

Senate Select Committee on Fuel and Energy

Terms of Reference

That a select committee, to be known as the Select Committee on Fuel and Energy, be established to inquire into and report by **21 October 2009** on:

a) the impact of higher fuel and energy prices on:

families,

small business,

rural and regional Australia,

grocery prices, and

key industries, including but not limited to tourism and transport;

Higher prices are a signal. Fuels & energy sourced from non- renewable resources are finite, not infinite. Rising prices in this case, are part of a market driven warning technique to communicate future scarcity. These fuels and energy sources need to be carefully managed.

There are renewable alternatives and other vehicle design strategies such as purchasing quality tyres that are inflated to a suitable pressure to reduce the demand on petrol. See, EU parliament website. (1.)

As alternatives, electric, hydrogen fuel cell car designs are being produced. There is a need to strategically conserve the current non- renewable resource, petrol/ diesel for the transportation of goods across Australia in trucks and for buses, ambulances and fire engines.

Certain supermarkets provide fuel offers to reduce costs for families and small businesses. Farmers that sell direct to the public through an order on line initiative can reduce costs for the public as well.

If able to ride a bike to work then this choice has health benefits not only for the individual but for the health system and atmosphere.

Please consider that IATA, (5.) the International Air Transport Association is investigating fuel- efficient practices. The quick link, IATA and the

environment, lists alternative fuels. Bio fuels are currently being developed and trialed.

1. www.europarl.europa.eu/news/public/focus_page/008-57107-187-07-28-901-20090612FCS57088-06-07-2009=2009/default_en.htm accessed 14 July 2009
2. www.garnautreview.org.au, all reports, accessed 13th July 2009,
3. www.hrea.org.au/, wind park project, accessed 13th July 2009
4. www.goingcarbonneutral.co.uk/, accessed 13 July 2009.
5. www.iata.org/ IATA and the environment, accessed 13 July 2009
6. www.houseenergyrating.com/process/vic accessed 14 July 2009

Recommendations:

- Provide clear policies that promote a secure economic framework for creative fuel and energy solutions, particularly with regard to rural and regional projects as well as city projects.
- Consider labelling of tyres to help reduce fuel bills and Co2 emissions as recommended in the Energy Efficiency Package supported by the European Parliament.
- Continue to label household appliances through the energy efficiency star rating system introduced by former Senator Lyn Allison.
- Nationally encourage all new buildings to meet the 5 star energy efficiency rating or higher. (6)
- Continue to encourage local government initiatives to develop safe bike paths and required resources for electric and hydrogen fuel cell vehicles.

b) the role and activities of the Petrol Commissioner, including whether the Petrol Commissioner reduces the price of petroleum;

This role has the potential to encourage the strategic management of a non-

renewable resource by communicating when the price of petroleum has become distorted.

The price of petroleum will rise, why not let everyone know, over what time frame and why?

Recommendations:

- The Petrol Commissioner communicates distorted prices for fossil fuels.
- As an independent source of information for the Australian Government, the petrol commissioner or another independent authority prepares a monthly bulletin containing the cost of crude oil, natural gas, LNG and any other non- renewable resources and the anticipated consumption world- wide. Included in this quarterly report would be the consumption of alternative renewable resources of energy. Policy adjustments can then match the changing circumstances.
- That alternative energy and fuels are promoted and are priced to encourage market competition and uptake without being ridiculously high and distorted.

c) the operation of the domestic energy markets, and petroleum, diesel and gas markets, including the fostering of maximum competition and provision of consumer information;

There has been an underestimation of energy requirements across the world. In response, energy efficient solutions are emerging. Here in Australia the voluntary “greenpower” program began in 2006. Householders can choose to have their energy requirements sourced from renewable sources.

Some natural gas reserves are diminishing and pipelines from other countries are being constructed to continue winter heating supplies, elsewhere. While

biomass is growing it acts as a natural carbon sink. But it can provide the fuel for biomass boilers that can generate heat.

Overseas the EU is currently considering solar thermal designs producing 10+Mw to provide energy locally that reduces the loss of energy along high-tension wires of approximately 5% to distant towns and cities in Australia.

