

UBA workshop “Decarbonisation – 100% Renewable Energy and more”

Monday, 9 November 2015, Berlin

Full programme and further details available at

<https://www.umweltbundesamt.de/en/workshop-decarbonisation-100-renewable-energy-more>

The scientific basis is clear: GHG emissions need to be drastically reduced across all economic sectors to keep global warming below 2°C. Delaying the necessary steps will only increase the costs. To bring about the necessary transformation of the economy, all levels of governance need to take ambitious action in all economic sectors and design long-term visions of their mitigation pathways.

Across the globe, countries are starting to take climate action more seriously and are developing strategies to limit or reduce emissions – but these still lack ambition and rarely provide a long-term vision for 2050 and beyond. In the framework of the emissions reduction which the IPCC considers necessary for developed countries as a group, the EU has set itself the target to reduce emissions by 80-95% by 2050 compared to 1990, but it does not yet have a common strategy of how to achieve that target.

Many EU Member States have already developed or are currently developing climate mitigation strategies leading up to 2050. At sub-national level, many regions or cities are designing or already implementing decarbonisation strategies. These are often more ambitious than those at the national level.

The Workshop “Decarbonisation – 100% Renewables and more” provided a forum for dialogue among European and international actors on the challenges of designing and implementing decarbonisation strategies, and possible solutions.

This summary brings together insights from all the levels of governance touched upon in the course of the workshop’s presentations and discussions.

International level

In the run-up to the Paris climate summit there has been growing momentum towards global action on climate change. Over 170 countries have submitted so-called INDCs (intended nationally determined contributions), signaling their intent to contribute to the global effort.

However, emissions are still rising, and the estimated aggregated effect of INDCs is still nowhere near a pathway that would bring us on track for staying below the 2°C limit. The main emission drivers are population growth and increasing GDP per capita – but also

misleading policies. Governments are still heavily subsidizing the use of fossil fuels, and around the globe new coal power plans are in planning. There are concerns that the world is on a carbonization pathway rather than on the much proclaimed pathway towards decarbonisation. To turn this around, key decisions are needed at the international level. Key insights from the workshop include:

- A realistic global **carbon pricing strategy** is needed to stop the coal renaissance.
- For this to be acceptable also to those poor countries whose emissions are expected to increase in the future, governments should create a **transfer mechanism** from North to South.
- Climate change and mitigation should also be framed as a **social justice issue**. Many mitigation policies have positive co-benefits for health, quality of living, etc. Redirecting subsidies from fossil fuels to much needed infrastructure could close major development gaps (water, clean energy, telecommunications) – even more so with the revenues from carbon pricing.
- Most countries will experience a significant **decline in GDP, by up to 75%, with increasing temperatures**. Focusing the debate on these economic arguments could help forge public acceptance for climate policies.

European level

More than ever, the world needs frontrunners on climate policies. Now that there is a momentum at the international level, the EU could showcase successful policies and lead by example. The EU could also follow the example of other countries that have included in their INDC a long-term objective and elaborate on its long-term pathway. Key insights from the workshop include:

- **Improving existing policies** could prevent other countries from making the same mistakes. Most importantly, the EU needs to reform the Emissions Trading Scheme more ambitiously to establish a credible carbon price.
- This is also the right time for **revising the EU's roadmaps on climate and energy** towards decarbonisation, taking into account recent developments in climate science, technology, etc. and scenarios to match the common 2050 climate goal.
- The EU should work towards a common climate strategy that offers a credible pathway towards decarbonisation. While one should welcome the advances of some more ambitious Member States, national strategies will soon face limits. A **coordinated European approach** is needed to create synergies and avoid conflicts between strategies of different Member States.

National level

A number of EU Member States have adopted long-term emission reduction goals and developed national 2050 climate strategies. These Member States have devised their climate strategies coming from very different starting points. Next to environmental concerns, energy security, energy poverty or economic considerations might bring the decisive momentum. Also, the structure of the economy and the energy sector vary widely across Member States

and bring with them distinct challenges. Such different national **circumstances require different strategies** for achieving the same long-term goal. For example, carbon pricing might be a good approach for the UK but prove less effective for France in moving away from nuclear energy. However, the different Member States also face some similar opportunities and challenges:

- Studies across EU Member States have shown that moving towards an energy system that uses **100% renewable sources is technically and economically feasible**. Since the energy sector accounts for more than 80% of GHG emissions in the EU, this is an important message for policy makers. Turning such scenarios into reality would bring EU Member States a long way towards a GHG neutral economy – but not all the way.
- To reach the required emission reduction trajectory, strategies also need to address energy demand and tackle other economic sectors. Ambitious **climate strategies should be comprehensive**.
- A first step are sectorial studies, e.g. for agriculture or waste. These can help identify sector-specific technologies and paint a picture of a possible future. But effective decarbonisation strategies need to tackle all sectors and find **integrated solutions**, also taking into account interactions and synergies between sectors, but also with other policy areas. For example, resource use and land use are issues closely linked to sustainable mitigation policies.

