

B4: Opportunity Assessment

# **Flexible demand and demand control**

Report at a glance



## RACE for Business Program

### Flexible demand and demand control

Opportunity assessment for research theme B4

Project Code: 20.B4.A.0132

October 2021

ISBN: 978-1-922746-00-9

### Project team

CSIRO

- T.S. Brinsmead
- S. White

Royal Melbourne Institute of Technology

- C. Bransden
- C. Stanley
- K. Hasan

University of Technology Sydney

- K. Nagrath
- C. Briggs

Australian Alliance for Energy Productivity

- J. Leak
- L. Harkins-Small

Energy Efficiency Council

- R. Murray-Leach
- K. Jennings

Energetics

- M. Sprague
- J. Northey
- G. Walgenwitz

RACE for 2030

- Dani Alexander

### Project partners



### What is RACE for 2030?

The Reliable Affordable Clean Energy for 2030 Cooperative Research Centre (RACE for 2030) is a 10-year, \$350 million Australian research collaboration involving industry, research, government and other stakeholders. Its mission is to drive innovation for a secure, affordable, clean energy future.

## Report at a glance

### Theme B4: Flexible demand and demand control

#### What is the report?

The opportunity assessment report provides a pathway for Australian businesses to develop flexible demand and demand control technology. The report identifies large and untapped potential for low-cost flexible demand across a range of industrial and commercial energy end-use applications. It found that activating these opportunities would put downward pressure on electricity prices for all electricity consumers.

#### Why is it important?

Unlocking flexible demand is a win-win-win: businesses pay less for electricity, network operators reduce their infrastructure costs, and electricity supply becomes more reliable. The report identifies both the large untapped potential for low-cost flexible demand in the industrial and commercial sectors, and the research required to address barriers and support deployment of flexible demand.

#### What did we do?

In preparing the report, the project team:

- identified barriers to flexible demand
- assessed the amount of flexible demand available
- conducted a gap analysis, and
- identified research opportunities to address the identified barriers.

The identified research opportunities are particularly focused on the decision-making steps required for people involved in trading flexible demand—sellers, buyers, policy makers and technology providers.

#### What difference will it make?

Preliminary estimates of the system-wide value of flexible demand providing ‘the last gigawatt’ is \$455 million per year, with \$300 million of this available to customers through annual bill savings.

#### What’s next?

The priority research areas identified through the project were categorised into the following three investment streams:



