

HOW TO TRANSFORM O&G COMPANIES INTO SUSTAINABLE BUSINESS ECOSYSTEMS IN 3 STEPS

Executive Summary

The oil and gas industry is facing a rapid change in the way it does business, as the COVID crisis acted as a catalyst for a faster energy transition. In this new scenario, even though there is a consensus that hydrocarbons will continue to play a fundamental role in the economy, there is a clear demand from governments, investors, and society for low-carbon products and a more transparent and stronger approach from O&G companies regarding their environmental, social and governance (ESG) commitments.

We describe the 3-step approach that will help O&G companies build a future-proof new business. This approach will need to be sustained by a set of values that we believe will channel the right level of commitment and results from the oil and gas sector. Numerous skills and values already present in the industry can also be the catalyst of a new sustainable business ecosystem that drives innovation, influences markets and attracts new talents.

There are key factors that companies must embrace and integrate tangibly into their strategy to reflect net-zero ambitions. O&G companies have a crucial role to play in the energy transition. Starting with developing clearer strategies of their vision, current GHG emissions, and portfolio rationalisations to harnessing the added value from the interplay between new and traditional energies. They can remain big influencers of regional and global economies by broadening their sustainable energy vision, becoming hybrid, and engaging with a different energy at their core.

A hero's journey to sustainability

The Paris Agreement and more specifically, the International Energy Agency's (IEA) sustainable scenario, which might be the most influential party for the energy industry, established the pathway for a net-zero carbon world by 2050. This has had an effect on the O&G industry, starting from the International Oil Companies (IOCs), some of them pledging to become net zero (including all GHGs not just CO₂) between 2025 and 2050, making huge divestments from hydrocarbons and reshaping their portfolios, according to their capabilities, ESG commitments and financial needs (Figure 1).

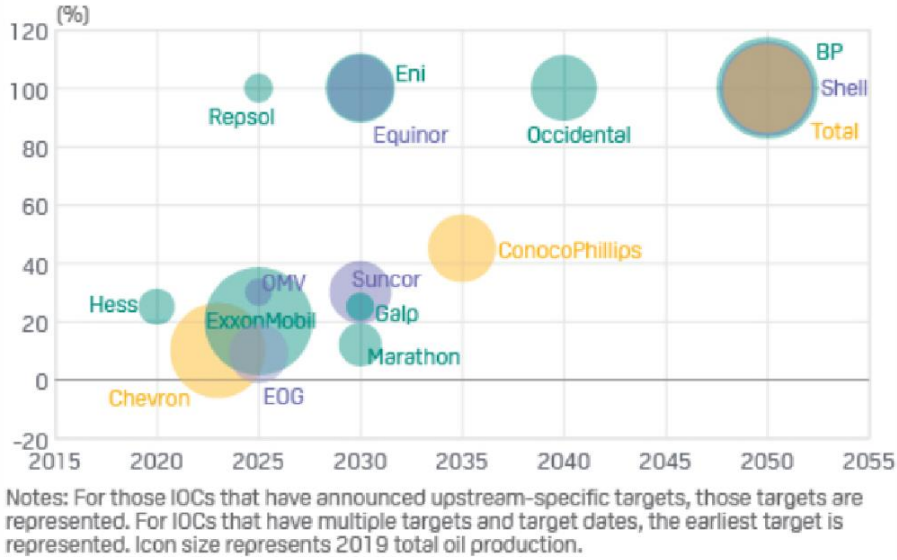


Figure 1: S&P Global Platts analysis of IOCs reduction targets in the following decades ¹⁾

Investors are doing their part, as raising capital for hydrocarbon projects is becoming increasingly challenging. Figures from Bloomberg clearly show how current private equity funds and new funds are following public sentiment by moving away from fossil fuel investments (Figure 2). And finally, new indices measuring the carbon intensity of different crude benchmarks which will give a premium for the cleanest as well as more companies are announcing carbon-neutral barrel sales. It is clear for the industry that the mantra will be not only low-cost barrels but low-carbon barrels, which requires an ESG-strategy embedded in a new portfolio.

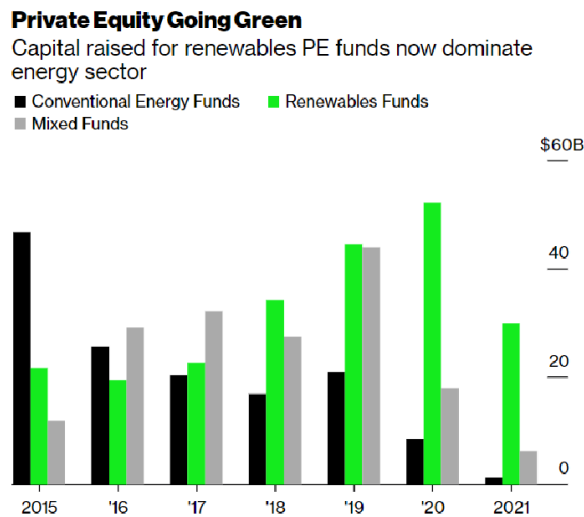


Figure 2: How money is following the trend towards renewables projects²

¹ S&P Global, 2021. [Quest to reduce upstream oil emissions has significant market implications](#). February 5th [Accessed 15 11 2021]

² Bloomberg, 2021. [Private Equity Follows the Money—and the Money Is Ditching Fossil Fuels](#). [Accessed 15 11 2021]

For its long-term benefit, any company should understand the key aspects and implications of their portfolios' carbon intensity, how emissions are reported, tackled, and synergies with low-carbon technologies. This will be beneficial for both the financial and environmental foundation of the industry. There is clearly a lot of work to be done with monitoring and reporting must become a more transparent and a fluid practice. Some of the majors are actively demonstrating their commitment to this new era while others including smaller independents, service companies and state-owned companies (NOCs) are struggling to embrace the movement and set pertinent Net Zero targets, potentially resulting in a larger financial setback than anticipated for them at many levels. **NOCs include the largest O&G companies both in terms of production and in terms of reserve size.** They have a mandate from their home government to develop national resources for the benefit of their people with a legally defined role in upstream development.

