

Issues Paper

Inquiry into Feed-in Tariff Arrangements and Barriers to Distributed Generation

February 2012



About the Victorian Competition and Efficiency Commission

The Victorian Government established the Victorian Competition and Efficiency Commission to provide the Government with independent advice on business regulation reform and opportunities for improving Victoria's competitive position.

The Commission has three core functions:

- (1) reviewing regulatory impact statements, measurements of the administrative burden of regulation, and business impact assessments of significant new legislation
- (2) undertaking inquiries referred to it by the Treasurer
- (3) operating Victoria's Competitive Neutrality Unit.

For more information on the Commission, visit our website at: www.vcec.vic.gov.au. For regular updates, follow us on twitter @VCEC_victoria.

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About this Issues Paper

This issues paper aims to assist those wishing to contribute to the inquiry into feed-in tariff arrangements and barriers to distributed generation by outlining the Victorian Competition and Efficiency Commission's (the Commission's) initial views on the scope of the inquiry and the key issues (see attachment 1 for the inquiry terms of reference). Participants are invited to make written submissions to respond to these views and address the issues and questions outlined in the paper. This issues paper is intended to guide, but not to limit, the issues addressed in submissions.

Key Inquiry Dates

Submissions due:	19 March 2012
Consultation:	February to April 2012
Draft report released for further consultation:	May 2012
Draft report submissions due:	4 June 2012
Further consultation on the draft report:	May to June 2012
Final report to government:	13 July 2012

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Feed-in Tariff Arrangements and Barriers to Distributed Generation Inquiry
Victorian Competition and Efficiency Commission
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MELBOURNE VIC 3001

Or emailed to: feedintariff@vcec.vic.gov.au

Attachment 2 contains further information on how to make a submission.

1 About this inquiry

Along with many other jurisdictions, Victoria has in place programs to reduce greenhouse gas emissions and facilitate adjustment towards a low emissions economy. These programs include feed-in tariff (FIT) schemes to encourage the installation of renewable energy or low emission generators, including photovoltaic (PV) cells, on homes and other buildings. Under these schemes, households and businesses are paid for electricity produced but not used on site and exported into the electricity grid for others to use. Businesses may also install renewable energy or low emissions generation that is not covered by FIT schemes.

With the introduction of a national carbon tax, the justification and design of State government greenhouse gas policies may need to be reconsidered. The terms of reference for this inquiry look at the policies that relate to distributed energy generation and have two main elements:

- assessing the design, efficiency, effectiveness and future of FIT schemes
- identifying barriers to connecting distributed renewable and low emission technologies into the distribution system.

1.1 Coverage

The terms of reference require the Commission to:

- assess the design, efficiency and effectiveness of FIT schemes
- recommend whether existing FIT arrangements should be continued, phased-out or amended
- identify any State and/or local regulatory and other barriers to the development of a network of distributed renewable and low emission generation in Victoria, including cogeneration and trigeneration.

In addition, the terms of reference direct the Commission to have regard to:

- recent reports by the Australian Energy Market Commission on planning and connection arrangements for distributed energy generation
- reviews currently being undertaken by the Victorian Government
- relevant reports by Commonwealth forums and bodies such as the Productivity Commission.

1.2 Who should participate

The Commission encourages interested parties to express their views and contribute to this inquiry. The inquiry is likely to be of interest to a wide range of individuals and organisations, including:

- electricity generators, distributors and retailers
- manufacturers and installers of renewable energy technology
- environmental groups
- households

- government departments and their agencies (including the relevant regulatory bodies)
- local government
- public policy analysts, academics and those with an interest in energy policy.

The Commission is seeking submissions from individuals and organisations with an interest in distributed energy and FITs in Victoria. Submissions may cover all or some of the issues described in this issues paper. While the Commission will consider submissions received throughout the inquiry, submissions in response to this issues paper are invited by **19 March 2012**.

Anyone intending to make a submission or wishing to be kept informed of progress is invited to register their interest by emailing their details to feedintariff@vcec.vic.gov.au. Details of the inquiry are also available on the Commission's website: www.vcec.vic.gov.au. The website will be regularly updated to include information on the consultation process, copies of publications relevant to the inquiry and public submissions. Inquiry updates are also broadcast on twitter @vcec_victoria.

Box 1.1 How to make a submission

Anyone may make a submission (in written, electronic or audio form) to the Commission. All public submissions will be posted on the Commission's inquiry website and to facilitate this, we would prefer an electronic version of written submissions (by email or on CD).

The Commission has a strong interest in promoting informed debate on the issues arising in its inquiries and accordingly wishes to publish the submissions it receives to the greatest extent possible. Nonetheless, materials may be submitted in confidence. They must be clearly marked 'CONFIDENTIAL', either in part or in full, and provide an explanation of the reason for claiming confidentiality. If the Commission feels that a claim for confidentiality has not been substantiated, it will contact the author to discuss the reason for the claim. If the discussion does not resolve the issue, the Commission will return the submission to its author. Confidential materials which are accepted will be read only by Commissioners and Commission staff and will not be referred to in the Commission's report.

The Commission publishes on its website all written submissions unless a claim for confidentiality is justified or, in its discretion, the Commission considers that publication is not in the public interest. This could be because a submission may be defamatory or otherwise unlawful or reflect on an individual or organisation in a way the Commission considers to be an abuse of the process. Contact details will be removed from submissions before they are uploaded to the website.

You should be aware that the Commission's documents, including the unpublished submissions it accepts, are subject to the *Freedom of Information Act 1982 (Vic)*. The Commission develops policies in the light of the *Charter of Human Rights and Responsibilities Act 2006 (Vic)* which recognises that human rights are essential in a democratic and inclusive society.

2 Scope of the inquiry

This issues paper is designed to assist you to participate in the inquiry and help establish the public inquiry process. It provides some background information, identifies some of the major issues the inquiry is likely to address and asks questions about issues on which the Commission is seeking information and views. The issues paper is not intended to limit comments, nor does it require you to answer all the questions posed. Indeed, the Commission will be guided to a significant extent by the matters and insights raised by participants, including matters that may not have been identified in this issues paper.

In the sections below, the Commission explores the nature of the electricity industry in Victoria, placing it within the broader National Electricity Market (NEM) and the current feed-in tariff (FIT) arrangements in Victoria. This background information is followed by an outline of some of the issues the inquiry is expected to address.

2.1 Context of the inquiry

Previously, FiTs were set to encourage the installation of PV cells and thereby increase the amount of energy generated through low emissions technologies. More recently, however, the Commonwealth has legislated to tax carbon emissions. The Commonwealth's Clean Energy Future legislation will, among other things, impose a fixed carbon price of \$23 a tonne from 1 July 2012, moving to a flexible price after three years.

The Commonwealth also has a target that 20 per cent of Australia's electricity supply will come from renewable energy by 2020. This target is supported by other assistance, some of which is targeted specifically at small-scale renewable energy. Since January 2011 households, small businesses and community groups installing small-scale renewable energy technologies have been eligible to receive financial credits in the form of small-scale technology certificates. Additional credits are available to encourage further the installation of small-scale renewable generators, such as roof-top PV or wind generators (DCCEE).

The introduction of a price on carbon has led to some, including the Council of Australian Governments (COAG), to argue that subsidies through policies such as FiTs should be discontinued. South Australia and New South Wales recently held inquiries to establish the future framework for setting 'fair and reasonable' FiTs in their jurisdictions. The terms of reference for this inquiry note that:

In the context of the implementation of a national carbon price, it is appropriate that the Commission undertakes a review of Victoria's feed-in tariff schemes.

More generally, the introduction of a price on carbon will encourage more energy generation from low emissions sources. However, there may be regulatory or other barriers that prevent or hinder the move to low emission sources of energy. As noted in the terms of reference:

Addressing any state and local regulatory or other barriers to the uptake of low emissions generation, including cogeneration and trigeneration, is also important to ensure that any transition to low emissions generation occurs as smoothly and as cost-effectively as possible.

This inquiry covers those barriers that apply to renewable and low emissions distributed energy.

