

Ireland's Carbon Budgets and EU fit for 55% package

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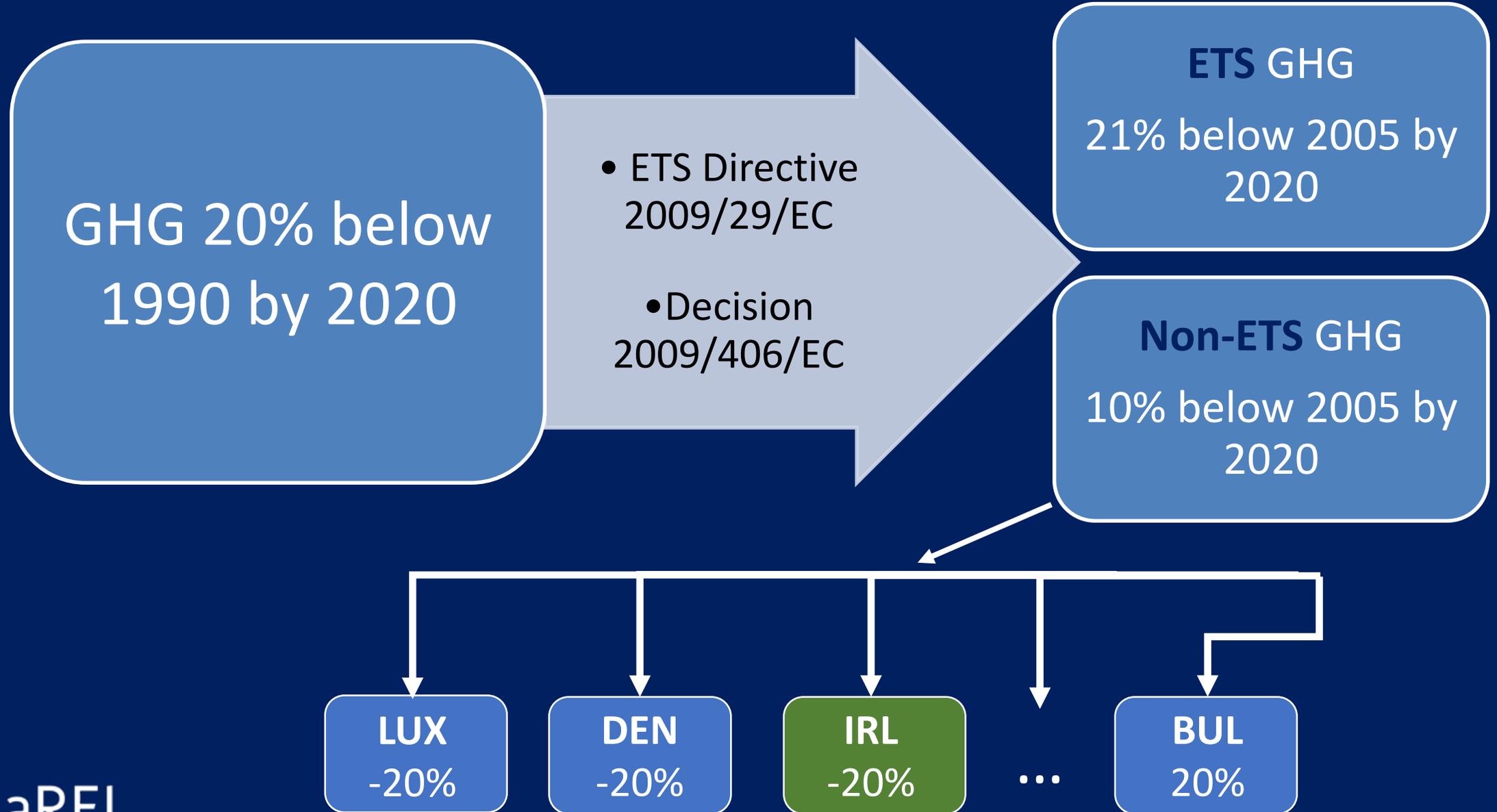
CAPACITY

