

STRATEGY AND DIVERSIFICATION OPTIONS FOR OIL AND GAS MAJORS IN THE SUSTAINABLE ENERGY TRANSITION

Krista Halttunen, Centre for Environmental Policy, Imperial College London, UK, kmh111@ic.ac.uk

Raphael Slade, Centre for Environmental Policy, Imperial College London, UK

Iain Staffell, Centre for Environmental Policy, Imperial College London, UK

Overview

Mitigating climate change and meeting the goals of the Paris Agreement requires an urgent transition of the oil and gas industry. There is minimal incentive for firms to act while they remain highly profitable, but early diversification may confer advantage in the long run.

We develop a typology of corporate strategy and diversification options for international oil companies (IOCs) in the sustainable energy transition and evaluate the fit between different strategies and companies' capabilities alongside their business and emission reduction potential. Data from semi-structured interviews with oil industry professionals are thematically analysed and considered in the context of the wider literature. The resulting frameworks of strategy options are more comprehensive than has been previously published. We find gaps in the companies' strategic readiness for the energy transition especially in preparing for the ramp-down of the fossil fuel-based core business. Many diversification options fit at least some of the existing capabilities of oil majors, but while there is potential for the companies to contribute positively to the energy transition, the current scale of change remains inadequate for meeting global climate goals. More research and public discussion should focus on whether IOCs can and should play an active part in the sustainable energy transition and how to drive the necessary action.

Methods

The main method of data collection in this study was semi-structured interviews with current and past oil industry employees. The purpose of the interviews was twofold: to evaluate whether the views of professionals with direct experience of the oil industry match those expressed in literature, and to generate new insights about the strategic options of oil companies in the energy transition. Interviews were conducted with 12 participants in person and via online video conference between July 2021 and January 2022. Eight participants worked for IOCs at the time of the interviews, while two had left the oil industry due to retirement and two because of career changes. All participants worked or had worked in roles directly related to the energy transition.

The interviews lasted between 25 and 56 minutes (median length 35 minutes). Thematic analysis of interview transcripts was carried out using the computer-assisted qualitative data analysis software NVivo. The data were coded to strategy-related themes. The interview data were combined with literature on business in transitions and the oil industry in general to develop novel frameworks that illustrate the business options faced by oil companies in the energy transition. The frameworks were constructed by structuring the information interviewees gave on different strategic options, and their opinions on the strategic fit of different options for international oil companies.

Results

The results for the study include novel typologies for a) IOCs' corporate strategy options and b) diversification options in the energy transition, both of which are shown in figure 1. The corporate strategy options are analysed in terms of the extent of the change (Melioration or Transition [1]). The diversification options are analysed in terms of their fit to IOCs' technical skills and existing infrastructure. The analysis is based on the resource-based view of the firm, which has been suggested as a useful lens for understanding the role of oil companies in the sustainable energy transition. [2]

The comprehensive typology and analysis of corporate strategy options show that IOCs need to take drastic action to meet global climate goals. Incremental changes to the fossil fuel business combined with diversification do not lead to adequate emission reductions, but need to be supplemented with a transition of the fossil fuel business itself. Hence, some form of ramp-down, or at least portfolio management, must be part of the strategy of any oil company that claims to be aligned to the Paris Agreement.

The analysis of diversification options supplements previous work (see e.g. [3], [4]) with insights from the expert interviews and by including a wider range of technologies. It shows that the technologies that are the clearest strategic fit to IOCs technical skills and existing assets – carbon capture and storage (CCS) and blue hydrogen – are also the ones with uncertain future potential and scale. While areas such as electricity retail and renewable energy generation

have strong growth potential, the interview participants expressed doubts about their fit for IOCs. However, further analysis shows that IOCs have other capabilities beyond technical skills which may enable them to contribute more to the transition.

