



Sustainable investments: **ODDO BHF AM excludes coal**



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Foreword

Investing in climate-damaging assets entails considerable long-term risks. As a consequence, we have decided to take our environmental approach one step further by excluding coal in our responsible investment policy.

With a 30% share of global CO₂ emissions, coal as an energy source does not offer a long-term viable solution in the framework of the energy transition. So, a coherent strategy to combat global warming cannot do without starting to phase out coal.

Aside from our Energy Transition Analysis at issuer level and engaging in a dialogue with companies under the Climate Action 100+ initiative, the exclusion of coal investments is now the third building block of our environmental strategy. In this paper, we explain why we are no longer investing in coal in our ESG portfolios.



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Why excluding coal from our ESG portfolios?



I. Coal at a dead end

Climate change has now been confirmed by several decades of scientific research. Most major international institutions agree that the economic costs of inaction are enormous and, above all, irreversible. According to the International Energy Agency (IEA), around 30% of global CO₂ emissions in 2017 came from coal combustion. Coal is therefore by far the main problem that any coherent strategy to combat global warming must address. Against this background, ODDO BHF Asset Management has decided to exclude coal from all its portfolios managed in compliance with ESG criteria.

Economic profitability increasingly questionable



42%

Share of installed capacity already unprofitable in 2018, expected to rise to as much as 72% by 2040

35%

Share of coal production capacity that already costs more than renewable energy. This figure should reach 96% in 2030

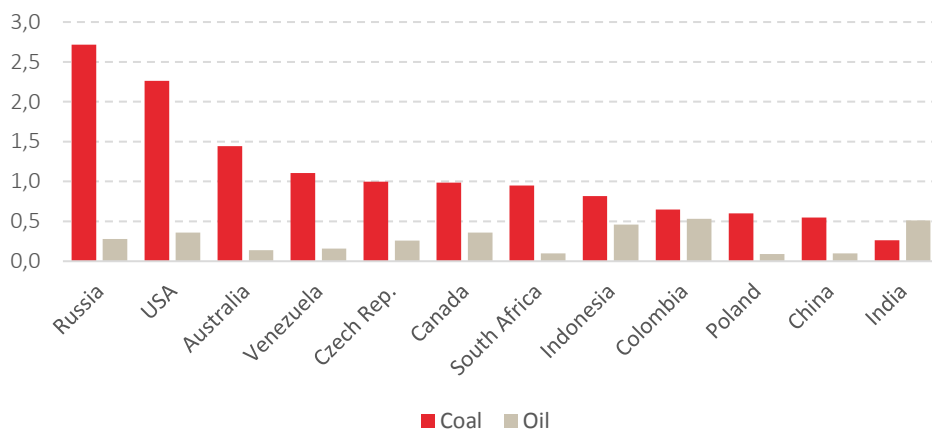
Apart from the environmental impact, coal mining is at a dead end in the medium and long term for at least three reasons: the increasing uncertainty of its economic viability, the risk of valuation of the associated assets and growing, soon unacceptable negative externalities.

Abandoning coal as an energy source is economically rational. This is the result of an academic study carried out in 2014¹. Apart from the need for state subsidies and a sufficiently high carbon price, an economic cost-benefit analysis for coal mining is already negative in several countries such as Russia, the United States and Australia (and thus about 25% of global coal production), according to this study.

¹ *Closing Coal: Economic and Moral Incentives*. Centre for Climate Change Economics and Policy at Grantham Institute. May 2014.



Ratio of production costs to revenues of coal vs. oil



Sources: World Bank, IEA, BP

This is confirmed by figures from the International Energy Agency and the World Bank, according to which the simple costs of extraction already amount to 1.4 to 2.7 times the income generated from coal mining in these three countries. Although the equation remains favorable for large producing countries such as China and India in particular, it is likely to deteriorate in the medium term as labor costs rise or the necessary investments to operate new facilities are included. By way of comparison, the production cost/revenues ratio for oil is about six times lower in the USA and ten times lower in Australia and Russia.

In the European Union, for example, with Germany and Poland the fourth largest coal producer in the world, all plants will become unprofitable by 2030².