CLIMATE ACTION PATHWAYS & ABSORPTIVE CAPACITY

EU 2020 Climate Policy Targets

- The European Council of March 2007 committed to achieve at least a 20% reduction of greenhouse gas emissions by 2020 compared to 1990
- The Council further decided to use the EU Emissions Trading Scheme (ETS), which was introduced in 2005 (under Directive 2003/87/EC). Phase 1 (2005-2007) was a pilot phase, followed by the Kyoto Phase (2008-2012).
- Since 2005, ETS emissions were quantifiable distinctly from other GHG emissions. Hence 2005 became the reference year for ETS and non-ETS emissions targets.
- The 20% target was allocated between ETS and non-ETS emissions on a 'cost effective' basis.
- A 20% reduction in GHG relative to 1990 is equivalent to a 15% reduction in GHG relative to 2005. The cost effective way to achieve this 15% reduction relative to 2005 comprises a 21% reduction for ETS emissions and a 10% reduction for non-ETS emissions.
- The Council further decided that the EU ETS 21% target would be met collectively by ETS installations within the EU, whereas the non-ETS 10% target would be distributed amongst Member States under an Effort Sharing Decision (406/2009/EC)
- Effort sharing was determined by relative GDP per capita levels of Member States, capped by -20% or +20% change in non-ETS emissions relative to 2005 levels. Annual emissions caps were agreed with banking and borrowing from between years and emissions allowances trading between Member States

