eco@work

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Sustainable reading from the Oeko-Institut

Are we fit for 55?

Climate Policy – A Fitness Check

Socially just and international Interview with Michael Bloss

Peace, freedom and climate action



Jan Peter Schemmel CEO, Oeko-Institut j.schemmel@oeko.de

I am a fan of Europe. The EU has brought peace, security and more freedom for citizens and has created the world's largest internal market – as well as a high level of climate ambition. In that field we have an important driver in the form of the European Commission, with its latest initiative, the Fit for 55 package. The Commission can often do more than individual countries to progress the necessary strategies and actions. So it is good to read in the German government's coalition agreement that it is supporting the Commission's proposals in the ne-gotiations on the package.

We now find ourselves confronted, horrified, by Russia's attack on Ukraine. We are seeing immeasurable suffering and an unflinching struggle for freedom, self-determination and democracy. The war is a painful reminder of our high dependence on fossil fuel imports, particularly from authoritarian states. It is clear that in order to maintain our own scope for action, we must reduce our dependence on gas, oil and coal more rapidly, and with that aim in mind, make faster progress on renewable energy expansion and energy efficiency. The Fit for 55 package sets out a number of proposals here. They now have security policy relevance as well, underlined by the war, and their level of ambition must be maintained or exceeded and certainly not watered down. The corresponding measures in the German government's Easter Package are a positive sign.

Another lesson we are learning from the war in Ukraine is that we must increase diversity in our energy and resource mix overall and not curtail our scope for action by allowing new forms of dependence. That means utilising a variety of sources and suppliers. This applies in equal measure to hydrogen and to the resources we need to build electric cars or photovoltaic systems, for example. We must also reduce our dependence by scaling down demand. There is still a great deal of headroom when it comes to the issue of sufficiency in Germany and Europe. The International Energy Agency (IEA) has calculated how much progress can be made simply by slightly lowering room temperatures or the average driving speed of passenger cars. Since the start of the war, we have seen that many people are willing to cut back, but sadly, we have seen and heard little reaction from the European governments here. But even without governments taking the lead, all of us can and should be asking ourselves what we really need and where we can cut back – and then take action.

In addition to protecting the climate, we now have another pressing reason to redouble our efforts.

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Yours, Jan Peter Schemmel

CONTENTS

IN FOCUS

- 3 "Will we manage to maintain the package's level of ambition?"
 Interview with Michael Bloss, MEP (Greens/EFA)
- 4 Important ambitious fit for purpose? The EU's Fit for 55 package
- 8 **Carbon dioxide costs** Fit for 55: putting a price on CO₂



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"Will we manage to maintain the package's level of ambition?"

Now it is Parliament's turn: after the presentation of the Fit for 55 package, the legislative process has begun. First of all, proposed amendments will be deliberated and put to the vote. This will be followed by negotiations among the member states. Michael Bloss - a Member of the European Parliament from the group of the Greens/ European Free Alliance since 2019 - is fully involved in this process. In this interview with eco@work, he reports on the opportunities for social justice in climate policy, the courage to take ambitious steps, and negotiations with Polish conservatives.

Michael Bloss, what is your assessment of the Fit for 55 package?

It is the most ambitious climate package ever, and it is all-encompassing – and of course, that is a very good thing. At the same time, there are a few points where it needs to be improved. For example, the social and international dimensions have not really been considered, and many issues have been put on the backburner. We should be starting with very high CO₂ reductions right away.

How is the process shaping up?

Many member states were keen to start by scaling down; they wanted to reduce the level of ambition, partly because of the war in Ukraine. This is the major question at the political level: will we manage to maintain or perhaps even improve the package's level of ambition? To make this the major and historic package that it really should be, we will have to fight for many of the proposals.

Where do the social aspects fall short?

The focus is almost exclusively on emissions reductions and economic growth. Granted, cash from the emissions trading system for buildings and transport is to go to the Social Climate Fund, mainly to support member states with a lower income level. But that's far too little; in reality, the full amount of income should flow into the Fund. Perhaps the cash will indeed be used to deliver meaningful programmes. However, there is also a risk that the national governments will not concern themselves with the social dimension and will spend the money on courting popularity with voters instead. Incidentally, I don't think it is particularly socially minded to expect the public to pay a carbon levy when industry is still receiving allowances free of charge.

