

Power from the People

Inquiry into distributed generation

Summary Report July 2012



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About the Victorian Competition and Efficiency Commission

The Victorian Competition and Efficiency Commission (VCEC), which is supported by a secretariat, provides the Victorian Government with independent advice on business regulation reform and opportunities for improving Victoria's competitive position.

VCEC has three core functions:

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

For more information on the Victorian Competition and Efficiency Commission, visit our website at: www.vcec.vic.gov.au

Disclosure of interest

The Commissioners have declared to the Victorian Government all personal interests that could have a bearing on current and future work. The Commissioners confirm their belief that they have no personal conflicts of interest in regard to this inquiry.

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 co-generation and tri-generation, 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) Prove 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 and State and/or local regulatory and other barriers to the development of a network of distributed renewable and low emission generation in Victoria, including co-generation and tri-generation.

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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Key messages

Spending by Victorian households and businesses on distributed generation (such as solar panels and co-generation) has grown sharply over the past three years, stimulated by government policies and the desire to offset rising power costs, diversify sources of electricity supply and reduce greenhouse gas emission. The carbon tax is a further major addition into this mix. Distributed generation faces barriers from inefficient installation processes and inefficient and unsustainable pricing of electricity fed into the network.

Victoria has three feed-in tariff (FIT) schemes that pay small domestic and commercial distributed generators for the electricity they produce. The Commission considers Victoria's FITs should be market-based as soon as practical so they are sustainable, predictable and free from cross subsidies. It recommends:

- the premium FIT (closed to new entrants) continue for existing customers until 2024 as previously announced
- the transitional FIT (TFIT) be closed to new entrants by 30 September 2013 or once the 75 MW capacity is reached (as currently legislated), whichever occurs first. Existing customers would receive a TFIT until 2016 as previously announced. The standard FIT (SFIT) also be closed by 30 September 2013
- a new net FIT scheme be established to replace SFIT that requires Victorian electricity retailers with more than 5000 customers to offer an efficient and fair FIT to all small low-emissions or renewable distributed generators (100 kW or less) until 31 December 2016. This price would be based on the wholesale price of electricity (which includes the carbon tax) adjusted for reduced system losses
- following a transition period, the price for energy from distributed generators would be set through the retail electricity market from 1 January 2017.

Advice to the Commission suggests the efficient and fair market price for 2013 to be, at a minimum, in the range of 6 to 8 cents per kWh (compared with 25 cents currently for TFIT). This minimum range is consistent with rates announced in New South Wales, Queensland, South Australia and Western Australia over the past year.

Distributed generation may have significant network value in deferring or reducing investment in network capacity. However, no reliable estimates of this value currently exist. Moreover, this value cannot be efficiently captured through a FIT. The Commission recommends the Victorian Government investigate whether, and how, the Australian Energy Regulator's price reset process could be used to identify and permit payments from distribution network service providers (DNSPs) to distributed generators based on the network value.

Connecting household-scale generation is complex and the process imposes unnecessary regulatory burdens on retailers, installers and consumers. The cost of this regulatory burden could be reduced by around \$3-4 million per year by:

- having a default FIT in retail supply contracts, avoiding the need to sign a separate FIT contract; and households dealing directly with DNSPs rather than retailers, avoiding the double handling of paperwork.

Medium-scale generators have most potential to reduce network costs and greenhouse gas emission. But there are significant barriers to connecting medium-scale generators. National regulatory change is needed to remove these barriers. The Victorian Government could advocate for national reform. If national changes are not forthcoming, then the Victorian Government could assess the net benefits of implementing State-based improvements.

Summary report

In this inquiry the Commission has been directed to look at the policies that relate to distributed electricity generation using low-emissions and renewable technologies. More specifically the terms of reference require the Commission to:

- assess the design, efficiency, effectiveness of feed-in tariff (FIT) schemes
- recommend any changes to current FIT arrangements (although any changes to existing arrangements are not to be applied retrospectively)
- identify state and/or local and other barriers to the development of a network of distributed renewable and low emissions generation.

The Commission received 200 submissions, 100 short submissions and comments and 844 proforma submissions through Environment Victoria. The Commission has addressed the issues raised in the submissions in the final report. The Commission thanks those people and organisations that participated in its consultation process and made submissions to the inquiry before or after the release of the draft report. The Commission appreciates the quality of the submissions, reflecting the thought and effort which has been put into their preparation.

The structure of this summary report differs from the final report as it addresses issues of most concern to participants first (those relating to FITs) and considers connection issues later.

What is distributed generation?

There is no definitive definition of distributed renewable or low-emissions generation. For the purposes of this inquiry, the Commission is focussing on generation with the following characteristics:

- the electricity is generated by households, businesses or community groups who primarily intend to use the electricity on-site or to supply people or organisations close by, and includes co-generation and tri-generation systems
- 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
- electricity in excess of the needs of the generator owner may or may not be sold (exported) into the grid
- the electricity 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 electricity generated is small- to medium-scale.

The Commission's definition was generally supported by many participants (chapter 1).

What are feed-in tariffs?

FITs are the price of electricity exported to the network by small- and medium-scale low-emission and renewable electricity generators, all of which are distributed generators. Victoria currently has three regulated FITs that apply to either small-scale solar alone or small-scale renewable generators. All retailers with more than 5000 customers are required to offer these tariffs.

Premium FiT (PFiT) — introduced in 2009 and closed in December 2011, PFiT is paid to customers generating electricity using solar photovoltaic (PV) systems of 5 kW or less. Customers are paid 60 cents per kWh until 2024 for net exports of electricity fed into the electricity network. The level of the PFiT was set according to the amount needed to pay back the cost of the solar PV system over 10 years. At that time solar panels were considerably more expensive than they are currently.

Transitional FiT (TFiT) — commenced in January 2012 following the closure of PFiT, TFiT has similar eligibility criteria to PFiT but sets the FiT at 25 cents per kWh until 2016. The tariff was set at the level needed to pay back over six years the cost of an average household solar PV system in late 2011, and reflects the significant fall in the capital cost of household-scale PV generators since the inception of the PFiT. It is open to new applicants until 2016 but may be closed earlier if a cap of 75 MW of installed capacity is reached, the cost of the scheme on other energy users exceeds \$5 per year per customer or the Minister for Energy and Resources thinks earlier closure is appropriate.

Standard FiT (SFiT) — introduced in 2004 as part of the *Electricity Industry Act* for electricity generated from wind generators, the SFiT was extended in 2007 to cover all renewable electricity generators up to 100 kW capacity. The scheme has no specified end date and requires eligible retailers to pay a Fair and Reasonable price for the surplus electricity fed into the grid. Although not mandated in legislation, guidance from the Essential Services Commission (ESC) is that 'fair and reasonable' is interpreted that the price paid to customers supplying electricity from distributed generation should not be less than the price they pay the retailer for electricity bought from the network.

