

Delivering a climate neutral Europe by 2050

Paul Deane





A German wind farm exemplifies Europe's embra of power generation. Credit. Hans-Peter Merten,

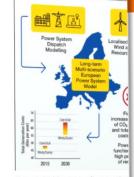
RENEWABLE ENERGY · 26 JULY 2018

Green power in Euro

The fickle nature of wind and solar dring price polatility

Joule

Impacts of Inter-annua Variations on the Europ



energy

Comment Published: 14 January 2019

Strengthening the poverty

Audrey Dobbins , Francesco Fuso Nerin

Nature Energy 4, 2-5 (2019) Download

Energy poverty in the Euro across member states and r policymakers need to streng engender action across men vulnerable consumers in en

vulnerable consumers in energy markets.

engender action across mem eer states, moving beyond the forus



Renewable Energy Pros for the European Union



Based on REmap analysis

Abstract

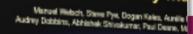
SO IRENA

Emerging literature highlights the essential role playe energy systems consistent with the Paris climate agree of high levels of renewable energy and negative emiss EU power system in 2050 in terms of emissions redu

Sneak Peek

A PREVIEW OF PAPERS UNDER REVIEW

Europe's Energy Transition -Insights for Policy Ma





FINAL REPORT

of the High-Level Panel of the European Decarbonisation Pathways Initiative



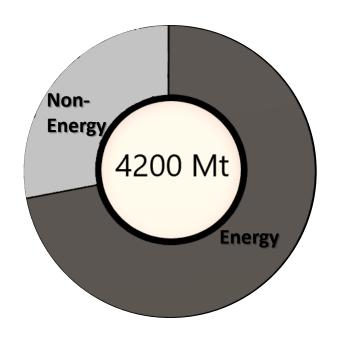
Key Messages

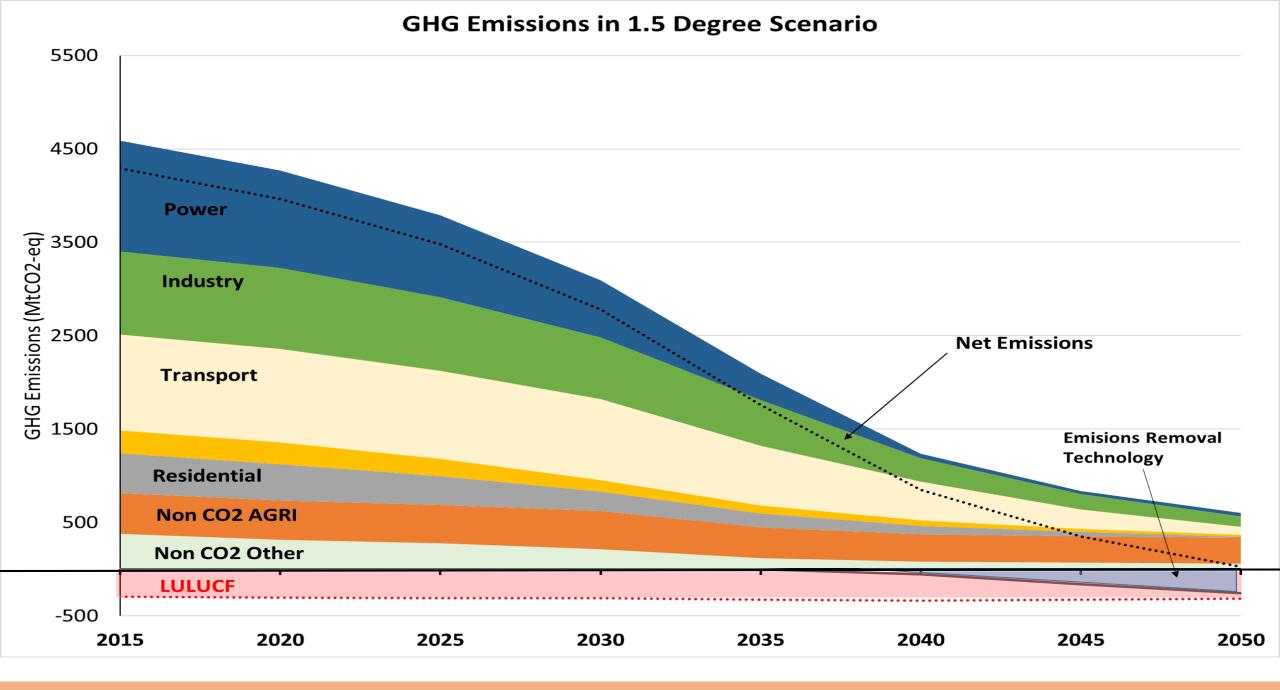
Current Policy is not enough

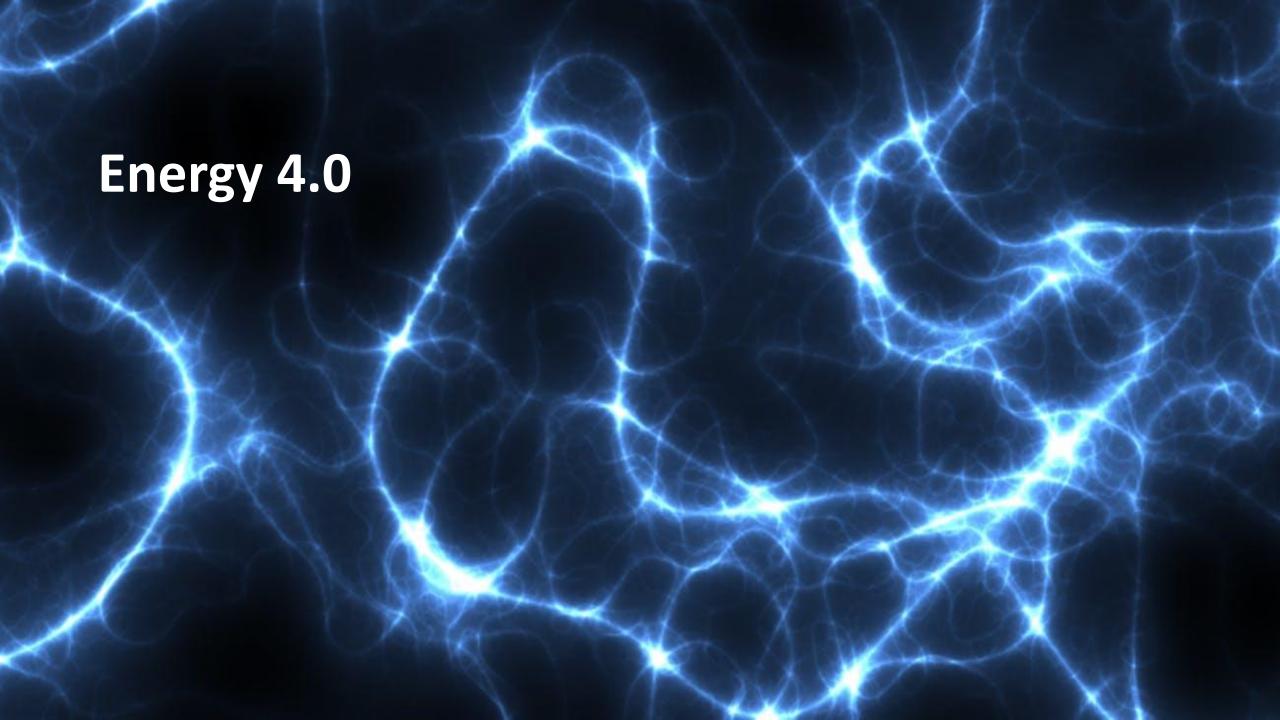
- Paris alignment will require radical changes in
 - <u>E</u>nergy efficient
 - **E**lectrification
 - **E**nhancement of renewables
 - Action across all sectors is required
- Costs are significant, particularly in short term



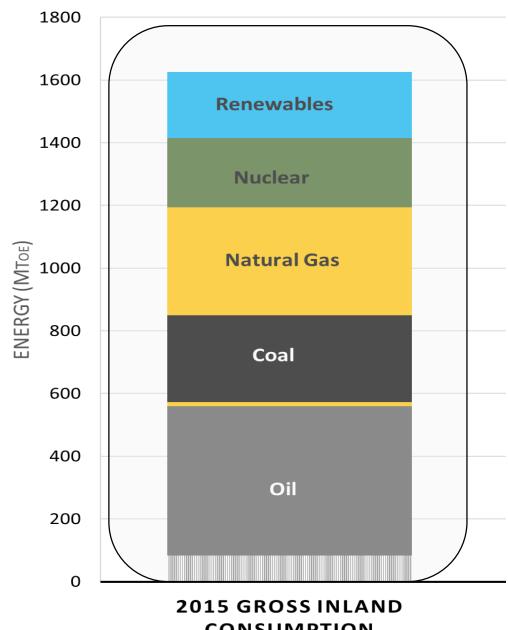
ALL Greenhouse Gas Sources in Europe (Millions of tonnes of CO2 eq)





