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| **Network Innovation Competition 2020 Supplementary Answer form** | | |

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| Project Name | QUEST | | |
| Question number | #12 | Pro forma section | Section 2.3 |
| Question date | 25/08/20 | Answer date | 27/08/20 |
| Question summary | Please explain how the claimed loss reduction benefits will be substantiated in the trials. | | |

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

The loss reduction benefits will be quantified through modelling work to be carried out by our technical research partner, SGS. A bench-testing regime will create a set of network models (using IPSA, DINIS, analytical scripts, and extensive data sets), DER and load cases/scenarios, and QUEST method/solution configurations, to enable offline analysis of the operation of the QUEST solution.

Initial use of the bench-testing models will inform the design and configuration for the trials. This will include assessment of the prospective benefits, including net loss reductions over an operating period. The net losses outcome is expected to be influenced by the QUEST system configuration, DER and load scenarios, and the operating profiles through time (modelled as a time series of demand, generation, and QUEST/other controls) with variations over time.

SGS will collate the results from the trials and use data cleansing and aggregation methods to provide a bench-testing data set for modelling, comparable to that used in the initial analysis and design phase. The challenge here is to extract granular time series and event-driven data and convert it into appropriate, comparable modelling data for each QUEST trial configuration and operating regime. The outcome will be a robust, pre-trial, trial and analysis of losses, with results reported appropriately in keeping with the QUEST reporting and dissemination objectives.