Another innovative project includes marine turbines relying on tidal drifts, see Orecon, UK (1.)

Consider the design of Vertigro's, USA biodiesel facility. This facility grows algae vertically and efficiently creating an algal oil that can be used in diesel powered vehicles.

Modern wind turbines with rotors upwind are now quieter, producing 2 MW each. Surely, there are locations on the Australian mainland that would be suitable and not in the flight path of aviation companies. Co-operation with aviation companies has been successfully mitigated in Britain by BWEA staff.

The added benefit of progressive, renewable energy projects is that they can deliver a lower emissions trading cost. That is black certificate costs.

Nicholas Stern also makes the point, "that subsidies when applied to fossil fuels ... discourage the development of and investment in low carbon alternatives, including investment in carbon capture and storage." (Stern 2007, p. 313)(2.)

Australia is well placed to develop carbon capture and storage technology. See Emma Alberici's ABC news article titled "Aust 'should be leading world' in carbon capture and storage" posted on Fri Jan 30, 2009 (3)

1. www.orecon.com/en/news/
2. Stern, N 2007, *The economics of climate change, the stern review* UK, Cambridge University Press
3. Alberici, E 2009, 'Aust 'should be leading world' in carbon capture and storage" ABC news online
www.abc.net.au/news/stories/2009/01/30/2478075.htm accessed 16 July 2009

Recommendations:

- Energy efficient, renewable sources require secure investment and government policies that ensure the development of innovative solar, wind, ocean energy, geo- thermal and biomass technologies.
- If 100% 'green power' customers install other renewable energy technologies then an independent energy authority could supply an information sheet as to how much energy they are feeding back into the renewable energy grid.
- Reward this energy customer with a Gross feed in tariff rather than a net feed in tariff.
- Equally, reward a manufacturer that produces 7 - 8 star appliances, where 3 stars are the minimum, with white energy efficient certificates equal to the value of the energy saved.
- If planning new renewable energy plants then minimize risk by finding locations that are defensible from severe weather events e.g. bushfires, floods, rising sea levels. Locations may also need to be close to energy intensive industries.
- Research and development must continue into innovative energy efficient solutions and be backed by government recurrent funding.

- Continue to encourage universities to provide information for consumers through public lectures, online and through printed publications.
- Encourage universities to provide innovative programs of study in energy specific degrees with particular focus on legislation on how future projects are built and any International agreements that impact on energy supply. See Aberdeen University www.abdn.ac.uk/prospectus/pgrad/study/taught.php?code=renewables accessed 16 July 2009

d) the impact of an emissions trading scheme on the fuel and energy industry, including but not limited to:
prices,
employment in the fuel and energy industries, and any related adverse impacts on regional centres reliant on these industries,
domestic energy supply, and
future investment in fuel and energy infrastructure;

Please refer to the Senate Economics Report May 2008 detailing the National Market Driven Energy Efficiency Target Bill 2007 [2008] and Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008 introduced by former, Senator, Lyn Allison.

A starting point would be pages ten and eleven. Read on under “Main findings,” where the committee received evidence questioning the timing and design of the energy- efficiency trading scheme proposed in the Bill. Support for the Bill comes from Professor Alan Pears who acknowledges that energy efficiency allows for a “higher level of output, using fewer inputs”. Continue to pages 50 and 51 where support for Renewable Energy Power Percentage Bill 2008 refers to the downside of “stalled investment”. Then consider the cost impacts described by Professor Pears on page 61. Access can be gained

at 'completed inquiries' -

www.aph.gov.au/senate/committee/economics_ctte/index.htm

If these Bills had been passed the cost of the ETS scheme would be lower because an Energy Efficiency scheme would be running parallel with the Emissions Trading Scheme. Energy efficiency complements a Mandatory Renewable Energy Target.

ANU researchers as part of Anutech Pty Ltd (1991) and CSIRO Scientists belonging to the Division of Atmospheric Research 1989 (2), and more recently the work of IPCC scientists www.ipcc.ch/, all refer to the greenhouse effect and greenhouse gases.