How could the international dimension be improved?

An initial and important step would be to actually honour our financial pledges to the Global South. But of course, it is also about meaningful investments in these countries, and it is about partnerships and energy transfers. Trade policy should also be restructured so that it makes a contribution to curbing the climate crisis.

What might that look like?

Until now, trade agreements have viewed climate provisions primarily as a restriction on trade. That needs to change. This is where the carbon border adjustment mechanism (CBAM), proposed in the Fit for 55 package, can help. It integrates products' carbon footprint into trade policy by imposing a carbon price on imports. However, there also needs to be some form of social compensation for poorer countries so that they can initiate effective decarbonisation strategies, focusing, for example, on strengthening internal trade and local economic cycles in Africa.

A higher level of ambition is needed due to the war in Ukraine as well. Absolutely. Unfortunately, there is a lot of movement in the wrong direction at present. Buying oil and gas in Qatar and building LNG terminals is not a solution. Everything possible must now be done to accelerate the exit from fossil fuels. Here, I am thinking of how heating systems can be made more efficient, with options such as installing heat pumps in basements and solar panels on rooftops, or rapidly progressing the energy upgrading of buildings.

What is the current parliamentary arithmetic in terms of opposition to and support for the package?

It is a very dynamic and exciting situation, with many different majorities that can and should be mobilised. And there are some surprises along the way: for example, the Polish conservatives voted with us for an ambitious climate target. This was probably because they sit on the Opposition benches alongside three Green MPs in the Polish Parliament. We are very numerous and we are very diverse. And that is Europe's defining feature as well.

Thank you for talking to eco@work. The interviewer was Christiane Weihe.



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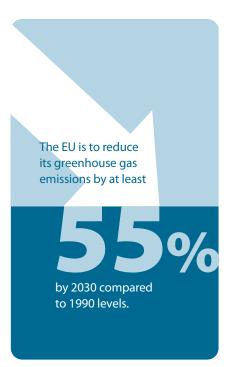
Important – ambitious – fit for purpose?

The EU's Fit for 55 package

Climate policy in the EU has never been more ambitious: the Fit for 55 package is intended to enable the EU to reduce its greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, as envisaged in the European Green Deal. The target is backed by challenging plans for all sectors. The package has been welcomed by many, including the Oeko-Institut, which views it as an important and ambitious step. But can emissions really be reduced so drastically in less than a decade? Which of the Commission's proposals are realistic, and where is there a need for improvement? These questions are being addressed in various Oeko-Institut projects. 5

The Fit for 55 package was presented by the European Commission in July 2021. After scrutiny by the Council of the European Union and the European Parliament, representatives of these two institutions and the Commission will meet in trilogue to discuss and negotiate possible amendments, with initial decisions to be adopted in 2022.

In addition to more ambitious climate targets, the Fit for 55 package includes proposals on regulatory and market-based instruments. "Among other things, the Commission is keen to boost energy efficiency in the EU, accelerate the expansion of renewable energies, establish more stringent emissions standards for passenger cars and integrate land use into climate change mitigation," says Sabine Gores, a national and European climate policy expert at the Oeko-Institut. "There are also plans to extend emissions trading to new sectors and improve the existing Emissions Trading System." (For more information on emissions trading, see "Carbon dioxide costs" on p. 8.) The EU's Effort Sharing Regulation – which addresses sectors not covered by the EU's Emissions Trading System at present - will also be amended. "This is an extreme-

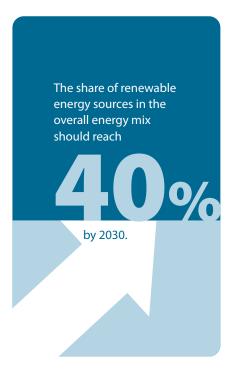


ly important instrument: previously, non-achievement of climate targets could simply be dismissed with a shrug of the shoulders, but now, it genuinely costs money," Sabine Gores explains.

