

# Just Transition

## Hambach – transition planning and implementation



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### 1. The here and now – the baseline situation

The Hambach open-cast mine, the largest in Europe, opened in 1978 and located 40 kilometres west of Cologne, is situated between the towns of Jülich and Kerpen in the heart of the Rhine lignite mining area. At its peak, the deposit – with an area of 8,500 hectares and a maximum depth of 411 metres – supplied around 40 million tonnes of lignite to local power stations, which supplied 5 per cent of Germany's electricity needs. It is owned by RWE, the Essen-based Rhine-Westphalian Electricity Company, which is important to the Rhineland not only due to its economic influence, but also because it is the largest landowner in the region.

The exploitation of the mine was hampered by a conflict over the protection of the ancient Hambach forest, located on the edge of the RWE-operated mine. This sparked a heated public debate about the future of coal in Germany and became a symbol of resistance against the environmental destruction caused by the coal industry. The location was deeply entrenched in the public eye, along with narratives associated with

it, which, placed within the context of the Germans' cultural and emotional attachment to forests, reinforced the emergence of a large civic movement, the goal of which was to protect the Hambach forest. The movement's network of supporters crossed social and international borders. Pressure from German public opinion led to the decision to protect the forest from logging. This case shows that places are not only spaces in which transformations take place, but they can also play a central role in decision-making and policy development with regards to the transformation of carbon regions.

The mining operation will cease in 2029 as part of the statutory coal phase-out. Local development plans are currently being amended to allow for ambitious plans for a comprehensive reclamation of the open-cast mine. It has already been decided that a lake will be created on the open-cast mine site, and water will be supplied to it by the Rhine River for decades to come.

In order to effectively combat climate change, Germany – through international agreements and European law – has committed itself to significantly reducing its greenhouse gas emissions. The European Union wants to be climate-neutral by 2050, and an important element of this plan is the phasing out of coal-fired power generation.

To this end, the German government set up a Commission on Growth, Structural Change and Employment (usually referred to as the Coal Commission), consisting of politicians, representatives of the energy industry, environmental organisations, trade unions, scientists, and residents of coal regions. The commission's final report from January 2019 aimed to establish a consensus regarding the phase-out of coal. On this basis, a law on the phasing out of coal as an energy resource was enacted in July 2020, which provides for the curtailment and termination of coal-fired power generation by 2038, with the possibility of bringing this date forward to 2030.



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According to NGOs, its provisions have been watered down at the expense of the environment and, moreover, it favours energy corporations. It has emerged that although social movements influenced the decisions of the aforementioned Commission and there is a high awareness of climate policy in German society, the actual impact of social movements on the plan has proved to be limited. Nevertheless, the nationwide anti-carbon movement, including the environmental activists protecting the Hambach forest, has contributed to changes in Germany's energy economy. It is likely that the German government would not have even considered moving away from lignite as an energy source had it not been for the wide-ranging influence of the grassroots movement.

Concurrently with the establishment of the Coal Commission, a civil society entity was created, the Zivilgesellschaftlicher Koordinierungskreis Strukturwandel (Civil Society Coordination Group for Structural Change). It consisted of 25 organisations (e.g. Bund für Umwelt und Naturschutz Deutschland [the German Federation for the Environment and Nature Conservation], the local civic group Buirer für Buir, local parishes) and individual activists. The group produced the document 'Revierperspektiven Rheinland – gutes Leben, gute Arbeit' ('The Future of Mining Areas in the Rhineland – Good Life, Good Work') in which guidelines for regional structural change were formulated.

The state of North Rhine-Westphalia, where the Hambach mine is located, has decided to use the provisions of the Coal Withdrawal Act for spatial planning and to create a framework for changes to open-cast lignite mines located within its territory. Their implementation thus becomes a joint task for the state, the region, and the local communities and mining companies.

There is a lignite committee at the district government in Cologne. Representatives of the open-cast mining community, among others from the Neuland Hambach area, participate in its work and have been guaranteed speaking rights. Within the committee, working groups prepare amendments to the lignite plan. Post-mining landscapes will be transformed into 'future spaces', and the post-mining areas will be integrated with their surroundings, creating prospects for innovative and sustainable development. To this end, provisions have not only been made in lignite plans, but also in regional development plans.

Along with the Coal Withdrawal Act, the Coal Regions Structural Strengthening Act was passed to support the coal regions in their transition process. The coalfields will receive financial assistance in the amount of EUR 40 billion until 2038, of which around EUR 14.8 billion has been reserved for the Rhine Basin.

