

THE FUTURE OF BATTERY STORAGE INSTALLATION IN AUSTRALIA

November 2015



CLEAN ENERGY COUNCIL

Leading and supporting the growth of the clean energy industry in Australia through:

- Shaping policy
- Developing standards and regulations and ensuring the integrity of the industry
- Promoting the industry
- Providing a range of valuable services to our members, customers and partners
- Over 400 member organisations across the energy industry
- Accredited over 4,000 solar installers

AUSTRALIA'S ENERGY SYSTEM

- Network – long and thin and costly. Peak pressure and cost scrutiny
- Consumption - flat energy demand, but peak remains strong
- Generation – aged, inflexible with increased variable supply
- Considerable remote energy demand, with high dependence on expensive diesel generation
- Consumers cynical about energy utilities and now electricity-literate
- 1.4 million homes with solar PV
- In 2017 the first of the feed-in tariff customers return to the market
 - Importing at ~30c (per kWh)
 - Exporting at ~7c (per kWh)

ACCELERATING BATTERY STORAGE

- Unlock the full value of storage with transparent network tariffs
- Integrity and safety:
 - Installation practices
 - Product standards
 - Maintenance and operation and end of life
- Facilitate demonstration
- Ensure supportive regulatory framework
- Inform and engage consumers

AUSTRALIAN STORAGE INDUSTRY ROADMAP

CLEAN ENERGY COUNCIL



1 Analyse and monitor the growth of the storage sector



2 Ensure the development of standards and the integrity of the storage sector



3 Ensure effective regulation and policy to support the uptake and implementation of storage technology



5 Promote storage technology and its potential to consumers, policy makers and regulators



4 Coordinate the emerging sector, raising awareness about best practice implementation, and engagement in policy and regulatory issues



To download the roadmap and sign up to receive updates through the Energy Storage Network, visit cleanenergycouncil.org.au/storage.



