

Vattenfall's responsible hard coal sourcing explained

The global hard coal market

Vattenfall's goal is to enable fossil free living within one generation. In Germany and the Netherlands, the energy industry is still dependent on coal and gas, but Vattenfall has a clear plan for phasing out fossil fuels and thus the carbon dioxide emissions in our business.

In 2020, Vattenfall's usage of hard coal in our plants declined to 1.2 million tons from 4.4 million tons the year before. The main reasons for this decline are the sale of the heat business in Hamburg to the City of Hamburg, the closure of Hemweg 8 in Amsterdam and of Reuter C in Berlin which all happened during 2019. We also closed the Moorburg plant in Hamburg in July 2021. This leaves Vattenfall with two hard coal plants in Berlin (Moabit and Reuter-West). According to a plan that we have agreed with the City of Berlin, we will phase out all coal in our heating business in Berlin until 2030 replacing them with climate friendly solutions.

Hard coal supply chain

Hard coal is generally bought either through direct contracts with a mining company or trader or through the global wholesale market via brokers or the trading platform GlobalCoal. The main drivers for the decision from whom to source are price and quality. To source responsibly, Vattenfall applies a thorough due diligence process for each coal supplier before it can be approved as a supplier.

Quality is an important driver because firstly the quality of hard coal varies greatly between different origins (country, region and even mines). Secondly, power plants are technically designed to run, more or less, on a specific quality of hard coal. To optimise the composition of the coal used in a power plant, coal with different qualities is blended. This blending can be done at different stages in the supply chain. However, most coal mining operations involve a degree of blending in the country of origin.

Because the global coal market is mainly driven by price and quality, the fact that blending occurs at different steps in the coal supply chain and because coal can change hands several times before final delivery, the original supplier of the coal is not always known to the end user of coal. In case, a company buys coal through GlobalCoal, the buyer aware of the country of origin only six weeks before the delivery, and it is not until the vessel loading of coal that the buyer is able to track from which port the coal is loaded. In case the port of loading is connected to several coal mines, the exact origin can still not be tracked down. The exception to this is Colombia. There, the exact mine is known with high probability as the three biggest mining companies each use their own ports.

Transparency in a non-transparent market

The global coal market is not as transparent as other commodity markets. Due to the relatively low number of suppliers, insights into the supply chain are commercially sensitive information. Providing the names of a supplier could result in a competitive disadvantage and increase costs of sourcing hard coal. Suppliers would be able to draw conclusions on

our supply/demand situation and might increase prices which could result in a negative economic effect for us.

On the other hand, European consumers are increasingly interested to understand where the coal that is used to generate their electricity comes from. Therefore, we have looked for ways to increase transparency without creating a competitive disadvantage for Vattenfall. We think we found a good way by publishing a full list of our direct coal suppliers that we were eligible to buy coal from during the last three years. This list is updated annually. To our knowledge, this level of transparency is unique among energy utilities and we received the feedback that this approach helps to address the questions our stakeholders have on coal supply chain transparency.

Table: Names of Vattenfall's direct suppliers (and country of related mines), 2018-2020

- Kuzbassrazrezugol (Russia)
- Murray Energy (United States)
- Polska Grupa Górnictwa (Poland)
- SDS Ugol (Russia)
- SUEK (Russia)
- XCoal (United States)

The list does not comprise the coal that Vattenfall sources indirectly for the reasons mentioned above.

In addition, Vattenfall reports on the origin of hard coal on a country level. In 2020, hard coal imported from Russia accounted for around 89% of the total hard coal that we used in our plants. The rest came from the US (11%). These shares fluctuate year to year due to market conditions. Since the closure of the Hemweg plant in 2019, Vattenfall has not sourced any coal from Colombia.