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Carbon Conscious Investing in Oil & Gas – A Case for Carbon Offsets
By Steffen Dietel and George Nadda

Introduction

ESG investing makes a lot of sense. Companies with strong governance, which are mindful of their environmental footprint and social responsibility, stand every chance to financially outperform rivals that ignore these topics. Altana recently signed the Principles for Responsible Investing instituted by the United Nations (UNPRI) and when it comes to the underlying ideas behind ESG, we fully endorse them.

But how do we square that with a portfolio that is invested in fossil fuel related securities in the offshore oil & gas services sector?

While we do have issues with how ESG is implemented, monitored and sold to investors we believe the oil & gas industry can play a valuable role in the process towards a net zero carbon economy. To our mind there is no inherent contradiction between the concept of ESG based investing and investing in fossil fuels.

But the oil & gas industry does have some serious issues to overcome.

The Problem

There is now an almost uniform global consensus that the world needs to become carbon neutral by 2050 to avoid a potentially catastrophic rise in global temperatures. It is also crystal clear that this will not be possible in the current system where fossil fuels provide about 80% of the world's primary energy. The goal is to provide as much energy as humanly possible from emission free renewable sources and find mechanisms to neutralise unavoidable CO2 emissions.

This opens up endless investment opportunities in exciting technologies and has been supported by the enthusiasm of capital markets that have been lavishly rewarding disruptors over the last few years. One of the few certainties in energy is its extremely high capital intensity. Historically all energy transitions, from wood to coal to oil and natural gas have taken an age. The incumbent technology has the advantage of existing infrastructure that the disruptor still needs to build up. The levelized cost of energy (the total cost over the lifetime of an energy project) may already be in favour of renewables like solar and wind.[1]

However, we do not, indeed cannot, rebuild our energy infrastructure from scratch every year. As a result, assets running on incumbent technologies using existing infrastructure will continue to have a significant economic advantage until they reach the end of their economic lifecycle.

[1] Levelized Cost of Energy and Levelized Cost of Storage – 2020 - Lazard Perspective

While global economic growth has become less energy intensive, primary energy demand will continue to grow for some time[2]. The job at hand not only involves shifting existing consumption from fossil fuels to renewables but also accommodating significant growth in overall energy demand from billions of people in the developing world, a truly gargantuan task. The standard ESG logic applied to tackle this task is almost completely focused on the final destination: cut links to fossil fuels; invest in renewables and applications such as electric vehicles that reduce reliance on fossil fuels. There is nothing wrong with this logic; every Euro, every Dollar invested to facilitate this transition is good news.

What we do question is the hostility towards all oil & gas assets. It does not make sense.

Questioning that logic does not mean we do not understand where it comes from. The fossil fuel industry and many large oil & gas companies, in particular, have gone to great lengths to discredit and question the science behind global warming and spent huge sums lobbying against measures aiming to tackle CO2 emissions. They fully deserve the sin bin they are in.

However, our advice to climate activists is: “You have won! Not just the debate over climate science but, even more importantly, the fight for investment money” [3]. This victory is so comprehensive that we are seeing developments that could be detrimental to the cause.

Given that fossil fuels still dominate today’s energy landscape it is vital that a responsible investor base holds the industry accountable for the role it needs to play in the energy transition[4]. Not to protect an untenable status quo but to ensure they contribute their fair share to true emission reduction. We meet very few energy investors, including those mostly focused on renewables, who doubt the protracted timelines for an energy transition. The world is awash with bold emission targets for 2050 but has only very modest ambitions over the next ten years.

This means a substantial amount of oil & gas will be needed for the foreseeable future. If the transition away from fossil fuels is going to follow a gradual path it makes sense to focus on minimising the CO2 footprint associated with it. Scope 1 and Scope 2 emissions, which are responsible for approximately 15% of emissions linked to oil & gas use, are defined as those emissions that are directly linked with the extraction of oil & gas as opposed to Scope 3 emissions, the emissions generated by end users[5]. Stopping the routine flaring of natural gas or controlling methane leakage is relatively easy and would make a measurable impact over the next five to eight years. In the offshore service space ADOF invests in, it is about vessels reducing emissions by using battery packages or alternative fuels[6]. Drilling rigs can use battery power to operate in hybrid mode and, in some cases, be fully electrified by relying on shore-based power[7].