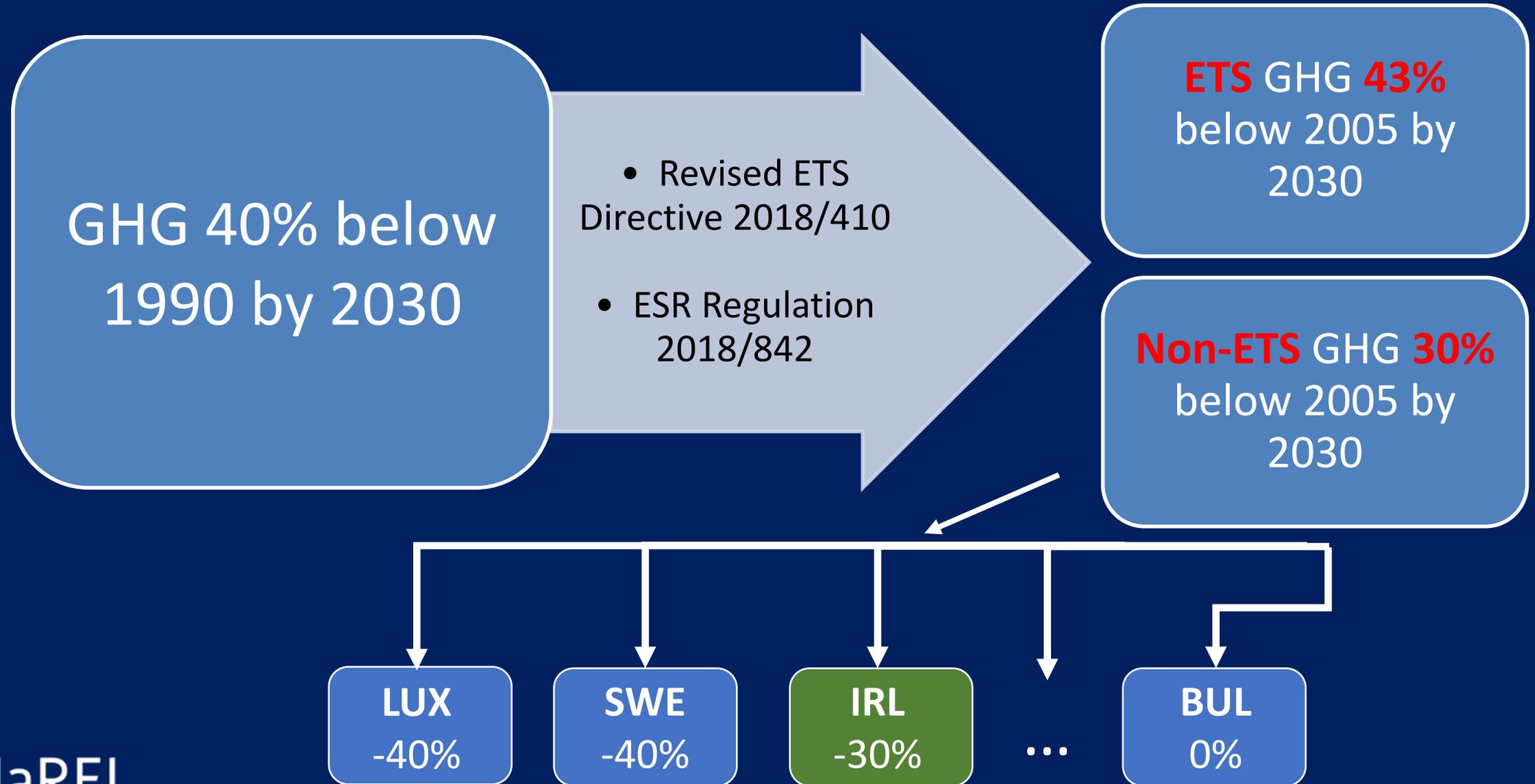
EU 2020 Climate Policy Targets



EU 2030 Climate Policy Targets

- The European Council stated in 2009 that the EU's objective, in the context of necessary reductions by developed countries as a group, is to reduce GHG emissions by 80-95% in 2050 compared to 1990.
- The Council further decided in October 2014 to set a target of minimum 40% reduction in EU GHG emissions to be achieved by 2030 relative to 1990 levels. The 2030 40% target was allocated between ETS and non-ETS emissions on a 'cost effective' basis, as in the case of the 2020 20% target.
- This is equivalent to a 37% reduction in GHG relative to 2005. The cost effective way to achieve this comprised a 43% reduction for ETS emissions and a 30% reduction for non-ETS emissions.
- The Council again decided that the EU ETS 43% target would be met by collectively by ETS installations within the EU (Emission Trading Scheme Directive 2018/410), whereas the non-ETS 30% target would be distributed amongst Member States under an Effort Sharing Regulation (2018/842).
- Effort sharing was determined on the basis of GDP per capita levels of Member States, adjusted to reflect 'cost-effectiveness in a fair and balanced manner', within the range 0% to 40% reductions in non-ETS emissions relative to 2005 levels.
- Annual emissions caps were agreed with flexibility mechanisms comprising transfers between Member States, banking and borrowing between years, and one off ETS transfers. In addition, credits were permitted for 280 Mt CO₂ net emissions removals from LULUCF, capped for each Member State in accordance with the share of GHG emissions from agriculture.

EU *previous* 2030 Climate Policy Targets



EU 2030 NEW Climate Policy Targets

- The European Council committed to achieving climate neutrality by 2050 at its June 2019 Council meeting.
- The European Council endorsed in December 2020 a new binding EU target for a net domestic reduction in greenhouse gas emissions of at least 55% by 2030 compared to 1990 levels.
- The European Commission published in July 2021 a 'Fit for 55' climate and energy package indicating how the 55% reduction target by 2030 can be delivered.
- A 55% reduction in GHG by 2030 relative to 1990 levels is equivalent to a 52% reduction in GHG relative to 2005 levels. If the ETS and non-ETS sectors remain as is, the cost effective way to achieve this reduction comprises a 62% reduction for ETS emissions and a 40% reduction for non-ETS emissions, relative to 2005 levels.
- The Commission proposes [COM(2021) 555 final] an update of the previous target setting approach (for individual based on GDP per capita is still appropriate, while applying a limited amount of targeted corrections to address cost efficiency concerns).
 - All Member States targets will fall within the range 10% to 50% reduction in non-ETS emissions relative to 2005 levels
 - No Member State will see their 2030 target grow by more than 12 %'age points and possibly.
 - net emissions removals from LULUCF are allowable, capped to 225 MtCO₂eq for the EU over the ten year period to 2030 and split in half for each of the two 5 – year periods.