Bloomberg NEF recently benchmarked several Integrated Energy Companies (IECs) and NOCs by reference to their investment strategies, broadly reflective of positioning in progress towards net zero economy (Figure 3). The purpose of including this benchmarking is not to "call-out" any corporations, but to emphasize the progress that has been made. Closer to home, when we look at independent O&G companies listed on the London Stock Exchange, we observe that only a minority have ESG strategies in place stating compelling targets and action plan.

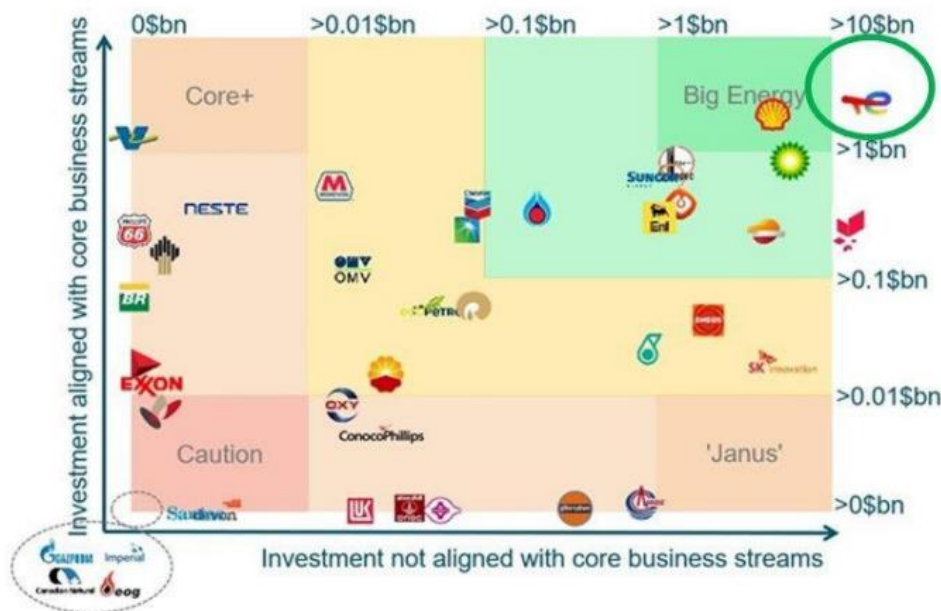


Figure 3: Oil and gas low carbon investment strategies, 2015 to 1H 2021 - not including last commitment from Chevron: 10 billion USD of capital investment by 2030. ³

However, beyond the narrative of the GHG scorecard, nobody really wants companies with extremely valuable subsurface expertise and project development skills to be left behind by lack

³ Ashurst, 2021. Global developments in progress towards net-zero emissions. Low Carbon Pulse edition28

of a transition vision. We will still require oil and gas for the decades to come and there is even a growing supply gap scenario starting to emerge (Figure 4). For example, the current high natural gas prices have already incentivised gas-to-oil switching for energy companies which could exacerbate a supply deficit. Brent is currently \$81/bbl at the time of writing. For the same BTUs required to heat the water to create steam to turn the turbines to produce electricity at a dual fired power station the cost of natural gas is ~\$200/boe. This situation could lead to up to 750,000 b/d extra oil demand according to JPMorgan. There are also voices warning that increased demand and the supply constraints for some of the metals necessary for the electrification of our transports, particularly cobalt and nickel, could start to hinder the pace of EV mass production.

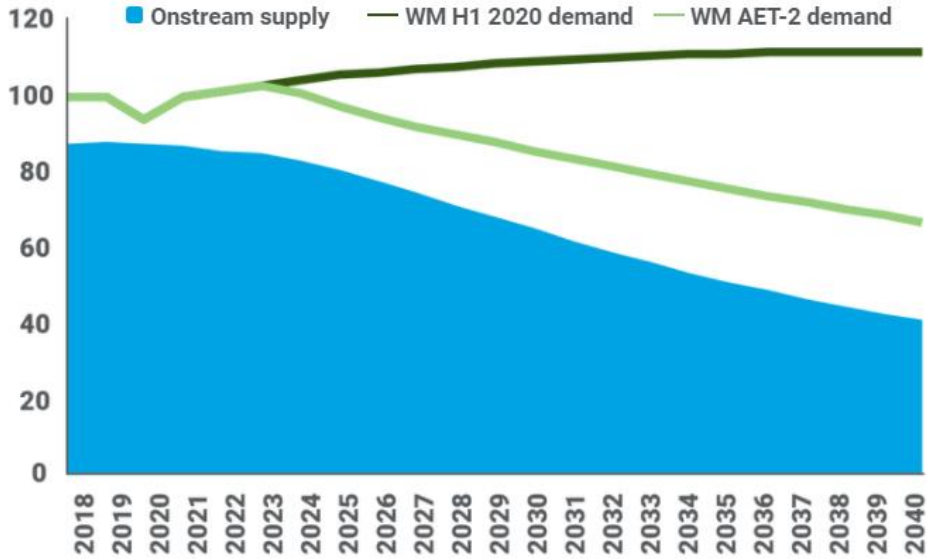


Figure 4: Proven developed oil supply assumes an average output decline of 8% a year from on-stream oil fields (Y axis: million barrels a day. WM H1 2020 demand (WoodMac 3deg pathway scenario). WM AET-2 demand (WoodMac below 2deg scenario))⁴

When it comes to developing a future-proof business, there is enough space to create something bespoke that nevertheless honours the full picture of the challenges.

