Entrepreneurship and Innovation Management: consultancy report

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Executive summary

The publicly traded renewable infrastructure fund with the highest level of performance is Greencoat UK Wind PLC. It has financial interests in wind farms in the UK that already supply the nation with energy. Wind resource analysis software is needed to calculate the potential of wind energy accurately. We chose one that uses advanced modelling, keeps archived meteorological data, and considers the terrain of the project location after investigating and comparing the numerous wind resource assessment programmes on the market. The macroeconomic environment affects both total demand and investment in an economy. The macroeconomic environment affects both total demand and investment in an economy. Greencoat Wind UK is vulnerable to changes in regional policy, grid restrictions, and variations in the total amount of wind resources accessible because a sizable number of its assets are situated in specific locations, such as Scotland. Working with regional developers and operators in various regions or buying them all will aid the company's entry into additional markets and diversification of its wind farm holdings. This would be a fantastic method for the business to grow. Using this strategy, Greencoat Wind UK can depend on the knowledge and experience of established businesses already active in the field, reducing the time and resources needed to establish a presence in new regions.

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1.1. Critical selection of Greencoat Wind UK

Greencoat UK Wind PLC is the most successful renewable infrastructure fund that is publicly traded. It has financial stakes in wind farms already producing energy in the United Kingdom. The fund is nearly £3.6 billion worth of market capitalisation and is featured in the FTSE 250 index. Exposure to onshore and offshore wind assets in the United Kingdom through a premium listed vehicle provides an attractive and consistent yield and the possibility of private market co-investment (Hill et al., 2021). Greencoat UK Wind PLC is a fund that invests in renewable infrastructure and places a particular emphasis on wind farms in the United Kingdom. The business's objective is to keep its investment portfolio's market value stable over the long term and on an objective basis by continually reinvesting any surplus cash flow and simultaneously offering shareholders an annual dividend that rises proportionately to a retail price index (RPI) increases (Tavoletti et al., 2022). The company has financial stakes in several wind farms in the United Kingdom.

1.1.1 External Factors

It might take much effort for Greencoat Uk Wind Plc to achieve economies of scale in its competitive market. This simplifies having a cost advantage for those who manufacture in huge quantities. Most businesses in the sector sell unique products rather than ones that are standardised, which is evidence of the high level of product differentiation in the sector (Tavoletti et al., 2022). Customers are also drawn to goods that distinguish them from their competitors. Additionally, there is a big emphasis on marketing and offering top-notch customer service. These several factors work together to make the prospect of new competitors entering this market a relatively minor force.

- Due to the industry's high capital requirements, it is challenging for new entrants to form businesses because significant initial investments are needed. Significant ongoing costs are additionally necessary. The high level of capital expenditures is partly a result of the high costs of research and development. The likelihood of new competitors entering this market is greatly diminished for the above reasons.
- Access to distribution networks enables new businesses to set up their distribution channels. As a result, it is easier for new businesses to enter a market (Madsen, 2020). It is straightforward for any new entrant to obtain their items on the shelves of those retailers because the product category is only sold in a small number of retail establishments.
- Before a company can start selling its products, it must satisfy several onerous legal and licencing requirements imposed by the government regulations that regulate the

industry. The combined effect of all these factors makes the possibility of new entrants into this market a potent force. This makes it challenging for new businesses to enter the industry, reducing the threat of new businesses entering the market.

Only a few alternatives can effectively replace the products that Greencoat UK Wind Plc competes in. The industries producing the fewest feasible alternatives all make very little money. This suggests that there is no cap on the maximum profit that an organisation in the industry in which Greencoat Uk Wind Plc competes may make. These factors make the rivalry from substitute products less prominent in the market (Henry, 2005). The few options are of good quality, but their costs are much higher. When contrasted, businesses in the sector that Greencoat Uk Wind Plc serves sell their goods for less than competitors while maintaining an adequate level of quality. According to this, customers are less likely to buy copies of the original product. This suggests a lower likelihood of competitors creating similar products within the industry.

1.1.2 Internal Factors

- Few options can replace the goods manufactured in the market in which Greencoat UK Wind Plc competes.
- The industries producing the fewest feasible alternatives all make paltry profits. This suggests that there is no cap on the maximum profit that an organisation in the industry in which Greencoat Uk Wind Plc competes may make. These factors are making the rivalry from substitute products less prominent in the market.
- The few available alternatives are of good quality, but their costs are much higher.
- When contrasted, businesses in the sector that Greencoat Uk Wind Plc serves sell their goods for less than competitors while maintaining an adequate level of quality. According to this, customers are less likely to buy copies of the original product. This suggests a lower likelihood of competitors creating similar products within the industry.

