

# IEA Wind Task 41

20.Jan.2023 Workshop for DK stakeholders

# Persistent issues for DK small/distributed wind

- Prohibitive rules for installation of  $< \sim 500$  kW
  - basically, just self-powering?
- Expensive certification requirements
  - 61400-2 needs to be updated
- Validated aeroelastic modelling: lacking (& expensive)
- Loads characterization & testing
- Power curves still not well-known/tested
  - turbulence & obstacle issues

# potential / emerging possibilities?

- community / collective agreements for TSO/endpoints
- battery-sharing
- hop-on with (new) solar,bio,EC/H2; hybrid re-labelling? (→Florin, *et al.*)
  
- crowd-sourced reporting of performance
  - simple metrics on surroundings (distance to obstacles)
    - WAsP-online/mywindturbine.com project (almost) started this
  
- mass-produced microturbine applications (reselling...‘voluntary’ Chinese standards)
  
- urban turbines
  - e.g. Ventum now in DK (shrouded VAWT)
  
- ANSI/ACP SWT-1 standard (from USA) for  $P_{\text{peak}} < 150$  kW
  - some ‘relief’
  - acceptance in DK (outside USA) ?

# possibilities for DK sellers of SW/DW turbines ?

- Experience of DK manufacturers, vs. current situation / needs
  - Gaia case
  - Thy
  - re-distributors (Viking? ...)
- Representation in DK/588, TC88...
- More student projects with uni's & Folkecenter 😊

# ongoing / coming up...

- connecting event:
  - Distributed Wind Energy Assoc. [Distributed Wind 2023 Business Conference](#), 27-28 Feb. 2023
    - will have a hybrid attendance option
- Task 41 continuation...
  - work towards in-situ description (turbulent flow)
    - universal metrics
      - obstacle/environment characterization
        - » → turbulence + stats
      - power-curve effects