Some developing countries demand maximum social and economic impact that their hydrocarbons reserves could deliver with minimum environmental impact. Expecting the same timetable for everyone may not be the best ESG approach. Countries with proven resources need to be able to develop them with the reassurance that they will be able to keep providing the needed jobs and energy progression for their people and businesses, integrating O&G in an energy ecosystem as a catalyst to fund renewables and circular economy.

⁴ Wood Mackenzie. 2020. Energy Transition Outlook Report H1 2020.

ESG goal setting must show leadership and adaptability, embedding a country-specific narrative and a balanced energy strategy.

Balancing fossil fuels needs and transformation

The overall message from the IEA sustainable scenario is to first be able to get transparent, credible, and consistent data on potential emissions that **help companies understand their effects** on the carbon budget and inform investment strategies and decisions to use reserves.

The threat for O&G companies is that while carbon emission accounting can be directly used by fossil fuel companies to disclose potential emissions data, other groups, such as civil society organisations, investors, and stock market listing authorities, can use the methodology indirectly to press for disclosure⁵.

As stated above, low-carbon assets will dominate the agenda, whether the company owns, buy, or sells. It is essential to identify the risk of stranded assets for the largest GHG emitting countries, because of rising carbon price, while engaging with a well-informed narrative to open new perspectives.

The transformation of the energy sector can happen without the oil and gas industry, but it would be more difficult and more expensive⁶. In order to play an active role in this inevitable transformation, O&G companies must start creating their new business ecosystem by following a step-by-step approach (Figure 5).

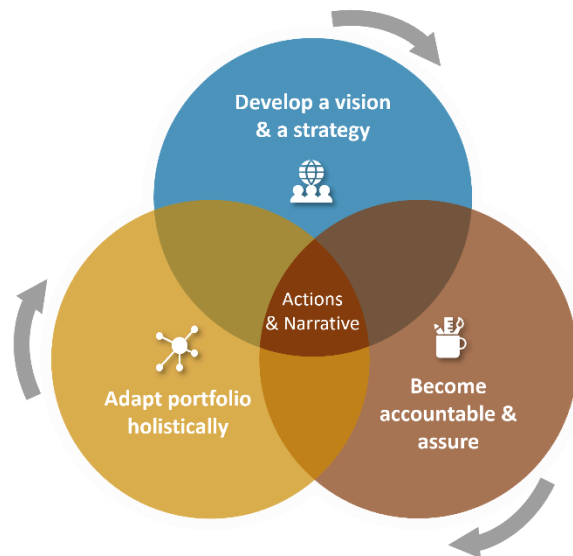


Figure 5: The 3-step approach to business transformation

⁵ WRI. 2016. A recommended methodology for estimating and reporting the potential greenhouse gas emissions from fossil fuel reserves. Available from [WRI16 WorkingPaper_FF.pdf \(ghgprotocol.org\)](https://www.wri.org/publications/2016/06/wri16-workingpaper-ff/)

⁶ IEA. 2020. The oil and gas industry in energy transitions. Available from [The Oil and Gas Industry in Energy Transitions – Analysis - IEA](https://www.iea.org/reports/the-oil-and-gas-industry-in-energy-transitions)

1. Develop an ESG vision and strategy

Set up a vision and identify the values that stakeholders will engage with to align your business model. An ESG roadmap must share the values of the capital market which is now evolving to not solely look at GHG calculations but also the company social and economic goals. Overall, it must reflect some of the sustainable development goals (SDGs) set by the United Nations.

Strategise for the medium and long-term, describe the main sustainability issues and the approach to decide what to prioritise, what to maintain, improve and optimise. The strategy will keep evolving and be an integrative part of the new business ecosystem.

2. Become GHG accountable

For O&G companies that are not involved in the downstream sectors, scope 1 and 2 are the main targets to reduce carbon emissions. Direct emissions will need improvement in facilities, the possibility to market or inject gas, and alternative technologies that require less energy to produce efficiently the resource. For scope 2, it is necessary to evaluate how to connect the equipment to renewable electricity sources, either a national grid or in-situ generation.

It is important to deliver a credible methodology for emissions accounting. Many guidelines for GHG inventories are available from the IPCC (Intergovernmental Panel on Climate Change) and the World Resources Institute (WRI). There are also clearly defined pathways currently being finalised by the Science Based targets initiative (SBTi). SBTi scope for GHG emission reporting are represented in Figure 6.

