# Planning for Net Zero: Business Diversification Strategies for Fossil Fuel Companies

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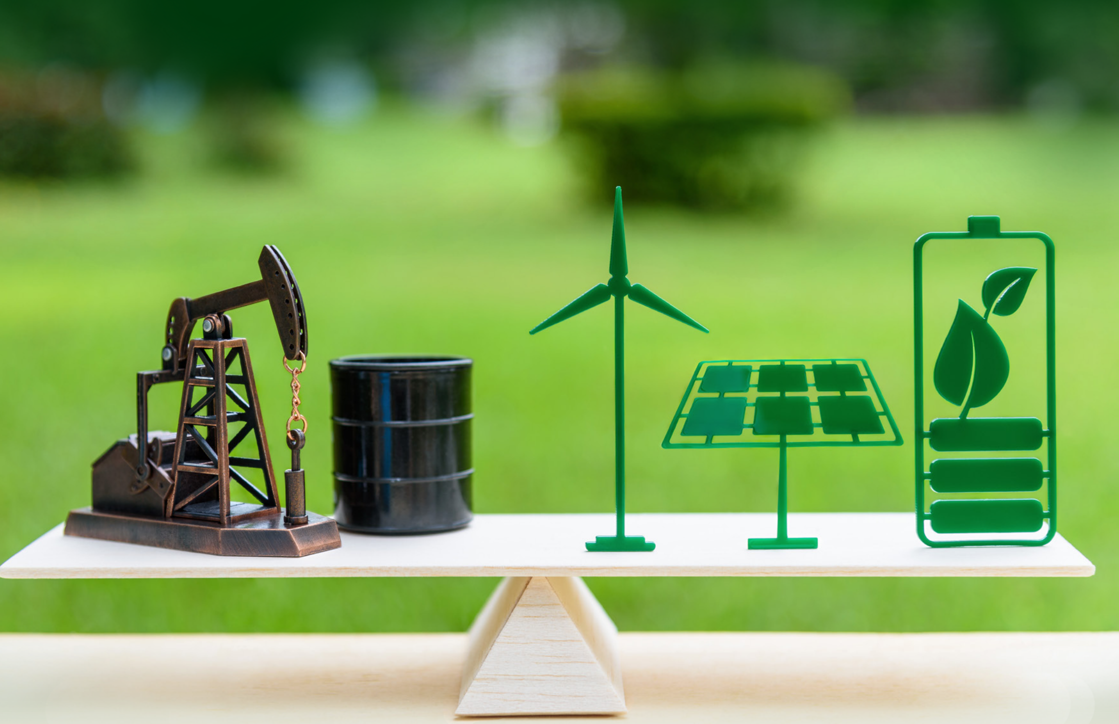

Swaniti Initiative | GCDI Global Climate and Development Institute

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# Table of Contents

**1.0 Introduction** ....................................................................1

**2.0 Types of Diversification** ........................................................2

**3.0 Key Elements of Diversification**..........................................3

3.1 Mobilizing Finance ........................................................... 3

3.2 Making Strategic Investments & Divestments ................. 4

3.3 Leveraging Government Policies........................................ 5

3.4 Board of Directors Providing Oversight............................. 6

3.5 Investing in Research and Development............................7

**4.0 Example of Diversification** .......................................................7

4.1 Ørsted.......................................................................................7

**5.0 Conclusion** ................................................................... 10

**References** ..........................................................................11

# Executive Summary

Nearly 1,000 companies including major fossil fuel producers around the world have pledged to achieve net-zero emissions by 2050. Achieving these targets would require companies to diversify their businesses rapidly. Historically, many companies have diversified by venturing into related sectors or expanding into completely new sectors. In this study, we reviewed historical diversification of 23 global companies – from fast-moving consumer goods, trading, entertainment to mining companies – in order to understand key elements of corporate diversification in a net-zero world.

Overall, we find that corporate diversification constitutes focusing on five key elements:

1. Mobilizing finance;
2. Making strategic investments and divestments;
3. Leveraging government policies;
4. Board of Directors providing oversight; and,
5. Investing in research and development.

