gridshare

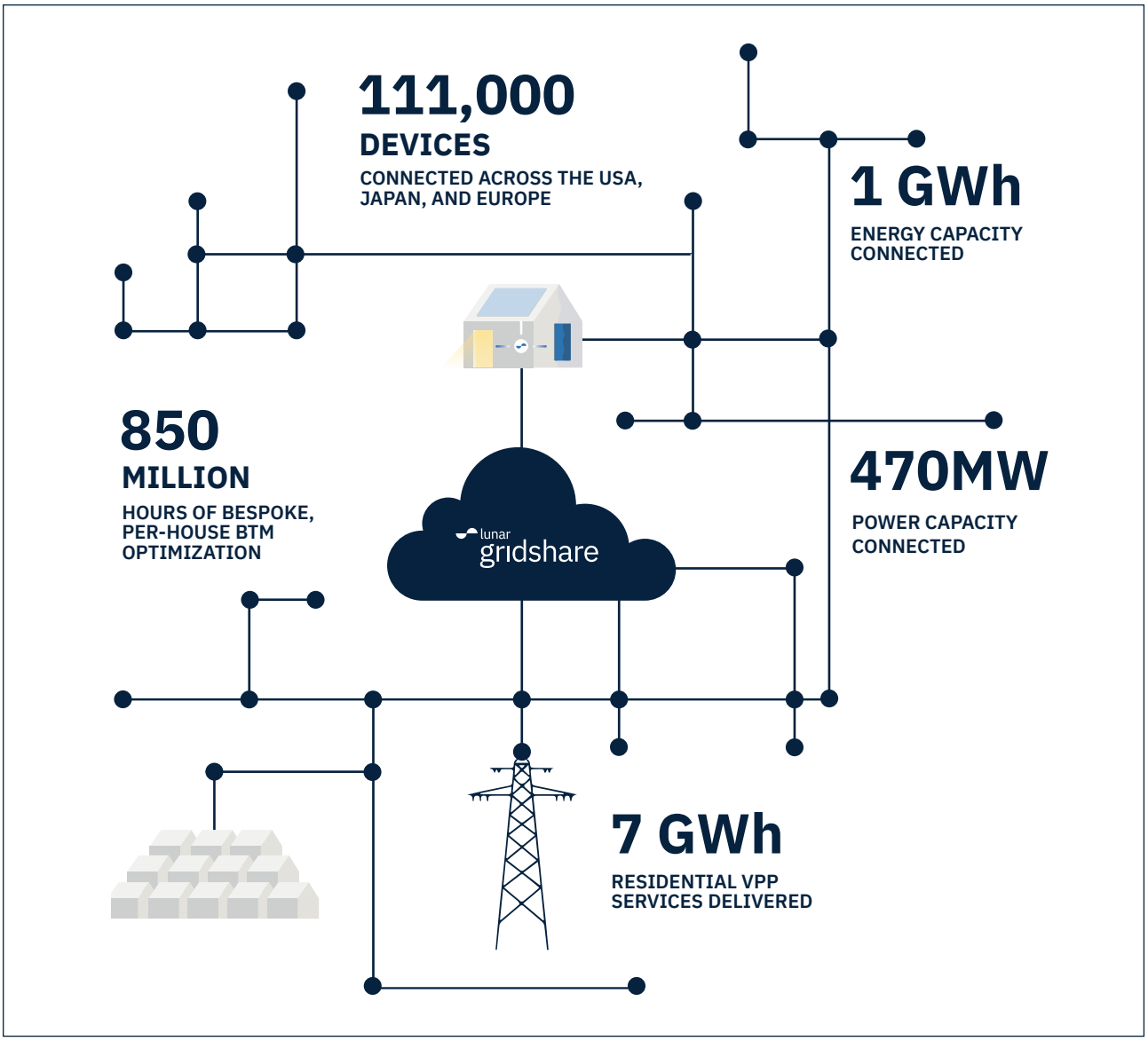
Gridshare

HEMS | DERMS | International Experience

Dynamic electricity markets require dynamic software solutions like Gridshare

Built from the device up, Gridshare delivers house-by-house forecasting and multi-device HEMS optimization that combines to provide best-in-class aggregate forecasting and DERMS control. Whether for behind-the-meter optimization in Japan, for grid services in the USA, or for EV smart-charging in Europe, Gridshare is proven to create value for customers and electricity companies alike.

With experience in advanced international markets, clients can be sure that Gridshare will deliver quickly and reliably now and in the future, as markets become more dynamic and complex.



