

To:

The Energy White Paper Reference Panel

From:

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SkyNRG – Response to the Australian Government’s Issues Paper to inform the Energy White Paper

SkyNRG is a company headquartered in the Netherlands but with a global vision to support the development of the sustainable aviation fuels market. SkyNRG is the global market leader for sustainable aviation fuel, supplying more than 20 airlines across 5 continents.

Australia is a key market for SkyNRG as it has a range of natural advantages that we strongly believe can assist in the development of a domestic sustainable aviation fuels industry. These include:

- A significant landmass with considerable established and mature agricultural sectors;
- A supportive domestic aviation sector;
- Strong domestic research, scientific and engineering capabilities; and
- A significant reliance in imported transport fuels.

To try and leverage these advantages SkyNRG is already working closely with a range of major Australian companies including Qantas, Virgin Australia and Brisbane Airport to establish viable, affordable and sustainable supply chains for renewable aviation fuel.

Carefully considered energy policy will be critical to supporting the development of this important new industry¹. For this reason SkyNRG welcomes the opportunity to comment on the Australian Government’s Issues Paper to inform the preparation of the Energy White Paper (the Issues Paper).

The challenge for aviation

Aviation is a critical industry in Australia. It directly employs over 50,000 people and indirectly employs 500,000. In addition to the jobs it creates and its direct economic contribution, it is also critical in terms of its significance to the efficiency and prosperity of the Australian freight and tourism industries. Being a large island continent Australia also relies more heavily on aviation than many other countries as a form of mass transit and a facilitator of commerce.

One of the largest challenges for Australia’s airlines (as well as their international competitors) is the cost of fuel. Qantas’ fuel costs are now in excess of \$4 billion per annum and are its single largest cost at 26% of operating costs in 2013². Jet fuel prices have historically been highly volatile and this

¹ The benefits of a coordinated Governmental approach can be seen in the United States where Defence, energy and agricultural policy have all been aligned to drive the development of a significant biofuels industry.

² This has increased from 14% as recently as 2004.

creates a significant business risk for airlines. Traditionally this risk has been addressed to a limited extent through:

- Expensive fuel hedging;
- Significant capital investment in newer more fuel efficient aircraft and engines; and
- Working closely with airports and regulators to improve airspace and airport efficiencies.

Together these approaches to fuel management have assisted in limiting the impact of rising fuel costs, however, there are limitations to how effective they can be long term in mitigating against fuel price volatility and carbon emissions (when considering future airline capacity growth).

Sustainable aviation fuel provides a significant opportunity to address not only airline emissions issues but also fuel price volatility. The science, technological capability and regulatory certification for “drop-in” aviation are fully progressed and ready now. The barriers to the development of a significant new industry in Australia are a mixture of commercial, infrastructure and policy issues.

Set out below are a number of these key areas that require close consideration to help foster the development of this important industry in Australia.

Energy security and Australian fuel infrastructure

Fuel security is an issue of growing global discourse and importance. By world standards Australia has a high reliance on imported liquid transport fuels. This is certainly true for Australian aviation which relies entirely on imported fuel to provide for its domestic requirements. The Issues Paper states that as a result of liquid fuels being sourced ‘from a diversity of suppliers under stable market arrangements’ there was ‘a high degree of confidence in Australia’s liquid fuel security.’³ Whilst this may be true in relation to many liquid transport fuels SkyNRG considers that there are a number of infrastructure and competitive constraints in Australia that may challenge this notion with respect to aviation fuel.

When assessing the reliability of supply of aviation fuel Australia is faced with a series of challenges. In recent years there have been a number of instances where airlines have experienced aviation fuel shortages at major domestic ports. These shortages arise as a result of issues associated with the importation of jet fuel (for example a delay in shipping or the delivery of an off spec batch of fuel) and from the lack of adequate storage and fuel pipeline infrastructure at airports.

These shortages (or near shortages) have caused considerable costs and concerns for airlines including necessitating schedule changes or service cancellations. When such a shortage occurs airlines tend to upload additional fuel at other ports and to carry this fuel to the affected airport. Carrying extra fuel is a very expensive and is an operationally complex process. It is also only available as a solution for domestic airlines leaving international carriers significantly exposed. Despite this issue having been present for many years there is still no coordinated approach to addressing these critical supply or infrastructure constraints.

Along with reliability of supply, fuel price is also a critical issue for airlines. The infrastructure shortcomings discussed above mean that there is currently a lack of competition in Australia between fuel suppliers. Third party suppliers wishing to service airlines are prevented from getting access to critical fuel tanks and pipeline infrastructure. This lack of competition drives up jet fuel prices. Some airports have also sought to impose fuel throughput levies for the supply of fuel notwithstanding that they are not providing any capital investment or service associated with the supply of this fuel. These opportunistic charges add to the cost of domestic aviation fuel and further burden airlines.