2.2 Victorian feed-in tariff arrangements

FIT arrangements provide for customers to enter into a contract with their electricity retailer to receive payments for the electricity generated by small-scale renewable generators at their premises.

FITs may be either net or gross. Under a net FIT, a premium is paid for any solar energy that goes back into the grid from the premises, and so the customer is paid only for the surplus energy generated. Under a gross FIT the customer is paid for every unit of electricity generated, regardless of whether it goes into the grid or is used at the premises, and they then pay separately for the energy they use. All Victorian FITs are net.

In Victoria, there are three FIT arrangements established under the *Electricity Industry Act 2000* (box 2.1):

- the general feed-in tariff scheme, also known as the standard feed-in tariff (SFIT), scheme established in 2004
- the premium solar feed-in tariff scheme (PFIT) introduced in 2009 and now closed to new customers
- the transitional solar feed-in tariff (TFIT) scheme to replace the premium solar feed-in tariff scheme.

All electricity retailers with 5000 customers or more are required to make offers to eligible customers under these three schemes. Electricity retailers with less than 5000 customers can choose to make offers under these schemes, in which case the relevant statutory requirements apply.

Box 2.1 Victorian feed-in tariff schemes

The standard feed-in tariff (SFIT) is available to customers with small renewable energy generators (generating electricity from wind, solar, hydro and biomass sources) with a system-size up to 100 kilowatts. Eligible customers receive a 'fair and reasonable' offer for excess energy fed back into the state's electricity grid. The SFIT scheme has no end date. Customers on the SFIT can switch to the transitional solar feed-in tariff (TFIT) provided they meet the TFIT eligibility criteria (however, customers eligible for the TFIT are excluded from applying for the SFIT).

The premium feed-in tariff (PFIT) started in late 2009 and is now closed to new applicants. The scheme offered eligible customers with small-scale solar systems of five kilowatts or less a credit of at least 60 cents per kilowatt hour for excess electricity fed back into the grid. The scheme will run for 15 years from 1 November 2009 — so signed-up eligible customers will receive the PFIT until 1 November 2024.

Box 2.1 Victorian feed-in tariff schemes (cont.)

The transitional solar feed-in tariff (TFIT), available 1 January 2012, offers eligible solar customers a guaranteed minimum of 25 cents per kilowatt hour for excess electricity fed back into the grid. To be eligible, customers must:

- have a solar PV system no greater than five kilowatts in size
- claim for a principal place of residence (for households)
- consume 100 megawatt hours or less of electricity per year (for small businesses or community organisations)
- claim only one solar PV system per site (small businesses or community organisations operating across multiple sites can claim for one system per site)
- have bi-directional metering in place that measures two-way electricity flows and records them on a half hourly basis.

This scheme is intended to have a capacity cap of 75 megawatts of installed solar systems across the state, and provide eligible signed-up customers with guaranteed credits until the end of 2016. However the Minister can also declare a TFIT scheme end date before then if it is considered appropriate.

Sources: (DPI 2011a; DPI 2011b; DPI 2011c; DPI 2011d).

The objectives of the three Victorian FiTs are outlined in box 2.2.

Box 2.2 The objectives of Victorian's FiT schemes

Each of Victoria's three FiT schemes have slightly different objectives and therefore appear to be seeking to address different problems or concerns.

Standard FiTs were established in 2004 to:

- develop Victoria's substantial wind energy resource
- ensure timely and efficient connection of wind energy generators
- address problems where the benefits and costs of connecting wind farms are not shared equally amongst market participants
- remove market barriers that constrain the development of a small wind turbine industry in Victoria.

Premium FiTs were established in 2009 to:

- reduce cost barriers to installing small-scale solar photovoltaic (PV) systems
- encourage the continued uptake of solar PVs as part of a greenhouse gas abatement strategy for Victoria
- modernise the regulatory approach to crediting and qualifying customers
- assist households to make a personal contribution to tackling climate change
- ensure certainty for owners of solar PV systems
- ensure certainty for electricity retailers and distributors
- support the solar industry.

Box 2.2 The objectives of Victorian's FiT schemes (cont.)

Transitional solar FiTs were established in 2011 to:

- ensure that the level of subsidy is equitable, given the cost to electricity users, including those on concessions
- support renewable energy in the transition to a lower emissions future
- provide a fair price to households feeding solar power back into the grid
- manage changing prices as PV costs have dropped by around 50 per cent
- reduce the boom and bust cycle for the solar panel industry
- provide an average payback period of less than 10 years.

Sources: (Brumby 2004; Batchelor 2009; O'Brien 2011).

The Commission notes that while their objectives appear to have changed, FiTs continue to be used. The main problem addressed by the SFiT was barriers to small-scale wind, PFiT was barriers to small-scale solar and TFiT was managing cost pressure on energy prices, all in the absence of a carbon price.

2.3 Distributed generation

The terms of reference direct the Commission to look into regulatory and other barriers to the development of a network of distributed renewable and low emission generation in Victoria. There does not appear to be a standard definition of distributed generation, however, and reports that analyse distributed generation (or embedded generation) use varying definitions.

While the Commission does not need to settle on an authoritative definition of distributed renewable or low emissions generation, it does need to define the scope of its inquiry. Subject to feedback on the issues paper, the Commission anticipates that this inquiry will focus on generation with the following characteristics:

- the energy is generated by households, businesses or community groups who primarily intend to use the energy on-site or to supply people or organisations close by, and includes cogeneration and trigeneration systems (box 2.3)
- the generator is connected into the electricity grid through the distribution network, not the transmission network. In some cases the system may be stand alone
- energy in excess of the needs of the generation owner may or may not be sold (exported) into the grid
- the energy could be from renewable sources such as solar, wind, bio gas or waste, but may also be low emission fossil fuels such as natural gas
- the total amount of energy generated is small to medium scale.

The Commission is still considering the scale of generation activity that should be covered by its definition of distributed generation. A CSIRO report on distributed energy systems defines these systems as typically in the range of 3 kW to 10 MW. Work by ClimateWorks Australia, in conjunction with Seed Advisory and the Property Council of Australia, suggested regulatory improvements should cover systems up to 5MW (ClimateWorks 2011, p. 39). Under the national electricity rules, the rules for network connection in chapter 5 apply to generators above 30 MW. While a new chapter 5A that covers retail customers has been endorsed for introduction by the Ministerial

Council, the regulation of these smaller generators and their role in the electricity market is different. The Commission's initial view is that its inquiry should cover generators less than 30MW.

Another question is whether the Commission's inquiry should cover medium scale generators (such as wind farms) that are set up primarily to produce and sell electricity, rather than producing electricity as an adjunct to other activities. Given the time and resources available to this inquiry, the Commission will seek to concentrate its efforts on issues where it can add the most value. At this stage, it is not clear whether there are distinct, unexplored barriers to medium scale generation (connected to the distribution network) that would benefit from specific analysis by the Commission.

Box 2.3 Cogeneration and trigeneration

Cogeneration (also known as combined heat and power) is the simultaneous production of electricity and heat from the same fuel source. Trigeneration (also known as combined cooling, heat and power) is the simultaneous production of heat, cooling and electricity.

In both cogeneration and trigeneration systems, a fuel is burnt in an engine which drives a generator to produce electricity. In cogeneration systems the waste heat from the engine is used for space, water or process heating and in trigeneration systems it can also be converted to cold water for cooling through an absorption chiller.

Source: (ClimateWorks 2011, p. 14).