Wood Mackenzie ⁷ indicates that to be meaningful and comparable across the industry, emissions should:

- Include scopes 1, 2 and 3
- Be based on net equity in all assets (not only operated ones)
- Include absolute and intensity-based targets
- Set a Net-Zero goal between 2050 to 2070

⁷ Wood Mackenzie. 2021. Counting carbon: how to set oil and gas industry emissions targets. Available from www.woodmac.com

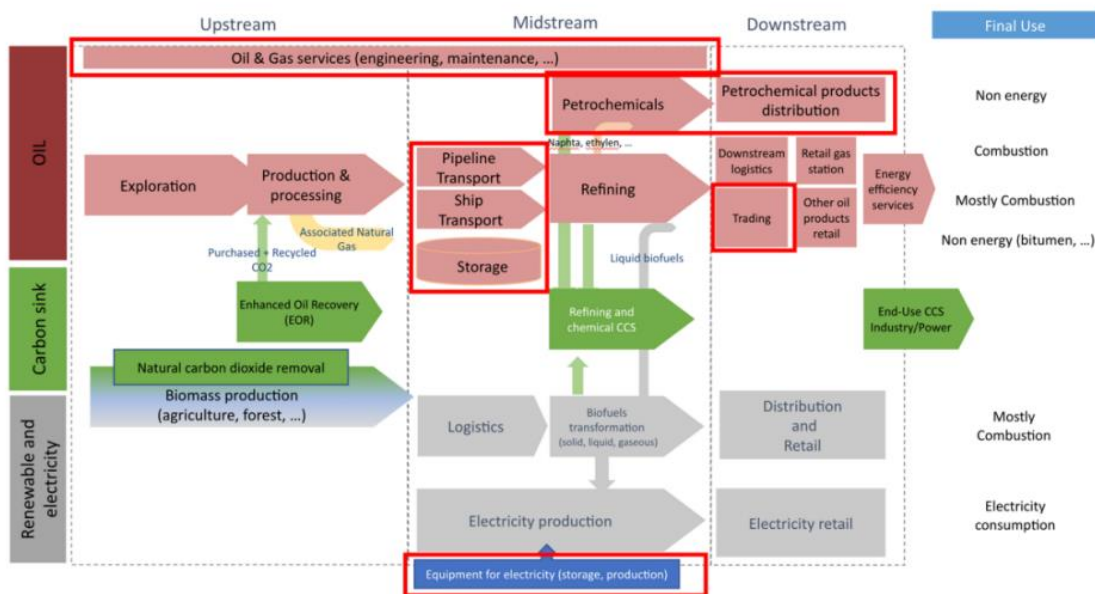


Figure 6: Activities in the Oil value chain taken into account for GHG intensity calculations, red boxes represent exclusion to the scope.⁸

One of the key factors for the industry is to establish a precise, credible, and monitored baseline of GHG emissions for scopes 1 and 2. Here AI, data analytics, and machine learning are fundamental to building the necessary database that will be the starting point to set abatement targets. In this regard, methane emissions are one of the most difficult issues to tackle, as identifying the sources and capturing the data is hard. A report of G20 Insights from 2020⁹, indicates that a combination of bottom-up and top-down calculations are necessary to just make methane emissions credible (Methane is the second largest source of greenhouse gas emissions, with a substantially higher warming potential than carbon dioxide). The IPCC guidelines allow a range of methodologies from very generalised Tier 1 (top-down) to more detailed individual Tier 3 (Bottom-up). It recognises that Tier 1 can lead to underestimations up to several orders of magnitude, while Tier 3 can be very costly to obtain. New technologies that include satellite data, stationary, and mobile ground detection systems, as well as field services are now used to reduce the uncertainty in measurements.

Transparent and credible reporting engages stakeholders and represents the company's values in action. From understanding the biggest challenges and levers quantitatively and qualitatively, the company sets a science-based target, budget it and schedule it, demonstrating industry leadership in ESG. Companies must set up goals that not only fit their business models but also

⁸ SBT. 2020. Guidance on setting science-based targets for Oil, Gas, and Integrated Energy companies. Consultation version of 10th of August 2020. Available from <https://sciencebasedtargets.org/sectors/oil-and-gas>

⁹ G20 Insights. 2020. Measurement, reporting, verification, and certification of methane emissions from fossil fuel production and natural gas value chains. Available from www.woodmac.com

the socio-economic needs of their country. The Oil and Gas Methane Partnership, which is an initiative created by the Climate Clean Air Coalition, set a framework at the end of 2020, that will enable the industry to measure and report in a standardised form the methane emissions across the value chain, from upstream to downstream.

At COP26, the creation of the International Sustainability Standards Board was agreed, which will provide the foundation for consistent and global ESG reporting standards that will enable companies to report on those factors affecting their business.

3. Adapt portfolio holistically

This is the natural outcome of the two previous steps. Future asset development, acquisition or diversification will be assessed according to the new ESG commitments encompassing sustainable development goals. The growth strategy of the company must reflect that vision.

Assessing the risks that high carbon prices and/or taxes will have on any project is crucial to avoid future stranded assets. Divestments may also be necessary. Overall communication must be maintained and developed between regulators, O&G independents and IOCs, governments, and financial institutions. Investor confidence grows in response to evidence that the company is managing these important risks and positioning itself to take advantage of emerging opportunities from the interplay between traditional and new energy markets.

Adapting portfolios will also involve taking on the task to design new regenerative and collaborative business models with less linear economies and more circular ones to leave as a legacy for future generations.

‘Think like an ecosystem to create one’

There are obviously challenges and complex issues to face to start producing low carbon barrels. Companies who drive their thoughts and actions from a set of sustainable values will be best equipped to successfully transition. These values will support the process of change and become a symbiotic part of the business ecosystem by providing a natural ceiling for its sustainability (Figure 7). Here are examples of sustainable values for business transformation and their practical application in the 3-step approach for O&G companies.

