



2020

Ireland possesses two key climate and energy targets. By 2020, Ireland's national (non-ETS) greenhouse gas emissions need to decrease by 20% (compared to 2005 levels) and 16% of our energy requirement must be met from renewable sources. Ireland will miss both of these targets - both by a considerable margin. The cost of this compliance is still unknown but can be estimated with a reasonable degree of certainty.

On greenhouse gas emissions Ireland will likely miss the 2020 target by a very considerable margin but since the EU as a whole will comfortably meet its target, there will be an excess supply of credits and compliance is likely to cost in the region of €2m to €14m.

On renewable energy, Ireland is likely to achieve 80% of the required progress towards the target (13% achieved, 16% target) but progress on renewable energy has been slower in general across Europe, hence purchasing compliance will come at a higher cost. This is likely to be in the range €20m to €40m per percentage point shortfall, suggesting that a 3% under-achievement will give rise to a likely total compliance cost of €60m - €120m.

The total cost of compliance with **2020** climate and energy targets is therefore likely to be in the range of €62m to €134m.

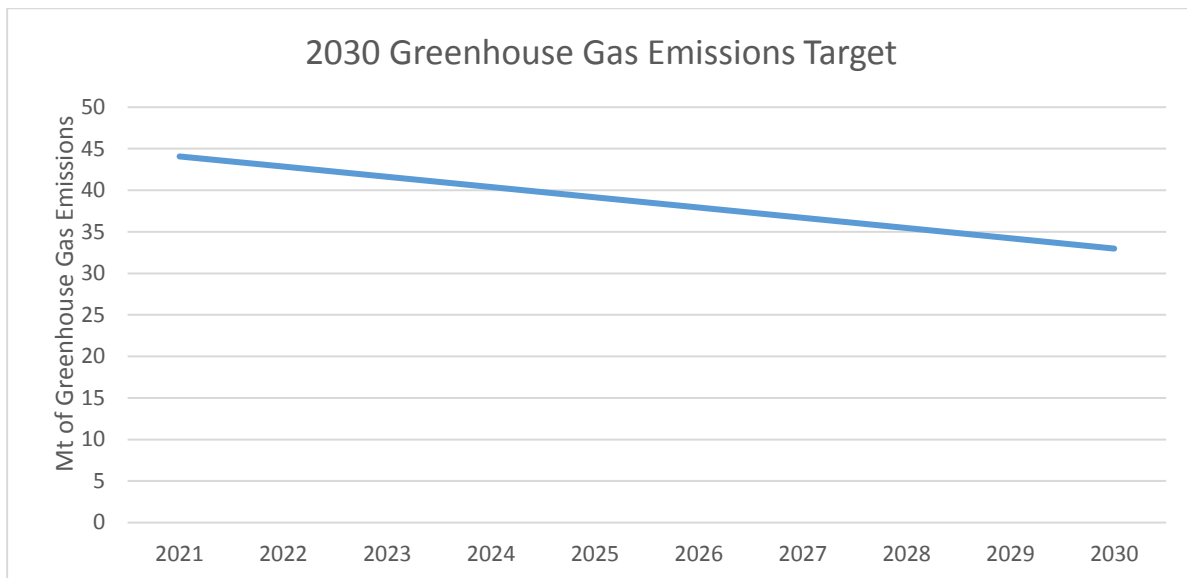
2030

With regard to 2030 climate and energy targets, the picture is considerably more complex and any projection of total compliance cost is extremely speculative.

On greenhouse gas emissions, the Effort Sharing Regulation requires Ireland to reduce national non-ETS greenhouse gas emissions by 30% (compared to 2005 levels), with annual limits for every year over the period 2021-2030.

Ireland's 2018 non-ETS greenhouse gas emissions (the latest year for which data is available) were circa 45 million tonnes. To comply with EU targets, by 2030 these emissions must reduce to circa 33 million tonnes in that year. However, the regulation also requires emissions to be reduced in a linear fashion over 2021-2030 towards this target. The starting point for this trajectory will be based on the average of Ireland's non-ETS emissions over 2016, 2017 & 2018, with the finish point being 33 million tonnes by 2030.

