

RENEWABLE ENERGY VS FOSSIL FUELS FOR THE FUTURE

Gokul Ravi
K00302276



Aim of the Project

This research aims to compare the application of both renewable and fossil fuels to determine the transition to a sustainable future across the global region. By analysing the relevancy behind using renewable energy sources rather than fossil fuels, it emphasises the strategic approaches to eliminate the usage of fossil

Background

In the twenty-first century, renewable energy is the only source that cannot be exhausted for electricity and heat production in several industrial regions. Through generating energy from natural resources, the formation of various kinds of renewable energies enhances power transportation and replenishes faster.

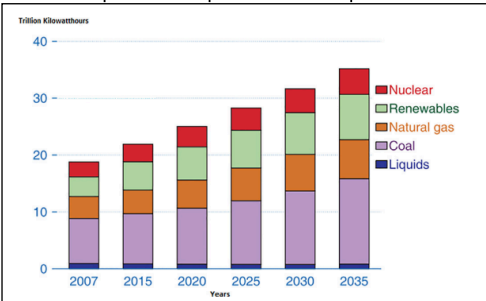


Figure: Rate of net electricity generation by different sources globally

Kalair *et al.* (2021) revealed that the discovery of fossil fuels initiated massive usage of natural gases for different household activities and industrial manufacturing in the 19th and 20th Centuries. The rapid consumption of coal, crude oil and lately gas is responsible for disrupting environmental sustainability, which influences the innovations of renewable energy production from biomass and

Methodology

In this chapter, the methodological process is distinguished along with selecting particular research options. By stating the key justification behind selecting each methodological technique, it explores the authenticity of choosing valid information. In regards to following up on Saunderson's research option, the research framework is designed to ensure the successful

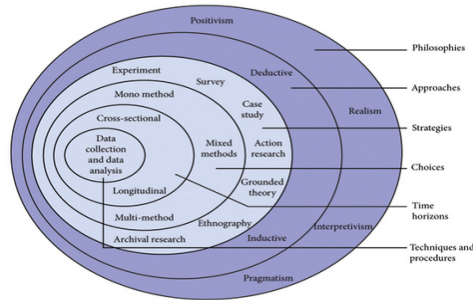


Figure: Saunderson's research onion

From the above discussion, it can be stated that the secondary data collection method is suitable to standardise the effective comparisons of both renewable and fossil fuel energy. The application of thematic analysis is viable to emphasise the in-depth elaboration of the strategic aspects to promote the

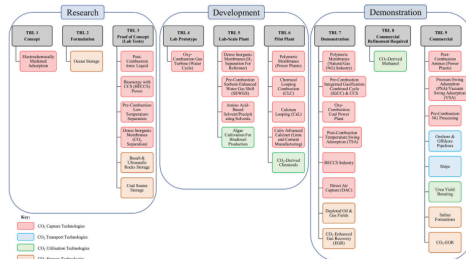


Figure: Some CCUS technologies' Technology readiness level

Data Analysis

This chapter will provide an in-depth analysis of the energy sector's shift from fossil fuels to renewable energy. It will compare the environmental, economic, and social implications of both energy sources. Key challenges and opportunities of fossil fuel and renewable sources will also be examined here. This section will also discuss the future potential of renewable energy to replace fossil fuels. For this, it will explore current trends and strategies that are aimed at increasing renewable production.

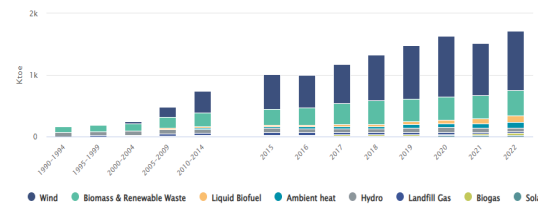


Figure: Renewable energy use in Ireland

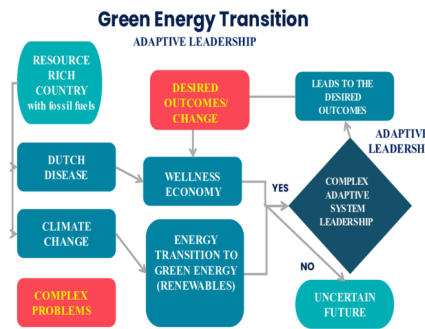


Figure: Framework of energy transition

Conclusion and Recommendation

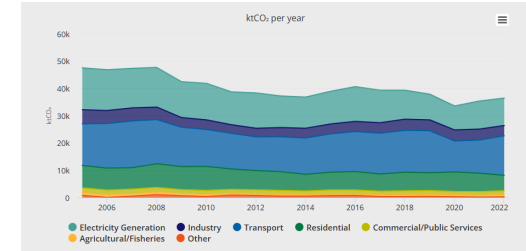


Figure: GHG emission in different sectors of Ireland

Thus, it can be concluded in the context that the application of renewable energy has developed more effective results to the environment over the use of fossil fuel energy. It has also developed the analysis to assess the challenge and opportunities of using fossil fuels and on the contrary applies the analysis for the benefit of using renewable energy. The research has also addressed different strategies to improve the production of renewable energy and develop sustainable goals for the country. The research has also highlighted the fact that the use of renewable energy has promoted a good air condition to the citizens of the country and develops effective business growth that creates better health of the community.

References

Kalair, A., Abas, N., Saleem, M. S., Kalair, A. R., and Khan, N. (2021). Role of energy storage systems in energy transition from fossil fuels to renewables. *Energy Storage*, 3(1), e135. Available at: <https://www.academia.edu/download/100247667/est2.pdf>