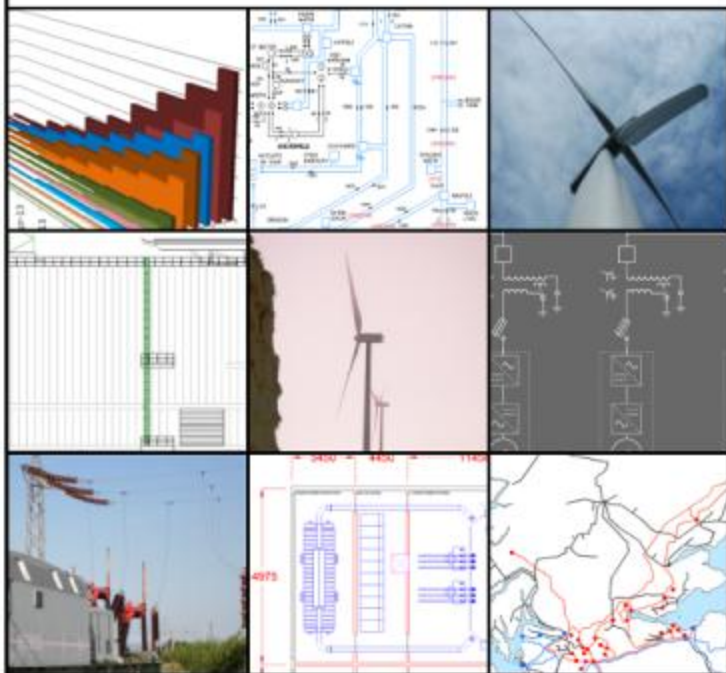


DISTRIBUTED GENERATION

CUSTOMER EXPERIENCE

OFGEM DG FORUM



12 November **2012**

Xero
ENERGY

Xero Energy Limited · Tel: +44 (0)141 221 8556 · www.xeroenergy.co.uk
Registered as No. SC313697 in Scotland, at 2/1A, 2 Parkgrove Terrace, Glasgow G3 7SD, UK

- › Who – a specialist consultancy
 - 10 people -> mainly engineers

- › Where – Glasgow, Scotland
 - Mainly UK projects but experience is worldwide

- › What – grid connection of renewable energy
 - Every single day, that's all – no nuclear, no fossil fuels

