



Committee Secretary  
Senate Standing Committee on Environment, Communications and the Arts  
Department of the Senate  
PO Box 6100  
Parliament House  
Canberra ACT 2600  
Australia

August 2008

Dear Sir/Madam

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

Thank you for the opportunity to provide comment to the Senate Standing Committee on Environment, Communications and the Arts Inquiry into the Renewable Energy (Electricity) Amendment (Feed-in Tariff) Bill 2008.

In the attachment to this letter Conergy Pty Ltd has provided a submission outlining suggestions for an effectively designed National Feed-in Tariff (FiT) Scheme, suitable for Australia.

It is the recommendation of Conergy that the Senate Committee support a Nationally consistent Gross Feed-in Tariff based on the following design factors;

- utilising gross generation
- in place for 20 years
- provides a return on investment within 10 years
- applies to all sectors including: residential, business/commercial/light industrial/agricultural & large scale
- encompassing range of renewable energy technologies specifically solar and wind.

If you have any questions about our submission please feel free to make contact with me on 0407 772 579.

Sincerely

Dana Hughes  
Government Relations  
**Conergy Pty Ltd**



**CONERGY**

**Submission to the Senate Inquiry**

**Renewable Energy (Electricity) amendment (Feed-in Tariff) Bill 2008**

**by Conergy Pty Ltd**

**August 2008**

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# **Inquiry into the Renewable Energy (Electricity) Amendment (Feed-in Tariff) Bill 2008**

## **About Conergy**

Conergy AG is a leading international supplier in the field of solar system integration. The group produces, installs and plans solar systems and wind power stations for its customers in more than 20 countries. The Conergy Group is now represented by branch offices on five continents.

Conergy Pty Ltd is the Australian subsidiary of Conergy AG established in January 2005 with head office in Sydney and other offices in Brisbane, Melbourne and Perth.

Conergy engineers have installed over 70,000 solar systems worldwide, making the company the market leader in solar system integration.

## **Introduction**

Conergy supports the introduction of a National Gross Feed-in Tariff as a major policy driver to ensure increased uptake of renewable energy in Australia. Conergy welcomes the opportunity to provide comment to the Senate Standing Committee on Environment, Communications and the Arts Inquiry into the Renewable Energy (Electricity) Amendment (Feed-in Tariff) Bill 2008

Australia needs a positive, well designed and implemented National Gross Feed-in Tariff in order to fully utilize the abundance of renewable energy resources this country has to offer. An effective Feed-in Tariff will increase installed capacity, increase investment, improve consumer awareness and involvement, improve energy security, encourage job creation and abate greenhouse gas emissions.

With many countries around the world adopting Feed-in Tariff models to varying levels, it is Germany that leads the way with the most comprehensive and effective scheme encouraging industry growth and its associated positive effects.

*“We got, with the help of this law, a renewable energy industry that has now 170,000 people employed – a new industry. That means if you compare this with the money that makes that possible, it became the cheapest public industrial and job promotion program ever happened.”*

Herman Scheer (German MP), on the effects of the German FiT, 2005

## Structuring an effective Feed-in Tariff

The FiT is not an innovative policy. Governments all over the world have applied this policy since the 1980s, with extensive experience gained since the first scheme began. It is important we learn from those experiences, identify the crucial successful factors and avoid the pitfalls that weaken the success of an effective FiT scheme.

### **Scheme in place for 20 years**

The tariff should be higher than the regular market price, and payments should be guaranteed over a 20 year period. Tariffs may have a direct relationship with cost or price, or may be chosen instead to encourage investment in the particular renewable energy technology. The tariff can be set individually for each of the technologies, according to the level of support intended and the state of the technology in its life cycle.

A National Gross Feed-in Tariff policy should apply to a range of Renewable energy technologies.

### **Levy on electricity rates**

The cost of a FiT schemes should be paid by electricity suppliers in proportion to their sales volume. The costs, from the higher payments to the grid-connected renewable energy generators, are covered by an additional charge per kWh on consumers, according to their level of use (e.g., Spain, Germany as of 2000). Other recouping mechanisms have been applied: In Germany, until 2000, a surcharge was applied to those utility customers required to purchase green power, or an additional direct tax, or a combination of both (Denmark through feed-in rates and reimbursement of the carbon tax).

## **Achieving Return on Investment within the system's life**

An effective FiT scheme has the advantage of investment security, the ability to fine tune and the promotion of several RE technologies at different commercialisation stages. In addition, it is not dependent on direct government spending and hence budget cycle neutral.

On the other hand, a FiT may be challenged under internal market principles and involve a risk of overfunding, if the learning-curve for each RE technology is not built in as a form of digression over time.

### **Digression**

A reducing mechanism (e.g. a reduction in the FiT rate of 7% p.a. for newly commissioned system) is an appropriate measure to reflect efficiency gains achieved by the renewable energy industry in the process of dynamic market development. This mandated digression rate also acts as an insurance that these gains are actually passed on to the investors.