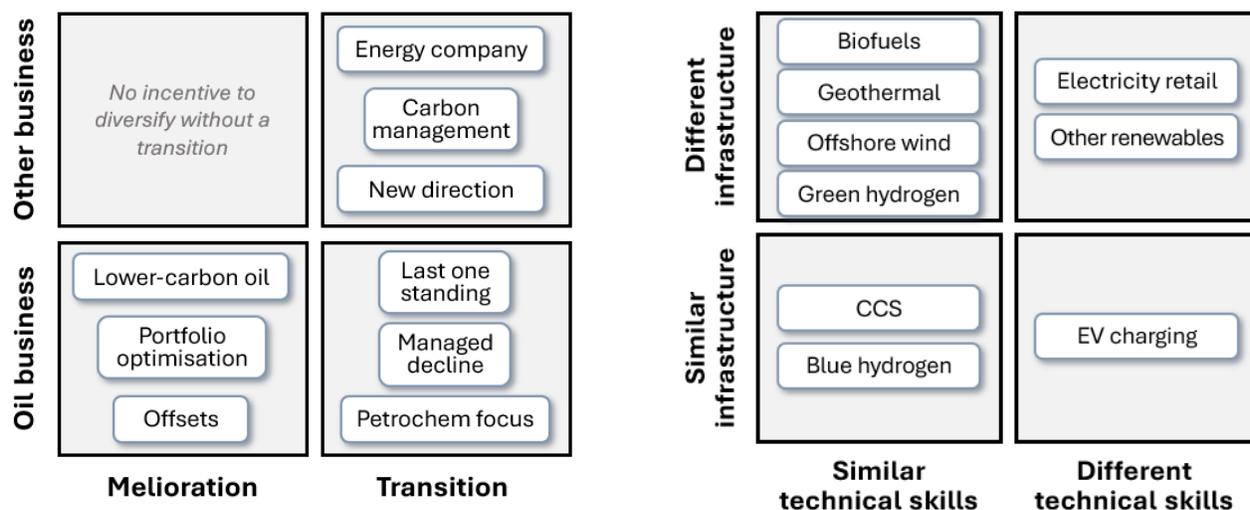


Figure 1. The corporate strategy options and diversification options for IOCs in the energy transition.

Conclusions

This study presents the strategic options available for IOCs in the energy transition through typologies that are more comprehensive than those in existing literature. While the interviewed experts tended to be positive about the many opportunities available to the oil industry in the energy transition, in practice it is far from clear which of these strategies IOCs could and should follow. The diversification strategies most closely aligned with oil companies' core business – CCS and blue hydrogen – are ones that have remained in limbo for decades as they critically rely upon large changes to current regulatory frameworks to become successful. The fact that other diversification options are not such a close fit does not mean they cannot work, simply that developing a successful business with them is likely to require more concerted efforts and organisational changes.

Rapid, large-scale changes can be difficult in business. As one interviewee remarked, companies have their own 'DNA' which may be nearly impossible to change. Perhaps some oil companies have the ability to adapt to changing markets, but if this is not the case, a managed ramp-down of fossil fuel production while returning capital to shareholders might be the only long-term option.

References

- [1] J. Green, J. Hadden, T. Hale, and P. Mahdavi, "Transition, Hedge, or Resist? Understanding Political and Economic Behavior toward Decarbonization in the Oil and Gas Industry," *Rev. Int. Polit. Econ.*, 2021, doi: 10.1080/09692290.2021.1946708.
- [2] M. Blondeel and M. Bradshaw, "Managing transition risk: Toward an interdisciplinary understanding of strategies in the oil industry," *Energy Res. Soc. Sci.*, vol. 91, p. 102696, Sep. 2022, doi: 10.1016/J.ERSS.2022.102696.
- [3] M. J. Pickl, "The renewable energy strategies of oil majors – From oil to energy?," *Energy Strateg. Rev.*, vol. 26, p. 100370, Nov. 2019, doi: 10.1016/j.esr.2019.100370.
- [4] E. Shojaeddini, S. Naimoli, S. Ladislaw, and M. Bazilian, "Oil and gas company strategies regarding the energy transition," *Prog. Energy*, vol. 1, no. 1, p. 012001, Jul. 2019, doi: 10.1088/2516-1083/AB2503.