



LEGAL CIRCUIT

Wired to Code. Bound by Law



Independent Forensic Electrical Engineering | Compliance | Expert Opinion

Victor Saifi
Principal Consultant
EWRB Registered Electrical Engineer and Electrical Inspector | Admitted Lawyer
M: 021 995 916 | E: victor@legalcircuit.co.nz | W: www.legalcircuit.co.nz

LC-004, September 2026

From Consumption to Generation and Storage

The traditional electrical installation was built around a simple assumption: electricity came from the grid and flowed to the load.

That model is changing with the growth of renewable energy. Solar generation and Battery Energy Storage Systems (BESS) allow electricity to be generated, stored and used within an installation, while electricity may also be imported from the grid or exported to the grid.

As electricity can now be supplied from multiple sources, the installation becomes more complex. This brings greater attention to:

- Multiple sources of supply
- Isolation and fault protection
- Battery and inverter integration
- System control and energy management
- Testing and documentation

The challenge is not simply integration of the sources; rather, it is ensuring that generation, storage, protection and the existing installation operate safely as one integrated system.

Key point

The source of electricity is changing. The principles of safe design, protection and compliance are not.

As generation and storage become more common, each source of electrical supply should be considered when determining isolation, protection and verification requirements.

Prepared by Victor Saifi

EWRB Registered Electrical Engineer and Electrical Inspector

Disclaimer: This publication provides general engineering information only. It is not an engineering assessment or legal advice.