Among other things, since the war started in Ukraine, accelerated expansion of renewable energies has become an even more urgent issue as it offers the prospect of more independence from fossil fuel imports from other countries - notably Russian gas and oil. The Commission is proposing a 40% share of renewable energy sources in the overall energy mix by 2030 - raising the current target by 8%. There will also be sub-targets for various sectors, including transport, industry and buildings. "Here, the German government happens to have set a high level of ambition in the coalition agreement: it stipulates that new heating systems installed from 2025 onwards will have to be powered by a 65% share of energy from renewable sources."

Boosting energy efficiency is a further way to reduce our dependence on fossil fuels. Here too, the Fit for 55 package sets more ambitious targets, almost doubling the required annual energy savings. As a further goal, public bodies will be required to renovate 3% of the floor space of their buildings annually to higher energy standards. "I can well imagine that the war in Ukraine has given fresh impetus to the discussions about renewable energies and energy efficiency and that the process will end with even more ambitious goals," says the Oeko-Institut's Senior Researcher.

The Commission also intends to increase the climate targets for sectors that are not covered by emissions trading at present and therefore fall within the scope of the Effort Sharing Regulation: buildings, transport, agriculture, waste and small-scale industry. They produce around 60% of Europe's greenhouse gas emissions. The new reduction target for these sectors is at least 40%, instead of the current 30%, compared to 2005 levels. Depending on their starting points and capacities, different targets will be set for individual countries. "For Germany, this will amount to a 50% reduction in emissions from these sectors by 2030, instead of the current 38%."



In addition, land use, land use change and forestry (LULUCF) will be integrated into the EU's climate targets for the first time - and will thus contribute to the removal of carbon dioxide (CO₂) from the atmosphere. The EU-wide target of net greenhouse gas removals in the LULUCF sector is 310 million tonnes of CO₂ equivalent in 2030. In addition, absolute targets are planned for individual countries. "Unfortunately, the data on which these targets are based are not particularly robust," says Sabine Gores. "This type of data is also difficult to collect because unlike coal burning, for example, where it is possible to calculate greenhouse gas emissions with a high degree of accuracy, the question of how much CO₂ can be absorbed by the soil depends on factors such as how it is ploughed. Another key issue is the longevity of emissions storage in this sector. Avoiding emissions from the burning of fossil fuels is therefore most important and cannot be directly equated with carbon storage in the land use sector."

MORE AMBITION, ACCELERATED ACTION

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Overall, Sabine Gores views the Commission's Fit for 55 package very positively: "With this package, Europe is taking a major step forward. However, it must now be underpinned by higher standards and rules, with more stringent checks on how it is implemented," she says. For example, since 2019, she has been working on the project "Achieving targets and increasing ambition in EU climate policy in both the medium (2030) and the long term (2050+)" for the German Environment Ministry, with a focus on more ambitious climate targets for Europe. The initial results may help to fill the Commission's proposals with life. "We are looking at where there is scope to raise the level of ambition here in Germany and are producing qualitative and quantitative climate policy analyses. For example, together with the Ecologic Institute, we analysed the potential of natural sinks, such as forests, grassland and arable land, and how it can be maintained and improved," says Sabine Gores. In the Working Paper "Options for Strengthening Natural Carbon Sinks and Reducing Land Use Emissions in the EU", the project team shows that conservation of forests and afforestation offer the greatest potential for carbon sequestration. In order to avoid emissions from land use at the same time, the conservation and rewetting of organic soils are also important. "The assumptions about how much CO₂ the EU net sink can actually absorb vary considerably. We consider an estimate of 400 to 600 Mt CO₂ per year to be feasible for 2050."

RAPID IMPLEMENTATION AND A LONG-TERM APPROACH

In Sabine Gores's view, Germany is generally well-prepared for the new targets. "In essence, Germany's Federal Climate Change Act anticipated the Commission's proposed targets. But now we need to move from intention to action at last, because achieving the targets will take time, especially where infrastructural measures are concerned." For Sabine Gores, an energy and process engineer, this will require not only rapid implementation, but also a long-term approach. "In Germany, we aim to be climate-neutral by 2045. That is a major challenge and one which will require ongoing work. It means that the ambitions and goals must remain in place across election cycles and possibly also across governments and parliaments of different compositions." The public must therefore be convinced of the long-term need for ambitious climate policy "so that they consider not only their own current wellbeing but also that of future generations". At the same time, in light of the global political situation, Sabine Gores sees an unprecedented willingness to exit fossil fuels.