Information request

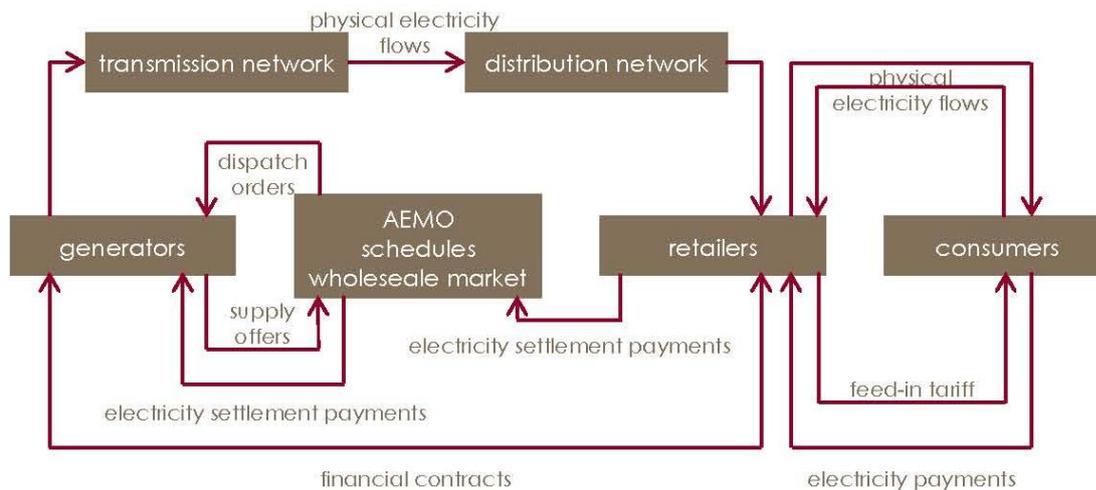
What criteria should the Commission use to define distributed renewable and low emissions generation for the purposes of this inquiry?

Are the characteristics outlined above appropriate for distinguishing the relevant generation systems? What size of system should the Commission define as distributed energy for the purpose of this report? Should the Commission include medium scale generation, such as wind farms, in its definition of distributed generation?

3 The Victorian electricity industry

The market structure for electricity in Victoria can be defined by interactions through physical energy flows and financial transactions between market participants (figure 3.1). The key participants in the Victorian electricity industry are summarised in box 3.1.

Figure 3.1 Market structure



Source: Commission analysis.

Box 3.1 Electricity industry key participants

The key participants in the Victorian electricity industry are:

- Generators — supply electricity to the transmission or distribution system. Most of the generation capacity in Victoria is privately owned. The major companies are AGL Energy, International Power, TRUenergy, and Alinta Energy.
- Transmission network service providers (TNSPs) — transport electricity from generators to distribution network service providers and large end users through high voltage transmission lines to substation transformers that lower the voltage for distribution. The Victorian transmission network service provider in the National Electricity Market (NEM) is owned and operated by SP AusNet.
- Distribution Network Service Providers (DNSPs) — link the transmission systems to end users (including households) through distribution lines that carry low voltage electricity. In Victoria DNSPs are Citipower, Powercor, Jemena, SP AusNet and United Energy. Each DNSP is responsible for a defined region.
- Retailers — act as an interface between the electricity wholesale market and customers. They manage customer transfers, connections, billing, complaint handling, and service information. They also deliver a range of Commonwealth and state programs, including community service obligations, energy efficiency schemes, hardship schemes and renewable and other energy generation schemes. Retailers operating in Victoria include: AGL, Australian Power and Gas, Click Energy, Dodo Power and Gas, Energy Australia, Lumo Energy, Momentum Energy, Neighbourhood Energy, Origin Energy, Powerdirect, Red Energy, Simply Energy and TRUenergy. Retailers are not constrained to operate in a particular region and are free to compete for customers.

Box 3.1 Electricity industry key participants (cont.)

- Consumers — purchase and use electricity.

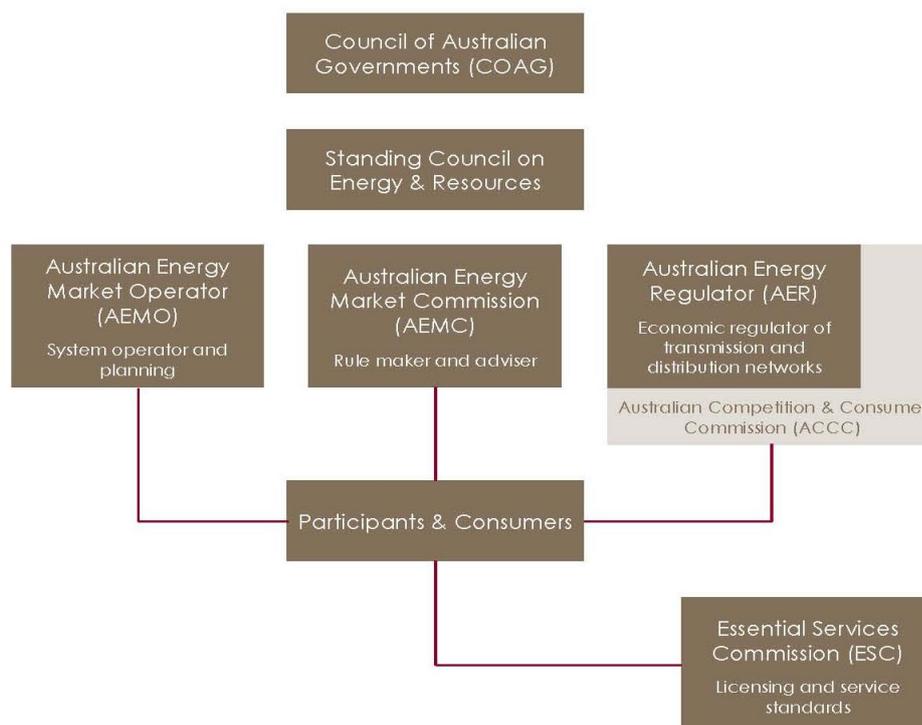
These assets and businesses physically operate in Victoria and are governed by the rules of the NEM which is a wholesale market for the supply of electricity to retailers and end-users. The NEM consists of five interconnected regions (essentially Queensland, New South Wales, Victoria, South Australia and Tasmania). The NEM is operated by the Australian Energy Market Operator (AEMO) under the National Electricity Law and Rules.

Source: Commission analysis.

3.1 Electricity industry regulatory structure

The National Electricity Market (NEM) operates the wholesale market for the supply of electricity to retailers and end-users in all states and territories except Western Australia and the Northern Territory. The high level regulatory structure of the electricity market in Australia is outlined in figure 3.2.

Figure 3.2 Regulatory structure



Source: Commission analysis.

The regulatory framework that oversees the electricity market in Australia is governed by the COAG and developed under the guidance of the Standing Council on Energy and Resources. The Australian Energy Market Commission (AEMC) and Australian Energy Regulator (AER) oversee and regulate the NEM. The AEMC makes rules in response to requests for rule changes, usually from NEM participants.

The AER enforces and monitors compliance with the National Electricity Rules, and has responsibility for economic regulation of electricity transmission. The National Electricity

Rules are made under the National Electricity Law (NEL). The Australian Energy Market Operator (AEMO) manages and operates the NEM and coordinates planning of the market. In the case of appeals, these are considered by the Australian Competition Tribunal.

3.1.2 Carbon abatement

The Commonwealth emissions trading scheme, renewable energy target and Clean Energy Finance Corporation are Australia's main policy measures for reducing carbon emissions. These policies will generally help renewable and low emissions energy producers by making it more costly to produce carbon intensive energy. The small-scale renewable energy target provides payments to households and other small producers of renewable energy. The emissions trading scheme may apply to some larger cogeneration plants: 'in general, a threshold of 25,000 tonnes of CO₂-e will apply for determining whether a facility will be covered by the carbon pricing mechanism' (Australian Government 2012).

3.1.3 Market for distributed energy

The Victorian energy market has historically been shaped by large brown coal energy generation in the Latrobe Valley, with large transmission lines to distribution networks. This network reflects system design decisions made in the 1920s and this means there is a legacy structure that has adapted and changed over the years, at least to some extent. Smaller gas fired generators increasingly played a part in the energy market after privatisation and more recently large-scale wind and small-scale solar capacity have grown rapidly.

While exact figures on market characteristics depend on definitions of distributed generation, such generation already appears to play a role in the energy market, with Energy Supply Association of Australia (ESAA) figures showing 'embedded and non-grid generation' accounts for 7.2 per cent of Victoria's installed capacity (table 3.1). Note that some renewable embedded/non-grid energy is cogeneration and wind power is classed as 'embedded' generation, even though the majority of wind power connects to the transmission network.

