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The Viability of Energy Transition Companies

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Abstract

Various phases of economic development have been characterized by traditional energy transition from one predominant energy source to another. However, S&P Global, (2020) refers to Energy Transition as a global energy sector shifting from a fossil fuel-based system of energy production and consumption, including crude oil and natural gas, coal to renewable energy sources like wind, solar, as well as lithium-ion batteries. The production and consumption of fossil fuel energies contribute disproportionately to global GHG emissions, with undesirable effects on a widespread, rapid, and intensifying climate change. To achieve a low carbon economy, society needs to deliberately reduce the use of fossil fuels. This has translated to energy supply uncertainties, posing substantial investment risk for energy suppliers and investors. On the other hand, these challenges have also created opportunities to produce and consume energy in a sustainable manner. This paper reviewed various reasoning on financial viability of energy transition companies, attributes, and its theoretical basis, with supported practice of Orsted Energy's enterprises to put forward several directions for further study. In this regard, the viability of transition from oil and gas companies to renewable energy companies by Orsted Energy, was analysed. Financial statements collected from Orsted Energy Company's website from the period 2013 to 2020. From the data, Orsted Energy's financial performance highlighting its profitability, revenue, and leverage metrics were critically reviewed to appreciate the financial viability of Orsted Energy. This shows that Orsted Energy displayed strong financial viability since its flip energy transition strategy. Therefore, enablers for energy transition were deduced from the findings, whereby seek to inform policymakers, emerging and existing energy services providers for decision making to further achieve the Net-zero target in 2050.

Keywords: *Energy Transition, Financial Performance, Orsted Energy, Renewable Energy, and Conventional Energy*.

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1. Introduction

Industrial development is a key component of the energy transition. That is, as economies develop and become more intricate, the need for energy grows rapidly (Timmons et al., 2015. p.3). However, various phases of economic development have been characterized by traditional energy transition from one predominant energy source to another. S&P Global, (2020) refers to Energy Transition as a global energy sector shifting from a fossil fuel-based system of energy production and consumption- including crude oil and natural gas, coal to renewable energy sources like wind, solar, as well as lithium-ion batteries. Contemporarily, Fossil fuels continue to hold the largest share of the energy mix. Crude oil, natural gas, and coal account for about 84 percent primary global energy supply, and renewable energy accounts for nearly 6 percent respectively (British Petroleum, 2020). The hydrocarbon industry has played a major role as one of the biggest, highly complex, and most important among other industries in the world as it propels the primary socio-economic order for transportation of goods, producing electricity, heat, and other essential commodities that touches everyone's life (Inkpen and Moffet, 2011). The exploitation of hydrocarbon has generated herculean revenue for both International Oil Companies (IOCs), National Oil Companies (NOCs), Independent Energy companies, and various servicing companies across the value chain of the Petroleum industry.

Consequently, the production and consumption of fossil fuels contribute disproportionately to global Green House Gas (GHG) emissions, with undesirable effects on a widespread, rapid, and intensifying climate change. Global energy-related Carbon dioxide (CO2) Emissions remained at about 31.5 Giga-tons CO2, where CO2 emissions contributed nearly 412.5 parts per million in 2020. Around the globe, CO2 Emissions declined by 5.8% or nearly 2 Giga-tons CO2. This drop is related to the covid-19 pandemic, owing to a significant drop in demand for crude oil and coal, contributing to the rise in renewable energy consumption in this period (International Energy Agency IEA, 2020).

Furthermore, the Intergovernmental Panel on climate change (IPCC) in a study that includes over 1,000 scientists across the globe predicted that there will be a temperature rise of about 1 to 3 degrees over the next few decades (Victor Chuku, 2021). The report also suggests that, in other to keep global warming around 1.5ºC, we must reduce coal power generation to 70% by 2030, and also phase a total phase of by 2050. However, to achieve a net-zero and low-carbon economy, it is expected economies must significantly reduce dependency on fossil fuels. This can be feasible by the significant drop in fossil fuel development, and increased investments in renewable energy. Thus, investors and companies continue to seek clarity and confidence in accounting for long-term renewable energy investment, climate risks, and opportunities in the energy transition. However, the main drives of energy transition remain climate change pressure groups, technology advancement, depletion of reserves, increasing population, and growing demand for electricity serves as game-changing signals, where energy-related businesses will seek to adapt to the energy transition, that aims to minimize energy-related GHG emissions through different processes of decarbonization.

