Meitheal na Gaoithe Workshop 15-5-09

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Riding instructions….

"Meitheal na Gaoithe wish to see that overall grid strategic planning (such as Grid 25 for transmission) includes the distribution system, so as to accommodate the MnaG projects on the distribution system - that is Green policy, Government policy and EU policy. That isn't done today, as you have said. So it would be helpful to find out from you and Eirgrid:

- firstly, why it isn't done, and

- if it cannot be done, what are his reasons;

- if it can be done, what is needed."

Historically: Transmission System vs Distribution System

- Transmission System
  - to transport power from bulk sources to Bulk Supply Points [BSP's]
  - Relatively small number of lines and stations
- Distribution System
  - to distribute power from BSP's to all customers at a local level
  - Very extensive with very large numbers of sub-stations and 1000's km of lines

Transmission System vs Distribution System

- Transmission System Operator
  - balances power – matches supply to load so as to maintain voltage, frequency etc.
  - operate interconnected
  - system is one massive island
- Distribution System Operator
  - historically not involved in load balancing
  - generally not deliberately involved in “islanded” operation
  - is radial in nature

Is there strategic planning on Distribution Networks?

- Distribution Networks are planned for load on 10 year horizons
- Beyond 10 years, uncertainty at local level becomes too great
- Such plans form basis of submissions to CER for funding as part of regulated Price Review [PR]
- Assumptions based upon load growth rates and known spot loads
- Such assumption reviewed before committing to work
- Strategic decision to convert MV networks from 10kV to 20kV – DG benefits from this

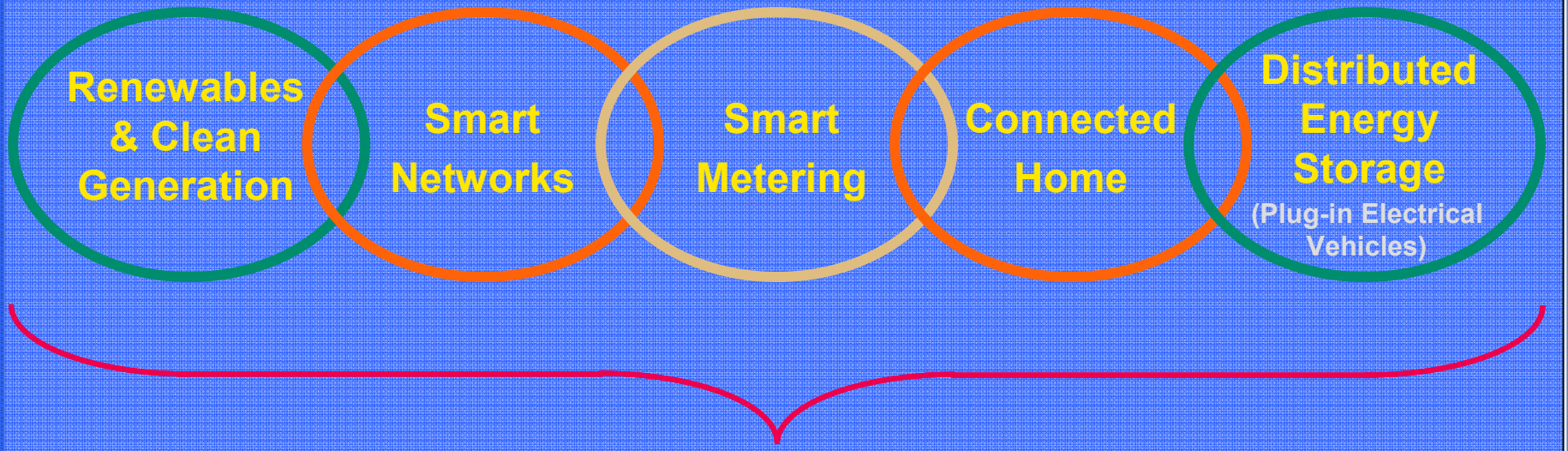
What about planning for Distributed Generation?

- Gates are here to stay – love them or hate them!!
- ESBN has no mandate to build advanced infrastructure for Generation other than that done within a Gate
- Where it is possible to do so within rules of a given Gate, ESBN will always seek to use distribution networks developed for load, to connect DG

What about the future?

- Distribution Systems becoming more complex
- Moving towards being “active” rather than passive
- At some point in the future, DSO may be involved in VAR/Voltage control and dispatch of DSO connected wind
- Smart Metering has potential to revolutionise Distribution Networks
- Workstreams already moving in the direction of “Smartgrids”
  - Remotely controlled switches
  - Automatic restoration schemes
  - Large investment in OMS

Sustainability Strategy



Internal Sustainability

A sustainable energy system connecting with energy aware interactive customers

Electric Vehicle charging points

"Meitheal na Gaoithe wish to see that overall grid strategic planning (such as Grid 25 for transmission) includes the distribution system, so as to accommodate the MnaG projects on the distribution system"

- Eirgrid have no jurisdiction to plan Distribution Networks
- Gate 3 makes use of Grid 25 and the ITC
- Grid 25 informs choice of Tx deep re-enforcements
- The ITC is being used in Gate 3 to determine the Tx Firm Access Quantities

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- Grid 25 has no direct role in the planning of distribution generations connection in Gate 3
  - However, ESBN and Eirgrid do work closely with each other
  - No need since applications are assigned

- DSO determine the connection methods for all Gate 3 applications that will connect at Distribution voltages.
- MnaG projects are therefore "included"

Questions?

Or lunch?