Table 3.1 Capacity of embedded and non-grid generation in Victoria — June 2010

All embedded/non-grid	MW	Non-hydro renewable embedded/ non-grid	MW
Hydro	103	Black liquor	55
Natural gas	133	Landfill gas	40
Waste gas	45	Sewage gas	22
LPG	0.6	Solar	75
Non hydro renewables	619	Wave	0.2
		Wind	428
		Solar hot water	131,000 units
Total	900	Total	619

Note: Solar hot water not included in total, renewable embedded/ non-grid does not include hydro.

Source: (ESAA 2011, pp. 20-21; CEC 2011).

Small-scale solar market

Many Victorian electricity retailers are active in the small-scale solar market, having published offers under the standard, premium and transitional feed-in tariff schemes (SFIT, PFIT and TFIT) (these are discussed further in the following section). Indeed, electricity retailers with more than 5000 customers are required to offer feed-in tariffs, and have done so using different packages and terms and conditions.¹ The number of PFIT customers and installed capacity (kW) within the various Victorian electricity distribution networks is shown in table 3.2.

Table 3.2 **Premium solar feed-in tariff scheme uptake (as at 31 October 2010)**

	SP Ausnet	Jemena	Powercor	CitiPower	UED	Total
Number of PFIT Customers	9152	2467	7259	1451	5236	25 565
Installed capacity (kW)	12 953	3969	10 648	1654	7977	37 201

Source: (DPI 2011e, p. 153).

Producers and installers of solar panels

The small-scale solar market also comprises producers and installers of solar panels. There is a significant number of solar PV cell and panel producers worldwide, many of which sell their products in Australia. Some of the key producers in the solar PV cell and panel market in Australia are documented in box 3.2.

Box 3.2 **Key producers of solar PV cell and panels in Australia**

SilexSolar is an Australian owned commercial manufacturer of solar PV cells and panels. SilexSolar is partnered with the University of New South Wales (NSW) and the Australian National University (ANU) in developing high power monocrystalline solar panels that incorporate anti-reflective coated cells and glass to generate more energy.

Suntech in China is the world's largest producer of silicon solar PV cells and panels. Suntech was founded by University of NSW graduate.

Sharp Solar is the world's largest PV manufacturer. Sharp produces single and multi-crystalline panels and amorphous silicon solar cells in Japan.

Conergy is a German multinational solar PV panel manufacturer and supplier of complete solar power systems including modules, inverters and mounting systems. Another German multinational producer is Bosch Solar Energy.

Other producers of solar PV cells and panels include: Trinasolar (China), Hyundai Heavy Industries (South Korea), Kyocera (Japan), SunPower (USA) and Solyndra (USA) which specialises in the design and manufacture of panels made up of cylindrical modules.

Source: Commission analysis.

Many energy retailers also supply and install solar systems, including to customers who purchase their electricity from other retailers. This includes selling a range of system

¹ If retailers with less than 5000 customers make feed-in tariff offers, the statutory requirements apply.

configurations with different panels and inverters, arranging for finance, arranging installation by licensed accredited installers, organising applications for appropriate government rebates, and providing advice and assistance for the installation of appropriate meters by the relevant distributors (Origin 2011; TRUenergy 2011).

In Australia, all installed solar PV cells and panels must be certified and approved to AS/NZS5033 standards. These guidelines are set by Standards Australia. The Clean Energy Council (CEC) also runs an industry accreditation program,² and there are now more than 3000 accredited installers of PV systems who are certified and trained.

To be eligible for the Commonwealth rebates and Renewable Energy Certificates (RECs), solar PV systems must be designed and installed by accredited CEC installers. Each installation must have a completed report before the system has been commissioned and RECs can be applied for up to 12 months after the date of installation.

Distributed generation

Distributed generation covers a variety of power generating technologies, such as gas, solar PV, fuel cells, wind turbines, hydro and cogeneration (box 3.3) and trigeneration.

In Australia, distributed generation accounts for 7.2 per cent of Victoria's total electricity generation, which includes 4.7 per cent from renewable distributed energy generation and 2.5 per cent from non-renewable distributed energy generation. A recent observation is that:

In absolute terms, installed DG [distributed generation] capacity has increased in Australia by about 20 per cent between 2006 and 2010, however this has not kept pace with the national average increase in installed capacity. (Dunstan et al. 2011, p. 42)

While data depends on definitions and sources, non-renewable cogeneration contributed around 478MW of Victoria's electricity generation in 2010 (table 3.3).

Table 3.3 Non-renewable cogeneration in Victoria — 2010

	MW
Brown coal	195
Natural gas	124
Waste gas	45
LPG	0.6
Bioenergy	113
Total	478

Note: the 195MW Morwell brown coal cogeneration power station is classed as a 'principal power station' and does not appear in Table 3.1.

Sources: (ESAA 2011, p. 21; CEC 2012).

As outlined below the premium and transitional FiTs apply only to small-scale solar PV. The SFiT applies to other distributed (as well as solar) energy sources with a system size of less than 100 kW.

² See <http://www.solaraccreditation.com.au> for more details.

Box 3.3 QENOS cogeneration facility

In March 2011, AGL Energy Limited (AGL) announced plans to construct a cogeneration facility for the Qenos polymer products manufacturing plant in Altona, in Melbourne's inner west. The facility will generate power and heat more efficiently than Qenos' steam turbine system — and reduce greenhouse gas emissions. The cogeneration unit is expected to begin operations in late 2012.

The facility will have a nominal capacity of 21MW and, when coupled with a heat recovery steam generator, will produce up to 88 tonnes of steam per hour. This will meet all of Qenos's electricity demand and over a third of its steam requirements.

AGL will build the co-generation plant for Qenos — with the parties entering into a 15 year operating and maintenance agreement, with options to extend. AGL will also become the sole supplier of natural gas to the site to operate the gas turbine and balance of plant. The cogeneration plant and balance of plant is estimated to consume approximately 4.5PJ of natural gas per annum, close to the threshold for participating in the emissions trading scheme.

The facility is expected to cost \$45 million, and is the largest investment in industrial or manufacturing cogeneration in over 10 years.

AGL also owns and operates gas-fired cogeneration plants at Symex Holdings (4.4MW) in Victoria and in Coopers Brewery (4.4MW) in South Australia and biogas (sewage) generation at Melbourne Water's sewage treatment plants at Werribee and Carrum Downs (10MW).

Sources: (QENOS 2011; AGL 2011; Sustainability Victoria 2008).

4 Inquiry issues

4.1 Assessing the design, effectiveness and efficiency of feed-in tariffs

The terms of reference require the Commission to assess the design, efficiency and effectiveness of feed-in tariffs (FiTs), including market-based gross FiTs, in the context of a national carbon price. The terms of reference do not specify criteria for the Commission to use in undertaking its assessment. Consistent with the Commission's order-in-council, it intends to analyse FiTs from the perspective of whether they improve the well-being of the community as a whole, rather than promoting the interests of particular industries or groups. Answering this question requires a clear understanding of the objectives of the policy, and whether these objectives are being achieved.

4.1.1 Design of FiTs: how do they work?

There are three FiT schemes:

- (1) *Standard feed-in-tariff (SFIT)*: requires retailers to publish the prices, and terms and conditions on which they will purchase electricity supplied by generators. This FiT varies among retailers according to their business strategy and applies to all renewable technologies (including solar). It is available to households, community organisations and small businesses with a solar generation capacity greater than 5 and less than 100 kilowatts in size, and is also available to eligible customers

generating other forms of renewable energy, such as wind, hydro or biomass, with a system size of less than 100 kilowatts. All electricity retailers with more than 5 000 customers must offer the SFIT.

- (2) *Premium solar feed-in tariff (PFIT)*: This scheme (which is now closed to new applicants) offered eligible households, businesses and community organisations with small-scale solar systems 5 kilowatts or less a credit of at least 60 cents per kWhr for excess electricity fed back into the grid. This tariff was calculated to provide a 10 year payback period for those installing small-scale solar system (system costs were significantly higher when this tariff was introduced compared to current system costs).
- (3) *Transitional solar feed-in-tariff (TFIT)*: Under the TFIT scheme, households receive a minimum of 25 cents for every kilowatt hour they feed back into the grid. It is only available to new solar customers with systems of 5 kW or less.

