neil Jackson, Policy Planner

REFERENCE: R424

SUBJECT: **ENERGY AND CLIMATE CHANGE: COUNCIL SUBMISSION ON GOVERNMENT DISCUSSION DOCUMENTS - EP07/03/12 - Report**
Prepared for 28 March 2007 Meeting

1. PURPOSE OF THE REPORT

The report recommends submissions by Council in response to central government discussion papers on policy options relating to Energy and Climate Change.

2. BACKGROUND

In December 2006, the government released a set of discussion documents for consultation. Submissions are required by 30 March 2007. The documents are:

- Powering our Future: Draft New Zealand Energy Strategy to 2050.
- Action Plan to maximise energy efficiency and renewable energy in New Zealand: Draft New Zealand Energy and Conservation Strategy.
- Sustainable Land Management and Climate Change: Options for a plan of action.
- Transitional measures: options to move towards low emissions electricity and stationary energy supply and to facilitate a transition to greenhouse gas pricing in the future.
- Reduce Greenhouse Gas Emissions in New Zealand Post 2012.

The proposed submissions relate to the first three documents.

3. FORM OF SUBMISSIONS

The form of the submissions is to question assumptions behind some of the government's policy proposals, rather than to seek specific changes to policy statements.

4. RECOMMENDATION

That Council endorse or amend the proposed submissions on the discussion documents:

- Draft New Zealand Energy Strategy to 2050;
- Draft New Zealand Energy and Conservation Strategy;
- Sustainable Land Management and Climate Change;

for submission to the relevant central government agencies.

Neil Jackson
Policy Planner

SUBMISSION FROM TASMAN DISTRICT COUNCIL ON THE “DRAFT NZ ENERGY STRATEGY” – DECEMBER 2006

1. TIME-SCALE

The time-scale of the strategy needs to be clarified. The draft states it is a strategy to 2050. Most of the projections in the document stop at 2030. Little is said about the period 2030 – 2050.

Options are to shrink the time-scale to 2030; or to explain why so little is said about the period 2030 – 2050.

The Council recommends that Government provide a projected timeframe and associated programme of action for energy sustainability to run at least to 2050

2. RELATIONSHIP WITH OTHER GOVERNMENT POLICY

The strategy emphasises the need for NZ to find a greater proportion of energy from renewable sources. It states there is likely to be enough energy from renewable sources to meet demand for the next 10 – 20 years *while still meeting appropriate environmental standards*.

The implication is that sometime during the next 10 – 20 years, increased use of renewable energy will be possible only with some compromise of current environmental standards.

Logic suggests that in 10 – 20 years, non-renewable sources of energy will be further depleted; more expensive; or with reduced security of supply to New Zealand than now, making greater use of renewable resources more imperative.

The strategy is for 44 years from 2006. It needs to state government policy for dealing with this conflict between the increasing need for energy from renewable sources, and other environmental standards. The conflict is likely to escalate over the duration of the strategy – and beyond 2050.

For example, utilisation of wind, hydro and marine energy sources are likely to conflict with natural character and landscape values which the Resource Management Act says are matters of national importance. It may also conflict with conservation values and water abstractive values in relation to hydropower. Government needs to give direction on how these conflicts are to be resolved. Resolution will be needed for all significant conflict areas around the regions, including where key renewable resource values coincide with key environmental values likely to be affected.

3. TRANSPORT ENERGY

The strategy advocates the developing use of biofuels and electric vehicles for road transport. The strategy refers to the draft NEECS for a programme of action. By 2030 the strategy projects that biofuels will be responsible for the most CO2 equivalent reduction in emissions than any of the transport energy sources available through to that horizon, even though transport emission levels are projected to continue rising. This level of fuel and associated transport technology, infrastructure

and land conversion will require much more significant approaches than the tiny contribution of biofuels to our transport fuel (2.25%) foreshadowed by 2012. This issue is picked up in the Council's submission on the draft NEECS.