Why this inquiry is important

Interest in installing distributed generation in Victoria has been growing because distributed generation has a role to play in reducing greenhouse gas emissions, offsetting rising power costs and contributing, on a competitive basis, to a diverse and efficient electricity sector. However, there are concerns about unnecessary barriers to installing and using distributed generation and how electricity fed into the network will be priced. These barriers are preventing the adoption of distributed generation when it is an efficient investment decision for households and businesses.

This inquiry also has been conducted in a context of changing Commonwealth policy regulating electricity markets, including processes for connecting distributed generation and consumer protection, and climate change. In addition, other jurisdictions have been changing their FiT policies (chapter 1).

Wider policy developments

The Commonwealth Government has policies either in place or about to be implemented that will reduce carbon emission and make installing distributed generation more attractive, including:

- a fixed carbon price of \$23 a tonne since 1 July 2012, moving to a market-determined price after three years
- the Clean Energy Finance Corporation, with a mandate to encourage and leverage private investment in renewable energy and clean technology projects

a target that 20 per cent of Australia's electricity supply will come from renewable energy by 2020 (supported by assistance that includes subsidises for small-scale renewable energy).

The distributed generation industry itself is now more viable, without the need for industry support measures and subsidies. Moreover, it is growing more rapidly than expected indicating that it is able to compete and secure a place in the electricity generation network into the future.

The widening scope of Commonwealth policies affecting distributed generation and the maturing of the sector raise questions about the continued relevance of previous State policy objectives for distributed generation. Other jurisdictions have faced similar questions and have reformed their FiTs and related policies. Four Australian states have already substantially reduced FiTs:

- In 2012 New South Wales' Independent Pricing and Regulation Tribunal (IPART) reviewed New South Wales' FiTs for small-scale solar PV systems, recommended removing the obligation for retailers to offer a gross FiT (of 20 cents per kWh) and suggested that a fair and reasonable net tariff would be in the range of 5.2 to 10.3 cents per kWh.
- South Australia's price regulator, ESCOSA, also made a price determination in 2011 for net FiTs applying to small-scale solar PV and concluded that retailers must pay a minimum FiT of 7.1 cents per kWh in 2011-12, increasing slightly in subsequent years. DNSPs will pay an additional 16 cents per kWh until 30 September 2016. This change reduces the FiT by approximately 27 cents per kWh.
- In May 2011 Western Australia halved its net FiT from 40 cents to 20 cents per kWh and has subsequently closed the scheme.
- In June 2012 Queensland announced it was reducing its net FiT from 44 cents to 8 cents per kWh from 9 July 2012.

The changes announced in other states contrast with Victoria's TFiT and SFiT which respectively set FiTs of at least 25 cents per kWh and the retail price.

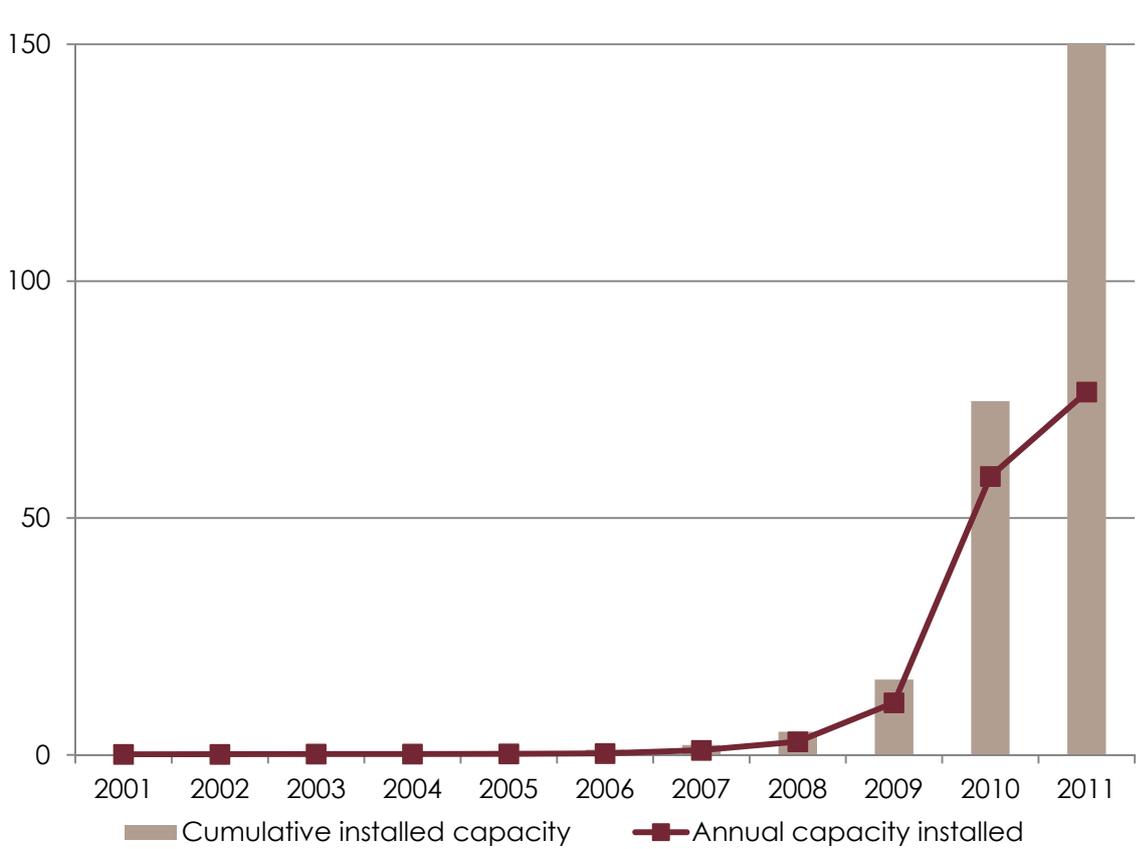
Distributed generation in Victoria

Distributed generation currently occupies a specific segment in the broader electricity market. The installation and production of distributed generation involves electricity retailers, technology producers and installers, small- and medium-scale generators, and energy DNSPs. Distributed generation is a diverse sector of the electricity market, with a wide range of energy sources and producers, ranging from micro size (households) to medium size. The installation and operation of distributed generation is made more complex by a slew of standards, regulations, policy and legislation imposed by various levels of government.