This necessitates average annual greenhouse gas emissions reductions of 1.2 million tonnes over 2021 – 2030 inclusive. This is an annual reduction of 2.7% compared with Ireland's 2018 non-ETS emissions. The scale of the challenge posed by meeting these targets can be illustrated by noting that Ireland's non-ETS emissions increased by 2.8% in 2018.



In practical terms, once projected growth rates are taken into account, it is estimated that Ireland will require a cumulative reduction in greenhouse gas emissions of around 100 Mt over 2021 – 2030, compared to what would be released under a business as usual scenario.

There are flexibilities available under the Effort Sharing Regulation which can decrease this amount and the capital investment planned under the National Development Plan will deliver further reductions. However, the pre-Climate Action Plan 2030 compliance gap was estimated to be 58.4 Mt of greenhouse gas emissions over the decade.

If Ireland fails to reduce emissions in line with the linear trajectory required under the Effort Sharing Regulation, Ireland will be required to purchase compliance from Member States who have over-achieved on an annual basis.

It is very difficult to place an accurate cost on this. Carbon credits are currently plentiful and cheap. However, no overachievement towards the 2020 target can be carried forward and all Member States face more stringent 2030 targets. There is no guarantee that other Member States will have a surplus available for sale. In addition, many Member States may prefer banking forward any over-achievement. We may go from a scenario where carbon credits are very cheap to one where they are very expensive.

In the Emissions Trading System, it is expected that allowance prices will range between €25 and €30 per tonne over 2021-2030. If countries use the ETS price as a reference point to value their over-achievement, this might provide an illustrative proxy price. This suggests that if none of the actions in the Climate Action Plan were to be progressed, Ireland might face a compliance cost in the range of €1.46bn to €1.75bn to 2030. This is a cumulative cost, a portion of which will be borne annually if Ireland fails to reduce emissions in line with the required trajectory. How much will be borne annually will depend on gap between the annual emissions limit and Ireland’s total non-ETS emissions.

It should also be borne in mind that there is no indication that member states will use ETS prices as a reference for ESR transactions.

On renewable energy, 2030 renewable energy targets are set by individual Member States in the National Energy and Climate Plans (NECP). The draft NECP Ireland submitted in December 2018, contained 4 scenarios with a range of renewable energy targets from 23.7 – 27.7%. The incorporation of the commitments in the Climate Action Plan to a final National Energy and Climate Plan would see a significant increase in these targets.

The renewable energy target is calculated as the proportion of energy consumed in the economy over the course of a year that comes from renewable sources. Hence any target set will be for 2030 itself. However, each Member State is required to achieve certain compliance milestones in 2022, 2025 & 2027: 18% – 43% and 65% respectively (of the proposed increase). In addition, a Member State’s starting point will be its 2020 target. This matters for Ireland as our likely 2020 achievement level will be 13% renewable energy, not our 16% target.

If any Member State slips below their baseline level for any of the compliance milestones, they will be required to implement additional measures within one year to cover this gap. This may mean additional investment in domestic renewable energy or a contribution to an EU fund that will fund renewable energy in other EU Member States. To put this in practical terms, Ireland’s level of renewable energy in 2022 will be assessed in October 2023. If we have failed to achieve at least 18% of the 2030 renewable energy target level, the Commission will require Ireland to boost the level of domestic renewable energy or make a contribution to the proposed EU fund by October 2024.

The variety of options makes the cost of compliance very difficult to estimate. To put it in practical terms, an extra 1% in renewable energy usage in the Irish economy would require an extra 5% of our electricity to come from renewable sources, or about 840MW in additional capacity. The construction cost of this capacity is estimated to be €1.4m per MW, suggesting an investment requirement of €1.18 billion per % point of renewable energy required. This is not necessarily a cost to the Exchequer but incentives would have to be put in place to deliver the additional investment required. It should also be noted that given that there is already a target to reach 70% renewable electricity, additional renewable electricity may not be technically feasible and other, more expensive, forms of renewable energy may have to be procured.

An alternative would be to contribute to the proposed EU fund. Since this would fund renewable energy levels in other, poorer Member States, it would presumably come with a lower cost. However, a contribution to this fund would have to be 100% Exchequer financed and it would see Ireland lose out on some of the co-benefits of increased domestic investments – employment, taxation etc.

With these limitations in mind, no credible projections can be attached to the risk of failing to meet any 2030 renewable energy target that might be set in the National Energy and Climate Plan at this point in time.

5 March 2020