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Project Management

ASSESSMENT 1

Critically evaluate the Hinkley Point C Project of UK

Executive Summary

In the below findings, it is discussed in detail the challenges faced by Hinkley Point C. Details have been provided which will help to understand the reason for excess cost and delays in maintaining the schedule. It is important to solve their problems and guarantee that their perspectives are taken into account. The program owners as well as contractors must communicate with participants. These participants include neighbourhood companies, citizens and environmental groups. The initial project concept meanwhile also contained a number of flaws and restrictions. The absence of a defined strategy for managing risks was among the primary problems. The lack of flexibility in the initial schedule was yet another flaw. The plan was created in an era when there were significant changes happening in the UK energy industry. These included the rise of sustainable power and the reduction of fossil power output.

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Introduction

Hinkley Point C is a planned nuclear power capacity in Somerset, England. EDF Energy is a division of the French power giant EDF. It is collaborating with Chinese nuclear sectors to create the initiative. It has a projected price tag of over 22 billion British pounds. Hinkley Point C is anticipated to be one of the biggest construction projects in the UK. The nuclear plant will have a lifespan of roughly 60 years. It will be able to produce over three Gigawatts of power. It can roughly power six million homes. The project has drawn criticism. It was initially suggested with detractors contending that it is overly costly. Others argue there are superior and less hazardous options to nuclear electricity. Advocates of the project nevertheless contend that the UK demands a dependable source of green energy. Nuclear power may play an important part in meeting those objectives. The power station's development started in 2016. After multiple delays and excess costs, it is currently expected to be finished in 2026. The project has run into legal challenges as a result of concerns regarding security and the environment. Environmental organizations and other protesters have attempted to stop the construction of the project.

Discussion

Overview of the project

A significant nuclear power plant is now being built in Somerset, UK. It is a part of the Hinkley Point C nuclear venture. It is anticipated to be the biggest project for infrastructure in the EU. The undertaking project is being built by EDF Energy. It is a unit of the French energy firm. The Hinkley power plant will comprise two sophisticated third-generation European Pressurized Reactors (Aldama-Bustos et al., 2019). They are going to be used for generational reactor capability. These types of reactors are more secure and effective than earlier types of nuclear reactors. They have better security precautions. They also produce more power. Hinkley Point C's work started in the year 2016. It is anticipated to take a decade to complete. The project's planned price is over 25 billion pounds (Carpenter and Energy,

2019). This makes it one of the costliest construction endeavours worldwide. The project has been disputed. Worries have been raised about its exorbitant cost and the possible risks engaged with nuclear power. Advocates contend that the initiative will give the United Kingdom access to a substantial amount of renewable energy. It will also help in reducing the nation's dependency on oil and gas. It will assist in the accomplishment of environmental goals.

Budget

According to the most recent statistics, the Hinkley Point C nuclear project will cost roughly 22 billion pounds. This consists of the expenses of designing, building, and operating the site over its anticipated lifetime. The venture's developer EDF Energy is accountable for providing most of the money. It is also supported financially by investors from China and the UK government. The lock-in price of 92.50 pounds per MW hour has been increased to 106 pounds per MW hour in the year 2021. This has been done keeping price inflation in mind (Daniel and Daniel, 2019). It is a further assurance of the power produced by the plant. It is going to be provided by the government of the UK. The project's huge expenditures and possible impact on household prices for energy have sparked some questions.

Time

Construction on the nuclear plant at Hinkley Point C began in 2016, it is anticipated to take about a decade to finish. The project's development has been hindered by a variety of delays and setbacks. These were notably legal complications and distribution network problems. These have caused some delays to the project's timetable. The assembly of the first nuclear reactor was finished at the end of the year 2020. In the year 2021, the initial ring for unit two of the structure was placed. Hinkley Point C development started in the last month of the year 2018. It comprises two EPR reactors. They have a cumulative capacity of more than 1600 Megawatts. Unit 1 is scheduled to begin producing electricity in the year 2026. Unit 2 is expected to begin electricity production in the next year (Dyrda and Morrison, 2021).

Cost

Inflation has raised prices for the Hinkley Point C nuclear project to roughly 33 billion British pounds. It means that the project would certainly cost higher than the previously budgeted amount. EDF officials said that the price of the facility might be close to 37.5 billion pounds after taking inflation into the account. This is a rise since the month of May in 2022. The then-projected cost was around 27 billion British pounds. The project has seen a series of price rises and setbacks since it was first announced. EDF initially projected 20.5 billion British pounds for the plant. Its price increased to 22.5 billion British pounds by the moment it fetched approval in the year 2016 (Glasson *et al.*, 2020).

