Government of **Western Australia**
Sustainable Energy Development Office

Western Australian

Feed-In Tariff Discussion Paper

OVERVIEW

In September 2008, the incoming State Government announced its intention to introduce a feed-in tariff as part of the Liberal Plan for Environmental Sustainability and Water Management.

The Government allocated "$13.5m towards a feed-in tariff for homeowners, and an investigation of the feasibility of extending the scheme to small business and commercial premises."

The Government's original intention was to implement a gross feed-in tariff scheme. However, an unprecedented system uptake rate meant the scheme was no longer affordable. In June 2009 the Government announced that it would allocate the $13.5 million equitably among owners of systems installed between the date of the 2008 State Government election and the date of the announced changes. The development of a residential net feed-in tariff to commence on 1 July 2010 was also announced.

This paper seeks to provide guidance to the public and key stakeholders who wish to provide input to developing design features of a net feed-in tariff scheme. Stakeholder submissions will inform the development of the preferred scheme design.

While most scheme design features are yet to be determined, the Government's intention is to design a feed-in tariff that:

- is paid on net generation; and
- applies to photovoltaic, wind, and micro-hydro technologies.

At this stage comment is sought on a residential scheme only. The Government has committed to conduct a feasibility study on the potential for a feed-in tariff scheme for small business and commercial premises. However, this will be conducted separately to the development of a residential tariff.

Details about submitting written comments are provided in Section 4 of the paper. The submission closing date is 20 November 2009.

SECTION 1: POLICY CONTEXT

Policy Objectives of a Feed-in Tariff

The objectives of the feed-in tariff scheme form the basis of the scheme design parameters. Comments and suggestions that are offered through the consultation process should be mindful of the scheme objectives, which are to:

- increase the penetration of household renewable energy systems;
- increase the affordability of investment in residential renewable energy systems;
- help householders manage their exposure to electricity price increases;
- provide transitional support to the renewable energy industries that supply systems to the residential sector; and
- enable householders to contribute to the achievement of national renewable energy and carbon reduction targets.

National Policy Context

The principal driver for renewable energy is the Commonwealth Government's mandatory Renewable Energy Target (RET) scheme. This scheme places an obligation on liable electricity retailers to source a proportion of their supply from accredited renewable electricity generators.

The RET is designed to support a least cost approach to increasing renewable generation. Consequently, the contribution of photovoltaic generation to the scheme has been small. Australian governments have tended to provide support to small scale applications largely through supplementary mechanisms such as capital subsidies.

The Commonwealth Government, in consultation with State and Territory Governments, has recently expanded the RET scheme. The Commonwealth Government has also phased out direct rebates for renewable energy systems and integrated support for such systems into the RET scheme design.

The new support mechanism, Solar Credits, will enable renewable energy system owners to generate multiple Renewable Energy Certificates (RECs) in order to claim an upfront discount on the capital cost of systems. The value of this discount is dependent on the REC market price at any given time, however, the Commonwealth Government estimates that this is likely to be around $7,500 for a 1.5kW system.

While rebate programs can provide an effective incentive, other mechanisms can provide different benefits. Further information on the additional benefits of feed-in tariff schemes is provided in section 2.

National Principles for Feed-In Tariff Schemes

Government support for small scale household renewable energy systems is changing rapidly. For example, with the exception of Tasmania, every Australian jurisdiction has implemented or committed to introducing a feed in tariff.

On 29 November 2008, Western Australia, through the Council of Australian Governments (COAG), agreed to a set of national principles to guide the development of new feed in tariff schemes and to inform the reviews of existing schemes. These principles will strengthen harmonisation of schemes across Australia while allowing for the differing policy environments of States and Territories.

These principles will guide the development of the proposed Western Australian feed-in tariff scheme. The National Principles are provided in Attachment A.

Western Australian Policy Context

Electricity generation infrastructure in Western Australia is physically separate from the National Electricity Market (NEM) and uses a different market model. The policy challenge is to develop a feed-in tariff scheme consistent with the national principles, while meeting the needs of Western Australia's unique market.

