

The Legal and Policy Obstacles to the Deployment of Residential Battery Storage for Renewable Generation



Penelope Crossley
Sydney Law School



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SYDNEY

- › There is significant regulatory and policy uncertainty in electricity markets internationally.
- › This uncertainty materially affects the deployment of residential battery storage systems.

- › The current market structure in most countries was designed to suit large-scale and centralised generation and transmission using fossil fuel or nuclear fuel sources.
- › In the 1980s and 1990s, vertically integrated utility monopolies were unbundled and privatised.

Current electricity market structure (2)

- › This market structure is now being challenged by a range of disruptive developments including:
 - *Significant growth of intermittent renewable generation;*
 - *Distributed generation;*
 - *The commercialisation of smart grids and demand-side management; and*
 - *Energy storage.*

- › Energy storage as a multifunctional asset does not easily fit within an existing market category in an unbundled electricity market.
 - *There is a lack of awareness of just how disruptive energy storage will be to existing market structures and pricing, especially as it becomes more cost competitive.*

- › The lack of clarity about future infrastructure plans and the role that energy storage will play is creating unnecessary uncertainty and risk. This is hampering the deployment of energy storage.

- › Various points of entry of consumers into the market require different kinds of regulation:
 - Outright purchase;
 - System-owned electricity purchasing; or
 - Lease of system.

- › Many of the incumbent market participants have a vested interest in maintaining the status quo.

1. **Lack of deployment incentives** available in many jurisdictions for residential battery storage.
 - Further market distortions by subsidies for existing generation technologies
2. **Lack of reliable, publicly available, and independent information** on residential storage systems, including comparisons of technical capacity and performance evaluations.
3. **Limited availability of contractual warranties** for the performance or life of residential battery storage systems.

4. As the market develops, **third parties may seek to remotely control** the operation of the storage systems for the use of the residential customer and/or for the benefit of other parties such as Network Operators.

5. Network Operators generally, by contract, **exclude all liability** to the extent that they may do so by law.
 - Alters the extent of risk assumed by customer.
 - Typically creates a personal liability for damage caused to their connection point, to the installation, to the operation or maintenance of the PV cells, the battery storage, or their export to the grid.
 - The customer agrees to indemnify the Network Operator for any loss or damage suffered by them.



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SYDNEY

Contact Information



PENELOPE CROSSLEY

Lecturer | Sydney Law School

THE UNIVERSITY OF SYDNEY

Room 427, New Law Building

The University of Sydney | NSW | 2006

T +61 2 9351 0388 | F +61 2 9351 0200

E penelope.crossley@sydney.edu.au

W <http://sydney.edu.au>