1.2. Critical selection of evaluation tools

1.2.1 Wind Resource Evaluation Software

An accurate wind energy potential estimate requires wind resource analysis software. After comparing the several wind resource assessment tools on the market, we chose one that uses advanced modelling, contains historical meteorological data, and considers project site geography (Madsen, 2020). This technology accurately assesses wind resources and makes wind farm placement easy. Thus, underestimating or overestimating energy potential is significantly decreased.

One of the first things that must be done while building a wind farm is to collect data on the wind and other relevant data using the onsite meteorological towers and remote-sensing devices. When estimating the amount of energy a wind project will produce, the data from these systems are of the utmost importance (Henry, 2005). Software that validates and analyses wind data makes it possible to filter such data for quality problems and provide an accurate data set that can be used for project design and analysis. Validation and analysis of data are both tasks that may be carried out using software that is readily accessible on the market and contains functions such as:

- Importing a wide variety of formats utilised often in the wind industry from data loggers and measuring equipment
- Visualisation of raw data and data that has been calculated, such as wind roses, frequency histograms, diurnal profiles, and air density and turbulence intensity.
- Quality control measures that allow users to indicate errors and potentially fill gaps in the data that could be caused by things such as shadowing on the tower, icing, or sensor malfunctioning
- Functions for the examination of data concerning wind shear, turbulence, temperature patterns, high wind situations, and wind speed distribution

1.2.2 Wind energy Projects EIA methods

This review considered the ability of multiple EIA methods to analyse potential consequences on animals, habitats, noise pollution, visual aesthetics, and ecological balance. We can simulate and evaluate consequences using the tool's rich modelling capabilities. This lets us spot environmental hazards and violations (Hofmann et al., 2020). The tool encourages stakeholder participation, allows a participatory approach, and ensures local community issues and opinions are considered during the review process.

The maritime environment is anticipated to play a pivotal role in the approaching energy transition towards clean, renewable sources, mainly through offshore wind energy (OWE). This is because the marine environment is home to many renewable energy sources. In the following years, it is anticipated that this industry will experience tremendous growth, facilitated by global and European accords, such as those enacted by the United Nations (Cooke, 2019). Communities that host renewable energy development, as well as the nation as a whole, reap enhanced environmental and economic benefits due to wind turbines that are sited and handled correctly. Wind energy deployment and operation present several issues, which are being studied by the Wind Energy Technologies Office (WETO) of the Department of Energy (DOE). This includes facilitating research, collaborating with stakeholders, and sharing

research results on cost-effective methods of monitoring and minimising the environmental impacts of wind energy. WETO invests in cutting-edge, cost-effective, innovative technologies to assist the ecologically sustainable growth of wind energy in the United States. These technologies can improve our understanding of the risks involved and minimise the consequences on wildlife that land-based and offshore wind farms cause (Hofmann, 2020). These technological advancements include monitoring, deterrence, and reduction tools. Studies and other types of research that experts in the field have vetted are funded by WETO and are published on WindExchange and Tethys.

Since the 1990s, research that the DOE has carried out in collaboration with the private sector, academic institutions, other federal agencies, and non-governmental organisations has significantly advanced our understanding of the interactions between wind and wildlife. It has uncovered potential solutions for various problems. One strategy for reducing the number of bats killed by wind turbines is known as "curtailment," which involves reducing the amount of force applied to the blades of the turbines at certain risky times of the year.

(2) Findings: evaluation of the Greencoat Wind UK

2.1 The threat

The rate of inflation and the rate of savings are both components of what economists refer to as the macroeconomic environment. According to Endres et al. (2021), factors of a company's microenvironment, such as competition standards, can affect the company's competitive advantage. Greencoat UK Wind Plc can estimate the growth trajectory of both the sector as a whole and that of the organisation by, among other things, considering the national economic determinants. Whenever Greencoat UK Wind Plc does a PESTEL analysis, it is imperative that the company takes into account the following economic factors:

- The economic structure in the nations
- The effectiveness of global financial markets: Is Greencoat UK Wind Plc necessary to raise capital in the local market?
- The financial sector's infrastructure standards in the industry

Greencoat Uk Wind Plc is put in a position where it could lose clients to competitors recently entering the market. There has been increased competition within the business, which has led to downward pressure on prices. If Greencoat Uk Wind Plc does not make any adjustments to the pricing modifications, this could result in a decrease in revenue; alternatively, the company could lose market share. Due to the persistent volatility of the exchange rate, businesses like Greencoat UK Wind Plc, which conducts business on a global scale but sources its supplies from domestic companies, are adversely affected. Businesses need help

with the unpredictable political environment in the nation, which can hinder performance and result in extra expenses. The nation cannot have a stable financial and economic environment if interest rates constantly fluctuate. Because consumer preferences change, businesses are pressured to modify their products and services to meet customer demands consistently.

