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# Sustainable Investment Strategy

## The impact of geopolitical shifts on energy and agriculture markets

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### SUMMARY

A little over a month ago we wrote [Shifting to a more sustainable world: Energy](#) and opened the essay with a reference to the film *Don't Look Up* highlighting the difficulty in spotting near term risks even as they loom large on the horizon. We cannot now reflect on those opening sentences without acknowledging that we, like most of the world, could not have imagined the rapid shift in the geopolitical situation that is taking place.

The conflict in Ukraine has shifted long standing relationships and supply chains, disrupted markets, and changed expectations. A combination of sanctions against Russia and the direct disruption of food production that we see in Ukraine, has resulted in surging energy and agriculture prices. In the weeks since that report was published, oil prices surged and collapsed as a result of broken relationships and supply chain issues, leading to self-sanctioning in the oil market. In addition, the high demand and volatile price of natural gas, a raw input in synthetic fertilizer, has driven up fertilizer costs which will mean higher costs for farmers around the world and ultimately can lead to food inflation. Exasperating the problem, Russia is a major low-cost exporter of fertilizer. Today, the world must assess and employ adaptation strategies to meet the energy and food demands not of the far future, but of tomorrow and the week after.

### Energy

For energy, this creates two separate and seemingly opposite potential opportunities. In the near term, there are trading and expansion opportunities in traditional fossil fuels in parts of the world far from the conflict. At the Global Investment Committee's (GIC) most recent [meeting](#), we added an overweight to oil field services due to the fact that a large amount of the existing oil supply is most likely going to need to be replaced rapidly with alternative supply. And yet in [Quadrant](#) we discussed how this same interruption may lead, in the longer term, to an even faster green energy revolution. The EU's 27 heads of state met on March 11<sup>th</sup> and signed the "Versailles Declaration," laying out not only the rearmament of Europe, but also the goal of becoming autonomous in terms of energy and food.

We see three ways markets and investors may interact with the disruptions from the war. The first is in energy markets themselves, but as we have seen in recent days with the shocking surge in oil prices and subsequent

collapse, prices are higher following the start of the conflict in Ukraine, as well as volatility. Stepping back from the extreme volatility of commodities markets we still see near term potential opportunities in oilfield services which are crucial to building out the near-term supply of oil in the US and other portions of the world far from the conflict. This highlights the impact of energy price shocks on the developing world, and particularly on those individuals who suffer from energy insecurity.

We believe, while in the near-term shifting sources of oil is the only way to meet the energy needs of the world (and the shift from one supplier to another of oil is inherently carbon neutral), but ultimately this may be an opportunity with a finite time horizon. While the world cannot power itself with pure green energy today, it also cannot power itself with fossil fuels indefinitely. As such we note that one way to position around the disruptions from the conflict in the longer term is to buy and hold portfolios that help build the green alternative energy supply of the future. Long before Europe declared energy independence a strategic goal for defense, we saw [greening the world as an unstoppable trend](#) and a key opportunity for investment. And now we find that the trend is only accelerating as we see by Germany's commitment to move its Net Zero targets up by two decades.

We do not see the realization of Europe as isolated, but rather it is now more obvious than ever that governments around the world cannot ignore the national security implications of concentrated fossil fuel dependences on other states and regions. We expect new mandates as well as government dollars to support R&D as well as direct investment in alternative energy products and projects that can help countries decrease their risks to having energy supplies used as weapons in economic conflicts.