[2] Global primary energy demand growth by scenario, 2019-2030 - International Energy Agency
[3] Harnessing the Energy and Resource Transition - Bain & Co
[4] Global primary energy demand by fuel, 1925-2019 - International Energy Agency
[5] World Energy Outlook 2018: Oil and gas innovation - International Energy Agency
[6] This battery-hybrid ship was designed to cut emissions - Equinor
[7] Maersk Invincible: World’s first jack-up running on shore-power - Maersk Drilling

Not enough is being done to reward the companies driving this process. This needs a fully engaged shareholder base rather than blunt divestment moves by large pools of capital.

We also struggle with this divestment logic on a corporate level. Last summer to much fanfare BP announced that its oil & gas production would be about 40% lower in 2030 as it reduces upstream investments and disposes of producing assets. We have little doubt BP will be able to reduce its carbon footprint and many climate activists hailed this announcement.

But for overall global CO2 emissions this is bad news.

Assets divested by BP will not stop producing nor emitting, they just end up in different hands. Currently raising funds to acquire oil & gas assets in public markets is all but impossible. Thus, the natural acquirers are either private companies or National Oil Companies (NOCs) that face significantly less scrutiny over their emissions profile. Such was the fate of BP's Alaskan assets, bought by the privately held Hilcorp, which immediately increased production. Oil barrels produced in Alaska have a very high CO2 footprint so from an emissions' perspective this is one of the last places on the planet where we would like to see more oil produced. Additionally, Hilcorp's emission disclosures are way worse than BP's.[8]

We must avoid a situation where companies or investors simply shift the burden of dealing with emissions without truly addressing the problem or even make it worse. Unfortunately, we expect to see more transactions with similar motivations in play.[9]

Complexities are inherent with energy investing and these complexities extend to the evaluation of the effectiveness of ESG criteria in the space. Now that the gradual phasing out of fossil fuels is no longer contested the focus needs to shift on how to realistically manage this transition. There is way too little investor engagement to drive Scope 1 and Scope 2 emissions lower. While this in itself is not a game changer for global emissions, we need all the incremental help that we can get.

We need to tackle the world's CO2 problem. Not BP's. Not Blackrock's.

Carbon Markets – A Brief Overview

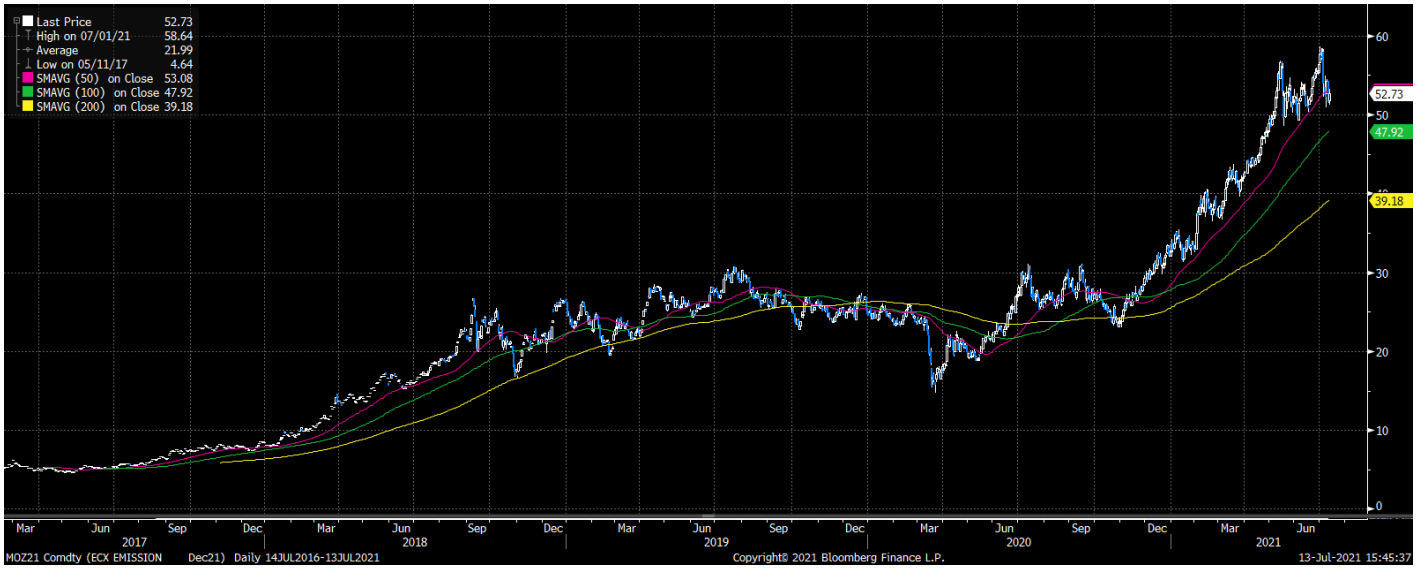
Just as a journey starts with a single step it is our responsibility to practice what we preach and try to find ways towards carbon neutrality for a fund like ADOF. While the use of voluntary carbon offsets for investment funds is not totally new it is still rare.