International trade laws are constantly being revised, and enterprises must abide by these laws to operate globally. The development of products that can act as acceptable substitutes threaten the sector as consumers purchase less of the currently available products. The rise in petrol prices has increased Greencoat Uk Wind Plc's overall input costs. These costs have also increased due to other industries that supply this business's inputs being severely impacted by rising petrol prices, which resulted in a rise in pricing (Christodoulou and Cullinane, 2019). The corporation has expressed concern regarding the increased promotions of Greencoat Uk Wind Plc's rivals. Customers are being inundated with communications from several sources, and most media must be more transparent. Because of this, promotional materials distributed by Greencoat UK Wind Plc will have a diminished impact. Greencoat Uk Wind Plc risks seeing a drop in revenue if its employees need to catch up with the rapid pace of technological advancement. This makes it necessary for the company to provide appropriate training for its personnel.

2.2 The weakness

The high geographic concentration of Greencoat Wind UK's wind farms is one of the company's most critical operational issues. Due to the firm's portfolio being disproportionately concentrated in just a few geographical areas, its ability to diversify and its susceptibility to unique elements is needed (Bagnoli et al., 2019). Greencoat Wind UK is vulnerable to changes in regional policy, grid restrictions, and variations in the number of wind resources accessible because a sizeable number of its assets are situated in specific locations, such as Scotland.

Greencoat Uk Wind Plc has a higher employee turnover rate than other businesses in its industry. Uk Wind Plc's quality control department has a smaller budget than the company's competitors. Because of this, its numerous sources lack consistency, which increases the risk that the quality will suffer. Because of this heavy reliance on a few goods, Greencoat UK Wind Plc is resistant to attacks from outside sources if any of these items need help.

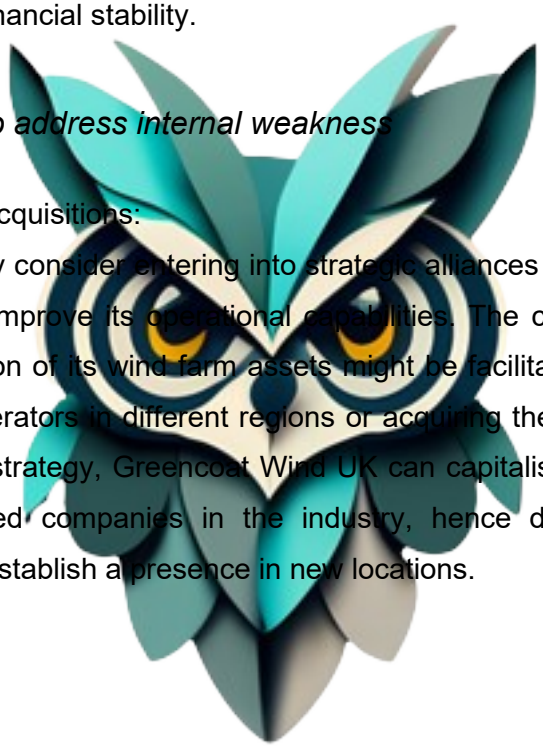
Making choices is highly centralised, and some officials must bless team decisions. As a result, operations are less efficient because the procedures take a lengthy time. Additionally, it causes a decrease in inventive activities. The performance review needs a systematic or logical organisation. Only sporadically are people judged on how well they perform at work. This results in decreased morale at work and less opportunity for people to advance in their careers.

(3) Recommendations

3.1 Recommendation to Mitigate the external threat

Geographic Diversification:

Greencoat Wind UK should aggressively pursue possibilities to diversify its wind farm portfolio across various geographical regions (Sotnyk et al., 2020). The corporation can lessen its vulnerability to risks posed by the surrounding region and increase its resistance to the effects of regional policy shifts by investing in projects located in regions with favourable wind resources and regulatory environments. This diversification strategy will help balance the performance of the total portfolio and limit the influence of external risks on the company's capacity to maintain its financial stability.



3.2 Recommendation to address internal weakness

Strategic Alliances and Acquisitions:

Greencoat Wind UK may consider entering into strategic alliances or making acquisitions to extend its portfolio and improve its operational capabilities. The company's entry into new markets and diversification of its wind farm assets might be facilitated by collaborating with local developers and operators in different regions or acquiring them outright (Henriksen et al., 2012). Through this strategy, Greencoat Wind UK can capitalise on the knowledge and experience of established companies in the industry, hence decreasing the time and resources necessary to establish a presence in new locations.

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