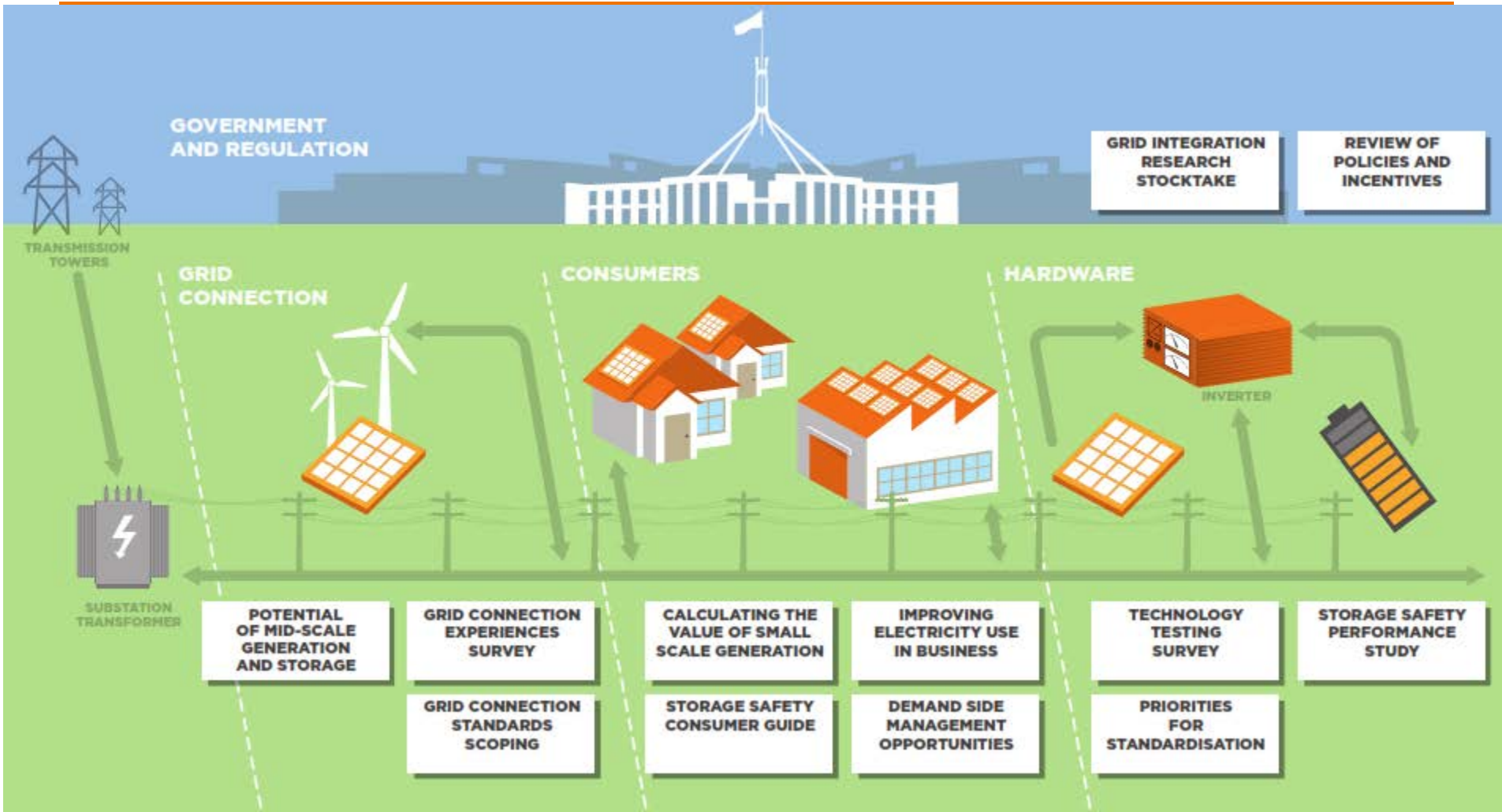
AUSTRALIAN RENEWABLE ENERGY AGENCY

Danny DeSchutter

ARENA General Manager, Strategy



CEC FUTURE-PROOFING PROJECT



CSIRO

Dr Sam Behrens

CSIRO, Research Scientist



CLEAN ENERGY COUNCIL

Sandy Atkins & Luke Pickles

CEC Accreditation Managers



CLEAN ENERGY COUNCIL

Tom Butler

CEC Network Specialist



ACTIONS AND NEXT STEPS

Next steps and actions for industry and government

1. Industry integrity and safety
2. Consumer information
3. Unlocking the value of energy storage
4. Ensure supportive regulations
5. Government-supported demonstration projects

ACTIONS AND NEXT STEPS #1

Integrity and safety

- Battery storage technologies are not zero risk
- Consumers need to have confidence in the performance, quality and safety of their investments by
 - Ensuring products and components meet minimum standards suitable for Australian conditions (CSIRO #4)
 - Installer & designer training, accreditation & enforcement to ensure competency (CSIRO #6)
 - Consideration of the operation, maintenance, transport, fault management and life-cycle management (CSIRO #2 & #5)

ACTIONS AND NEXT STEPS #2

Consumer information

- Consumer circumstances are individually unique
- Consumers need information to support informed decisions about system selection, installation, operation and maintenance (CSIRO #1)

ACTIONS AND NEXT STEPS #3

Unlock the full value of storage

- Battery storage can reduce peak demand and manage system-wide costs
- Tariff structures need to allow consumers to realise the economic benefits of their investments
- Current tariff reform debate needs to prevent barriers to customers realising this value now and moving forward

ACTIONS AND NEXT STEPS #4

Ensure supportive regulations

- Regulations relating to building codes, planning regimes, fire safety and electricity networks all need to be updated to remove barriers to these new technologies (CSIRO #3)
- Installer training and accreditation program in place but no enforcement regime exists (CSIRO #6)

ACTIONS AND NEXT STEPS #5

Government-supported demonstration projects

- Critical in identifying barriers, growing confidence and familiarity with battery storage solutions, finding innovative business and financing models, and building capability and capacity within the industry
- Targeted regulatory requirements or by providing upfront financial incentives

SUMMARY

- Electricity markets are evolving to create the right conditions for a highly active storage market where consumers are empowered and become active participants in our energy systems
- This presents a significant capacity building opportunity for Australia in a global energy system transition
- CEC is working, alongside industry experts, on ensuring industry integrity as the storage market grows
- There is a role for government to understand the issues and take action where necessary to support this integrity framework

THANK YOU

- See our website for updates on our storage work
<https://www.cleanenergycouncil.org.au/technologies/energy-storage.html>
- Join our Storage Network to receive updates via email
storage@cleanenergycouncil.org.au
- Become part of the conversation with CEC membership.
 - Membership enquiries: JFarrington@cleanenergycouncil.org.au
 - Phone: (03) 9929 4103