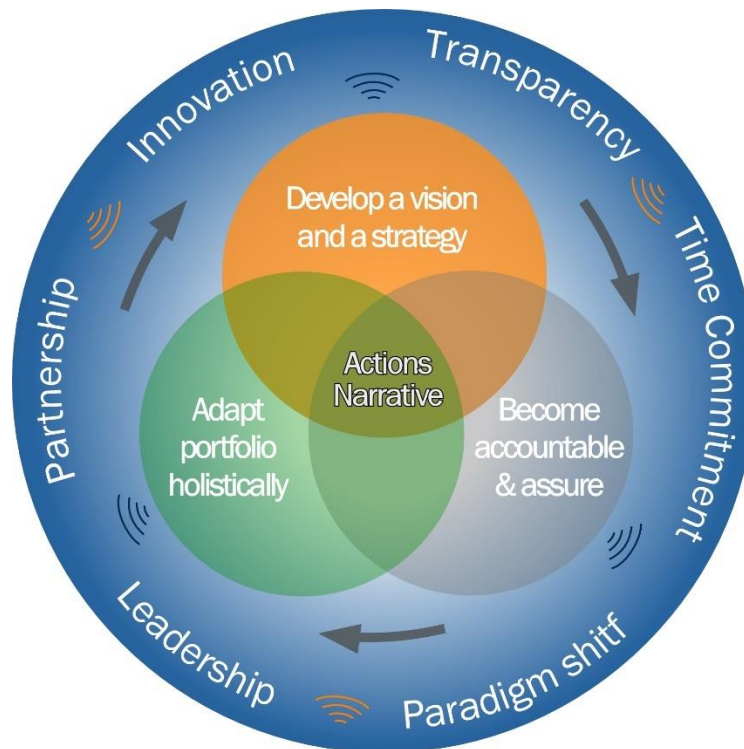


Figure 7: O&G business transformation ecosystem

Transparency and completeness

One of the pillars of decision-making is data. GHG measurements must be credible and encompassing to the relevant company's activities (upstream, midstream, and downstream): E.g., acknowledge the multiple emission sources, account for GHG emissions from the fossil fuels used in all activities, report emissions from proven and upcoming probable reserves, clearly show evidence of your assumptions and use up-to-date accounting methodologies. There are guidelines like the market-based method, as defined by the WRI GHG Protocol to report for scope 1, scope 2 and scope 3 emissions. Scope 1 and 2 only represents a small percentage of total emissions for larger companies with complex value chain. Scope 3 emissions in 2019 accounted for an average of 75% of total GHG emissions from the electric utility sector, and about 88% from the oil and gas sector ¹⁰. There is growing pressure to decarbonise the whole value chain by

¹⁰ Amina Salyid. Oil, gas companies under pressure to manage scope 3 emissions to reach net-zero goals. IHS Market. 22 June 2021. <https://ihsmarkit.com/research-analysis/oil-gas-companies-under-pressure-to-manage-scope-3-emissions-t.html>[Accessed 15 11 2021]

accounting for scope 3 emissions associated with the end-use of products sold, i.e., emissions to produce energy (Category 11 of Scope 3 under the GHG Protocol from the WRI).

Currently scope 3 calculations have no consideration of CCS applied to oil and gas while scenarios usually provide net emission pathways that consider it. To remediate this inconsistency, there are proposed models aiming to introduce them as 'carbon transfers' in Scope 3¹¹. Being at the forefront of this research and even being involved in protocol development will demonstrate commitment and help transform the business holistically.

ESG committed companies will publish their progress towards their targets on a yearly basis - in their sustainability reports as well as international initiatives such as the United Nations Global Compact and CDP questionnaires- and certify/audit their calculations for assurance.

Time commitment

Choosing to dedicate the time to quantitatively and qualitatively assess the emissions from technologies and facilities needed for exploration, appraisal, development, production and decommissioning activities will eventually pay off to set credible targets, retain investors and attract new ones. Understanding the company's biggest impact, enhancing traditional oil and gas operations, finding better choices when possible, engaging with new key players, re-evaluating, and starting to implement change takes time but will then rapidly meet approval and trigger financial backing.

Paradigm shift

Most of the solutions needed cannot be found within today's oil and gas paradigm. It is now time to think more like a circular carbon company and use the interconnectedness of the industry to set new standards. For example:

- Making plans to market the gas that is produced, applying due diligence on plant maintenance to do so, and using renewable electricity (scope 2) within the facilities, which is essential when assessing the future investments required to produce low-carbon barrels.
- Assessing the possibility to use and/or repurpose part of the asset creating added value and local net-zero economy (e.g., Geothermal, CCUS).
- Rethinking location, process, and transport methods of the crude.

¹¹ WRI. 2016. A recommended methodology for estimating and reporting the potential greenhouse gas emissions from fossil fuel reserves. Available from [WRI16_WorkingPaper_FF.pdf \(ghgprotocol.org\)](https://ghgprotocol.org/WRI16_WorkingPaper_FF.pdf) [Accessed 15 11 2021]

Mandulis Energy sets an example for what a circular carbon project looks like. In Uganda, the renewable energy project developer is contributing to a 28 MWe gasification project by converting biomass from agricultural residues thermodynamically to syngas. The gas is turned into electricity which is tied to the grid (currently 20MWe) and also used off-grid for rural farming communities via 16 mobile microgrids of 500KWe. The biochar by-product from gasification is also used in the form of briquettes for cooking as a clean-burning alternative to coal or wood. Finally ashes from the last use are returned to the ground and used as fertiliser. Mandulis received fundings from the African Development Bank, KfW, Laudato Si' Challenge, UNCDF, TotalEnergies, etc.¹²

Leadership

Companies are encouraged to develop a long-term targets up to 2050. At a minimum, targets must be consistent with the level of decarbonisation required to keep global temperature increase to well-below 2°C compared to pre-industrial temperatures, though companies are encouraged to pursue greater efforts towards a 1.5°C trajectory. Companies choosing ambitious scenarios and embedding their subsequent ESG strategies in their capital planning and business development will garner more support from the investment community. Still to this day, companies who engage with the level of leadership required for the task are few and far between. Here are a few examples on how leadership can drive the energy sector transformation.