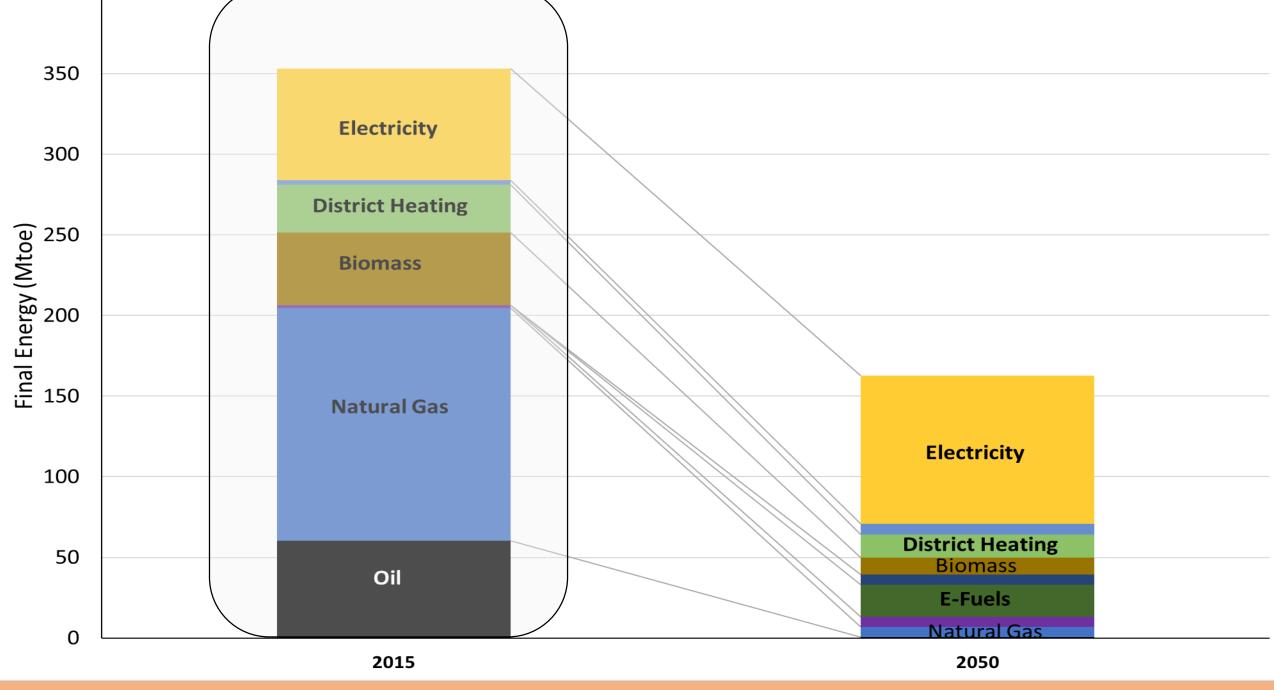


ENERGY OVERVIEW-GROSS AND FINAL ENERGY



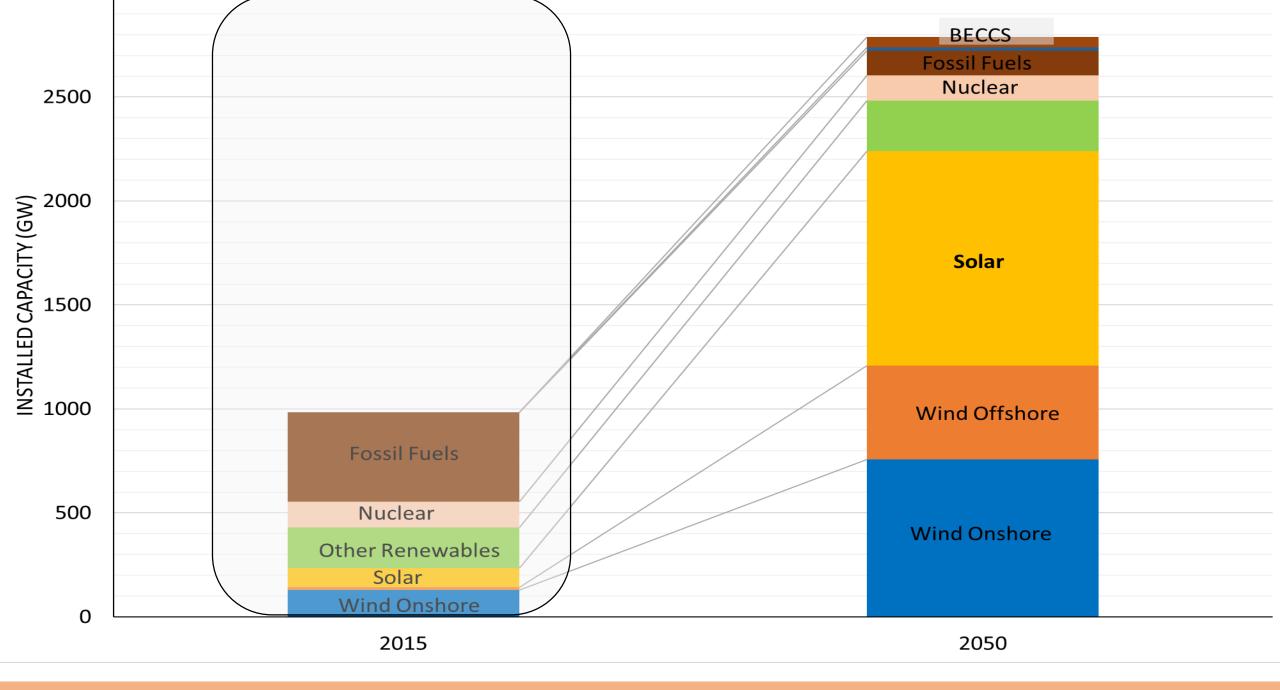
CONSUMPTION