The extent of distributed generation

Figure 1 shows the capacity of solar PV installed annually, and highlights the impact of the PFiT (introduced in late 2009). The take up of household-scale solar PV has been significantly greater than anticipated by the previous Victorian Government. In the *Victorian Climate Change Whitepaper - The Action Plan* published in July 2010, the Victorian Government noted that PFiT installations 'have recently been growing at 1 MW per month and are expected to reach over 40 MW by 2014' (DPC 2010, p.15). By the end of 2011 households had installed an estimated 150 MW (CEC 2011a, p.32) and are expected to install approximately 250 MW by 2013-14 (ACIL Tasman 2011a, p.42). The Commission considers that the growth in the uptake of PV solar indicated in Figure 1 is not sustainable (chapter 2).

Figure 1 Annual installed and cumulative capacity of PV in Victoria (MW)



Note: 2011 data based on first eight months of the year only

Source: CEC 2011a, pp.32, 34.

While exact figures on market characteristics depend on definitions of distributed generation, Energy Supply Association of Australia (ESAA) figures for June 2010 suggest 'embedded and non-grid generation' account for 7.2 per cent of Victoria's installed capacity (approximately 5.7 per cent from renewable distributed electricity generation and 1.6 per cent from non-renewable distributed generation) (table 1; (ESAA 2011, pp. 18, 20)). Figures on distributed generation capacity are published annually and, as such, the data presented in table 1 are likely to be out of date. Policy changes, such as closing the PFIT scheme, increased the installed capacity of distributed generation in 2011 (figure 1) and hence the data in the table underestimates solar's current contribution to generation.

Table 1 Capacity of embedded and non-grid generation in Victoria – June 2010

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

Notes: Embedded generators are those connected directly to the distribution network, with no direct connection to the transmission network; solar hot water is not included in total.

Sources: (ESAA 2011, pp. 20-21; CEC 2011a.

The majority of embedded generation capacity, by volume, is from medium-scale generators, which include wind farms, biomass, gas, hydro and some solar generation. The capacity factor for distributed generation technologies (actual annual generation divided by potential annual generation) varies depending on technology, system design, location and end-user requirement. There are around 30 co-generation facilities in Victoria but they produce a significant amount of electricity (DPI 2012d). While data depend on definitions and sources, non-renewable co-generation accounted for around 478 MW of Victoria's electricity capacity in 2010 (ESAA 2011, p. 21; CEC 2012a).

The Commission's framework

Policies affecting distributed generation, including FITs, are aimed at achieving a number of objectives (chapter 2). These objectives are reflected in the different views participants presented in submissions to the inquiry and during consultations. Submissions to the inquiry and the Commission's research indicate that there are several broad lenses through which participants view policies for distributed generation and its place in the National Electricity Market (NEM):

- efficiency — investing in distributed generation when it is the most efficient option and being rewarded for the value of the electricity it generates and any broader network benefits without imposing additional costs on other electricity users (that is, without cross subsidies)
- fair return — those who invest in distributed generation want a 'fair return' on their investment and this may be reflected in an expected 'pay-back period'
- environmental concerns — investing in distributed generation is primarily driven by environmental concerns such as reducing greenhouse gas emission and should be stimulated so that the share of electricity generated from distributed generation grows as quickly as is practicable.

For the reasons outlined in this report the Commission considers that distributed generation can contribute to reducing greenhouse gas emissions in Victoria and is often a sound commercial decision for many individuals and businesses. However, these outcomes need to be achieved on an efficient economic basis that avoids, as

far as possible, cross subsidies from one group of customers to another (especially where these cross subsidies are likely to be regressive).

The electricity industry is a complex market which is regulated — heavily in some areas — and much of this regulation is changing or under review.

The Commission's response to its terms of reference reflect its view that the primary policy objectives for distributed generation policy should also fit within the broader NEM objectives which are:

To promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –

- a) price, quality, safety, reliability, and security of supply of electricity; and
- b) the reliability, safety and security of the national electricity system.
(National Electricity Law s 7)

The Commission's response to its terms of reference is therefore guided by five core principles:

- Incentives reflecting economic value — through efficiently working markets that capture the value of the output of distributed generation and capture the additional efficiency to the network of incorporating distributed generation among investment options.
- No cross subsidies — for both equity and efficiency reasons policies for distributed generation should be subsidy free so that one consumer group is not financially supporting another.
- Efficient assignment of policy instruments — the most efficient policy instrument should be used to address a particular issue.
- Technology neutrality — policy affecting distributed generation should not discriminate among technologies.
- Efficient and predictable processes — connection and other processes should not be unnecessarily burdensome, red tape should be minimised, and processes should be timely and predictable.

Given the context and in applying the principles it is important to understand what is the value of distributed generation, who benefits from these values, and whether the market is capable of delivering those values, and if not, whether barriers can be removed to improve market outcomes (chapter 4).

Value of distributed generation

In economic terms, the Commission has distilled the benefits of distributed generation into two broad types of value:

- output value, which translates into a unit price
- network value, which translates into an incremental investment/capital value.

Output value

The output value of distributed generation is the value of the electricity produced by the distributed generator. Participants have variously argued that the electricity produced by distributed generation has value arising from:

- The wholesale price of electricity including avoided system losses — distributed generation has an output value based on the wholesale price of electricity because output from distributed generation reduces the amount of electricity that must be purchased on the wholesale electricity market.
- Avoided network charges — electricity retailers are required to pay for the use of the transmission and distribution network in the form of transmission use of system (TUOS) and distribution use of system (DUOS) charges. Because distributed generators use only a small part of the network, if any, some argue that the price they receive for exported electricity should reflect avoided network charges.
- Pollution and greenhouse gas reduction — electricity produced by low-emission and renewable distributed generators has value because of the value of greenhouse gas reductions (which would have been produced if electricity had have been generated by more emission-intensive technologies).
- The merit order effect — the merit order refers to how available sources of electricity are ranked in the marketplace in deciding which will be called on to supply into the wholesale electricity market. Sources of electricity supply are ranked in ascending order according to the price at which they are offering to supply electricity. Usually the suppliers with the lowest marginal costs bid into the market at the lowest price and are the first to be brought online to meet demand. The plants with the highest marginal costs who offer to supply at the higher prices are the last. Distributed generators that supply intermittently based on weather, such as wind and solar generators, are automatically dispatched into the market when they produce. Therefore, introducing new distributed generation with low marginal costs of production can reduce the average wholesale price by displacing high marginal cost gas-generated electricity with lower marginal cost renewable electricity when it is available.