- Leaders set cultures across the company and the industry sector. Those cultures drive behaviours which in turn drive actions. Ideally this leadership then becomes every single employee's way of doing business.

Leaders can create opportunities to reflect their ESG vision and strategy at the company and individual level. They may want to incorporate ESG goals in employees bonus plan for instance, bring ESG into the core company values, and tap into this new energy when setting financial, operational, environmental goals.

- Integrated O&G companies started to set *absolute* Scope 3 targets for upstream, midstream, and downstream. Repsol has set up scope 3 targets since 2020 now followed by BP, Shell, TotalEnergies, Chevron, and Equinor. Although these remain 'fuzzy' in terms of how they would be met, exploring what considering scope 3 looks like for an O&G company is certainly an angle that investors and regulators are now demanding to explore and start planning for.

¹² Crunchbase, 2016. Mandulis Energy. [Online] Available at: <https://www.crunchbase.com/organization/mandulis-energy#/entity> [Accessed 15 11 2021]

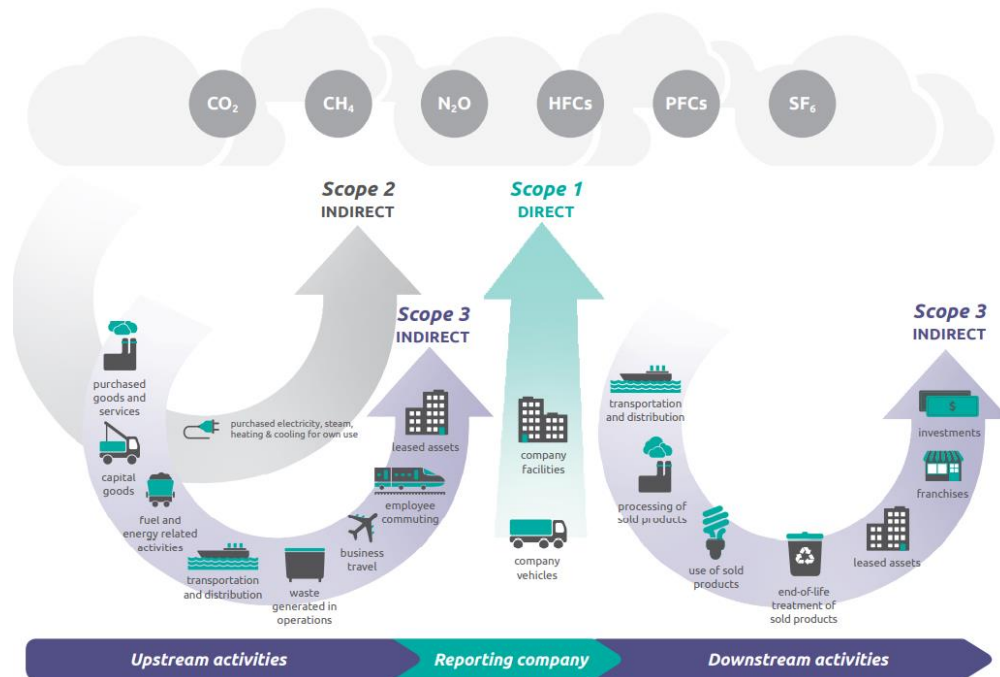


Figure 8: Overview of GHG Protocol scopes and emissions across the value chain.¹³

- For stakeholders, companies creating carbon offsets and a patchwork of partial solutions (like banking on CCS or creating slightly less GHG emitting end products) may need to set more convincing targets. Carbon offset has its place as long as it is not used as smokes and mirrors to avoid working on an embedding absolute ESG into the future business. Preserving biodiversity, promoting conservation and reforestation, managing waste better or exercising due diligence onshore to minimise environmental impact in countries where policies are lacking reinforcement, have a role to play but we also need credible long-term management strategies. Ideally those practices should be routine and need no carrot nor stick to be implemented, showing collective responsibility, and reflecting ESG leadership across all employees and management's decisions.
- The way we are building credentials to offer a more sustainable business ecosystem is evolving to allow case-by-case basis. Demonstrating leadership also means creating conversations with regulators to engage in roadmaps and models that are more country specific. Absolute ESG isn't just only about the environment. Untapped oil and gas resources can provide the essential socio-economic impact a country needs (also reducing foreign aid). By not replicating the models of the countries bringing the capital but

¹³ WRI. 2013. Corporate Value Chain (Scope 3) Accounting and Reporting Standard. *Supplement to the GHG Protocol Corporate Accounting and Reporting Standard.*

incorporating national needs, companies can create an attractive business model. On the ESG capital market there is a debate emerging not solely on carbon intensity calculations but on national economic growth and jobs creation potential.

- Trends also suggest that alignment by the O&G industry to energy transitions is a work in progress. Market and policy makers have not yet encouraged a change in strategic priorities of the industry, and reallocation of capital spending to meet the goals of the Paris Agreement is lacking. Leading the solution is creating something that fundamentally becomes part of who we are and how we do business together. IOCs and NOCs must be able to challenge decisions, work with regulators and influence policy making that will sustain the new business ecosystem. It is also fundamental to fix discrepancies between the targets of the oil and gas companies and the decarbonisation plans of their host or head office countries as many are reported in the case studies of the 2021 Oil & Gas Benchmarking by the World Benchmarking Alliance¹⁴.