Despite the business opportunities surrounding energy transition to a low-carbon economy, most oil and gas companies are still seeking clearer grounds on the trends that are advocating to secure swift and fair transition. This has put some question marks on the viability of transition oil and gas businesses to renewable energy companies. However, few businesses have demonstrated viable resilience towards reducing their carbon footprints. Ørsted, an energy company in Denmark, a former Danish Oil and Natural Gas, DONG Company stands out as a case study for this dissertation. Ørsted became the world's most sustainable energy company after its management announced a major strategic transition, where the company seeks to generate 85% of its Energy and power from renewable resources by 2040 (McKinsey, 2020). Just recently, top Oil and Gas companies have announced a change of name and strategy to respond to energy transition trends this year. For example, Total, Qatar Petroleum, and Seplat rebranded to Total Energies, Qatar Energies, and Seplat Energies respectively.

2.Conceptual Outline

2.1 Demand and Supply of Energy sources

Energy is the capacity to do work. It drives overall human productivity and fuels an economy. There are two types of energy sources, namely renewable and non-renewable (fossil fuels), sometimes also known as unconventional and conventional energy sources respectively. Renewable energy is derived from natural resources and is inexhaustible. Examples of Renewable energy include Solar photovoltaic (Solar PV), Wind, Hydro-energy, biomass, geothermal energy, etc. While non-renewable resources are exhaustible resources that can deplete over time. Examples are Crude Oil, Natural Gas, and coal. Furthermore, these energy resources can be transformed from one energy to another, and can be used sometimes in their primary form like natural gas, or transformed to secondary forms for transportation, electricity generation, cooking, heating of homes, manufacturing, and more. Most importantly, the use of energy is closely related to the health and well-being of humans, low energy users are expected to suffer high infant mortality rates, low life expectancy, and low literacy rates (Darmstadter, 2003; Duncan, 2001; Holdren, 1991). The economics of energy resources is central to the demand and supply of these energy resources. For more than 8 decades, the world has been dependent on fossil fuel which is characterized as more reliable, easily accessible, and cheap compared to renewable energy. According to International Energy Agency (IEA), global energy demand is about 91 million barrels in 2019 and is expected to experience demand growth to about 104 million barrels in 2026 due to the increasing population. The biggest crude oil and natural gas are China, India, and the United States of America (USA) respectively. On the other side, the global crude oil supply must be able to meet energy demand. The USA, Russia, and OPEC members account for over 80 percent of global crude oil and natural gas supply. However, consumption of these energy sources does not exist in isolation from the environment. There is a strong relationship between energy use and the environment, as environmental protection is fundamental to sustainable economic development. Moreover, a Lack of access to clean and affordable energy can lead to significant environmental degradation, such as climate change, loss of biodiversity, and ozone layer depletion (Ghosh and Prelas, 2009).

2.2 Climate Change

Climate change according to (IPONC, 2007) refers to any change of climate over time, whether as a result of natural phenomena or human activity. Although, human-induced changes in atmospheric chemistry have occurred over decades (Ramanathan, 1988 as experienced by Hardy, 2003). Human contributions aside, aerosols partly caused by human activities play an intense role in the climate change system through radiative effects in the atmosphere, on snow and ice surfaces through effects on cloud formation and compositions (Wuebbles et al., 2017). Moreover, there has been significant evidence of volcanic eruptions as a natural driver of climate change. In contrast, substantial amounts of sulphur dioxide (SO2) and ash formed in the stratosphere, in the presence of explosive volcanic eruptions, which eventually leads to significant short-term climate change (Myhre et al., 2013). For instance, the 1991 eruption of Mount Pinatubo significantly contributed more than 250 megatons into the upper atmosphere a day (Self et al., 1999). The columns of the eruption reached an altitude of about 40 kilometers, forming a gigantic umbrella-like cloud in the stratosphere that emitted nearly 17 megatons of SO2. This is, however, slightly more than twice the largest emission produced by the 1982 El Chichon volcanic eruption that took place in Mexico.