Network value

The network value of distributed generation is the difference between upgrading the network sooner, and upgrading it later, taking into account the costs that a distributed generator may impose on the network (ACIL Tasman 2012c, p.vii). The value of distributed generation to the wider distribution network therefore comprises positive and negative elements:

- Deferral of network augmentation costs — the network value of distributed generation stems from electricity being generated close to the customer and therefore not needing to be transported through all of the network. Reducing the demand on the network may defer the need for network augmentation if the network is constrained. However, the value of the distributed generation is driven by its capacity to support the network at the time the network is constrained (which is at times of peak demand) and hence the value is partly technology dependent.
- Costs of network reinforcing — connecting distributed generation may require additional expenditure to reinforce the network to allow safe and reliable connection.

Realising the value of distributed generation

Realising or capturing the full value of distributed generation is key to ensuring there are appropriate, efficient incentives for distributed generation to play a role in Victoria's electricity sector. In the Commission's view the market is generally the best mechanism to identify and realise value. However, there may be times when markets fail to function effectively and additional regulation or government intervention is needed to ensure efficient outcomes.

There are two key elements necessary for realising the value of distributed generation:

- (1) there must be payment based on the value of the electricity produced (both network value and output value)
- (2) the distributed generator must be connected to the network.

These two transactions are the focus of the remainder of the report.

Recovering the output value

The Commission considers that appropriately determined FiTs are the best way to recover the output value of electricity produced by distributed generators.

Ensuring access to an efficient and fair price for exported electricity (particularly for households and small businesses) is the most relevant objective underpinning any future FiT arrangements. This is consistent with COAG national FiT principles and the objectives of the NEM. Efficient and fair FiTs are also consistent with the Commission's five core principles, in particular that incentives reflect economic value and that there are no cross subsidies.

The Commission notes, however, that there are varying views about what constitutes an appropriate price. The Commission's assessment of FiTs (chapter 8) concludes that the wholesale price of electricity and reduced network losses should be included in any FiT (which includes the value of reduced greenhouse gas emissions captured through the carbon tax). The Commission sees no argument for including merit order effects in FiTs paid to distributed generators (chapter 9).

Barriers to an efficient market-determined feed-in tariff

The most common view among distributed generation proponents was that retailers are far less responsive to distributed generation than in competing for customers without distributed generation. For example, unlike the process for changing retailers to supply electricity, the processes for signing up to a FiT is complex and lengthy. Distributed generation proponents, particularly in areas not subject to regulated FiTs, have found it difficult to negotiate a FiT for electricity fed into the network. These experiences raise questions about whether market behaviour reflects that which would be expected in a competitive market (that would set 'efficient and fair' FiTs chapter 8) or that retailers have business models that do not get value from distributed generation.

The underlying causes of these difficult, complex and lengthy processes are likely to include:

- information and transactions costs
- market power issues and vertical integration
- limitations on time-of-use and locational pricing
- uncertainty of the regulatory environment, coupled with the transition to a national regime.

While on its own none of the above factors constitutes a market barrier big enough to prevent competitive outcomes from emerging (as long as adequate consumer protection, transparency and information is provided), taken together they are likely to be a significant short term barrier.

Several of the changes in the NEM that are underway or have been foreshadowed are likely to reduce these barriers, as would the Commission's recommendations on connecting distributed generation, if accepted. Other aspects could be addressed through consumer protection, reasonable access to information and maturing of the market. Accordingly, a market-based FiT is likely to provide the most efficient outcome in the long term. However, there are important transition issues and in the short term moving too rapidly to market determined FiTs may cause unnecessary disruption and hinder the transition to a fully competitive market. Observation of energy markets in Victoria and other states (particularly New South Wales) over the transition period would provide further evidence on how the FiT markets are performing and whether there is any justification for further measures to improve market outcomes.

Proposed future Victorian feed-in tariff arrangements

The terms of reference require the Commission to, in part, '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'. The Commission's view on this element of the terms of reference may be summarised as follows:

- With the advent of the carbon tax, the energy value for distributed generation output is best captured through a wholesale-based price (which includes the carbon tax) adjusted for network losses that is set by the competitive market. A well-specified FiT recovers this value.
- FiT schemes should:
 - be based on such market prices, and for the immediate future be part of a transition to a fully market-based approach for pricing electricity from distributed generation
 - include the ability to compare market-based offers on a well-informed and comprehensible basis (for example, through a FiT comparator website)
 - at least for the short- to medium-term provide an indicative benchmark range (consistent with the methodology outlined by ACIL Tasman 2012) with periodic updates until market FiTs are reasonably established
 - not be mandated to exceed such a market-based price, because this would mean cross subsidies from customers without distributed generators to customers with distributed generators
 - be technology neutral so that the most efficient choices among generation technologies can be made
 - be confined to 'household-scale' distributed generation of 100 kW or less, as larger-scale producers are better placed to compete in the market and are likely to have access to alternative mechanisms for selling/exporting electricity to the grid.
- Adopting time-of-use pricing is desirable, because it provides a stronger economic signal to distributed generators of the value of production when overall electricity demand is high.
- While there are arguments in favour of gross FiT schemes, there is likely to be significant costs in replacing recently installed smart meters and changing retailers' supporting infrastructure and computer systems to be able to adopt such schemes. The retention of net FiTs is also consistent with recent changes in other jurisdictions. Therefore, while not ruling out such schemes if they were to arise in the marketplace as a result of competition, the Commission sees no clear value in mandating them.

The second element of the terms of reference directs the Commission to 'provide a recommendation as to whether existing FIT 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'.

There was considerable debate among participants about the structure and method of calculating future FITs. The Commission has presented and considered the various views in some detail in the body of the report (chapter 9). To avoid confusion, specifically in relation to the criteria used by the ESC, the Commission has adopted 'efficient and fair' to characterise FITs that are based on and reflect the wholesale price of electricity.

- Taking into consideration all this input, the Commission recommends:
- the PFIT (closed to new entrants) continue for existing customers until 2024 as previously announced
- the TFIT be closed to new entrants by 30 September 2013 or once the 75 MW capacity is reached (as currently legislated), whichever occurs first. Existing customers would receive a TFIT until 2016 as previously announced. The SFIT also be closed by 30 September 2013
- a new net FIT scheme be established to replace SFIT that requires Victorian electricity retailers with more than 5000 customers to offer an efficient and fair FIT to all small low-emissions or renewable distributed generators (100 kW or less) until 31 December 2016. This price would be based on the wholesale price of electricity (which includes the carbon tax) adjusted for reduced system losses
- following a transition period, the price for energy from distributed generators would be set through the retail electricity market from 1 January 2017.