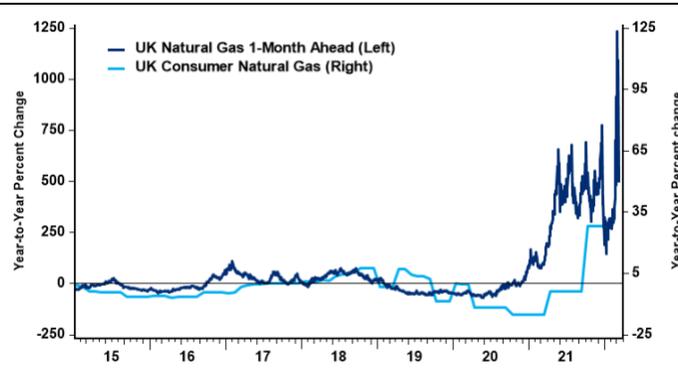
Adding these pushes to the already insurmountable logic of energy transformation accelerates our timeline for the end of fossil fuel dominance for power grids around the globe. Likewise, any short run shortages in fossil fuels that prop up energy prices will boost demand for the new energy solutions that are currently available. These high prices and national interests aligning will likely accelerate cutting through red tape and bureaucratic processes that have slowed down the green energy transformation. We doubt Europe will be the only part of the world that reevaluates the role of external oil dependence in light of national security. China already has limits on the concentration of supply in oil imports than can come from any one country.

The early 2021 slowdown in performance of alternative energy has left potential opportunities in that space more attractively valued than they were a year ago, and the geopolitical developments have accelerated demand for decarbonization and, at minimum, energy independence.

### **Higher Fossil Fuel Prices are Good for Alternative Energy (Volatility Can Be Better)**

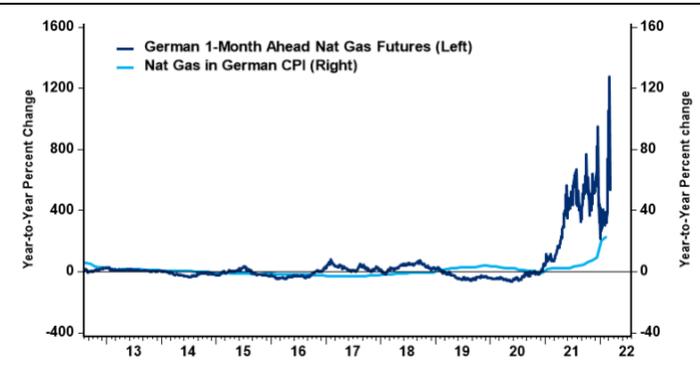
Prior to the conflict in Ukraine winter depleted stockpiles combined with cold weather to drive natural gas prices to then unimaginable highs that sent shock waves through national markets. And because in most developed countries regulations place limits on how much can be passed on to consumers, despite huge consumer price shocks either distributor companies or governments have been on the hook for the higher energy bill (see Figure 1 and 2). In the UK for instance from the start of 2021 through February 18<sup>th</sup>, just days before the start of the conflict, roughly 30 energy distributors had gone out of business as regulations had limited the price that could be passed on to consumers, while free markets set sky high input costs for producers. Even now backstop deals and risk sharing agreements have sent these unprofitable customers on to other suppliers who face the same existential crisis, and the prices for natural gas have risen to multiples of their prior levels. At its highest, German natural gas futures were up 1,227% year-to-year as markets scrambled to match supply and demand.

**Figure 1: UK open market natural gas prices and consumer prices for natural gas**



Source: Haver Analytics as of March 15<sup>th</sup>, 2022.

**Figure 2: US open market natural gas prices and consumer prices for natural gas**



Source: Haver Analytics as of March 15<sup>th</sup>, 2022.

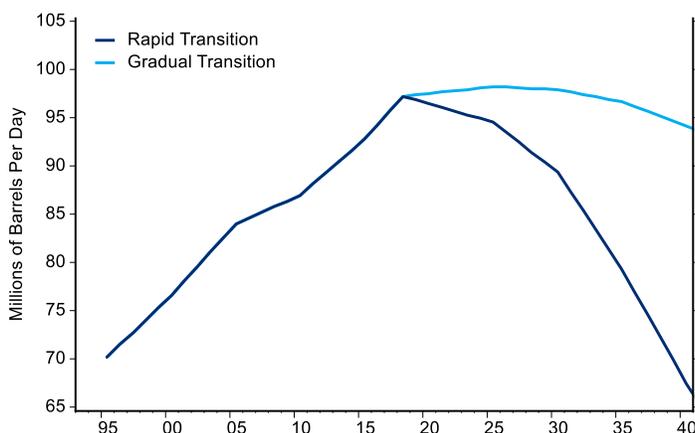
In the short run this poses a threat to utility company solvency, but in the longer-term firms will either seek ways to pass costs and risks to consumers (threatening a just energy transition and reelection risks for politicians) or to governments themselves. These are costs that are simply too high to be assumed by customers. Even in the US, which was insulated against the worst surges from the global natural gas crisis, a collection of state run and regulated private suppliers have not been able to raise consumer prices of natural gas enough to sufficiently compensate distributors for the record high input costs that they have had to purchase.

