

# COVID-19 - Final Straw or Deathblow for a Global Coal Industry at the Verge of Collapse

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## Introduction: The status quo of coal

Coal accounts for around a third of global primary energy supply, is mostly (~70%) used for power and heat generation, and responsible for 40% of global CO<sub>2</sub> emissions (IEA 2020a). Within the last years, coal-related businesses have been increasingly exposed to climate and air pollution regulation, local resistance to projects, climate litigation, trade restrictions, and reduced operational margins due to competition with alternative fuels. These policy and market developments have increased the risk profile of coal related businesses significantly resulting in estimated stranded assets ascending to hundreds of billions (Caldecott et al. 2016). Key indicators show the early stages of decline of the global coal industry with coal use peaking in 2014 and showing a plateau since then (IEA 2020a) as well as global coal prices being on a downward trend (Enerdata 2020) (see Figure 3).

In 2019, global CO<sub>2</sub> coal emissions fell by 1.3% – offsetting increases in emissions from oil and natural gas (IEA 2020b). While this is an encouraging sign for global decarbonisation efforts, the scale and speed of the reductions in coal use and production are far from what would be needed to reach global temperature targets agreed on by governments (Climate Analytics 2019; Stockholm Environment Institute et al. 2019). Still, many countries – mostly in the Global South – are planning to expand coal use in the coming decades (Shearer et al. 2020), with current and stated policy scenarios of the latest World Energy Outlook, showing a slight increase or flattening of coal emissions until at least 2030 (IEA 2019).

Within this context, key policy and economic developments in 2020, driven by the ongoing COVID-19 pandemic, can be determinant for the medium and long-term future of coal markets – and therefore also influence the possibility to reach overall global climate targets. Within this perspective, we examine how the pandemic, and subsequent economic recession, will

affect global coal markets and coal dependent countries and regions (see Figure 1). Avoiding mistakes of the post 2008-financial crisis period, however, we believe that this can also accelerate the transition towards a more sustainable development pathway.

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## Effects of the COVID-19 outbreak on the global coal market

The COVID-19 pandemic is an unprecedented global health crisis which causes partial and total lock-downs of countries until 2021. Even in the best-case scenario this will go along with hundreds of thousands of people dying and enormous social and economic consequences for societies. In addition to these direct consequences of COVID-19, also the global economy and energy markets, are largely affected by the pandemic and its countermeasures (affecting once more societies).

The COVID-19 pandemic has resulted in an unprecedented sudden halt of the global economy in spring 2020. National lock-downs and the closure of main industry branches reduced the overall need for labor, products as well as energy. The interruption of international trade and transport furthermore interrupted global supply chains – affecting even those countries and industries that were (not yet) hit by the virus itself. As a consequence, investments are being withdrawn within all areas, but especially from developing countries, generating heavy depreciation of local currencies (IMF 2020).

Increased government spending combined with a global economic recession increases overall debt levels substantially, including major coal producers and exporters. This becomes a problem especially for countries suffering already from high debt levels. Some of these countries have just recovered from the financial crisis of 2008 and are still struggling to achieve their sustainable development goals. Furthermore, fear of massive government debt default, could unleash catastrophic failure of global financial markets.

The unanticipated reduced demand for energy also increases the pressure on international fuel prices. This comes at a time of already low fuel prices due to ongoing discussions among oil producing countries. Some countries (and companies) are more vulnerable to such resulting price shocks. This can be due to higher production costs (e.g. in the U.S), or a higher dependency on fuel rents (e.g. in the Middle East). Fuel price drops

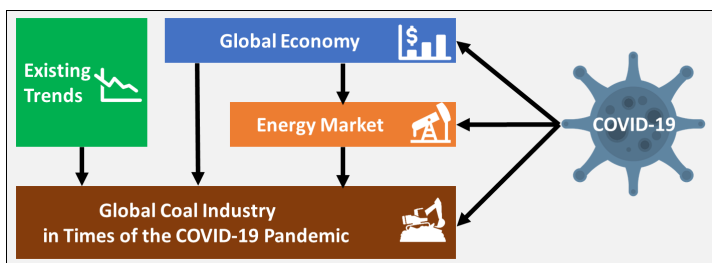


Figure 1: Prospects for the global coal industry in times of a COVID-19 pandemic.