That the Essential Services Commission:

- publish information on the likely range of minimum wholesale market-based net feed-in tariffs which would be consistent with an efficient and fair offer — updated at regular intervals and published until 31 December 2016. The estimate by ACIL Tasman at May 2012 suggested a range of between 6 and 8 cents per kWh for 2013 would be consistent with the Commission's recommendation.
- From 1 October 2013 to 31 December 2016 consider the extent to which new FIT offers are consistent with efficient and fair criteria, defined to reflect a wholesale-base value of electricity (the output value, including reduced system losses).

Feed-in tariff transition arrangements

The transition needs to be well understood so there are no surprises for those involved, and they understand what is going to happen, when it will happen and what are the implications of the changes (chapter 10). Experience from the process and attention to detail of the closure of the PFIT has shown the importance of minimising adverse impacts during the transition on:

- installers and electricity businesses — minimising the creation of boom and bust cycles on distributed generation installation
- customers — minimising uncertainty and ensuring maximum provision of information

- electricity businesses — minimising the impact of a last minute rush of customers wanting to connect.
- A time line for implementing the Commission's recommendations is provided in table 2.

Table 2 The Commission's recommendations: key events and dates

Event	Dates	Notes
Close TFiT to new customers	30 September 2013 or when 75 MW capacity is reached	
Close current SFiT to new customers	30 September 2013 or when TFiT closes	Legislation required
Establish new FiT (market-based)	1 October 2013 or immediately after current SFiT closure	Legislation required. ESC to consider whether new SFiTs are consistent with an efficient and fair criteria — redefined to reflect a wholesale plus value of electricity
Publish information on minimum FiTs considered to be efficient and fair	From 1 October 2013 until 31 December 2016	
Market-based FiTs to apply	1 January 2017	
Current SFiT customers	To receive a FiT as per contract made prior to 30 September 2013 (or date of SFiT closure) until 31 December 2016	All customers continue to get 1 for 1 until 31 December 2016. Afterwards payment depends on type of contract.
Current TFiT customers	Continue on current TFiT contract until 31 December 2016	As specified in current legislation
Current PFiT customers	Continue on current PFiT contract until 31 October 2024	As specified in current legislation

Source: Commission analysis.

However, the design of TFiT and its underpinning legislation inevitably means that, based on the PFiT experience, some intending participants may be disadvantaged when the scheme is closed.

Implications for current premium and transitional FiT customers

As noted above, if the Commission's recommendation on future FiT arrangements is accepted by the Victorian Government, customers currently receiving the PFiT would continue to receive this FiT until it is contracted to end on 1 November 2024. The key transition issue is to ensure this information is communicated to existing PFiT customers. The Commission notes several participants misunderstood its draft recommendation and thought their PFiT would be terminated early.

At the expiry of their PFIT contract these customers would be free to select a new FiT with retailers based on retailer's 'efficient and fair' offers at the time.

Customers currently receiving the TFIT would continue to receive that tariff for their contract period (31 December 2016). At the expiry of their contract these customers would be free to select a new FiT with retailers based on retailer's 'efficient and fair' offers at the time. The Department of Primary Industries (DPI) should ensure that this information is disseminated to existing TFIT customers to minimise uncertainty and unnecessary anxiety.

The completion date of 31 December 2016 is specified in legislation and is presumably directly (or indirectly) incorporated in each customer's TFIT contract. The Commission recommends the closure process, when it occurs, be modelled on that for the PFIT scheme, together with any lessons from that closure. In particular as part of the closure process there should be:

- information provided to customers so that they understand the process and timelines
- timely monitoring to identify any problems in enough time to take remedial action
- a strong explicit role given to the Energy and Water Ombudsman and Consumer Affairs Victoria so that where problems arise for customers they have a right of redress and the numbers of customers affected is known.

Implications for current standard FiT customers

The implications of the Commission's recommendations for current SFIT customers are more complex than for TFIT and PFIT customers. For one thing, the legislative underpinnings and closure mechanisms are different. Closing or amending SFIT would require amendments to the *Electricity Industry Act 2000* (Vic) and associated regulation. In addition, interpreting non-retrospectivity is not straight forward as the provisions of SFIT contracts vary among retailers. Some allow for changes to the way the FiT is calculated, while others lock in a rate for a particular period. It proved impossible for the Commission to determine the number of customers currently receiving SFIT and hence the number affected by the Commission's recommendations. The data are not readily available and retailers themselves were unable to provide robust data.

The Commission recommends simultaneously:

- closing SFIT to new customers
- establishing a new market-based FiT for renewable and low-emission distributed generation.

It is highly desirable, although not necessary, that the timing of these changes coincide with the recommended closure of TFIT to new entrants.

The different legislative underpinning for TFIT and SFIT make coordination challenging. As the Electricity Industry Act must be amended to close or amend the SFIT scheme, time needs to be allowed for this process. In contrast, the TFIT scheme can be closed by notice published in the Government Gazette. Changes to the Electricity Industry Act would also be required to extend the proposed new FiT to cover renewable and low-emission technologies. The Commission is not in a position to assess how quickly necessary changes to the Electricity Industry Act could be achieved. It has assumed that 30 September may be reasonable, or sooner to coincide with an earlier closure of TFIT. In the following discussion references to 30 September 2013 (and 1 October 2013) should also be taken as referring to an earlier date if this is practical. It would be highly

desirable, although not essential, for the closing of TFIT and SFIT and opening the new FiT to occur simultaneously.

In making recommendation 9.1 the Commission considered two options to implement its recommended future FiT arrangements that would also meet the terms of reference requirement that the Commission's recommendations do not apply retrospectively. The Commission notes there may be other practical implementation options. See chapter 10 for more detail on the transitional arrangements.

Option 1: close the SFIT and open a new FiT

Under option 1, the SFIT would close to new customers from 30 September 2013 and a new market-based FiT scheme for all small low-emissions or renewable distributed generators (100 kW or less) would open on 1 October 2013. Existing SFIT customers would be unaffected by the scheme closure and continue to receive a fair and reasonable price in accordance with their existing SFIT contract until the 31 December 2016. The SFIT scheme would close for existing SFIT customers on 31 December 2016.

Option 2: have two classes of SFIT customers

Under option 2, the SFIT would remain open but there would be two classes of SFIT customers from 30 September 2013:

- Class A would be existing SFIT customers — these customers would continue to receive a fair and reasonable price in accordance with their existing SFIT contract until 31 December 2016.
- Class B would be new SFIT customers, who enter into the SFIT scheme from 1 October 2013. The Class B SFIT would apply to all small low-emissions or renewable distributed generators (100 kW or less).