When we contrast this to the volatility of the price of wind or sunshine it is clear why many energy suppliers are increasingly adding renewables to their portfolios of power sources. While in some sense the price of wind and sunshine is clearly a jest, as the cost of renewables is in the technology that makes use of the sun and the wind, it has a serious side as well. Once built, renewable energy projects have minimal input cost risk. While they, like their traditional energy competition, face market price risk for the energy they supply, they do not face the same risk to a change in input costs. As the recent closures highlighted above in the UK makes clear any power project that uses fuel inputs that does not account for volatility in assessing long term costs of energy is at risk of sudden insolvency.

**Why the Energy Transformation Will Mean More Volatile Fossil Fuel Prices**

Take for example the transition from internal combustion vehicles to electric vehicles (EV). There will be many key moments of transformation, but probably the largest will be when we see peak gasoline demand. As the transformation of electricity demand from EVs progresses there will be a moment when global oil demand starts to contract. Even looking at the energy outlook of BP plc (see Figure 3), which has every incentive to maintain business as usual, their outlook with a slow energy transformation is that oil demand has basically peaked at the current level, and in the case of a rapid transition to alternative energy demand is likely to collapse and face years of decline.

**Figure 3: BP Global energy outlook for rapid and gradual transition in oil demand scenarios for the next twenty years**



Source: Haver Analytics as of February 5th, 2022. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

It may not be obvious why falling demand means greater volatility, but we will be watching the oil markets with their strong ties to national wealth and prosperity deciding how to carve up an ever-shrinking pie. This means declining national revenue to states that have become dependent on high energy prices and avoiding a durable collapse in oil prices will require careful calibration of supply to match demand from the managed suppliers in OPEC+. If they oversupply, prices will collapse and if they undersupply prices will temporarily jump – and US frackers and other marginal suppliers will gain market share. So far OPEC+ has shown a strong willingness to restrict supply to maintain higher prices and has even avoided changing output figures in response to the recent market surges. In effect oil producers will take on the role of a central bank, trying to keep oil prices at a level that balances the needs of national budgets, but also doesn't rise too high to attract competition from new oil suppliers and renewables. A crucial corollary is the transition to alternative energy will be faster than in an unregulated market, as continuously falling oil demand will be met with punctuated drops in oil supply, so falling prices will not spoil the cost advantage of improving green energy technology.

This bears repeating in a free market where falling green energy prices would mean falling prices for their competitors which would place a speed limit on adoption with green energy always roughly the same price as fossil fuels. But oil prices are likely to be kept artificially high by cutting supply to match demand to avoid declines in price. This cartel style behavior will help national treasuries to be maintained and likely allow for a smoother transition for countries and companies that need to remodel their economic model to face a post oil future. But it also could be surprisingly good for the environment. If the oil price was governed by a free market every improvement in EV technology and green energy production would be met with a moderate decline in the price of oil which would keep traditional Internal Combustion Engines (ICE) roughly price competitive with EVs. Instead, oil prices will likely be held up, helping EVs to fall well below ICE engines in total cost of ownership. Because there is such an enormous fleet of existing vehicles it will be better for OPEC and other oil producers to enjoy reasonably strong prices while the technology changes than to slow the energy transformation with prices that they can barely break even with.

The dynamic between green energy and different fossil fuels is truly unusual, with a modest positive correlation (see Figure 4) between the price of West Texas Intermediate (WTI) oil and the MSCI Global Alternative Energy index over the past 4 years. This makes sense as both sectors have global economic activity as a key determiner of demand, and as we saw above the cartel style behavior in the oil market will tend to keep oil prices high and thus also support demand for alternatives. In contrast the relatively unregulated natural gas price has had a negative correlation to alternative energy stocks, this comes as something of a surprise as presumably sky-high natural gas prices will help drive alternative energy in the longer run.

