

RESPONSIBLE PROCUREMENT OF RESOURCES

As the fifth biggest generator of electricity and the largest producer of heat in Europe, Vattenfall acquires substantial amounts of fuel. Vattenfall also uses a diverse range of fuels, from biomass and waste to coal and uranium. To be perceived as a Benchmark of the Industry, we must ensure that our fuel procurement is handled in a responsible way. Regardless of whether we are mining lignite in our own operations or purchasing other fuels through a supplier, we adhere to a high set of standards.

In 2007, Vattenfall produced 168 TWh electricity and 36 TWh heat for households and companies in Germany, Poland and the Nordic countries. Although Vattenfall's current generation is mostly based on fossil fuels, nuclear power and hydro power, our energy mix also includes wind power, bioenergy and waste.

Lignite represented approximately 66% of the fossil fuel used in Vattenfall's electricity and heat production. Our lignite is supplied by wholly owned mines in eastern Germany, while all other fuels – hard coal, uranium, peat, biomass and waste – are purchased on the world market. But no matter if the fuel is purchased from suppliers or extracted from our own mines, we do our utmost to ensure that we apply responsible and sustainable practices.

Strengthening our responsible procurement practices

In 2007 Vattenfall initiated work on improving effectiveness and accountability within its purchasing organisation. This included the launch of an initiative to develop a Group-wide solution and practices to ensure that our suppliers meet Vattenfall's minimum social responsibility requirements. These requirements, based on the UN Global Compact's principles for human rights, labour standards, the environment and anti-corruption, apply not only to fuel suppliers, but to all of Vattenfall's suppliers and subcontractors. Also a Code of Conduct for Suppliers covering environmental and other aspects of corporate social responsibility will be included in Vattenfall's overall Code of Conduct.

Different fuels, different issues in purchasing

Vattenfall strives to take all aspects of social responsibility into account in its fuel purchasing practices. The UN Global Compact forms the basis for the requirements we put on our suppliers, regardless of fuel type.

Since the start of 2007, a clause requiring that operations be run in accordance with the Global Compact principles is included in all new hard coal purchase contracts. From July 2008, all new nuclear fuel contracts will include such a clause.

In addition, procurement of uranium is associated with specific safety

issues along the value chain, from mining and enrichment to fuel fabrication. The detailed safety requirements for Vattenfall's own nuclear operations are extended to strict demands on uranium and nuclear subcontractors. Raw material and services are purchased only from companies that produce in accordance with international standards and conventions for environmental impact, radiation protection and handling of fissionable material.

Several considerations need to be taken into account when purchasing biomass fuels, since they are associated with different aspects from both environmental and social perspectives. Vattenfall is currently developing criteria on sustainability aspects to consider for purchasing of bioenergy.

