Innovative Distributed Generation

Accelerating Renewable Connections

LCNI - 21st Oct 14

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Agenda

- Introduction – Aims and Objectives – the original slide
- What we have done to date:
  - ✓ Commercial Agreement
  - ✓ Online Curtailment Analysis tool
- What Stakeholders have said – Bad and Good
- Summary

Accelerating Renewable Connections (ARC) – Project Aims & Objectives

SP ENERGY NETWORKS

- 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 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

Six Key Elements of ARC & Trial Area

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Empowering Customers	Connection Design Policy & Enabling Technology Review	Delivery of Non-Firm Capacity Connection Agreements	Deployment of Active Network Management Technology – Network Connection Trial	Delivery of at least 1 Community Demonstration Project	Knowledge Transfer and Industry Policy Reviews

- **Trial Location** – East Lothian & Borders Region of Scotland that covers an area of 2,700km^2
- **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 and pending generation at all voltages levels including Transmission Network at exporting GSPs

THE SCOTTISH GREEN ENERGY AWARDS 2014 FINALIST BEST INNOVATION AWARD

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Online Curtailment Analysis Tool

"This is brilliant – exactly what we want"

"Can there be the capacity to look at two technologies?"

"The closer to real time you can make the available data, the more useful it becomes."

"This tool is great! Can we have this over the whole of SPEN's area?"

"Could this be available to the Scottish Government? It would be a really helpful addition as an overlay to their heat map system."

"Can the demand profile be added?"

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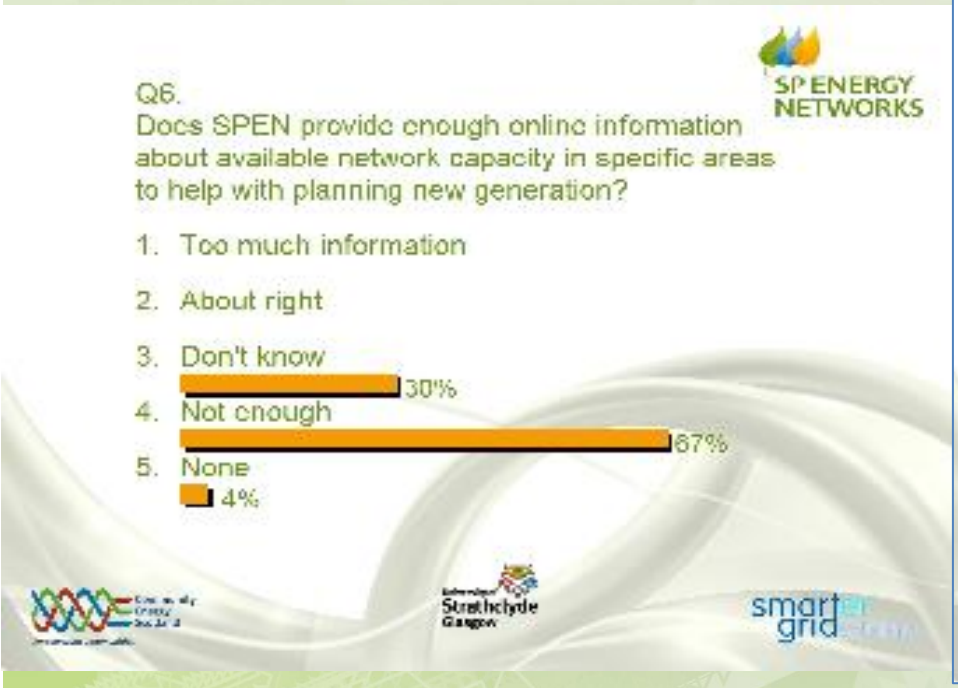
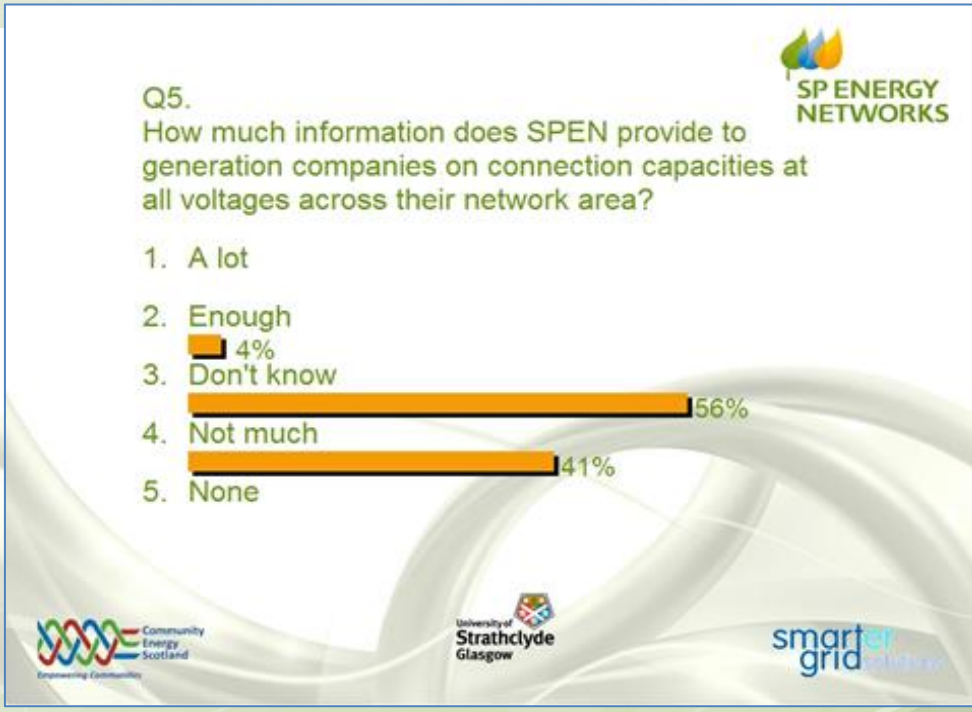
What Stakeholders Said – Feb 14





