

2020 DEMAND SIDE VISION WORKSHOP

26 February 2010

1. AGENDA

- 09:00 **Registration and coffee**
- 09:15 Welcome and objectives of day
- 09:30 Plenary session:
- All-island 2020 context & overview of policy drivers
 - Overview of all-island demand side potential
 - Lessons from international best practice
 - Introduction to morning syndicate sessions – key questions & issues
- 10:30 Coffee
- 10:45 Syndicate sessions:
- Establish and characterise potential for key demand-side measures to meet market challenges
- 12:00 Syndicate groups report back
- 12:30 **Lunch**
- 13:15 Plenary session:
- Introduction to afternoon syndicate session
- 13:25 Syndicate sessions:
- Barriers and enablers to deployment of demand-side measures
- 14:45 Syndicate groups report back
- 15:20 Next steps
- 15:30 **Close**

2. SYNDICATE SESSIONS

2.1 Syndicate Chairs

Syndicate Chair	Topic	Suggested issues
Teresa Fallon (ESB Customer Supply)	Energy efficiency delivering reductions in total consumption e.g. more efficient appliances, insulation, up to large scale industrial processes	What is the scope for energy efficiency? How can it be achieved and in which sectors?
Peter McPolin (Energia)	Aggregation of embedded generation e.g. capturing flexibility from existing and new generation	How much flexibility is out there? At what cost? Can commercial barriers be overcome?
Dafydd Elis (Pöyry)	Micro generation e.g. solar PV, micro-wind turbine, micro-CHP, (solar thermal)	Is a scale roll-out of micro-generation a viable option? Can it provide flexibility?
Brian Montayne (ESB Energy Services)	Electric vehicles	Are there conflicts between distribution network and wholesale market needs? Are the vehicles remotely controlled? By whom? Is vehicle-to-grid viable? Should the vehicles be pure electric or plug-in-hybrid? What is the realistic roll-out timeframe?
Tony Walsh (ESB Networks)	Other new types of electrical demand e.g. increases in (controllable) electric heating / hot water/ heat pumps	Are there conflicts between distribution network and wholesale market needs? Is dispatch remotely controlled? By whom? Can flexibility be increased e.g. with gas boiler back-up?
Simon Tweed (EirGrid)	Transmission and distribution scale electricity storage e.g. pumped storage, compressed air, batteries, flywheels, etc.	What are the transmission and distribution system needs? Can large scale storage be commercially or economically viable? In what circumstances is it most valuable?
Paul Cooley (Airtricity)	Changing human behaviour through enhanced information / smart metering e.g. reduced electricity consumption, re-timed electricity consumption	Will customers continue to respond after the novelty wears off? How can this be prolonged? Will customers be able to react to the high-wind future when the 'net peak' times change from day to day?

Syndicate Chair	Topic	Suggested issues
Leslie Bryans (NIE)	Home and office automation / frequency sensitive relays e.g. remote control of appliances, heating and hot water, frequency-sensitive fridges	Is this a realistic prospect with existing uses of electricity? In what sectors is the greatest potential?
Padraig Fleming (Bord Gáis Energy)	Demand side flexibility from industry e.g. frequency or voltage-sensitive devices, peak reduction, etc.	What is the scope for provision of the various services? How can it be delivered? Will it be reliable? Are the existing SEM rules on demand side units too restrictive?

2.2 Syndicate Session 1: Establish and characterise potential for key demand-side measures to meet Irish market challenges

Each Syndicate Group will be assigned one or more demand 'resource' topic (see table above) and asked to discuss the following:

1. Review / prioritise key issues set out in Poyry presentation, preceding the Syndicate Session
 - Illustrative examples:
 - Increased levels of intermittent generation
 - New types of demand e.g. electric vehicles, electric heating / hot water/ heat pumps
 - Increased levels of interconnection with other European markets

2. What is / are the resource(s)?
 - Description
 - Actors involved
 - Nature of control – centralised, automated, price signals etc.
 - Technologies involved

3. What can it / they deliver?
 - Timescale of response e.g. planning (year-ahead), scheduling (day-ahead), operation (within-day), or close to real time (primary / secondary / tertiary reserve timescales)
 - Type of response (quantified by installation / in aggregate)
 - Energy reduction (average annual)
 - Peak power reduction (annual /daily)
 - Flexibility (load shifting)
 - Ancillary services (primary / secondary / tertiary reserve)
 - Synergies / other benefits

4. What are the consequences if not enabled / delivered?
 - Impact on electricity market / system
 - Impact on broader economy
 - Competing options to deliver same 'response' e.g. investments in other parts of supply chain e.g. generation / transmission / distribution / supply

2.3 Syndicate Session 2: Barriers and enablers to deployment of demand-side measures

Each Syndicate Group will be asked to discuss the following, for their assigned demand “resource” topic(s):

1. What are the barriers?
 - System constraints
 - Technology
 - Protocols / standards
 - Regulation
 - Policy
2. Implementation issues
 - Potential timescales for roll-out
 - Estimated costs
3. What are the key enablers?
 - Regulation
 - Policy
 - Support mechanisms
 - Other
4. Other observations

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