In Victoria, to ensure that the customer is paid (in the form of a credit) for any surplus energy generated that goes back into the grid, retailers are required to fund the SFIT scheme. The PFIT and TFIT schemes are funded by a distributor 'pass through' model. Under this arrangement distributors apply the appropriate feed-in tariff rebates to electricity retailers' network bills that, in turn, apply the credits to eligible customers' bills. The AER regulates the distribution charge that retailers pay the distributor.

Box 4.1 outlines the eligibility criteria for the transitional solar FiT scheme in Victoria.

Box 4.1 Eligibility for the transitional feed-in tariff scheme

To be eligible, customers must:

- have a solar PV system no greater than five kilowatts in size
- be claiming for a principal place of residence (if a household)
- consume 100 megawatt hours or less of electricity per year (if a small business or community organisation)
- claim only one solar PV system per site (if you are a small business or community organisation operating across multiple sites, a claim can be made for one system per site)
- have bi-directional metering in place that measures two-way electricity flows and records them on a half hourly basis

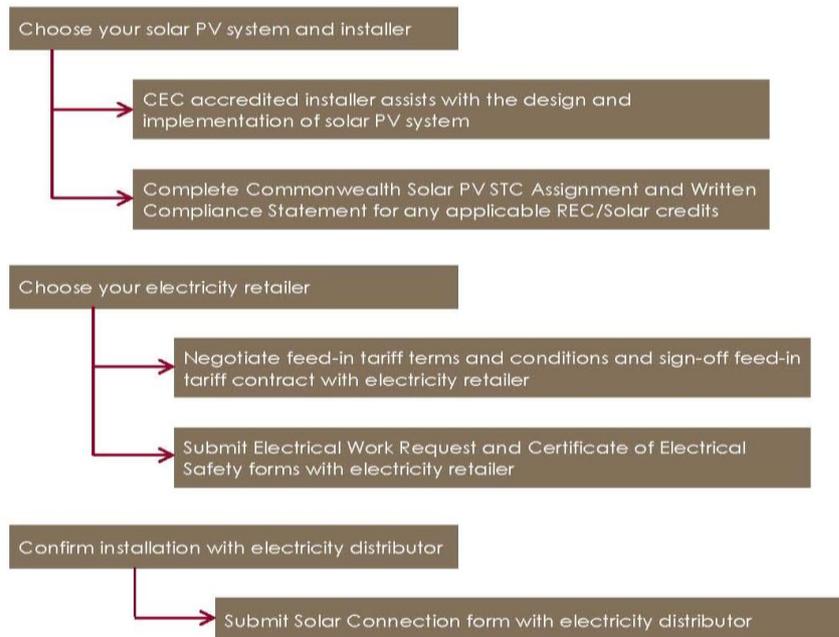
Source: (DPI 2011f).

Electricity retailers are required to publish their feed-in-tariff terms and conditions relating to each of the schemes in the Government Gazette and on their websites. In some cases electricity retailers have combined all offers into one set of terms and conditions; in others they have separated the offers into discrete terms and conditions.

The Department of Primary Industries publishes a set of 'fair and reasonable' criteria that are used as the basis to assess electricity retailer feed-in tariff terms and conditions. The *Electricity Industry Act 2000* (Vic) provides that if the Minister for Energy and Resources is not satisfied that the prices, terms and conditions of a retailer's feed-in-tariff offers are fair and reasonable, the Minister may refer the matter to Victoria's Essential Services Commission (ESC) for assessment. In a guidance paper, the ESC has outlined the criteria it uses for assessing FiT offers. (These criteria include cost of service provision, cost allocation, cost differentials and simplicity. A small number of referrals have been

made under this mechanism, see esc.vic.gov.au). A simplified application process is set out in figure 4.3.

Figure 4.3 Simplified example of the application process for feed-in tariffs for a solar PV system



Source: Commission analysis.

4.1.2 Objectives of feed-in tariffs

Overall the objectives cited for FiT schemes in the past appear to fall into four categories:

- reduce greenhouse gas emissions
- support innovation and development of a new industry
- ensure fair payments for electricity from small-scale PV investments
- efficiently allocate risks: including risks to customers of changes in government policy and energy market risks to small-scale PV investors.

Another objective — related to the first dot point — has been to assist households to make a personal contribution to reducing greenhouse gas emissions.

The Commission has been specifically asked to view FiTs in the context of the national carbon price. Therefore, it has particularly focused on the greenhouse gas emissions objective.

Carbon emissions reduction

With the introduction of the carbon tax the Commission's initial view is that the objective of using FiTs to reduce greenhouse gas emissions is no longer valid.

As designed, FITs lead to increases in small-scale distributed low emissions technologies, especially small-scale solar. The net effects on renewable energy and emissions overall, however, are not always clear, as:

Strong uptake of domestic based renewable energy like solar PV systems, supported by a combination of deeming and multipliers for solar hot water and other small-scale renewable technologies and state-based financial assistance, was putting strong downward pressure on REC prices and essentially crowding out larger scale (and lower cost) renewable technologies. (DAE 2011, p. 15)

Even if feed-in tariffs were *effective* in reducing emissions, some would consider that the emissions trading scheme will deliver more *efficient* outcomes. Professor Garnaut argues that:

Other and more expensive power generation mitigation measures especially the renewable energy target and subsidies for new roof top solar, can be phased out as the carbon price rises, or feed-in tariffs replaced immediately by more efficient measures for new investments. (Garnaut 2011, p. 2)

In an international review, the Productivity Commission (PC) found that subsidies for solar PV systems were consistently the most costly way of achieving abatement for all countries (box 4.2). Others may consider that additional incentives, such as generous FIT, are also required to reduce greenhouse gas emissions. However, the price of PV panels is falling rapidly so the attractiveness of PV panels will increase even in the absence of other incentives to invest in this technology.

Box 4.2 **Cost effectiveness solar PV in Australia**

The Productivity Commission (PC) estimated the implicit abatement subsidies associated with policies supporting a particular emissions-reduction technology. The results compare the cost effectiveness of different policies and show that solar photovoltaic (PV) is currently a relatively costly abatement option compare to other options.

The PC reported that in Australia, the combined effect of the Renewable Energy Target and state and territory feed-in tariffs was estimated to have provided a subsidy equivalent to solar PV of \$149-194 million in 2010.

The PC also found that implicit abatement subsidies for solar PV amounted to between \$432-1043 per tonne of carbon dioxide abated. This is one of the highest compared to other abatement policies and in comparison to other developed countries with the same policy.

Source: (PC 2011).

In the Commission's view, there are other options for reducing greenhouse gas emissions so the inquiry should consider whether feed-in tariffs are the most efficient method for reducing such emissions.

Information request

What is the problem that feed-in tariffs are addressing?

What are the intended outcomes for FiTs?

What are the most appropriate objectives for the feed-in tariffs?

Is a regulated feed-in tariff an efficient way of achieving these objectives?

Does the introduction of an emissions trading scheme remove the case for FiTs as an instrument for reducing greenhouse gas emissions?

4.2 Future feed-in tariffs arrangements

The terms of reference require the Commission to:

Provide a recommendation as to whether existing feed-in tariff arrangements should be continued, phased-out or amended. Where phase-out of existing arrangements is proposed, the appraisal should give consideration to whether any transitional arrangements may be necessary. Any changes to existing arrangements would not be applied retrospectively.

In assessing the future of future FiT arrangements, the Commission notes that Victoria — through the COAG — has agreed to a set of national principles for FiT schemes (box 4.3).

Box 4.3 National principles for feed-in tariff schemes

In 2008, COAG agreed to a set of national principles to apply to new feed-in tariff (FiT) schemes and to inform the reviews of existing 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:

- 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
- for any new measures, or during any reviews of existing measures, 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)

Box 4.3 National principles for feed-in tariff schemes (cont.)

