

Powering the future of smart EV charging

How Resillion helped Octopus Energy achieve G99
certification for its Vehicle-to-Grid charging platform.

The opportunity

Octopus Energy is a global energy company that uses technology to make energy fairer, greener and simpler. Their approach combines renewable power, smart tariffs and the Kraken software platform to help customers use cleaner energy at the best times.

One of their major innovations is Power Pack, Octopus's first Vehicle-to-Grid (V2G) tariff. Power Pack allows customers to charge their electric vehicle (EV) when energy is greenest and export electricity back to the grid when it's needed most.

About Octopus Energy

Since launching in 2015, Octopus have been driving innovation in the energy market.

- **Industry:** Energy
- **Solution:** Power Pack, Octopus's first Vehicle-to-Grid (V2G) tariff
- **Service provided:** Standards compliance testing
- **Certification:** G99
- **Location:** UK

The challenge

Delivering a fully compliant, secure solution with no established testing pathway

This was a genuine leap forward – with no precedent anywhere in the UK energy sector. For an EV to send power back to the grid, it must pass the UK's G99 certification standard, which checks things like voltage control and how the system behaves during faults.

- **Grid compliance:** For an EV to send power back to the grid, it must pass the UK's G99 standard.
- **Real-world testing:** The whole system must work seamlessly together in a way that meets the requirements.
- **Secure operation:** Distributed Energy Resources (DERs), such as EV chargers, bridge physical infrastructure and the digital world.

“

This was a genuine leap forward – with no precedent anywhere in the UK energy sector.”

