# Future Networks Accelerating Renewable Connections



Overall Aim of Project ARC is to accelerate the process & time to connect renewable generation.

## How can DNOs improve the generation connections process?

- Time to connect
- Cost of connections
- **Customer Service**

## **Key Facts**

- Cost £8m
- Covers 2700Km<sup>2</sup>
- Covers low voltage up to 33KVA applications
- 4 year trial concluding in December 2016
- Covers 2700Km<sup>2</sup> in East Lothian and Borders

## **Key Objectives**

- Improve network access & capacity available to accommodate distributed generation
- Accelerate the time taken to connect distributed generation
- Enable connection of distributed generation to be facilitated around constraints; and
- Create an enduring process & learning tool that can be rolled out across our distribution networks and Great Britain

# **Key Elements of ARC & Trial Area**

Connection **Design Policy** & Enabling Technology Review **Empowering** Customers

> Delivery of a Community Demonstration **Project**

**Delivery** of Non-Firm Capacity Connection **Agreements** 

Deployment of Active Networl Management Technology -Network Connection **Trials** 

Knowledge Transfer and **Industry Policy Reviews** 

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# **Key Elements of ARC & Trial Area**

#### **Trial Location**

East Lothian & Borders Region of Scotland that covers an area of 2,700km<sup>2</sup>

#### Characteristics

High penetration of existing generation, some of which is subject to operational constraints & existing generation capacity exceeds demand in parts of the region

### **Distribution Generation Potential**

200MW of connected generation with a further 530MW of applications/enquires received

#### **Network Trial**

High level of existing pending generation at all voltage levels including those affected by Transmission Network constraints

## Empowering Customers Heat Maps



11kV Circuit Heat Map



Primary S/S Heat Map

## Innovation Elements – Top-Down ANM