Partnership and Innovation

Investing in repurposing training, in strategic consulting and creating alliances with businesses in your supply chain or innovative clean tech sharing your new emerging vision are some of the aspects to inevitably explore when setting up inspiring ESG targets.

Taking in account Scope 3 emissions will also create overlap with other industries which could be a good opportunity for collaboration and even diversification outside the core business oil & gas supply. Both supplier and consumer can recognise that they share responsibility and explore ways to partner to continue mitigating across the value chain.

Some other decarbonisation tools driven by those values are:

- Further operations optimisation through well designs and energy savings from smarter engineering (refineries are the best at saving energy due to low margins so bringing their best practices and skills upstream)
- Digitalisation and AI (Explore what that looks like for your ongoing and new operational requirements)

¹⁴ World Benchmarking Alliance.2021. Oil and Gas benchmarking. <https://www.worldbenchmarkingalliance.org/publication/oil-and-gas/findings/case-studies-for-the-oil-and-gas-benchmark/> [Accessed 15 11 2021]

Sustainable and resilient portfolio by design

Because the future shape of oil demand in the decades to come is unclear, a holistic portfolio is sustainable when it is also resilient.

To reshape a business, we lean on existing models but also choose an approach that is flexible enough to develop our own set of core values as well as a personal narrative to support the new model. As stated before, only by first understanding the current values behind ESG for every stakeholder, can we create a sustainable portfolio. Many of those values will already be embedded in the company - but may need to be defined and reflected differently – and they will now drive a transformation for sustainability.

Continuously stress-testing portfolio against an emerging spectrum of risks related to climate change will support the business and define appropriate responses. Those responses must reflect a win-win attitude within the minimum environmental, social, and economic impact.

For instance, during this decade, the demand for lighter and sweeter crudes, low-carbon, and cost-efficient assets will increase. To raise capital via debt or equity, a careful evaluation of the future impact of the carbon intensity of any project is required. Carbon taxes and markets for premium low-carbon barrels will have a financial impact. When assessing reserve types and the impact of the production associated in calculations, companies may start investigating portfolio diversification. The type of crude defines how much energy will be required to extract, transport, and refine each barrel. Gravity, viscosity, sulphur content, GOR, and field age are the key factors that will impact the carbon intensity of the asset. Low API crudes where high-energy demanding extraction methods are required, like steam injection, will be less attractive. Having said that, as stated before, needs differ depending on where you are, and no leader should want energy poverty as a legacy for future generations. ***'Capital doesn't flow necessary where the highest return is but where there is value. Money flows where fund managers understand their investors values and can get the best return within that space'*** stated Paul McDade, COO of Afentra during the E&P Africa Summit in London.

Taking revenue from oil & gas to invest in renewables, securing the future of the supply chain, promoting new raw materials extraction, repurposing wells, or connecting new business needs to local industries are just examples in the broad spectrum of opportunities to assess and include in the new strategy. The future is hybrid and inclusive, tapping on the strength of each sector to build portfolios which will continue to evolve for the decades to come (Figure 9).

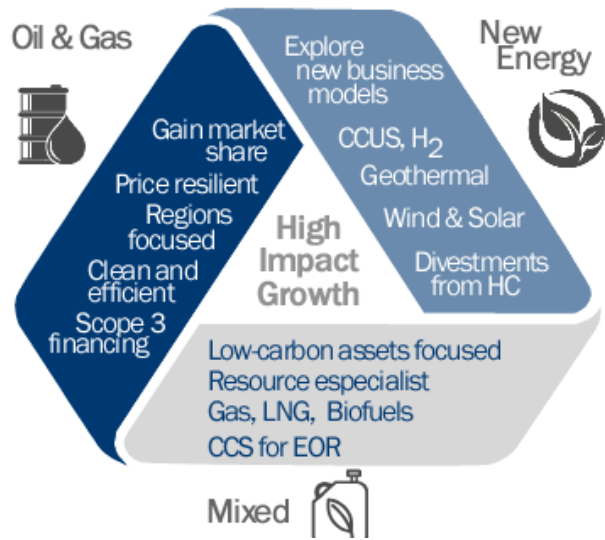


Figure 9: Hybrid portfolio strategy

Here are a couple of high-level examples of current ESG strategies and portfolio developed by smaller independents.

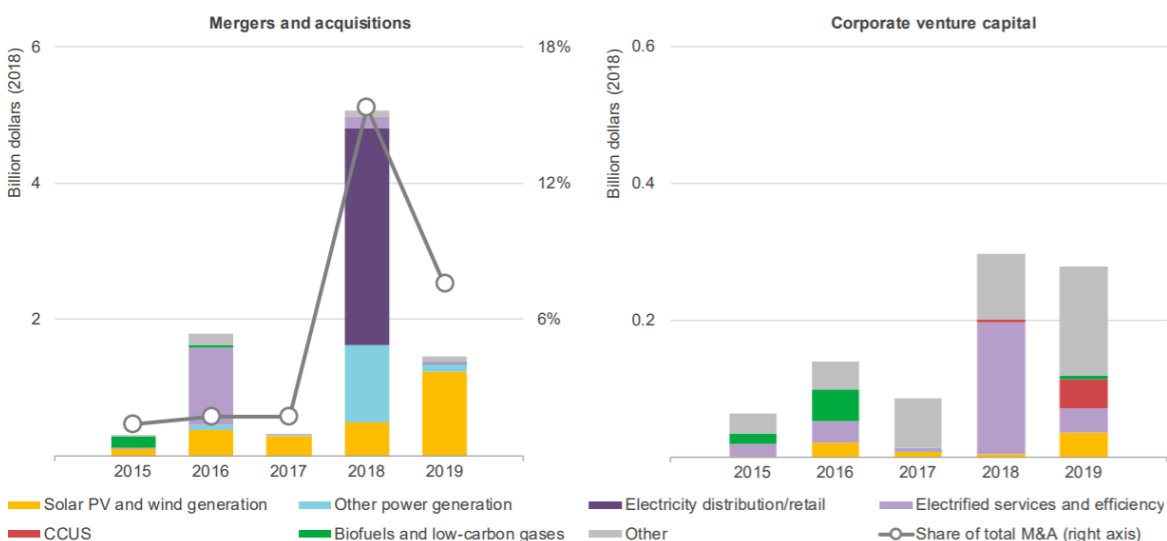
- As a privately held independent E&P company, Neptune, currently produces around 142 Kboepd, focused on gas production, with assets in Norway, UK, Netherlands, Germany, Algeria, Egypt, Indonesia, and Australia. In 2019, the company decided to set its ESG strategy and develop a business model according to an overall assessment of what is valuable to their stakeholders (Figure 10).

