WEP
Warwick
Evans
Publishing

Transactions on Economics, Business and Management Research
ISSN: 2960-1789, eISSN: 2960-2254 | Volume 14
AFTEM 2024

The Impact of BP Oil's Transition to Sustainable Energy on Future Profitability

Zhihao Wang

Canadian International School of Hefei, Anhui, China

leozhihao@hhu.edu.cn

Abstract. As global energy consumption transitions toward sustainability, traditional energy businesses face mounting pressure to adapt to low-carbon and renewable alternatives, prompting BP Oil to initiate its transition from traditional to sustainable energy sources. BP Oil has initiated the transition from conventional to renewable energy sources. This study seeks to examine how BP Oil's present sustainability operations management decisions may influence its future profitability. The investigation reveals that BP Oil's restructuring encounters several hurdles. The initial expense and regulatory intricacies of wind energy projects are significant; yet, BP Oil's collaboration with wind power firms, such as Equinor, illustrates BP's commitment to pursuing sustainable energy alternatives. Reduced oil and gas production may impact short-term profitability; however, BP's incremental investment in renewable energy initiatives will alleviate these effects and secure stakeholder backing. BP is augmenting its investment in ammonia while diminishing its reliance on conventional petroleum-based energy sources, indicating a transition to sustainable energy and a commitment to low-carbon energy solutions. Notwithstanding these external and internal pressures, BP's sustainable energy strategy serves as a model for other conventional oil corporations with similar challenges. This study explores the transformation inside the traditional energy sector, concentrating on BP's Transformation Initiative.

Keywords: BP Oil, Wind Power Plant Construction, Gas Production, Ammonia Energy Investment.

1. Introduction

The global transition to sustainable energy sources has intensified in recent years due to increasing worries regarding climate change and the exhaustion of fossil fuel stocks. At this critical juncture, governmental policies and market dynamics are compelling the oil industry to explore renewable energy sources, thereby catapulting energy production into a transitional phase. As the globe shifts towards a low-carbon economy, the gas and oil business face mounting pressure to adopt sustainable practices, requiring transformation from conventional oil and gas companies. This transition has impacted energy market dynamics and catalyzed innovations and policy modifications, positioning sustainability as a pivotal focus of energy sector reform.

As the world begins to shift toward renewable and sustainable development, the policies and directions of various energy companies are changing, and BP Oil and other companies are having to accept and adapt to these changes to ensure their survival in the future. BP has the largest oil and gas reserves on this planet, with extensive exploration and production assets located around the globe. Its businesses include the oil and gas development process, refining, gas marketing and power generation, oil retail, and transportation jobs, as well as the production and marketing of petrochemical products. In 2020, BP Petroleum released its Zero Carbon Emissions Timetable, which plans to reduce oil and gas production by 1 million barrels per day (BPD) by 2030, equivalent to 40% of 2019 levels [1]. In addition, BP's business in solar power, wind power, and other renewable energy is also growing. In other words, the primary focus of the study is BP's transition to renewable energy, specifically its efforts in wind power, the reduction of oil and gas production, and investments in ammonia energy.

Prior research has investigated multiple facets of sustainability and business transformation within the energy sector. Hockerts et al. investigated how established energy firms, referred to as "greening oliaths," have implemented sustainable entrepreneurial methods through case studies and theoretical

assessments in the UK and Germany [2]. Eccule et al. performed a quantitative evaluation across various industries to examine the effects of business sustainability initiatives on performance results [3]. Eccule et al. conducted quantitative analysis across multiple industries to examine the impact of company sustainability initiatives on performance. Their findings indicated that sustainable practices could provide organizations with a competitive advantage [3]. Furthermore, Gielen et al. illustrated that sustainable practices might confer a competitive advantage, particularly by analyzing how early investments in hydrogen and ammonia can influence future market dominance [4].

While numerous research and studies have demonstrated the effectiveness of renewable energy technologies in meeting today's basic needs, the intensified climate policies and advancements in renewable energy technologies have compelled the traditional gas and oil industry and companies to adopt new sustainable energy systems. These include the integration of ammonia and hydrogen solutions, the reduction of traditional fossil fuel production, and significant investments in offshore wind power facilities. Therefore, BP Oil, an integrated energy company that has primarily focused on traditional oil and gas, is starting to consider further exploration as a means to effectively balance its investments in traditional fossil fuels with its renewable energy goals, thereby gradually completing the transition. In other words, what are the specific strategies that a traditional energy company such as BP should adopt in order to achieve a profitable transition without sacrificing competitiveness in the energy market?

