

WHAT ENVIRONMENTAL CHANGE MIGHT MEAN FOR COMMODITY TRADERS



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“ Different sectors across the world, from agriculture to mining, are being disrupted by clean technologies, environmental regulations, and changing social norms. Assets and operations are also being buffeted by increasingly regular and more intense extreme weather events and other consequences of a changing climate. These societal trends and environmental impacts will have significant implications for physical commodities traders.

This is an intensifying feedback loop: current and anticipated physical environmental change is driving an ever expanding and deepening range of societal responses. The Paris Climate Change Agreement, secured to great acclaim in December 2015, is perhaps the highest profile example of a collective response to physical changes in our environment, but it is by no means the most important.

For all the press coverage, no international climate change agreement will ever directly impose or enforce a limit on the amount of carbon emitted into the atmosphere by countries and corporations. Instead of ‘top-down’ international targets and enforcement, a ‘bottom-up’ transformation is already well underway, with a panoply of different local and national factors promoting the shift to greater environmental sustainability. If anything, the Paris Agreement backstops this process by mobilising bottom-up commitments and creating mechanisms for these to be ratcheted up regularly over time.

The drivers of change regionally are diverse and have multiple causes – climate change concerns are just one among many factors. In the case of power generation, thermal generators in Europe (often a guide to what might happen in other power markets) have been suffering significant write-downs not because of emissions regulation or carbon pricing, but as a result of several interlocking factors, in particular the unexpectedly rapid deployment of low-marginal cost

renewables driving down wholesale electricity prices and the shale gas revolution resulting in a glut of cheap US coal in Europe undermining the competitiveness of brand new gas plants.²

In China the causes of write-downs in thermal generation assets are different, but no less significant. Air pollution in the major coastal cities is resulting in the closure of coal-fired power stations, with these either being replaced by other generation technologies or being relocated far inland in significantly less populated areas³. In India new thermal coal power-stations are being mothballed due to drought and the lack of water available for cooling⁴. In Australia, ageing coal plants have suffered from extreme heat affecting their efficiency, reliability, and profitability⁵.

In all these countries renewables deployment has grown and continues to grow significantly, with small-scale modular technologies such as solar PV relentlessly eroding incumbent utilities’ market power. Even after the collapse of the 2009 Copenhagen climate talks clean energy investment exploded (USD\$1,462 billion in cumulative new generation investment from 2010 to 2015⁶), the price of renewables has fallen dramatically (59 percent for solar PV over the same period⁷), and the world is now adding more capacity in renewable power each year than coal, natural gas, and oil combined⁸. The emergence of battery storage, which also benefits from the steep learning curves associated with being prefabricated and easy to install, are making renewables even more attractive.

The automobile industry is also experiencing structural change, with environmental concerns at the centre. Anxieties about diesel pollution and carbon emissions from road transport have been developing for some time, particularly in Western Europe, but last year’s emissions scandal elevated the issue significantly. This is resulting in stricter regulations and greater government incentives for cleaner alternatives.

Innovation focused on incremental improvements to conventional internal combustion engines has been diverted towards hybrid electric and battery electric vehicles, resulting in significant cost reductions,

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particularly in batteries. This process is opening up a sector with notoriously high barriers to entry to major new players, such as Apple and Tesla. The stabilisation and decline in car use and ownership, particularly among younger people and in urban areas across the developed world, is also significant. It is changing the ownership model that has underpinned the automobile industry for a generation. Shared ownership could emerge as the norm, changing preferences for designs and potentially significantly reducing the total number of vehicles on the road.

These developments in both power and mobility have important knock-on effects. Changes in technology have direct ramifications for the demand for natural resources in manufacturing (e.g. steel, aluminium, copper, lithium), fuel (e.g. oil, gas, coal), and products across the supply chain (e.g. batteries, electric motors, car furnishings), as well as for physical infrastructure (e.g. fuelling, charging, intelligent sensors and computation) and logistics (e.g. shipping, grid infrastructure, gas pipelines). There are also significant implications for corporate business models and financial institutions investing in or providing products and services to affected sectors.

The importance of these changes should not be underestimated. Nor should their likely non-linearity. The evidence suggests that these trends are accelerating rapidly and are feeding off each other. For example, increasing scale deployment of batteries in car manufacturing (e.g. Tesla’s ‘gigafactory’) will lower the cost of battery storage in the power sector – a key development that would address the intermittency of renewables.

Moreover, the already significant drivers of change discussed above will likely unleash other factors too. For example, societal expectations of cleaner air could increase, particularly as cities get rid of diesel and deploy electric vehicles, putting further pressure on car manufacturers. Anecdotal evidence that many students at leading universities are reluctant to work at fossil fuel companies, suggests that these firms may be starved of talent which would affect long-term performance⁹. Perhaps more importantly in the short- to medium-term, such stigmatisation can increase the cost of capital and increase the likelihood of regulation¹⁰. Finally, judicial systems are mirrors to society, and we are already seeing legal actions against fossil fuel companies that could become material in three key areas: their role in causing climate change; failing to report climate change risk; and improperly managing such risks, even if they are reported¹¹. While some of these legal avenues seem highly speculative, they are sufficiently concerning to be have been highlighted as a risk to financial stability by the Governor of the Bank of England¹².

So what could a future ‘proofed’, or at least future ‘resilient’, strategy look like for a physical commodities trader?

There are three key pillars. The first is to avoid cognitive biases, particularly the tendency to discount these developments and to assume there is ample time to adjust. The pace of change, particularly in energy, suggests that the point at which renewables make up all the increase in global energy supply and fossil fuel supply starts to fall is less than 10 years away¹³. Upstream oil and gas producers claim that this tipping point is 25 to 70 years away, but the facts on the ground are getting away from their assumptions¹⁴. Demand growth expectations based on the last commodities super cycle and data points from the 20th century will not be a good guide to the future¹⁵.

The second pillar follows from the first, which is to shift focus to reflect a changing commodity demand landscape. The transition underway is the most capital intensive ever in human history and will require an abundance of different metals and minerals, but some areas will face structural decline (such as thermal coal) and others will grow quickly as changing industries reshape demand.

The third pillar is to run shipping and associated logistics sustainably – both to maximize efficiency and to minimize exposure to regulatory risk and societal stigmatization. The upsides are real and can be achieved with short-payback periods, while the risks of inaction are uncertain, but can materialize quickly and cause significant and long-term damage. The costs of improving efficiency can be passed on to contractors (and captured by them too), but to spur the market counterparties need to better differentiate between vessels and hire accordingly. Part of this also requires traders to communicate their preferences and standards to the market, helping to shift shipping company investment and scrappage decisions in favour of sustainability.

The vast majority of firms will be reluctant to adapt – there are sunk costs and it is very easy to discount the future or postpone a decision. The firms that adapt and do so early have a good chance of flourishing in a significantly altered operating environment. This is a once in a generation opportunity and one that should be grasped – it also has the upside of helping to resolve the great environmental challenges now confronting humanity. Every sector and every corporation has a role to play.

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