Innovation Learning Event

Wednesday 5 July 2017
Smart Street Technology

Ben Ingham
Historic networks have no active voltage regulation

LCTs create network issues
Customer demand could cause voltage to dip below statutory limits

Customer generation could cause voltage to exceed statutory voltage limits

Smart Street stabilises voltage across the load range and optimises power flows

Conservation voltage reduction
Stabilised voltage can be lowered making our network and customers’ appliances more efficient
£11.5m, four-year innovation project

Started in Jan 2014 and finishes in Apr 2018

Quicker connection of LCTs

Lower energy bills

Improved supply reliability

Trials period Jan 2016 – Dec 2017

Extensive customer engagement programme throughout project
Lynx and Weezap

LV vacuum devices

- Retrofits onto standard equipment
- Replicates standard fuse curves up to 400A
- Telemetered back to central monitoring point
Capacitors

LV units are multi-stage

HV units are single stage

Used for voltage control only
OLTCs

9 tap positions with 2% per step

Nominal tap

Self regulating on loss of comms
Learning points – site installations

- Communications
- Water ingress
- Cabinet design and location
- Enclosure size
Network overview

Builds on C₂C and CLASS • Storage compatible • Transferable solutions

C₂C
Capacity to Customers

C
Capacitor

W
WEEZAP

L
LYNX

TC
On-load tap changer
Spectrum Power 5

Siemens network management system

Optimisation module – DSSE/VVC

Linked to CRMS via ICCP link
System architecture
Learning points – system

System architecture

Integration with existing SCADA system
For more information

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