Financial risk in asset valuations on the rise

The financial risk associated with stranded assets is considerable for both coal producers and shareholders / creditors. If regulatory restrictions on CO2 emissions continue to tighten and the Paris climate agreement is adhered to in the long term, most of the proven coal reserves will ultimately go untapped. While now bearing the costs of exploring and developing their reserves, producers will no longer be able to benefit from them in the future, resulting in substantial financial losses of several hundred billion dollars.

² "Powering down coal: Navigating the economic and financial risks in the last years of coal power", Carbon Tracker Initiative, November 2018

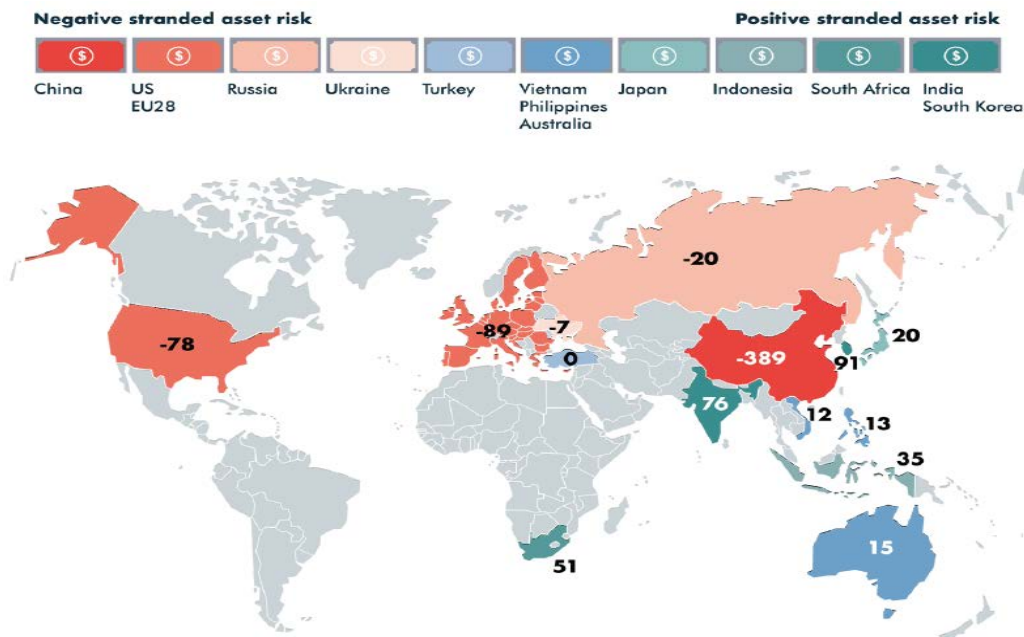


\$267bn

Potential loss on coal-related assets if the 2°C trajectory of the Paris Agreement is respected

China, the European Union and the United States are the regions most exposed to the risk of stranded assets. In countries such as India and South Africa, on the other hand, such risk is tilted more to the upside given the rapid realignment of their energy mix towards renewable energies and the decision to shorten the life of many coal-fired plants.

Stranded asset risk by country in an under-2°C scenario



Source: Carbon Tracker Initiative

Moreover, some countries have already included the phase-out of coal in their climate roadmaps by 2030 in order to fulfil the Paris Agreement: Canada, Austria, Belgium, Denmark, Finland, France, Italy, Mexico, the Netherlands, New Zealand, Portugal, Sweden, Switzerland and the United Kingdom. While their share of global coal production is negligible (around 1.5%), abandoning coal will ultimately lead to the closure of coal-fired power stations, thus driving down demand for coal.



2038

Date by when Germany should definitively stop using coal (extraction and power generation)



« Stranded assets »

The term "stranded assets" was first used in 1998 by the US Congressional Budget Office to refer to the depreciation of energy company assets following the extensive liberalization of the electricity market in the 1990s.

In 2013, the International Energy Agency (IEA) defined "stranded assets" as "those investments which have already been made but which, at some time prior to the end of their economic life (as assumed at the investment decision point), are no longer able to earn an economic return as a result of changes in the market and regulatory environment brought about by climate policy." Oxford University in the UK speaks of "assets that have suffered from unanticipated or premature write-downs, devaluations or conversion to liabilities."

Since then, several institutions and organizations active in the energy sector have adopted this concept. Today, it plays an important role in the transition to a low carbon economy both for industrial companies in the energy sector and for investors as shareholders and/or creditors of the same companies.