The ESC would amend its *Methodology for Assessment of Fair and Reasonable Feed-in Tariffs and Terms and Conditions* (ESC 2008), so that:

- Class A SFIT customers would continue to receive a 'one-for-one' price
- Class B SFIT customers would receive an a wholesale-based price.

The Commission was advised that both options 1 and 2 would require amendments to the Electricity Industry Act and associated regulation. The Commission considers that its recommended future FiT arrangements could not be implemented by the Victorian Government without legislative change. Given this, the Commission considers that option 1 is preferable being clearer and more certain for customers and industry.

Implications for future customers

New customers (following the closure of TFIT and SFIT (if the government were to choose this option) entering an arrangement to receive a FiT for electricity exported into the grid will be eligible to receive the 'efficient and fair' market rate offered by retailers. The Commission considers it likely that different retailers would offer different rates and conditions and it will be up to each customer to explore their options and decide on the offer that best suits their needs.

The Commission has suggested that a price comparator website be established to make the process of comparing retailer offers easier. The website should be available by the end of the transition period recommended by the Commission and provided by the Victorian Government if it is not available from the private sector or the Commonwealth.

Under the Commission's recommendation the offers made by retailers will be available to all distributed generation technologies and not favour a particular technology.

In addition, once on the market-based FIT is established the Commission expects that there will be more certainty for distributed generators as there will be no need to make substantive changes in scheme design once implemented. The FIT rate will vary depending on market rates but this is no different to other contractual arrangements (such a mortgages) which allow for floating rates.

There are many indications that FITs, while a focus in the past, will not necessarily drive future investment in small-scale distributed generation. Other factors that drive the attractiveness of these investments are strengthening, such as the impact of the carbon tax and lower technology costs.

The main benefit to solar customers will continue to be the avoided cost of the electricity produced and used by the customer. For example, an average householder would save between \$383 and \$615 in 2013 depending on the size of their PV system. Between 97 and 83 per cent of this saving is the value of electricity displaced from the grid by the householder's own generation (as the system size increases, a greater proportion of the electricity is exported) (chapter 9).

Special issues for medium-scale distributed generation

Medium-scale distributed generators were also concerned about their ability to sell excess generated electricity. These concerns are known to the Australian Energy Market Commission and several national processes are seeking solutions to the identified problems. The difficulties are, however, even more complicated for precinct-scale projects where the complexities of electricity generation can be compounded by State planning and local regulation, including infrastructure for distributing heating (and cooling).

Precinct-scale projects involve a number of parties, often including but not limited to: proponents of large-scale urban renewal land development, local government, businesses, community groups, utilities (electricity, gas and water), building designers, architects and alternative technology proponents.

Given the complexities associated with precinct-scale developments the Commission is not in a position to recommend specific solutions. The Commission however, does see merit in the Victorian Government sponsoring a combined approach to identifying, evaluating and addressing some of these issues, especially the regulatory framework governing precinct proposals. The Commission has recommended that, to inform future policy development, and assist in the efficient consideration of distributed generation options, the Victorian Government facilitate precinct-scale development(s) by:

- selecting an appropriate precinct scale project, or projects, and bringing relevant interested parties together in a project facilitation group
- taking the new precinct development and thoroughly examining the regulatory and other barriers to distributed generation including the net benefit of reducing or removing those barriers
- subject to the outcome of this assessment, taking action to remove the barriers, including through necessary changes to legislation and regulation
- documenting the results and disseminating the information to government, industry and community organisations to inform future precinct scale distributed generation projects and policy directions (electricity, planning etc.).

Recovering the network value

Recovering the network value and paying it to the proponents of distributed generation is important to ensure there are incentives for the efficient incorporation of distributed generation into Victoria's electricity system. However, recovering this value is not easy. No reliable estimates of this value currently exist — at least in the public domain. The size of the network value is difficult to determine because it will be both time and location specific, but in constrained areas of the network it is likely to be large (chapter 5).

If there were an effective market for identifying and realising network value, the Commission expects that distribution businesses would plan measures, including for distributed generation, to address identified localised system constraints where such investment would have a net benefit. The distribution businesses and the proponents of distributed generation would have sufficient information to assess the costs and benefits of proposed distributed generation to the network and the proponent.

The rules on how any necessary network reinforcement costs should be shared, and who pays, would be clear and efficient. Areas where network investment could be avoided by distributed generation (or demand side responses more generally) would be identified and payments made available to proponents of such investments. If distributed generation projects arose outside this planning and required investment to be brought forward, the rules on how such projects would be charged would also be clear and predetermined.

However, the Commission concluded there are two major barriers to the market identifying and realising network value:

- distribution businesses are regional monopolies and therefore do not face competition
- regulatory incentives reinforce the traditional approach of investing in the existing network rather than delaying augmentation through encouraging additional distributed generation.

The Commission identified three areas where there is scope to improve current arrangements and put industry participants in a better position to make an informed decision about the value of proposed investment in distributed generation:

- improving information on the location and value of network constraints
- increasing transparency and clarity on how network reinforcement costs are determined and shared
- recovering the network value and paying it to distributed generators.

Better information about where there are network constraints would help and there are national processes underway to make more information available. It will be necessary to wait until the process is complete to determine if any additional information is required to be published.

Improved information would also help proponents of distributed generators to understand the need for, and likely cost of, any network reinforcement required to enable the connection of a distributed generator. However, the issue of how reinforcement costs are shared among current and future users of the network remains. There was concern that a single distributed generator who 'tripped' the requirement to reinforce the network would bear the full cost while subsequent users would free ride on this investment without bearing any cost.

To clarify the circumstances and conditions in which network reinforcement costs can be spread across new distributed generators and other users, the Commission has recommended that the Victorian Government:

- make a submission seeking the development of principles for cost sharing to the Australian Energy Market Commission's (AEMC) consideration of the Proposal to amend the National Electricity Rules for connecting embedded generators. This submission would be prepared by DPI in consultation with the Australian Energy Regulator (AER), DNSPs and distributed generator proponents
- advocate to the AER that it prepares and provides guidance on cost sharing arrangements for the connection of distributed generators before the next round of network distribution pricing determinations expected in 2015.

Recovering the network value is key to ensuring there are appropriate incentives to invest in distributed generation where it is most valued. Possible options for addressing this network value, include:

- recognising that there is a value but doing nothing because of the difficulty and possible transactions costs involved in identifying, calculating and sharing it
- improving information about network constraints and reinforcement costs to reduce DNSPs market power and leaving market participants to optimise the network
- estimating the value and spreading it across all distributed generators through FIT payments.

