



EirGrid Group Annual Conference

Planning for our Energy Future

#OurEnergyFuture



Tomorrow's Energy Scenarios

Planning our Energy Future

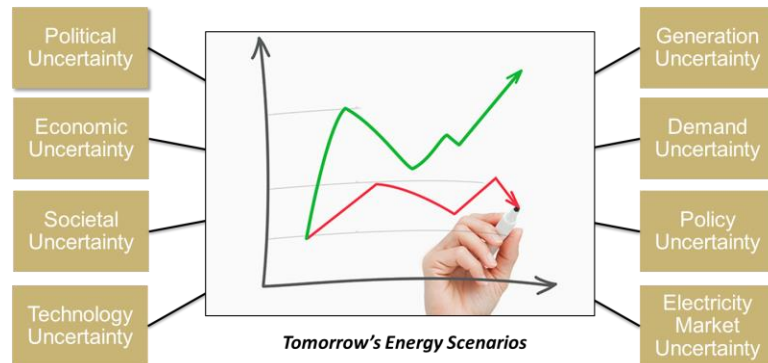
EirGrid Annual Conference

Thursday 26th January 2017



Tomorrow's Energy Scenarios Overview

- Tomorrow's Energy Scenarios form part of our new Ireland's new Grid Development Strategy
- They capture future uncertainties and trends of the energy industry and will increase the robustness of our Grid Development process
- Our 2017 publication will look at Ireland's possible energy futures from 2020 – 2040



Tomorrow's Energy Scenarios Consultation

- Tomorrow's Energy Scenarios Consultation report launching six week consultation with industry and public in February

February – March 2017

- Refine Tomorrow's Energy Scenarios based on consultation feedback

April – May 2017

- Publish Tomorrow's Energy Scenarios

June 2017

Tomorrow's Energy Scenarios Workshop

- Introduction to Tomorrow's Energy Scenarios
- Dr. Fionn Rogan - *'The future of Ireland's Energy Policy and the Challenges of Decarbonisation'*
- Roundtable discussions on Ireland's 2030 energy future
- Summary of results and comparison of 2030 power system information

Tomorrow's Energy Scenarios

Steady Evolution

Renewable electricity generation maintains a steady pace of growth. This is due to steady improvements in the economy, and in the technologies which generate electricity. New household technologies help to make electricity consumers more energy aware. This increases energy efficiency in homes and businesses. Over time, electricity consumers gradually begin to make greater use of electric vehicles and heat pumps. This means that, over time, electricity powers a larger proportion of transportation and heating.



Onshore wind generation
increases to approximately
5,200 MW by 2030



Ireland's 2030 emissions
targets are met

New 700 MW
interconnector to Europe
is in place by 2025



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Low Carbon Living

The economy enjoys high economic growth. This encourages the creation and rollout of new technologies for low carbon electricity generation. There is strong public demand to reduce greenhouse gas emissions. In addition to high carbon prices and incentives for renewables, this creates a high level of renewable generation on the grid. This clean energy then combines with improvements to broadband and transport to drive growth in large data centres.



Coal generation is repowered to Gas
and Peat generation is repowered to
Biomass by 2025

The total demand for electricity
increases by 60% by 2030 compared
to today



Data Centre connections reach
1900 MVA in 2030 - most of these
are based in Dublin

Tomorrow's Energy Scenarios

Slow Change

The economy experiences very slow growth. Investment in new renewable generation is only in established, low risk technologies. Due to poor economic growth, new technologies that could increase the use of renewable generation at household and large scale levels are not adopted. Overall there is little change in the way electricity is generated when compared to today. Domestic consumers and commercial users are also avoiding risk and uncertainty. The only source of demand growth is the connection of new data centres but the level of investment slows down significantly after 2025.

Coal generation remains on the power system beyond 2030



The total demand for electricity increases by 28% by 2030 compared to today

Ireland's 2030 emissions targets are missed



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Consumer Action

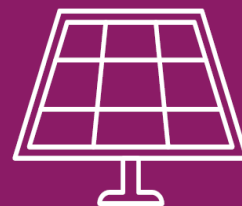
A strong economy leads to high levels of consumer spending ability. The public want to reduce greenhouse gas emissions. Electricity consumers enthusiastically limit their energy use and generate their own energy. This results in a large number of community led energy projects and a rapid adoption of electric vehicles and heat pumps in the home.

There are almost 300,000 electric vehicles on the road by 2030



17% of residential houses are heated through heat pumps by 2030

Household batteries and Solar PV help to increase self-consumption of electricity



Tomorrow's Energy Scenarios Workshop

- Roundtable discussions on the most likely 2030 for:
 - Energy Policy
 - Electricity Demand
 - Fossil Fuel Generation
 - Wind Generation
 - Solar Generation
 - Electrification of Heat & Transport and Electricity Storage
- 1-2 minute summaries at the end following discussion

Tomorrow's Energy Scenarios – Survey

- We want to get your opinions on some of the biggest uncertainties in the future of the energy sector
- Online Survey Tool – kahoot.it
- Use your smartphone to join us in a live survey now
- Dublin Castle WiFi Network: **Conference**
- Dublin Castle WiFi Password: **January-2017**

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