

All Island Grid Studies for Renewables

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Grid Studies Working Group Member

Working Group Establishment

- Following meeting of Ministers Noel Dempsey and Angela Smith at Limavady on 21st June 2005 it was agreed that

an “All island Grid Study” would be initiated to address and report on the technical and economic issues associated with the development of renewable energy with a vision for 2020 and beyond.

Working Group Organisation

- Representatives from:
 - DCMNR and DETI
 - SEI and Action Renewables
 - EirGrid and NIE/SONI
 - CER and NIAER
- Martin Finucane (DCMNR) and Fred Frazer (DETI) are Joint Chairs, reporting to North-South Joint Steering Group (JSG)
- Ivan Jackson, Action Renewables is project manager
- Prof. Mark O'Malley is technical advisor to the group

Working Group Terms of Reference

- Agree the definition of the project
- Agree the nature and extent of necessary studies to inform the optimum Grid Management, Control and infrastructure development on an ‘All Island’ basis in order to facilitate ambitious renewable energy penetration to 2020 and beyond.
- Manage the process of ensuring that the studies are commissioned, controlled and delivered on time and within budget.
- Report the outcomes to Ministers via the Joint Steering Group.

Objectives

- Find out
 - Where options lie
 - Shape policy in long term
 - Help decisions in shorter term

Approach

Workstreams identified

1. Resource Identification

2. Variability

- Impact on system operation, fuel costs etc.
- Management

3. Network Issues

4. Economic and Stakeholder assessment

Consultation

There is consultation with stakeholders with regard to assumptions and methods

- Consultation on scope of Workstream 1 on 23/11/05
- Consultation on scope of Workstream 2 on 8/2/06
- Consultation on scope of Workstream 3 on 22/3/06

Workstream 1

- Estimate amount and location of each renewable technology
 - Probably two scenarios – with and without offshore wind
- Estimate cost of deployment
- Workstream 1 is being carried out by ESBI
- Consultation and information gathering in progress

Screening Study – Workstream 2A

- After Workstream 1 consultation, it was decided to carry out a screening study of scenarios
- This was carried out by Ronan Doherty PhD
- Considered a wide range of input parameters (gas price, carbon price, financing costs etc,)
- Identified a range of scenarios to be considered in the more detailed studies
- Known as Workstream 2A

Screening Study

Recommended Scenarios

- The scenarios recommended for further study include:
 - Renewable penetration ranging from 16% to 54%
 - Installed wind ranging from 2,000 MW to 8,000 MW
 - Wind energy ranging from 11% to 36%
- The more detailed phases of the study will assess the feasibility and impacts of these scenarios from a system perspective

Workstream 2B

- Assess how much variable and unpredictable generation can be accommodated
- Impact on total system costs and emissions
- Will consider impact of
 - Different plant mix
 - Improved forecasting
 - Storage

Workstream 2B

- Contract awarded to Risø National Laboratory, Denmark, working with Univ. of Stuttgart, Univ. of Duisburg-Essen and RAM-løse EDB
- Based on WILMAR (Wind in Liberalised Electricity Markets) tool developed by the partners for an EU Research Project, adapted to suit Irish situation
- Detailed methodology is now being finalised
- Presentation by Peter Meibom of Risø at tomorrows workshop

Workstream 3

- Investigate extent of network development required for renewables
 - Amount of transmission reinforcement that might be required for various scenarios
 - The regional spread of the reinforcements
 - Associated capital costs

Workstream 3

- Contract awarded to TNEI Services Ltd., UK, working with Dr. Keith Bell of University of Strathclyde
- Using ASSESS suite developed by National Grid (UK) and RTE (France)
- Kick-off meeting held last week

Workstream 4

- Based on outputs from workstreams 1, 2 and 3, assess overall economic, stakeholder, market impacts etc.
- Draw the overall results of the study together
- Scope being developed at present
- Consultation meeting probably before end of 2006

Peer Review Group

- An independent peer review panel is proposed to provide challenge and criticism as the studies progress
- First phase of peer review will be Workstream 2A report and Workstream 2B methodology
- Arrangements for peer review being finalised

Peer Review Group

- Peer reviewers for screening study include
 - Charles Smith, Utilities Wind Integration Group, USA
 - Prof. Nick Jenkins, Univ. of Manchester, UK
 - Prof. Ronnie Belmans, Univ. of Leuven, Belgium

Present Position

- WS 1 (resources) in progress
 - First stage is a key input to later workstreams
- WS 2A (screening study) completed
 - In peer review at present
 - Will be used to set scenarios for Workstreams 2B and 3
- WS 2B (variability) under way
 - Detailed methodology being finalised
- WS 3 (network) commencing
- WS 4 (economic and stakeholder impact) scope being developed

Present Position

There are no results yet!

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- There are no results yet!
- Workstream 2B and 3 results due early in 2007
- Study complete mid-2007

END



Annual Customer Conference 2006

Croke Park Conference Centre, Dublin

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