



# australian network of environmental defender's offices

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Submission to the Inquiry into the *Renewable Energy (Electricity) Amendment (Feed in Tariff) Bill 2008*

August 2008

The Australian Network of Environmental Defender's Offices (ANEDO) consists of nine independently constituted and managed community environmental law centres located in each State and Territory of Australia.

Each EDO is dedicated to protecting the environment in the public interest. EDOs provide legal representation and advice, take an active role in environmental law reform and policy formulation, and offer a significant education program designed to facilitate public participation in environmental decision making.

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This submission is on behalf of the Australian Network of Environmental Defender's Offices Inc (ANEDO).

**Submitted to:**

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## Executive Summary

The Australian Network of Environmental Defender's Offices Inc (ANEDO) is a network of 9 community legal centres in each State and Territory, specialising in public interest environmental law and policy. ANEDO welcomes the opportunity to provide comment on the *Renewable Energy (Electricity) Amendment (Feed-in Tariff) Bill 2008* (the Bill).

ANEDO supports the development of a national feed in tariff scheme. ANEDO has consistently submitted that a range of measures are urgently required to abate Australia's greenhouse gas emissions.<sup>1</sup> In ANEDO's opinion, renewable energy has a crucial role to play as part of Australia's long-term mitigation response to climate change and represents the primary long-term viable solution to climate change.

ANEDO is of the view that feed-in tariff (FiT) laws are the most effective ways of encouraging the production of electricity from renewable sources. Evidence from overseas has found that the introduction of feed-in-tariff laws has proven the most effective mechanism for increasing the use of renewable energy sources in the electricity sector.<sup>2</sup>

The benefits of a feed-in-tariff are:

- (i) environmental benefits - increased take up of renewable energy systems<sup>3</sup> with a consequent reduction in green house gas emissions; and
- (ii) economic benefits through:
  - (a) job creation;<sup>4</sup>
  - (b) investment in technology and encouraging technology innovation;
  - (c) protecting the economy from the risks associated with relying on a limited suite of energy technologies and fuels; and
  - (d) helping to provide a level playing field and fair market conditions to enable renewables to compete with subsidised conventional energy sources.

ANEDO supports the following elements of the Bill which in our view are essential for an effective feed-in-tariff scheme:

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<sup>1</sup> See ANEDO submission to the COAG Working Group on Climate Change and Water – *Design Options for the Expanded National Renewable Energy Target Scheme*, 30 July 2008 (available at <http://www.edo.org.au/edonsw/site/policy.php>).

<sup>2</sup> In his report on the economics of climate change, Sir Nicholas Stern compares FiTs with tradable quotas and concludes that a FiT scheme achieves a larger deployment at lower costs (Stern, Sir N, *The Stern Review: The Economics of Climate Change* (2006), Chapter 6 at p 366). Miguel Mendonca has also concluded that 'The most successful policy instrument yet devised for speeding the comparative low-cost deployment of renewable energy technologies is the Feed-in-tariff model' (Miguel Mendonca, *Feed-in-Tariffs: Accelerating the Deployment of Renewable Energy* World Future Council, Earthscan, 2007)

<sup>3</sup> Evidence from experiences of FiTs in European countries suggests that FiTs have been successful in promoting a substantial increase in the generation of renewable electricity. Since the introduction of a feed in tariff scheme in Germany in 1990, the proportion of Germany's electricity generated from renewable sources has increased more than fourfold.

<sup>4</sup> The renewable energy sector generates more jobs per megawatt of power installed, per unit produced, and per dollar of investment, than the fossil fuel-based energy sector (Daniel M. Kammen, Kamal Kapadia, and Matthias Fripp (2004) *Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Generate?* RAEL Report, University of California, Berkeley, p.3)

- a guaranteed reasonable rate of return over a set 20 year period.<sup>5</sup> This period provides certainty in the long-term which will encourage investment and take up;
- payment for renewable energy generated to be calculated on gross, not net, production.<sup>6</sup> A net export model is likely only to be effective in promoting the take up of large renewable energy systems; and
- an obligation on retailers to connect renewable energy systems to the network<sup>7</sup>.

While strongly supporting the principle of a national feed in scheme, ANEDO makes a number of recommendations for changes to the proposed scheme:

- that the scheme should apply to all renewable energy systems, not just those installed after the commencement of the Bill; and
- that the scheme should not include renewable energy sources which are not ecologically sustainable and lead to other negative environmental impacts, such as wood waste and hydro.

### **Are feed in tariffs the most effective mechanism for supporting renewable energy technologies?**

There are a number of regulatory options available to promote renewable energy use. The two main options used around the world are:

- (a) feed-in-tariff mechanisms; and
- (b) tradable quota schemes (such as the green certificate system in the UK) - where the supply of renewable energy is achieved by requiring suppliers to deliver to consumers a portion of their electricity from renewable energy sources.

