

Introduction

The Environmental Protection Agency (EPA) produces national greenhouse gas emission projections on an annual basis. This bulletin provides an updated assessment of Ireland's progress towards achieving its emission reduction targets set under the EU Effort Sharing Decision (Decision No 406/2009/EU) for the years 2013-2020.

Ireland's 2020 target is to achieve a 20% reduction of non-Emissions Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, residential, commercial, non-energy intensive industry, and waste) on 2005 levels with annual binding limits set for each year over the period 2013-2020¹.

Approach

Greenhouse gas emissions are projected to 2020 using two scenarios; *With Measures* and *With Additional Measures*.

The *With Measures* scenario assumes that no additional policies and measures, beyond those already in place by the end of 2014 (latest national greenhouse gas emission inventory), are implemented.

The *With Additional Measures* scenario assumes implementation of the *With Measures* scenario in addition to full achievement of Government renewable and energy efficiency targets for 2020, as set out in the National Renewable Energy Action Plan² and the National Energy Efficiency Action Plan³.

This update assumes an unchanged energy system outlook compared to the EPA's 2015 projections publication⁴. It does however include an analysis of the impact of Food Wise 2025⁵ for the agriculture sector.

Key trends

Ireland's non-ETS emissions are projected to be 6% and 11% below 2005 levels in 2020 under the *With Measures* and *With Additional Measures* scenarios, respectively. The target for Ireland is a 20% reduction.

Ireland is projected to exceed its annual binding limits in 2016 and 2017 under the *With Measures* and *With Additional Measures* scenarios, respectively (Figure 1).

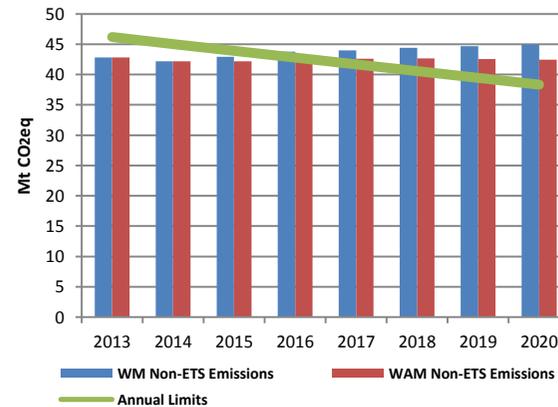


Figure 1. *With Measures* and *With Additional Measures* greenhouse gas emission projections and comparison with the linear reduction pathway required between 2013 and 2020⁶

To determine compliance under the Effort Sharing Decision, any overachievement of the binding emission limit in a particular year (between 2013 and 2020) can be banked and used towards compliance in a future year. However, even using this mechanism Ireland will still be in non-compliance according to the latest projections.

Figure 2 shows that over the period 2013-2020 Ireland is projected to cumulatively exceed its compliance obligations by 12 Mt CO₂ equivalent under the *With Measures* scenario and 3 Mt CO₂ equivalent under the *With Additional Measures* scenario.

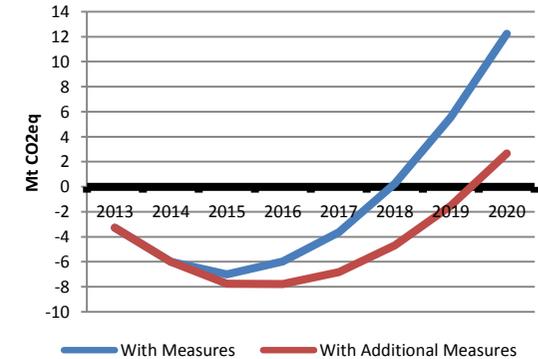


Figure 2. Projected cumulative distance to target for Ireland's Non-ETS emissions 2013 to 2020

The challenges associated with implementing planned policies and measures that are aimed at reducing emissions under the *With Additional Measures* scenario should not be underestimated. Failure to meet 2020 renewable and energy efficiency targets will result in Ireland's emission levels moving even further from its emission reduction targets.

¹ Refer to the 2015 EPA projections publication (www.epa.ie) regarding the estimation of annual limits by EPA for the period 2013-2020

² <http://www.dcenr.gov.ie/energy/en-ie/Renewable-Energy/Pages/Action-Plan.aspx>

³ [http://www.dcenr.gov.ie/energy/en-ie/Energy-Efficiency/Pages/National-Energy-Efficiency-Action-Plan-\(NEEAP\).aspx](http://www.dcenr.gov.ie/energy/en-ie/Energy-Efficiency/Pages/National-Energy-Efficiency-Action-Plan-(NEEAP).aspx)

⁴ http://www.epa.ie/pubs/reports/air/airemissions/irelandsghemissions2014-2035.html#_Vs51Hct0vmQ

⁵ <http://www.agriculture.gov.ie/foodwise2025/>

⁶ 1 Mt = 1,000,000 tonnes

Non-ETS Sectoral emissions to 2020

Agriculture and transport dominate non-ETS sector emissions accounting for 76% of emissions in 2020, as shown in Figure 3.