Increasing negative externalities

Abandoning the mining and use of coal is a central element of the climate scenarios of international organizations (IPCC, IEA, and several NGOs). For example, the International Energy Agency models a 46% decline in global coal production by 2040 as the only way to limit global warming to less than 2°C by 2100.

In addition to the high CO₂ emissions, the mining and use of coal also causes other negative ecological and social externalities: Water and soil pollution, generation of hazardous waste (heavy metals such as chromium, mercury or arsenic), restriction of human and labor rights and impairment of human health.



12 200

Premature deaths due to coal in 2016 in the European Union



€18.6bn

Median health cost linked to coal in the European Union in 2016

At European Union level, for example, coal is responsible for about 13% of CO₂ emissions, causing about 12,200 premature deaths and health costs of 18.6 billion euros in 2016. In Germany alone, this amounts to 4,238 deaths and health costs of 6.4 billion euros for 2016³.

³ « Lignite Coal – health effects and recommendations from the health sector », Health and Environment Alliance (HEAL), November 2018



II. Excluding Coal, looking to the future, the position of ODDO BHF AM

A further deepening of our climate policy

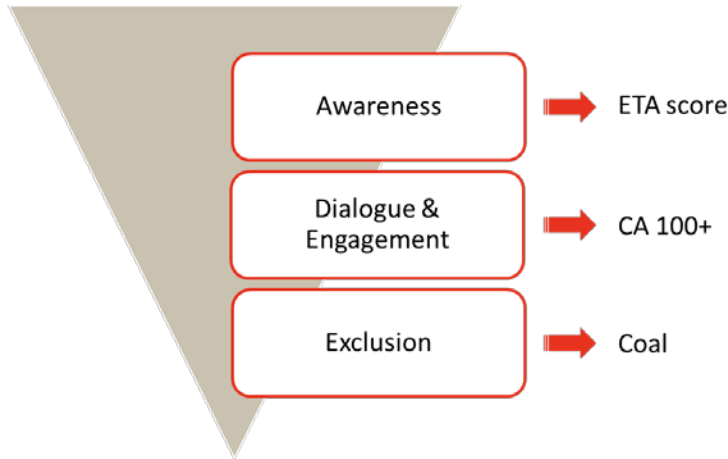
The ODDO BHF Group, which signed the CDP (Carbon Disclosure Project) in 2006 and the United Nations Global Compact in 2015, has addressed the challenge of climate change for several years. With a view to consistently develop and enhance its climate policy, ***ODDO BHF Asset Management will now also exclude coal investments when applying the ESG criteria to its investment activities.***

In addition to measuring the CO₂ intensity of certain portfolios in response to Article 173 of the French Energy Transition Act, our climate policy is now based on three pillars:

- An analysis of the positioning of our portfolios in terms of environmental risks and opportunities in relation to long-term climate scenarios. Since 2017, we have been developing our proprietary ***Energy Transition Analysis*** (ETA)⁴ indicator to measure each company's contribution to energy change towards a low-carbon economy.
- A policy of dialogue and active engagement, particularly on environmental issues. ODDO BHF Asset Management has been a member of the ***Climate Action 100+*** initiative since March 2018 to support the joint efforts of investors to engage in dialogue with the world's 100 most climate-damaging companies.
- An ***exclusion policy that focuses on coal*** because of its contribution to global CO₂ emissions, the negative impact of its use and the lack of technological alternatives (we do not consider carbon sequestration to be a viable solution given the scale of the issue).

⁴ Please refer to « OBBO BHF AM approach to climate change », December 2017

The 3 building blocks of our climate policy applied to ESG integration funds



Source: ODDO BHF AM

Our Coal exclusion policy



> 5%

Revenue from extraction



> 30%

Revenue from power generation

ODDO BHF Asset Management undertakes to exclude coal from all portfolios integrating ESG criteria (about 12% of assets under management as at 31 March 2019).

In the field of raw material extraction, our objective is to exclude any company that generates more than 5% of its sales with coal. This threshold is set at 30% for utility companies. We assume the installed capacity, but regularly monitor the investment programs of companies in the industries concerned. For the definition and the updating of the securities to be excluded, we rely on information provided by external suppliers (Sustainalytics and Urgewald Global Coal Exit List).



An expert view on the physical-related risks of coal

Interview with Four Twenty Seven





Coal is rightly considered as the main cause of atmospheric CO2 emissions. And yet, after declining for three years in a row production of it turned up in 2017, despite a business model that is increasingly debatable.