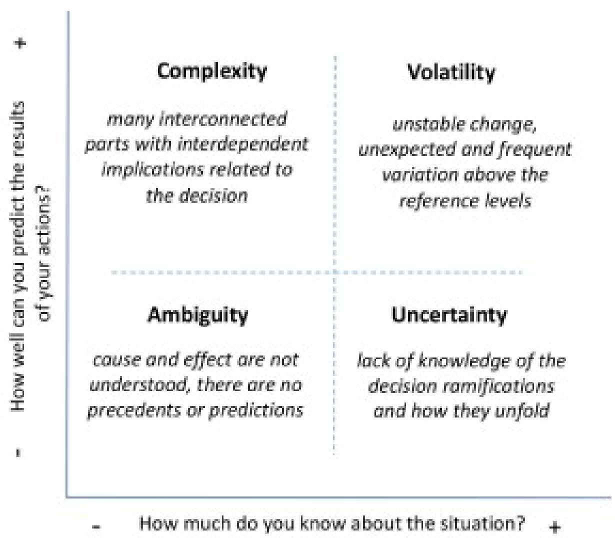
Furthermore, changes in solar irradiance directly impact the climate system because the irradiance is the earth's primary energy source. In the industrial era, the biggest variations in total solar irradiance follow an 11-year circle (Frohlich and Lean, 2004; Gray, et al., 2010). There have been direct solar observations dice 1978 (Kopp, 2014), where proxy indicators of solar cycles are present far back to the early 1600s (Kopp et al., 2016) Although, these variations have approximately amounted to 0.1% of the total solar output of about 1360 W/m2 ((Kopp et al., 2011), with relative variations in irradiance at given wavelengths which can be much larger in terms of percentage. Thus, several variations include spectral variations which seem to be highest at near-ultraviolet, and shorter wavelength (Floyd et al., 2003), which is seen also regarded as most important for driving significant changes in the ozone (Ermoli et al., 2013; Bolduc, et al., 2015). Conversely, various scientists attribute the global warming trend since the mid-20th century to the human expansion of greenhouse gas emissions (GHGE). Most GHGEs emanate from the burning of fossil fuels for industrial and domestic consumption. The different types of GHGs include Carbon dioxide (CO2), Methane, Nitrous oxide, and fluorinated gases. Recent data from the International Energy Agency, (IEA, 2021) indicates an increase of the total CO2 emissions by 63% at 33,513 Mt since 1990 and a 13.92% increase of CO2 emissions per capita at 4.42 t CO2 /capita since 1990. Consequently, the continuous emission of GHG to the atmosphere has had undesirable effects on our environment like continuous rise in temperature, flooding, wildfires, and excessive cold. Consequently, there have been simultaneous events of wildfire in the US, France, Greece, Turkey, Israel, Indonesia, Brazil this summer.

The grave consequences and undue uncertainties of climate change have long become unending debates between energy industry players, policymakers, investors, governments, academia, and environmental activists. The problems span across irresponsible information about climate change. Responsible reports like accurate, precise, and timely information about GHGE remains an inherent tool in managing climate crisis. Yet all the proponents of climate change lack easy access to data today. On the other hand, global demand for energy, which is heavily dependent on fossil fuels is rapidly increasing, characterized by growth in economy and population, most especially in emerging market economies, which significantly account for 90% of energy demand growth to 2035 (OECD, 2011). In all, this has created a window of opportunity to carry out transformational and transitional change in the energy supply industries to meet economic and environmental objectives, as there is a need to revamp old plants with added capacity to meet growing electricity demand, especially in developing economies.

2.3 Strategic Decision Making

There are lots of unending business risks and uncertainties resting on strategic leaders in organizations. Effective strategy brings about a competitive advantage to firms regarding healthy decision-making in the face of high risk and uncertainties in the organization. Moreover, decision-making means making the best choices or alternatives to achieve profit objectives that require sometimes extensive mental calculations. The top management team is made to make decisions on business objectives, products/services, and finance, middle managers decide on production outlines, staff hiring, etc (Robbins, 2011 as cited in Celik et al., 2016 paper). Extensively, if decision-making is choosing from alternatives, what then makes a decision strategic? Among several illustrations; (Schwartz, Ben-Haim, and Dasco, 2011) perceive the strategic decision as exploitations in power games from competitors that aims to push competitors out of business and/or make more profits. However, TMT leaders must consider the effectiveness of strategic decisions when initiating change, competition, addressing conflicts, innovation, risk-taking, and other fundamental strategies. In Energy firms, achieving the goal of competitive advantage requires top managers to understand the fundamentals of competitive advantage as well as the characteristics that may propel the significant changes in these fundamentals that allow them to link together a series of temporary advantages (Sirmon et al., 2010). For instance, a decision for a merger, or acquisition of assets, or innovative technology like Orsted's partial divestment to Renewable energy streams. This is expected to create core rigidness as it is perceived as a liability even though its position's the organization for increased competitive advantage, especially when firms are exposed to environmental and societal change. Therefore, in a bid to describe the implications of strategic rigidness in the energy sector, (Nisar et al., 2013) suggests in their findings that not all utility firms are keen to embrace new technologies, as firms have traditionally been operating efficiently with a more standardized and familiar technology arrangement, which has, however, become embedded in the organizational activities. In this regard, most of the firms present in the S&P 500, Dow Jones, Nasdaq, and FTSE 100 would probably not be there in 20years. Especially, in this energy transition era where top management teams are called upon to proffer the best strategic choices, sustain core business propositions to position the organizations for the future. However, the difficulty that lies in identifying the requirements of the introduction of combinations of strategic postures (Courtney et al., 1997), is embedded in business leaders to reshape energy transition. In some familiar cases, it is perceived to embrace an approach of flexibility and agility to respond to undesired changes. While, some would prefer to be on a hang fire mode, buffering resources, and avoiding unseasonable commitments (Courtney et al., 1997). Based on the popular (Bennett & Lemoine, 2014) model on Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) framework which helps to contextualize turbulence and drive strategic decisions for business leaders as seen in (Figure 2.0) where traditional business models eroded swiftly and key stakeholders lost their positions. After several interviews with several CEOs in the renewable energy clime, both in the US and Germany, **(**Giones et al., 2018) proposed a guide for top managers to effectively implement and navigate through the VUCA frameworks, taking into account the importance to introduce both short and long term Responses that will prepare organizations and stakeholders for the uncertain future.