Our short review report provides a first order understanding of each of these elements of diversification. When combined, these elements create a conducive environment for successful business diversification. Overall, this work shows the need for a more holistic understanding of the business diversification strategies for fossil fuel companies in a net-zero world.

# 1.0 Introduction

To prevent global warming from exceeding the 1.5 degrees Celsius threshold above pre-industrial levels,[1] large corporations will have to achieve net-zero emissions across their supply chains. According to the International Energy Agency, nearly 1,000 companies around the world have declared a net-zero target by 2050.[2] These include some of the world's largest fossil fuel producing companies, such as BHP, Shell, Saudi Aramco, ExxonMobil, and Glencore. Companies around the world are now following suit, setting net-zero targets and moving toward decarbonization of their business models.

Business diversification can serve as a means for companies to transition toward low-carbon business opportunities and achieve their net-zero goals.[3] Diversification is typically an expansion of a company's operations or product offerings into new markets or new industries. This expansion may be unrelated or related to its current business activities.

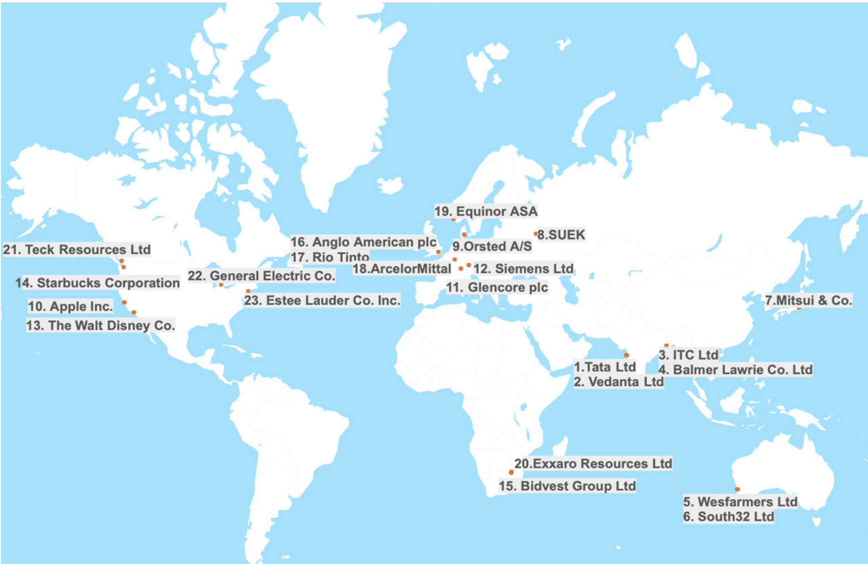
Business diversification is not a new concept, and many companies around the world have diversified in the past.[4] Businesses have historically diversified for several reasons. Firstly, companies diversify to increase revenue. They do this by tapping into new markets, customer segments, or product lines to drive top-line growth. Secondly, corporations diversify for risk mitigation — diversification serves as a potent buffer against market volatility and uncertainties that could otherwise undermine the financial stability of a business.[5] Thirdly, companies diversify because of their declining performance in core businesses.

In order to understand how companies have diversified in the past, we reviewed diversification strategies of 23 private and state-owned corporations (See Figure 1 below). We studied academic and grey literature along with corporate documents to discern common themes among companies' diversification efforts. This review of past diversifications offers key lessons for companies — especially fossil fuel companies — seeking to diversify their businesses in a net-zero world.

In the next section (2), we explain different types of business diversification. In section (3), based on our review, we highlight key themes of successful business diversification. In section (4) we provide one case study of diversification. In our final section (5) we provide key recommendations for companies attempting to diversify their businesses in a net-zero world.

### Figure 1: Companies Included in the Review

The figure below shows 23 companies included in this review along with their headquarters.