The existing buy-back arrangements for household renewable generators are governed under the Electricity Industry Regulations (2005). The associated scheme, the Renewable Energy Buy-back Scheme, requires the State owned electricity retailers (Synergy and Horizon Power) to purchase excess electricity from eligible customers at a fair and reasonable rate. Currently this is the prevailing tariff rate, less the goods and services tax component for residential customers.

This requirement includes all renewable energy technologies (i.e. photovoltaic, wind turbine and micro hydro) between 0.5 - 5kW. However, Horizon has extended the service to 30 kW (10kW per phase) in regional areas it services.

The proposed Western Australian feed-in tariff scheme design will seek to complement existing and proposed State and Commonwealth Government support programs.

SECTION 2: BENEFITS AND CHALLENGES OF A FEED-IN TARIFF SCHEME

There are many benefits of feed-in tariff schemes. For example, feed-in tariffs can:

- provide ongoing support for renewable energy generation;
- encourage high quality installations and on-going maintenance, as financial benefit is determined by system output;
- complement rebate-style programs, but can exist in the absence of other support mechanisms;
- enable households to manage their exposure to electricity price increases.
- encourage energy efficiency, particularly during peak sunlight hours, which correlates reasonably well with commercial peak load;
- provide long-term certainty for the renewable energy industry.

While the benefits of feed-in tariff schemes are numerous, the main challenge of such schemes is the cost, which would ultimately be borne by the community.

The Government is yet to determine the appropriate funding method for the Western Australian Feed-in Tariff Scheme. It is likely to be either a small levy imposed on electricity consumers or through consolidated revenue (i.e. tax revenue). The Government is currently considering the issues surrounding both options, including program certainty, the potential cost of a levy on other electricity consumers, the impact on different community sectors such as low income households and potential options for ameliorating these impacts, and consistency with the National Principles.

SECTION 3: FEED-IN TARIFF SCHEME DESIGN

The Office of Energy (the Office) seeks input from stakeholders on the design of Western Australia's feed-in tariff scheme. The Office does not wish to limit the scope for comment regarding design of the scheme. However, particular areas of interest are outlined below.

Tariff rate

Payment on net generation means that the scheme rewards system owners whenever they generate more electricity than they are using. This means that payment would be made whenever generation exceeds consumption during the day and not just the balance at the end of their billing cycle. This is the process that currently exists under the Renewable Energy Buyback Scheme.

The tariff rate will determine the benefit that system owners receive. However, the tariff rate will also affect the costs of the scheme, particularly if funded through a levy. Striking the right balance between the benefits for those that are able to participate in the scheme and the increase in energy costs for other users is important. For example: renters, those who live in multi-storey complexes, those with a small amount of north facing roof space, and low income earners may be unable to participate in the scheme. These people may also be disproportionately affected by any increase in electricity costs. Should a levy be the chosen funding option, a number of factors will influence the extent to which electricity prices increase, including the uptake rate of renewable energy systems, the tariff rate and the number of consumers from whom the cost of the tariff is recovered.

The design of the feed-in tariff scheme can include measures to ensure that the renewable energy industry has an incentive to pass through cost reductions and to innovate. In Germany, for example, tariff rates for new entrants decline annually. The regression rate provides an incentive for industry to innovate and pass through cost reductions.

Comment is sought from stakeholders on the tariff rate and related design aspects.

1. Should the tariff rate decline for new participants over time, to encourage efficiency and innovation?
2. What is an appropriate impact on domestic electricity costs to pay for a feed-in tariff for residential consumers? Within this context, respondents may wish to consider:

- What is an appropriate tariff rate?
- How long should system owners receive the tariff for?

3. Are there any other scheme design mechanisms that encourage industry to pass through cost savings?

Scheme life and duration of payments

The scheme life refers to the time for which the feed-in tariff scheme is offered to the community. The duration of payments refers to the time period for which participants are paid the premium rate.

The scheme duration and scheme life will impact on the level of benefit provided to system owners; the support provided to industry; and the cost of the scheme to the community.