The reduction rate is crucial- and a very sensitive factor: if too low it will lead to less demand; if too high the market will not be able to handle the demand.

FiT's can be designed to motivate industry to achieve efficiency gains by implementing a digression rate. Utilising this reducing mechanism, will result in the renewable energy industry evolving to an economic state that does not require direct Government assistance. A digression rate of 7% is recommended on the guaranteed FIT rate and every year, the tariff offered to newly connected systems is lowered by the rate.

This mechanism is implemented to ensure the expected renewable energy industry efficiency gains (economies of scale and learning) are passed on to the consumer.

International experts have assessed and confirmed the value of this learning curve. In Germany, the digression rate included in the FiT has already proved its effectiveness: The costs for installing photovoltaic systems dropped by 25% between 1999 and 2004; for wind turbines, costs were reduced by 30% between 1993 and 2003.<sup>1</sup>

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<sup>1</sup> UVS 2005

This example also shows that digression rates might differ, according to the renewable energy technology's stage in the life cycle. For example, Wind Power is more advanced in its life cycle and thus less efficiency gains p.a. can be expected. The digression rate on a FiT could be set accordingly for each technology.

## **Reviews**

Once an instrument has been implemented, frequent exposure to complex political consultation processes (e.g. annual review of systems) reduces investment security significantly. It is preferable that a long-term strategy involves all political parties and stakeholders to ensure broad support.

However, appropriate renewable energy market monitoring systems have to be ensured, for effective policy control.

## **Decentralised processes**

Decentralised processes managed by regional or local bodies are generally more efficient, but less predictable and homogeneous than centralised processes managed or controlled by a national authority (e.g. electricity sector regulator, transmission grid operator or energy agency); often single regions put common regulations into practice in a very different way and this leads to inefficiencies and confusion among market participants.

# Benefits of an effective Feed-in Tariff

## **Proven to be the most effective policy for Solar PV deployment**

The European PV Industry Association (EPIA) has identified FiT's as the most effective instrument in supporting PV:

*In stimulation of PV market growth, a feed-in tariff is the single most important and most successful driver, when applied correctly.*

**Position Paper on a feed-in tariff for photovoltaic solar electricity, EPIA 2005**

The DIW, a key economic institute in Germany, also acknowledged FiT's in Germany to be an effective and efficient instrument for fostering renewable energies. At the same time, it stated that experiences in other countries showcased that *“a withdrawal from this FiT would lead to higher electricity prices”*<sup>2</sup>

The EU Commission has identified FiT's to be the most effective policy in supporting PV deployment in the EU.

*“When comparing the current data of performance of feed in tariffs and quota systems the assessment must be that at present feed in tariffs score better as regards effectiveness but also as regards costs.”*

**Yordi, Beatrice, EU-Commission, DG Energy and Transport: The support schemes of renewable energy sources, 2005**

## **Encourage investor security**

A FiT reduces risk and provides attractive investment opportunities. It allows the consumer to optimize their investment in appropriate technology to make the most out of the best renewable energy resource available to them eg: PV modules in Broken Hill or SGU wind turbines in Port Fairy.

The structure of a well-designed FiT guarantees higher investment security, through a price-guarantee for generated electricity, over 20 years. Risk is reduced and ideally an attractive investment opportunity is provided.

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<sup>2</sup> DIW-Wochenbericht 29/2005

This encourages long term financial planning, provides investor security for businesses, results in attracting both domestic and foreign investment (private sector – institutions) for financing renewable energy projects and companies.

### **Industry not affected by Budget processes**

A FiT, unlike rebates does not create a burden on the Federal budget and as such should gain political acceptance more easily. The costs of a FiT are paid by all electricity consumers, unless certain sectors are exempt.

In addition to political acceptance, this also results in a FiT usually being more consistent and unaffected by political change than other industry support mechanisms.

### **FiT can be expanded to ensure renewable energy diversity**

A well designed FiT policy should not be limited to Solar Photovoltaics (PV) and should be extended and applied to a range of renewable technologies. The advantage is that by setting individual rates, according to the stage of maturity of the technology, the policy can be individualised within the overall FiT framework.

Conergy understands the need for a broad mix of renewable energy technologies and is advocating support for a range of technologies for the long-term benefits of developing the industry, driving down price and reducing greenhouse gas emissions.

#### **Electricity sector**

- | PV systems and wind turbines have a value beyond just the quantity of electricity that is generated.
- | An effective FiT is a useful instrument to attract private investment into this highly valuable electricity generation capacity

#### **Industry development**

- | Development of a scaled renewable energy industry due to its distributed nature, requires a larger local labour force for installation.



- | In addition, deployment of renewable energy drives industry investment, competition and innovation and, if linked with investment incentives, encourages domestic manufacturing

### **Labour market development**

- | The growth of the renewable energy market initiated by a FiT stimulates employment in
  1. Manufacturing; and
  2. installation and maintenance at both a community & broader level

### **Environment**

- | Renewable energy is a combination of greenhouse gas emissions free, energy generation resources.