We warmly thank Emilie Mazzacurati, founder and managing director, and Nathalie Borgeaud, European head, from Four Twenty Seven⁵, a company researching and modelling physical climate change risks, for providing expert insight into coal-related risks.

ODDO BHF AM: Four Twenty Seven researches climate change-related physical risks. Could you briefly outline your methodology?

Four Twenty Seven: Four Twenty Seven was established in 2012 in the aftermath of Hurricane Sandy in the United States and was founded on the conviction that a failure to anticipate climate-related events could lead to economic disasters. We are climate experts and data providers serving investors. Our team has about 15 persons, including engineers, data scientists and financial professionals. Our methodology is based on the IPCC's⁶ long-term scientific scenarios and aims to understand and integrate climate risks worldwide. Our tool, which we have constructed over several years, allows us to analyse in precise detail the nature of physical risks that a given company is exposed to. We descend as far as the scale of the production facility and point of sale and then consolidate these exposures at the level

of the company and then the level of an investment portfolio.

ODDO BHF AM: Could you explain to us the nature of the physical risks that investors are exposed to, in particular in the coal sector?

Four Twenty Seven: The coal sector, from extraction to its use to generate energy, is closely dependent on water and is itself energy-intensive. As a result, water-stressed regions, which are more and more numerous worldwide, are a major risk for coal mining, given the reduced availability of water, the higher costs of supplying water, and the social acceptance of this type of activity. Likewise, the growing amplitude of temperature shifts, with very hot periods, has a direct impact on a coal-fired power plant's operation, due to the severe worsening in air quality and, hence difficulties in cooling the installations. Heat waves also threaten employee health at coal mines. These two risks, which can lead to operational breakdowns or shutdowns, are important factors

⁵ The name "Four Twenty Seven" was chosen in reference to the target the state of California announced in 2006 to move back under the threshold of 427 million tonnes of greenhouse gas emissions, i.e., its pre-1990 level.

⁶ See Glossary



that investors must take on board, especially if the operational exposure of their portfolio companies is focused geographically on certain regions of the United States, Australia and India. To a lesser extent, coal mines are also exposed to the risk of flooding, either from overflowing rivers or higher sea levels, like all infrastructures.

ODDO BHF AM: Investors are reluctant to acknowledge the reality of stranded assets. Could you tell us more about the economic and regulatory risks that the coal sector is exposed to?

Four Twenty Seven: This involves more of a transition risk and, as US market specialists, we see the impact of an uncertain regulatory environment each day, particularly since the arrival of the Trump administration. But let's not fool ourselves – some assets will no longer be exploitable, due to lack of water or energy, as well as tighter regulations in response to the larger number of severe climatic events. A coal mine or power-generation facility is a heavy fixed asset that cannot be moved and that requires an electricity grid and, indeed, an entire local ecosystem, to operate. The economic equilibrium of many sites is already under threat, and the trend appears to be on a collision course with the growing restrictions. All climate scenarios assume a drastic reduction of coal in the global energy mix, which generates a huge transition risk for the sector. Physical risks, which are less systematic, as they depend on geographic locations, obviously exacerbate the threat of stranded assets, and this is especially true in Asia, which now accounts for more than 60% of global production. Lastly, the coal transition risk is being exacerbated by the lack of technological

alternatives that would help drastically reduce its environmental impact. Much is made of carbon sequestration, but implementation costs are very high and only one pilot project is currently deployed in Australia. Large-scale dissemination of this technology currently looks highly unlikely, especially as even that would not settle the issue of CO2 emissions, in contrast to developing renewable energies, whose production costs are now competitive.

ODDO BHF AM: There are an increasing number of obstacles, often labour-related ones, in implementing the transition to zero-carbon energies. What is your view of the burgeoning concept of a “fair transition”? And, more importantly, what solutions could governments implement to make the transition as fair as possible, given that environmental necessity doesn't leave much leeway anymore?