However, none of these options is particularly effective in identifying the network value and ensuring it is paid to the distributed generation proponent. Advice provided to the Commission by ACIL Tasman suggested that the network value of distributed generation is in the nature of a local specific capital value that is unrelated to the quantity of energy generated, and is not easily incorporated into the FIT payment. The Commission's view is that the network value is appropriately dealt with outside the FIT payment.

Another option is to use the AER's price reset process to consider the value of any network benefits from distributed generation and then to require DNSPs to make payments based on this value. The payments could be made available to proponents of large distributed generators, retailers (to pass on to relevant distributed generators), or aggregators who may be responsible for a number of distributed generators that have an appreciable effect on the network.

DNSPs are already required to provide the AER with estimates of the need for and cost of network investment as part of the price reset process. Those requirements could be modified to include providing estimates of the network costs and benefits of distributed generation (or demand side responses more broadly). This information would be the basis for identifying the areas of the network where the network benefits of distributed generation would be positive and setting up how payments would be made to proponents bringing forward proposals that would realise those benefits.

The Commission therefore recommends that the Victorian Government, through DPI, investigate whether, and how, the AER's price reset process can be used to:

- identify the network value of distributed generation
- require distribution businesses to make available payments based on that value.

Subject to that investigation producing a practical solution, and in the absence of any other relevant developments, the Commission recommends the Victorian Government prepare and submit a rule change proposal so it could be considered by the AEMC prior to the next price reset process in 2015.

Connection issues

Efficient connection processes are critical to ensuring that there is appropriate investment in distributed generation as part of Victoria's electricity sector. The connection processes for both medium- and household-scale distributed generation are more complex and costly than they need to be. There is very limited performance information on the efficiency and timeliness of the connection process — in stark contrast to processes in other sectors, such as planning approvals.

The Commission makes a distinction between the processes for connecting medium-scale and household-scale distributed generation because of the different issues involved.

Connecting household distributed generation

The current household connection processes causes problems for consumers, retailers, installers and DNSPs. The problems arise from complicated and time consuming processes, multiple handling of paperwork and a lack of information on the process. There are significant cost savings from reforming connection processes for household-scale distributed generation. These savings come from reducing administrative burdens and 'bringing forward' the benefit of producing electricity sooner (chapter 7).

Reducing the administrative burden and delay involved in processing contracts, double handling by retailers of paperwork and reducing paperwork errors could reduce administrative burdens in Victoria by \$3m to 4m per year. Time savings, and the 'bring forward' depend on whether the individual has errors in their application which delay connection. The estimated 'bring forward' of revenue is minimal for those that do not experience errors now (\$5), whereas for those who do not experience errors under the improved connection process but would have under the previous process have additional revenue of \$95. These 'bring forward' savings are important at the individual level but are not significant in aggregate (for details of the calculations see chapter 7).

The Commission consulted extensively after the draft report on the connection process to identify where the problems arise and how they could be addressed. The Commission identified and recommends the following improvements:

- remove the need for separate supply and export contracts with retailers and include a default FIT in retailer's standard supply contracts
- allow households to deal directly with DNSPs rather than retailers.

These reforms would address concerns about delays in the connection process, unnecessary red tape burdens and minimise double handling of paperwork.

In addition DPI should work with the sector to improve information provided to customers on their role and the role of other parties in the connection process, the likely retail and installation costs, and on the progress of their connection application — to ensure information is available to all parties and delays can be identified and addressed early.

In the event that industry is unable to reach agreement by 31 December 2013 — on improving process visibility and removing the retailer from the installation, connection and metering processes, then the Commission recommends the Victorian Government assess the costs and benefits of mandating the reforms.

Many participants argued in favour of online application and tracking systems to improve information flows and reduce delays. While the Commission concluded mandating the establishment of such systems would be difficult, it considers that its recommendation that customers deal directly with DNSPs would increase incentives to improve the system.

Medium-scale connection

Depending on location and operation, medium-scale generators offer several advantages in network support and electricity supply to the owner and other parties in the electricity system:

- greater potential for network savings and lower cost than small-scale renewables because of economies of scale
- contribution to national emission reduction targets and improved green building ratings which improve rental returns for building owners
- low transaction costs with less than 100 medium- to large-scale plants making up 295 MW of installed capacity and around 50 000 small-scale PV installations making up around 75 MW of installed capacity in Victoria in 2010 (CEC 2011).
- co- and tri-generation plants can switch on at full capacity or switch off unlike solar PV which cannot guarantee maximum production when the network is constrained and the electricity spot prices peak (Dunstan et al 2011, p. 12).

The net benefits of medium-scale generation will vary by location and operation and achieving many of these benefits requires connection to the network. Many participants expressed concerns to the Commission about significant barriers to connecting medium-scale generators (chapter 7).

The areas where participants argued there was scope to improve the efficiency of the medium-scale distributed generation connection process are in the areas of:

- The right to connect and export — there are network access barriers for medium-scale distributed generators with ambiguity around standards and no obligation on DNSPs to provide an automatic right to connect and export electricity, subject to the necessary standards and costs being met
- Improved process, timelines and uncertainty — the connection process was raised by many participants as a source of uncertainty and delay and therefore a barrier to distributed generation. Areas for improvement are: providing more information on the connection process, standardising the connection process, better information exchange between the proponent and DNSPs, quicker connection times and a better negotiation/arbitration process.

Several of these areas fall within the accountability of the NEM and the AER. Some can be addressed by the Victorian Government. To address these issues the Commission has recommended that, to facilitate efficient connection of medium-scale distributed generators up to 5 MW, the Victorian Government support initiatives that:

- clarify minimum technical standards and cost sharing arrangements that would support a right to connect and export

- improve information on the connection process and the exchange of information between the DNSP and the distributed generator early in the connection process, including by publishing Sustainability Victoria's guide to distributed generation connection in Victoria
- standardise connection processes
- improve engagement between DNSPs and distributed generators
- specify and reduce timelines.

In the first instance, the Commission recommends the Victorian Government, through DPI, indicate to the AEMC its support for those aspects of the ClimateWorks, Seed and PCA *Proposal to amend the National Electricity Rules for connecting embedded generators* that progress the above objectives. The Commission also recommends DPI advise the AEMC accordingly, during the AEMC's consultation on the rule change proposal.

Should these issues not be resolved through the national rule change process by June 2013, the Commission recommends the Government adding a licence condition requiring DNSPs in Victoria to establish such standards and rights.

Recommendations

The six recommendations are listed in the order they appear in the report, and need to be understood in the context of the discussion in respective chapters.

