

2030 climate and energy framework: DG CLIMA reaction to unfounded claims about the Commission's economic analysis

DG CLIMA wishes to react to suggestions raised in the media based on unfounded claims by Mr Brook Riley that the Commission intentionally presented in its 2030 Climate and Energy framework a low-ambition greenhouse gas target, that it ignored the benefits of ambitious energy efficiency or renewables deployment and that the modelling results were biased against energy efficiency through the use of too high discount rates.¹

1. The assertion that costs had been tweaked by using artificially high discount rates is wrong. All assessments by the Commission so far using the PRIMES model are actually focussed on representing the real investment limitations that the private sector faces. To simulate capital budgeting decisions of consumers and producers in a realistic way, the PRIMES model uses sector-specific discount rates when calculating overall costs. These represent the weighted average cost of capital for business and private discount rates for households. These rates reflect real-world risk-aversion, cash flow shortages, and limitation to access to bank lending. For example, a household paying for a refurbishment of its house, a power company investing in a new power plant or a public planner investing in public transport expect different payback times and face different problems, costs and risks related to raising capital.

If the model used social discount rates to simulate private capital budgeting decisions, the results would be unrealistic, producing historical trends that cannot be explained. For policies which are non-incremental but have far-reaching, society-wide impacts, the levels of energy-saving or abatement possibilities advised risk being overestimated. The debate on the use of social discount rates mostly refers to the calculation of net present values of future costs and benefits from the perspective of a social planner, rather than to economic decisions related to the use of scarce financial resources.

2. The analysis on GDP impacts of the 2030 framework as proposed applies 3 different macro-economic modelling tools (the GEM E3 model, the E3MG model and the E3ME model).

The E3ME model assessed the impacts of higher efficiency or renewables targets. Due to methodological limitations on this type of modelling, which does not optimise GHG reductions only, the modelling exercise needed to use exogenous data on higher investment needs related to higher renewables and energy efficiency targets. This data came from the PRIMES energy model. Using this exogenous input on higher investment needs, it projected that higher renewable energy and energy efficiency targets can increase GDP by 2030 within a range of 0.46% to 0.55%.

The other models focussed on the GHG target only. Limiting their assessment to the GHG target alone allowed them to do so without the need to use exogenous assumptions on investment requirements from the PRIMES model. The GEM E3 projected limited negative impacts on GDP by 2030 (decrease in 2030 compared to reference of -0.45% to -0.1%) while

¹ See for instance Euractiv articles [Building efficiency sector: The 2030 debate was a set-up](#) and [EU analysis: Sole 40% CO2 cut target will cut EU GDP by 2030](#).

E3MG typically showed limited neutral or positive impacts (no impact in 2030 compared to reference to increase with 0.2%). Both models clearly have better GDP impacts in case of more widespread use of carbon pricing. This approach of full carbon pricing is actually also used in the E3ME projections as discussed above.

While it is correct that one model thus showed positive GDP results in case of higher energy efficiency and renewables targets, its results depend on realising the increased investment needs as projected in the PRIMES energy model. This underlines that while potentially positive for GDP growth, this is associated with increasing investment challenges requiring higher up-front finance.

Taking this into account, the impact assessment came forward with the following balanced conclusions on GDP impacts:

"The main conclusions are that overall the impact on economic growth of achieving a 40% GHG reduction target, with or without ambitious EE or additional RES targets, is limited, with impacts by 2030 to be less than 1% of GDP. Impacts depend notably on the approach to carbon pricing (auctioning and/or taxation) and the extent to which revenues from carbon pricing are used to lower labour taxation. Also higher levels of energy efficiency and renewables, requiring higher level of investments, could result in positive GDP impacts."

3. The Impact Assessment gives far more information to decision makers than the GDP impacts estimated by these macro-economic modelling approaches alone. This information includes, but is not limited to, the total energy costs - including required investments and resulting fuel savings - as well as other factors: impacts on the distribution of costs between member states, effects on energy prices, carbon leakage and industrial competitiveness, air pollution, etc. The broader international context is also taken into account.

One of the findings in the Impact Assessment shows that the overall costs associated with the energy system itself can increase for GHG reduction scenarios relying more on ambitious investments in energy efficiency and renewable energy targets than other scenarios that also rely on other GHG reduction options including fuel switching away from coal. These scenarios with higher energy system costs, linked to higher investments, also come with additional benefits - for instance, related to energy security. This is all shown in a transparent way, and may justify choices for higher or lower targets. The Commission actually suggested an at least 27% renewables target at EU level, recognising it may be preferable to achieve even higher renewables shares, but wants Member States to drive these choices depending on national circumstances and preferences. It is therefore wrong to suggest that this balance of elements, taking into account the pros and cons of the different targets, was intentionally ignored.