

Responsible lignite mining

THE ART OF RECULTIVATING LANDSCAPES

Mining and reclamation are two phases of the same operation. Vattenfall's ongoing reclamation programmes are well established and based on models that ensure ecological stability and multifunctional use. Many of the areas we operate in today are well on their way to be self sustained natural habitats. Reclamation requires knowledge and patience, but we must never forget that time is of essence.

Experience a cultural landscape

The new landscape being created is characterized by extensive forests, gently shaped hills and valleys, with courses of streams passing through and enriched by lakes. Reclamation always means harmonising several interests: economical, recreational and nature conservation. The best result will be achieved if the future users are included in the reclamation processes as early as possible.



Federal Mining Law basis for all activity

Main basis of mining activities is the Federal Mining Law that regulates the conditions for mining companies. The conditions have to be fulfilled to get permission for an operational plan. In any case, one of the most important prerequisites is to make reclamation of the land possible through reclamation. Plans have to be made and approved and then implementation has to be proven. The Federal Mining Law defines reclamation as proper shaping of areas occupied by mining operations with special attention to public interests. This is manifested as legal basis in the long-term lignite mining plan.



Before mining starts

Vattenfall establishes ecological requirement profiles describing among others the pre-mining situation, the interference that mining causes and impacts on all kinds of use and subjects of protection. Fact is that quite different habitats will establish after mining. The ecological requirement profiles are part of the permits.



The front 20-30 years after mining

Vattenfall views landscape after mining as a resource for new generations. This photo shows an example of a landscape approximately 30 years after mining. It is similar to a naturally formed landscape, but is in fact a new habitat for flora and fauna. 15% of the post-mining landscape is provided for nature conservation. Systematic resettlement of plant and animal species compensates for the interference in nature. The basis for this is a long-term working programme agreed with the respective nature conservation authority. After resettlement, the growth of plants and animals are monitored.

The area named Lusatian district, in Eastern Germany, extends over 550,000 hectares. The aerial photograph is taken over the mine and restoration area of Welzow-Süd in 2006. Vattenfall Europe Mining AG mines about 60 million tonnes of lignite yearly from the opencast mines. Both mining and re-cultivation are carried out on large areas. About 10 hectares of land are required just for extracting one million tonnes of lignite from a coal seam with an average thickness of 10 to 15 metres.



The front today

The post-mining landscape to be shaped by Vattenfall Europe Mining includes a presently approved overall area of nearly 30,000 hectares. Areas that have already been cultivated prove that mining activities can produce cultural landscapes, arising from the needs and ideas of the people living here. The re-cultivated areas show that lignite mining represents a chance to shape new land.



The front 0-2 years after mining

The first phase of reclamation is topsoil restoration. The best available soil must be placed at the surface as the structure of the soil is decisive for the productivity of the new land being formed.



Areas more than 2 years after mining

The Lusatian District is an area rich in forests and Vattenfall aim at providing a natural and variably useable forest landscape. Vattenfall therefore plants tree species which correspond to the natural forest composition of Lusatia. Apart from pine-trees, these species mainly involve sessile and common oaks. On each hectare of land, between 6,000 and 12,000 seedlings are planted. In this phase Vattenfall also begin agricultural utilisation. The first step is to establish plant life that helps develop the soil, making it come alive and become rich. After that commercial agricultural utilization can begin.



The front 10-20 years after mining

Agricultural areas are formed, securing the existence of agricultural companies and contributing to preservation of rural areas. 10% of post-mining landscapes have been listed as agricultural lands in the plans of Vattenfall Europe Mining.



- Agricultural areas
- Forestry areas
- Other areas
- Mining area

Schwarze Pumpe power plant