



## Why Firm Frequency Response?

System frequency is a measure of the balance between energy currently being generated and consumed nationwide - this is a constantly moving number that has to be actively managed and controlled. National Grid is legally required to keep it within plus or minus one per cent of 50Hz which is the optimum position, ensuring that enough generation or demand is available to balance out any fall or rise in frequency.



ukpowerreserve  
SUPPORTING A RENEWABLE FUTURE

WORKING WITH



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Firm Frequency Response (FFR) is one of the most valuable balancing services to National Grid on a £/MW hour basis and relies on the customer being able to respond fully within 30 seconds to movements in system frequency. Data from National Grid suggests static FFR providers can be expected to be called upon roughly 10 times a year at the pre-set frequency trigger point of 49.7Hz.

National Grid procure the services through a monthly competitive tender process where tenders can be for low frequency events, high frequency events or both. The tendered service of FFR is open to Balancing Mechanism Units (BMU) and Non BMU providers thereby increasing the number of potential response providers and improving liquidity. FFR also creates a route to market for providers whose services may otherwise be inaccessible.

Non BMU providers can also provide response and this can be either generation increase or decrease based on the system frequency. For example, a service could be provided whereby a generator would increase its output if the system frequency fell to 49.8Hz. Alternatively, the reverse could be provided whereby a generator would decrease its output if the system frequency rose to 50.4Hz. National Grid also operate a dedicated Frequency Control Demand Management (FCDM) service that helps prevent dramatic falls in frequency by automatically interrupting the demand of customers that use large amounts of electricity. This helps the system because as demand falls, frequency should increase. Once it has stabilised, the provider manually restores its demand connection.

[About UK Power Reserve over the page](#)

### THE POTENTIAL FOR PROFITABILITY

#### A UKPR DEMAND SIDE BALANCING SERVICE

BASED ON AN OFFERING OF 1MW OF GENERATION OR DEMAND REDUCTION CAPACITY

PRODUCT		GUIDE AVAILABILITY REVENUE	GUIDE UTILISATION REVENUE	GROSS REVENUE PER MW	GUIDE HOURS OPERATION	
Firm Frequency Response	FFR	£35,000	£2,000	£37,000	6	Fast responding contract for quick but short responses to change frequency. Competitive tender.

**TRANSPARENT ENERGY SOLUTIONS**  
FROM THE UK'S LEADING SUPPLIER

## UK Power Reserve is the leading independent developer and operator of flexible, smart and affordable power generation.

**From site purchasing to operations and plant design to grid connections, we bring a unique expertise to the UK energy market.**

We participate in a variety of Energy Balancing Services and provide third-party aggregation and Demand Side Response (DSR) management and trading services.

UK Power Reserve's portfolio is the size of a large-scale CCGT (combined cycle gas turbine) generator but at a much lower cost to the consumer, with a faster-acting response time and a geographic

spread across the country rather than a single plant concentrated in one location. It is the largest reserve power portfolio in the UK and places the company amongst the largest independent reserve power providers in the EU. This ensures greater security of supply at lower risk, while delivering affordability and addressing the Energy Trilemma. We consider ourselves to have the smartest power generation capabilities in the UK.

### About Total Gas & Power

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