Multi-device | Multi-use case | Multi-market

Dynamic pricing, and the opportunities it presents

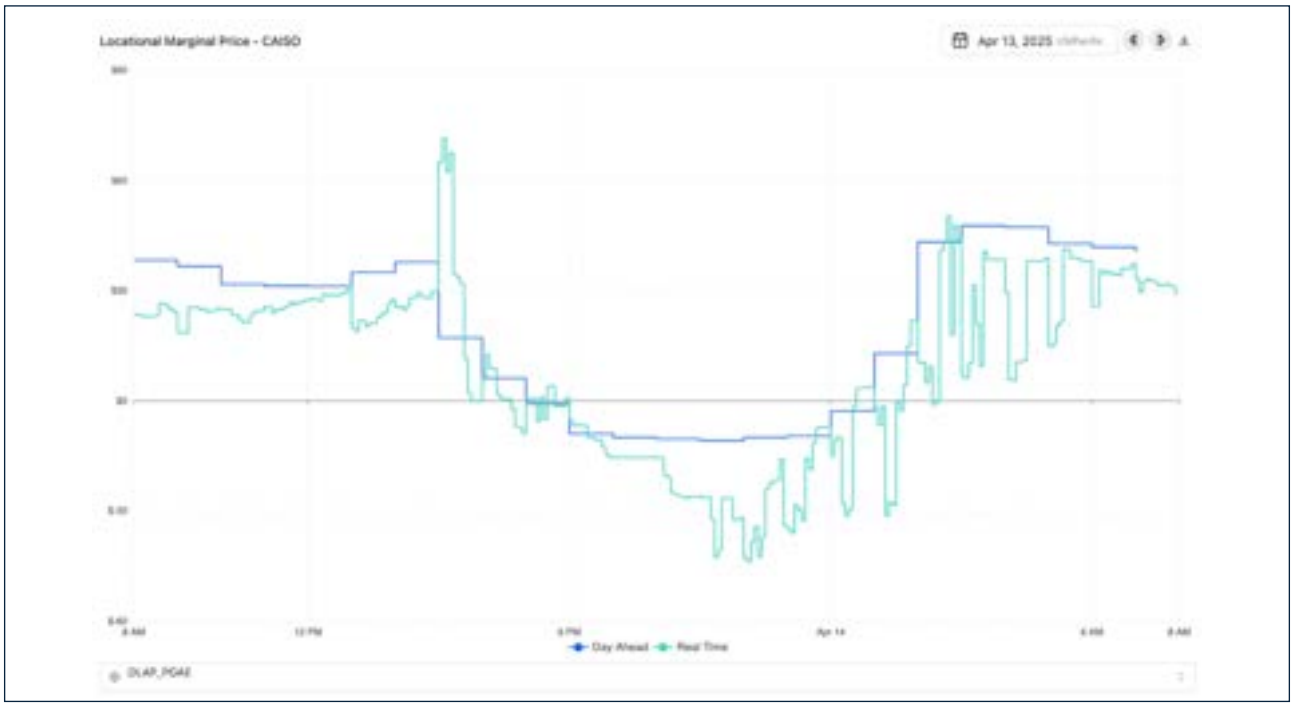


Figure: CAISO wholesale electricity prices.

Dynamic pricing is a key tool for helping to manage electricity supply and demand, and Gridshare has been delivering value for years in international markets that have such pricing.

Electricity markets, by their nature, are dynamic. How wholesale prices in those markets are exposed to customers is a function of market design, but it is clear that in many markets where dynamic prices are possible (e.g. the UK, New Zealand, Australia), they need not necessarily be exposed to all customers. And, by combining dynamic price optimization, novel propositions, and intelligently controlled DERs, Gridshare can empower you to reduce costs for your business and your customers. The proliferation of controllable DERs, better metering and intelligent software to manage it means that more dynamism can be introduced without increasing complexity or risk.

Dynamic pricing is already fairly common for commercial and industrial customers, and is increasingly available to residential customers. By dynamic pricing we mean hourly (or more granular) pricing which is updated every day and not known significantly in advance. Other types of semi dynamic pricing exist and include critical peak pricing, where prices increase to pre-published levels on certain days, alerted in advance.

The USA is already seeing an increase in these types of rates. Dynamic pricing exists in Illinois, pilots are starting with PG&E and SCE this year, and New York has its Value of Distributed Energy Resources pricing. This is a trend that is here to stay, and we expect to see adoption of dynamic pricing accelerate across the country.

Gridshare optimized batteries with dynamic pricing

Launched in the UK in 2018, the Octopus Agile tariff provides dynamic pricing with 48 half hourly prices each day. Linked to day-ahead wholesale prices, the tariff is updated every afternoon for the following day. There is a cap on the maximum price a customer pays to protect them from very high prices, and prices can go negative. Gridshare has been optimising ESS against customers' solar production and this tariff since soon after its launch.

