Building a renewable portfolio

Bord na Móna

Mike Quinn - CEO
Electricity Demand has doubled since 1990
Bord na Móna Generation mix - 2014

1.1 TWh 1,100,000 MWh

- Peat: 47.9%
- Wind: 29.5%
- Biomass: 19.6%
- Biogas: 2.7%
- Distillate: 0.3%
Bord na Móna Land bank

200,000 Acres

Our Land bank remains one of our key assets
Climate change bill – low carbon economy

• EU targets (consistent with IPCC necessary reductions for developed countries) are for 80%-90% reduction in greenhouse gases by 2050 compared to 1990. Ireland’s low carbon road mapping process will be guided by a long term vision based on:

• An aggregate reduction in CO2 emission of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors

• In parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production
Our Approach

Bord na Móna
Co location – Wind, Solar, Storage
Potential Technology – Battery Storage

Wind, Solar, Storage

Available Solar Power
Available Wind Power
Storage
MEC
Dispatch Quantity

Wind, Solar, Storage

Graph showing availability of solar power, wind power, storage, MEC, and dispatch quantity over 24 hours.
BIOMASS
Powering the future

Bord na Móna
FOCUS 2030
Looking to the Future
PowerGen – Biomass demand

Biomass Demand:

- 370K tons in 2016
- 1.7M tons in 2021
2021 Biomass Supply Mix

In bound Biomass Supply

- Domestic Biomass
  - 30% of supply

- International owned Biomass
  - 30% of supply

- International sourced Biomass
  - 40% of supply

BnM Supply Chain

1.7M tons by 2021

Biomass Demand sources

- Private CHP projects
- Domestic home heating
Biomass Sources

**Domestic Supply:**
- Coillte
- Private forestry
- Willow crops
- Saw mills

**International Sourced:**
- Spot buys
- Traded commodity
- Wood chip, pellets, PKS etc

**International Owned:**
- Wood pellet mill
- Wood chip plants

Demand 1.7M Tons
Resourceful Use of Waste Streams

CHP Plants

Drehid: Engineered Landfill

Gasification / Pyroloasis
PowerGen Mix 2021

Bord na Móna Generation mix - 2014
1.1 TWh 1,100,000 MWh

- Wind 29.5%
- Peat 47.9%
- Biomass 19.6%
- Biogas 2.7%
- Distillate 0.3%

Projected BnM Output 2021 - 2.0 TWh

- Wind 46%
- Peat 25%
- Biomass 20%
- Biogas 2%
- Solar 7%
- Distillate 0%
Reducing Our Carbon Emissions Intensity

CO₂ Intensity of Electricity Generated

- Irish Generation Portfolio
- BnM Generation Portfolio
Renewable build out challenges

- Planning
- Biomass sourcing
- Regulatory Support
- Development costs
- Grid Infrastructure
- Technology Costs
Thank you

Bord na Móna