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ADVOCACY CENTRE

Executive Summary

Ensuring Consumer Protections for Purchasers of Residential Battery Storage Systems

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Executive Summary

Summary of Key Findings

Increasing numbers of residential customers are investigating installation of battery storage systems to complement their existing or new photovoltaic solar systems. The first national audit of residential battery storage systems in the Australian market found that almost 7000 systems were installed in 2016, with the figure being predicted to triple in 2017. Clearly, however, the installation of residential battery storage systems poses significant risks to the end-consumer.

In that context, contractual warranties and statutory consumer guarantees play an important role both in terms of inspiring consumer confidence in residential battery storage systems and in ensuring consumer protection for end-consumers. Contractual warranty theories suggest that the warranty should act as a risk allocation tool that provides both insurance to prospective purchasers and an incentive to manufacturers/suppliers to improve the quality of their products.

This research analyses the warranties offered by 14 different manufacturers covering 31 residential battery storage systems that are available in the Australian market. These contractual warranties are analysed for a number of key discriminators, including the duration of the warranty, coverage of the warranty, and the available remedies under the warranty.

1. Problems emerging with residential battery storage systems

First, it is important to understand the legal problems which can arise for consumers in the installation and operation of residential battery storage systems. From a review of reported litigation regarding household and domestic battery products, it is clear that the five most common legal problems which arise are:

i. Poor battery performance;
ii. Poor battery life;
iii. Total product failure;
iv. Safety defects such as fire risk and battery leakage;
v. Misleading and deceptive conduct on the part of the seller of the product.

These problems are likely to be exacerbated in the Australian market. First, environmental factors pose unique challenges for market entrants. Both high temperatures and high humidity are known to cause problems for lithium ion batteries, shortening their lifespan and reducing their performance. As a result, battery manufacturers have placed limitations on both upper maximum and minimum ambient and operating temperatures and humidity for their batteries. Moreover, there are currently no Australian Standards governing residential battery storage system safety, installation or performance. These Standards are currently in the process of being drafted but have been identified as a high priority area for the development of Standards since 2012.

2. How do the contractual warranties offered to purchasers of residential battery storage systems in the Australian market address these problems?

A number of issues were raised by this study of the contractual warranties offered to consumers of residential battery storage systems in the Australian market. Many of these concerns suggest that the risk of loss arising from the problems identified above is likely to be borne directly by the consumer.

Amongst the warranties studied, the market standard for the **warranty period** was 10 years for a limited warranty. However, many warranty periods commence on different dates, such as the date of manufacture; the date of invoice; or the date of dispatch from the factory. These differing start dates may significantly affect the length of the warranty period. The start date in some instances was the date of the manufacture of the battery in China, which could be as much as 12 months prior to the battery being installed in Australia.

Many of the warranties in our study were **in breach of the Australian Consumer Law** and provided misleading and deceptive statements in their warranty documents purporting to exclude any other statutory rights or implied guarantees of merchantability, fitness for purpose and hidden defects.

They also sought to limit any prospective damages claims to a maximum amount of the purchase price of the battery and excluded liability for any consequential losses, damage or injuries.

A further issue in relation to the contractual warranties was the **maximum operating temperatures** contained in the warranty documents. The range of maximum operating temperatures varied between 35^{o}C and 65^{o}C. This is lower than the record highest annual mean daily temperature in some Australian cities. A significant concern in this respect is that some manufacturers are advertising wider temperature ranges in their technical data specification sheets than in their warranty documents.

Any warranty claim will be subject to the consumer using their battery in accordance with the **conditions** specified in the warranty document. Standard conditions included that the battery is used normally and subject to the consumer meeting the conditions in the product manual and that the battery be installed by an authorised installer. Of some concern, however, are conditions which impose additional resource burdens on consumers in the event of product failure, for example requirements that in the event of a warranty claim, the consumer has a limited period of time in which to report the defect.

Most manufacturers now provide a **capacity warranty** over the warranted life of the battery. Among the warranties studied there was variation in the amount of capacity which the manufacturers/suppliers were willing to warrant retention of at the end of the warranty period. Given that loss of capacity is a significant issue arising with the use of lithium ion batteries, the lack of industry standard risks leaving some consumers unprotected for such a common problem.

All of the warranties studied contained an extensive list of **exclusions**. Common exclusions included incorrect installation; misuse or abuse of the battery; negligence; the battery being subject to a force majeure event; or damage caused during shipping or transportation.

The study found a range of available **remedies** under warranty. There is a clear market standard that repair or replace is at the sole discretion of the manufacturer/supplier. However, of concern is the fact that many of the provisions for repair and replacement incur a range of hidden costs for the consumer, including costs of removing and shipping the defective battery, and installing or reinstalling the repaired or replaced battery. Further, any replacement or repair of the product is expressly stated not to lead to the renewal or extension of the warranty period.

3. Are there other remedies available to Australian consumers to address potential problems with residential battery storage systems?

In addition to the express contractual warranties that may be offered by manufacturers, suppliers or retailers, consumers may benefit from additional protections in the form of statutory consumer guarantees or conditions being implied into their contracts.

There are a number of statutory consumer guarantees under the Australian Consumer Law that provide protections for consumers purchasing residential battery storage systems. These include that the residential energy storage system must be of acceptable quality; must be fit for any disclosed purchase; that it meets its product description; that it has spare parts and repair facilities available for a reasonable time after purchase unless the customer is told otherwise prior to purchase; and that it meets any express warranties provided by the manufacturer or supplier. There are also consumer guarantees under the Australian Consumer Law that are applicable to the installation of residential battery storage systems. The remedies available in relation to a breach of the consumer guarantees vary depending on whether the breach is deemed to be a "major failure".

Where the consumer purchases the residential energy storage system outright, they may also acquire rights under the *Sale of Goods Act 1923* (NSW). This Act will imply three conditions into the contract for the sale of goods relevant to purchasers of residential battery storage systems: that the system will correspond to their description; will be reasonably fit for purpose, providing that the purchaser can show that they disclosed the purpose for which the system was to be used, relied on the seller's judgement and skill and that the seller usually trades in that type of goods; and that the system was of merchantable quality. Where one of these implied conditions is breached, the consumer has two potential remedies, compensation for their losses or recession of the contract.

A further statutory protection for consumers is found in s 18(1) of the Australian Consumer Law which prohibits misleading and deceptive conduct in trade or commerce. In the context of residential battery storage systems, misleading and deceptive conduct may occur if the manufacturer or seller of the product provides misleading product comparisons, makes express statements that are untrue or makes unsubstantiated claims about product performance.

If there has been a product failure, which has caused the consumer to suffer damage, consumers may also be able to bring a claim for negligence under the *Civil Liability Act 2002* (NSW). If the consumer is successful in their claim, they may be eligible to receive compensation for their loss or damage suffered. However, any compensation claim will be subject to the caps on damages contained with the Act.