Thus, this research aims to answer the question: to what extent will BP Oil's current sustainable operations management decisions affect its future profitability? This study aims to investigate BP's recent investments in offshore wind, ammonia energy, and oil or gas production reduction, offering valuable insights into the impact of a diversified approach on profitability and competitive advantage. This study will be particularly pertinent to today's society, which is in a transitional stage of energy consumption. It will delve into the challenges faced by traditional oil companies as they navigate the gradual shift toward sustainability and the ongoing development of newer energy technologies. The study will explore whether they should prioritize maximizing their profits before the oil industry's demise or if they should have acted ethically earlier, even if it meant compromising their current profitability.

The following paper will adopt a case study methodology regarding the issue. This essay will introduce BP's transition from the traditional energy sector to new energy initiatives, subsequently analyze the impact of BP's sustainability management decisions on profitability, and finally provide informed opinions and recommendations on how BP can enhance its sustainability strategy to improve profitability. This article will adopt a case study methodology regarding the issue. This essay will introduce the transition of BP from the traditional energy sector to new energy initiatives, subsequently analyze the impact of BP's sustainability management decisions on profitability, and finally provide informed opinions and recommendations on how BP can enhance its sustainability strategy to improve profitability.

2. Case on BP Oil

BP is a London-based global energy company traditionally recognized as the largest and most powerful oil and gas producers on this planet. However, in response to growing environmental concerns and regulatory pressures from governments and NGOs, in 2020, BP released its “Zero Carbon Timeline," which commits the company to transforming itself from a global traditional oil company into an “integrated energy company” focused on renewable and low-carbon energy that is unstainable. BP has committed to transitioning from a global oil company to an "integrated energy company" that prioritizes renewable and low-carbon energy.

In recent years, the BP oil company has made a commitment to accelerate the development of solar energy, wind energy, and other renewable energy sources, with the aim of achieving net-zero emissions by 2050. Simultaneously, the company plans to sell a portion of its chemical business, divest from the traditional oil and gas business, and explore other strategies to actively participate in

the renewable energy market. In the field of wind power, BP cooperates with Equinor and EnBW to develop large-scale offshore wind power projects, including major installations in America and the United Kingdom, with the aim of generating large quantities of clean energy and reducing dependence on fossil fuels. In solar energy, BP Oil increased its stake in Lightsource BP, a solar energy development company, contributing to the rapid growth of solar power capacity on several continents.

In addition, BP invested in green hydrogen projects, such as the Green Hydrogen Center in Western Australia, which provides low-carbon hydrogen energy for industrial and transportation applications, in line with the International Energy Agency's forecast of hydrogen's critical role in achieving net-zero emissions by 2050. Despite taking action on renewable energy, such as building various facilities, BP Oil continues to face criticism as a shallow marketing scheme. The transition is not well-received within BP, a sign that future partnerships will not fully support it, as it threatens BP's current profitability. Employees are skeptical that this transformation is sustainable and sufficient for BP to compete in the rapidly changing world of energy. Many employees still maintain the belief that compliance with regulations is sufficient.

3. Analysis on Problem

3.1. Wind Power Plant Construction

BP Oil has made significant efforts to transition from fossil fuels to sustainable energy, a transition that is at the heart of BP's sustainable growth strategy, responding to global calls to reduce carbon emissions and aligning with the goals of the Paris Agreement. The aim is to achieve the Sustainable Development Goals (SDGs) while maintaining profitability in the face of growing global demand for clean energy. Part of the plan involves significant investment in wind farm projects, particularly within the United States and United Kingdom, aiming to generate up to 50 gigawatts of renewable energy by 2030 [5]. These wind farms represent BP's attempt to both diversify its energy portfolio and remain profitable as the world moves away from conventional energy sources.