In designing climate strategies, generating **political support** is key – but also very challenging.

- A successful strategy needs support **across political parties**. This helps long-term strategies **last beyond** individual legislative periods.
- Transformative policies will increasingly impact the life of **individuals**. It is crucial to create awareness and **buy-in from the public** about the future transformation. EU Member States have started to pay more attention to public involvement in designing climate policies. Some have established alliances between different government levels and civil society (e.g. German Climate Alliance), organised dialogues and workshops, or requested public inputs via online platforms. Using such approaches, governments can test what objectives and measures could be politically feasible but also can raise awareness of the need for climate policies. They also help to better align climate objectives and policies with people's needs. There is, however, room for improvement given that these public participation processes of-ten do not reach the wider public but only interested individuals or organizations.
- Creating **independent advisory bodies** may also help governments to gain public support. A policy proposal might be perceived as more credible if supported by independent analysis from renowned individuals. Furthermore, such bodies can bring issues onto the public agenda that might be too "hot" for the government to pick up.
- Successful policy experiments at **sub-national** level can be an important means to **showcase** climate policies that increase quality of life and are beneficial to the economy (see also below). Governments could better align their national strategies with and build on existing climate action at local level.

Progress in **implementing** long-term strategies differs widely across Member States.

- Enshrining strategies in **national law** guarantees more durability but it is often difficult to find public support for such a step.
- Often it has been possible to agree on targets for 2050. But agreeing on **pathways and interim targets** that would be consistent with the long-term objective has been challenging. However, such pathways are necessary for starting the transformation process.
- Some Member States have established **monitoring systems** that regularly assess the progress of implementation. Such systems can help to address gaps at an early stage and identify new opportunities.

Subnational level

Subnational governments are key players in tackling climate change. They are often – depending on the attribution of powers in the respective country - responsible for the regulation of areas that are key to reducing GHG emissions, such as transport or land use management. Also, they are often better placed to identify the real needs of their societies, and mitigation opportunities that bring co-benefits. Many subnational governments have taken up this challenge. For example, **hundreds of local communities** across the world have committed to becoming **100% renewable**. Regions, cities and communities can serve as role models, showcase the positive co-benefits of the transition to a low-carbon economy – this is crucial for building public acceptance on a wider scale.

Like governments at the national level, local governments need to base their strategies on sound analysis, gather political support and find adequate ways to involve the public in design and implementation. However, at local level it might be easier to develop **targeted solutions that provide visible co-benefits** for society and might thus prove more acceptable. For example, changing to alternative modes of transport and greening public spaces can improve air and water quality or reduce traffic (and stress) during rush hours. The local level can also involve and inform the public in a more targeted way.

Public procurement could play an important role in local decarbonisation strategies to facilitate more acceptance for climate neutral measures on local level. Targeting public investment in line with decarbonisation strategies could be an important leverage for local governments.

However, some structural issues may not be easily addressed at local level. For example, decisions on the promotion of renewable energy are often taken at a higher level. Also, it might prove difficult for local governments to involve companies if key business decisions are taken by a parent company that is located elsewhere.

It is also key to consider how local action can connect back to the national level. For example, how can the national policy trigger and support sub-national action? Or how can GHG reductions at the local level be reflected at the national level and not be offset elsewhere?

Conclusion

Even though we have 35 years of experience in discussing scenarios for modelling an Energiewende in Germany, we are only at the “mid-way point”. While realizing that many changes can occur in such a period of time, we need to face the challenges ahead. Thanks to technological advances and enhanced understanding there is now a general consensus that decarbonizing the economies of EU Member States is possible. The fastest way to decarbonisation is increasing the use of renewable energy. Today we have the technologies available to make the energy future we want to have become a reality by developing integrated energy approaches to reach our climate and energy goals.

Governments at all levels need to give clear and **reliable long-term directions** for the next decades. Only if the path towards decarbonizing the economy is clear, investment will be steered towards low carbon technologies. To encourage investment in low carbon technologies it is important for policies to strengthen investment security. In the EU, Member States face different circumstances, which makes coming to a joint vision and a common strategy an extremely complex endeavor. The biggest challenge is to create the **political will** to meet such visionary goals. Building acceptance for decarbonisation strategies at every governance level, and across the population, will be hard work.

A fundamental challenge is the integration of these different levels – local, regional, national and for the EU also European. To facilitate this cross-sectoral and multi-level integration, **dialogue is needed, at all levels**. These dialogues need to provide the possibility to learn from each other, from the errors that will inevitably be made. This learning can lead to better solutions and increased acceptance.

The **Umweltbundesamt remains committed to fostering this dialogue**, also in the future.