- give explicit consideration to compensation from public funds or specific levies rather than cross-subsidised by energy distributors or retailers
- not impose a disproportionate burden on other energy consumers without small renewable generation.

The Ministerial Council on Energy³ (MCE) to continue to advance fair treatment of small renewables

- (3) That the MCE should continue to implement the regulatory arrangements for small renewable customers, consistent with the objectives of the relevant electricity legislation, whereby the:
- 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
 - connection arrangements for small renewables customers should be standardised and simplified to recognise the market power imbalance between small renewable customers and networks
 - 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.

FiT 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:
- 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
 - 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
 - should be subject to independent regulatory oversight according to clear principles; and
 - should be consistent with implementation of other intergovernmental agreements relating to energy, competition policy or climate change.

Source: (COAG 2008a; COAG 2008b).

Any recommendations made by the Commission would need to take account of the COAG principles. The COAG principles require that small renewable energy producers, such as households with solar PV panels:

... 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

³ Replaced in December 2011 by the Standing Council on Energy and Resources.

electricity network it feeds in to, taking into account the time of day during which energy is exported ... (COAG 2008a)

This suggests that some form of FiT would be offered by electricity retailers. This may, in principle, range from allowing the market to determine such tariffs, to an obligation to offer a FiT that is market determined and may vary among retailers and customers, or setting a standardised FiT that is uniform among retailers.

The issues for the Commission include whether such a tariff should be regulated in Victoria rather than being set by the market, and if it is regulated the form of any obligations, including whether it should specify a price or a price schedule and whether it should include a 'premium' above the value of energy exported.

The various options for the Commission to consider are to continue existing FiT arrangements, discontinuing the existing schemes or amending them in some way. The options are outlined below.

4.2.1 Continuing current FiTs

Continuing the existing FiTs would mean that when the TFiT expires in five years (as intended) those customers would move onto the SFiT.

The SFiT is available to those with small renewable energy generators and covers not only solar systems but also wind, hydro and biomass energy generation sources. The SFiT is funded by the grid retailers (where as the transitional and premium solar FiTs are funded through a distributor 'pass through' model).

4.2.2 Discontinuing regulated FiTs

Discontinuing the existing FiTs would mean abolishing the SFiT scheme, closing the TFiT to new customers, and discontinuing the transitional and premium schemes when their announced phasing periods expire.

Electricity businesses would be free to offer FiTs to those offering their excess power to the grid, and the Commission expects some retailers would be likely to continue to offer such tariffs. These FiTs would be determined by the market and would be regulated under the Australian Consumer Law, for example, to prevent misleading and deceptive conduct or abuse of market power by the electricity businesses. Electricity businesses would also need to comply with any requirements under the national electricity rules.

The Commission notes that energy retailers in Victoria currently offer FiTs above that mandated by regulation in response to their own business needs and objectives.

4.2.3 Amending current FiTs

Amending the existing FiTs could be done in a number of ways. The Commission considers that there are two broad models in which future FiTs could be regulated.

It would be possible to regulate a requirement that retailers offer a FiT but not regulate the actual price paid. The regulation could ensure that retailers are required to publish the tariff they offer and the associated terms and conditions. Transparency would then be ensured so that customers could compare the offers made by different retailers and choose the one that best suits their needs. Given the proposed chapter 5A of the NEL, which will require retailers to have an approved standard offer for basic connections, which includes micro embedded generation, the Commission would need to consider what role, if any, the State would have in such regulation.

Regulating 'competitive' FiTs

FiTs could be regulated in a manner that attempts to mirror the outcome that would result from a competitive market. Such regulation may be justified if there is some form of market failure that means a competitive price would not be offered without regulation or that electricity businesses would not offer FiTs at all.

The most common forms such a market failure could take include: market power, incomplete information, or excessive switching costs. The existence of such market failures would mean that businesses would offer FiTs that are too low or the terms and conditions may disadvantage the power supplier. The other issue may be that consumers do not have the information or capacity to effectively choose or switch.

This approach would mean setting a regulated minimum or indicative price, subject to periodic review by an authorised regulator. Both New South Wales' (NSW) and South Australian (SA) regulators have determined such tariffs (box 4.4). Another option would be to specify a one-for-one tariff where consumers are paid the current retail market rate for the energy they export.

Box 4.4 **Reviews of Feed-in Tariffs in other Australian jurisdictions**

New South Wales

New South Wales' Independent Pricing and Regulation Tribunal (IPART) is currently reviewing solar feed-in tariffs. The review will establish a 'fair and reasonable' value for electricity generated by small-scale solar photovoltaic (PV) systems. The fair and reasonable value determined by IPART must not result in any increase in electricity prices in NSW, and must not be funded from the NSW Government budget.

In the draft report released in November, IPART recommended a fair and reasonable feed-in tariff of 8 to 10 cents per kWh in 2011-12. This value will increase after the introduction of a carbon pricing mechanism on 1 July 2012, but IPART will not provide an estimate for 2012-13 until June 2012. The release of the final report will be in April 2012.

South Australia

The Essential Services Commission of South Australia (ESCOSA) is also reviewing the price for the feed-in tariff that can be earned by customers that install eligible solar PV generators. ESCOSA is to set the fair and reasonable value to a retailer of electricity fed into the network, and all retailers selling electricity to customers eligible to receive the feed-in tariff would be required to pay the amount.

ESCOSA also has released a draft price determination. A feed-in tariff of 7.1 cents per kilowatt hour (c/kWh) is applicable from 27 January 2012 to 30 June 2012. ESCOSA also considered future feed-in tariff rates with and without a carbon price. However, in light of the passing of the Australian Government's Clean Energy Bill, ESCOSA released its final price determination in January 2012 with an adjustment to reflect the inclusion of a carbon price. The FiT will be 9.1 c/kWh for the period 1 July 2012 to 30 June 2013 and 11.2 c/kWh for the period 1 July 2013 to 30 June 2014.

Sources: (IPART 2011; ESCOSA 2011)..

Regulating a premium FiT

Another option is to regulate FiT and include a requirement that retailers pay a premium above the competitive market price for power exported to the grid. The payment of a premium could be justified to encourage additional installation of distributed generation if there are additional benefits which would not be captured by the market. Any such benefits would result in under provision of distributed generation technology if the determination of FiT was left to the market without regulation.

There are different ways in which such a premium could be determined:

- The FiT could be set on the basis of a given payback period to allow households or others to recover the costs of installing distributed generation technology. This is the case with Victoria's current schemes. This approach is relatively simple to calculate, but it may not ensure the benefits of the scheme outweigh its costs.
- The premium to be applied to the market-based FiT could be based on an estimate of the external benefits accruing from the installation of distributed generation (such as PV cells). This would, however, be difficult to calculate in practice.

Regardless of how the premium is determined, a subsidy would need to be paid either by electricity users or taxpayers. In its draft report, the Commission expects to provide some quantitative indication of a general price estimate if continuation of some form of regulated FiT were among its draft recommendations.

4.2.4 Future FiTs: issues for the Commission

In determining the future of FiTs for distributed generation, the issues the Commission will have to decide include:

- Should there be a FiT?
- If so, should the FiT be regulated?
- If the FiT is to be regulated:
 - Should it apply to all technologies (for example, solar, wind, biomass etc)
 - To what size generation capacity should it cover?

Should it include a regulated tariff and, if so, what methodology should be used to determine the tariff? In considering regulated prices the Commission will need to consider whether the tariff should be gross or net, and whether it should vary according to system demands, such as where potential savings from delaying investment in distribution assets is greatest or at times when the demand for electricity is highest.

4.2.5 Transition arrangements

If the Commission recommends changes to the current FiT schemes, transitional arrangements may need to be put in place to ensure existing and future participants are not unfairly disadvantaged by the change process. The Commission considers it important that, in the event of changes to existing schemes, that participants have sufficient information to plan for the future and make decisions relating to their investment decisions and energy use. The PFiT has already been closed and the current TFiT has a specified end (based either on time or generation capacity). The Commission expects that households and industry participants who have already signed agreements under these schemes will continue until the agreement ends.