Source: Own depiction.

therefore strongly affect national budgets as well as currency depreciation, and consequently can decrease economic or political stability of countries and regions (Westphal et al. 2019).

The coal industry is therefore already indirectly affected by the global economic recession, reducing the demand for coal (e.g. in the steel industry), the drop of fuel prices which increases the competition (e.g. natural gas as competitor in the electricity market), as well as economic instability in financial markets and national budgets. In addition, also direct effects by the COVID-19 pandemic can be observed as mining and power plant activities around the globe were reduced and in some cases even stopped to limit the spread of the virus (see Figure 2):

The U.S. is estimating a 20% reduction of coal production and consumption for 2020; in April 2020 European countries are observing electricity demand reduction of 10-40%, Hubei province in China still observes a 30% electricity demand drop; India's coal consumption in March was reduced by 30%. In addition, the construction of coal power plants was delayed due to shortages of workers, resources or financial reasons, comprising of more than 13 GW of delayed capacity in South and South-East Asia alone (Global Energy Monitor 2020).

These negative effects will keep global coal prices at their current low levels and might even result in a temporary downturn. Coal prices have already declined 8% y-o-y in 2019 due to declining demand in the OECD coupled with flattening demand in China not compensated by increases elsewhere. Since the COVID-19 outbreak, thermal coal prices have remained resilient, although at low levels, amid sharp losses in other fossil-fuel markets.

Further trade restrictions, predicted continued oversupply in the seaborne coal market, as well as disruptions in the supply chain are expected to have a negative impact on international coal prices (Kalb and Sands 2020). This leaves coal exporting countries on a very risky position, given their high dependence on coal revenues and royalties.

The COVID-19 pandemic will reduce global energy as well as coal demand in 2020 substantially and increase competition among the fossil fuel industry. However, coal's midterm perspective hereby strongly depends on the duration of the pandemic as well as on different possible economic recovery strategies.

Experiences from previous (economic) crisis, however, show that the economic performance – and emission levels – could return to its pre-crisis levels within a couple of years. China, appearing to have already passed the first wave of its COVID-19 crisis, is trying to reboot its economy also through the construction of new coal power plants resulting in 8 GW of additional new coal capacity in March 2020. (Global Energy Monitor, 2020).

The uptake of the continuously rising share of renewables, however, will be determining the fate of all fossil fuels. Neither oil nor natural gas are compatible with the vision for a carbon-free economy. Their consumption levels, however, appear unlikely to change too much within the next ten years (IPCC 2018). The prospects for coal, on the other hand, look much more pessimistic (see Figure 2).

### Upcoming challenges for coal Prevailing challenges for the international coal market

		Short-term effects (2020)	Medium-term effects (2021-2025)	Long-term effects (2025+)
Global Economy	Globalization	Global shut-down	Ongoing travel and trade restrictions	National critical infrastructure build-up
	Economic Growth	Global recession	Ongoing recession in some countries	Uptake to previous growth rates
	Emissions	Strong reduction due to recession	Reduced reduction depending on economic uptake	Climate policies might halt emissions despite economic growth
Energy Sector	Energy Demand	Strong reduction due to recession	Reduced reduction depending on economic uptake	Uptake to previous rates
	Gas & Oil Demand (& Prices)	Strong reduction due to recession and lower energy demand	Stabilization in low-medium range (aviation will stay low; disunity of producers)	Stabilization in low-medium range (climate policies)
	Renewables Installments	Reduced investments due to recession	Competition by reduced fuel prices; high upfront investment costs	Innovation lowers prices; supportive climate policies
Coal Industry	Coal Demand (& Prices)	Reduction due to recession and lower energy demand	Competition with other energy carriers, reactivation of supply and trade chains	Competition with other energy carriers and climate policies
	Investments in New Infrastructure	Halted due to recession, delays in projects under development	Divestment increases, focus on exploiting existing mines, power plant projects cancelled or shelved	Continuous divestments, except domestic production and cheap mines
	Coal Regions and Workers	Halted productions and job losses; reduced fiscal revenues for export-dependent countries	Continuation of open mines, but hardly any new investments; changes in employment and economic structure	Coal phase-out begins with various degrees of national support schemes for a just transition

Figure 2: Summary of main trends: Short-, medium-, and long-term effects of the COVID-19 pandemic on global economy, energy sector, and coal industry.