Four Twenty Seven: The concept of a “fair transition”, which was included in the 2015 Paris Agreement, re-emerged with a vengeance last December at COP 24⁷. The host country, Poland, with its more than 80,000 miners and about 80% of its energy generated from coal, insisted on putting this item on the conference agenda. It did so to sound the alert on the labour disruptions that will be caused by the transition to a low-carbon economy, and on the need to assist workers and, more broadly, cities and regions that are closely dependent on fossil fuel production towards a transformation providing a decent future. Despite recent jolts and discontent, developed countries do have the means to help transition these sectors and regions via worker assistance mechanisms. That said, this issue is a huge

⁷ See Glossary

challenge for emerging economies, which, moreover, are most heavily exposed to extreme climate risks. The challenge will be in transitioning jobs, particularly through renewable energies. From this point of view, China and India, for example, have launched massive investment plans that should be structural in nature to better produce a fair transition.



Glossary

Paris Agreement: The first universal climate agreement. It was negotiated at the Paris Climate Conference (COP21) of the United Nations Framework Convention on Climate Change. It was approved by all 195 delegations on 12 December 2015 and came into force on 4 November 2016. It has been ratified by 178 countries and aims to contain global warming “well below 2°C above pre-industrial levels” by the year 2100 and, if possible to “continue efforts to limit the increase in temperatures to 1.5°C”.

CDP: The Carbon Disclosure Project is an international organisation that has developed a system that has produced an unprecedented commitment by investors (managing more than 800 billion dollars) on environmental issues, companies (more than 5600), cities (533), and countries and regions (71) worldwide. The CDP database allows this network to combine environmental responsibility, fiduciary duty, and public interest in making more enlightened decisions on climate action.

Climate Action 100+: A collaborative international initiative to facilitate dialogue with the 100 companies emitting the world’s most greenhouse gases. The goal of the 289 investors committed to date (with more than €30 billion in assets under management) is to lead companies to improve their climate governance by stressing clearly the responsibility of management bodies in reducing greenhouse gas emissions throughout the chain of value and, in accordance with the Paris Agreement objective, to enhance disclosures to investors for a more precise understanding of the risks.

COP: At the Earth Summit in Rio de Janeiro in 1992, the United Nations adopted a framework for action in fighting climate change, the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC includes almost all the world’s countries, which are called the “Parties”. Their representatives have met once each year since 1995 at the Conferences of the Parties (COP).

ETA: ODDO BHF AM has developed an Energy Transition Analysis, or ETA, within its in-house platform. This is a special indicator of each company’s contribution to the energy transition to a low-carbon world.

Eurosif: Eurosif is the main pan-European organisation of sustainable investment forums in various European countries. Its activities consist in promoting best practices and helping to define public policies in sustainable investment.

IPCC: The Intergovernmental Panel on Climate Change (IPCC) is the main international body in charge of assessing climate change. It was set up by the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) in 1988 in order to supply the world with a clear scientific opinion on the current state of the art of knowledge on climate change and its potential environmental and socioeconomic impacts. It currently has 195 member-countries.

UN Global Compact: The United Nations’ Global Pact is an initiative aiming to encourage companies worldwide to adopt sustainable and socially responsible policies. The United Nations Global Pact is a framework for companies with its 10 principles in the areas of human rights, the environment, and the fight against corruption. The initiative includes 13,000 participating companies and other stakeholders from more than 170 countries, with two objectives: "Mainstream the ten principles in business activities around the world" and "Catalyse actions in support of broader UN goals, such as the Sustainable Development Goals (SDGs)."

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About ODDO BHF AM

ODDO BHF AM is part of the independent Franco-German financial group ODDO BHF that was founded in 1849. ODDO BHF AM is an independent asset management leader in Europe. The asset management of the ODDO BHF Group comprises ODDO BHF AM GmbH in Germany, ODDO BHF AM SAS, ODDO BHF Private Equity SAS in France and ODDO BHF AM Lux in Luxembourg, which together manage assets totaling € 54.4 billion.

ODDO BHF AM offers its institutional and wholesale clients a unique range of high-performance investment solutions in all main asset classes, i.e. European equities, quantitative strategies, fixed income, multi-asset solutions, private equity and private debt.

On a combined basis, 59% of assets under management are from institutional clients and 41% from distribution partners. The teams operate from investment centers in Dusseldorf, Frankfurt, Paris and Luxembourg with additional locations in Milan, Geneva, Stockholm, Madrid, Hong Kong, Abu Dhabi and Zurich.

ODDO BHF AM puts the long-term support of its clients at the heart of its priorities. Its independence allows its teams to be responsive, flexible and innovative in order to constantly find solutions tailored to the customers' needs.

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