Quality stakeholders

The major developer and operator of the Hinkley Point C nuclear project are EDF Energy. They are tasked with supervising the project's planning, management and execution. The Hinkley Point C nuclear facility was constructed with the assistance of numerous vendors and subcontractors. They include firms that have handled different facets of construction activities. The Hinkley Point C nuclear project is expected to generate thousands of employment opportunities during the construction phase. Most of it will be held by locals. Considering their contribution will significantly relate to the team's achievement, the members of the team represent a crucial internal stakeholder (Henshaw, 2021). The French energy firm EDF, a publicly listed business with a few shareholders, owns EDF Energy. Due to the way the nuclear development at Hinkley Point C will affect the business's financial results, these stakeholders have an interest in its accomplishment. The Environmental Protection Agency has set forth an array of requirements. It is to guarantee that the Hinkley Point C project adheres to the environmental rules. The agency will verify the project's adherence to these requirements during the building and operation phases. The conditions pertaining to topics like groundwater resources, quality of air and waste disposal. Controlling the security and stability of nuclear operations in the UK is indeed the responsibility of the

Office for Nuclear Regulation (Alberto, 2019). The agency has issued a variety of permissions and licenses to it. It is in order to ensure that the Hinkley Point C program complies with the necessary nuclear safety standards. The agency regularly conducts checks and audits. It is to ensure that the work is being completed safely and in accordance with all applicable laws and norms.

The communities in the area will be impacted by the Hinkley Point C nuclear project. Stakeholders who might have an effect on the endeavour. It includes nearby citizens, enterprises, and agencies. Some environmental groups have criticised the Hinkley Point C nuclear plant. They have expressed worries about the hazards that nuclear electricity may pose. They have also raised concerns about how the development may affect the local ecosystem and fauna. Energy buyers in the UK will be affected by the Hinkley Point C nuclear project. It will generate power that will be delivered to the nation's electricity grid. Several people are worried about the way the project would impact energy prices (Bingham, 2021). These prices can then impact the end customers. The Hinkley Point C nuclear construction is crucial to the UK government. It will likely be a substantial source of environmentally friendly energy that will aid in the achievement of the nation's environmental goals. The government is in charge of regulating the energy sector. This is also responsible for funding the project. EDF Energy and two other companies from China are participants in the Hinkley Point C nuclear project. Such foreign partners are external participants. They have an involvement in the team's achievement. It has effects on the world energy marketplace.

Risk factors

Hinkley Point C is a nuclear power facility under development in the United Kingdom. The development and running of the facility are both fraught with risk considerations. The least is the development of Hinkley Point C. It has been beset by delays that have driven up the project budget overall. This may be the result of a number of factors like unforeseen

technological problems and labour shortages. It also includes disruptions in the supply chain. Accidents at nuclear power facilities could have serious repercussions. UK nuclear power stations have a solid overall safety record. There is still the possibility of a disastrous catastrophe. One of the most costly building projects in the world is Hinkley Point C (Lovas, 2021). It is anticipated to cost over 37 billion British pounds to build. There is a possibility that expenses will go over budget. It might put the project's partners in financial trouble. There is a lot of opposition to the building of Hinkley Point C. It includes worries about the costs of the project as well as the security and ecological dangers involved with nuclear power. There are quite a number of hazards and ambiguities involved with the project. Hinkley Point C might have a big impact on lowering carbon emissions and improving energy security.

Other factors relevant to the project

Given that Hinkley Point C is a challenging project with numerous stakeholders, such as the project owners, builders, vendors, and government regulators, there are also a number of additional considerations that are pertinent to the work in addition to the hazards concerns already mentioned. The project must be linked well to guarantee that all of its components are in line and that it is completed on time and on budget. A sizable number of knowledgeable and experienced workers are needed for Hinkley Point C's construction and operation. To recruit, develop, and keep the requisite staff, the venture managers and subcontractors must make sure they have the proper HR procedures and regulations in place. Hinkley Point C is no different from other huge projects. In such projects communicating efficiently is crucial for its achievement. The individuals in charge of the development must make sure that all parties involved are kept up to date on the program (MARKED, 2020). This includes program status, dangers and difficulties. Hinkley Point C is being built and run by a huge supply chain of vendors and subcontractors. In order to guarantee that the task is carried out on schedule and on budget, efficient control of the supply chain is important. Hinkley Point C has a sizable effect on the neighbourhood and the broader public. In conclusion, proper

implementation and human resource management are important. Factors such as interaction, control of the supply chain and stakeholder engagement are also essential for the effective execution of Hinkley Point C (Pomponi and Hart, 2021). These elements are crucial for guaranteeing that the task is finished on schedule and under budget. It is also important to make sure that the project has the least possible adverse effects on the natural world and nearby populations.