Figure 2.0: VUCA frameworks



Source: (Bennett & Lemoine, 2014)

2.4 **Leverage and Solvency**

The transition to achieve net-zero energy systems is fast growing to expected outcomes. Despite the climate change activism and emerging renewable energy technologies, business leaders in the energy sector will continue to seek profitable investments in any regard. Although, Laurence Fink, CEO of Blackrock Investment firm in his letter to CEOs, suggests that firms should aspire to positively impact society than just to make profits. The statement stems from the recent scientifically established threshold that is necessary to keep global warming below 2^{o}C. This means, companies will seek for transition, but profitability will continue to be the order of the day. Although, Oil and Gas businesses are already characterized by high financial leverages. Will transition from oil and gas firms to renewable energy firms expose Energy companies to increased financial leverages or not?

Financial leverages can be described as a strategic investment of using borrowed money. That is, it is the substation of debt for equity in project or company financing. Business managers have, however, used financial leverages to improve the return of equity. In terms of optimum, academics have labored and pondered over the relationship between debt and equity, which has led to various publications at conferences. But among all, Professor Myers' static trade-off theory, which emphasized the tax advantages for a company in borrowing. He further buttressed the costs of the risks inherent in indebtedness could become so significant to overwhelm the tax margins, whereby more borrowings could plunge the firm towards bankruptcy. On the other hand, one of the uncertainties in applying (Professor Myers' theory, as seen in Andrew Fight, 2006. p. 59) is that, in practice, most firms are neither on the brink of collapse nor sitting on a cash mountain. However, project financing is traditionally complex, with inherent risk and highly leveraged capital structures. Investors, that provide the highest quota in the form of nonrecourse or limited-recourse debt, are typically concerned about the risks inherent with financing, developing, and operating project finance initiatives (Boeing, Singh, and Kalidindi, 2009). This could have been a result of a bad economy, characterized by a shortage of public finance, with limits imposed on public budgets coercing many countries to cut traditional investments in energy projects (De Marco et al., 2016). Consequentially, the application of project finance schemes has witnessed increasing interest in the energy sector (De Marco and Mangano, 2017). Furthermore, there is a central issue regarding the relationship between financial leverage and investment policies. On one side of this issue are those who maintain that a firm's capital structure is essentially irrelevant (Langs et al., 1995). Most firms with viable projects regardless of how their balance sheet looks will continue to grow because of their creditworthiness. (Miller, 1991. p. 481) argues that we should not "waste our limited worrying capacity on second-order and largely self-correcting problems like financial leveraging. While for those on the other side, argues that high leverage reduces a firm's ability to finance growth through the liquidity effect. In this regard, (Langs et al., 1995) were able to prove the negative relationship between leverage and growth. It is imperative to document such research since various capital structure theories suggest that such a relationship should exist because firms with high leverage might not be able to take advantage of growth opportunities, and because firms with low growth opportunities should be prevented from squandering cash flow on poorly evaluated projects. Having provided many choices by managers that choose leverage by using their private information about the firm's growth opportunities, it could also be that leverage is a proxy for growth opportunities. Also, (Langs et al., 1995) further addressed this issue by showing that the negative relationship between growth and leverage also holds for non-core business segments of diversified firms, even though the growth opportunities of noncore segments should have little impact on a firm's capital structure. Furthermore, the corporate debt maturity structure, a choice between short-term and long-term is a major decision. Various literature suggests

Short-term debts undesirably subject managers to greater scrutiny and monitoring (Stulz, 2000) and signal private information to outsides (Diamond, 1991; Barclay and Smith, 1995). Also, prior studies provide evidence that various firm-level characteristics, institutional settings, and macro-economic factors affect the maturity structure of debt (Awartani et al., 2016; Barclay and Smith, 1995; Belkhir et al., 2016; Boubaker et al., 2019; Datta et al., 2019; Huang et al., 2016). To investigate the impact of oil price uncertainty on corporate debt maturity structure, Hasan et al., (2020), was motivated by recent evidence suggesting that, despite the advent of alternative energy sources, crude oil remains an essential input for firms (either directly or indirectly) and oil price movements have important implications for corporate investment, liquidity, pay-outs, cost of production, earnings, and stock prices (Chen et al., 2020; Clements et al., 2019; Crawford et al., 2021; Phan et al., 2019; Wong, 2021; Wong and Zhang, 2020; Wong and Hasan, 2021; Zhang et al., 2020).

