

Australian Sustainable Built Environment Council Platform on Distributed Generation

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Introduction

Distributed generation (DG) includes solar photovoltaic, cogeneration, trigeneration and district energy systems. DG offers significant opportunities to make energy more affordable, improve energy productivity, increase system diversity and resilience, and reduce greenhouse gas emissions.

However, reforms to energy market regulations and other policies are essential to both unlock the potential of DG and ensure that its installation occurs in a way that delivers both short- and long-term benefits to consumers.

Benefits of DG

DG includes a wide number of technologies that are installed close to energy consumers. These technologies vary in their installation costs, fuel cost and generation patterns. For example:

- Solar photovoltaic systems have variable output, relatively high upfront costs and no fuel costs;
- Cogeneration and trigeneration systems have stable output and moderate upfront costs. The fuel costs of these systems vary, but are substantially more efficient than conventional generation systems at converting fuel into useful services.
- District energy systems reduce the infrastructure and running costs of thermal energy systems by substituting a small number of large, highly-efficient plant (sometimes cogeneration systems) for a large number of smaller less-efficient plant.

If they are rolled out in an effective way, a diverse mix of DG technologies would:

- Protect homes and businesses from rising fuel costs by either avoiding the use of fuel or using it more efficiently;
- Reduce energy bills by reducing the need to augment the grid to cope with rising peak demand;

Barriers to a rational roll-out of DG

The penetration of PV and other forms of DG has increased significantly in recent years and this is likely to continue. However, technical, skill-based and regulatory barriers have prevented the installation of some of the most cost-effective forms of DG, and the absence of a suitable economic framework means that DG is not always installed in a way that delivers maximum benefits to the grid.

The National Electricity Market (NEM) was designed around an electricity system predominantly made up of large generators in a small number of regions, backed by extensive transmission and distribution networks. As such, existing rules, regulations, and technology have created many anticipated and unanticipated barriers to the uptake of DG, such as:

- generators being unable to capture the full value created by DG for energy users, networks and other parties;
- problems with connecting DG to the network, with substantial delays, ad hoc processes, and inequitable mechanisms for apportioning any costs for augmenting the grid; and
- disadvantages to innovators and first-movers.



ASBEC policy recommendations

Federal, state and local governments should work together to:

- Maintain the Renewable Energy Target
- Appoint a commissioner to support the rollout of DG. The Commissioner would focus on removing regulatory barriers and inconsistent standards, and creating a viable market for renewable and distributed energy resources.
- Simplify the process for connecting DG to the grid by:
 - Expediting the rule change proposed by ClimateWorks and the Property Council to improve the connection process for DG;
 - Developing protocols for a standard connection process
 - Having the DG Commissioner to act as an ombudsman for the connection process.
- Commence a long-term process to deliver fair returns from DG installations, including both energy and network values. This would include:
 - Reviewing the way that energy consumers and generators are charged for connecting to, and using the grid, and ensuring that DG owners are rewarded for any benefits they deliver to networks.
 - Recognising and commodifying the low-carbon value of cogeneration and trigeneration, so that consumers that place a high value on avoided emissions can pay a premium for these forms of generation.
- Immediately start interim measures to deliver fairer returns from DG installations:
 - Allow distributed generators to use parts of the public network as virtual private-wire systems;
 - Relax requirements for consumers to be able to access offers from multiple electricity retailers where access to DG is combined with additional consumer protection; and
 - Support the next 3,000 MW of cogeneration installed in Australia through the NSW Energy Savings Scheme and Victorian Energy Saver Incentive, in recognition of the multiple barriers facing these technologies and their multiple benefits.
- Deliver targeted financial support for innovative applications of DG.



About ASBEC

ASBEC is the peak body of key organisations committed to a sustainable built environment in Australia.

ASBEC's membership consists of industry and professional associations, non-government organisations and government observers who are involved in the planning, design, delivery and operation of our built environment, and are concerned with the social and environmental impacts of this sector.

ASBEC provides a forum for diverse groups involved in the built environment to gather, find common ground and intelligently discuss contentious issues as well as advocate their own sustainability products, policies and initiatives.

ASBEC is a non-profit volunteer organisation. Members commit their time, resources and energy to developing practical opportunities for a more sustainable built environment.

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