In fact, BP has established a strategic partnership with Equinor for this purpose. BP will pay Equinor $1.1 billion in exchange for its interests in existing offshore development projects in the United States. The two companies will collaborate on the development of four assets within two existing offshore wind leases located offshore New York and Massachusetts. Both companies expect this specialized facility to meet their ongoing projects and contribute to the development of the offshore wind industry in the region. The region anticipates the addition of 1,000 new jobs to meet the employment needs of the local people [6]. Together, these assets have the potential to generate electricity for over 2 million homes [5]. However, the transition to wind energy is not without its challenges. High capital expenditures, regulatory barriers, and the complexity of integrating renewable energy into the existing grid are all present.

Existing academic research demonstrates that companies with a clear, long-term sustainability strategy are better positioned to succeed in the marketplace. Robert et al.'s research demonstrates that companies that incorporate social and environmental sustainability issues into their strategies and operations outperform their peers over the long term [7]. Through its commitment to wind energy, BP is capitalizing on the growing demand for renewable energy while securing a long-term competitive advantage. It is also setting a precedent for sustainable development in the energy industry, demonstrating that profitability and environmental responsibility can go hand in hand.

3.2. Reduce Oil and Gas Production

BP Oil has made the decision to gradually decrease its oil or gas production, with a commitment to a 40% reduction by 2030. Additionally, the company has committed to investing $8 billion in transforming its growth engines. This entails expanding into more lucrative sectors like bioenergy, facilities, and electric vehicle charging. The company plans to reduce its refining production by approximately 30%, which is expected to result in a decrease in both BP's direct emissions and those

from its products [1]. This is part of BP Oil's plan to transition to sustainable energy, aiming to align the company with global climate goals while maintaining long-term profitability. This emissions reduction strategy reflects BP's efforts to balance profitability and environmental responsibility in a rapidly changing energy landscape, and it confirms that BP Oil has provided a solution to move away from fossil fuel dependence.

In practice, BP has achieved this reduction in fossil fuel production by divesting from certain oil fields and reducing exploration activities in high-carbon areas. For example, BP sold off some of its oil and gas assets in Alaska and elsewhere to focus instead on low-carbon projects and increased its investment in low-carbon energy tenfold to $5 billion per year by 2030 [1]. BP's board of directors has introduced a new distribution policy, despite concerns about a short-term drop in revenues due to lower oil industry production. This policy resets the dividend to a resilient level of 5.25 cents per share and guarantees the return of at least 60% of the remaining cash to shareholders through share buybacks once BP deleverages its balance sheet and maintains its strong investment-grade credit rating [8]. This provides a compelling and attractive long-term solution for all investors, and as a result, investor interest in low-carbon companies and sustainable business practices is growing, which supports BP's strategy.

Academic research underscores the long-term benefits of reducing dependence on fossil fuels. Research by Khan “et al." found that companies with good ratings on major sustainability issues significantly outperform companies with poor ratings on these issues [9]. Thus, by reducing oil and gas production and focusing on sustainable renewable energy, BP Oil has become a leader in the industry's transformation, thereby gaining a competitive advantage and maintaining investor confidence.

3.3. Ammonia Energy Investment

BP has also expanded its portfolio by investing in ammonia as part of its broader sustainability strategy. BP's transition to sustainable energy heavily relies on ammonia, a clean fuel and hydrogen carrier. It says that over the next 10 years, it will increase its renewable power generation capacity to 50 gigawatts (GW) from the current 2.5 GW and the number of charging stations for electric vehicles to 70,000 from the current 7,500. And it will increase its investment in hydrogen [1]. BP has decided to leverage the growing global demand for alternative energy sources through this plan, aiming to maintain profitability in the global market while achieving its net-zero emissions plan.

In the hydrogen investment, BP has established a wide range of products in privileged markets worldwide, with a potential capacity of 700-1.3 million tons annually. These products can also create additional value through integration with renewables and CCS [10]. In practical terms, BP has acquired a 40.5% stake in and is the operator of the Asian Renewable Energy Hub (AREH), which is likely to become one of the world's largest renewable energy and green hydrogen centers [11]. And at full capacity, AREH is expected to reduce the industry's carbon emissions by about 17 million tons per year in both domestic and export markets [11]. The International Energy Agency (IEA) predicts that ammonia could meet up to 45% of the world's hydrogen demand by 2050, so BP's investment in this technology is critical for future growth [12].

Researchers have undertaken studies that are optimistic about the economic prospects of investing in emerging clean energy technologies, such as ammonia. Hockerts et al. have shown that the energy transition might result in significant economic development and job creation, with an estimated 11.6 million new direct and indirect positions generated. Consequently, by investing in ammonia energy, BP Oil may establish itself as a pioneer and pivotal participant in the global energy transformation while securing satisfactory financial returns.