The Oeko-Institut is supporting the German Federal Ministry for Economic Affairs and Climate Action as the process continues. "For example, we are assessing progress towards the national and European climate targets and analysing whether additional measures are required and what they can achieve."

This should also form the basis for the next update of Germany's national energy and climate plan (NECP), the final version of which must be available by mid-2024 and which describes goals, strategies and measures in climate policy. "All the member states are required to submit these reports," Sabine Gores explains.

In the "Trends and Projections in Europe 2021" study for the European Environment Agency (EEA), Oeko-Institut researchers underline the need for decisive action at the European level as well: the climate policies and measures currently planned across Europe will lead to a net emissions reduction of just 41% by 2030. "The evaluation of the national energy and climate plans shows that without further efforts, the EU share of renewable energy will stand at 33% by 2030 – 7 percentage points below the Commission's new target. And even the current energy efficiency target will be missed by almost five percentage points."

Climate policy in the EU has never been more ambitious. Now it is up to the European countries to show that as well as being able to set ambitious goals, they can take long-term, resolute and courageous action to achieve them. When it comes to protecting the climate, there should be no more delays – for geopolitical reasons, but, above all, for the sake of the environment and society.

Christiane Weihe



Energy and process engineer Sabine Gores has been working on climate policy for more than 20 years. As part of her research at the Oeko-Institut, she analyses European greenhouse gas emissions trends and develops scenarios on future energy consumption and emissions. s.gores@oeko.de

Carbon dioxide costs

Fit for 55: putting a price on CO₂

Carbon dioxide (CO₂) pricing has existed for some time: some producers of CO₂ emissions have been required to purchase carbon allowances via the EU Emissions Trading System (EU ETS) since 2005. However, not all producers of greenhouse gas emissions are covered by the scheme. The Fit for 55 package aims to redress the balance: by requiring maritime transport to pay for its emissions, ending the free allocation of allowances for aviation and introducing a separate emissions trading system for buildings and road transport. How effective are the Commission's proposed changes and innovations likely to be? Where are bold amendments planned, and where is more ambition required?

The Commission is proposing multiple changes to CO₂ pricing. The Oeko-Institut has summarised some of these changes in factsheets produced on behalf of the German Environment Agency (UBA); it has also formulated open questions for the further political process, focusing, for example, on the existing EU Emissions Trading System (ETS 1). "Here, the aim is to increase the level of ambition by reducing the cap, for example. The cap determines how much can be emitted in total," explains Jakob Graichen, a Senior Researcher in the Oeko-Institut's Energy and Climate Division. "The cap has already been continuously reduced, but the Commission would now like to accelerate this process. A one-off reduction of the cap by 117 million allowances is also planned." In addition, adjustments are envisaged for the Market Stability Reserve (MSR), whose purpose is to reduce the existing surplus of allowances and better match supply and demand. "With the MSR, not much will change; I would have liked

to see more ambition here," says Jakob Graichen. On behalf of the German Emissions Trading Authority at the UBA, he has developed a calculator to simulate the behaviour of the MSR based on various assumptions. "If CO₂ emissions are reduced more rapidly than expected, the Commission's proposal would be too weak and the surplus of emission allowances would increase once more."

ON THE WATER, IN THE AIR

Changes are on the horizon for the aviation sector as well, which has been covered by European emissions trading since 2013. "There is a cap here too, which will now be lowered more quickly than previously envisaged. There are no plans for a one-off reduction," Jakob Graichen explains. "What's more, the practice of allocating 85% of this sector's emission allowances free of charge will end in 2027." He is critical of the lack of regulation of other climate impacts of aviation, such as cloud formation. "Their climate impact is roughly double that of CO_2 emissions."

In addition, from 2023, the EU ETS is to be extended to maritime transport, which currently accounts for approximately 3% of the EU's total CO₂ emissions – roughly equivalent to Belgium's GHG emissions. Shipping companies will then be required to purchase allowances for larger vessels (gross tonnage above 5,000). Allowances will have to be obtained for all voyages within the European Economic Area and 50% of voyages to or from third countries. "There are some exemptions – for fishing or fish processing vessels, for example – and inland shipping is not covered," says Jakob Graichen. Overall, however, he regards this as "very substantial progress and one of the strongest elements of the Commission's proposal", as maritime transport was previously a blind spot in European and global climate policy.