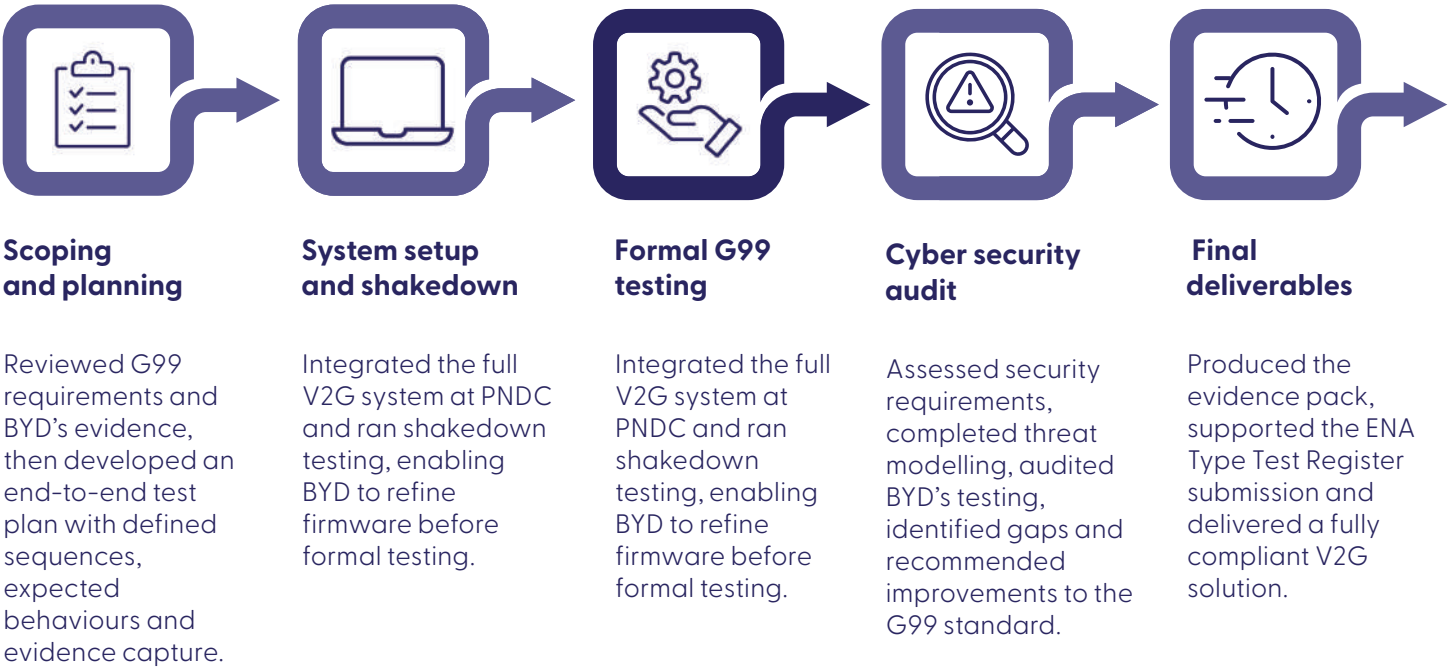




Our approach

From designing the test plan to running the lab setup and successful testing

We worked alongside Octopus throughout the entire G99 certification journey, from the first conversations about requirements to the moment all tests were finally signed off. The work was hands-on, iterative and often problem-solving in real-time. Turning experimental ambition into certified reality.



Inside the testing

To make this bold idea work reliably and at scale, Octopus partnered with BYD and Zaptec to create a bundle: a BYD Dolphin EV with V2G capability, a Zaptec Pro bi-directional charger alongside a tariff that gives customers free home EV charging.

“Some of the requirements are satisfied by the car, and some by the charger, so that the whole system must work seamlessly together in a way that meets the requirements.”



As the Power Pack Bundle was the first of its kind - outside of innovation hardware - to achieve G99 certification, we collaborated closely with industry experts to redefine existing methodologies, tailoring them to the specific demands of AC V2G.



The outcome

Certified Vehicle-to-Grid system ready for commercial rollout

By completing all G99 tests and supporting the ENA Type Test Register submission, we helped Octopus deliver a first-of-its-kind, fully certified secure V2G customer offering in the UK.



✓ Full G99 certification

By completing all G99 tests and supporting the ENA Type Test Register submission, we helped Octopus deliver a first-of-its-kind, fully certified secure V2G customer offering in the UK.

↑ Commercial rollout

This milestone gives Octopus the confidence to roll out the Power Pack Bundle at scale, knowing the system meets the UK's strict safety, cyber and grid-connection requirements.

👥 Customer demand

Interest in the solution has been strong, with thousands of customers registering interest for the Power Pack Bundle and the first customers recently onboarded onto the scheme.

💰 Customer savings

Octopus says a typical V2G driver could save £620 per year compared to Flexible Octopus, and £161 compared to Intelligent Octopus Go.

👉 Grid impact

Each V2G-enabled vehicle acts as a small, distributed energy asset, helping to absorb renewable energy when the grid has surplus and supporting the grid during peak demand.

💰 Typical savings

£620 A typical V2G driver could save per year compared to Flexible Octopus. **£161** Compared to Intelligent Octopus Go.



We chose Resillion because they shared our desire to move quickly and learn by doing”



*Michael Evans, Director of Optimisation and V2X,
Octopus Energy Group*

Resillion

To make this visionary solution a reality, Octopus partnered with Resillion to lead the way in standards compliance testing.

Specialist expertise

With no established framework for AC V2G certification, Octopus needed a partner capable of navigating uncharted territory.

Total Quality approach

Instead of treating compliance and cyber security separately, Resillion tested and evaluated them together across the end-to-end solution. This gave Octopus a single, coherent view of performance, risk and regulatory readiness.

Strong relationships

Resillion had access to PNDC's isolated-grid innovation centre enabling fast scheduling and efficient test cycles, reducing time, cost and complexity.

Trailblazing

V2G projects are redefining the energy landscape, and Resillion helped pave the way to full G99 compliance. We worked across automotive, charging, cloud and grid stakeholders to solve problems in real time, establishing a new benchmark.



Get in touch

Providing solutions in a unified, structured approach across all critical domains to enable end-to-end quality – Because we're the only ones who can.

✉ | Email us at: hello@resillion.com



The services described in this publication are subject to availability and may be modified from time to time. Services and equipment are provided subject to Resillion's standard conditions of contract. Nothing in this publication forms any part of any contract. © Resillion 2026.