## 2.0 Types of Diversification

Business diversification strategies can be classified into three broad types: Vertical, Horizontal and Conglomerate.[3]

- Vertical Diversification is a business expansion strategy in which a company extends its operations into different stages of the same industry's supply chain(s) that the company does not yet own or control. This involves diversifying either into "upstream" or "downstream" sectors. For example, in 1987 when Glencore (a commodity trading company) acquired Peruvian mines and U.S. smelters,[6] it gained the production and extraction of raw materials in its supply chain.

- Horizontal Diversification is the introduction of new products or services alongside existing ones to expand market share. Typically, they share similarities or synergies with the company's current operations, leveraging existing customer loyalty and brand strength. This can involve product development through joint ventures, mergers, or acquisitions. An example of this is the Walt Disney Company's acquisition of Pixar Animation Studios. In 2006, Disney (a multinational entertainment conglomerate) acquired Pixar (an animation film company) in order to incorporate newer animation technology into its business.[7]

- Conglomerate Diversification is a strategy to venture into entirely new, unrelated product lines to tap new revenue streams and mitigate risks. An example comes from General Electric, a multinational conglomerate company that was founded in 1879 by Thomas Edison through the creation of a lightbulb filament. The company soon diversified in 1882, developing the first dynamos to power a grid that provided electricity to nearby neighborhoods. The company continued on the path of diversification, entering various sectors such as healthcare (1896), jet engines (1919), philanthropy (1922), manufacturing (1930), and, more recently, the power and energy sector.[8]

## 3.0 Key Elements of Diversification

Our review of 23 companies — in sectors ranging from marketing to mining — shows that there are five key elements of successful diversification.

### 3.1 Mobilizing Finance

Internal or external capital generation is essential to any diversification strategy (horizontal, vertical, or concentric). Financing projects through internal capital generation can take two different forms. US based Apple's diversification is an example of utilization of internal funds. In 1996, facing an anticipated decline in sales of Macintosh computers, the company swiftly curtailed operating costs, safeguarding its financial health. It then stockpiled resources for vertical diversification to reinvent its operating software by acquiring NeXT Software.[9]

ITC is an example of using surplus profit from its core business to fund diversification projects. The company used its surplus profits derived from its tobacco business to fuel its conglomerate diversification strategy into packaging, printing, hospitality and Fast-Moving Consumer Goods.[10]

Raising capital through external financing can involve the use of debentures, equity or grants and Initial Public Offerings (IPO). Among these, IPOs are the most common option that fuels diversification of companies. It helps companies gain large capital infusions required for successful diversification. One such example is Wesfarmers, a farmer's cooperative that went through conglomerate diversification, facilitated by an IPO in 1984.[11] This in turn pivoted the company's finances away from the fertilizer business. The former segment once contributed to 60 percent of earnings but now is merely 1 percent of Wesfarmers' overall earnings.

## 3.2 Making Strategic Investments & Divestments

When contemplating corporate strategies regarding diversification, the top management often faces myriad investment decisions. Does the company invest in a new business line, acquire an existing entity in a different sector, or divest from underperforming assets? The successful execution of these investment and divestment decisions hinges on a blend of meticulous due diligence and strategic financial decision-making.

In our review, some enterprises chose to venture into multiple segments through partial or complete acquisitions and strategically divesting from less promising assets.

One pattern of investment and divestment emerged for Mitsui & Co. while pursuing a conglomerate diversification strategy, through its history from 1959 to 2023. The company focused on acquisitions and divestment at different stages in different industry segments, including chemicals, energy, minerals and metals, machinery and infrastructure, iron and steel products, lifestyle, liquefied natural gas, and healthcare. The strategic mix of investment and divestment allowed the company to pursue a conglomerate diversification strategy to mitigate the risk of loss-making enterprises. For example, in 2014, the company divested its shareholding from the Silver Bell copper mine in Arizona and increased its shareholding in the Astoria I power generation project in New York.[12]

Vedanta Limited, an Indian mining company, also adopted the strategy of acquiring significant ownership stakes in various industries in order to horizontally diversify. The company ventured into a multitude of mining businesses. It bought stakes in various companies to venture into the mining of zinc, lead, silver, aluminium, iron ore, steel, copper, ferro alloys and nickel, and also entered other industries such as power, semiconductors and glass. This strategic maneuver allowed Vedanta to tap into a wide array of mining elements.