DEFINING	SETTING A PLAN	TAKING ACTION
<p>Identify ESG issues that concern most to investors, communities, governments, partners</p> <p>Assess worldwide context:</p> <ul style="list-style-type: none"> - Upcoming regulations - UN SGD's - TFCDD, - Carbon markets <p>Evaluate risks on business model and stakeholders</p> <p>Define a path according to the highest impact issues</p>	<ol style="list-style-type: none"> I. Develop ESG strategy II. Embedding ESG on the business model III. Integrating ESG into the supply chain IV. Demonstrate track record 	<p>Establish a <u>New Energy Team</u></p> <p><u>Portfolio Carbon Intensity</u> of 6Kg CO2e/b by 2030</p> <p><u>New Investments in</u> Hydrogen: pilot for the first green H2 offshore plant in the North Sea</p> <p>CCS: Participate in a project in cooperation with partners and CO2 emitters to store carbon in depleted fields near owned licences.</p> <p>Electrification: Connect O&G offshore fields to green a energy grid</p>

Figure 10: Neptune Energy transformation model (graphic elements derived from Neptune's ESG reports).

- Canadian Cenovus Energy is looking into using non-core business technologies like SMRs (Small Modular Reactors) to produce zero-carbon source of process heat necessary to recover the crude from their mined oil sands. Oil sands production will contribute more than CAD3 trillion to Canada's GDP over the next 30 years according to Cenovus. The Canadian government's goal is net-zero emissions in the oil and gas sector by 2050 as stated by Prime Minister Justin Trudeau at COP26.

There is no doubt that the models that currently exist are work in progress and companies need to keep on exploring and integrating non-core business activities to be part of the change. So far, a larger share of recent spend in new areas has come through M&A plus venture activity, focused on renewables, grids and electrified services such as mobility (Figure 11).



Notes: M&A = mergers and acquisitions; only transactions with disclosed values are included. *Electrified services* include battery storage and electric vehicle (EV) charging; *low-carbon gases* include low-carbon hydrogen and biomethane; *other* includes digital technologies, data analytics and mobility services. Companies include the Majors and selected others (ADNOC, CNPC, CNOOC, Equinor, Gazprom, Kuwait Petroleum Corporation, Lukoil, Petrobras, Repsol, Rosneft, Saudi Aramco, Sinopec, Sonatrach).

Figure 11: M&A and corporate venture capital spending by Majors and selected other companies outside of core oil and gas supply¹⁵

Conclusion

Many, if not most companies including NOCs are still lagging when it comes to establishing and executing their plan. The business world is now supporting early adopters of a low carbon model

¹⁵ IEA. 2020. The oil and gas industry in energy transitions. [Online] [The Oil and Gas Industry in Energy Transitions – Analysis - IEA](#). [Accessed 15 11 2021]

and companies who are agile and able to articulate a congruent ESG strategy backed up with a holistic narrative and tangible actions.

Transforming business models that have sourced most of what the world relies on today to exist is not an easy task. O&G companies have a big influence on the regional and world economies and thus have a crucial role to play in low carbon transition of economies and in the evolution of economic models. Moreover, the O&G and other energy sectors have put together some of the most complicated projects on Earth over the last 100 years. Now that another type of growth is required, the O&G must tap into all the skills previously earned, use the streamlined processes in operations and financing previously mastered and deepen collaboration across sectors. By following a step-by-step approach supported by newly defined values, O&G companies can design new distributive and regenerative models to transform into future-proof business ecosystems and lead the way one more time.

This is not a simple set of decisions to make and there are legitimately hard questions to ask on this hero's journey. But behind every challenge awaits a solution-focused project and in this relatively new area the work must rely on best practices and robust methodologies. To take O&G companies to their sustainable future, their ESG commitments must reflect a vision and core business values aligned with investors and stakeholders who are themselves navigating the change. An ESG roadmap must be derived from problem analysis, risk assessment, strategic planning and analytical skills demonstrating transparency, leadership, adaptability, and resilience.

The ESG space is wide-open for businesses willing to shift perspectives and is richer in opportunities everyday as old and new generations join this exciting trend. Data-backed credentials and innovative thinking can be explored, combined, and converted into actions that will have the impact the world is asking for.

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Our experienced consulting team and strong associate pool combines consulting best practice with deep industry knowledge to deliver tangible improvements to business performance.

Our values and robust methodologies are enablers of change from within. We can help transform your challenges into opportunities and support organic growth with insightful, trusted, and actionable results.

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