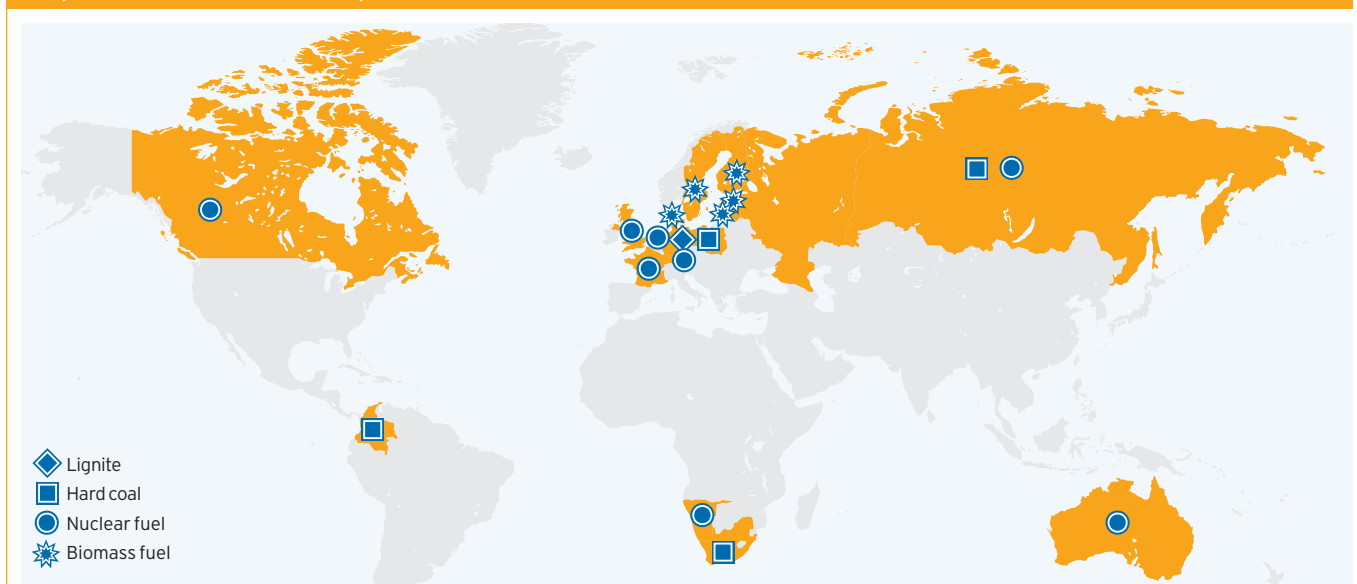
◆ Responsibility in lignite mining

Vattenfall's mining operation – which today employs approximately 5,000 people in eastern Germany – is only one part of the lignite supply process. Analysis and planning starts long before any mining takes place, and biodiversity as well as social aspects are mapped. Plans are then verified by authorities, decided through a democratic process and controlled by the Federal Mining Law. Even though Vattenfall always seeks to develop the open-cast lignite mines into uninhabited areas, the expansion sometimes inevitably affects nearby villages. In such cases, we apply a well defined process for responsible and socially accepted resettlement of the community. Mining is then conducted, with re-cultivation of the mined land as the next phase of the same operation. Our ongoing re-cultivation programmes are well established and based on models that ensure ecological stability.

Responsibility for careful resettlement

Coal, in particular lignite, is the most important fuel used in Vattenfall's electricity and heat production in Germany. Owning and operating our own lignite mines situated in the Lusatia region makes us confident in our ability to secure our customers' energy need. But there is always a trade-off between the provision of energy and environmental consequences. Lignite mining has a substantial environmental impact, sometimes to the degree

Map over Vattenfall's fuel procurement locations



that requires nearby communities are being resettled. Being a benchmark of the industry means that we must handle any resettlement with utmost care and respect.

Lignite plays an essential role in securing energy supply in central Europe, today and as a bridge to the future. For example, Germany's energy policy states that the country should base its energy needs on subsidy-free, reliable and available fuel. Lignite is a domestically procured fuel, which makes it a key part of Germany's energy supply.

The EU has concluded that fossil fuels, combusted and stored using CCS technology, are a prerequisite for achieving economic growth that at the same time decreases CO₂ emissions. Lignite fuel is the basis for Vattenfall's ongoing CCS project, and the Schwarze Pumpe pilot plant aims to virtually eliminate CO₂ emissions from fossil fuel power plants.

In 2007 Vattenfall mined a total of 59.5 million tonnes of lignite. Currently we have four active mines: Welzow-Süd, Nochten, Jänschwalde and Cottbus-Nord. We are also planning to recommission the Reichwalde open-cast mine, which was shut down in 1999 as a result of the decreased demand for fuel that followed the energy market liberalisation. Mining activity at Reichwalde is expected to resume in 2010.

Principles for socially acceptable practices

The ongoing and planned development of Vattenfall's mining operation affects communities in the Lusatia region. On the one hand, the mines are an important regional employer; on the other hand, the expansion plan involves the partial or complete resettlement of a number of small villages.

Vattenfall has a well-defined set of resettlement principles in order to ensure that each resettlement process is handled in a respectful and careful way. See the reporting section, indicator SO1.

Dialogue and active participation

We encourage active participation of the people concerned before, during and after resettlement. The planning and decision processes are carried out in close co-operation with local authorities as well as with the people concerned.

Improvements in infrastructure, maintained village character, neighbour relationships and social bonds are examples of issues of great importance. Vattenfall always strives to offer the majority of inhabitants in a village a joint resettlement location.

