

Resource Efficiency: a missing piece of the EU climate puzzle?

The path to a 'circular economy' is not smooth, but progress towards the goal will have positive climate impacts. SIEPS Senior Advisor **Mats Engström** describes the challenges the EU faces in achieving this and gives reasons to press on with this work.*

Using material resources more carefully can significantly reduce emissions. One way of doing this is to encourage producers and consumers to recycle more. But there are other ways to increase overall efficiency, such as adopting innovative methods for using less material inputs to achieve similar quality outputs. Such changes are mentioned in EU climate policy documents, but it can fairly be said that they receive less attention than other measures. For example, reducing the need for steel or cement is not as important a part of [existing EU climate plans](#) as reducing the emissions in the production of that steel and cement.

This discrepancy exists even though the potential climate gains from using materials more efficiently are widely acknowledged. In its latest [report](#) the Intergovernmental Panel on Climate Change (IPCC) lists material efficiency as a promising option for reducing greenhouse gas emissions. The consultancy Material Economics has [shown](#) that circular economy solutions could reduce emissions from heavy industry in the EU by up to 300 million tons CO₂ per year by 2050. The European Environmental Agency has analysed how [better raw material sourcing](#) can reduce emissions by 10 percent or more. And in Sweden, the Climate Policy Council in 2022 [described](#) both the potential benefits of similar policy initiatives and the obstacles they face.

What action is the EU taking?

Much work is ongoing in this policy area, including new and revised legislation currently being negotiated in the Council or in trilogues

with the European Parliament. However, levels of ambition differ between member states, and there are opportunities for further action.

The EU's [Circular Economy Action Plan](#) and the subsequent legislative proposals are significant steps. Member states such as Germany, the Netherlands and Finland are leading by example in making the link between resource efficiency and climate action, and as chair of the G7 in 2022, Germany [promoted](#) this topic.

But negotiations in the Council and the European Parliament on these proposals are not easy: progress has been difficult on the [Construction Products Regulation](#), the [Packaging Regulation](#) or the [Sustainable Products Initiative](#).

The effect on greenhouse gas emissions will depend on compromises reached regarding these dossiers and on the content of forthcoming detailed legal acts about specific product groups, as foreseen under the [proposal for a revised Ecodesign directive](#).

The legislative process is slowing

The Green Deal has been one of the EU's major initiatives since the present European Commission took office in 2019. The package has been remarkably resilient to external shocks such as the pandemic and the start of Russia's war on Ukraine.

But today high energy prices and concerns over the competitiveness of European industry are starting to change the political situation. The umbrella organization Business Europe has objected

* This text is partly based on a digital roundtable discussion on 15 March 2023 with experts from the European Commission, member states, business organisations, NGOs and think tanks.

to forthcoming environmental proposals and [demanded](#) ‘regulatory breathing space’. Parts of the EPP Group in the European Parliament have [taken a similar position](#).

Given this situation, it might be more difficult to achieve far-reaching results on present and forthcoming circular economy dossiers than it was in the already completed negotiations on the climate law with legally binding targets, and the reform of the emissions trading system.

Reasons for keeping it moving

However, there are arguments in favour of moving forward with these remaining parts of the Green Deal, including the planned revisions to legislation on the design and recycling of motor vehicles, and the extension of producer responsibility for textiles. Motor vehicles and textiles are two sectors with big carbon footprints. It will be difficult to reach climate targets and the 2050 goal of a net-zero economy without greater efficiency in the use of materials in fields such as these.

And requiring or incentivizing better material efficiency offers many opportunities. Such regulation can drive innovation, where the EU is ahead of the curve. In the [roadmap](#) for circular technologies and business models, the European Commission’s Directorate-General for Research and Innovation (DG RTD) highlights that ‘the EU has the highest share (32%) of companies worldwide active in circular economy technologies compared to, e.g. the US (20%) and China (4.4%).’

Circular economy solutions can also create significant numbers of ‘green jobs’. There is convincing [analysis](#) that increased reuse and recycling, for example, can both improve the environment and contribute to a net increase in jobs. In addition, better recycling of industrial products, such as motor vehicles, can reduce Europe’s dependency on virgin strategic metals, as recognised in the recent Commission proposal for a [Critical Raw Materials Act](#).

Industrial policies for innovation

One change which would simultaneously mitigate problems such as climate change and increase European competitiveness is increased resource efficiency through further innovation. However, the DG RTD report notes that ‘a clear innovation pipeline for major technologies seems to be missing. There is no continuous support from early development to uptake of circular technology projects.’

When considering the best way forward for material efficiency policy, such questions need to be addressed. EU funding for large-scale demonstration of circular economy solutions – for example digital/AI based collection and recovery systems, textile fibre recycling – should be increased. The [revised Innovation Fund](#) has a widened scope but does not cover all circular economy aspects.

The new industrial policy proposed by the Commission in 2021 mentions circular economy, but in the recent [Net-Zero Industry Act](#) the focus is on other aspects such as the use of hydrogen in industrial processes and European production of renewable energy technology. Still, as mentioned above, European companies have a strong global position when it comes to circular economy and material efficiency in general. This asset might be further enhanced with a well-designed industrial policy of wider scope.

Conclusion

Climate action and maintained or increased competitiveness is not an ‘either/or’. By including material efficiency more clearly in European industrial policy and showing co-benefits, climate action can be reconciled with present business concerns. At EU level, the period remaining before the next elections to the European Parliament will to a large extent determine the direction and speed of EU policy in this field. This means the Swedish, Spanish and Belgian presidencies of the Council of the EU have a decisive role to play.