## 3.3 Leveraging Government Policies

A review of the companies shows that government policies can play a major role in diversification. Overall, governments create policies to incentivize companies to explore business avenues, often through subsidies or imposing taxes that nudge them away from their core operations. After the Indian government introduced the New Economic Policy in 1991, focusing on privatization, liberalization and globalization, the Tata Group leveraged the policy to diversify into software and information technology consulting by acquiring government owned CMC Ltd in 2001. CMC Ltd later became Tata Consulting Services.[13]

Another example of government policy affecting diversification is ITC's response to India's ban on tobacco marketing. The ban led ITC, whose core business was tobacco, to opt for conglomerate diversification into packaging and printing.[10]

The review highlighted the growing synergy between public policy and corporate diversification, the pivotal role governments play in shaping the future of industries and sustainability practices.

## 3.4 Board of Directors Providing Oversight

The board of directors in any corporate organization plays a pivotal role not only in ensuring effective governance, strategic direction and overall success, but also in driving diversification strategies that align with Environmental, Social, and Governance (ESG) principles. Our review emphasizes the crucial role of boards of directors in providing strategic oversight and approval for diversification initiatives. If a company's board is behind its diversification agenda, it can ensure long-term sustainability of diversification efforts. Their assessment of diversification strategies' alignment with long-term goals ensures that these strategies are not only financially prudent but also environmentally and socially responsible.

In 2015, for instance, Rio Tinto took an initial step toward sustainability by signing the Paris Pledge for Action to move towards decarbonization. In 2018, Rio Tinto's board of directors decided to halt coal production and align the company's operations with the goals of the Paris Agreement. Two years later, in 2021, the company planned to further decarbonize its business by deploying Carbon Capture, Utilization and Storage technology at their ISAL Smelter in Iceland. It also plans to make investments in solar energy projects in Madagascar.[14,15]

Similarly, Glencore's board has approved its decarbonization by reducing coal production to reduce scope 3 emissions (indirect emissions associated with a company's activities) and strategically invest in metals and minerals that facilitate decarbonization.[16] In

2017, another company, South32, planned to divest from coal and is now setting a long-term goal of achieving net-zero operational greenhouse gas (GHG) emissions by 2050.

These diversification decisions reflect the importance of the board of directors in driving diversification efforts of companies.

### 3.5 Investing in Research and Development

Research and Development (R&D) stands as an indispensable pillar in the realm of business diversification, offering the critical elements of innovation, knowledge, and competitive advantage. They serve as engines that drive companies into new markets, create novel products or services, and adapt to evolving business landscapes.

In 1953, Siemens developed and patented a technique for making ultrapure silicon for semiconductor applications. This development allowed the company to penetrate the microelectronics market.[17] Siemens has since then established 16 Research and Innovation Ecosystems, channeling substantial investment of USD 5.6 billion, in 2022, towards R&D and Technology Enhancement.

Rio Tinto has formed a joint partnership with Apple, the Government of Quebec and the Government of Canada to develop a new aluminum smelting technology that produces no GHG emissions. These examples underscore how strategic investments in R&D form a cornerstone of business diversification, creating pathways for companies to diversify through the development of new products and practices.[14]

## 4.0 Example of Diversification

### 4.1 Ørsted

Ørsted, formerly known as the Danish Oil & Natural Gas (DONG) company, is an example of a state-owned enterprise that has diversified away from fossil-fuel production into the world's largest renewable energy company.[18] This transformation has been enabled by strategic decisions, substantial investments, and a clear vision for the direction of the company.

