# SHAPING OUR ELECTRICITY FUTURE ROADMAP

May 2022



# WHO ARE EIRGRID AND WHAT DO WE DO?

State owned operators of Ireland's electricity transmission grid.

We send power from where it is generated to where it is needed.

We operate the wholesale electricity market.

We also operate some electricity interconnectors with neighbouring countries.

We do not generate electricity.



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



## WHOLE OF ELECTRICITY SYSTEM CHALLENGE



**Shaping Our Electricity Future** 



# Ireland's electricity grid: What needs to happen?

- The grid needs to carry at least 10 GW more renewable electricity by 2030 – double 2020 levels.
- Power output from renewable sources depends on the weather – so the grid must work differently.
- Renewable electricity is typically generated far away from where most electricity is used and more electricity will be carried across this grid than ever before.



## How did we consult...?

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14-week consultation		Over 500 consultation responses		
3 Day	Over 100		National	Civil
Deliberative	consultatio		Youth	Society
Dialogue	n events		Assembly	Forum

## ...and what did did the public say?





## **Consultation and Engagement**



## FINAL GRID DEVELOPMENT ANALYSIS







### **DEMAND & GENERATION – WIDESPREAD GROWTH**

#### 2030 Demand



High demand scenario 1550 MW Large Energy Users (including 300 MW in total distributed across Cork, Limerick and Galway)





Main concentration of new generation:

- Offshore wind off east coast
- Solar in south and east
- · Onshore wind in north west and midlands
- Conventional generation in Dublin, West, South



## **GRID DEVELOPMENT**

- Approx. 40 new projects (~€1.1 bn) in Ireland\*
- Public acceptance at the heart of future grid development
- Have maximised use of existing grid and focussed on publicly acceptable, deliverable solutions
- However significant new grid infrastructure required complex, contentious and takes many years to deliver.
  - Particular concentration in Greater Dublin area

\* In addition to committed pipeline of approx. 100 significant projects (~€2.2 bn).
Excludes customer projects.



## **ENGAGEMENT – MULTI YEAR PLAN**



Engagement at the heart of transition to 2030....public, industry, key stakeholders

Continue to evolve our engagement expertise and methods – innovative methods and new processes

Initiatives required to support community buy-in; as well as delivering wider societal and industry awareness and acceptance

Involve, Inform and Empower all parts of society on the transition and build a coalition of support



### **OPERATIONS – MULTI-YEAR PLAN**

electric-vehicles dynamic-line-rating probabilistic-operations

offshore-wind synchronous-compensators european-market-re-integration control-centre-of-the-future statcoms system-services-future-arrangements Greenlink-interconnector 3-8 distributed-energy-resources Celtic-interconnecto 2nd rth₋S∩i Ine power-flow-controllers series-compensation roof-top-solar onshore-wind

## **ELECTRICITY MARKET EVOLUTION – RECOMMENDATIONS**



### **LOOK FORWARD**





## SUMMARY

#### Recognises the many challenges, including:

- Public acceptance of electricity infrastructure
- Public concern about increasing electricity prices
- Security of supply
- Demand growth

#### Shaping Our Electricity Future provides:

- Robust, and deliverable plan for 2030 and ultimately towards a net zero carbon energy system by 2050
- Accommodates social and economic growth (national and regional)
- Facilitates a secure transition from a non-renewable to renewable majority system through the decade