4. Suggestions

4.1. Suggestion on Wind Power Plant Construction

Wind power in the current overall state presents a rapid development trend; technological innovation and policy support are the main driving forces for its rapid development. The growing global demand for wind power generation is a result of climate change and energy transition needs. In the future, with the further progress of technology and policy, continuing to promote wind power, especially offshore wind power, will usher in greater development opportunities.

Recommendations for the construction of BP's wind farm are to further strengthen its sustainability strategy, improve profitability, integrate relevant advanced technologies, improve operational efficiency, reduce downtime, maximize wind turbine performance, and ultimately improve overall profitability. With the renewable energy market expected to grow significantly over the next decade, BP is well-positioned to capitalize on the growing demand for wind energy. However, due to future competition with other companies in the same industry and the complexities associated with the increased scale of renewable energy, BP Oil needs to enhance its public communications and stakeholder relations, which could potentially aid in related projects. It should also actively involve members of the communities where the power plants are located, thereby mitigating potential conflicts and garnering support for the project from local residents and conquistadors. This approach will streamline the construction process, enhance the project's social license to operate, and foster further civic acceptance.

As government subsidies for companies in the renewable sector continue to increase and governments are tightening emissions regulations, BP should capitalize on its wind energy investments by aggressively communicating its sustainability accomplishments, demonstrating that its business can reduce environmental impacts, create jobs, and deliver the long-term economic benefits of renewable energy to further strengthen civic acceptance of the wind farm project. This sustainable philosophy builds public and market trust, enhances brand reputation, promotes positive relationships with stakeholders, and ultimately leads to long-term profitability. According to research by Hockerts et al., these "greening oliaths" tend to be less ambitious on environmental and social goals, but their established market position likely allows them to have a wider impact [2].

4.2. Suggestion on Reduce Oil and Gas Production

To enhance profitability while upholding sustainability, BP should adopt a gradual strategy for diminishing oil and gas output, emphasizing judicious divestment and reinvestment in renewable energy technology. Furthermore, as the need for clean energy escalates, BP Oil ought to expedite its investments in renewable energy sources, including wind and hydrogen, thus hastening its transition to a low-carbon portfolio. Simultaneously, exert all efforts to cultivate markets for sustainable or clean energy solutions. Diversify into renewable energy and diminish reliance on oil and gas. By transparently articulating its vision for a low-carbon future and the justification for transitioning from fossil fuels to renewable energy, BP Oil can cultivate stronger relationships with various stakeholders, including investors, consumers, and the public.

Moreover, Eccles et al. assert that sustainable organizations prioritize long-term growth and exhibit enhanced measurement and sharing of non-financial information. Ultimately, from the standpoint of stock market and accounting performance, sustainable enterprises substantially surpass their competitors over the long term [3]. Consequently, by executing such initiatives and clearly articulating their objectives, MVV and BP can solidify their competitive stance and guarantee a substantial financial return in the volatile energy market.

4.3. Suggestion on Ammonia Energy Investment

The global demand for ammonia energy is increasing, mainly for shipping, fertilizers, and chemical feedstocks. As a result, ammonia energy is currently experiencing rapid growth and has a diverse

range of applications across various fields, in addition to providing policy support. Currently, the global climate policy mandates the promotion of the petrochemical and chemical industry's carbon peak, the optimization of the coal chemical industry, ammonia, and other raw material structures, and the encouragement of low-carbon clean energy equipment research and development. These policies have opened up unprecedented development opportunities for the green low-carbon energy industry. Many people view green ammonia as a promising application for efficient hydrogen energy storage and transportation.

For BP Oil, to maximize the profitability of its ammonia investments, BP should focus on scaling up green ammonia production and building strategic partnerships with companies in related industries. With the anticipated growth in ammonia energy demand, BP stands poised to take the lead in industries where ammonia plays a crucial role in decarbonization.