Source: Own depiction.

Even before the COVID-19 pandemic crisis, the global coal industry was already facing some fundamental challenges resulting in narrowing operational margins for coal related businesses both on the supply and demand side (Oei and Mendelevitch 2018). COVID-19 is likely to exacerbate all these key challenges

Starting with the World Bank in 2013, and growing fast after 2015, the list of financial actors that have enacted anti-coal policies is now very significant, with combined assets ascending to trillions (see Figure 3) (Buckley 2019). As a result, less capital is available for coal related businesses and the risk profile of coal-related businesses is much larger (Mercure et al. 2018). Moreover, there is the increasing awareness of importance of climate change risk management, and climate finance (Asia Investor Group on Climate Change et al. 2019). Consequently, considerably less capital at higher interest rates is available for coal related businesses. The focus of investors during and after the COVID-19 pandemic will therefore lie on maintaining current operations, but in most cases be difficult to

finance new mining or coal power plants projects.

Also the financial situation of important coal companies has deteriorated continuously in last years, both on the supply and demand sides (Michalak 2017): Rio Tinto sold its last coal mine already in 2018; in 2019 additional announcements came from BHP to exit thermal coal operations in Australia and Colombia; Anglo American to move away from thermal coal and reduce its thermal and metallurgical coal production plans; and Glencore to start aligning its business model with the Paris Agreement (Umar 2020). This precarious financial situation of coal companies, combined with capital scarcity will make it difficult for the industry to find financial support in times of crisis.

Another fundamental challenge for coal-related businesses globally, is the increasingly grim outlook for long-term coal demand. Since 2015, 170 GW of coal power generation have retired, a trend that is expected to continue in the next decade, while the global coal power plants pipeline has shrunk 74%, with hundreds of projects being shelved or cancelled (Shearer et al.