In the European Union there are a number of different approaches taken by Member States for promoting renewable energy. The primary methods have been broadly categorised by the European Council as FiTs (which exist in most Member States) and green certificate systems (which exists in the UK and several other Member States).<sup>8</sup>

The European Council has analysed the different approaches of the Member States and concluded that the disadvantages of green certificates are that:

- they may pose a higher risk for investors,
- long-term currently high cost technologies are not easily developed under such schemes, and
- they present higher administrative costs.<sup>9</sup>

<sup>5</sup> As provided for in clause 2 of the Bill, proposed new s34D(12). The German model, which is widely recognised as a very successful FiT scheme, operates on a 20 year period. In South Australia, the ACT and Queensland recently enacted feed in laws provide for a maximum 20 year period (see s36AE of the *Electricity Act 1996* (SA), inserted by s 4 of the *Electricity (Feed-In Scheme – Solar Systems) Amendment Act 2008*, s11 of the *Electricity Feed-in (Renewable Energy Premium) Act 2008* (ACT) and s44A(3) of the *Electricity Act 1994* (Qld), inserted by s52 of the *Clean Energy Bill 2008*).

<sup>6</sup> As provided for in clause 2 of the Bill, proposed new s34C(2)(b).

<sup>7</sup> As provided for in clause 2 of the Bill, proposed new s34A(1).

<sup>8</sup> A number of other methods are also used: tendering procedures (used in two Member States) and tax incentives (used primarily as an additional policy tool), Communication from the Commission of the European Communities: *The support of electricity from renewable energy sources* COM (2005) 627, available at [http://ec.europa.eu/energy/res/biomass\\_action\\_plan/doc/2005\\_12\\_07\\_comm\\_biomass\\_electricity\\_en.pdf](http://ec.europa.eu/energy/res/biomass_action_plan/doc/2005_12_07_comm_biomass_electricity_en.pdf), accessed on 4 August 2008

<sup>9</sup> Communication from the Commission of the European Communities: op cit 8

The evidence from overseas suggests that a FiT is a cost effective method of reducing greenhouse gas emission. In Britain, in his report on the economics of climate change, Sir Nicholas Stern compares FiTs with tradable quotas. He notes in this report that while both tradable quotas and feed-in tariffs have proved to be effective, the latter achieves larger deployment at lower costs, because it assures a long-term price guarantee, while prices are lower than comparable tradable support mechanisms. Stern concludes that

...analysis suggests that competition is greater than in the UK Renewable Obligation Certificate scheme. These benefits are logical as the technologies are already prone to considerable price uncertainties and the price uncertainty of tradable deployment support mechanisms amplifies this uncertainty. Uncertainty discourages investment and increases the cost of capital as the risks associated with the uncertain rewards require greater rewards.<sup>10</sup>

One fundamental problem with quota schemes is this lack of long-term certainty. When a quota is set either for a period of time or for a quantity of power, once that goal is reached there is no incentive for ongoing investment in renewable energy sources.

These conclusions support the view that electricity feed-in laws are the most successful and cost effective mechanism for stimulating the rapid use of renewable energy.

ANEDO also supports other regulatory measures such as mandatory renewable energy targets, which are aimed at increasing renewable energy use and facilitating reductions in greenhouse gas emissions that progress Australia to 60% cuts in 1990 levels by 2050.<sup>11</sup> However, ANEDO submits that such other measures should be undertaken in addition to national feed in laws.

### **Appropriate time frame for FiT scheme**

To ensure that a FiT scheme is effective it is necessary to ensure that there is long-term financial certainty to ensure take up. Without this security, the initial up-front costs of installing renewable energy generators, combined with a lack of certainty on the return will discourage rapid take up of renewable energy technologies. To ensure that people will invest the considerable amount of money necessary to install renewable energy systems ANEDO supports a guaranteed price for a set period.

ANEDO supports the 20 year period provided for in the Bill. This is the time frame adopted in Germany, and more recently in South Australia, the ACT and Queensland.<sup>12</sup>

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<sup>10</sup> Stern, Sir N, op cit 2 at page 366.

<sup>11</sup> See ANEDO submission to the COAG Working Group on Climate Change and Water – *Design Options for the Expanded National Renewable Energy Target Scheme*, 30 July 2008, op cit 1.

<sup>12</sup> See clause 2 of the Bill, proposed new s34D(12). See also s36AE of the *Electricity Act 1996* (SA), s11 of the *Electricity Feed-in (Renewable Energy Premium) Act 2008* (ACT) and s44A(3) of the *Electricity Act 1994* (Qld).

## **Payment based on gross not net production**

ANEDO strongly supports the payment of the feed in tariff rates on the gross energy production of renewable energy generators. This is consistent with both the German and ACT feed in laws which adopt a gross production model. Payment based on gross production ensures that the premium rate is payable for the total amount of electricity generated.