Hasan et al., (2020), further proved in their work that the duration of debt instruments can have a substantial impact on the cost of capital, investment plans, and firm risks 9refinancing and liquidity) and thus, can influence the future direction of the company. The study also contributes to extant literature regarding corporate finance and literature by establishing empirical evidence that oil price volatility creates uncertainty for most other industries leading to a significant increase in the use of short-term debt.

2.5 Profitability Metrics

A recent report by the International Energy Agency (IEA) suggests that energy investments are usually made with profitability as targets but also, by the perception of risks and other business factors. Some Energy industry players recently announced intentions to shift their capital allocations to a different mix of fuels and technologies merit a look at some of the financial and non-financial drives. Reasons given that; to invest more in energy transition companies, and invest in less high-risk projects (IEA, 2019). However, the relevance of sustainable development in the energy sector has become crystal in the Renewable energy directive of the European Union (EC, 2009). Research conducted by Tomasz Schabek, (2020) on the financial performance of sustainable power producers in emerging markets took cognizance of the familiar Renewable energy source like solar and wind with their financial performance. His study included private and public firms whose main activity is based on renewable power production in large samples, and also provided overall comparatives of the financial performance of fossil fuel against renewable energy power producers. The study, however, provided comprehensive results from a variety of panel regression that explained the return of assets (ROA) and returns of equity (ROE). It was observed that ROA was higher for solar power producers, and ROE lower for public companies, since the legal form of the company does not impact the ROA. The results further suggest that the variables introduced into the investigation are relevant in determining the financial performance of sustainable power producers (Schabek, 2020).

3 Orsted Energy Brief

The famous Arab-Israeli war popularly known as the Arab embargo in 1973 led to one of the most significant crude oil price volatility in the world. The Arab embargo affected Denmark, leading to a rise in inflation and economic recession. At this time, Denmark was heavily dependent on crude oil and natural gas importation. The Danish government through a reformed energy policy decided to respond to the Arab embargo by establishing its own company called Danish Oil and Natural Gas Company, known as DONG. The company was, however, modeled to extract oil and gas from the North Sea instead. To consolidate energy independence, DONG developed a renewable energy industry (wind turbines) in1991 as an integral strategic business unit. This was the world’s first offshore-wind farm put in operations, which accounted for nearly 2,200 Danish households' annual consumption. To further expand its renewable energy portfolio, DONG announces another 150 Mega-watts offshore wind farm. Notably, DONG was still much in Oil and gas business but seeking to liberalize its electricity and gas market. DONG later merged with Elsam, Energi E2, Nesa, Kobenhayns Energi, and Frederiksberg Forsyning to increase its energy resource portfolio.

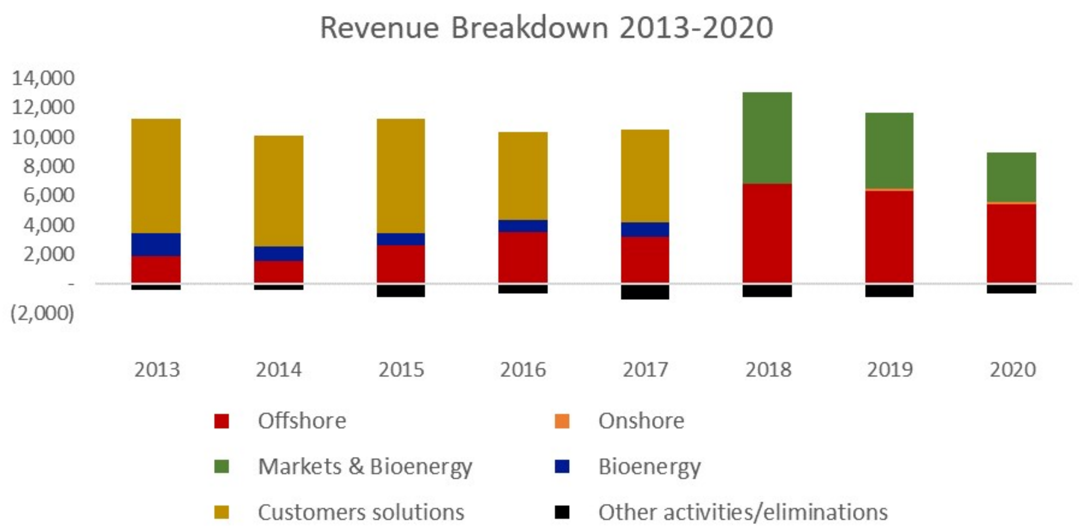
In 2008, DONG officially announced its decision to transform from an oil and gas company to a renewable energy company, by investing heavily in the development of its renewable assets like the offshore wind farms, and as well, converting its existing fossil fuel-based power plants to cleaner fuels like biomass. This transformation made DONG a leading green energy provider in the world, and later change its name from DONG to Orsted Energy in 2017 (About our name).