EU proposed revised 2030 Climate Policy Targets

GHG 55% below
1990 by 2030

- Revised ETS Directive (2021)
- Revised Effort Sharing Decision (2021)

ETS GHG **61%**
below 2005 by
2030

Non-ETS GHG **40%**
below 2005 by
2030

COM(2021) 555 final
proposes ...

LUX
-50%

SWE
-50%

IRL
-42%

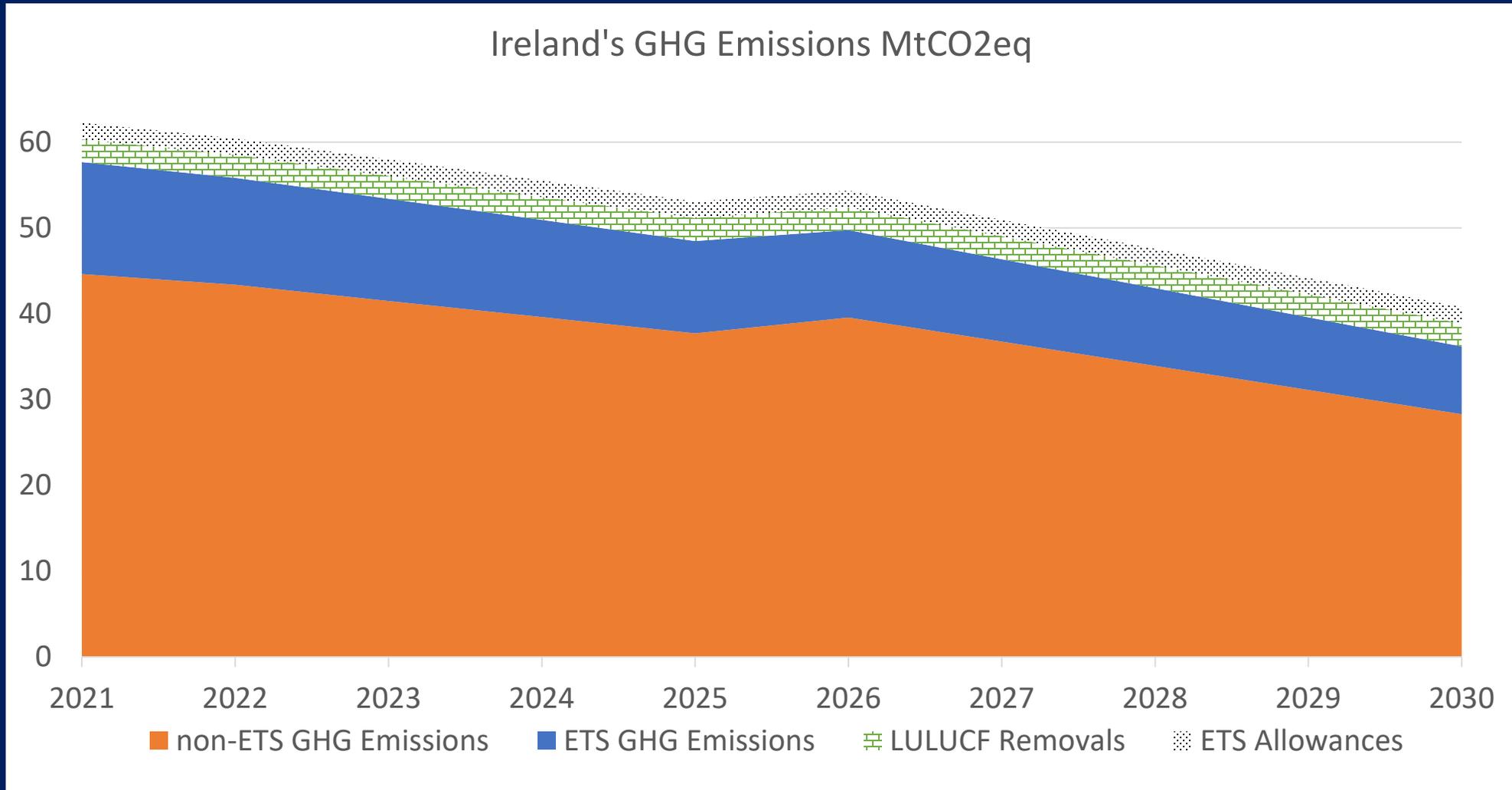
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BUL
-10%