## **2. Where do the actions lead, and to what end?**

The decision to end lignite mining at the Hambach open-cast mine is set in stone. It is also clear what will emerge in place of the open-cast mine: a lake with water supplied by the Rhine River for decades to come. However, there are still many new areas to be developed – in terms of climate protection, landscape and resources, infrastructure, and living and working conditions in the 21st and 22nd centuries.





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The measures taken are intended to make the Hambach region an attractive place to live. Not only the flagship projects – such as the inter-municipal cycle route and the development of Sophienhöhe hill – are important here, but also all other ambitious, courageous undertakings which will mold the Neuland Hambach region as part of a coherent, futuristic vision. Concepts to improve the landscape and infrastructure and the living and working conditions will require the build-out of infrastructure, urban planning or network projects, as well as agricultural projects.

### **3. Who is implementing it and with what funds? The adopted action strategy**

The restructuring of the open-cast mining area is a challenging task that is to be carried out within this century; it requires the involvement of many parties and the consideration of their needs and perspectives for the future. The open-cast mine has torn through existing structures, so it is expected that new projects will be enacted to rebuild them. As part of the transition process, space is being created for the realisation of investments that link the future with the past for the benefit of the people of the region, as well as business and science.

With this in mind, the six neighbouring communes of Elsdorf, Jülich, Kerpen, Merzenich, Niederzier and Titz founded the Neuland Hambach GmbH. Its aim is to create new infrastructure that helps guarantee decent living and working conditions that corresponds with the expectations of residents and businesses. This facilitates conditions for introducing people-friendly landscapes, promising job markets, new business models and value chains. The company is also responsible for regional structural change and fundraising.

By thinking and acting as integral parts of complex systems and cycles, networking people and places, revitalising the landscape and infrastructure, and developing housing, there is a good chance that Neuland Hambach will perform in a capacity that will meet the needs of all stakeholders. There is also room here for regenerative agriculture, sustainable water management and renewable energy ventures. However, reconnecting people and places is the pivotal task at hand. Sustainable mobility concepts serve this purpose: cycling routes, eco-roads, an innovative traffic guidance system, and the use of existing infrastructure, such as the Hambach railway line.

In all projects the joint venture aims to integrate residents, tourists and commuters with the region, while taking environmentally friendly, space-saving measures and promoting active forms of mobility that are conducive to healthy living.

Under the motto 'Shaping a new territory together', citizens had the opportunity to learn about the current state of planning and co-create structural changes in their own backyard. In addition to two participatory events, individual discussions were held with decision makers from the six municipalities of Neuland Hambach and experts from the fields of landscape planning, nature conservation, tourism, economics and water management. The results of these discussions, as well as the results of the citizens' participation, were incorporated into the preparation of the Hambach framework plan.

During conversations and discussions with local residents, two sites of particular interest emerged: Sophienhöhe, a hill that is already deemed an ecological treasure, and the proposed lake, which could have multiple future uses. Many ideas have been put forward for developing the region, such as building a tourist and information centre on Sophienhöhe hill or raising salmon in the lake waters. At present, all the residents' proposals are being analysed and categorised by two planning offices.

The residents of the six municipalities neighbouring the Hambach open-cast mine are permanently involved in the planning process for the new region. Most recently, on 30 March 2023, another public consultation was held with 120 people, who were able to see the current planning status and to express their own views. Topics discussed included the use of the lakeside area, the redevelopment of existing facilities, and the tourist valorisation of Sophienhöhe hill. A stronger emphasis on agriculture in future plans was also indicated. 'The lively discussions at the thematic tables exposed the worries of the local population about the upcoming changes. We will incorporate approximately 300 submitted suggestions into the planning process, many of which overlap with and complement our ideas, but also indicate the need for various clarifications,' reports Matti Wirth, regional planner at Neuland Hambach GmbH. In addition to the stationary workshops, online surveys have also been actively used.

The Hambach Framework Plan will be presented to the public at the end of 2023. Local population consultations will also take place prior to the reservoir being filled with water, i.e. after 2030.

## 4. How has this been implemented? Key projects, decisions and events

By proposing their own projects, the municipalities show their strengths and areas of specific interest. Their implementation takes into account the framework arrangements for infrastructure, economy, mobility, energy, climate and nature conservation. The detailed objectives and needs of the municipalities are also considered.

The role of academia in structural change is also highlighted: the capacity to analyse and resolve conflicting goals in dialogue with different social actors. In North Rhine-Westphalia (NRW), there is a relatively high level of contact between academia and trade unions. It is important that this takes place on an equal footing and that research results are published promptly.