4 Orsted Energy Financial Performance

4.1 Revenue and Cash Position

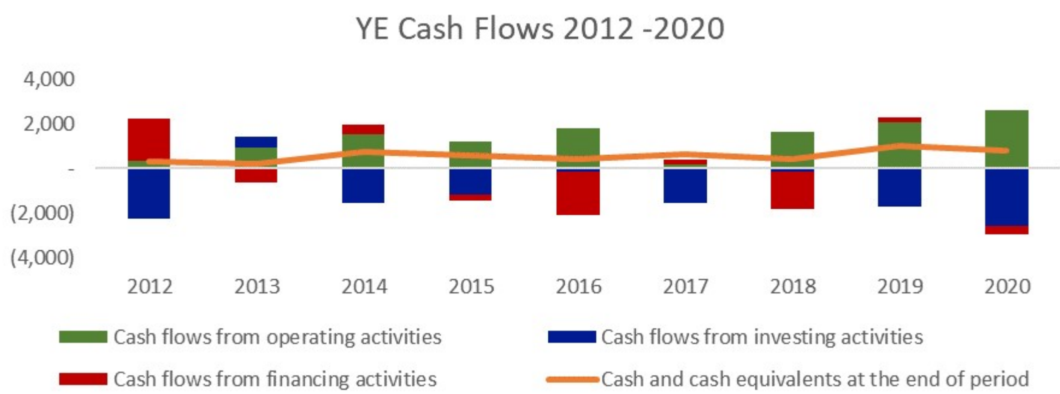
Orsted’s $8.28B in revenue for 2020 was at the lowest level since at least 2013. This could have been attached to the Impact of the Covid-19 pandemic on the energy sector. The energy sector in 2020 was significantly characterized by plummeted electricity demand from the commercial and industrial sectors, induced by government-enforced lockdown measures to curb the widespread of covid-19. Notably, The IEA estimates that global electricity demand fell by 2.5% in Q1-2020, and has forecasted a 5% drop at the end of 2020. Also, (Bakovic et al., 2020) observed a 15% drop in electricity demand in the International Finance Corporation (IFC) member countries. However, with a high of $12.11B, the total revenue level has been quite stable over the years but with significant changes in its composition. Most significantly is the growth in revenue in offshore and bioenergy segments since 2018. This growth indicates the significant maturity of Orsted’s offshore technological breakthrough. Just like revenue, the company’s cash position has been relatively stable. A closer look at the cash flow statement shows that the company invests significantly in assets (offshore wind turbines) as would be expected for a company operating in the utilities/energy sector to transition from conventional fuels to renewable energy. Positively, the company has not had to significantly rely on outside cash to finance this investment in assets. In fact, on balance, Orsted has been paying off previously obtained financing with the largest outflow occurring in 2016. This was also the same year that there was a significant drop in the company’s leverage which can be explained by the significant debt repayment in that year (see Leverage Ratios graph). It’s also important to note that the company’s $2.59B in cash flow from operations is the highest level in what has been a relatively upward trend in operating cash flow.