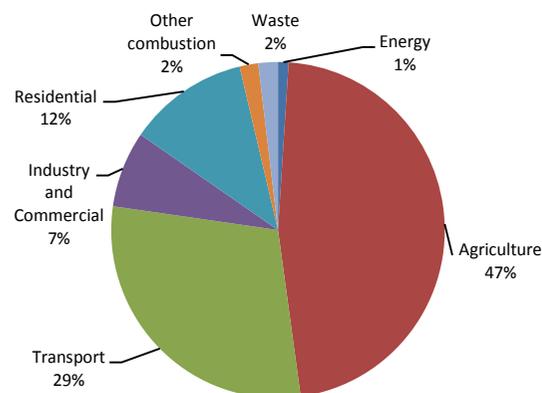


Figure 3. Projected sectoral share of non-ETS emissions in 2020 for the *With Additional Measures Scenario*

Agriculture

Agriculture emissions are projected to increase by 7% in the period 2014 to 2020 under the *With Measures* scenario. Under the *With Additional Measures* scenario emissions are projected to increase by 6%. Both scenarios are based on an analysis undertaken by Teagasc of the proposed national herd, crop areas and fertilizer use to meet the overarching objectives of Food Wise 2025. The dairy cow herd is projected to increase by 16% on current levels while the beef herd is projected to remain relatively static to 2020. Nitrogen fertiliser use is projected to increase by 21% by 2020. Fertiliser use efficiency gains are assumed under the *With Additional Measures* scenario.

Transport

Under the *With Measures* scenario, transport emissions are projected to increase by 16% in the period 2014 to 2020. Under the *With Additional Measures* scenario emissions are projected to increase by 10%. The latter scenario assumes the target of 10% renewable fuel use in transport² is reached, 50,000 electric vehicles are deployed and more efficient eco-driving practices are in place.

Residential

In the residential sector emissions are projected to increase by 1% under the *With Measures* scenario by 2020. Under the *With Additional Measures* scenario emissions are projected to decrease by 13% by 2020. The latter scenario includes savings associated with Sustainable Energy Authority of Ireland's Better Energy Homes (residential retrofit) scheme and proposed future amendments to building regulations.

Industry and commercial

Combined emissions from the industry and commercial sectors are projected to decrease by 3% under the *With Measures* scenario by 2020. Emissions under the *With Additional Measures* scenario are projected to decrease by 19%. Emission savings under the latter scenario are attributed to the impact of the 2012 buildings regulations in addition to public and commercial sector components of the national retrofit scheme. It is also assumed that the target of 12% renewables for heating² will be met.

Waste

Emissions from the waste sector are projected to decrease by 46% under both the *With Measures* and *With Additional Measures* scenarios. Projections assume that the Landfill Directive target for 2016 is met and 800,000 tonnes of municipal waste is sent for energy recovery by 2018, reducing the proportion of waste generated that is landfilled.

ETS emissions to 2020

With respect to the Emissions Trading Scheme (ETS) sector (electricity generation and energy intensive industry), which does not form part of the Effort Sharing Decision targets, it is projected that overall emissions will increase by 9% and reduce by 13% respectively under the *With Measures* and *With Additional Measures* scenarios in 2020 compared to 2014.

Conclusion

The latest projections estimate that by 2020 non-ETS emissions will at best be 11% below 2005 levels compared to the 20% reduction target. Emission trends from agriculture and transport are key determinants in meeting targets, however emissions from both sectors are projected to increase in the period to 2020.

There will be new obligations for Ireland for the period 2021-2030 that are yet to be determined by EU legislation. The national policy position also sets out a vision to reduce CO₂ emissions by at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors, and an approach to carbon neutrality in the agriculture and land-use sector⁷.

It is clear that Ireland faces significant challenges in meeting emission reduction targets for 2020 and beyond. Further policies and measures above and beyond those already in place and planned in the period to 2020 are essential in order to position Ireland on a pathway towards a low carbon, climate resilient and environmentally sustainable economy, in line with the national objective of the Climate Action and Low-Carbon Development Act 2015.

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<http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/Files/FileDownload,37827,en.pdf>