

ARENA Insights Forum Presentation Summaries & Key Points - Plenary Session

SYDNEY, TUESDAY 25 JUNE 2019



Australian Government
Australian Renewable
Energy Agency

ARENA

During the past seven years, ARENA has invested \$1.4 billion in accelerating Australia's uptake of renewable energy. One of the greatest returns we have on this investment is a wealth of knowledge that can help shape new business models and key market reforms in the energy sector.

Sharing knowledge effectively to fast track industry development is central to ARENA's mandate. Guided by this, ARENA brought together 200 people from across the energy industry to share project insights and discuss topical themes. This summary presents the key messages and discussions during the plenary session, which focused on managing the energy transition on both the large and small scale.

The Forum was held on 25 June 2019 and was split into two streams: large scale projects and distributed energy resources (DER). ARENA CEO Darren Miller delivered opening remarks, emphasising the importance of sharing lessons from renewable energy projects to increase technical capability and collaboration, and how knowledge sharing platforms such as the Forum help to achieve this.

This year, ARENA was pleased to host international speaker Lorraine Akiba - Hawaii's former Commissioner for the Hawaii Public Utilities Commission, who presented on lessons learned from Hawaii's rapid transition to a high renewables grid.

KEYNOTE ADDRESS

Lorraine Akiba, former Commissioner of Hawaii Public Utilities Commission:
'Lessons from Hawaii, a high renewables grid'

Key points:

- Hawaii's exposure to the impacts of climate change is a large driver behind the transition of the electricity market, which is backed by a clear, mandated vision to move to a 100% renewable energy grid and 100% decarbonisation by 2045.
- The energy industry has traditionally been risk averse, as there are serious consequences to grid instability. However, with rapid leaps in technology, the mindset of the industry will need to change in order to be more innovative and agile, and robust regulatory and legislative frameworks will be necessary for pricing reforms and statutory mandates.
- The island state's high penetration of rooftop PV - with one in three roofs hosting solar arrays - influenced changes in feed-in rules for DER where capacity is valued over supply.
- The shift from Net Energy Metering of DER has changed how DER generation to the grid is paid for, including the move to TOU export tariffs where exported power is only paid for when the grid needs the additional generation. This was a controversial but necessary change from the industry's perspective and it ended with broad acceptance.
- For individuals that can't access DER, participation in community solar projects is available which incorporates time-of-use (ToU) tariffs following PV generation - offering cheaper tariffs during the day in an attempt to reduce the duck curve demand issue.
- The drop in battery prices was a key development for Hawaii to reduce dependency on LNG and shift to batteries to provide dispatchable power.
- Emerging technology and advancements are often world first tested in Hawaii, so there is a continual stream of knowledge sharing available from Hawaii's renewable energy and low carbon projects.

Session Panel Q&A Key Takeaways

Q&A Panel Facilitator: Darren Miller (ARENA)

Q&A Panel Members: Mark Paterson (Horizon Power), Monique Miller (CEFC), Justine Jarvinen (UNSW Energy Institute, Wattwatchers, Milton Corporation Limited and Pollinate Group), Suzanne Falvi (AEMC), Lorraine Akiba (former Commissioner of Hawaii Public Utilities Commission)

Key points:

- The NEM is changing from a load following grid to a supply following grid and legislation and regulation will need to evolve to accommodate a smooth transition.
 - Knowledge sharing across industry assists in informing the development of rules that are flexible and that will fit multiple scenarios.
- Collaboration across stakeholders is key for the transition:
 - Large scale projects have the ability to test leading projects at scale, while small scale projects identify the gaps and opportunities and are nimble enough to co-exist with existing players.
- Challenge of restructuring the market to make sure that it is creating value for consumers and there is a sustainable continued installation of grid support services.
- A key challenge in managing the perception of risk is the lack of current available information on projects in the pipeline, inhibiting the ability to take a real long-term view from a risk perspective.
- Applying a systemic approach and considering all the tools available to deploy may be effective in managing customer load and generation variability.
 - Moreso, collaboration across the energy sector and consumers is valuable to communicate what the rules are, to avoid unintended consequences.
 - Hawaii's holistic approach for the utilities strategic roadmap assists in ensuring rules are flexible and rational according to generators and users.
- Platforms such as the [Distributed Energy Integration Program](#) are highly valuable as it provides a space for industry to come together and collaborate, share knowledge and information, and hold each participant accountable to deliver progress.
- Tariffs need to properly and accurately reflect the value of what DER customers give and receive, and rational discussions are needed on how to value grid services. This then needs to be communicated to the public to educate consumers.

