Energy Communities in Denmark.

Gunnar Boye Olesen, INFORSE-Europe, Webinar 23/4 2020,
The Power of Energy Communities:
Turning Rights into Reality Across Europe!
History with cooperatives

• Power sector established as cooperatives and municipal companies 100 years ago

• District heating (now 62% of all heating) established as cooperatives and municipal companies, mainly since 1950

• Centralisation and larger power plants until 1990

• Starting in the 1980’s: new decentralisation with cooperatively owned, grid-connected windpower and gas cogeneration of heat and power (CHP) by primarily cooperative heating companies

• Less favourable regulations is leading to fewer cooperative windmills and closure of local CHP. This includes open electricity market, stop of feed-in tariffs.
Danish heating: community owned

• 64% of all Danish heating is delivered via district heating systems owned by 350 consumer cooperatives and 50 larger municipal owned non-profit companies

• 67,700 new consumers were connected in 2019

• 60% is from renewable energy and increasing: biomass, solar, geothermal, heat pumps, 70% CHP

• Legislation guarantees the non-profit status and loans with municipal guarantees makes it affordable
Wind (community) power expansion in Denmark

- Windmills of economic size became too big for single houses and farms in the early 1990’s
- With feed-in tariffs of 85% of consumer price for cooperatives, and fair connection costs, the basis was made for expansion of windpower with cooperatives from 5 MW in 1985 til 840 MW in 1998 (total wind capacity). Then preferential rules for cooperatives ended.
- Today all land-based wind projects must offer 20 of shares to local citizens
- Today cooperatives can get state guarantees for development costs until 500,000 DKK (70,000 €)
- At least 3500 MW of 3800 MW land based wind power is established by citizens and private investors (but some has later been sold to power companies)
- Total investment from farmers, cooperatives, private investors is over 35000 mio. DKr. (about 5000 mio. Euro)
Danish experiences in brief:

- With the right legislation community energy can deliver large shares of the energy supply with affordable prices and local support.
- Citizens will go for affordable and popular solutions.
- Transition to sustainable energy can be faster when community power is part of the development.
- Cooperatives can manage large investments, with the right financial and technical advisors.
- EU internal market regulations have not been supportive to community energy because of "equal access" rules and state-aid guidelines. Hopefully new EU rules for energy communities will change that.
EU legislation Implementation in Denmark

• Denmark implementing of the renewable energy (RES) directive and the electricity market directive with public consultation mid-2020 and adoption of law in Parliament in 4th quarter 2020 (Some parts of RES directive can be delayed).

• The guiding principles for citizens energy communities are now:
  • Supportive framework (no details available so far)
  • Sharing of power production via existing network
  • Equitable payment for system costs
  • Rights and duties according to roles in power sector (producer, aggregator, user, etc.)
  • No ownership or leasing of network
Keys to success for future renewable energy communities in Denmark

• Supportive framework:
  • Reasonable administrative rules for small entities,
  • no balance responsibility for small producers,
  • free advice service

• Local tariffs for local production

• Possibilities to benefit from local flexibility with tariffs etc.

• Possibilities to benefit from renewable energy support schemes
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