While offsets are controversial, reducing CO2 and eventual reaching net zero will not work without the use of these instruments. First, we look at the two different forms of carbon markets.

The most important compliance or mandatory carbon offset scheme is the EU's emissions trading system, ETS[10]. It is a market-based system in which authorities issue rights to emit CO2 with a ceiling amount that is reduced over time. Emitters receive a certain amount of rights and then buy or sell to match their actual profile. Companies with CO2 emissions that exceed their allocated

[8] Selling Its Alaskan Oil Business Was a Green Win for BP—Not the Planet - Bloomberg Green
[9] Bashing Big Oil Won't Save the Planet – Bloomberg Opinion
[10] EU ETS Handbook

allowances will have to buy additional rights from companies who receive a surplus compared to their actual profile or pay a hefty fine. Recently there has been a significant rise in CO2 prices in the ETS scheme due to the expectation of tighter emission rules. The price for the nearby contract currently sits at around EUR 50 per ton of CO2.



Source: Bloomberg L.P

Most of you will have seen carbon offsets offered when buying airline tickets. These are voluntary offsets, which provide finance to projects that have to document a reduction in CO2 emissions compared to a base case status quo. There is a wide spectrum of projects ranging from nature based sequestration to fuel switch and renewable energy[11]. There are also a variety of different certification programs that are supposed to verify that the claimedCO2 reduction is actually realised. Pricing of these voluntary offsets is significantly lower than current carbon pricing in the European ETS scheme. Our current research indicates that there are decent programs with good verification between $10-20 per ton of CO2.[12]

Most company initiatives to achieve net zero carbon are based on these voluntary schemes. One current example comes from North Sea oil company Lundin[13], who compensated 2,302 tonnes of CO2 associated with the production and shipment of liquified natural gas (LNG) through the purchase of high-quality carbon offsets generated by a tree planting project in Mexico that absorbed the equivalent amount of CO2 from the atmosphere[14].

All carbon credits bought are held in a registry and eventually retired to lock in the emission offset.[15]

[11] State and Trends of Carbon Pricing 2020 – World Bank Group. See page 51
[12] Nature and Net Zero – World Economic Forum. See Page 14
[13] World's first certified, carbon neutrally produced oil sold - Lundin Energy Press Release
[14] Lundin sells its first 'carbon neutral' oil as climate activism grows – Reuters
[15] Securing Climate Benefit: A Guide to Using Carbon Offsets OffsetGuide.org. See Page 11

Achieving Carbon Neutrality for Portfolios – ADOF Case Study

Most, but not all, of our target companies issue sustainability reports, which quantify their carbon emissions. Given the similarities of the businesses we can infer emissions from those companies that are not reporting their numbers.

Company	Year	Scope 1 Emissions	Scope 2 Emissions	Total Emissions	ADOF CO_2-e emissions
Company A	2020	205,145		**205,145**	**106**
Company B	2019	970,569	14,489	**985,058**	**513**
Company C	2020	259,139	694	**294,782**	**192**
Company D	2020	721,478	1,199	**722,677**	**2,129**
Company E	2020	394,700	4,500	**399,200**	**182**
Company F	2020	235,000	10,998	**245,998**	**107**
Company G	N/A	727,927		**727,927**	**1,222**
Company H	N/A	776,455		**776,455**	**97**
Company I	N/A	432,887		**432,887**	**284**
Total				**4,790,129**	**4,833**

Note: Emissions in metric tons of CO2 equivalent

Using this methodology, we know that our companies emitted around 4.8m tonnes of CO2 (equivalent, also captures other greenhouse gases like methane). Our "ownership" of these assets is calculated using our percentage share of the enterprise value (including cash according to the methodology used by PCAF, Partnership for Carbon Accounting Financials[16]). We calculated the CO2e of the fund at about 4,800 tonnes. Finally, we simulate different carbon offset prices with the range moving from $5 for the cheapest voluntary offsets to $50 being close the current contract price of the European ETS scheme:

CO_2 price in $					
	5	10	20	40	50
Cost % NAV	0.25%	0.50%	0.99%	1.98%	2.48%

Note: CO2 price per metric ton

Based on these inputs we can see that the cost of neutralising CO2 emissions for ADOF vary between 25bp to 250bp depending on the carbon price.