**Figure 4: Correlations between monthly changes in alternative energy stocks and fossil fuel prices**

	MSCI Global Alt Energy	WTI oil
MSCI Global Alt Energy		<b>0.16</b>
WTI oil	<b>0.16</b>	
Natural Gas	<b>-0.13</b>	<b>0.24</b>

Source: Bloomberg as of February 5th, 2022. Note: Correlations are run on monthly percent changes from January 2017 to through January 2022. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

## Carbon

In our last [piece](#) we also discussed the role of the price of carbon contributing to the volatility in both fossil fuel prices as well as the global energy transition. We discussed two driving forces at play on this: (1) the actual price of carbon regulated under schemes such as the EU ETS, and (2) investor and consumer demand for companies to report on all of their emissions with greater standardization. The crisis brings up a third force, the disruption in the supply of energy highlighting the need for energy independence.

As the crisis in Europe unfolded, the price spike in oil disrupted the essentially one way move in EU ETS prices since Phase IV of the scheme was implemented in early 2021. While the move can partially be attributed to an overall de-risking in markets, there were some concerns that industrials who rely heavily on carbon allowances to facilitate their businesses, would pare back operations as a result of the spike in oil prices and therefore raise cash by selling excess allowances. However, the market quickly reversed with a view that this is a temporary dislocation and that the EU's determination that carbon markets will continue to be used to incentivize companies to reduce overall emissions. Investors who are rooting for lower emissions don't want to see the price rise due to increased demand on fossil fuels like coal to replace the disruption in cleaner sources of energy, such as natural gas, but rather from the continued commitment by the EU to reduce supply of allowances. On an accelerated timeline to move away from fossil fuel energy, this could mean that elevated carbon prices are more temporary as companies reduce emissions more rapidly, now as a result of two driving forces: energy independence and the rising cost to emit.

## Agriculture

With so much of the world's food and fertilizer coming from Ukraine and Russia, [Qu Dongyu](#), Director-General of the Food and Agriculture Organization of the United Nations (FAO) warns us that the disruption in agriculture activity in the region could escalate food insecurity globally. [According to the FAO](#), approximately 50 countries, many being the least developed in Northern Africa, Asia and the Near East, are dependent upon Russia and Ukraine for over 30% of their wheat supply. Furthermore, many European and Central Asian countries attain over 50% if their fertilizer from Russia. The conflict could result in a steep increase in the cost of wheat and disrupt the food supply of low-income countries already struggling with food deficit.

As with energy, the conflict emphasizes the need to localize and invest in technological innovation to increase food production. We must come to terms with the fact that it is not sustainable or safe to rely on small areas of the world for agriculture and energy production. Geopolitical conflicts along with weather and yield variability related to climate change is destabilizing food supply.

In the short-term, countries are seeking out existing supplies. But in the long run, either there must be an increase in the amount of land that is cleared for food production or a shift in how we produce food. Similar to fossil fuels, there is only a finite amount of land and clear cutting more land comes at a high environmental cost. Alternatively, technologies such as vertical farming fed by solar power, robots and digitalization, biological fertilizers, and

cellular agriculture can boost food production, enable decentralization and is already a focus for AgTech companies around the globe. Much like the global energy transition, climate change and geopolitical events will shape the future by accelerating adoption of AgTech to safeguard global food supply.

## CONCLUSION

Climate change, food, and energy security will always be inextricably linked to the geopolitical struggles of the day. Relatively small shifts in climate that have occurred so far have already triggered mass migrations and political dislocations. Famines and shortages of water as well as threats to energy supply are classic causes of wars through human history, and sadly it is unlikely to be different in the future. That said, investments in sustainable food and energy solutions have the opportunity to not merely profit from the inevitable changes in how the world feeds and powers itself, but also remove some of the pressure that could contribute to future conflicts.

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