Grid at the Centre of a Decarbonised Society

17 November 2022



Agenda

1. To 2030 – Shaping Our Electricity Future

2. Post 2030 Future – Ireland & Europe

Shaping Our Electricity Future v1.0



- SOEF initiative launched in 2021
- Based on 70% RES-E target
- Public & Industry Consultation
- Scenario based analysis conducted
- SOEF Roadmap published

November 2021

Whole of Electricity System Approach



How did we consult and engage?



What did the public say?



What infrastructure will be required

294 existing projects in the pipeline

40 new projects in Ireland

4 new circuits
24 upgrades to existing circuits
1 new transformer
11 new technology projects

12 new projects in Northern Ireland

- 3 new circuits
- 7 upgrades to existing circuits
- 2 new technology projects



The Government has asked us to prepare the grid so up to 80% of Ireland's electricity can come from renewable sources by 2030.



Shaping Our Electricity Future V1.1 – What are we doing now?



 Taking account of latest policy position in Ireland and Northern Ireland (RES-E, emissions etc.)

IN

PROGRESS

 Not a root and branch review – V1.1 building on V1.0

Preliminary Analysis

- Preliminary analysis (unconstrained) on renewable portfolio required to meet 80% RES-E
- Initial results indicate
 - 1) Very significant amounts of additional renewable generation required to move from 70% to 80% RES-E....non-linear compared to 40% to 70% renewable requirements

PROGRES

- 2) The amount of renewable power that needs to be spilled is very significant
- Three sources of renewable spill:
 - Constraints (network congestion)
 - Curtailment (operational limits)
 - Oversupply (not enough demand to absorb RES at point in time)
- At higher levels of RES, oversupply plays dominant role trying to squeeze more and more renewable generation into the same load

Assessing Options

- Test the impact of technology 'levers' on RES-E% and oversupply
- Results will evolve but gives a sense of scale of challenge
- Perform Multi Criteria Analysis (MCA) of these 'levers'
- Assumptions are moving from realistic to optimistic
- These levers are dependent on 3rd party delivery, i.e. cross industry/ society delivery



System Operations





https://www.eirgridgroup.com/site-files/library/EirGrid/Operational-Policy-Roadmap-2022-to-2023.pdf



Market Evolution



Agenda

1. To 2030 – Shaping Our Electricity Future

2. Post 2030 Future – Ireland & Europe

OFFSHORE OPPORTUNITY



Drivers

- Supports our decarbonisation and energy security goals with a potential significant economic benefit
- Underpins a transformation to a sustainable, global Irish economy
- Ireland & Europe

Irelands USP

- Large, relatively unconstrained maritime area relative to our peers
- Strength of resource available
- Irelands offshore resource outweighs our domestic demand



IRELAND – DEEP DIVE BEYOND 2030

Consider domestic usage, energy exports, energy vectors (hydrogen, new industry) etc.





Jhan You