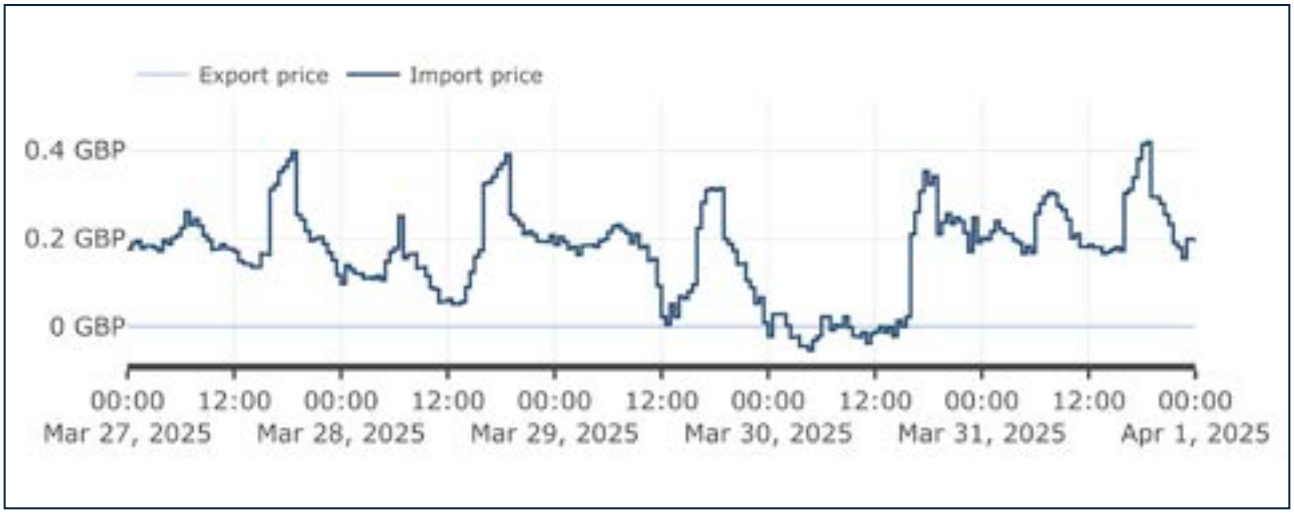


Figure: Octopus Agile tariff, March 2025. Note the negative pricing on March 30th.

In the chart below, you can see Gridshare's optimization of PV + ESS for a home on a dynamic tariff. On the first day, the ESS charges from solar (orange highlighted period). On the second day, the ESS charges from the grid when prices are negative (green highlighted periods), even when there is available solar. In some cases, the ESS discharges before the negative pricing to "make room" in the battery so it can charge up and earn credits. These optimization decisions are made by Gridshare automatically, using our machine-learning predictions of that home's consumption and production.

Gridshare creates approximately **50% extra savings**, compared to adding a battery to solar. This load shaping directly reduces the stress on the grid at times of high demand and/or low supply. It also directly reduces electricity retailers' cost to serve customers.