The strategy advocates increasing use of rail transport. It says nothing about increased electrification of rail. If this option has been discarded, the strategy should say why. If it hasn't been considered, it should be brought into the discussion.

4. ENERGY SOURCE TYPE

The strategy postulates hydro as increasing from 12% of total primary energy supply in 2005, to 15% in 2030. Geothermal increases from 12% to 18%. There is no projection of the quantum of total primary energy supply for 2030.

Assuming the 2030 total energy supply to be 20% more than in 2005, the hydro output increases to 50% more than the 2005 level, and geothermal increases to 80% more.

The strategy needs to say how and where this level of increased hydro and geothermal is to be achieved over the next 23 years. These figures are significant. Our comments above on conflicts between renewable energy development and environmental standards are especially relevant here. Region by region, the national level tradeoffs over the horizon to and beyond 2030 need to be understood by government, regardless of the form of management of hydro and geothermal energy development.

5. INTERNALISED EMISSIONS COSTS V INTERNATIONAL COMPETITIVENESS

Internalised costs do not rest with the cost generator. They are passed on to the next purchaser of the product. There will be tension between what is ideologically 'right' from national and international environmental perspectives, and what is ideologically 'best' from an international trading perspective.

The strategy needs to address this tension.

6. ENERGY SUPPLIER ROLES

The strategy suggests energy suppliers should have an obligation to promote energy efficiency to their customers.

The strategy needs to acknowledge the conflict of interest this would create under the current market ethos. Suppliers have the goal of selling as much as possible for the best possible price. It will be difficult for suppliers to reconcile this with a role of persuading their clients to use less.

This conflict of interest represents a major issue that the strategy does not address: is the bundle of issues associated with energy and climate change able to be optimally managed by market-dominated means? What level of government intervention is needed to achieve preferred outcomes? Whose preferred outcomes are these?

7. CHOICE, BEHAVIOUR

Energy efficiency in vehicles, urban design, transport networks and systems, appliances, homes and work-places, has potential for a reduction in energy use and in greenhouse gas emissions. But these are not assured outcomes.

These potential reductions depend on the marginal purchasing and behaviour choices of everyone, whether as individuals, businesses, institutions, or government departments. The actions of some, in particular government departments, can limit the choices available to others. And “choices” depend on the form of social process that is available: market process, regulatory process or some combination. What is unstated in the strategy is that the existing pattern of energy consumption in both onsite and transport energy uses, as driven by the national human settlement and trade patterns, has great momentum. All the energy efficiency choices raised in the strategy are possible only as marginal changes to the existing pattern. For any discernable reduction in growth of GHG emitting energy demand, these marginal changes need to be significant in their contribution to this reduction. Some of these forms of efficiency improvement have good potential, others are more constrained. The strategy needs to understand this range of potential emission reduction contribution through efficiency, and focus on those with greatest potential, first.

The strategy emphasises that energy efficiency allows people to do the same activities for less energy and emissions. The strategy does not give sufficient acknowledgement to the fact that energy efficiency also allows people to increase their activity levels while holding their energy consumption and emissions levels at their pre-efficiency levels.

A significant shift from the prevailing consumer-society attitude will be needed to realise the benefits claimed for energy efficiency by the strategy. Education, or social engineering, needs to be an explicit part of the strategy for those benefits to be achieved to a significant degree.

The strategy needs to address much more explicitly, this matter of choice.

8. PRIVATE ENTERPRISE ENERGY SUPPLY

Do all energy supply activities operate under the same mix of market practices and government intervention? Clearly, no. Do prospective private enterprise suppliers of energy from different resource types (eg. hydro, coal, oil, wind) face an equal set of opportunities and barriers? Again, clearly no.

The strategy should explain and justify these differences.