[16] PCAF (2020). The Global GHG Accounting and Reporting Standard for the Financial Industry. First edition. See page 49

Which Instruments Should be Used?

Most mandatory carbon markets like the EU's ETS scheme do not involve direct offsets. They are the balancing price between the need of carbon emitters to buy additional credits and sellers who have surplus credits. Tesla's sales of carbon credits to other car companies are a prime and profitable example of this. There is no direct link to a reduction in emissions. Mandatory carbon markets deliver a vital pricing signal on carbon, albeit one determined by a regulatory ceiling.
Altana recently launched a strategy to participate in the mandatory carbon markets[17].

Corporate net zero plans typically use voluntary offsets[18]. One key argument is price as voluntary carbon offsets are significantly cheaper. However, carbon offsets, if measured correctly, reduce emissions vis-à-vis the status quo, which is a much better story to tell stakeholders.

For our purposes, voluntary carbon offsets are the most suitable instrument to achieve carbon neutrality by cancelling out existing emissions of a portfolio's underlying companies.

Issues Surrounding Voluntary Offsets

Voluntary carbon offsets are controversial instruments[19]. Criticism is based on two key elements.

The first considers them an instrument that cements the status quo by paying relatively small amounts to continue behaviour that does little to reduce carbon emissions. We are not convinced by this argument. While currently offsets do look too cheap to really alter behaviour a broad pick-up in usage will ultimately drive prices up and provide more incentives to avoid CO2 emissions.

Just because an instrument is not yet widely used does not automatically mean it is inefficient. Quite the contrary, a well-designed system that uses offsets can be hugely beneficial and cost effective. Some heavily funded technological avenues currently being pursued have extremely high CO2 avoidance costs which may or may not eventually drop to a level that doesn't hurt economic growth and livelihoods. Green Hydrogen or carbon storage, for example, have abatement costs in the hundreds of dollars per ton of CO2 and we do not know how feasible they will be over the long term[20] [21]. If well documented offsets deliver on abatement at a fraction of the cost, we would accrue immediate benefits until more advanced technologies mature and become cost effective. That said, offsets can play a role in helping fund high-cost solutions which emphasises the wide-ranging applications in which they can be used[22].

More important is the spotty history of many projects to properly prove actual and additional CO2 emission reductions. Some of this is very difficult to reconcile. A reforestation project that falls victim to a wildfire has not reduced CO2. Outside these inherent problems there have also been a number of simply inferior projects, badly designed from the outset, with very debatable outcomes.

[17] Altana Carbon Futures Opportunity factsheet
[18] Carbon Removal Corporate Action Tracker - Institute for Carbon Removal Law & Policy
[19] A complete guide to carbon offsetting – The Guardian
[20] Technology readiness and costs of ccs - Global CCS Institute. See page 28
[21] 3rd Energy Transition report – Rystad Energy Press Release
[22] Taskforce On Scaling Voluntary Carbon Markets – See page 61

The fact that CO2 reductions are measured against a baseline scenario opens the door for a lot of assumptions around this base case[23]. The industry has tried to tackle these problems with improved certification standards. Choosing projects that have a credible CO2 reduction profile is key to any credible offset strategy.

For the oil & gas sector there is the added complexity of scope 3 emissions, which cover the usage of fossil fuels by end customers. Our focus is on the direct emissions that come from the role our companies play in support of the extraction process.

Conclusion

The path to a carbon emission-free planet is difficult and will require tremendous efforts from all stakeholders. Moving large parts of the energy supply chain into renewables without denying large parts of the global population continued growth and prosperity is one of the major challenges. In the foreseeable future we struggle to see how this can play out without oil & gas remaining a key component of energy production. That said, whatever can be done to improve or absorb the carbon emissions profile of the industry needs to be relentlessly pursued. This is why carbon offsets have an important role to play in this transition alongside the other mechanisms which are in place.

We are convinced it can be implemented successfully and the cost is not prohibitive even for a carbon heavy fund like ADOF. Costs should be substantially lower for broader portfolios but they will almost certainly rise over time. This should incentivise all portfolio managers to push for an improved emissions profile of companies they are engaged with. Carbon emissions will become a true holding cost in a portfolio.

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[23] An Even More Inconvenient Truth – ProPublica Feature