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BARRIERS TO OFFSHORE WIND POWER DEVELOPMENT IN THE BALTIC STATES

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Abstract

The currently ongoing energy debates in Europe are broadly focused on three main subjects which are energy security, volatile energy prices and reduction of greenhouse gas emissions to tackle with climate change issues. The main goals implied in these are not coherent or at least not necessarily so. Sources of renewable energy, i.e. for instance solar, wind and biomass energy, are often considered appropriate to cope with these main goals, with their competitive advantages subject to natural conditions as they are mainly applied as domestic or regional sources. Wind energy is currently seen as one of the crucial renewable energy sources in Europe due to its good technical potential both on land (onshore) and sea (offshore) locations. Onshore wind turbines are abundantly seen in some European countries, and offshore wind farms are numerous in countries on the North Sea and the Atlantic Ocean. However, in the Eastern European states along the Baltic Sea coast, there is hardly any development of offshore wind farms despite almost equally favourable wind conditions.

This paper attempts to detect the major barriers to the development of offshore wind energy in the Baltic States, a small region consisting of Lithuania, Latvia and Estonia sharing the shoreline of the Baltic Sea.

To detect the barriers, two major approaches were applied in the course of the thesis. First, a literature research was conducted of articles about RES in Europe and their development. Second, a questionnaire was prepared and sent to energy experts in the Baltic States. From these sources the major uncertainties to the future development are derived and applied as key driving forces in a modelled scenario analysis. This analysis delineates four possible future scenarios by 2025 concerning offshore wind energy penetration in the Baltic States' energy mixes. The goal is to provide policy-makers, academics as well as potential investors in offshore wind energy with an overview of what the obstacles currently consist of and how they might be overcome in different perspectives.

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