9. ENERGY DISTRIBUTION SYSTEMS

Do all energy suppliers have equal access to energy distribution systems? Roads and railway tracks are owned by the government. Airspace and navigable waters are in the public domain. Does the strategy need to explain and justify ownership of gas or oil pipelines, or electricity transmission lines, and constraints on access to them by other or new energy suppliers?

10. BUSINESS AS USUAL?

Business as usual? Or: you can't make an omelette without breaking eggs?

The strategy should identify those aspects of the energy, emissions and environment bundle of issues that can continue with business as usual, and those where intervention is needed to achieve re-defined or new outcomes.

12. EMISSIONS TRADING

Emissions trading places a value on, and creates a market in, emissions.

Who will purchase emissions rights with the intention of extinguishing them? Especially if the value of those rights increases in time.

Who, other than government, purchases fishing quota at a market value, with the intention of retiring it?

How does emissions trading ensure a reduction in emissions? Only caps placed on such markets can begin the control process. Emissions caps can sink only with clear government regulation. This is far from explicit in the strategy's discussion of emissions trading.

SUBMISSION FROM TASMAN DISTRICT COUNCIL ON THE “DRAFT NZ ENERGY EFFICIENCY AND CONSERVATION STRATEGY” – DECEMBER 2006 (NEECS)

1. The strategy states:

“For the foreseeable future, it is preferable that all new electricity generation is renewable, except to the extent necessary to maintain security of supply.”

There is a logical problem with the concept that security of supply will be delivered by non-renewables.

The strategy needs to state how far into the future this dependence on non-renewables for security of supply can be sustained. And what the implications are beyond that.

2. Taxing vehicles according to emissions levels is already done in the United Kingdom. Has the UK system been considered and rejected? Is New Zealand re-inventing a wheel already made elsewhere?
3. A shipping strategy is proposed. Consideration should be given to an overall freight strategy instead of just a shipping strategy.
4. The strategy refers to “equity in freight costs across road, rail and shipping”. This needs explanation. Does it mean subsidies for one or other sector?
5. There is an intention to “incorporate the social and environmental costs of the transport system”.

The strategy needs to explain how this will be achieved without undermining international trade competitiveness with countries that do not adopt similar strategies.

6. The strategy advocates: “town and city design to reduce transport needs and environmental impact”.

Land use, urban design, and settlement strategies all create opportunities for transport efficiencies, but the up-take of those efficiencies is dependent on individual choices and behaviours. The strategy needs to acknowledge this and give more consideration to how theoretical efficiencies can be realised (or thwarted) in practice.

Much of current inefficiency results from historical decisions on settlement forms and networks, and the continuing momentum of present-day decisions. Within this pattern of driven demand, how people exercise choice; for example, about place of home, place of work, mode of transport, and recreational activities, can all aggravate energy inefficiency and so additional demand.

The idea of “increased use of active modes for short trips” is an option primarily for single-purpose, small-scale trips. It is less practical for combining work and after-hours activities, or supermarket shopping. It is also dependent on choices made about place of residence, place of work, and place of recreation or entertainment. Have individuals made these choices with ease of access as a dominant factor or not?

Urban design can facilitate, but does not necessarily ensure, energy-efficient behaviour, especially as both interventions and social choices operate at the margin of demand growth, and the current momentum has to continue into the future until such efficiency changes influence the rate of demand increase.

The discussion on “living and working” is focussed on urban issues. Little is said about energy efficiency for rural settlement. Nor about energy costs imposed on rural people and communities by government policies for relatively centralised service delivery.

Non-urban settlement, work-place and recreational travel are significant energy consuming activities, despite the overwhelming proportion of the population in urban areas. Much travel demand results from such lifestyle choices, which probably drive energy demand proportionately far beyond their numeric contribution to transport energy consumption.

The strategy needs to realistically assess how the potential energy needs and environmental impacts of transport can be reduced in the current “enabling” rather than “direct and control” ethos that applies to development opportunities.

7. “Customer energy efficiency responsibilities of energy suppliers”. The inherent conflict of interest needs to be acknowledged. It is not logical to expect a profit-driven supplier to promote reduced use of the product.

The strategy needs to review not just how energy efficiencies can be achieved, but how overall demand can be dampened.

8. The strategy refers to:

“Deferring future investment in new electricity infrastructure.”

Is this compatible with also “reducing price volatility” and “improving system reliability”?

These relationships need to be explained further.

9. The strategy advocates: “Begin fast tracking marine energy technology by 2007 to 2008.” What form and degree of fast tracking are envisaged? How are other values taken into account in this proposal?

The strategy needs to explain what processes or values will be bypassed by this fast-tracking.

10. “Government leading by example”.

Is energy efficiency a factor in the centralisation of government-funded services such as health and education? Does that include efficiency for clients, as well as for the government agencies that deliver these services?

11. Part of the strategy is: “to challenge and stretch New Zealanders to achieve”.

This sounds like a classroom scene. What is the default option if the majority don't want to be challenged and stretched?

12. The strategy has a vision of healthy homes, which are more comfortable with less energy. But how does the strategy counter the option of greater luxury for the same energy?
13. The strategy advocates efficient freight movement through increased use of rail and coastal shipping.

The energy efficiency of rail and shipping over road, while goods are in transit, is acknowledged. Has the strategy taken into account the door-to-door energy budget in this comparison: including the energy used in the pick-up, loading, unloading and delivery of goods between point of origin and final destination?

14. Despite the strategy's preference for electric road vehicles, there is nothing said about further electrification of rail.
15. And as with the draft NZES, the action programme for moving towards biofuels growth in contribution to emissions reduction is tiny and appears to assume that market preferences will be sufficient to drive what biofuels contribution may be prudent, alongside the risks associated with fossil carbon sources of energy. There are significant implications for progressive conversion of:

- Transport power unit technology,
- Biofuels manufacturing and distribution infrastructure, and
- Land use conversion;

to significantly shift the proportion of biofuels in the transport sector of energy demand. The Council considers that a far greater deliberate programme of action than is proposed, of market support and regional level planning for development possibilities that may become imperatives, will be needed.

16. No links have been made in this strategy or the NZES with the issue looked at in the MAF sustainable land management & climate change discussion paper of carbon sequestration and emission through afforestation and deforestation. Biofuels development can drive a range of land use conversion possibilities, which are linked to some extent with the fuel types that may be worthwhile. But the value of the present national plantation forest estate in advancing the future biofuels development pathway is not really recognised in any of the discussion documents.

17. There is reference to “increased passenger kilometres by non-motorised modes”.

It is not at all clear what this means. Carrying an infant in a back-pack soon becomes impractical, as does taking a passenger on a bicycle. Row-boats and yachts are not an option for many. Statements like this do little for the credibility of the document.

18. “New Zealand has abundant renewable energy resource and we know it is sufficient to enable a fully renewable electricity system.”

The strategy needs to explain whether this statement takes into account obtaining permission to utilise the resources, or whether it is just a statement of the existence of resources without considering barriers to access and utilisation?

SUBMISSION FROM TASMAN DISTRICT COUNCIL ON “SUSTAINABLE LAND MANAGEMENT AND CLIMATE CHANGE” – DECEMBER 2006

1. EMISSIONS REDUCTIONS / MARKETS

The document needs to distinguish between methods that will guarantee a reduction in emissions, and those which may or may not result in reduction.

For example, how does a tradeable permit regime guarantee a reduction in emissions? Who will buy permits for the purpose of retiring or extinguishing them?

This option seems to be more about creating a market for a commodity of increasing value, than about achieving a targeted and measurable reduction in emissions.

A market response is more likely to be: “I’ve paid for it, I’ll use it”, than purchase to extinguish.

If an emissions cap and trade regime is to be considered for introduction, then an examination of the implications of a sinking cap for both government and emitters is needed.

At a fundamental level, the document assumes that all carbon emissions are bads to be avoided. But the net introduction of carbon by combustion of fossil carbon should be distinguished from the recycling of the present carbon pool by afforestation and either temporary or permanent deforestation. The failure of international process to make this distinction through the Kyoto Protocol means relatively significant burdens are to fall on forest and farming activities in relation to present transport fuel consumption of fossil carbon. In other words, carbon that is recycled through land use activities involving biomass production, and associated emissions, is a mix of non-fossil and fossil carbon; whereas transport fuel use is exclusively fossil carbon net introduction to the atmosphere. The Council does not accept that the biomass production industries should be burdened with controls simply on the basis of carbon emissions generally.

2. RESOURCE MANAGEMENT ACT MEASURES

The suitability of RMA measures depends on what level of prescription or discretion government envisages in relation to energy and climate change outcomes.

The RMA contains a set of participatory “community self-determination” processes. Consultation before setting policies and rules is good and expected practice. Those policies and rules are then open to public submissions. Both consultation, and the hearing of submissions, are to be conducted with no element of pre-determination.

All significant decision steps in the process are contestable.

If government requires specific national outcomes to be achieved, the RMA is not appropriate – its outcomes are not certain, and are driven by local facts and community preferences.

3. VOLUNTARY REPORTING OF FARM EMISSIONS

What does this achieve? It may achieve greater awareness, individually and collectively, of emissions among those farmers who participate. It may allow extrapolation of data to account for non-participating farming operations. But what does the information lead to?

Why would farmers participate? What is the benefit or incentive for them; or penalty for not participating?

4. CHARGE FOR DEFORESTATION

This is assumed to be a disincentive to permanently ceasing the sequestration effect of planted forests, as opposed to temporary removal through harvest, followed by replanting. But such a charge does not account for any emissions consequences of the following land use, and these need to be evenly addressed across all land use sectors.

5. TAX OR CHARGE ON NITROGEN FERTILISER.

What evidence is there that successive taxes on commodities such as fuel, alcohol and tobacco, have had any measurable effect on demand and consumption?

Is such a tax likely to be just another charge that is recovered from down-stream sales of farm products?

6. OFFSETS

This option includes the statement:

“These reductions, called “offsets”, could include a range of activities such as planting trees, using nitrification inhibitors or improving energy efficiency of farm operations, thereby reducing emissions from electricity generation.”

It is not clear how measures to offset emissions from some on-site farm operations can be linked to reducing emissions from electricity generation.

The document needs to be clearer about what are emissions-producing activities, what are emissions-reducing or offsetting activities, and what linkages are made between them.

The offset option also needs a robust mechanism to ensure that any offset endures, at least for as long as the activity that it counteracts continues.

7. CHARGE WHERE DEFORESTED LAND IS USED FOR AGRICULTURE

Council suggests that any charge for deforestation be de-coupled from any charge (or credit) for the subsequent land use.

The option implies a need for all land uses to be classified with a carbon emissions rating, with an associated scale of charges or credits. It also needs a continually updated inventory of land use changes. Both imply a significant administrative effort.

It is likely to need a threshold land unit size, or emissions quantity, to trigger the system.

8. DEFORESTATION / WEED CONTROL

The document suggests that cutting trees for weed control is deforestation and should therefore be liable for emissions charges. This suggestion misses the obvious scale limitations of this activity. "Weed control" implies successive cut-down and regrowth cycles, or emissions release and absorption cycles. Over multiple cycles, the net emissions are likely to be neutral and a charge unwarranted.

9. APPROVAL FOR DEFORESTATION

Deforestation option 3 proposes a requirement for approval for non-Kyoto forest to be permanently removed. The intent is to ensure that total deforestation remains within prescribed limits.

The document does not say what criteria would be applied in deciding whether to grant or withhold approval, nor about choosing between competing applications. These are left as hanging issues.

While administrative efficiency is claimed for this option, this would depend on what opportunities are available for contesting decisions.