

Flexible Plug & Play

Delivering Flexible Connections

Introduction

Martin Wilcox | UK Power Networks

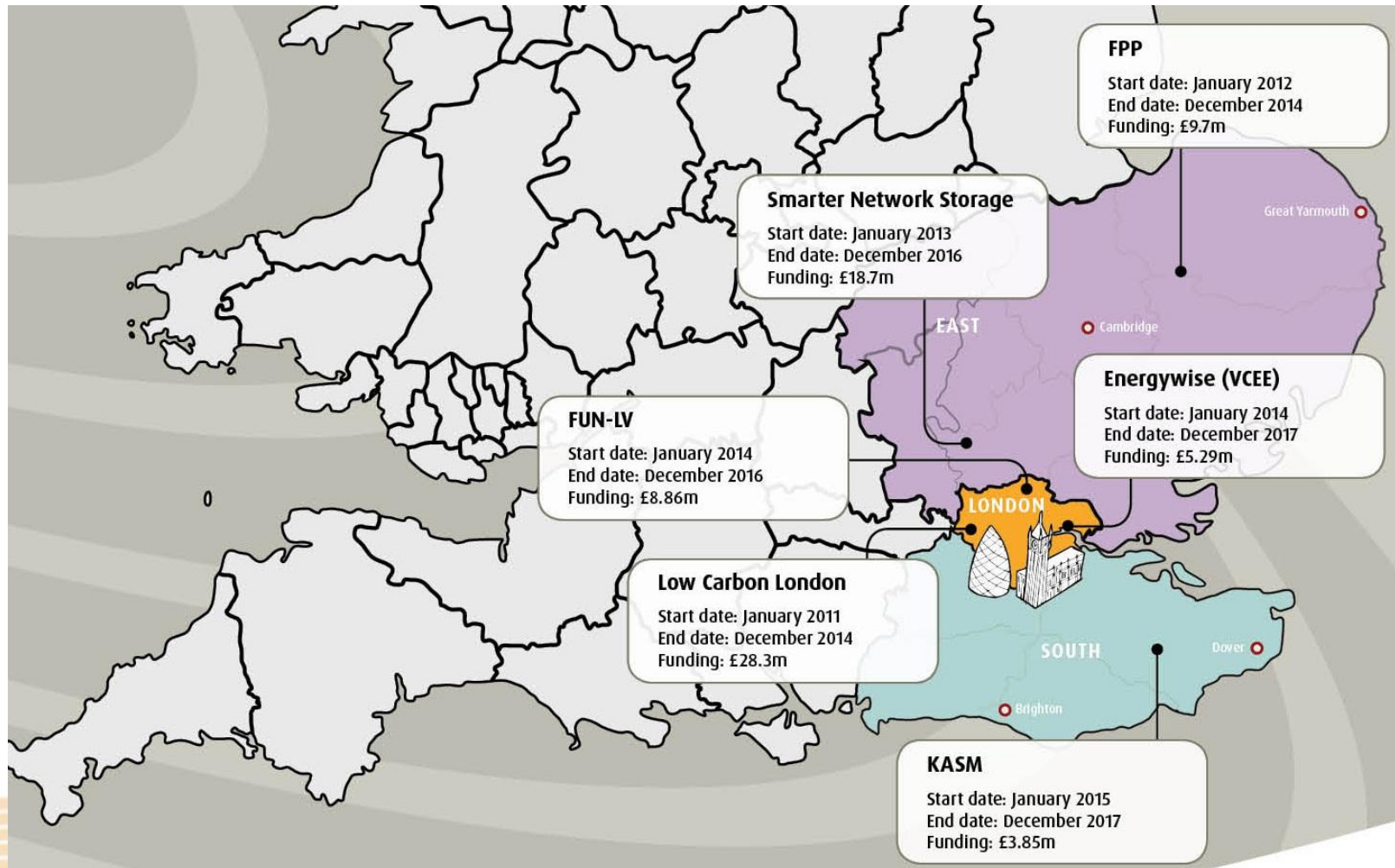
Mark Adolphus | UK Power Networks

Flexible Plug and Play

Flexible Plug & Play Animation:

<http://youtu.be/zNhwTHK1vGQ>

UK Power Networks' large-scale demonstrators

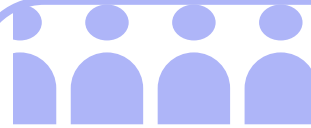
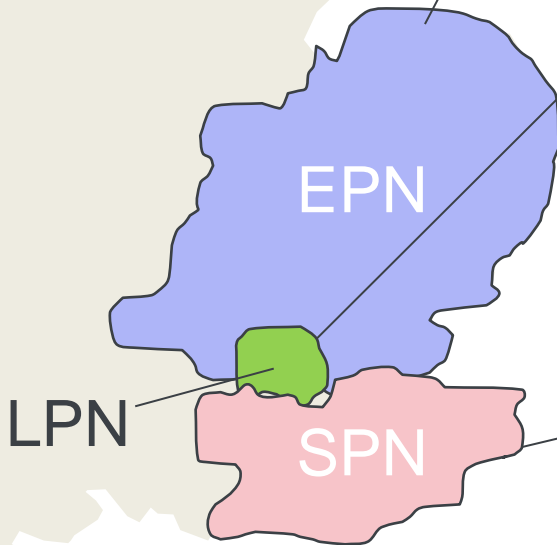


Responding through innovation

- We are a champion of innovation, leading the way for the benefit of customers, now and in the future
- Innovation provides answers to the challenges we face of moving to a low carbon economy
- We have submitted successful LCN Fund bids every year since its inception
- We believe they will benefit all customers, many times over, both now and in years to come

