

A FRAMEWORK FOR PROCURING OFFSITE RENEWABLE ENERGY

GUIDE NOTE



KEY POINTS

- Commercial electricity users now have a number of innovative options for sourcing their renewable energy supplies from other asset owners.
- The Australian market for offsite renewable energy procurement is immature but growing rapidly.
- We have developed a framework that characterises the market for, and supports consumers when making decisions about, the procurement of offsite renewable energy.

THE OPPORTUNITY / CHALLENGE

Electricity consumers across the globe want more control and choice over the power they purchase. In Australia, GreenPower and ‘behind the meter’ renewable energy options are being supplemented by electricity procured from renewable energy facilities located at other sites. Internationally, this practice has seen major technology companies including Google, Amazon, Facebook, and Microsoft procure large volumes of energy from newly constructed offsite renewable energy facilities.

Offsite renewable energy procurement, either through Power Purchase Agreements (PPAs) or facility ownership can:

- Offer Australian consumers another avenue for both managing electricity costs and achieving sustainability goals.
- Enable the renewable energy industry to diversify its new investment sources.
- Assist Australia in meeting its renewable energy target and climate goals.

However, there are a range of barriers to the development of a new market for offsite renewable energy procurement in Australia, including:

- End user skills and knowledge.
- The limited availability of public information.
- An underdeveloped market for services and products.

CRC for Low Carbon Living

The CRC for Low Carbon Living (CRCLCL) is a national research and innovation hub that seeks to enable a globally competitive low carbon built environment sector and is supported by the Commonwealth Government’s Cooperative Research Centres (CRC) programme.

With a focus on collaborative innovation, the CRCLCL brings together property, planning, engineering and policy organisations with leading Australian researchers. The CRCLCL develops new social, technological and policy tools for facilitating the development of low carbon products and services to reduce greenhouse gas emissions in the built environment. For more information visit www.lowcarbonlivingcrc.com.au/

OUR RESEARCH

We investigated the offsite renewable energy market to provide practical and academic insights to assist its development. We addressed a set of forward-looking questions including:

- What might an Australian market for offsite renewable energy look like?
- Who would participate in this market?
- What are the preferences and views of potential market participants?
- How should these participants approach their interaction with such a market?

We investigated the potential for end-users to become a driving force underpinning new utility-scale renewable energy facilities in the Australian electricity market.

These questions were answered through an exploratory, descriptive and explanatory approach to:

- Describing how consumers can procure offsite source-specific renewable energy.
- Understanding why consumers may wish to procure source-specific offsite renewable energy.

- Characterising who potentially makes up the market for offsite renewable energy procurement.
- Appreciating what factors enable and inhibit the effective provision of offsite renewable energy by market actors.

We conducted an industry survey, looked at case studies of implemented deals, and held workshops with market participants to develop a practical framework that can support decision-making regarding the structure of offsite renewable energy contracts.

VALUE PROPOSITION

The results of our study provide actionable insights for consumers through a decision-support framework, full details of which are set out in our report available on the CRCLCL website. The framework sets out the options available when structuring an offsite renewable energy procurement, with seven key decisions required. It can help reduce transaction costs and contribute to overall market development by guiding and informing both end-users and other market participants.

DECISION TYPE	OPTIONS AVAILABLE		
Economic structure	Buy	Own	
Project type	New		Existing
Form of renewable energy procured	Green	Black	Bundled
Deal type	Exclusive		Aggregated
Counterparty	Retailer		End-user
Procurement approach	Physical		Virtual
LGC treatment	Sell	Surrender	Combination

At an academic level, this study characterises the broader market environment that will arise from the interaction between end-users, electricity retailers, and renewable energy project developers. This will help inform governments designing policies and programs to support offsite renewable energy procurement, and renewable energy in general.

HOW YOU CAN BENEFIT

The offsite renewable energy procurement framework will be valuable for organisations designing a procurement strategy that:

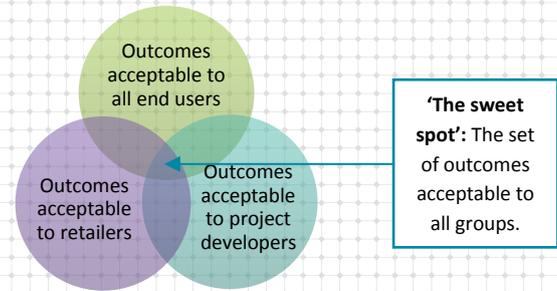
- Reduces electricity costs.
- Establishes ownership or a contractual procurement agreement.
- Overcomes barriers to the installation of 'behind the meter' renewable energy.

LESSONS

The future Australian electricity industry will offer a wider range of electricity procurement options to meet end-user needs and preferences.

Australia is facing electricity cost pressures and the need to meet environmental objectives, and is likely to replicate the US experience, resulting in the dramatic growth of offsite renewable energy procurement by corporations and institutions, who are already very interested in this avenue.

There are, however, a set of market risks that need to be managed effectively to achieve desirable outcomes. Australian electricity users require a set of standardised market product and service offerings to effectively manage these risks, and governments and NGOs can provide public information to enhance the development these.



NEXT STEPS

Our research identified a set of areas for future work including:

- The accounting treatment of PPAs for the procurement of offsite renewable energy.
- Development of methods and tools for end-users to manage the price/volume risk in matching intermittent supply with variable generation.
- Optimising offsite renewable energy technology choice for end users.
- Policy design for the provision of information supporting end user decision-making.

PROJECT PARTNERS

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- AGL
- AECOM
- Multiplex

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