In contrast, a net export model only pays the premium tariff for the amount of electricity generated in excess of the householder's use. It is likely that in the majority of cases, at least in residential homes, there may be little if any excess electricity generated. Consequently, many residential users would get little or no benefit from a net export model.

In the ACT the Chief Minister's Department issued a Feed in Tariff Discussion Paper in December 2007. This paper noted that the average household electricity consumption in the ACT has been estimated at around 22 kWh per day. Based on these figures for a solar photovoltaic system, a 4200 watt system at a price of \$48,990 (not taking into account any rebate that may be applicable) would be required in order for it to be possible to export more energy to the network than is consumed by the average householder.<sup>13</sup>

While the paper recognised that the exports associated with these systems are dependent on a range of environmental factors along with where they are installed, and the price of the systems are somewhat variable, these figures indicate that a net export model is likely only to be effective in promoting the take up of large renewable energy systems. This will minimise the effectiveness of the scheme due to the large up-front costs. It is ANEDO's view that a gross production model will encourage the uptake at sufficient levels to achieve the policy goals.

## **Obligation to connect to the grid**

Currently the Bill requires an electricity retailer to permit a renewable energy generator to feed into the grid network.<sup>14</sup> ANEDO strongly supports this requirement and is of the view that a legislative obligation to connect renewable energy generators to the grid is a fundamental element of an effective FiT scheme. Without this obligation there would be no certainty for renewable energy generator investors that they would be successful in having their systems connected to the network.

## **Recommendations for Reform**

### **Scheme applied to previously installed REGs**

The Bill currently limits the participation in the scheme to people who install renewable energy generators after the commencement date of the Bill. There are currently a number of existing Australian State and Territory FiT schemes and other States have announced

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<sup>13</sup> ACT Chief Minister's Department's Feed-in Tariff Discussion Paper, p. 8 available at [http://www.cmd.act.gov.au/\\_\\_data/assets/pdf\\_file/0010/2044/feed-in\\_tariff.pdf](http://www.cmd.act.gov.au/__data/assets/pdf_file/0010/2044/feed-in_tariff.pdf)

<sup>14</sup> See clause 2 of the Bill, proposed new s34A

an intention to implement a feed in scheme.<sup>15</sup> While ANEDO supports a national FiT scheme, if a national approach were to be adopted to replace State and Territory based schemes ANEDO is of the view that it would be unfair to limit the scheme to those systems installed after the Bill's commencement. This would deprive those persons who installed renewable energy generators in response to State or Territory FiT schemes of a premium rate for the electricity they produced and it would penalise people for their early uptake of renewable energy.

ANEDO is also concerned that limiting the scheme to those systems installed after the Bill's commencement date could delay a person's decision to install renewable energy generators. ANEDO therefore recommends that the scheme should apply to all renewable energy generators, not just those installed after the Bill's commencement.

### **Coverage of Renewable Energy Technologies**

ANEDO supports the coverage of a wide range of renewable energy sources provided they are ecologically sustainable and do not lead to other negative environmental impacts. Under the proposed Bill a feed in tariff rate is payable to customers who generate electricity from a variety of renewable energy sources, including wind and solar.

However, ANEDO is concerned that wood waste and all hydro schemes are included as an eligible renewable energy source.<sup>16</sup> ANEDO does not support the inclusion of wood waste and all hydro as an eligible renewable energy source. ANEDO has previously outlined its concerns regarding the inclusion of wood waste as an eligible source of renewable energy in the MRET scheme because of the significant environmental impacts of logging activities on our forests and biodiversity.<sup>17</sup> ANEDO has also raised concerns about the inclusion of all hydro schemes as renewable energy sources in the MRET scheme because of the significant detrimental environmental impacts that new hydro electric power stations can have.

As there is greater demand for renewable energy technologies and increased research into this area, it is possible that new technologies will emerge or existing technologies will adapt in a way that would render inclusion of other renewable energy sources in a feed-in-tariff scheme desirable. ANEDO supports the flexibility for including additional sources in the scheme which is provided through a regulation making power in s17, enabling additional sources to be prescribed.

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<sup>15</sup> See *Electricity (Feed-In Scheme – Solar Systems) Amendment Act 2008 (SA)*, the *Electricity Feed-in (Renewable Energy Premium) Act 2008 (ACT)* and the *Clean Energy Bill 2008 (QLD)*. Victoria has also announced plans for a feed in scheme.

<sup>16</sup> See paragraph (d) of the definition of **qualifying generator** in clause 1 of the Bill and s17(1)(j) of the *Renewable Energy (Electricity) Act 2000*

<sup>17</sup> See ANEDO submission to the COAG Working Group on Climate Change and Water – *Design Options for the Expanded National Renewable Energy Target Scheme*, 30 July 2008 op cit 1.