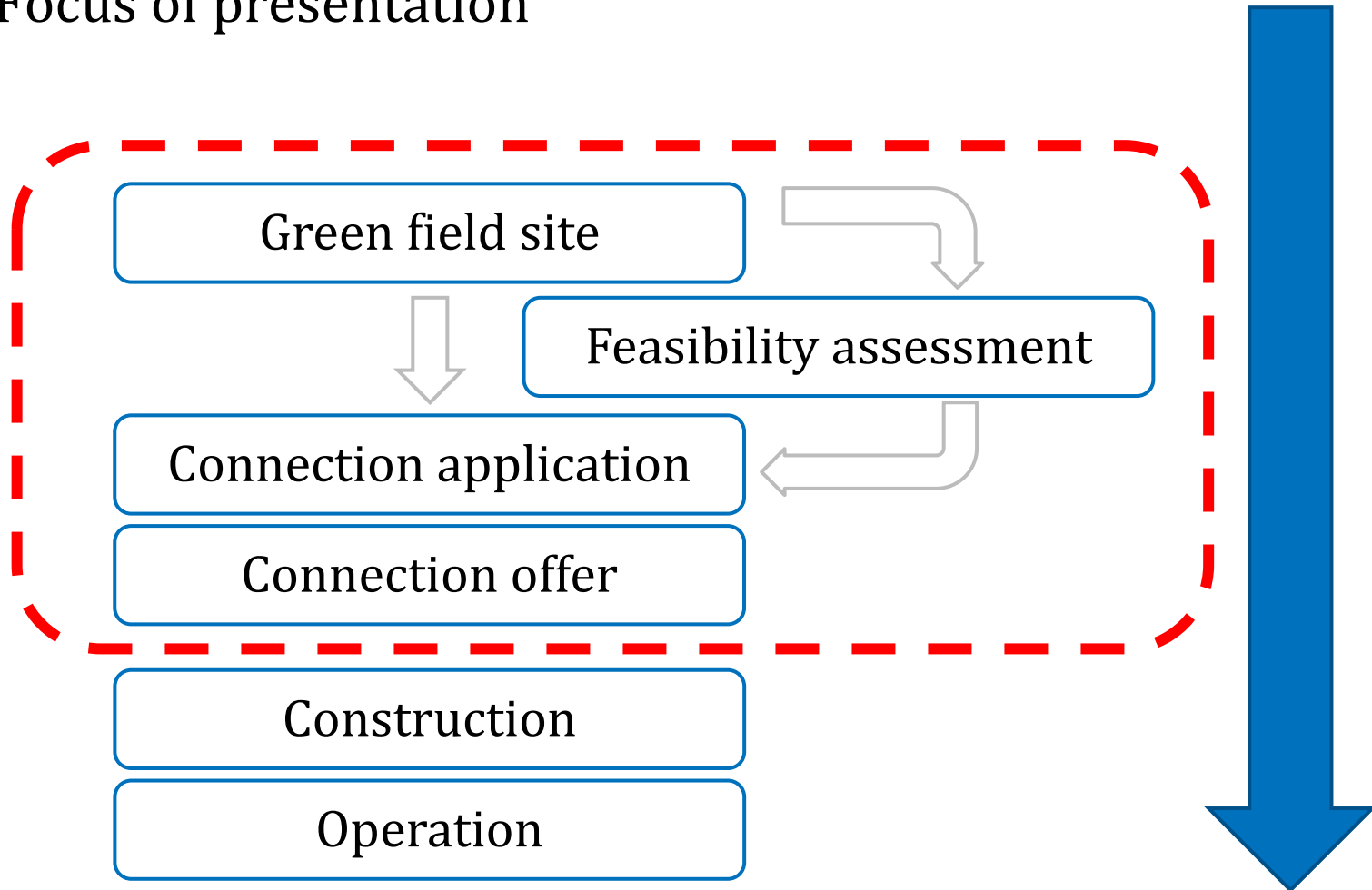
- › Why – because we believe in it
 - Our ethics are important to us and we work off quality and value

- › Scottish Renewables – Distribution Connection Working Group

“provide a forum for discussion for embedded generators, or those representing embedded generators, on the challenges presented to them when connecting to the electricity distribution network.”

- › The group contains members who have an interest in a number of technologies at a range of scales, from micro generation to large wind developments.

› Focus of presentation



GREEN FIELD SITE

Grid is a key constraint that heavily influences project economics / size.

- › Developers at pre-application stage need to know the:
 - Costs and timeframes for connection options
 - Local distribution system breakpoints
 - Risks, liabilities and other commercial issues

- › The connection application process is a constrained way of developing an understanding of these issues.

- › **A feasibility study is the most appropriate vessel, but...**

› Recent experiences - SRF DG working group feedback

- Feasibility study timelines from DNOs (long)
 - Statutory obligations prioritised (obviously)
 - DNO resourcing
- Third party study work
 - LTDSs, updated bi-annually.
 - Available data is limited (@11kV) and a bit patchy (@33kV)
- Full application process is required after feasibility study
 - By which time things may have changed!
- FREE applications!
 - Many speculative applications – used as an optioneering tool
 - High % of unaccepted offers
 - DNO resourcing

› Helpful suggestions - SRF DG working group feedback

→ **Access to information**

- Better data availability from DNOs (especially at 11kV)
- 'Micro websites' – good idea, but could be much better.
- Maps with good network data
- Up-to-date information in the LTDS

→ **DNO resourcing**

- Reintroduce fees for connection applications (resulting in better service?)
- Settlement under RII0-ED1 (output measure e.g. customer service)