### **Security**

- | Being a renewable source of energy, no constant fuel supply is required. In a world of insecure fossil fuel supplies this translates into a direct security benefit.

## Risk Factors for successful FiT implementation

### **FiT rate set too low**

The biggest risk factor is the choice of a FiT rate that is too low to attract broad investment.

*Very often feed-in-tariffs are simply too low / unattractive to ensure a reasonable payback time for investors*

**European Best Practice Report, PV Policy Group 2006**

For PV, this risk is particularly high when a FiT is designed for several RE technologies, but no differentiation of tariffs between technologies is made.

### **FiT scheme not long enough**

Because the industry needs investment security, FiT's should be guaranteed for a period of beyond 20 years. Ideally, a FiT scheme is designed to guarantee the premium rate for new installations until the price of solar PV generated electricity meets the price of grid-electricity (grid-parity).

### **Limits set on qualifying capacity (Caps)**

A cap of maximum capacity is always an artificial market barrier that may block the promising early growth stage of market development; even if a cap is lifted by political decision, this process creates unnecessary "stop & start" effects and puts off investors. The same can happen when a review of the system is imminent.

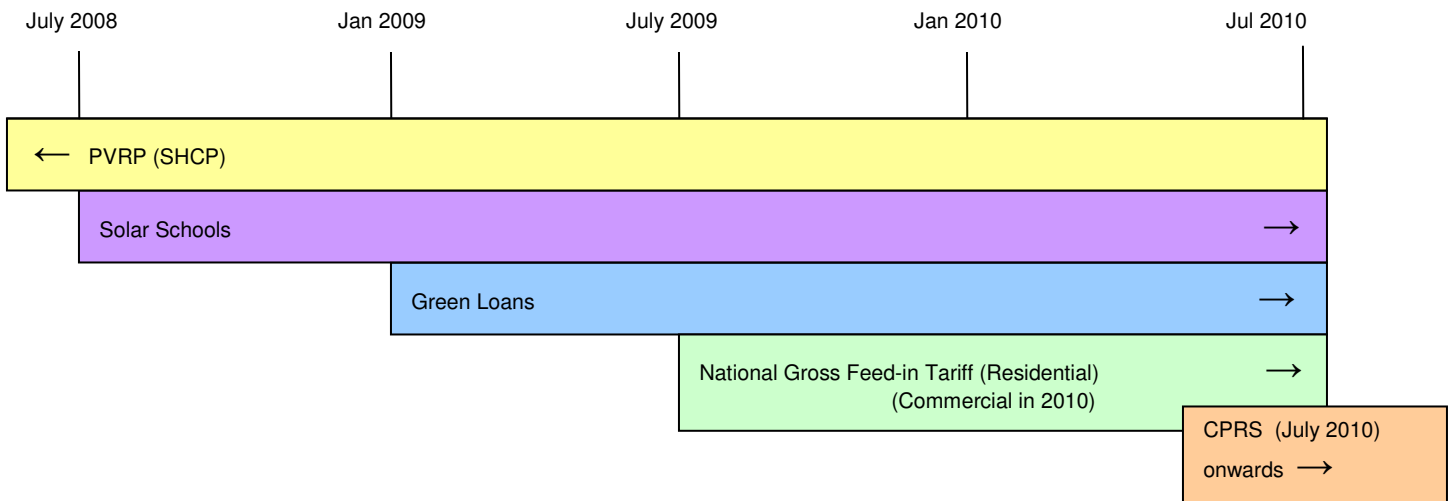
### **Limiting access**

#### For large projects

Large-scale projects in the "megawatt class" are frequently excluded by feed-in-tariff schemes. This idea limits market growth and investment.

# Industry transition to a FiT

Outlined below is a timeline of current Government support mechanisms and their dates of commencement etc. and how Conergy sees them working together to transition to a National Gross Feed-in Tariff scheme.



## Recommendations

### **The core elements of an effective and successful FiT**

The following points should be at the core of a National Gross FiT scheme as the most crucial factors in shaping its success;

**Entire generation**, with gross metering in place allows the FiT to be applied to the entire energy output of the solar PV or wind power system.

**Priority connection** of installations for the generation of electricity from renewable energy systems to the grid;

**Guaranteed purchase and transmission** of all electricity generated by connected renewable energy systems;

**Consistent, guaranteed premium rate** for the electricity, paid by the grid operators, for commissioned installations;

**Duration** of the FiT scheme operating over 20 years gives certainty to the customer;

**Payback period rate** should be guaranteed for a period long enough to provide investors with a ROI of 10 years or less;

**Simple administration** procedures ensure the scheme's success. FiT regulations have to be kept simple to be easily accessible for the broader public.

**Digression** of the FiT rate for newly commissioned installations over time of 7% (reviewable)

**Applicable to all sectors** including the residential sector. All investors including commercial, business, local councils, public buildings, schools, churches, agricultural, light industrial and large scale commercial should benefit from this policy;

**Retrospective** – the Feed-in Tariff should apply retrospectively to renewable energy systems already installed in order to encourage the early adopters to continue adopting further renewable energy technologies;