

World's most advanced Virtual Power Plant

Centrica Business Solutions has formed the first large-scale, multi-asset Virtual Power Plant to stabilize the European power grid.



Self-sustainable energy ambitions

Terhills is a unique tourism project on the edge of Belgium's only national park. Built on the site of a former coal mine, it is surrounded by 346 acres of lakes and forests. The holiday park had an ambition to be self-sustainable and create an energy infrastructure fit for years to come.

Unique energy partnership

Centrica Business Solutions has formed a unique partnership with battery supplier, Tesla, and the Belgian Transmission System Operator, Elia, to deliver a Virtual Power Plant (VPP) which will help consumer and industrial customers (C&I), like Terhills, to monetise their energy investment.

The 1,500 m² project took six months from inception to operation, including just five weeks to install 140 Tesla batteries. The VPP supports the national grid while reducing the need to ramp up fossil-fuelled, CO₂-emitting peak plants.

Using its patented and proprietary cloud solution, Centrica Business Solutions provides Demand Side Response (DSR) technology to optimise the VPP and coordinate the response across all sites.

The results

Thanks to the VPP, C&I customers like Terhills now enjoy a reliable and sustainable energy supply, and with DSR technology, spare capacity can be fed back into the Belgian national grid.

Centrica Business Solutions' mixed-asset VPPs are made up of distributed energy resources like energy storage, IoT applications and large-scale industrial loads to deliver a sustainable and innovative smart grid solution to reduce the need for peaking plants and to decarbonise the energy market.

"What makes this project unique is its inclusion in a larger flexibility portfolio," says Jan-Willem Rombouts, Director of Product Management, Centrica Business Solutions.



140 Tesla batteries provide 18.2MW of power



Plant implemented and operational within six months



VPP delivers 100% of power 99.6% of the time

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This unique energy project is not just perfectly in line with our climate investment plan, but also with our views on innovation and sustainability.”

Stijn Bijmens, former CEO, LRM NV, parent company of Terhills

Why Centrica Business Solutions?

- Patented VPP technology enables industrial load to participate in more lucrative energy markets
- Centrica Business Solutions' technology increases revenues for batteries by up to 150%
- Smart charging reduces battery cycles and degradation, improving lifespan
- Centrica Business Solutions' dynamic trading strategy ensures the VPP captures value from multiple markets from month ahead through to real-time

“The inclusion of Tesla batteries allows us to deliver a 1.5x higher revenue stream for the battery, compared to the base-case where the battery is monetised on a standalone basis.”