Incentives and barriers for wind power expansion and system integration in Denmark

In Denmark expansion of on-shore, near-shore and off-shore wind power is planned to increase the wind power share to 50% of electricity consumption by 2020. In this situation a continuation of past policies will not suffice, and a dual-track incentive system that both establishes incentives for investing in wind power and integration infrastructure with integration between the electricity, heating and transportation sectors, is required. The current Danish taxation system discourages electricity use and works against this integration. Likewise, the current day-ahead electricity spot market is not appropriate for a high-wind future as wind reduces price levels, but integration across sectors can partly assist in increasing demand and prices. The European Emission Trading System does not suffice in providing a level playing field for wind power and thus needs a revision. Another barrier for on-shore and near-shore wind power expansion is a growing citizens' resistance due to an unequal distribution of benefits and burdens. Ownership should be open for more types of investors especially local investors in order to ensure public support and local acceptance of wind power projects. The Danish political system needs to address these issues in order to promote further expansion of wind power in Denmark.