15 August 2008

Australian Conservation Foundation Submission to the Senate Committee on Environment, Communications and the Arts

Inquiry into *Renewable Energy (Electricity) Amendment (Feed-In Tariff) Bill 2008*

ACF welcomes the opportunity to provide input to this inquiry. Feed-in tariffs are an important policy tool with proven success for fostering renewable energy growth and electricity network savings. Our submission focuses on a national solar feed-in tariff.

ACF recommends a consistent national approach to supporting solar photovoltaic (PV) electricity and financial incentives through a gross feed-in tariff that would result in one million solar rooftops within 15 years.

Introduce a national solar feed-in tariff

To help tackle climate change Australia needs to dramatically step up its efforts to install renewable energy generation capacity. A guaranteed minimum price for electricity supplied by solar panels, known as a feed-in tariff, modelled on the successful experience of Germany, could unleash private investment to add clean generation capacity of 3,000 megawatts by 2022.

Solar PV panels installed on roofs capture the sun's energy and produce electricity for homes and businesses. This technology has been available for many years. Solar PV is a peak load technology. In other words, the sun is usually out and generating power at times when most power is needed. Solar PV reduces the need to invest in centralised peak power generation infrastructure[1] to meet peak electricity demands.

Australia is one of the sunniest countries in the world. We have a massive competitive advantage. Yet we have less than one twentieth of the PV capacity of Germany or Japan, despite the fact that a PV system in Australia generates more than twice the electricity as the same system in Germany.

A separate policy mechanism,[2] such as a feed-in tariff, would address the market failure of not paying PV owners the peak value of electricity.

[1] The infrastructure investment needed is estimated to be more than $24 billion in the next five years in a 'business as usual' scenario.

[2] The Mandatory Renewable Energy Target requires energy retailers to purchase renewable energy but does not provide substantial benefit to solar PV given costing differentials between different renewable energy sources.

The output from a PV system peaks in the middle of the afternoon when demand and consequently prices for energy also peak. However, today's PV owners are paid only a flat retail tariff – significantly less than the real traded value of electricity. A feed-in tariff should be set at a higher level than current electricity tariffs to account for the network and peak power benefits of solar electricity not recognised in today's market. The premium should be funded through a small levy on electricity bills.

The national solar feed-in tariff could be based on the model recently approved by the ACT Legislature. This uses a gross feed-in tariff, where solar PV panel owners are paid for all the electricity their systems generate. ACF believes the Victorian, Queensland and South Australian net feed-in tariff models are inferior and should not provide the model for the Federal scheme. The net approach sees system owners paid only for the electricity fed back into the grid. This fails to account for the network and peak power benefits of solar electricity and can result in very little incentive to install new solar PV systems.

The Garnaut Climate Change Review Draft Report found there were 'valid economic arguments' for feed-in tariffs and that a gross tariff model was the best way to capture the network benefits of locally embedded electricity generation.

The rural or 'off grid' market in Australia has been receptive to solar PV, but the urban market is where solar PV's great potential lies. The Australian market is growing at about 15 per cent per annum. However, global growth rates of up to 40 per cent per annum are the direct consequence of overseas programs responding to domestic energy needs and concerns about climate change. Some 37 countries, states and provinces now have feed-in laws. Driven by those mechanisms, the global market is expanding fast and is expected to grow to more than $40 billion by 2010.[3]

The Federal Government should set a gross feed-in tariff at a level that would see the up front cost of solar PV systems earned back by the owner within with ten years. Set at this level a national gross feed-in tariff would:[4]

1 Deliver more than 3,000MW of clean 'peaking' capacity

By guaranteeing a revenue stream to solar PV purchasers, the installed capacity of solar PV in Australia could grow to 300 megawatts within five years and more than 3,000 megawatts by 2022, reducing the need for costly peak electricity infrastructure and supplying electricity to more than a million Australian households.

2 Reduce CO_2 emissions by four million tonnes

The feed-in tariff would prevent the emission of four million tonnes of CO_2 per annum by 2021. It would also improve air quality by reducing local pollutants.

3 Cost consumers less than one cup of coffee per year

The feed-in tariff would be funded by an average increase in electricity costs of less than 1 per cent – the equivalent of a cup of coffee per year for a typical resident.

[3] http://www.premiers.nsw.gov.au/NR/rdonlyres/AAC3298D-875F-42F5-BA78-199A48C46B8B/0/BusinessCouncilforSustainableEnergyAttachment3.pdf

[4] BP Solar Australia – economic modelling, independently verified by UNSW Finance – unpublished data

4 Ensure energy security and price stability

The feed-in tariff protects electricity supply against summer peaks by diversifying the energy portfolio – to the benefit of the economy and low-income households.

5 Utilise leading local research to achieve world class manufacturing

World-leading research facilities in Australia, eg UNSW, developed the technologies that form the basis of today's $14 billion global solar PV industry. The feed-in tariff would allow Australia to benefit from the commercialisation of locally developed technologies, potentially creating more than 9,000 new jobs.[5]

6 Attract private investment to Australia

The introduction of a feed-in tariff would create new investment opportunities and security for institutional investors, potentially attracting significant investment from overseas.

ACF recommends the introduction of a nationally consistent and effective solar feed-in tariff by July 2009. There is broad political support for solar feed-in tariffs. A national feed-in tariff is a better policy lever to foster the sustainable growth of the Australia's solar PV industry, because it is less susceptible to the 'boom and bust' cycles of a rebate system.

Even with the newly introduced means test for people applying for the solar panel rebate, applications for the rebate have increased in recent months, with more than 500 households applying for the rebate each week. Australia can and should aim to have a million solar rooftops within 15 years. That means some 1000 Australian households need to install solar panels every week. A gross solar feed-in tariff can support this level of growth.

This submission looks only at solar feed-in tariffs. However ACF believes feed-in tariffs should be explored for other emerging renewable energy technologies like solar thermal and geothermal power. Feed-in tariffs should not be considered as only applicable to small scale installations. Large and small scale installation should be equally eligible.

Former US vice president Al Gore recently challenged the USA to aim to produce 100 per cent of its electricity with zero carbon emissions within 10 years. Australia should be aiming for a future where we are powered by 100 per cent renewable energy. A solar feed-in tariff is an important step in the right direction.

Recommendation:
ACF recommends the introduction of a national solar feed-in tariff by July 2009, based on the model recently approved by the ACT Legislature.

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[5] Ibid.