Fig 4.1: Orsted Energy Revenue Breakdown 2013 to 2020



Source: Orsted Energy

Fig 4.2: Cash flows from 2013

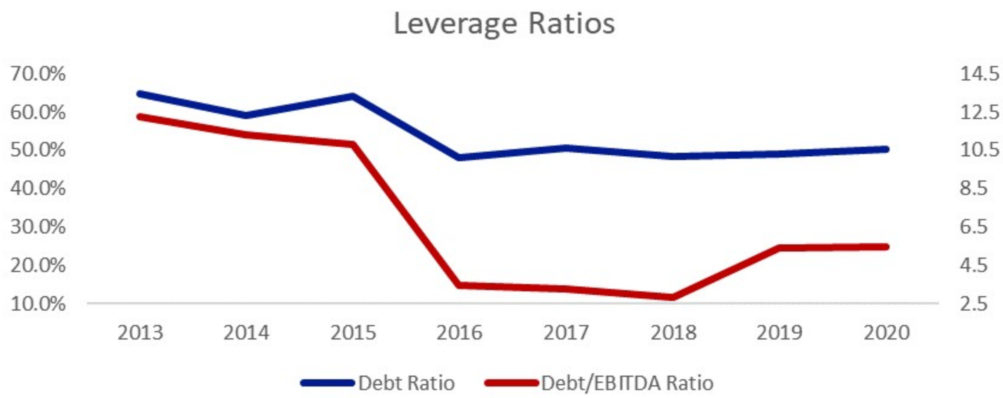


Source: Orsted Energy

4.2 **Degree of Leverage and Solvency**

As might be expected for a company operating in the utilities/energy sector, Orsted has historically had a top-heavy capital structure. However, with a debt ratio of about 50% in the last reported year, the company is not overly leveraged in comparison with its peers. This shows the strong position of Orsted Energy saddled by redesigning its strategic investment. Also, judging from the downward trend in the debt ratio from about 64% to its current 50% level, it is reasonable to expect the company to maintain, if not decrease, its current degree of leverage in the future. This is further borne out by the downward trend in the debt to EBITDA ratio. Although the current debt/EBITDA of 5.4 indicates a relatively high degree of leverage, this has substantially reduced from a high of 12.3 in 2013 and there has been a steady downward trend which is positive for current shareholders and prospective investors alike. In essence, a highly leveraged company is more beholden to its debt holders who have the first claim on the company's assets. Not only do debt holders have a greater claim to the assets due to the top-heavy capital structure, but a high degree of leverage commensurately increases the chances of bankruptcy. Hence, the indication that Orsted is moving toward a less top-heavy structure (less leverage) is encouraging.

Fig 4.3: Leverage ratios from 2013 to 2020

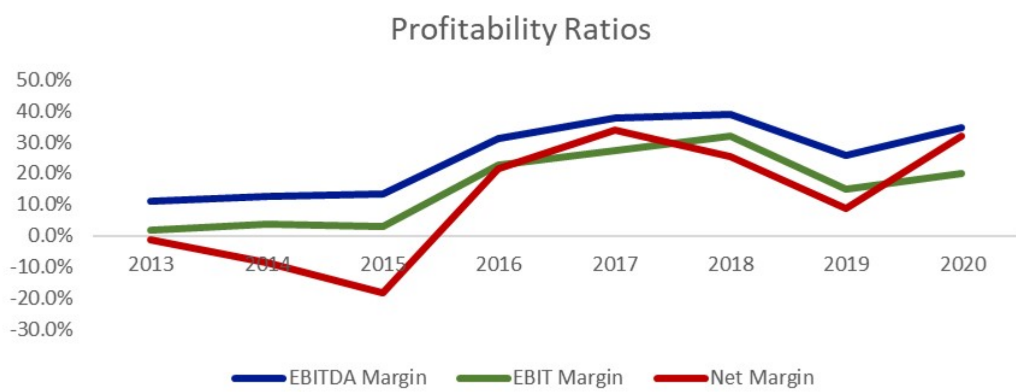


Source: Orsted Energy

4.3 **Profitability Ratios**

Orsted's profitability has been respectable over the past 5 years with a 2020 net margin of about 32%. However, over a 10-year period, profitability metrics have been somewhat volatile, especially net margins, with the low point being in 2015. Looking at the return on equity paints a less flattering picture and might imply that assets are not optimally employed. This does suggest that there is still room for improvement and management would prudently be looking at ways to increase ROE to at least the 2017 high of 28% as seen in (Fig. 4.4). The slight upward trend in net and EBIT margins is a source of encouragement that management will reach this goal which would increase the company's value.

Fig 4.4: Profitability ratios from 2013 to 2020



Source: Orsted Energy

Fig. 4.5: Return of Equity from 2013 to 2020

Source: Orsted Energy

5 Orsted Energy Transition Enablers

Just 13 years ago, the Danish Oil and Natural Gas Company made major of its profits from conventional fuels. Today, it's one of the world's most successful renewable energy suppliers with the largest offshore-wind footprint as a company in the world. However, Orsted Energy has displayed viable financial performance in renewable energy installations. From logical deductions, the transition from Oil and Gas Company to renewable energy company was enabled by the following;

5.1. ***Market Demand***: Traditionally, Demand and price is the primary element that fuels supply. That is, without demand, there will be no supply. Highlighting from an interview by the Chief Executive Officer (CEO) of Orsted's offshore wind business, Martin Neubert. Martin and his team were able to make a key decision to invest more in renewable after a failed attempt to develop a 1,600 MW coal-fired power plant in Northwest Germany.

5.2. Transition Strategy: The strategy to transition from a conventional energy company to a renewable energy company was borne out of necessity. There was greater awareness about climate change, and thus, led to the shift and behavioral change of consumers. Orsted Energy launched a strategic swap of its power generation portfolio. Previously Orsted had 85 percent fossil fuel and 15 percent renewable energy generation mix. In the course of the transition, Orsted formulated its new transition strategy to 85 percent renewable energy and 15 percent fossil fuel in its power generation mix. The effectiveness of strategic implementation was also backed by structural changes in Orsted Energy. Since the already had an existing renewable energy business unit operating like a startup, it was then necessary to carry out robust structural change to capture its new transition strategy.

