

ESIG May Webinar - Open Networks Project - Extracting Flexibility from DER	
Question	Answer
What are the emerging services at the ESO and DNO levels?	DNO services are as per slide slides 12 and 14. ESO services can be found here: https://www.nationalgrideso.com/industry-information/balancing-services
Have you observed any providers defaulting on their service obligations? Are DSOs revising their contingency plans to account for unexpected defaults?	As these markets are still emerging, the DNOs are not imposing any penalties on providers for defaulting on their service obligations as this helps to encourage participation and bring more liquidity into these markets. Once these markets are
How did you get the DNOs to agree to opening up their networks? Would they make less money because of Open Networks? (i.e., less rate base?)	Networks in the UK are regulated using a TOTEX model which means that they are incentivised to choose the most efficient solution, regardless of whether it is Capex or Opex. This is a form of performance-based regulation, with a focus on outputs, not inputs.
Could you further elaborate and give examples of internal and explicit flexibility?	Explicit services are all those listed on slide 17 under national and local markets. Implicit flexibility would be when a customer responds to a price signal (e.g. lower price offered by supplier at off-peak hours, and/or a variable network tariff) by altering their behaviour.
How far are DNOs to DSO goal in UK?	The DNOs are making good progress towards the transition to Distribution System Operation. The Open Networks DSO Roadmap gives visibility of this and sets out all the planned activities that each network company in GB is taking forward. A recent report commissioned by pan-European trade association GEODE on regulation of DSO has
What tactics/strategies/methodologies are being used for ESO-DNO coordination or services, including when it comes to stacking value?	Our approach is to remove exclusivity from as many contracts as possible so revenues can be stacked. We are kicking off work over the next couple of months to identify principles for DSO and ESO coordination for flexibility services.
In the US, most NWA projects have focused solely on Dx services. Are you suggesting that the economics of that approach won't scale up due to lack of value?	The value of flexibility will depend on a number of factors including the geography of the network, how well established the market is, cost of alternative solutions such as reinforcement and how the networks are regulated. In general though, assets are cheaper as you go down the voltages.
More to the nodal pricing question, without nodal pricing why would there be any implicit activity to resolve congestion?	Price signals that drive implicit flexibility can be introduced in a number of ways and nodal pricing is just one approach to this. In general though, you need some form of locational aspect to the price.

Randolph mentioned 2.9 GW as a metric for flexibility in terms of power - is there a ball park figure for this in financial terms?	Unfortunately, this is not available currently as some of the contracts signed with providers have confidentiality clauses that do not allow us to collate this information.
Randolph, What is the minimum capacity kW to participate and provide services?	This varies across DNOs but it is within the range of 0-50KW.
How do these markets work and what is the settlement process? Set the price and max quantity in annual auctions and pay when called to deliver?	The DNOs currently undertake settlement. Open Networks is defining baselining methodologies that will help to standardise the approach to settlement.