What Stakeholders Said – Jun 14

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Q1.
Do you agree with SP Ene
to constrain actively mana
LIFO stack?

1. Strongly Support
16%
2. Might Support

Q2.
How should a generator's p
stack be established?

1. Following receipt of pla
2. Upon connection to the
25%
3. When connection agree

SP ENERGY NETWORKS

Q3.
Do you support the proposal for a two-stage connection agreement for those generators affected by transmission constraints to enable distributed generation to connect ahead of completed reinforcements?

1. Strongly Support
61%

Q4.
Do you believe that Project
what SP Energy Networks
connection to the grid?

1. Great Improvement
2. Slight Improvement
17%
3. Don't know
8%
4. Slight Deterioration
5. Great Deterioration

Q5.
Previously 67% of delegates vo
SPEN does not currently prov
information about available n
assist developers in planning
Do you believe that the propose
tool will improve this?

1. Greatly Improve
2. Might Improve
27%
3. Don't know
4. Slightly Worsen
5. Greatly Worsen

SP ENERGY NETWORKS

Q6.
Would you support connections offers being withdrawn by SPEN if planning consent was not achieved within a specified timescale and for that capacity to be made available for those projects more advanced in progressing towards connection?

1. Greatly Support
70%
2. Might Support
17%
3. Don't know
9%
4. Slightly Against
5. Greatly Against
4%

Community Energy Scotland
Empowering Communities

University of Strathclyde Glasgow

smarter grid solutions

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Listened to Stakeholders and are responding directly to their needs.

Prioritised Online Curtailment Analysis Tool (OCAT) to be delivered to trial area by 31st March 2015 - as promised to stakeholders

Active Network Management into Business as Usual during 2015 – 2 years ahead of project close.

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Stop Pressing the Button