Preserved living conditions

Private estates are constructed on the basis of existing properties' size, function and quality, without additional indebtedness. Inhabitants who for personal reasons choose not to have their own homes and previous tenants are offered tenant concepts.

Private home owners are offered plots of land for gardens and sometimes individual agricultural areas right next to their estates. The inhabitants are also invited to bring plants, bushes and trees as well as building parts to the new homes.

Vattenfall supports a wide range of activities to maintain social life, such as clubs, associations and church-based activities. We also support the preservation of trade and business conditions.

Resettlement of Horno and Haidemühl

Continued operations at the Jänschwalde open-cast mine required the resettlement of the 350 inhabitants of Horno in 2002. Vattenfall, in close co-operation with the local authorities, conducted a joint resettlement in 2002 and 2003. Based on the established principles, approximately 60% of the inhabitants were resettled at Forst/Eulo as the joint resettlement place. The rest opted to move to other villages.

The representation of Sorbs – an ethnic minority in Lusatia – in Horno put different and even more challenging demands on the resettlement process. In co-operation with their general association DOMOWINA, Vattenfall implemented permanent exhibitions documenting village life, culture, traditions and history. These exhibitions are located at the church and in the municipality building. A museum in the form of a "cultural barn" has also been built. These measures were crucial to preserve the culture and customs within the Sorbian settlement area during and after the resettlement.

Based on the same principles, the resettlement of the village of Haidemühl was completed in 2006. In co-operation with local authorities and the inhabitants concerned, Vattenfall is currently preparing for partial



Lignite mining at Jänschwalde in Germany.

resettlement of the communities of Trebendorf and Schleife in the pre-cut area of the Nochten mine. Based on a mutually agreed framework contract on the compensation and the outlines of the urban development ideas, Vattenfall delivered a social requirements profile for these resettlements in summer 2006.

✪ Biomass fuels, waste and peat procurement

Vattenfall is one of the world's largest buyers and users of biomass fuels, as we operate over 30 biomass-fired heat or combined heat and power (CHP) plants

At Vattenfall we are constantly working to minimise our impact on the environment. For example, impact from transportation is minimised by procuring biomass nearby the power plants and using low CO₂-emitting transportation.

Biomass fuel mix based on forestry residues

Biomass fuels can be produced from a wide range of sources. A considerable amount of Vattenfall's present biomass fuel use is based on wood chips, bark, demolition wood, pellets and briquettes that are by-products and residues from forestry operations, sawmills or the pulp and construction industry.

Straw is an important part of our biomass fuel mix in Denmark and is purchased from regional and local farmers. Peat is combusted in Sweden and Finland, where it is available from regional suppliers.

Several important considerations

For most sources of biomass fuel, especially bio-oils, energy crops and other similar sources, additional responsibility aspects need to be considered, such as competition with food production local environmental impact and labour standards. Vattenfall is currently developing criteria on sustainability aspects to consider for bioenergy and different biomass fuels.

Vattenfall's biomass fuels, waste and peat contracts are based on the UN Global Compact's principles for human rights, labour standards, environment and anti-corruption. We try to regularly visit our suppliers of biomass, waste and peat fuels to verify and build up awareness of necessary aspects regarding total sustainability.

■ Hard coal procurement

Vattenfall purchases approximately 10 million tonnes of hard coal every year to sustain electricity and heat production at the Group's fossil-based power plants in Germany, Poland and Denmark. To be able to do business with us, suppliers are required to meet equally strict demands that we impose on our own lignite mining operation.

The vast majority of the hard coal is purchased from open-cast and underground mines in Colombia, Poland, Russia and South Africa. Because coal is transported long distances in heavy bulk shipments, large size vessels and trains are preferred.



The resettlement of the village Horno was completed in 2003.

Global Compact principles in all new contracts

Since the start of 2007, it has been our goal to include a clause on compliance with the UN Global Compact's ten principles on human rights, labour standards, the environment and anti-corruption in all new hard coal procurement contracts. During the year we also embarked on a continuous audit programme. Starting in 2007, two hard coal suppliers are audited against these principles each year.