BP Oil's communications strategy should focus on highlighting the potential of ammonia as a key enabler of decarbonization in hard-to-abate sectors such as shipping and heavy manufacturing. It should also emphasize the role of ammonia in helping these industries achieve their zero-emission targets. Through such a communication strategy, BP has been able to gain the support of investors in the relevant industries or those who are sympathetic to the concept. Additionally, BP can utilize this communication to underscore their Zero Carbon Emission Plan, thereby garnering additional public support. In addition, BP should actively promote the scalability and versatility of ammonia, not only as a hydrogen carrier but also as a stand-alone fuel for industries seeking green energy alternatives.

According to Dolf Gielen, early adopters of clean technologies, especially those involving hydrogen and ammonia, are more likely to achieve market leadership [13]. BP Oil can enhance market demand and reduce production costs by focusing on enhancing strategic partnerships, transparent communication, and dissemination of ideas and goals for its ammonia energy-related programs. It will also allow BP to gain support from the public and reduce resistance to the implementation and execution of its programs. Overall, BP must secure a sustainable future for clean energy sources such as ammonia, enabling profitable commercialization and financial returns.

5. Conclusion

This article analyzes BP Oil's strategic transition from conventional fossil fuels to renewable energy, highlighting the company's investments in wind energy, the reduction in gas and oil output, and its emphasis on ammonia as a clean energy alternative. The current results indicate that BP Oil has the ability to emerge as a leader in contemporary energy development due to its dedication to sustainable practices, despite facing internal and external constraints. BP is expanding its energy portfolio by enhancing partnerships and investments in wind energy while diminishing its dependence on conventional energy sources to address the rising need for sustainable energy. Moreover, the reduction in BP's gas and oil output indicates the company's efforts to diminish emissions while preserving profitability, along with a strategic pivot toward investments in ammonia and green hydrogen to address sustainability demands and capitalize on emerging market opportunities in the low-carbon economy.

Future research will concentrate on the long-term profitability of BP Oil's sustainable energy initiatives, particularly in light of emerging global energy policy and the evolving energy requirements of the public. Therefore, it is crucial to investigate whether BP Oil's current ability to incorporate technology into its traditional operations will allow the company to achieve sustainable growth in the emerging energy sector. Future research in the energy sector should concentrate on identifying distinct growth trajectories for conventional energy companies transitioning to sustainable energy. Additionally, it should examine the applicability of BP Oil's initiatives and performance to other traditional energy sectors under varying circumstances, as well as assess the long-term viability of BP Oil's energy transition strategies.

References

[1] Lustgarten, A. (2020, August 4). BP, oil and gas production, and climate change. Inside Climate News. Retrieved from https://insideclimatenews.org

[2] Hockerts, Kai, and Rolf Wüstenhagen. Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship[J]. Journal of business venturing, 2010, 25(5): 481-492.

[3] Eccles, Robert G., Ioannis Ioannou, and George Serafeim. The impact of corporate sustainability on organizational processes and performance[J]. Management science, 2014, 60(11): 2835-2857.

[4] Proost, Joris. The role of (green) hydrogen in the energy transition. No. UCL-Université Catholique de Louvain. 2021.

[5] BP. (n.d.). BP and Equinor form strategic partnership to develop offshore wind energy in U.S. Retrieved from https://www.bp.com

[6] Renewable Energy World. (n.d.). Equinor, BP partner to build offshore wind hub at New York port. Retrieved from https://www.renewableenergyworld.com

[7] Eccles, Robert G., Ioannis Ioannou, and George Serafeim. The impact of a corporate culture of sustainability on corporate behavior and performance[M]. Cambridge, MA, USA: National Bureau of Economic Research, 2012.

[8] BP. (n.d.). From international oil company to integrated energy company: BP sets out strategy for a decade of delivery towards net zero ambition. Retrieved from https://www.bp.com/en/global/corporate/

[9] Khan M, Serafeim G, Yoon A. Corporate sustainability: First evidence on materiality[J]. The accounting review, 2016, 91(6): 1697-1724.

[10] BP. (n.d.). BP update on strategic progress. Retrieved from https://www.bp.com/en/global/

[11] BP. (n.d.). BP to lead and operate one of the world's largest renewables and green hydrogen energy hubs based in Western Australia. Retrieved from https://www.bp.com/en/

[12] S&P Global Commodity Insights. (2021, May 18). Ammonia to power 45% of shipping in 2050 net zero scenario: IEA. Retrieved from https://www.spglobal.com

[13] Proost, Joris. The role of (green) hydrogen in the energy transition. No. UCL-Université Catholique de Louvain. 2021.