Evaluation of the initial project plan

The Hinkley Point C plant has a set capacity of more than 3 GW for energy production. It is among the most structural reform developments in the nation's history. The main contractors are EDF Energy and Chinese power companies. They created the first task list in the year 2008. It has since then experienced a number of adjustments. The first project management plan was thorough and extensive overall. It had a distinct purpose and objectives. There were plans for incorporating stakeholder involvement, risk assessment and quality assurance in the detailed design, acquisition and production schedules. The project plan additionally involves sources of funding such as the construction managers, the government of the UK and a variety of monetary organisations along with a specific budget strategy (Petre, 2019). The initial attention of the project on security and ecological compatibility constitutes one of its advantages. The proprietors of the project were aware of the possible dangers involved in the production of nuclear energy. They created a thorough safety policy that included precautions such as the use of contemporary reactor technology and multiple security systems. It also consisted of surveillance systems. The project management plan also included steps to reduce the program's environmental impact. It included using low-carbon materials, safeguarding local habitats for wildlife and putting waste disposal procedures into place. Despite having a risk registry the project management plan lacked a detailed risk management and mitigation plan. The potential dangers involved with an endeavour of this scope and complexity turned out to be a huge error (Resch and Suna, 2019). Nuclear power is going to be an important component of the UK's potential energy mix underneath the premise. The concept plan was

created. The UK government has since altered its energy strategy. It has been emphasising energy savings and energy from renewable sources more than ever before. It might prove challenging to adjust to such changes due to the rigidity of the plan. This could create interruptions and increases in costs (Troch and Milleville, 2021). The project's difficulty was also underrated in the initial proposal. Many parties having different interests and objectives are connected to the endeavour such as the construction managers and subcontractors. Many vendors and governmental agencies are also involved. The difficulties in handling these stakeholders and fostering successful interaction and cooperation were not adequately addressed in the project initiation design (Stoczkiewicz, 2022). The first Hinkley Point C project plan gave the project a strong basis alongside the flaws. It was thorough and in-depth with a distinct emphasis on security and long-term environmental protection. The construction managers have updated the plan to address a number of its flaws and restrictions. They have enhanced stakeholder engagement and interaction. They have also improved the plan's adaptability. They have built a much more thorough approach to risk management.

Conclusion

A large quantity of renewable energy might be added to the nation's grid by Hinkley Point C, a major construction project in the UK. It has drawn a lot of criticism from both proponents and critics. On one hand, the project is an important financial contribution to the energy sector. It is able to make a substantial difference in the combination of the nation's energy sources. Numerous employments will be generated by the project. It will also benefit the community's economy and lower UK carbon emissions. On the other side, the project has come under severe scrutiny and criticism. The venture's expenses, security, and impact on the environment have all been questioned. Some locals have also voiced resistance to the project because they are worried about how it will affect their properties and the surroundings. Despite these difficulties, the venture's owners EDF Energy as well as Chinese firms have created an extensive project strategy. It includes steps to ensure the involvement of stakeholders, sustainable development and protection. In order to fix the issues and

shortcomings the overall plan went through a number of revisions. These modifications include an enhanced risk management strategy, greater adaptability and better stakeholder involvement and collaboration. The successful execution of this amended plan with the venture's owners' power to handle the complex relationship of stakeholders and problems the project offers will be key factors in the success of Hinkley Point C. Owners and partners of the project have to remain conscious of and react to risks and challenges that may arise. Continuous tracking and assessment will be necessary in order to ensure that the endeavour stays on course. Any problems have to be quickly acknowledged and dealt with. Hinkley Point C is a significant development in the power generation of the UK. It has the possibility of bringing about sizable benefits. The construction managers and stakeholders have shown their commitment to completing it in a secure, ecological, and responsible way. It still faces substantial obstacles and risks. It has to be ensured that the endeavour remains on schedule and provides the projected advantages to the UK. It's going to be essential to continue tracking & evaluating its performance as it moves forward.

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