Implications for Ireland's Carbon Budgets

- Using the proposed 42% non-ETS (emissions reduction relative to 2005 levels) target for Ireland, this would translate into a non-ETS target for Ireland of **28.3 Mt CO_{2eq} for the year 2030**.
- Combining this with an ETS projection based on the European Commission results for Ireland arising from a 61% EU ETS target, this results in a total GHG emissions projection of **36.2 Mt CO_{2eq} for the year 2030 2030** (note this excludes LULUCF emissions).
- This compares with a national target (revised Climate Bill 2021) of **31.1 Mt CO_{2eq}** (note this also excludes LULUCF emissions).
- Based on these assumptions (and inherent uncertainties) about the possible outcome of EU negotiations, this points to a maximum carbon budget of **266 Mt CO_{2eq}** for the 1st period and **215 Mt CO_{2eq}** for the second period (i.e. **481 Mt CO_{2eq}** for the 10 year period).
- The EU proposes that current *net removals* from LULUCF can be taken into account in meeting mandatory 2030 non-ETS targets. In Ireland's case, the EU proposals suggest we can include net emissions removals up to **26.8 Mt CO_{2eq}** for the 10 year period. This would increase Ireland's carbon budget over the 10 year period to **508 Mt CO_{2eq}** for the 10 year period.
- The EU also allows some Member States to *cancel EU ETS allowances* and use these allowances (up to **19.1 Mt CO₂** for Ireland) for compliance with non-ETS target. If Ireland makes use of this, it would further increase Ireland's carbon budget to **527 Mt CO_{2eq}** for the 10 year period.

Implications for Ireland's Carbon Budgets



Possible Carbon Budgets for Ireland

Title	Period	EU 55% Target Carbon Budget	Non-ETS	ETS
CB₁	2021-2025	266	206	60
CB₂	2026-2030	215	170	45
CB₁₊₂	2021-2030	481	376	105

Title	Period	EU 55% Target Carbon Budget
CB₁	2021-2025	289
CB₂	2026-2030	238
CB₁₊₂	2021-2030	527

Title	Period	With LULUCF	No LULUCF
CB₁	2021-2025	298	278
CB₂	2026-2030	205	192
CB₁₊₂	2021-2030	503	469

Estimate based on EU increased ambition

481 Mt CO_{2eq}
(No LULUCF)

527 Mt CO_{2eq}

(including flexibilities - ETS and net LULUCF removals)

Estimate based on Climate Bill

469 Mt CO_{2eq} (no LULUCF)

503 Mt CO_{2eq} (incl. LULUCF)

Uncertainties

- **Sectoral split between ETS and non-ETS:** The analysis here assumes the same **sectoral split** of EU GHG emissions between ETS and non-ETS sectors. There may be changes regarding the possible inclusion of additional emissions into the ETS.
- **Treatment of LULUCF emissions:** Under the current (40% target) Effort Sharing Regulation, 280 Mt of emissions credits are allowable from net emissions removals in the period to 2030. The draft EU Climate Law limits emissions removals to 225 Mt CO₂ (updating the total to take account of Brexit).
- **Effort sharing distribution:** as per proposed revised ESR Regulation [COM(2021) 555 final]
- **Target for Ireland:** The analysis here points to a possible non-ETS 2030 target for Ireland of a 42% reduction relative to 2005 levels. This is based on COM(2021) 555 final and combines relative economic activity within Member States with cost effectiveness considerations.
- **Carbon budget:** The quantification of 266 Mt CO_{2eq} for 2021-2025 and 215 Mt CO_{2eq} for 2026-2030 is based on combining i) the estimated non-ETS target together with ii) an ETS trajectory for Ireland based on the EU modelling results of the *EU fit for 55* 'MIX' scenario, and iii) the starting point as defined by the revised ESR. Adding the emissions allowances associated with proposed flexibility mechanism increases this to 527 Mt CO_{2eq} over the ten year period.



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