



# Understanding flexibility

April 2020

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# What are Flexible Services?

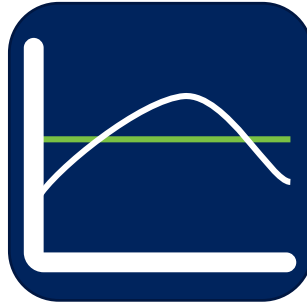


Flexible Services is the term given to the act of reducing consumption or increasing generation following receipt of a signal, due to a network constraint.



In simple terms, it means a customer generating more or using less electricity after we've asked them to.

A network constraint is where demand exceeds capacity, which leads to a breach of safe network operating limits.



This means the requirement for electricity in the area is greater than the amount that the local network is capable of providing.

There are lots of things that can cause an increase in the demand for electricity - leading to network constraints



Electric heating is used in Winter to keep warm



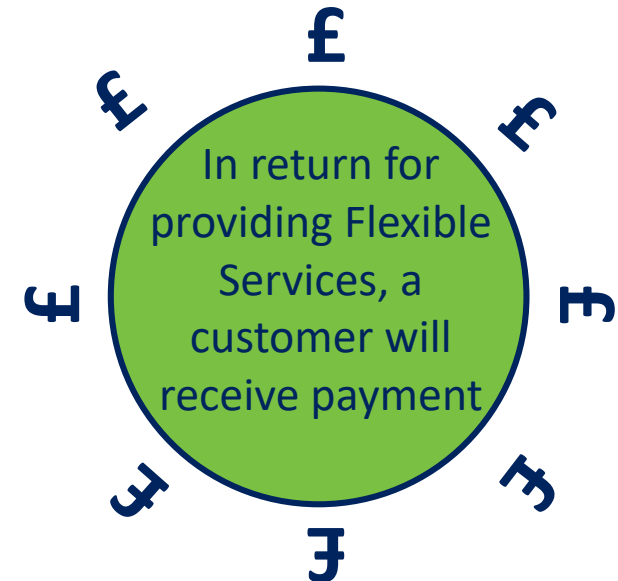
Air conditioning is used to keep cool in the Summer



Big televised events leads to lots of television watching



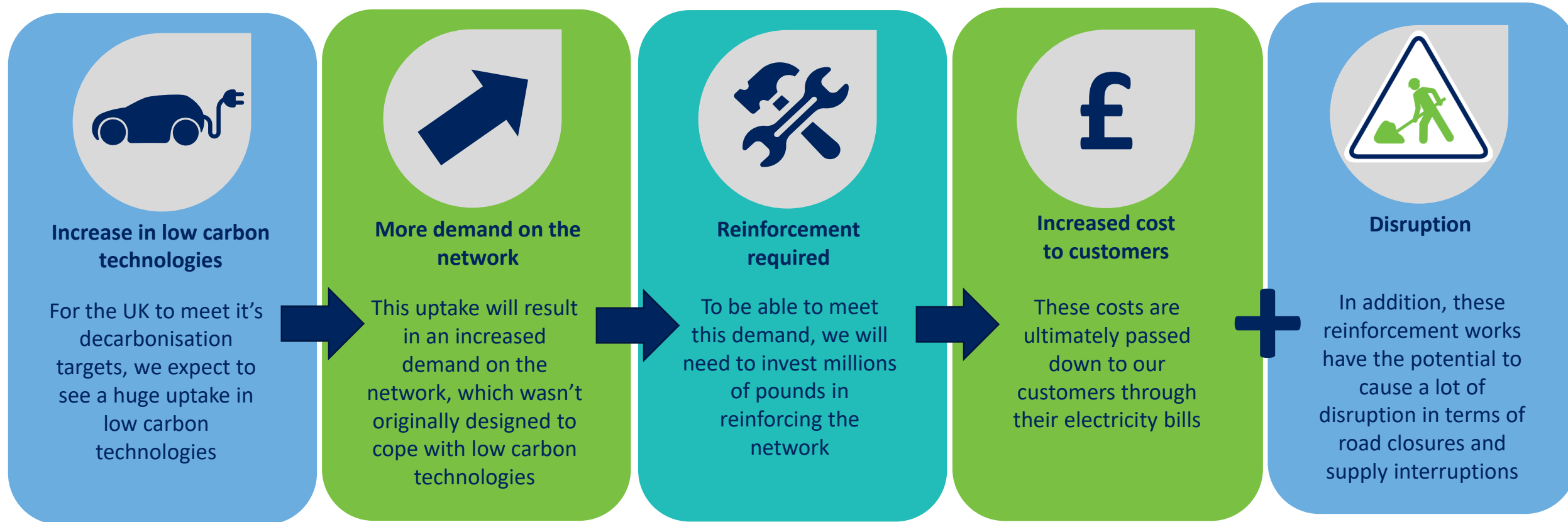
The uptake of low carbon technologies that are powered by electricity