SkyNRG believes that a policy review focussed on improving investment in, and access to, essential jet fuel infrastructure would maximise efficiency and would assist in addressing many of these issues.

³ Page 11 of the Issues Paper

Similarly, from a competition perspective, there may be benefits in reviewing the reasonableness of fuel throughput and other such opportunistic costs to assist in securing affordable jet fuel supply.

Capital required to establish advanced biorefinery facilities

The production of sustainable aviation fuel requires the construction of advanced biorefineries. These facilities require significant capital investment in order to produce commercial quantities of sustainable aviation fuel. There are a range of factors that impact on this capital cost including; the location of the biorefinery, the technology to be used, whether the site is a green field or a brown field and the ability to leverage off existing infrastructure to lower cost.

Current Australian energy infrastructure presents a number of challenges that can exacerbate this upfront capital cost for biorefineries. These include:

1. A significant reduction in domestic refining capacity; and
2. The regional supply of gas and pipeline infrastructure, particularly on the East Coast of Australia.

The opportunity for biorefineries to reduce their upfront capital costs can be affected by the ability to partner with established energy producers and to utilise their infrastructure such as storage tanks and specialised equipment such as hydrocracking units. The significant reduction in recent years of Australia's domestic oil refining capacity means that this ability to share or defray upfront capital cost has reduced considerably.

Many technologies for the production of advanced biofuels also require natural gas as an input. Natural gas is often used to meet the thermal needs of a biorefinery and also as a source of hydrogen. One of the benefits of biorefineries from a regional economic perspective is that often their ideal location is close to their feedstock placing them in regional and remote areas. The current gas supply infrastructure that is available to supply many of the promising regional areas on the Australian East Coast is inadequate to meet the gas requirements of a biorefinery of any significant scale. It is cost prohibitive for any single company (particularly one with significant additional capital requirements) to fund the construction or upgrade of this natural gas infrastructure. To facilitate the development of a viable sustainable aviation fuels industry, and to support the growth of other major regional industrial developments, careful consideration should be given to the possibility of Government assistance being provided to upgrade the pipeline infrastructure supplying major regional centres along the East Coast of Australia.

The Issues Paper also raises questions about both the transparency of the current gas pipeline access regime and the escalating cost of domestic gas supply. SkyNRG believes there is benefit in the Government's ongoing review of both these issues with the aim of improving both access and pricing outcomes associated with privatised gas infrastructure.

Market distortions and excise arrangements

Another key area where policy adjustments could play a significant role in assisting the establishment of a sustainable aviation fuels industry in Australia is the role of production incentives and the existing policies that support the production of biodiesel, renewable diesel and ethanol.

Under current legislation⁴, producers and importers of renewable diesel and biodiesel are eligible for a grant of \$0.38 per litre under the Energy Grants (Cleaner Fuels) Scheme. Producers of ethanol are also eligible for a grant of \$0.38 per litre under the Ethanol Production Grant program. Each of these grants support for producers that is equivalent to the amount of excise on biodiesel and ethanol. By contrast, there is currently no such support or incentive for the production of advanced aviation biofuel.

⁴ Currently in place until 2021.

Current legislation provide a significant incentive to produce those fuels which benefit under these scheme and, conversely, a disadvantage to fuel types competing for similar feedstock and capital. This issue was highlighted in a recent report prepared by the Federal Bureau of Resources and Energy Economics that was reviewing the costs and benefits of the Ethanol Production Grants Program. This report concluded that:

'The EPG program also imposes another distortion by reducing the competitiveness of other alternative fuels and emerging fuels.

This market distortion arises since these sort of alternative fuels have the full excise rate of 38.143 cents per litre applied to them, in contrast to ethanol which has an effective zero excise rate. As a result, there is a significant cost advantage for ethanol versus other alternative fuels (except for biodiesel) of close to 40 cents per litre.

Government policies that currently support many first generation producers and their relatively high costs could also be viewed as an impediment to the development of second generation biofuels. For example, the goals of some current policies that support the industry with capital grants are not always in alignment with policies that foster innovation to further develop the production and process technologies.⁵

Whilst SkyNRG is not advocating for changes to these existing production grant or excise relief schemes as they apply to ethanol or renewable diesel it must be recognised that the current legislation presents a significant challenge to the establishment of a viable aviation biofuel industry in Australia. It may assist in reducing this market distortion if a similar \$0.38 per litre production grant was also applied to aviation biofuels. Such an approach is likely to accelerate the development of the industry and to assist in the attraction of local and foreign investment to support its growth.

Sincerely,



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⁵ 'An Assessment of key costs and benefits associated with the Ethanol Production Grants program' February 2014 (p.15). <http://www.bree.gov.au/sites/default/files/files/publications/other/assessment-ethanol-production-grants-program.pdf>