About UK Power Networks

UK Power Networks is a Distribution Network Operator (DNO), providing power to a quarter of the UK's population through its electricity distribution networks



3.5 million customers

96,000 km of network



6.6 GW Maximum Demand



2.3 million customers

37,000 km of network



5.2 GW Maximum Demand



2.2 million customers

52,000 km of network



4.0 GW Maximum Demand

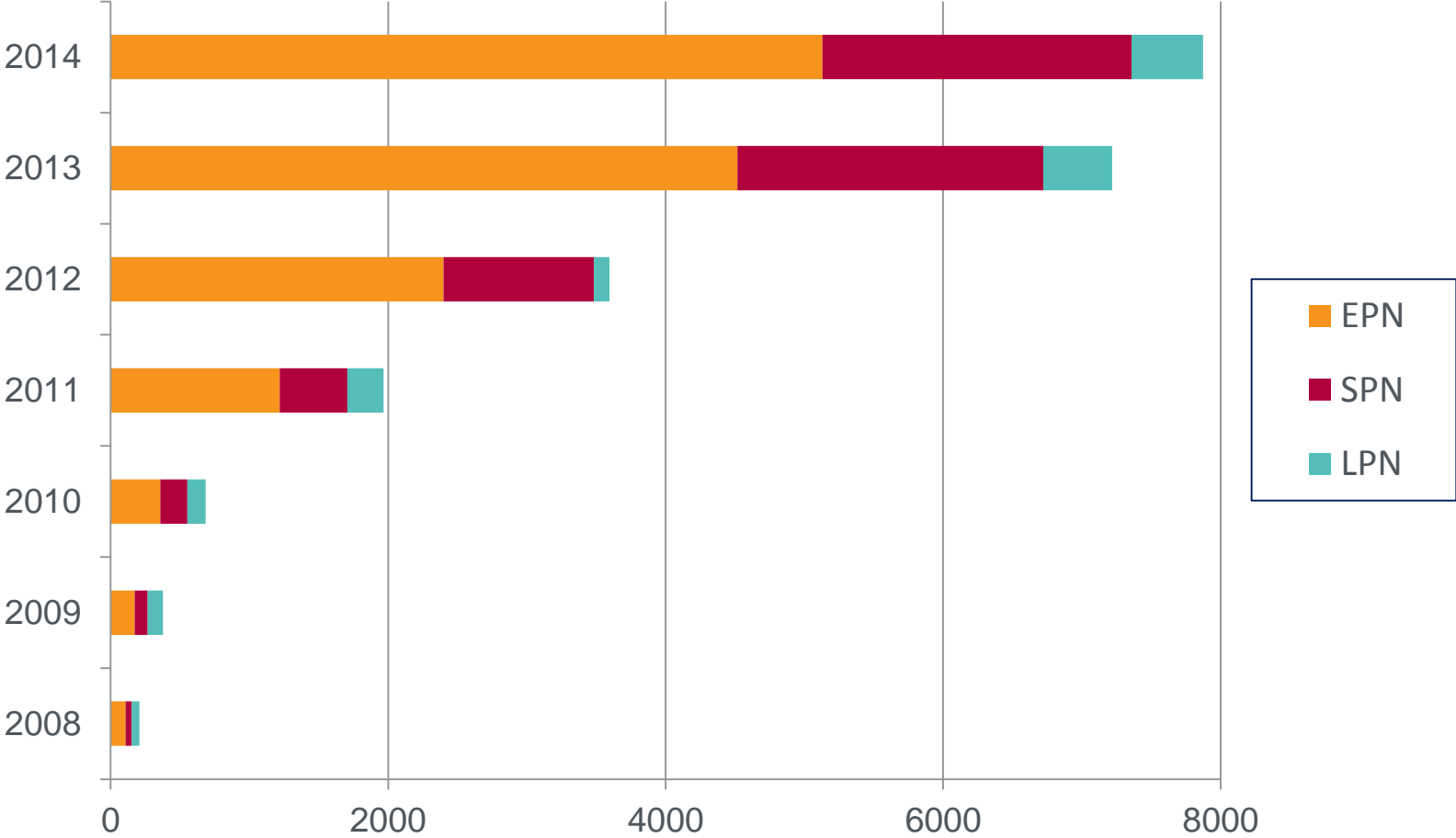
We've come a long way!

Accepted schemes total 2,799MVA

Connected schemes total 1,184MVA



Generation enquiries have risen 44-fold



Benefits of Flexible Plug and Play

£44 million

of benefits already delivered in connection cost savings compared to business as usual

15

offers to connect distributed generation projects already accepted

£55 million

worth of low carbon generation projects are set to be built (55MW), none of which would be financially viable otherwise

29 weeks

Improvement in average time to connect for the accepted schemes

£800 million

investment in distributed generation that could be enabled across the UK by 2020 using the FPP methods, equivalent to 800MW

Supporting Britain's binding carbon reduction targets, boosting the local economy and providing green collar jobs

Key achievements of Flexible Plug and Play



Engaged with 50+ DG developers
→ Interviewed 20



Commissioned RF mesh wireless
network for wide area comms



Trialled two DG access principles:
LIFO and Pro-rata capacity quota



Integrated and commissioned smart
devices across 12 sites



Made 40 connection offers:
• 15 accepted, 54.4MW enabled,
£44m savings



Installed and commissioned first
quad-booster at 33kV



Developed analysis tool for
investment options in DG
dominated networks



Deployed IEC 61850 for
interoperability between solution
components

Successful deployment of new commercial arrangements and interoperable smart grid components to deliver faster and cheaper DG connections

For more information visit ukpowernetworks.co.uk/innovation