

**CLEAN ENERGY COUNCIL
FUTURE-PROOFING IN
AUSTRALIA'S ELECTRICITY
DISTRIBUTION INDUSTRY PROJECT**



ANALYSIS OF DEMAND-SIDE MANAGEMENT OPPORTUNITIES

TASK 1C

REPORT BY: ENTURA



Foreword

The Clean Energy Council (CEC) is the peak body representing Australia's Renewable Energy Industry. Australia is a world leader in renewables. With some of the highest on-grid penetrations of solar PV in the world, electricity consumers are now driving an irreversible change. However, this change does not come without challenges.

The continued integration of renewable energy technologies into Australia's electricity distribution networks represents one of the largest economic, regulatory and technical challenges that the industry has faced to date. The extent of this reform brings with it risks and opportunities. The CEC firmly believes that these challenges are best addressed by considering all facets of the industry collectively and through constructive stakeholder engagement.

About the FPDl Project

The CEC, in conjunction with its members and other key stakeholders, has scoped a comprehensive program of work that will begin to address some of these challenges. With the objective of enhancing the flexibility and resilience of Australia's electricity distribution systems and the installations connected to them, the CEC-led Future Proofing in Australia's Electricity Distribution Industry (FPDI) project will analyse existing and emerging issues.

Ultimately the project seeks to build the foundations to facilitate the effective and efficient integration of renewable energy systems for Australia's electricity distribution industry. A subsequent goal is to ensure that the benefits of the transformation of this key industry towards a renewable energy future are accessible by the sector's various stakeholders.

The project's detailed scope of work includes technical, economic and regulatory analysis, forums, knowledge gathering and dissemination of the project outcomes. This approach is intended to create the environment for well-rounded stakeholder engagement throughout the project that will reinforce project outputs and target specific beneficial outcomes from each aspect of the project.

Further details of the project, its scope, governance and objectives can be found on the CEC website¹ in the FPDl Project area.

About this Report

A part of the industry's transition is new charging options designed to provide signals which reflect the costs of providing electricity. These signals are anticipated to create new dynamics in the way we use electricity.

For small-medium enterprise businesses there is generally a low understanding of the options available to contain their electricity costs – and the options are increasing. Demand-side management options for SMEs include embedded generation, battery storage, load shifting and integrated energy management systems. All of which are facing declining costs – while electricity costs are increasing.

At the same time there is an expectation that network owners place a greater emphasis on the use of demand side management in their investment strategies. The same options above might also assist these crucial stakeholders in managing the utilisation of their network assets. However, there

¹ <http://www.cleanenergycouncil.org.au>

is no immediately evident link between the expectations of DNSPs for demand management, and that of SME customers who may adopt demand management.

Aimed at all electricity industry stakeholders, the objective of this report is to inform the more technically minded stakeholders including distribution networks and DSM equipment suppliers. The CEC hopes that this report will provide a reasonable level of technical detail to increase the understanding of the options and businesses cases for demand side-management in the SME sector.

Based on this analysis, the accompanying report "*Guide to demand side management solutions for businesses*" translates this technical detail to inform SME businesses.

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