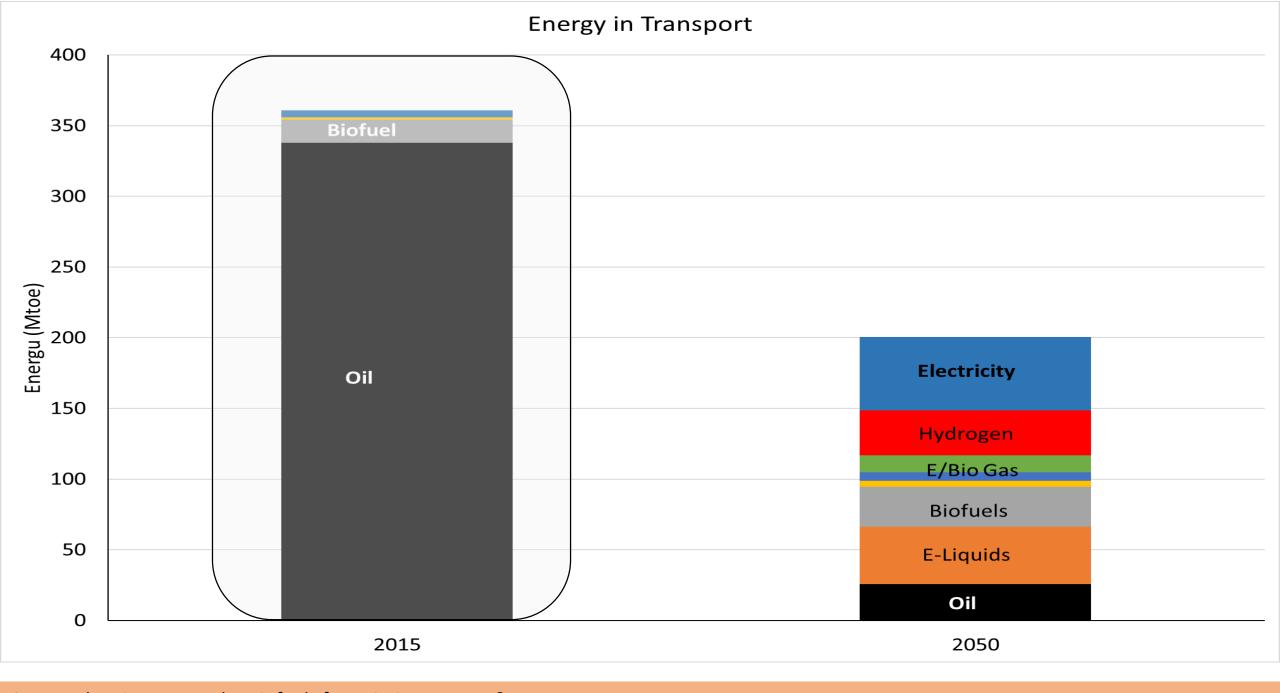


Our overlapping Research: Strengthening the EU response to energy poverty: Dobbins & Deane et al-Nature Energy

