



THE UNIVERSITY
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Australian Battery Storage Test And Training Facilities Knowledge Sharing, Experiences and Opportunities

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seekLIGHT

History

- Proposal for Australian Centre for Energy Storage , University of Adelaide and Industrial Partners, 2012
- Technical Report on Investigation and Recommendation of Battery Storage for a Mining Site, University of Adelaide, 2011-2012
- The Australian Energy Storage Test Facility/[Australian Energy Storage Knowledge Bank](#) , University of Adelaide/[ARENA](#), 2013

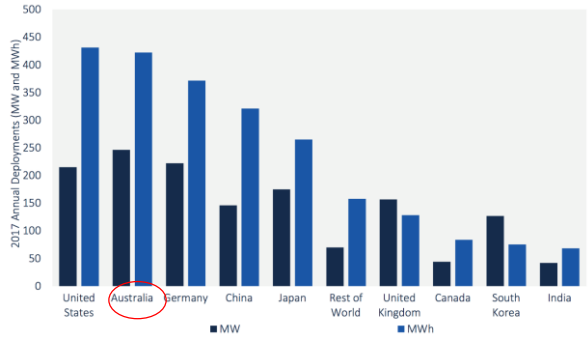
Total large scale battery deployment around the world until 2012

- 200MW, L i-Ion, 2009-2012
- 310 MW, Flow Battery (NaS), 2006-2012
- 3.25 MW, Vanadium Redox , 2000-2012
- 4MW, Ultra Batteries, 2012-
- 23MW, Lead Acid, 1987 -2012

Applications:

Spinning reserve, frequency regulation, renewable energy integration, peak shaving, reactive power support, deferral, voltage regulation

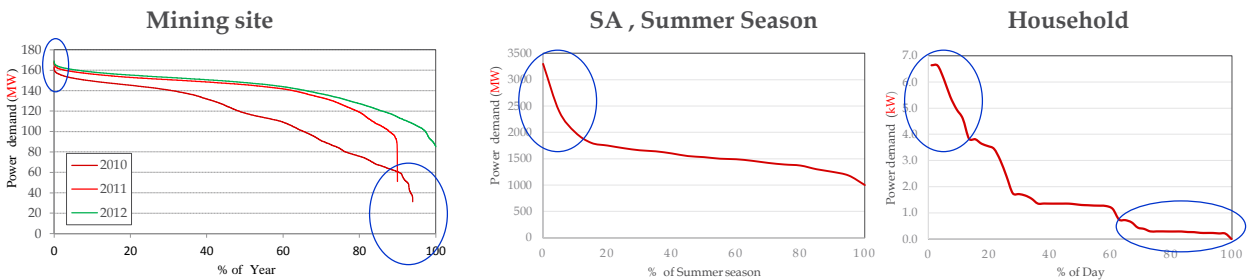
2017 Annual battery deployment



Recycling !

Global Energy Storage: 2017 Year-in-Review and 2018-2022 Outlook

Typical load duration (load capacity, load demand) curves in a given time frame



The area under curve is Energy !

Ideal area (generation/demand matches 100%)

Load factor = average load/maximum load in a given time frame

Australian Energy Storage Knowledge Bank (AESKB)

Aims:

“Accelerate growth of energy storage industry in Australia by real tests on system components and applications, knowledge sharing and training”

- Central Repository will include:
Case studies, trial / test data, network performance outcomes, storage system level, environmental data, battery level data, link with other databases / projects around Australia and the world, reports and research publications.
 - This afternoon, you will hear the details of AESKB project and about the experiences of industry in selected SA projects.
 - Further information about AESKB project can be found on the printed publicity documents (hard copies available) and on the Web page (which will be functional very soon)
www.aeskb.com.au or www.energystorageknowledge.com.au
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People Involved:

Nesimi Ertugrul (Project Director, The University of Adelaide)

Alex Lloyd (Project Manager, Solar Structures Pty. Ltd.)

Graeme Bell , Hybrid Energy Consulting Pty. Ltd

Gabriel Haines, The University of Adelaide

Michael Jansen, Power Technology Engineered Solutions Pty.

A number of technical staff from South Australian Power Network (in-kind support)

Acknowledgements

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Our Future Vision:

- Developing partnership to utilise the mobile test system, testing all possible configuration options, sharing data and knowledge with Australian Industry and community.
- Integrating Virtual Power Plant and Distributed Energy Storage concepts and relevant data

- Training future workforce in this exponentially growing area
- Inspiring and providing advice to develop local and National industry on battery storage technologies