Recommendation 5.1

That to clarify the circumstances and conditions in which network reinforcement costs can be spread across new distributed generators and other users, the Victorian Government:

- make a submission seeking the development of principles for cost sharing to the Australian Energy Market Commission's consideration of the *Proposal to amend the National Electricity Rules for connecting embedded generators*. This submission be prepared by the Department of Primary Industries in consultation with the Australian Energy Regulator (AER), distribution network service providers and distributed generator proponents
- advocate to the AER for appropriate guidance on cost sharing arrangements for the connection of distributed generators before the next round of network distribution pricing determinations expected in 2015.

Recommendation 5.2

That the Victorian Government, through the Department of Primary Industries investigate whether, and how, the Australian Energy Regulator's price reset process can be used to:

- Identify the network value of distributed generation
- Require distribution businesses to make available payments based on that value.

Subject to the investigation producing a practical solution, and in the absence of any other relevant developments, the Victorian Government prepare and submit a rule change proposal so it could be considered by the AEMC prior to the next price reset process in 2015.

Recommendation 6.1

That, to facilitate efficient connection of medium-scale distributed generators up to 5 MW, the Victorian Government support initiatives that:

- clarify minimum technical standards and cost sharing arrangements that would support a right to connect and export
- improve information on the connection process including publishing Sustainability Victoria's guide to distributed generation connection in Victoria
- improve exchange of information and engagement between the distribution network service provider and distributed generator early in the connection process
- standardise and simplify connection processes and incorporate more reliable timeframes.

In the first instance, the Victorian Government, through the Department of Primary Industries (DPI), indicate to the AEMC its support for those aspects of the ClimateWorks, Seed and PCA *Proposal to amend the National Electricity Rules for connecting embedded generators* that progress the above objectives. DPI should make the AEMC

aware of this view during the AEMC's consultation process on the rule change proposal.

Should these issues not be resolved through the national rule change process by June 2013, the Government, subject to a positive cost benefit assessment, use Victorian regulatory instruments such as adding a licence condition requiring distribution network service providers in Victoria to establish such standards and rights.

Recommendation 7.1

That to facilitate the connection of all renewable and low-emissions distributed generation (100 kW or less) under the new feed-in tariff (FIT) scheme contemplated by recommendation 9.1, the Victorian Government:

- amend the *Electricity Industry Act 2000* (Vic) (EI Act) to require that Victorian retailers with more than 5000 customers include a default FIT clause in all their retail supply contracts, which is activated — unless the customer has instructed otherwise — when the retailer is notified by the distribution network service provider (DNSP) that the supply customer has met all the physical and technical preconditions for connecting distributed generation. Retailers and customers would be free to agree on a FIT outside this default offer. The default FIT offer would give effect to the new FIT specified in recommendation 9.1.

That the Victorian Government require the Department of Primary Industries (DPI) to:

- increase the information available to household-scale distributed generation customers — about the customer's role and the role of other parties in the new FIT connection process, and the likely retail and installation costs — by being proactive in the provision of upfront independent information that:
 - outlines the impact of recommended process improvements
 - identifies which party is accountable for each step in the connection process and who bears the risk for any resulting cost and delay
 - clearly indicates to the customer the risk of not being informed
- in conjunction with Consumer Affairs Victoria and the Energy and Water Ombudsman Victoria identify, and respond to, ongoing systemic process problems
- initiate a process with Victorian retailers and DNSPs to establish an industry agreement on processes that:
 - improves visibility of the connection process, so that customers are informed about the progress of their application and can determine if, and where, their application has stalled at any stage in the connection process
 - allows for the installer to submit the Electrical Work Request and Certificate of Electrical Safety directly to the DNSP, and amend the Solar Connection Form to require customers to fill in the name of their supply retailer.

In the event that industry is unable to agree by 31 December 2013 on improving process visibility and removing the retailer from physical installation, connection and metering process, the Victorian Government, subject to a positive cost benefit assessment, amend the EI Act to:

- create a deemed electricity distribution licence condition that DNSPs vary their Use of System Agreements with applicable retailers to implement these process reforms

- impose a distribution licence condition that Victorian DNSPs amend the Solar Connection Form to add in a new box for customers to fill in the name of their supply retailer.

Recommendation 8.1

That, to inform future policy development, and assist in the efficient consideration of distributed generation options, the Victorian Government facilitate precinct scale development by:

- Selecting an appropriate precinct scale project, or projects, and bringing relevant interested parties together in a project facilitation group.
- Taking the new precinct development and thoroughly examining the regulatory and other barriers to distributed generation including the net benefit of reducing or removing those barriers.
- Subject to the outcome of this assessment, taking action to remove the barriers.
- Documenting the results and disseminating the information to government, industry and community organisations to inform future precinct scale distributed generation projects and policy directions (electricity, planning etc.).

Recommendation 9.1

That, to improve the efficiency and effectiveness of the operation of feed-in tariffs (FITs) in Victoria, the Victorian Government:

- **close the Transitional FIT to new entrants**, either by 30 September 2013 or once the 75 MW capacity is reached (as currently provided in legislation), whichever occurs first – those customers currently eligible to receive a Premium FIT (which is now closed) or TFIT to continue to receive this tariff until the end of the contracted period
- **close the Standard FIT to new entrants** at the same time as closing TFIT, or as soon as practical thereafter. Ensure that current SFIT customers continue to receive a feed-in tariff not less than the tariff agreed to prior to the date of closure to new entrants, until 31 December 2016 by continuing the ESC 'Fair and Reasonable' guideline until 31 December 2016. The ESC guideline to be rescinded with effect from 1 January 2017.
- **establish a new net FIT scheme** simultaneously with the closure of SFIT to new customers, to require that Victorian electricity retailers with more than 5 000 customers offer 'efficient and fair' prices for electricity exported to the grid by all small low-emissions or renewable distributed generators (100 kW or less) until 31 December 2016. Define low-emissions technology as generators that produce 50 per cent or less of the emissions intensity of electricity generation in Australia
- **establish market-based FITs** from 1 January 2017 to apply to all new participants for electricity supplied by distributed generators through the retail electricity market
- allow market-determined arrangements based on gross payments by mutual agreement
- ensure a FIT comparison website is operational by 31 December 2016 (the end of the transition period), provided by the Victorian Government if a Commonwealth or private site is not available.

That the Essential Services Commission:

- publish information on the likely range of minimum wholesale market-based net feed-in tariffs which would be consistent with an efficient and fair offer —updated at regular intervals and published until 31 December 2016. The methodology adopted by ACIL Tasman suggests (at May 2012) a range of between 6 and 8 cents per kWh for 2013.
- From 1 October 2013 to 31 December 2016, assess, on referral from the Minister for Energy whether new FiT offers are consistent with the 'efficient and fair' criterion, defined to reflect a wholesale-based value of electricity (including network system losses).