## Why Did the Company Diversify?

In 2008–09, the company's leadership recognized the need to reduce its reliance on coal. This decision came in response to factors such as the company's commitment to transition toward renewable energy, local opposition to a coal-fired power plant project in Germany, and the growing international momentum for renewable energy. DONG subsequently set ambitious targets to change its energy mix from 85 percent conventional and 15 percent renewable to 85 percent renewable and 15 percent conventional.[18] These goals were further supported by subsidies provided by the Danish government for renewable energy firms. In 2017, the company decided to change its name from DONG to Ørsted to make sure that the companies' name suggests its transition.

## Which Sectors Did the Company Diversify into?

Ørsted diversified into the renewable energy sector, particularly focusing on wind energy. They invested in onshore and offshore wind farms, and converted coal and gas-fired power stations to sustainable biomass.

### Table 1: Ørsted's Diversification Timeline

This table offers an overview of the company's diversification efforts over time, delineating key milestones in its transformation.

| Type of Diversification | Acquisition/Investment |
|---|---|
| Horizontal Diversification | • **2006:** Merger of 6 companies, formed DONG Energy<br>• **2009:** Agreement with SIEMENS for 500 3.6 MW wind turbines<br>• **2015:** Acquisition of offshore wind projects in the UK and US<br>• **2017:** Investment in Formosa Wind Farm, Taiwan<br>• **2018:** Acquired Lincoln Clean Energy (Onshore) and Deepwater Wind (Offshore) in the US |

**Source: Energy Transition: Our Green Energy Transformation | Ørsted.**

## What Tools Did the Company Use to Diversify?

Ørsted's transition to renewable energy was driven by the following four elements of diversification:

- **Finance:** The company's farm-down model was central to its diversification strategy. The primary objective was to release capital locked up in existing investments in order to invest in new ventures. To keep the capital flow of funds, the company built up green power projects and divested stakes in completed green assets to institutional investors to free up capital for further investment in green power projects.[19]

  The company saw an external capital injection in 2014 and 2016. Prominent entities such as Goldman Sachs and Danish pension funds ATP and FPA provided substantial capital of 13 billion Danish Krone. In 2016, Ørsted also put forth an IPO, to raise USD 15 million.[20]

- **Investments and Divestment:** To reshape its portfolio and focus on renewable energy, Ørsted strategically divested non-core assets, including various non-renewable energy businesses. It also sold off its Danish Power Distribution, Residential Customer and City Light, and LNG businesses, thus becoming leaner and focusing on growth in its renewable business[20]. This was followed by acquisition of offshore wind farms in the US and UK. The acquisition and investment for incorporated projects through a horizontal diversification strategy is listed above in Table 1.

- **Government Policy:** In 2008, when the company decided to transition from fossil fuels to renewables, it was driven by Denmark's stated long-term commitment to reverse their energy composition from coal to wind energy. The company acted to pursue the state's subsidies for electricity generation from renewable energy, paving the way for the company's diversification.[21]

- **Board and Management:** In 2009, Ørsted's board set a target to reverse the 85/15 split from fossil to renewable energy production by 2040. This choice marked a pivotal turning point in Ørsted's evolution towards becoming a world-leading renewable energy company.[18]

Overall, Ørsted's diversification was in response to government incentives, financial restructuring, and asset divestment and acquisition, all aimed at becoming a leading renewable energy company and reducing their reliance on fossil fuels.

# 5.0 Conclusion

This study explored the diversification strategies of 23 corporations across different sectors, shedding light on diversification as not merely being a means to increase revenue but also a critical tool for mitigating risks. Business diversification can happen in three different forms – horizontal, vertical and conglomerate – with each offering unique benefits and challenges. Overall, we find that there are five key elements of diversification that companies have focused on: 1) mobilizing finance; 2) making strategic investments and divestments; 3) leveraging government policies; 4) Board of Directors providing oversight; and 5) investing in research and development.

By conducting this review, we contribute to an understanding of key elements of business diversification. However, we only reviewed publicly available literature so we may have not been able to capture some other elements of diversification. The lessons learned from these diverse corporate experiences should serve as valuable insights for fossil fuel companies, seeking to diversify their businesses to mitigate climate risk to their business and contribute to a more sustainable and low-carbon future.

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