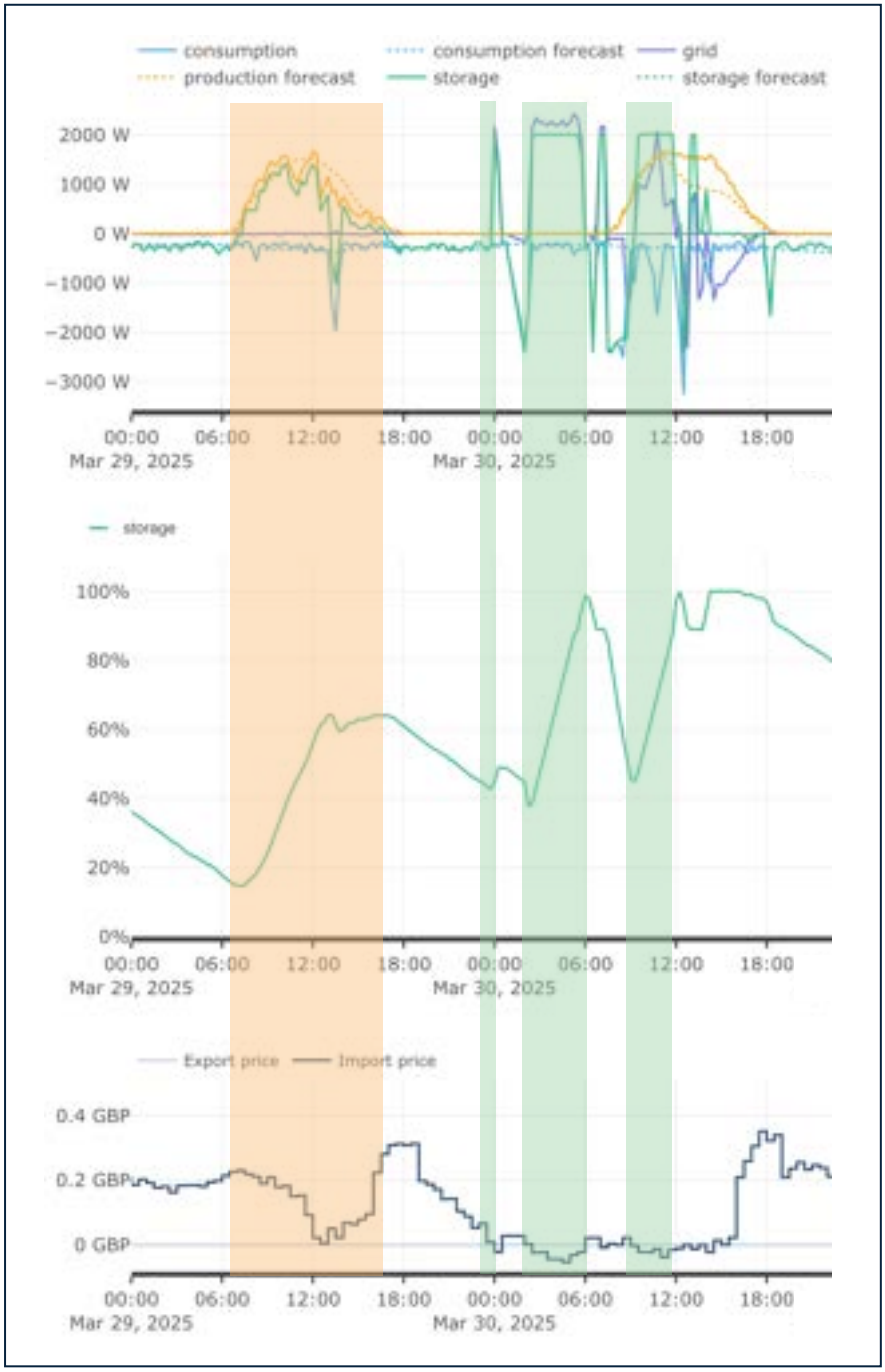


Figure: Gridshare optimization against Octopus Agile dynamic tariff.

Powering e:PROGRESS, Honda's Intelligent Charging solution in Europe

Gridshare powers e:PROGRESS, Honda's Intelligent Charging solution in Europe. e:PROGRESS saves Honda drivers time, carbon, and money. It delivers these benefits to drivers in an easy-to-use, 'set and forget' mobile app that supports any electricity tariff. By using e:PROGRESS, on average Honda drivers reduce the cost of their charging compared to simple plug and charge by **40%**, whilst also reducing the carbon intensity of their charging by **30%**.

Thanks to Gridshare's advanced optimization, Honda drivers on dynamic tariffs experience even greater cost and carbon reductions. In the case of cost, Gridshare delivers a significant average reduction of **95%**. In the case of carbon, Gridshare delivers an average **50%** reduction in the carbon intensity of charging.

Optimizing for dynamic wholesale prices in Japan

Japan has one of the largest fleets of residential batteries in the world, totalling around 1 million. Its wholesale power market is also exposed to global fossil fuel prices, given Japan imports all of its fossil fuels. This has created a strong incentive for Japanese electricity retailers to reduce the amount of expensive energy they procure from the wholesale market. Residential batteries are a key way for retailers to achieve this goal. That's where Gridshare's ability to optimize against dynamic pricing comes in.

Gridshare, alongside its partner ITOCHU, has delivered demand response trials triggered by wholesale pricing with six Japanese electricity companies: TEPCO, Tohoku, Kyushu, Chubu, and Shikoku. Through these efforts, Gridshare dispatched 700 ESS and delivered 12MWh of load reduction. It has now begun commercial services with Tohoku, with more companies starting services in 2025.

Gridshare is able to optimize residential batteries against the day-ahead wholesale price, ensuring net load is reduced during a retailer's most expensive settlement periods. Gridshare can also optimize to deliver wholesale savings to the retailer whilst maintaining customer bill savings. Lastly, Gridshare can help these retailers design an optimal end-customer tariff so they can offer a bundled service offering including PV+ESS, a rate that reduces customer cost, and the ability to optimize against wholesale prices.

By adding solar, a battery, and wholesale cost optimization from Gridshare, retailers are able to **reduce their cost of wholesale energy procurement by ~60%.**

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Learn more:
www.gridshare.com

Get in touch: