

# XPRESS CASE STUDIES ON BARRIERS TO INVESTMENTS IN RENEWABLE ENERGY SOURCES

## – DENMARK –

### *Description of the case*

This case is with the public authorities from two municipalities. The two chosen municipalities are both situated in the same region, and work on increasing the use of RES. One of the municipalities aims to have 100% renewable energy supply of heat and electricity by 2035.

#### - Municipality 1

The informant from the municipality is an engineer and has worked 12 years in the Department for Economy and Property.

The municipality has a Property strategy, which aims to work with sustainability and promote energy savings. All public property should be DGNB (German sustainable building council) certified, where the German criteria have been adapted and reviewed to fit the Danish standards, law and in practice. During the years, the informant has worked in the municipality, 150 MDK has been invested in energy renovation and DGNB certification. The municipality has installed around 10 000 m<sup>2</sup> BIPV (building integrated photovoltaic). The policy for energy renovations is that there should be a payback time of 25 years of investments in energy renovation, and the BIPV pays back in 10 years so they can contribute to financing a deeper renovation. However, the government has changed the rules so BIPV is now only considered in new buildings and through renovation projects. The change in the legislation made it much harder to install BIPV.

The municipality uses several SMEs on the framework tenders, small tenders under 50 000 DKK. However, for a large project, it is normally large companies bidding. In large tenders' consultants are used, and there might be a dialogue process. The municipalities have been divided into three "procurement districts", and SMEs can only bid in one district, to ensure that more companies have the opportunity of working for the municipality.

The municipality has not conducted its own market engagement activities for RES purchases because they do not consider it as necessary, as the processes work fine as it is. There have been several cases of an SME being among the winning suppliers, especially concerning geothermal heating and ventilation systems. But this is also because most companies in the area are categorized as SMEs. The informant does not perceive any potential barriers for SMEs to participate in public purchases.

#### - Municipality 2



The municipality aims to have 100% renewable energy supply of heat and electricity by 2035. From 2013, they stopped establishing new oil boilers, and in 2020, 50% of the electricity consumption is covered by wind energy. 43 % of heat consumption is covered by seven district heating plants using biomass heating. The municipality got the world's first offshore wind park and has in total 163 MW wind power in the municipality. Because of “over-production” of wind electricity, the municipality has a goal of using larger shares of the produced wind energy locally.

The municipality is committed to the EU's climate pact to reduce CO2-emission as a geographical area with a minimum of 20% in 2020 compared to 2008 reference year. Further, the municipality has an energy consumer goal of minimum 3% reduction per year of CO2-emissions.

In collaboration with universities and others, the municipality has a development project called “Lightning Metropolis” with the aim of saving 300 000 kWh for lightning in municipal buildings.

The municipality has not an established strategy for SME engagement, but there have been cases where SMEs have been winning public contracts. The informant assumes that potential barriers for SMEs to participate in public purchases is due to lack of capacity and that the most problematic phase in the interaction are before the tender.

### *Analysis of the current situation*

#### *a. Sustainability strategies, energy-related strategies:*

Municipality 1 has a property strategy which aims to work with sustainability and promote energy savings. All public property should be DGNB (German sustainable building council) certified, where the German criteria have been adapted and reviewed to fit the Danish standards, law and in practice. During the years the informant has worked, the municipality has been investing 150 MDKK in energy renovation and DGNB certification. The municipality has installed around 10 000 m<sup>2</sup> BIPV (building integrated photovoltaic). However, the government has changed the rules so BIPV is now only considered in new municipal buildings.

Municipality 2 aims to have 100% renewable energy supply of heat and electricity by 2035. From 2013 they stopped establishing new oil boilers, and in 2020 50% of the electricity consumption is covered by wind energy, and 43 % of heat consumption is covered by seven district heating plants using biomass heating. The municipality got the world's first offshore wind park and has in total 163 MW wind power in the municipality. Because of “over-production” of wind electricity, the municipality has a goal of using larger shares of the produced wind energy locally. The municipality is committed to the EU's climate pact to reduce CO2-emission as a geographical area with a minimum of 20% in 2020 compared to 2008 reference year. Further, the municipality has an energy consumption goal of minimum 3% reduction per year of CO2-emissions.



#### b. PP strategy

Neither municipality 1 or 2 has a strategy or policy for the procurement of RES. Municipality 2 tries to be involved in research and development projects for RES, but these types of projects are typically carried out together with research institutions without a tendering process. Municipality 2 has for instance carried out a process for replacing oil boilers at a municipal building of 1 200 m<sup>2</sup> to an innovative system of 45 kW heat pump including a salt phase shifting heat storage to increase flexibility in operations and increase renewable energy power supply from the grid.

Municipality 1 uses consultants for larger tenders, and turnkey is the traditional procurement model used for large projects. In large public procurement they might also use a dialogue process. For smaller, not specific projects, the municipality uses framework tenders where all sizes of companies can bid. Projects like geothermal heating or ventilation systems are normally made by SMEs.

#### c. PP and supplier engagement

Municipality 1, as mentioned above, normally has a dialogue with the turnkey entrepreneurs. Else, the tenders are published on the municipal platform without any supplier engagement activities. Municipality 2 is involved in research and development projects for RES, and they have also conducted a dialogue in the pre-tender phase with potential suppliers for the tender for innovative heat pump systems with heat storage.

#### d. PP and SME

The two municipalities do not have an established strategy for SME engagement. Municipality 1 does not consider it as necessary for RES purchases because the processes work fine as it is. For both municipalities, there have been cases where SMEs has won public contracts, and the municipalities used several SMEs on the framework tenders, small tenders under 50 000 DKK. This may be due to the fact that most local companies in both municipalities are categorized as SMEs. To ensure that more companies have the opportunity to work for the municipality, the municipalities in Denmark have been divided into procurement districts, and SMEs can only bid in one district.

#### *Barriers and drivers*

The informant from municipality 1 does not perceive any potential barriers for SMEs to participate in public purchases. While the informant from municipality 2 assumes that potential barriers for SMEs to participate in public purchases are due to lack of capacity and that the most problematic phase in the interaction is before the tender.



### *Summary and discussion*

The municipalities work on increasing the RES, but they do not have a strategy or policy for the procurement of RES. Due to changes in regulations, it is difficult for Danish municipalities to invest in solar energy in municipal buildings that are not new buildings. The municipalities have not an established strategy for SME involvement, other than that they typically use SMEs in framework agreements. For larger projects they use turnkey contracts, and for these projects they may use dialogue in the pre-tender phase.

