

THE UNSTAINABLE SUPPLY CHAIN FOR SUSTAINABLE ALTERNATIVE ENERGY – A WIND FARM CASE STUDY

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ABSTRACT

Governments around the globe are in pursuit of renewable energy sources that can abate climate change and reduce greenhouse gas emissions. One such renewable energy source is wind power and in this paper, a case study is presented in terms of the shipping and logistics industry supporting the expansion of the wind energy power source globally. The methods of operation, ways of working, and processes applied within wind energy shipping and logistics do not always appear to be sustainable in the long term. Although health, safety, and environmental considerations are a major priority in both wind farm construction work and during the subsequent operational phase, the shipping and logistics industry supporting the wind energy market is still somewhat nascent and not yet industrialized. Especially offshore wind is emerging as a key lever which government will focus on in terms of their energy strategy planning up to 2050, however, offshore wind is not yet financially viable compared to the levelized cost of energy for other more traditional energy sources such as fossil fuels and nuclear power. As efforts to reduce the levelized cost of energy for offshore wind are under way on a global basis, there is no doubt that despite significant cost reduction, potential shipping and logistics remain factors that are often overlooked. As more global players enter the scene, offshore wind farm shipping and logistics will mature and get more industrialized in years to come: this should be done with due consideration towards ensuring that the quest for wind power as a sustainable alternative energy source is pursued also with a sustainable supply chain set-up in mind.

Wind energy, Sustainable supply chain, Alternative energy, Shipping and logistics industry, Case study