

HOW TO BOOST THE EUROPEAN GREEN DEAL'S SCALE AND AMBITION

AUTHORS

DR RAFAEL WILDAUER,
STUART LEITCH
PROF JAKOB KAPPELLER

EXECUTIVE SUMMARY

The European Green Deal (EGD) is the European Union's flagship strategy to tackle climate change. This policy paper compares the ambition and scale of the EGD with the current relevant scientific literature. The goal is to assess whether the current proposals are capable of fulfilling the EU's commitment to limit global warming to 1.5°C in line with the Paris Agreement. Before embarking on the details of that question it is crucial to emphasize three core messages which emerge from climate science:

- 1. Tackling climate change requires that greenhouse gas emissions (GHG) are cut to net zero.** Importantly, this net zero goal allows for positive emissions as long as they are offset by negative emissions. However, the technological and ecological uncertainties involved in large scale deployment of negative emissions technologies, means **the emissions goal should be thought of as being close to an absolute zero goal.**
- 2. There is not much time left** to take action globally and in Europe. The latest estimates of global, as well as European carbon budgets, suggest that at current emission rates global warming will increase by more than 1.5°C in less than ten years. In addition, self-reinforcing feedback loops which push Earth onto an irreversible warming path (hothouse Earth) might set in from global temperature increases as little as 2°C.
- 3. The price of inaction will be high** and most likely underestimated by the general public. While Europe will not suffer the worst consequences of climate change, heat waves, floods and droughts will still cause severe human suffering and economic damage. In addition, by 2070 up to 3.5 billion people could live in regions unsuitable for human habitation. This has the potential to trigger an unprecedented global migration wave.

The question which emerges against this background is whether the EGD is ambitious enough to avoid the worst consequences of climate change. First, and most important, is the overall emissions reduction targets.

While the EGD proposes to cut emissions by 50% to 55% percent by 2030 compared to 1990 levels, recent research suggests that in order to stay well below 2°C, a reduction of 65% by 2030 would be required, as would be fully decarbonized energy production by 2035-2040.

The EGD currently assumes that reducing GHG emissions by 40% by 2030 requires additional annual investments of € 260 billion. This is likely an underestimation of the volume of required investments for several reasons:

1. Increasing the reduction target towards 55% or even 65% will require faster and broader action.
2. Increasing energy efficiency renovation of buildings alone is likely to require annual investments of € 490 billion.
3. Scaling up Research and Development (R&D) investment to 3% or 4% of GDP in the EU27 requires additional annual investments of between € 75 and € 200 billion.

Taken together, this suggests that annual investment requirements of up to € 855 billion (excluding transport) in the EU27 would be required for a successful transition. Setting and delivering on more ambitious GHG emission reduction targets requires the use of all possible policy tools. The EGD is a promising start in this context as it relies on a broad set of instruments from regulations, carbon markets, taxes and public investment. **Given the limited time available however the EGD should go a step further and upgrade the Sustainable Europe Investment Plan into a comprehensive climate master plan which determines clear targets and timelines for renewable energy capacity, building renovations, transport infrastructure, R&D targets etc. This would not only provide the private sector with clear long-term signals but also allow for timely monitoring of the EU's progress.**



POLICY RECOMMENDATIONS

For a detailed discussion of these recommendations see Section 4 - **Conclusions and policy recommendations**.

Boost the EGD's scale and ambition along four key dimensions:

1. Decarbonise the energy system by 2035-2040.
2. Refrain from relying on large scale negative emission scenarios.
3. Scale up the investment target to match total required expenditures.
4. Use individual transfer payments and training grants to address the regressive nature of rising energy costs.

Take steps and actions to reach these more ambitious goals:

5. Increase fiscal room via new revenue sources and reformed European fiscal framework.
6. Upgrade Sustainable Europe Investment Plan into a comprehensive climate master plan.
7. Implement and expand a carbon border adjustment mechanism.
8. Align the ETS with general emission targets and establish a price floor and inflation target.
9. Focus on providing stable finance for companies and refrain from encouraging further household sector borrowing.
10. Work with the European Research Council to establish a group of Europe-specific climate models published in an open source format.

For a detailed discussion of these recommendations [see the full policy paper](#),
Section 4 - Conclusions and policy recommendations.