The Commission therefore expects that any changes it may recommend will affect the SFIT (and possibly any associated terms and conditions). An issue for the Commission to consider is how to treat people who are currently on the SFIT if it makes recommendations for changes in the future.

In examining the terms and conditions offered by retailers, the Commission may also make recommendations on the administrative and billing process, including methods of payment, used by retailers.

Information request

What should the Commission take into account when assessing feed-in tariffs (FiTs)?

Should FiTs be regulated? Should the current FIT arrangements be changed and if so, how?

If a regulated FIT is set what methodology should be used?

If there are changes to the current FIT arrangements what, if any, transitional arrangements should apply and to whom should they apply?

4.3 Barriers to distributed energy

The terms of reference for the inquiry direct the Commission to:

Identify any State and/or local regulatory and other barriers to the development of a network of distributed renewable and low emission generation in Victoria, including cogeneration and trigeneration.

There are many who advocate that distributed energy is a low cost and efficient way of helping to manage the adjustment to a low carbon economy. Typical of these views is the joint report by ClimateWorks Australia, Seed Advisory and the Property Council of Australia which argued that cogeneration and trigeneration 'offer Australia significant environmental and economic benefits in the short and long term' but that these technologies are underutilised because of significant barriers in regulatory and connection processes (ClimateWorks 2011, p. 10). The CSIRO also argued that distributed energy generation improves system efficiency due to:

... the reduction of network losses by generating energy close to the point of consumption, or improving the utilisation of a fuel by capturing more of the energy available as occurs through cogeneration and trigeneration. (CSIRO 2009, p. 18)

While the cost of distributed energy generation systems vary greatly depending on their size and type of technology, it is claimed that 'in many cases cogeneration is financially and economically viable today' (ClimateWorks 2011, p. 19). Although, there also appears to be some debate about the impact these systems have on the management of the wider electricity network.

In this inquiry the Commission intends to identify barriers that inhibit the efficient incorporation of distributed energy into the electricity system and recommend actions or options the Victorian Government could consider to reduce or remove unnecessary barriers. This could include identifying areas in which the Victorian Government may wish to advocate for national or Commonwealth reforms.

4.3.1 Barriers identified in previous reports

The Commission was told of claimed examples of barriers to investment in distributed energy generation systems, in its 2009 inquiry into Victoria's environmental regulations. These included:

- planning application and approvals processes — that add complexity, cost and time risk
- complex network connection and access requirements (for example, requirements for detailed network connection studies) — that add substantially to overall project costs
- existing market rules of electricity distribution — that do not adequately set price signals that reflect the security and competition benefits that come from clean energy generating locations
- technical standards — that inhibit the registration of renewable generators
- existing structure of the electricity market — that discourages energy efficiency more generally, for example, retailers have an incentive to sell more electricity, while distributors have little incentive to encourage energy efficiency
- electricity distribution businesses have been set up on the basis of centralised electricity generation — and so resist connection by small-scale generation which is typically located away from current power stations (VCEC 2009, pp. 375–376).

Some submissions to other Commission inquiries have also argued there are barriers to connecting distributed energy generation plants into the electricity grid. For example, Australian Paper raised issues in its submissions to the Commission's inquiry into the manufacturing sector and Toyota in its submission to the Commission's inquiry into Victoria's regulatory framework.

4.3.2 Connection processes

The most commonly raised immediate barrier to greater adoption of distributed energy appears to be the process for connecting these systems into the electricity network. There are various physical and contractual arrangements that must be in place before distributed generation, such as a cogeneration or trigeneration system, can be connected to a Distribution Network Service Provider's (DNSP) network. These are required to ensure the DNSPs meet their safety and reliability of supply obligations.

Connection costs, conditions and the negotiation timeframes can have a major impact on the financial viability of embedded generation projects. These costs are project-specific, depending on various characteristics and location of the generation scheme.

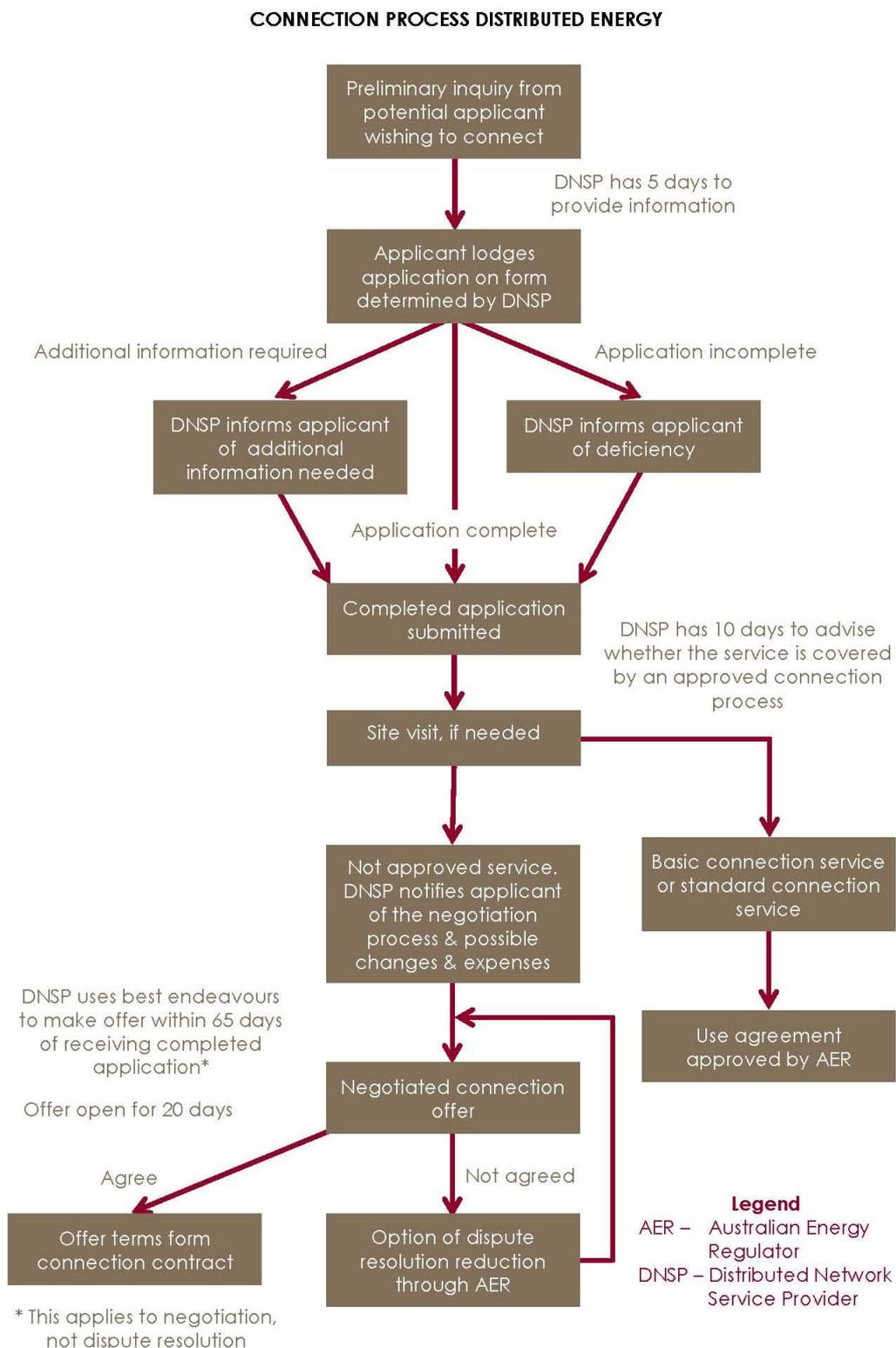
The regulation of these connection processes is changing with amendments to the national energy regulation that are expected to be introduced in the first half of 2011. This will provide for three types of connection service:

- (1) A basic connection service, which will cover retail customers including those who are micro embedded generators. DNSPs must have a model standard offer for basic connection services that has been approved by the AER.
- (2) A standard connection service, which can cover the terms and conditions for different classes of connection services or customers. DNSPs can choose to prepare a model standing offer for such services and have it approved by the AER.
- (3) A negotiated connection contract, which covers services that are not subject to a basic or standard connection standard offer. The terms and conditions for such

services are negotiated and if agreement cannot be reached the dispute can be arbitrated by the AER.

