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| Network Innovation Competition 2020 Supplementary Answer form | | |

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| Project Name | Constellation | | |
| Question number | #5 | Pro forma section | Section 3.1 |
| Question date | 27/08/20 | Answer date | 01/09/2020 |
| Question summary | Please explain what “protect other smart services (such as voltage and frequency support)” means. | | |

## 

## Answer (please retain document formatting and do not exceed 2 pages unless otherwise agreed with Ofgem)

A key outcome of Constellation is the ability to facilitate the benefits from smart services. For the services provided by DER, the Methods provide resilience against:

* Loss of communication with central network management systems resulting in curtailment of the DER (Method 1); and
* Unnecessary disconnection of the DER halting its operation (Method 2).

We have quantified the benefit of both points above, for flexibility services specifically, based on our historic communication and network faults data.

“Protect other smart services (such as voltage and frequency support)” means, despite not being quantified in the business case, Constellation (Methods 1 and 2) can protect services other than flexibility from loss of central communication systems and unnecessary disconnection of DER from the network.

1. DER can provide frequency response services for the ESO which would be interrupted should the DER either be curtailed or disconnected.
2. DER can provide reactive power services to support network voltage as currently being trialled in the Power Potential project with National Grid ESO and UK Power Networks. This is providing positive early results, so we are confident by the time Constellation is complete there could be business as usual services in this area.

As stated above we have not quantified any benefits from protecting these services in our business case.