BUILDINGS AND TRANSPORT

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Another key proposal concerns the introduction of a separate emissions trading system for buildings and road transport (ETS 2) from 2026, with allocation of emission allowances to be carried out entirely through auctions. The allowances will have to be purchased by distributors of fossil fuels. "After all, it would make no sense for everyone who drives a car or has a gas-fired boiler in their basement to take part in emissions trading." The separation from the ETS 1 also makes sense, in Jakob Graichen's view. "With ETS 1, we are finally at a point where the 'bugs' which affected the system in the past have been ironed out. Integrating new sectors could put that at risk."

In principle, it is important, of course, to consider transport and buildings, given that climate action in these sectors has been far from adequate so far. "But the ETS 2 cannot solve the problems in these sectors on its own; it can only support other policies," says Jakob Graichen. "What we need as a matter of urgency is accelerated energy upgrading of buildings and fewer combustion engines on the roads, for example." He believes that regulation – such as banning the installation of new gas heating systems or introducing more stringent



efficiency standards for buildings – would lead to much more progress in these sectors. And as he points out, it is unclear how the ETS 2 will affect the carbon price of heating and motor fuels, introduced in Germany under the Fuel Emission Allowance Trading Act (Brennstoffemissionshandelsgesetz – BEHG) in 2021. "The BEHG covers energy consumers who would not fall within the scope of the ETS 2, and that is quite rightly criticised. The ETS 2 should be expanded to include all forms of energy consumption."

In terms of its social impacts, an EUwide carbon price is a potentially explosive issue, says Jakob Graichen: tenants, for example, have no influence over issues such as the thermal insulation or type of heating installed in their building. "As the impacts of the ETS 2 are likely to be felt mainly by lower-income households, there are plans to set up a Social Climate Fund, which will receive around 25% of the revenues from the ETS 2. Which member states will receive funding for climate-related social programmes, and how much, will be determined by factors such as the number of people at risk of energy poverty," Jakob Graichen explains. "It's a good approach - but can it work? That's not entirely clear." Indeed, it is far from certain that the ETS 2 will be introduced at all."Many member states, including Germany, are critical of the Commission's proposal."

NEW TAXES AND CHARGES

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The Commission has also addressed the often-criticised free allocation of emission allowances to industry. "It has been argued that without continued free allocation of allowances to Europe's steel industry, for example, production would be relocated to countries where there are no climate policy measures in place," Jakob Graichen explains. "So there is now a proposal to introduce a carbon border adjustment mechanism (CBAM), with CO₂ pricing of imports." Countries which are already covered by an emissions trading system would be exempt. The carbon border adjustment mechanism would be introduced stepwise and is not without its challenges. "In an ideal scenario, it would be possible to trace every tonne of imported steel back to the factory where it was produced and determine the specific CO₂ emissions from that factory," says Jakob Graichen. "The CBAM should ideally encourage other countries around the world to introduce emissions trading."

Another positive point, he says, is the energy tax reform, which is also on the table. "Here, the tax rates should reflect the energy content and the environmental impact, for example – that would finally spell the end for the lower rates of tax on diesel. And kerosene would be taxed at last as well." However, the Senior Researcher is not optimistic that these plans will be implemented. "That's partly because changes to tax law must be agreed unanimously."

Jakob Graichen and his colleagues will continue to be involved in the Fit for 55 process. For example, the Oeko-Institut has formed a consortium with Ricardo-AEA from the UK and Austria's Environment Agency to monitor the negotiations and legislative process and support the Commission by providing analyses and assessments. The researchers - together with Fraunhofer ISI and DIW Berlin – are performing this task at national level as well: they are providing advice to the German Emissions Trading Authority at the UBA and to the German Environment Ministry, sharing their scientific expertise and, above all, conducting economic analyses. On the face of it, the concept of a carbon price might seem quite simple. But a closer look at how it is collected and what impact it may have reveals a very different picture.

Christiane Weihe



Graduate physicist Jakob Graichen works on a broad range of national and international climate policy issues at the Oeko-Institut, including emissions trading systems and quantification of greenhouse gas emissions. Climate-neutral aviation and shipping are a further focus of his work. j.graichen@oeko.de