The process for seeking connection is illustrated in figure 4.4.

Figure 4.4 Connection process for distributed generation



Source: Commission analysis.

Groups such as the Property Council have claimed that, despite the national regulatory changes, barriers to connecting small to medium scale distributed energy will persist (ClimateWorks 2011, p. 11). In particular, while the proposed national changes establish automatic access standards for micro generators, particularly solar PV other small to medium generators do not have similar rights (ClimateWorks 2011, p. 36).

The Property Council advocated a national, standardised connection process with automatic connection rights and, practical district level licensing frameworks (ClimateWorks 2011).

4.3.3 Other barriers

In preparing this issues paper, the Commission has also identified other categories of issues that have been raised as potential barriers to distributed energy projects:

- (1) Various prices and charges, including the cost of connection, the price paid for surplus power fed into the network from distributed generation and the incentives created by electricity prices for customers to adopt alternative forms of generation.
- (2) Regulatory barriers and the management of the electricity market that reduce the incentives or the capacity of the market to integrate distributed energy.
- (3) Other regulatory barriers that inhibit the scope and flexibility of distributed energy projects, such as licensing and planning provisions.

This inquiry seeks evidence on whether these barriers are significant constraints on the development of a network of distributed energy in the long or short term. The aim is to identify what actions the Victorian Government can and should take to reduce such barriers.

Information request

What are the major barriers and impediments (for example, price, connection, technical or regulatory) to the adoption of distributed renewable and low emission generation in Victoria?

Which barriers can be influenced by the Victorian Government or local governments in Victoria? Which barriers are the result of national or Commonwealth regulation or processes?

5 How to engage with the inquiry

The Commission is committed to a rigorous and transparent process for each inquiry it undertakes and sees consultation and dialogue with stakeholders as an essential element of this process. Stakeholders can have strong and contrasting views and a wealth of information and data that can inform the Commission's analysis. The Commission is therefore keen to hear from, and meet with a broad range of individuals, groups and government agencies.

Stakeholders will have the following opportunities to provide their views to the Commission. In particular, the Commission will:

- conduct a series of discussions and bilateral meetings, and possibly roundtable discussions with stakeholders to enhance its understanding of the issues and to encourage submissions
- consult with interested parties in both Melbourne and provincial Victoria to ensure that any particular regional concerns are considered by the Commission, consultations will also take place with those in other jurisdictions
- review all submissions received and post them on its website and encourage participants to comment on submissions received
- regularly update its website with transcripts or summaries of roundtable discussions and a range of other relevant information
- release a draft report in May 2012 with a request for public submissions
- possibly conduct a further series of roundtable discussions with stakeholders in April and May to explain the Commission's approach in the draft report and provide a further opportunity for stakeholders to share their views.

The key dates for the inquiry are set out at the beginning of this paper.

Stakeholders can also register their interest in the inquiry on the Commission's website: www.vcec.vic.gov.au.

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Attachment 1

Terms of reference

INQUIRY INTO FEED-IN TARIFF ARRANGEMENTS AND BARRIERS TO DISTRIBUTED GENERATION

I, Kim Wells MP, Treasurer, pursuant to section 4 of the State Owned Enterprises (State Body – Victorian Competition and Efficiency Commission) Order (“the Order”), in conjunction with Michael O’Brien MP, the Minister for Energy and Resources, hereby direct the Victorian Competition and Efficiency Commission (“the Commission”) to conduct an inquiry into feed-in tariff arrangements and barriers to distributed generation.

Background

Victoria currently has in place a number of programs that are designed to reduce greenhouse gas emissions and facilitate an adjustment towards a low emissions economy.

These programs include feed-in tariff schemes such as the standard feed-in tariff scheme for customers with installations up to 100kW capacity and the premium and transitional feed-in tariff schemes applying to eligible customers with solar inverter systems up to 5kW capacity. In the context of the implementation of a national carbon price, it is appropriate that the Commission undertakes a review of Victoria's feed-in tariff schemes.

Addressing any state and local regulatory or other barriers to the uptake of low emissions generation, including cogeneration and trigeneration, is also important to ensure that any transition to low emissions generation occurs as smoothly and as cost-effectively as possible.

Scope of the Inquiry

In this inquiry, the Commission is required to:

- (1) Assess the design, efficiency and effectiveness of feed-in tariff schemes, including market-based gross feed in tariff schemes, in the context of a national carbon price.
- (2) Provide a recommendation as to whether existing feed-in tariff arrangements should be continued, phased-out or amended. Where phase-out of existing arrangements is proposed, the appraisal should give consideration to whether any transitional arrangements may be necessary. Any changes to existing arrangements would not be applied retrospectively.
- (3) Identify any State and/or local regulatory and other barriers to the development of a network of distributed renewable and low emission generation in Victoria, including cogeneration and trigeneration.

In conducting this inquiry, the Commission should have regard to:

- recent reports by the Australian Energy Market Commission on planning and connection arrangements for distributed energy generation;

- reviews currently being undertaken by the Victorian Government; and
- relevant reports by Commonwealth forums and bodies such as the Productivity Commission.

Inquiry Process

In undertaking this inquiry, the Commission is to have regard to the objectives and operating principles of the Commission, as set out in section 3 of the Order. The Commission must also conduct the inquiry in accordance with section 4 of the Order.

The Commission is to consult with key interest groups and affected parties, including representatives of end-use electricity consumers, and may hold public hearings. The Commission should also draw on the knowledge and expertise of relevant Victorian Government departments and agencies.

The Commission is required to produce a draft report for public consultation, ahead of a final report to the Government within 6 months of receipt of this reference.

KIM WELLS MP
Treasurer

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Received: 13 January 2012

Attachment 2

How to participate?

The Commission encourages interested parties to express their views and to contribute to this inquiry.

The principal ways of participating in the inquiry include contributing written submissions and attending roundtable and other meetings with the Commission. Interested parties are strongly encouraged to register an interest in the inquiry by emailing your contact details to: feedintariff@vcec.vic.gov.au. The Commission's website: www.vcec.vic.gov.au will also be regularly updated on the consultation process, and with copies of publications relevant to the inquiry and public submissions. You can also follow the Commission on twitter [@VCEC_victoria](https://twitter.com/VCEC_victoria) for progress updates.

The Commission will consider submissions received throughout the inquiry, submissions in response to this issues paper are invited by **19 March 2012**.

How to make a submission

Anyone may make a submission (in written, electronic or audio form) to the Commission. All public submissions that are relevant to the terms of reference of the inquiry will be posted on the Commission's inquiry website and to facilitate this, we would prefer an electronic version of written submissions in Word format.

The Commission has a strong interest in promoting informed debate on the issues arising in its inquiries and accordingly wishes to publish the submissions it receives to the greatest extent possible. Nonetheless, materials may be submitted in confidence. They must be clearly marked 'CONFIDENTIAL', either in part or in full, and provide an explanation of the reason for claiming confidentiality. If the Commission feels that a claim for confidentiality has not been substantiated, it will contact the author to discuss the reason for the claim. If the discussion does not resolve the issue, the Commission will return the submission to its author. Confidential materials which are accepted will be read only by Commissioners and Commission staff and will not be referred to in the Commission's report.

The Commission publishes on its website all written submissions unless a claim for confidentiality is justified or, in its discretion, the Commission considers that publication is not in the public interest. This could be because a submission may be defamatory or otherwise unlawful or reflect on an individual or organisation in a way the Commission considers an abuse of the process. Contact details will be removed from submissions before they are uploaded to the website.

You should be aware that the Commission's documents, including the unpublished submissions it accepts, are subject to the *Freedom of Information Act 1982* (Vic). The Commission develops policies in the light of the *Charter of Human Rights and Responsibilities Act 2006* (Vic) which recognises that human rights are essential in a democratic and inclusive society.