The Rhineland lignite mining district has strong connections with a large number of scientific research institutions. The renowned RWTH Aachen polytechnic and one of the largest research centres in Europe, the Forschungszentrum Jülich, are located there. Cologne, Bonn, Düsseldorf and other university cities are in the immediate vicinity. The inclusion of academic and research centres in the process of structural change offers a major advantage for the local environment. In Jülich and Aachen, however, the focus so far has been on basic research. To promote economic growth through research, applied research will also be needed.

A successful example of the exchange of knowledge between academia and trade unions is the NRW 2020 programme launched by the German Trade Union Confederation in 2015, which had created more than half a million jobs in North Rhine-Westphalia by 2020. Technical support for the trade union initiative was provided by a scientific advisory board.



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## Inter-municipal cycling route

The Hambach Loop is a circular cycling route connecting a number of new and existing locations around Sophienhöhe hill and the lake that will be created at the quarry site. It is a joint project of six neighbouring municipalities. The route will not only have a recreational and touristic function, but it will also become an important everyday communication route for residents. In addition to interlinking municipalities, the emphasis is on regional connections and integration into existing cycling route networks. The open-cast mine environment can become a model region for transport transformation by linking infrastructure, landscape and settlement development.

## Terraces of the future Elsdorf

This project focuses on four activities to prepare and implement short-term measures for the use of an eight-kilometre stretch at the periphery of the open-cast mine in the Elsdorf urban area.

1. Future terraces on the periphery of the open-cast mine and its slopes; a land use concept is being prepared using urban design methods.
2. Forum :terra nova was built at the future boundary of the open-cast mining zone. The building serves as an information and exhibition centre for open-cast mining. In addition, it houses a restaurant and bar, as well as a multi-purpose room for cultural and entertainment events directed towards the local community. The building was commissioned by RWE Power AG and its design was selected in an international architectural competition. The building façade is made up of coloured layers of concrete mimicking the geological cross-section of a mine.
3. New life on the lake: an amendment to the local development plans providing for the development of residential areas in the vicinity of the lake is being prepared. It is also envisaged that they will be linked to the planned International Building and Technology Exhibition.
4. Linking the lake edge: new mobility solutions and upgraded mobility axes will open up the area around the open-cast mine and connect it to the surrounding area.

## Jülich mobility concept

An international congress centre is currently being built in Jülich to host scientific conferences and cultural events. In addition, the Jülich Research Centre (Forschungszentrum Jülich), a technology transfer centre, will be built on the outskirts of the city. It will serve to implement basic research in close cooperation with companies. In order to ensure smooth communication between these facilities, as well as the Brainergy park and residential areas, a sustainable urban mobility concept was developed and adopted by the City Council on 23 June 2021. This created the necessary groundwork for measures contributing to the reduction of greenhouse gas emissions. The concept includes measures to expand both rail and bus transport, as well as initiatives directed at

walking and cycling. Particular emphasis is placed on cycling and connecting city districts to the city centre. This should reduce road congestion and thus increase the quality of life in Jülich. In addition, the mobility of all groups of city residents will be significantly improved.

## Merzenich mobility station of the future

The suburban station in Merzenich on the Cologne-Aachen transport axis is already an important supra-local interconnection hub for various modes and forms of transport. In the future, the station will become even more important as an interconnecting station for commuters from the entire region, including the science centre in Morschenich-Alt. Merzenich will become a supra-regional hub for an innovative mobility network in which autonomous driving and city logistics will play an important role. Renewable energy and sustainable energy concepts, among others, are also being taken into account in the infrastructure design.

## 5. Is this the end? What next?

### Milestones of the Transition

The transition of the region is a 21st century task that must be planned and initiated as soon as possible. Here are its most important milestones.

#### **From 2021**

The first phase – The Immediate Future – covers the years immediately preceding the cessation of open-cast lignite mining and the commencement of the lake development. This is a time of concept development, preparation, and implementation of activities enabling the realisation of planned projects.

#### **From 2030**

The second phase – Transition – covers the entire period of filling the lake and, according to current estimates, could last until 2070 or even 2090. These projects aim to create an attractive living environment.

#### **From 2080**

The third phase – Future with the Lake – will begin once the excavation pit of the former Hambach open-cast mine has been filled with water. This will mark the end of the structural and spatial transformation of the local landscape.

#### **After 2100**

Once the mine site has been transformed into a lake, there will still be much to do to make the entire region a more liveable and attractive place for tourists. These will be tasks for generations living at the turn of the 21st century.



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