



Different Shades of Green: Ireland's Climate Scorecard Irish Fiscal Advisory Council Conference

Presenter : Paul Deane Date: 28 | Feb | 2020 **Institution : University College Cork**







🖹 Tvndall

College Dublin







RESEARCH AREAS





What I will talk about



- Ireland's Greenhouse Gas Emissions and Policy Context
- Ireland's Energy Use
- How we compare to the rest of Europe
- Compliance costs for missed targets
- The Road to 2030
- Ireland and the EU Green Deal

Where do Ireland's Emissions Come from?-An Overview

European Climate and Energy Obligations

EU Effort Sharing Decision Renewable Energy Directive



European Climate and Energy Obligations

EU Effort Sharing Decision Renewable Energy Directive



Ireland's National Policy Position

•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•<



Ireland's National Policy Position

•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•
•<



An 80% Reduction Energy Emissions and "an approach to carbon neutrality in the agriculture and land use sectors..."



Ireland and rest of Europe



GHG Emissions (Y Axis), Energy Use (X-axis) and GDP (Bubbles) Change Indexed to 1990 (1990 =1 for all Countries)



Energy Use in Ireland

Total Energy use in Ireland by fuel [1990-2017]



Estimated Cost of Compliance for Missed 2020 Targets



- Purchase of compliance <u>does not avoid the costs</u> but rather delays the cost
- It <u>increases the challenge</u> of achieving our national transition objective for 2050
- Missed Emissions Reduction Targets (10 Mt of CO2 eq) ~ <u>€6m to €13m* (purchasing certified emissions reduction)</u>
- Missed Renewable Energy Targets (4 TWh) ~ €110 million (statistical transfers)

*€121 million was spent on acquiring carbon credits as part of Ireland's strategy to meet first commitment period of the Kyoto Protocol (2008 – 2012).

The journey, Not the destination matters...

T. S. Eliot

(quotefancy

Projected Total Gap to Non-ETS Target and Annual Gap in 2030



The EU Green Deal and Ireland

Total System Costs for <u>Net Zero Emission Energy</u>* System by 2050



- UCC analysis show net-zero CO2 target could be met at an annual resource cost of <u>up to 1.5%-2% of GDP</u> to 2050
- Overall costs are manageable but must be fairly distributed.
- Increased Renewables reduces costs but has physical limits
- Removing mitigation options such as Carbon Capture and Storage increases costs
- Gap in knowledge for carbon neutral agricultural and land use

Glynn et al "Zero carbon energy system pathways for Ireland consistent with the Paris Agreement https://doi.org/10.1080/14693062.2018.1464893



Thank you

Contributions from James Glynn, Fionn Rogan, Brian Ó Gallachóir, Hannah Daly

FUNDED BY:

