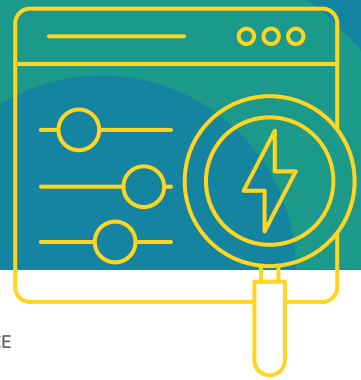




Seabird Data Services

The data centre becoming a flexibility powerhouse



PARTICIPATION



10.4MW

MARKET



FCR-D Up

ACTIVATION <5 SECONDS

MARKET PRICE



€90 000 - €120 000

PER MW PER YEAR



Founded in 2017, Seabird Data Services (SDS) is a data centre providing data hosting services for High Performance Computing (HPC) hardware at two main sites in Boden and Mellerud (Sweden).

SDS learnt of Sympower's services through our partnership with Swedish electricity trading company, Bixia, a municipality-owned electricity company with customers all over Sweden. **SDS started participating in demand response by contributing 9.4MW of capacity from their HPC systems to the FCR-D Up market.**

Discovering the potential of HPC systems.

SDS recognised the need for demand-side flexibility to be part of the solution for the rising demand for energy and renewables integration. Sympower's partnership with Bixia allowed SDS to contact Sympower about their flexibility potential. Their motivation to partake in demand response, was to establish themselves as a leading grid stabiliser in Sweden.

With such high energy consumption, **there is a lot of potential to adjust the energy draw of HPC systems when necessary.** Our technical teams identified several of SDS's HPC systems as suitable for participating in demand response. However, at the time, not all of these assets were accessible to testing. Once they became available again, they were swiftly added to the balancing markets.



Becoming a flexibility leader through the balancing market

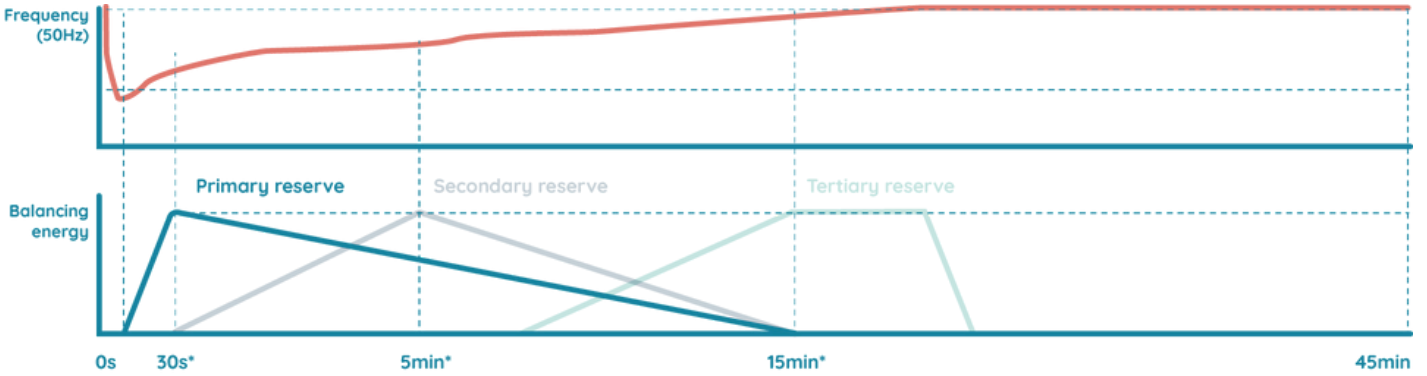
After working with Sympower for almost two years, SDS is expanding their participation in Sweden's balancing markets, and, with Sympower's help, **are entering the mFRR market.**

The mFRR market requires a far slower response time than FCR-D Up, and pays for reserves that can be manually dispatched within fifteen minutes to address grid frequency imbalances.

FCR-D Up

Seabird Data Services is approved to participate on the **FCR-D Up** market in Sweden. This Frequency Containment Reserve (FCR) market acts as backup power sources that can be deployed quickly in response to sudden imbalances between electricity production and consumption. **This activation occurs within 30 seconds, and can last up to 15 minutes.** The specific requirements involve 50% of the contracted capacity to be activated within 5 seconds of a frequency deviation, with 100% being ready for activation within 30 seconds.

FCR-D Up requires SDS to decrease electricity consumption momentarily, thereby reducing demand and reduce imbalances.



Revenue model

Participating on the FCR-D Up market means that **Seabird Data Services is compensated through energy payments.** Seabird Data Services is paid when their assets are activated, with payment being determined by the amount of MW contributed and the price at the time of delivery.



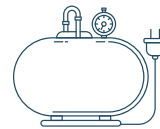
“Sympower has accompanied SDS to become the electric grid stabilising operation we are today. From the Datacenter feasibility assessment in 2022 to first ancillary service qualification in 2023 and continuous program expansion in 2024. Sympower has been very supportive of our vision and great to work with.”

Nachi Singh | Head of Datacenter Operations, Seabird Data Services

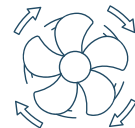
Flexible assets in the technology industry



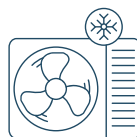
HPC



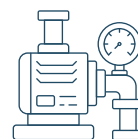
E-BOILER



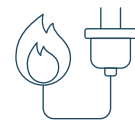
FAN (HVAC)



COOLING



HEAT PUMP



CHP

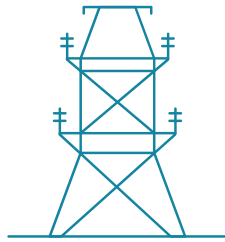


Benefits of demand response



New Revenue Streams

Businesses can **unlock new revenue streams** by offering their energy flexibility to the grid during periods of peak hours.



Reliable Grid

The flexibility of businesses, ensures that grid frequency stays balanced. Everyone connected to the grid **benefits from this reliable energy supply**.



Sustainable solution

The energy transition needs demand response to help phase out fossil fuels, making it **essential to a sustainable energy system**.

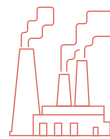
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employees



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