The British High Commissioner, the Right Honourable, Helen Liddell wrote in the Age recently "Britain has the world's first long term legal framework for tackling climate change - the Climate Change Act of 2008." (Liddell 2009) (3.)

1. Senate Committee Report, Economics –National Market Driven Energy Efficiency Target Bill 2007 [2008] and Renewable Energy Legislation Amendment (Renewable Power Percentage) Bill 2008 (Senator Annette Hurley, Chair) Senate printing Unit, Parliament House, Canberra.
- www.aph.gov.au/senate/committee/economics_ctte/index.htm
accessed 10 July 2009
2. Bouma, W & Pearman, G 1989, "Greenhouse Gases and the Greenhouse Effect" Chemistry in Australia – August 1989, pp. 268-271
3. Liddell, H 2009, "Greener can mean opportunity; after all, UK is OK", The Age, 30 June, p. 8

Recommendations:

Please reconsider the need for (as per the Bills mentioned):

- Gross feed in tariffs for householders to be able to create incentives to install solar panels
- MRET = a National Mandatory Renewable Energy Target of at least 20% by 2020 and a monitoring system that lets us all know if we are reaching it
- ETS = a black certificate emissions trading scheme that encourages awareness about the level of Co2 in the atmosphere. Research into stabilization needs to continue in cooperation with other countries.
- EE = an energy efficiency white certificate trading scheme that brings about a reduction in the cost of meeting the emissions trading cap because the energy saved reduces the cost of the permit.
- Carbon sinks require a certain level of Co2 in the atmosphere to perform well. Research needs to be ongoing into how well plants survive as levels of Co2 stabilize to 450 ppm.

e) The existing set of federal and state government regulatory powers as they relate to fuel and energy products;

Recommend:

- Phase out net feed in tariffs for solar installations in favour of gross feed in tariffs.

f) taxation arrangements on fuel and energy products including:

**Commonwealth excise,
the goods and services tax, and
new state and federal taxes;**

Recommend:

- To offset any possible future, inner city congestion tax and any increases in parking costs, then consider removing GST off train travel.

• **g) the role of alternative sources of energy to coal and alternative fuels to petroleum and diesel, including but not limited to: LPG, LNG, CNG, gas to liquids, coal to liquids, electricity and bio-fuels such as, but not limited to, ethanol;**

Consider, Jatropha, a potential biofuel that can be a natural fence for crops, grows in poor soils and reclaims wasteland. Harvested as a bio fuel and combined in equal amounts with kerosene that is %50, it can power a Boeing 747-400 engine. This is one example of many that may be certified as early as 2011. Research and development, at IATA is committed to offer net carbon reductions for the [bio fuels] life cycle. There are other examples on the IATA website.

Recommendations:

- Please consider renewable energy sources as possibly the most energy efficient sources available to provide supplies that are indeed environmentally sustainable.
- An energy future that includes solar power designs, wind, ocean tidal drifts, geo thermal and biomass projects would indeed fit the sustainable profile.
- By all means include other technologies that attempt to reduce emissions and help to conserve our reserves of non- renewable resources.

h) domestic energy supply and the domestic oil/gas exploration and refinement industry, with particular reference to:

the impact of Commonwealth, state and local government regulations on these industries, increasing domestic oil/gas exploration and refinement activities, with a view to reducing Australia's reliance on imported oil, other tax incentives, and securing Australia's future domestic energy supply;

Recommendations

- Consider investment equity for oil/gas exploration and renewables.
- Any dividends from the ETS go towards helping the renewable energy sector.

i) the impact of higher petroleum, diesel and gas prices on public transport systems, including the adequacy of public transport infrastructure and record of public transport investment by state governments; and any related matters.

Recommendations:

- To offset any possible future, inner city congestion tax and any increases in parking costs, then consider removing GST off train travel.
- Students of primary, secondary or university age require significant reductions in train fares.
- Regarding related matters, the OH & S of motor mechanics who service hybrid and electric vehicles, needs to be a priority.