5.3. Technological Breakthrough and Partnership*:* Prior to Orsted's energy transition, they had the presence of onshore wind in their portfolio, but quite insignificant compared to their new vision. Orsted resolved to expand its renewable energy portfolio through offshore-wind installations, which had a low technology landscape in 2008. Scientifically, offshore-wind turbines are characterized by high wind velocity and thus produce high energy compared to onshore-wind turbines with relatively reduced cost in the long run. However, due to technology constraints, Orsted Energy was able to acquire A2SEA, a large scale offshore-wind turbine installation company. Orsted also ventured into several partnerships in Engineering, Construction, and Procurement (EPC) firms to achieve its technological breakthrough.

5.4. Policy and Regulation: Government Policies and Regulations are key elements that drive the energy transition. Notably, target setting was adopted by European Union to achieve net-zero. This mechanism is often important in strategic policymaking for renewable deployment. Target settings are usually adopted into national law to ascertain their binding status (Daszkiewicz, 2020). These targets are expected to create traditional market opportunities for Energy Transition entrants.

5.6. Sustainable Investments and Funding: Sustainable Investment is a key enabler towards Orsted Green Energy vision. According to (Polack 2021), "Green and climate bonds allow governments and multilateral development banks to raise finance and direct capital into renewable energy and other green infrastructure, assets, and measures." In this regard, Orsted Energy has set a new target to increase its renewable energy installed capacity to 50 Giga-Watts by 2030. This can be achieved with the aid of sustainable investments as most financial institutions like Blackrock are strategically moving away from fossil fuel investment to green energy. Just recently, the European Investment Bank (EIB) agreed to support Orsted Energy Green investment with a €500 million loan.

6. Conclusions

The need to diversify conventional energy supply and consumption remains a topical puzzle for the energy transition in this industrial age. Energy remains a key component of economic buoyancy, and thus, aids the productivity of humans in general. On the other hand, we must seek to supply and consume energy in a responsible manner, to avert further degradation of the environment. This alludes to that, we must move away from conventional energy sources to clean energy like renewable energy (wind and solar PV) as alternative energy. However, emerging technologies have posed theoretical possibilities of the energy transition, but most energy supplies continue to adapt in this inevitable energy transition. This paper has put together an overall investigation of Orsted Energy's financial performance, seeking to highlight the enablers that may have led to the successful implementation of the Orsted Energy flip station from a conventional energy supplier to a global supplier of clean energy. The financial performance of Orsted Energy has displayed a strong position in generating huge revenues, most especially from their offshore-wind turbine assets. It further shows a reasonable position on their profitability metrics, Return of Equity, and debt servicing. In this regard, the analysis from Orsted Energy's financial performance in this paper has demonstrated a strong indication that it is possible for emerging renewable energy suppliers to transition from conventional energy supply. Therefore, both emerging and existing suppliers are expected to make a profit without being leveraged and exposed to bankruptcy if they employ a prudent energy transition strategy. Thus, this paper also highlighted six enablers deduced from Orsted Energy transition success such as market demand, Organizational Transition strategy, technological breakthrough and partnership, policy and regulation, and sustainable investment and funding.

7.Recommendations

Energy suppliers are a key integral player in Energy systems. To achieve green energy and net-zero goals, I recommend the following;

- Synergy and Collaborations: Resource constraints remain a challenge in the execution of projects of any magnitude. The world has further suffered yet another global financial setback caused by the infamous covid-19 pandemic. Therefore, both existing and emerging green energy players must seek adequate synergy and collaboration, most especially in areas like knowledge transfer and funding to enable the energy transition.

- Suitable Market Reforms: Governments and policymakers must seek to ensure effective free markets in energy systems. Open, free, and flexible markets are prerequisites to optimizing renewable energy systems. In return, more sophisticated technologies will be developed, either as standalone, or hybrids systems. In the long run, a reformed market system must seek to out rightly remove or reduce energy subsidy, and as well address high-cost variables in energy systems to reduce the cost of energy to its barest minimum to achieve affordable energy.

- Emerging Economy inclusivity: Energy transition would not be justifiable without economic prosperity in emerging economies. Countries like Nigeria in West Africa have large and underutilized oil and gas deposits. Consequently, the African continent is characterized by energy poverty with over 50 percent of its population living without access to public utilities. However, World leaders should allow countries, especially in Africa to transition at their respective pace, through oil and gas development as the African continent contribute almost negligible GHG to the atmosphere. The economic utilization of its huge hydrocarbon reserves is expected to cater to the growing population, increase economic prosperity, and improve the well-being of the people.

8. Research Opportunities

This paper, therefore, creates more research opportunities like exploring statistical evidence of the possibility of the energy transition, possibilities of the energy transition by regions, barriers that could hinder energy transition, and financial performance of renewable energy supply new entrants in 2021.

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