

Local Ownership Models as an Implementation Tool in Strategic Energy Planning

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Denmark has a political objective that the energy system should be based on 100 % renewable energy by 2050. [1]

In order to fulfil the national goal there is a need for a development and implementation of a smart energy system, combining the electricity, thermal and gas grid to obtain the most optimal solution.[2]

Need for Strategic energy planning in order to implement such a system.

- Development of local energy plans
- Communication and coordination between different authority levels (State, region, municipality)

It is not possible to fulfil all goals and actions defined through the development of strategic energy plans without local acceptance of the technologies

There is therefore a need for finding ways to gain the local acceptance. There are different ways to do so. One way could be **local ownership**

Case Study

Local ownership model for nearshore wind turbines

This study examine if it is; "[...] **realistic that non-profit organisations can tender for major nearshore wind turbine projects in Denmark through popular projects under the current framework conditions?**"

This is done through a case study of the Danish non-profit organisation Wind People. In 2015 the Wind People attempted to participate in a Danish tender for 350 MW nearshore wind turbines.[3]

Methodology

- Literature review
- Interview (Semi-structured)

Interviews has been the primary method for data collection in this study. Several interviews has been made with two persons from Wind People through the process.

This study is primarily seen from the view of Wind People and how they have experienced the process of trying to bid in with a popular project in large wind turbine tender in Denmark.

Framework conditions for the tender

"In the tender notice, The Danish Energy Agency has outlined a number of criteria that potential tenderers must meet in order to be allowed to join the bidding round. These pre-qualification criteria for the specific tender for nearshore wind turbines are [4]:

- The applicant must present an average turnover of 4 billion DKK over the past three years.
- The applicant must have an equity ratio of 20% or more. For financial institutions, however, they must have a credit rating of BBB- or more (Standard & Poors and Fitch) and/or Baa3 or more (Moody's) or an equivalent rating from another recognised credit rating agency.
- The applicant must have at least one reference to an offshore project with an installed capacity of minimum 30 MW within the last five years." [3]

Conclusions and Recommendations

Theoretically it should be possible for non-profit organisations to bid in with a popular project on the Danish 350 MW nearshore wind turbine tender, But in practice it was NOT possible for Wind People to reach the pre-qualification. This is especially due to the requirements of;

- A average turnover of 4 billion DKK over the last three years.

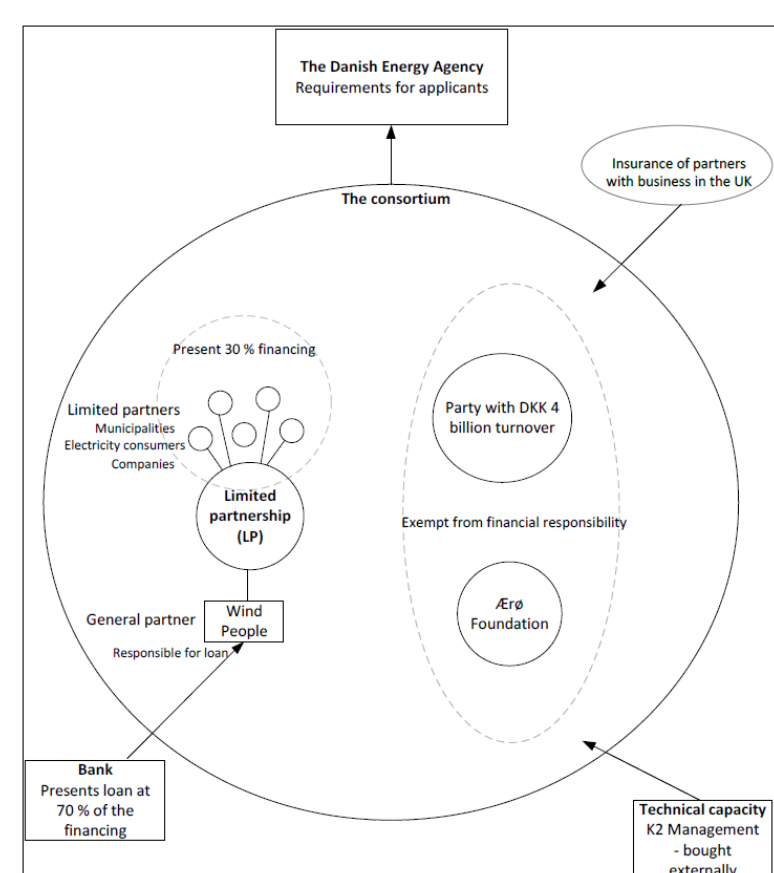
It is not only the framework conditions that limit popular projects possibilities to bid on such projects, also the fact that off-shore wind is already an established market dominated by large stakeholders makes it difficult for new actors to enter the market – especially small actors. [3]

If we wish to give 100 % popular projects a possibility to enter the off-shore wind market in Denmark, is It necessary to change the way these tenders are approached in Denmark today. Some recommendations for the Danish politicians is to:

- Define in what way competition in these tenders are desired.
- prepare an in-depth analysis on which stakeholders have an interest in tendering for the Danish offshore wind turbine market – in order to make better tender material.
- maybe establish a funding pool where potential tenders with local ownership can apply In connection with tenders for Danish offshore wind farms, for instance in the form of support for feasibility studies and development of professional networks.[3]

Wind Peoples Attempt to meet the conditions

Wind People develop a local ownership model for meeting the framework conditions for the tender.[3]



They find a lot of interest for their project, but it is impossible to find a partner with a large enough turnover that are willing to be part of the project.[3]

Wind People go into a dialog with the Danish Energy Agency

- Are met by a lot of resistance and no willingness to look at the conditions for local ownership projects in these large tenders.[3]

Internal communication in the Danish Energy Agency and the ministry reveals that Renewable Energy is seen as industrial big business.[5]

Figure 1: Ownership model for Wind & Welfare, as a result of the Danish Energy Agency's tender conditions in connection with the tender for nearshore wind turbines. (Own illustration, drawn up in collaboration with Lea Vangstrup from Wind People [5])

- References:
- [1] Folketinget, "Energitalen af 22. marts 2012," 2012.
 - [2] H. Lund, *Renewable Energy Systems : A Smart Energy Systems Approach to the Choice and Modeling of 100% Renewable Solutions*, vol. 2. Burlington, USA: Academic Press, 2014.
 - [3] L. K. Jensen and K. Spering, "Who should own the nearshore wind turbines? A case study of the Wind & Welfare project," 2016.
 - [4] Energistyrelsen, "Udbudsbekendtgørelsen kystnære havvindmøller," 2015.
 - [5] L. Vangstrup, "Møde med Lea Vangstrup den 17. november 2015," 2015.
 - [6] Energi- Forsynings- og Klimaministeriet and Energistyrelsen, "Intern mail mellem Energistyrelsen og Energi-, Forsyning og Klimaministeriet," 2015.