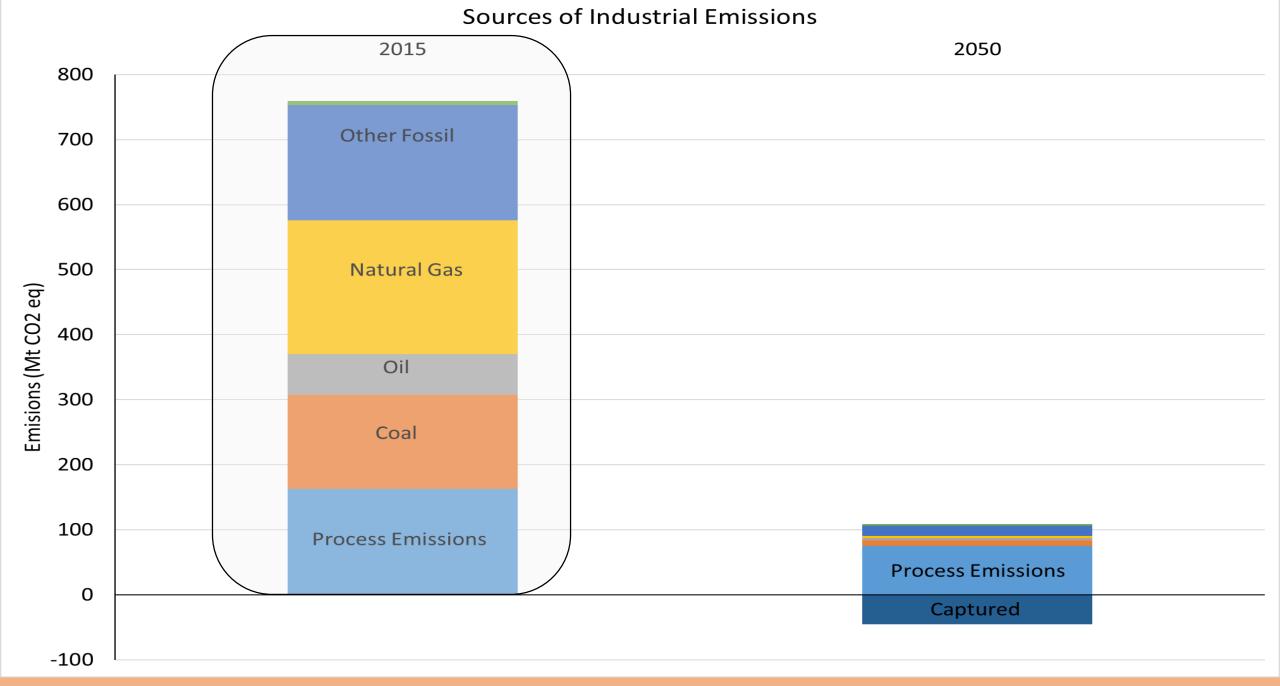
Electricity and Grids







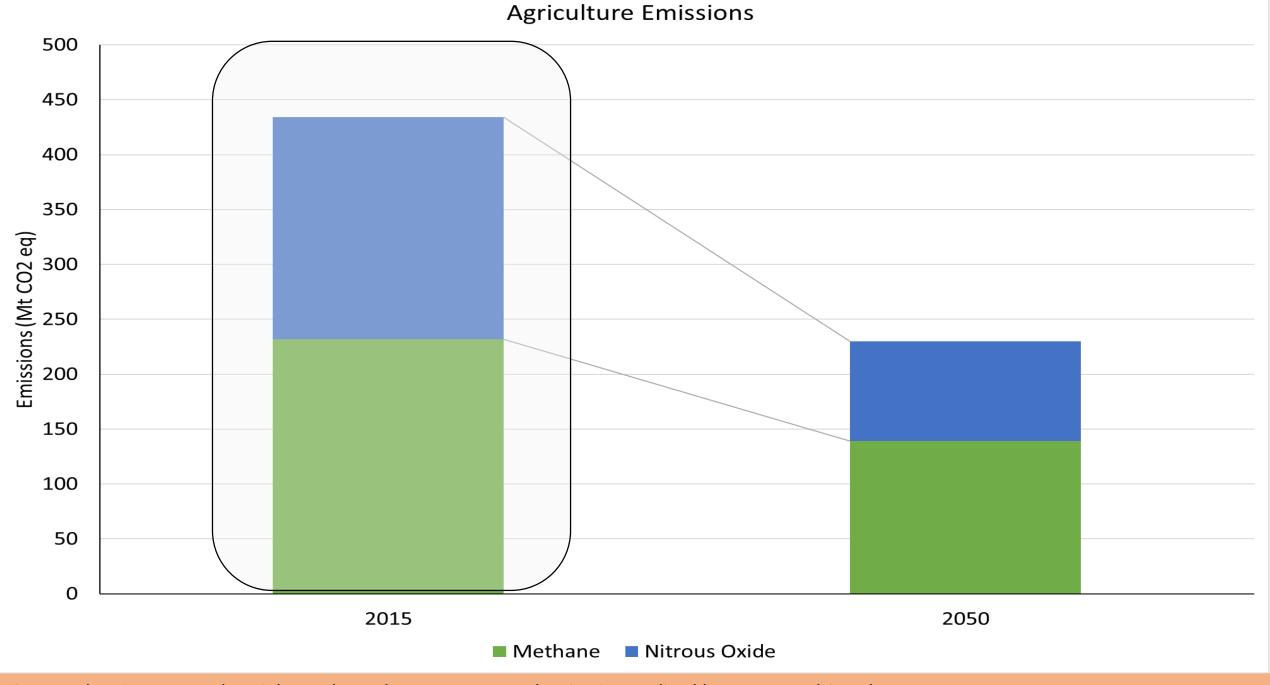




Our overlapping Research: High-Level Panel of the European Decarbonisation Pathways Initiative edited by Deane and Strachan

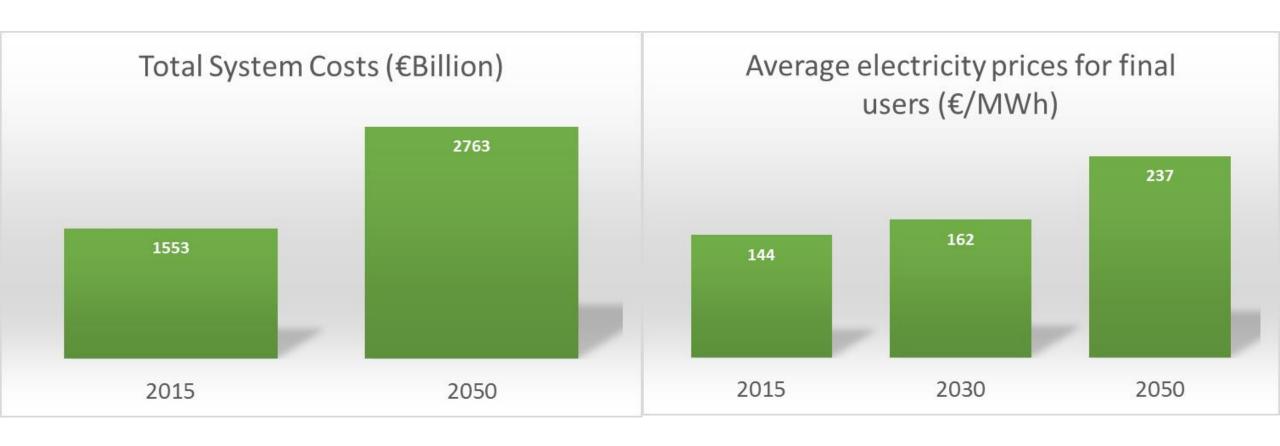
Agriculture/Food/Land use







Additional Average Annual Investment of 290€billion



Key Messages

Current Policy is not enough

- Paris alignment will require radical changes in
 - Energy efficient
 - Electrification
 - Enhancement of renewables
 - Action across all sector is required
- Costs are significant, particularly in short term

Open Questions

- How will EU Policy impact Ireland
 - Ireland is different
 - Power system challenges
 - Agriculture
 - ETS and Non-ETS