# The changing energy landscape



A revolution is currently underway as the UK embraces a zero carbon future, and the way energy is generated, stored, consumed and traded is all evolving at a significant pace. The electricity industry is facing one of it's biggest challenges yet.



It's our responsibility to find smarter, more flexible ways to meet future needs, and procuring Flexible Services is one of the ways in which we plan to tackle this challenge.

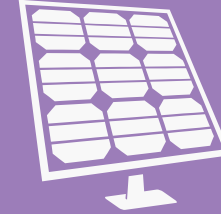
# What are the benefits?



Cheaper bills for our customers



Reduction in supply interruptions



Encourages low carbon technologies



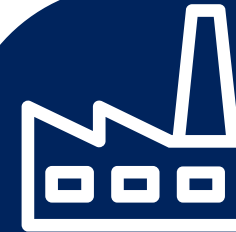
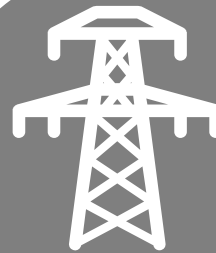
Less disruption

Reduces CO<sub>2</sub> emissions

Supports community energy groups

Utilises existing assets

Supports local businesses



# How we identify a Flexible Service requirement



On an annual basis, we forecast what we expect the demand to be on our network in both the near and distant future



We then take a look at each of our substations, and compare the firm capacity with the forecasted demand

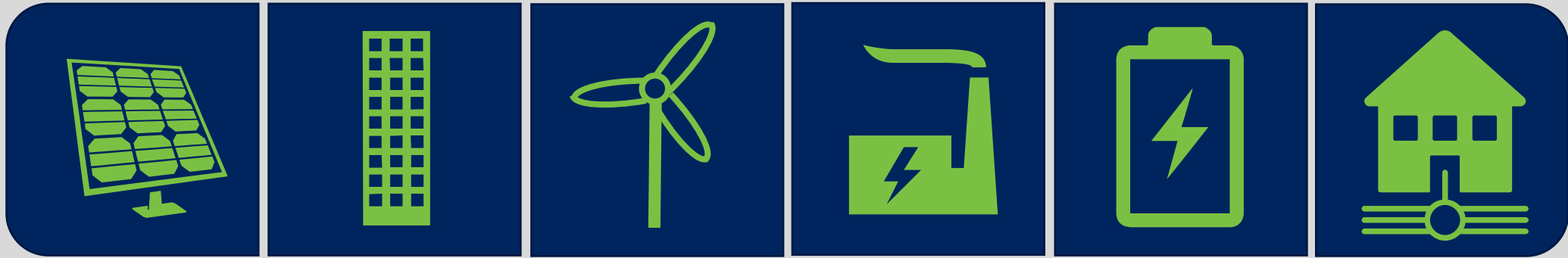


Where a constraint is identified which can be alleviated by Flexible Services, we publish a Request for Proposal

# Who can get involved?



Anyone capable of adjusting how much electricity they consume or generate, and is able to provide a minimum of 50kW\*



If you're not able to provide a minimum of 50kW, you can still get involved via an aggregator



Aggregators combine load from multiple customers to provide Flexible Services

\*Minimum values may vary depending on the overall size of the requirement.