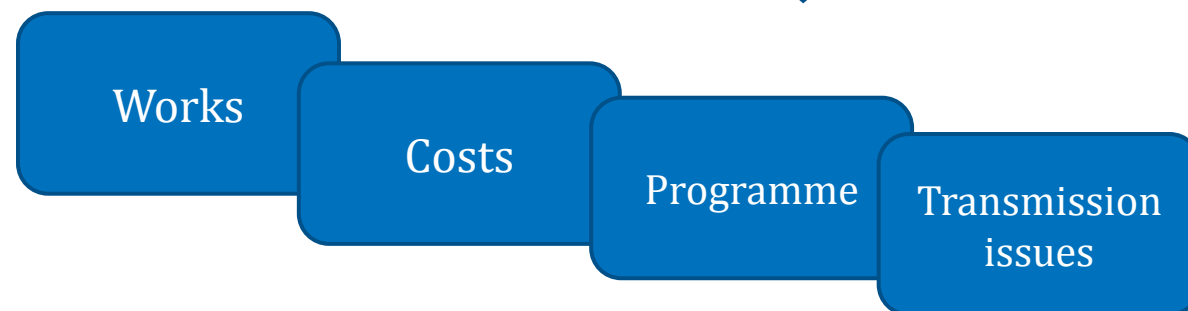
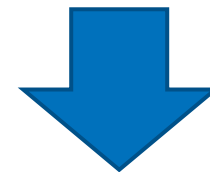
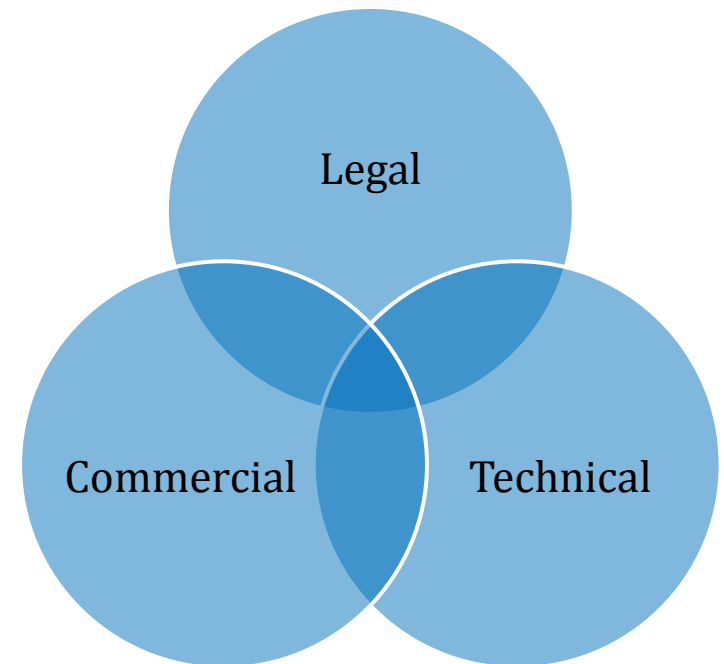
→ **Processes**

- Streamline the process between feasibility studies and connection applications

CONNECTION OFFER

- › Offer sets out:
 - T&C
 - Costs
 - Programme
 - Technical issues and site specifics

- › Commitments will be necessary
 - legally binding contracts
 - Capital expense and underwriting



- › Connection works and costs
 - *What have I been offered?... and is it reasonable?*

- › Contestable Vs. Non-contestable
 - *Can it be done cheaper by an ICP?*

- › Timelines
 - *What are the consenting risks of the works?*

- › Transmission system
 - *What are all transmission related issues and risks?*

- › Technical issues
 - *What are they?*

- › Recent experiences - SRF DG working group feedback
 - Connection solutions
 - Little evidence of (and incentive for) creative thinking from DNOs
 - Large down payments
 - Can be a big issue, particularly for smaller projects
 - Long connection timelines
 - “Legacy” projects
 - Non-firm access
 - Transmission
 - Statement of Works (ordeal!)
 - CMP 192 – clarity on the impact on DG?
 - Technical issues
 - Lack of available technical personnel

› Helpful suggestions - SRF DG working group feedback

→ **Payments**

- Scaled appropriately to project size/connection cost
- Itemised breakdown of costs included in the offer

→ **Innovative connection solutions**

- Increase the rate of introduction
- Active network management
- Non-firm options

→ **Transmission interface**

- Reconsider how the process between D and T could work better.

› Next steps

→ Scottish Renewables

- SR Member event – Active network management **29 Nov 2012**
- DNO engagement at next DG working group
- Continued regular DNO engagement via DG working group

→ RIIO-ED1