Scheme life could be a fixed period of time, with the duration of payments varying depending on the point at which the system owner enters the scheme (for example, in a 20 year scheme, those entering the scheme in year 2 would receive the tariff for 18 years). Alternatively, the scheme life could be ongoing, with the scheme duration fixed for each participant. This would mean that each participant receives the tariff for a fixed period of time, irrespective of when they enter the scheme. Under this model the scheme life could also be set, meaning that some recipients would continue to receive payments after the scheme closed to new participants.

The scheme life could also be determined by a target of installed capacity. For example, the previous state Government considered a feed-in tariff scheme design which paid the premium tariff until Western Australia achieved 10 megawatts of installed photovoltaic capacity. However, this may have implications for the level of certainty provided to system owners and industry.

Review periods could also be integrated into the scheme. These could be at set time periods, or be triggered by installed capacity targets as per the South Australian Scheme, which will be reviewed once 10 megawatts of installed capacity is reached. The review periods could consider scheme design parameters such as the tariff rate, inclusion of new technologies and duration of payments. Review periods are often included in long term schemes.

Stakeholder comment is sought on the preferred option for scheme life and duration of payments.

4. What options for scheme life and duration are preferred and why?
5. Do you support the inclusion of review periods?
6. Are there options not outlined above that achieve the same result or a better outcome?

System size

System size will impact on the potential benefit received by system owners, as well as the cost of the scheme to the community. However, system size in residential applications is usually limited by the availability of north facing roof space, rather than externally imposed requirements. Currently, the average system size on the State's main grid, the South West Interconnected System, is 1.7kW.

Synergy's Renewable Energy Buyback Scheme currently allows for systems up to 5kW in capacity to sell electricity to Synergy. The Synergy REBS product terms and conditions are currently under review and the eligibility of system size may change in the future. Horizon Power has extended their eligibility criteria to 10kW per phase (i.e. 30kW over three phases).

Linking system size requirements to the Renewable Energy Buyback Scheme may simplify the implementation and administration of the feed-in tariff. At the conclusion of the feed-in tariff scheme, this could also streamline transitioning customers back to the Renewable Energy Buyback Scheme, depending on the model chosen.

Alternatively, the system size limits could be separate from those under the Renewable Energy Buyback Scheme.

Stakeholder comment is sought on the appropriate system size limits.

7. Should the size limits of the feed-in tariff scheme be the same as the Renewable Energy Buyback Scheme?

GreenPower

Renewable Energy Certificates (RECs) are credited for electricity generated by residential renewable energy systems in recognition of the contribution made to the achievement of the Commonwealth Government's national Renewable Energy Target. Most residential renewable energy system owners sell the RECs to the system supplier as part of the purchase, in exchange for a reduction in cost. This year the Commonwealth Government introduced a 'Solar Credits' scheme to replace its photovoltaic rebate. Under this scheme, photovoltaic systems of up to 1.5 kW receive RECs equivalent to 5 times the amount of electricity generated.

The National GreenPower Accreditation Program is an initiative of participating state and territory governments, including Western Australia. The program gives electricity consumers the choice of sourcing electricity from renewable energy additional to the requirements of the national renewable energy target scheme. Solar Credits allows more RECs to be created than energy generated. To maintain the integrity of the program for GreenPower consumers, RECs generated through the Solar Credits scheme cannot be used for GreenPower.

A requirement for a feed-in tariff recipient to purchase GreenPower for any electricity sourced from the grid could offset the impact of the Solar Credits multiplier on overall renewable energy generation in Australia. However, based on current product costs, mandating GreenPower would add approximately $230 dollars to the annual electricity costs of an average household with a 1.5kW photovoltaic system. This may act to erode the incentive provided by a feed in tariff.

Further information on Renewable Energy Certificates and Solar Credits can be found on the Office of Renewable Energy Regulator website at www.orer.gov.au under *Renewable Energy Certificates,* and on the national GreenPower website at www.greenpower.gov.au.

Stakeholder comment in sought on the potential for a GreenPower purchasing requirement.

8. Should the feed-in tariff include a requirement for recipients to purchase GreenPower for electricity drawn from the grid?
9. Are there any other mechanisms you can suggest that achieve the same or similar outcome?