Vattenfall's audits are based on the Global Compact principles. Most audits include additional social responsibility issues and questions that vary between regions and types of mines. Responsible open-cast mining, for example, requires extensive plans for the re-cultivation of mined areas. It is also of great importance to ensure that good resettlement practices are applied whenever surrounding communities are affected by a mining operation. Underground mining is often associated with a wide range of occupational health and safety issues.

Inspection starts at head office, ends at mine

Most of Vattenfall's audit visits last approximately five days, with inspections beginning at the supplier's head office. Vattenfall's team then visits the mine to inspect operational social responsibility guidelines and routines, but also any voluntary community projects. Meetings are also held with supervisory authorities outside the company to ensure legal compliance, to discuss the company's community involvement and for other matters of interest.

Our current hard coal suppliers are large multinational companies that are already deeply engaged in social and environmental responsibility issues. If an inspection reveals conditions that are not in compliance, we issue recommendations for improvements. In the worst case, suppliers that fail to undertake improvement measures will not be awarded new procurement contracts.

Audit programme in effect

In 2007, a Colombian supplier was audited by a group of representatives from Vattenfall. The inspection showed a professional and well-organised organisation, with good environmental and safety standards. Local and regional authorities, like a national mineral resources institute and the Environmental Ministry, confirmed that the mine meets legislation as well as other applicable standards.

In the beginning of 2008, an audit was conducted in South Africa and later this year a supplier in Russia will be visited by Vattenfall's audit team.

Uranium procurement

Vattenfall procures the fuel for its nuclear power plants in Sweden and Germany in close co-operation with suppliers. Through continuous reviews and ongoing co-operation we ensure that all suppliers and subcontractors in the supply chain meet national laws, international standards and conventions, as well as Vattenfall's requirements regarding its own nuclear operations.



Uranium mining at the Rossing mine in Namibia.

Uranium procurement and life cycle treatment involve several steps, each associated with environmental and social issues that need to be controlled and handled. Our general environmental and social criteria apply throughout the entire chain – from the extraction of uranium from the ground to the nuclear reactors.

All nuclear fuel procurement within the Vattenfall Group is handled by the subsidiary Vattenfall Nuclear Fuel AB. The procurement process involves reviewing and auditing all suppliers against stringent safety and environmental standards.

Long lead time and complex refining chain

Procurement of uranium is a long-term undertaking. Most of the uranium delivered in 2007 was contracted several years ago. In the same way, the latest negotiated procurement contracts cover our needs for the period 2010–2025.

The long lead times mean that Vattenfall Nuclear Fuel must work closely with our suppliers in order to continuously develop and follow-up environmental, health and safety issues. In this way we ensure that their operations always meet our expectations on social responsibility. The current deliveries of uranium come from Canada, Australia, Namibia and Russia. From the mines the uranium is transported to converting companies in Canada, the USA and France. The converted uranium is then sent to enrichment facilities in the Netherlands, Germany and England.

In the last step of the nuclear fuel process, Vattenfall Nuclear Fuel follows the fabrication of fuel assemblies on-site to secure that our quality requirements are met. The current deliveries of fuel assemblies come from Sweden, Germany and Spain.

Continuous supply chain screening

When Vattenfall began audit nuclear fuel suppliers some ten years ago, we were the first company in the energy industry to do so. Today all new suppliers in our nuclear fuel procurement chain are audited and approved before any deliveries are made.

The UN Global Compact's ten principles form the basis of our requirements. From July 2008, all new nuclear fuel contracts will include a clause requiring suppliers to run their operations in the spirit of the principles. Before entering into procurement contracts we assess all necessary documentation, including policies, manuals, and environmental reports declaring the supplier's permits and emissions. Representatives from Vattenfall Nuclear Fuel then visit the facility in order to evaluate the operation against the steering documents as well as the Global Compact principles. In this way we ensure that our suppliers meet Vattenfall's environmental and social criteria. Twenty-five per cent of our nuclear fuel suppliers, from all parts of the supply chain, have undergone this screening.

Suppliers are re-evaluated on an annual basis by reading documents and reports provided by them, and they are re-audited or contacted for additional information approximately every fifth year.