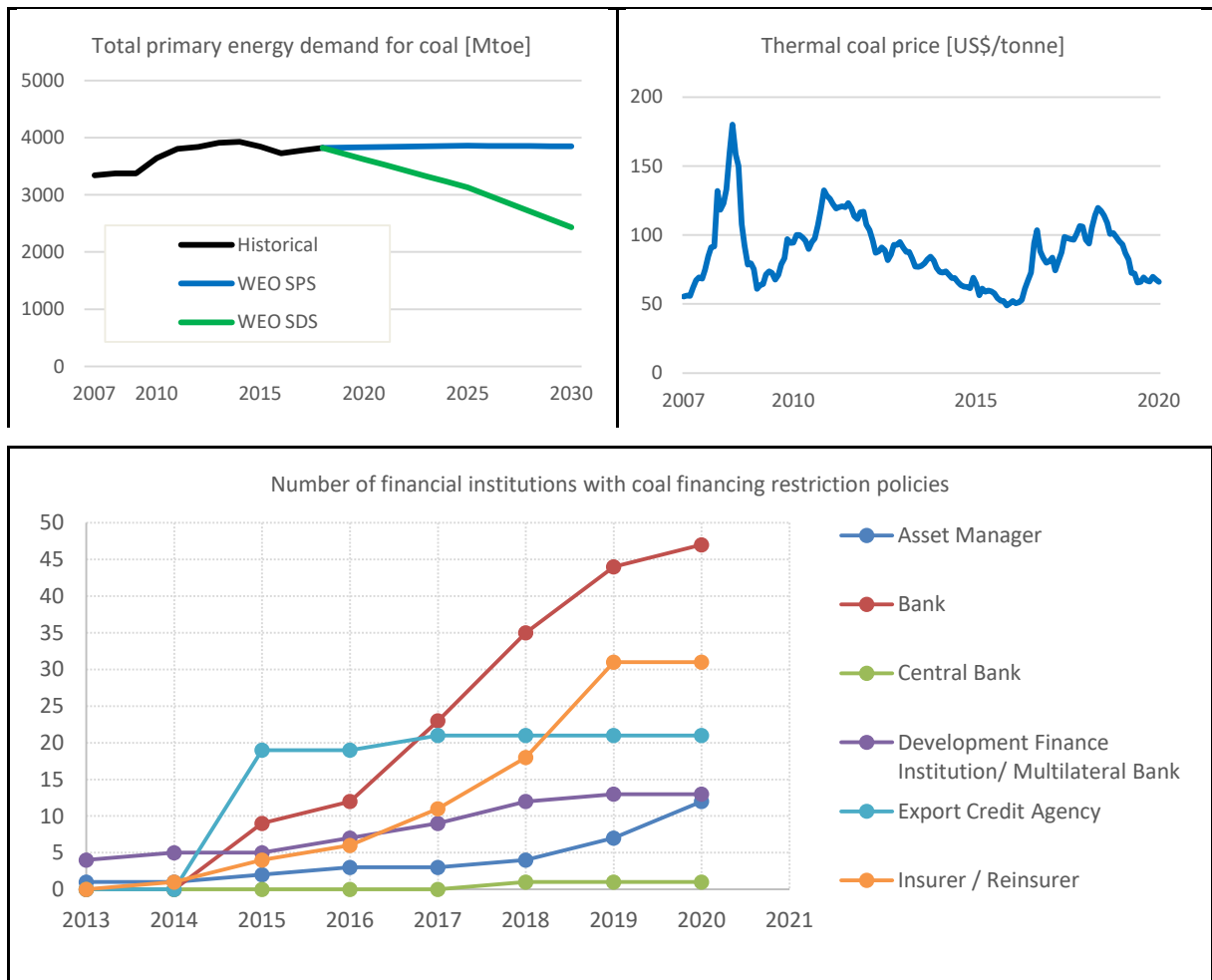


Figure 3: Status quo and prospects of coal in 2020

Source: Own depiction based on IEA data, IndexMundi.com and IEEFA database. Note: Global primary energy demand from coal, historical vs World Energy Outlook 2019 scenarios (top left); Thermal coal price (FOB, US\$/metric tonne) at Newcastle, Australia (top right), Overview of number of financial institutions with coal financing restriction policies by type of institution and year of

2020), and coal demand projections (e.g. IEA World Energy Outlook) have been systematically corrected downwards. Updated negative GDP growth projections will likely result in a much larger decline in coal demand than expected only a few months ago (IMF 2020). Moreover, growing intentions of key global players to focus their recovery and stimulus packages in the promotion of a 'Green Deal' and clean energy could speed-up already discussed coal phase-out plans, both for thermal and metallurgical coal.

On the demand side, investments in new renewable energy capacity have surpassed coal in all relevant markets for several years already; since 2019 also around 60% of the global coal fleet is outcompeted by renewable energy even in terms of operating costs (Carbon Tracker Initiative 2020a). Consequently, 60% of the operating coal capacity will be cash flow negative by 2030 under competitive market conditions (Carbon Tracker Initiative 2018). While lower fuel prices could provide an incentive for increased use of coal power plants, carbon pricing, air pollution standards, and lower prices of alternative fuels make it unlikely that we observe a reversal of current negative trends on coal power generation, unless active government intervention in favour of coal is executed. Consequently, estimates by Carbon Tracker (2020) suggest that the impacts of COVID-19 on the economics of coal power plants would be very limited and in 2020, roughly half of the operating coal fleet globally will be cash negative.