Legal mechanisms

Feed in tariff schemes in other jurisdictions have generally been implemented through legislation.

An advantage of legislating the scheme is that it may provide greater investment certainty for renewable energy system owners and suppliers. Renewable energy systems can be an expensive investment and the certainty of a long-term feed-in tariff positively impacts on the pay-back period of systems. This can be the deciding factor in purchasing decisions.

Alternatively, implementing the feed-in tariff as a program may provide flexibility to allow for necessary changes in a timely way. A program usually requires less time to develop and implement than a legislated scheme. However, the scheme could be altered or closed more readily under a non-legislative model.

Stakeholder comment is sought on the appropriate implementation mechanism.

10. Should the scheme be legislated, or implemented as a non-legislated program?
11. Are there other mechanisms that may be appropriate for implementing a feed-in tariff scheme?

SECTION 4: NEXT STEPS

Written submissions of comments relating to this paper should be provided by 20 November 2009 and sent to:

Manager, Feed-In Tariff
Sustainable Energy Development Office
Office of Energy
Level 9, Governor Stirling Tower
197 St Georges Terrace
PERTH WA 6000

Email: fit@energy.wa.gov.au

Fax: (08) 9420 5700 (Attention: Manager, Feed-In Tariff)

All submissions may be made public on the Office of Energy's website (www.energy.wa.gov.au) unless marked confidential.

Attachment A

National Principles for Feed-in Tariff Schemes

COUNCIL OF AUSTRALIAN GOVERNMENTS MEETING

CANBERRA

29 November 2008

National Principles for Feed-in Tariff Schemes

Micro renewable generation to receive fair and reasonable value for exported energy

1. That Governments agree that residential and small business consumers with small renewables (small renewable consumers) should have the right to export energy to the electricity grid and require market participants to provide payment for that export which is at least equal to the value of that energy in the relevant electricity market and the relevant electricity network it feeds in to, taking into account the time of day during which energy is exported.

Any premium rate to be jurisdictionally determined, transitional and considered for public funding

2. That any jurisdictional or cooperative decisions to legislate rights for small renewable consumers to receive more than the value of their energy must:
    a) be a transitional measure (noting that a national emissions trading system will provide increasing support for low emissions technologies), with clearly defined time limits and review thresholds;
    b) for any new measures, or during any reviews of existing measures, undertake analysis to establish the benefits and costs of any subsidy against the objectives of that subsidy (taking into account other complementary measures in place to support small renewable consumers);
    c) give explicit consideration to compensation from public funds or specific levies rather than cross-subsidised by energy distributors or retailers; and
    d) not impose a disproportionate burden on other energy consumers without small renewable generation.

MCE to continue to advance fair treatment of small renewables

3. That the Ministerial Council on Energy (MCE) should continue to implement the regulatory arrangements for small renewable customers, consistent with the objectives of the relevant electricity legislation, whereby the:
   a) terms and conditions for PV customers should be incorporated into the regulation of the minimum terms and conditions for retail contracts such that they are no less favourable than the terms and conditions for customers without small renewables;
   b) connection arrangements for small renewables customers should be standardised and simplified to recognise the market power imbalance between small renewable customers and networks; and
   c) assignment of tariffs to small renewable consumers should be on the basis that they are treated no less favourably than customers without small renewables but with a similar load on the network.

Feed-in Tariff policy to be consistent with previous COAG agreements (particularly the Australian Energy Market Agreement)

4. That the arrangements for PV consumers by the MCE and jurisdictions:
   a) should not deter competition for their business from electricity retailers
      in jurisdictions where there is full retail contestability and innovation in the tariff offerings available to PV customers;
   b) in relation to jurisdictions in the National Electricity Market, should not interfere with the regulation of distribution tariffs or operation of the national electricity market under the National Electricity Law or duplicate the regulatory arrangements that are part of that Law;
   c) should be subject to independent regulatory oversight according to clear principles; and
   d) should be consistent with implementation of other intergovernmental agreements relating to energy, competition policy or climate change.