



# DEMAND DIVERSIFICATION SERVICES

## THE FUTURE OF LOAD MANAGED AREAS (LMAs)?

Energy Innovation Summit 2024



Scottish & Southern  
Electricity Networks



## THE FUTURE OF LOAD MANAGED AREAS (LMAs)?

- Introduced in the 70s to ‘...limit the coincidence of Demand by adopting Customer Demand management...’
- Control heating and hot water via RTS and Smart meters
- Diversification schedules defined in the LMA Notice
- Longest running application of domestic "flexibility" on the UK network
- SSEN's RIIO-ED2 Business Plan committed to:
  - Lift around **30% to 50%** of LMAs by the end of ED2
  - Remove **all** LMA constraints by the end of ED3



# THE FUTURE OF LMAs PROJECT

- **Core Assumption** - the immediate removal of LMAs will lose essential network diversification
- The project will focus on three workstreams:
  - Detailed **Analysis** and enhanced network monitoring to liberate the LMAs where possible
  - Implement **Flexibility** as Demand Diversification Services (*DDS; the focus of this session*)
  - Check and inform Planned ED2 **Reinforcement** of possible changes





# PRIMARY OBJECTIVES

- Design DDSs to reduce peak demand and increase diversification
- Test commercial models that will interest flex providers
- Feasibility of large-scale market-driven LV flex
- Establish guidelines for minimal viable market size
- Confirm if voluntary DDSs can enable LCT growth and replace mandated LMAs





## DDS MODELS

DDS is aimed at suppliers and aggregators, with two models in development...

### Allocated Capacity

- Each flex provider is allocated a portion of an asset's capacity
- Incentivised to stay within allocation
- Further incentive for improving on historic diversification profile

### Dynamic Congestion Response

- Flex providers respond to real time congestion levels
- Rescheduling demand to avoid periods of high congestion
- Making use of periods of low congestion



# PROJECT CHALLENGES

## *DEALING WITH UNCERTAINTY*

- Will enough suppliers and aggregators **engage** to create viable markets at LV?
- What if diversification is lost by users **withdrawing** from a market?
- Will flexibility **reliably** deliver diversification on the LV network?
- Is the Smart Meter Network **reliable** enough?
- How do we cope with the constant **change** in supplier portfolios and the network?





## FINDINGS FROM DDS PHASE 1 – ENGAGEMENT AND INITIAL DESIGN

- Positive feedback from two engagement workshops
- Stakeholders agreed that DDS was worth pursuing
- Simulation Workshop demonstrated that DDS design would be crucial and that Herding and Hunting could be an issue!
- Data sharing issues prevented timely execution of technical trials





## DDS PHASE 2 – DESIGN AND IMPLEMENT COMMERCIAL TRIALS

- Detailed design of each DDS
- Commercial Trials
  - Field trials with flex providers
  - Virtual Network Trials with PNDC and Energy Systems Catapult
- Agile / Sprint approach to maximise learnings and pivot if required
- BaU sponsors ensure a focus on developing a service that delivers value







## DDS PHASE 2 PROJECT STATUS

- Kick-off complete
- Detailed design of DDS complete
- Trial design on-going
- Recruitment on-going (flex providers and consumers)
- First trials planned for late November