### Avoiding mistakes from post-2008-financial crisis times

As a consequence of the 2008 financial crisis, the thermal and metallurgical coal market experienced a significant slowdown, with coal demand eroding, prices plummeting, and growing project financing costs (Rademacher and Braun 2011) (see Figure 3). Global coal demand (and prices) only bounced back in 2010 driven by strong Asian demand. Expectations of continuous growth of demand spurred investments by coal companies in the post-crisis period in mining activities, but also asset acquisitions (IEA 2012). However, already in 2012, prices started to decrease again and the expected further growth of demand did not materialize. Left with large debt from prior asset acquisitions, many coal companies went bankrupt (Mendelevitch, Hauenstein, and Holz 2019).

Betting on post-crisis economic upturn after COVID-19 and investing in coal resources could lead again to massive amounts of wasted capital as the industry has a clear negative mid- and long-term outlook and would therefore not be sustainable investment. Although the coal industry was struggling already before the COVID-19 pandemic, it is attempting to get funding or other benefits from stimulus packages (e.g. preferential credit or direct cash transfers) and lobby for relaxation of environmental standards. A second observable strategy is the

attempt to socialize (e.g. nationalize) coal industry's losses and privatize their wins (e.g. request of tax or royalties exceptions, massive dismissal of formal and informal workers justified on the crisis, or accelerated bankruptcy submissions).

### Conclusions and Policy Recommendations

With global coal use and emissions showing a peak and plateau after 2014, we argue that the 2015 Paris Agreement marked a no-return point for the global coal industry, which since then has entered into the early stages of a long-term decline. Some of the key challenges and trends that indicate evidence of this inflection point for the global coal industry include: decreasing capital availability and increasing risk profile; negative outlook for future coal demand; uncertain outlook for international coal prices; and deteriorating operational and financial indicators of coal-related businesses.

The coal industry is being hit directly by COVID-19 in times where it already suffered from economic stress and political pressure for environmental and climate reasons. In addition, health problems and pollution caused by, among others, emissions from coal power plants might worsen negative health effects of the pandemic. All of this will make it difficult for the industry to find urgently needed financial support in times of crisis. Moreover, direct and indirect effects of COVID-19 are likely to exacerbate all challenges the coal industry is already facing.

Unlike after the 2008 financial crisis, now virtually all the countries in the world have ratified an international Climate Agreement, and have enacted national greenhouse gas emissions reduction targets. Under these new circumstances, it is likely and highly beneficial that countries and multilateral organizations focus much more in green investment recovery packages than in the recovery of the 2008 crisis. With this, the COVID-19 crisis and its aftermath could be a golden opportunity to accelerate global coal phase-out and bring global decarbonization and just transitions efforts substantially forward.

However, mistakes from the past must be avoided and concentrated policy efforts will be needed to deal with the economic and social consequences of this dying industry, in particular in coal-dependent countries and regions, where the crisis will hit especially those at the bottom. Stimulus packages should be designed (and justified) in a way that proves how it contributes to longer-term efforts to decarbonize national economies and meet the sustainable development goals.

Concrete policy recommendations for the coal sector should therefore include:

- Incentivize alternative industries in coal regions and start planning for a time after coal (taking advantage of the increased awareness of the vulnerability of coal-dependent regions and the inevitable decline of coal).

- Focusing public resources in coal-dependent regions on mitigating the effects of the crisis on the most vulnerable (e.g. making aid packages to coal companies conditional on maintaining employment, social security, and health and security of the employees).
- Reconsider all investments in new coal infrastructure, including coal power plants and mines, by – at the very least – withdrawing public funding for them.
- Revising carefully aid requests by the coal industry, to distinguish the relative importance of COVID-19 related issues, compared to other market trends, and financial and managerial decisions, and communicating transparently the decisions about resource allocations.
- Derogation or weakening of environmental standards and regulations (e.g. air, water and soil pollution standards) should not be considered as crisis-relief measures.
- Make fund transfers or tax exemptions (e.g. accelerated depreciation schemes) conditional on plans to phase-down emissions from the sector in the medium and long term.

Following these policy recommendations, the aftermath of the COVID-19 pandemic can help to enable a successful energy transition and at the same time redirect formerly coal dependent regions into a more sustainable future – even if this will mean a deathblow to an already dying coal industry.

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