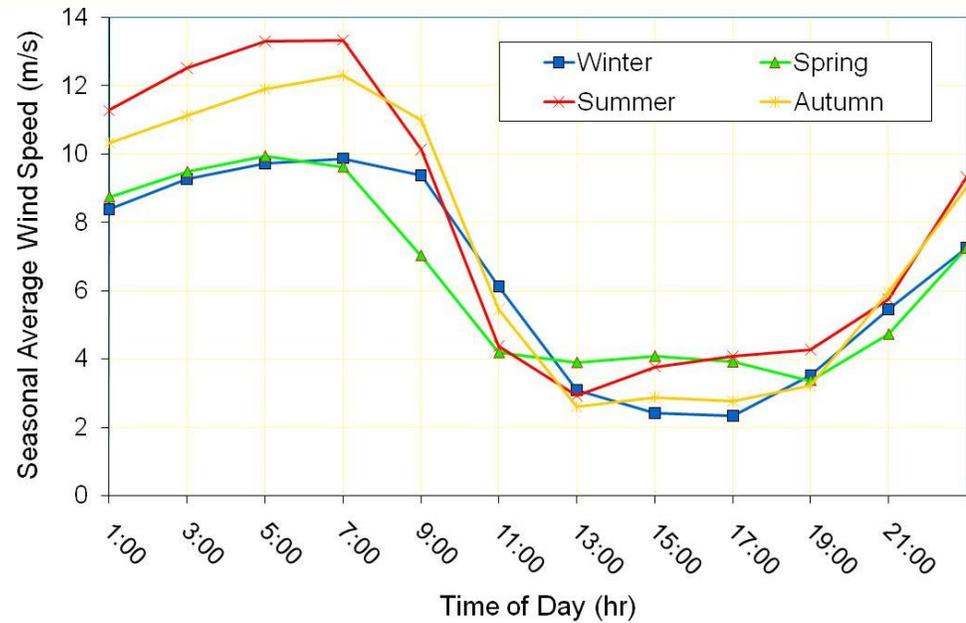




Future of Distributed Wind:
Signals From the Field

Background

Established Spanish Fork Test Site - 1995



Businesses

Windward Engineering - co-founded, 1994

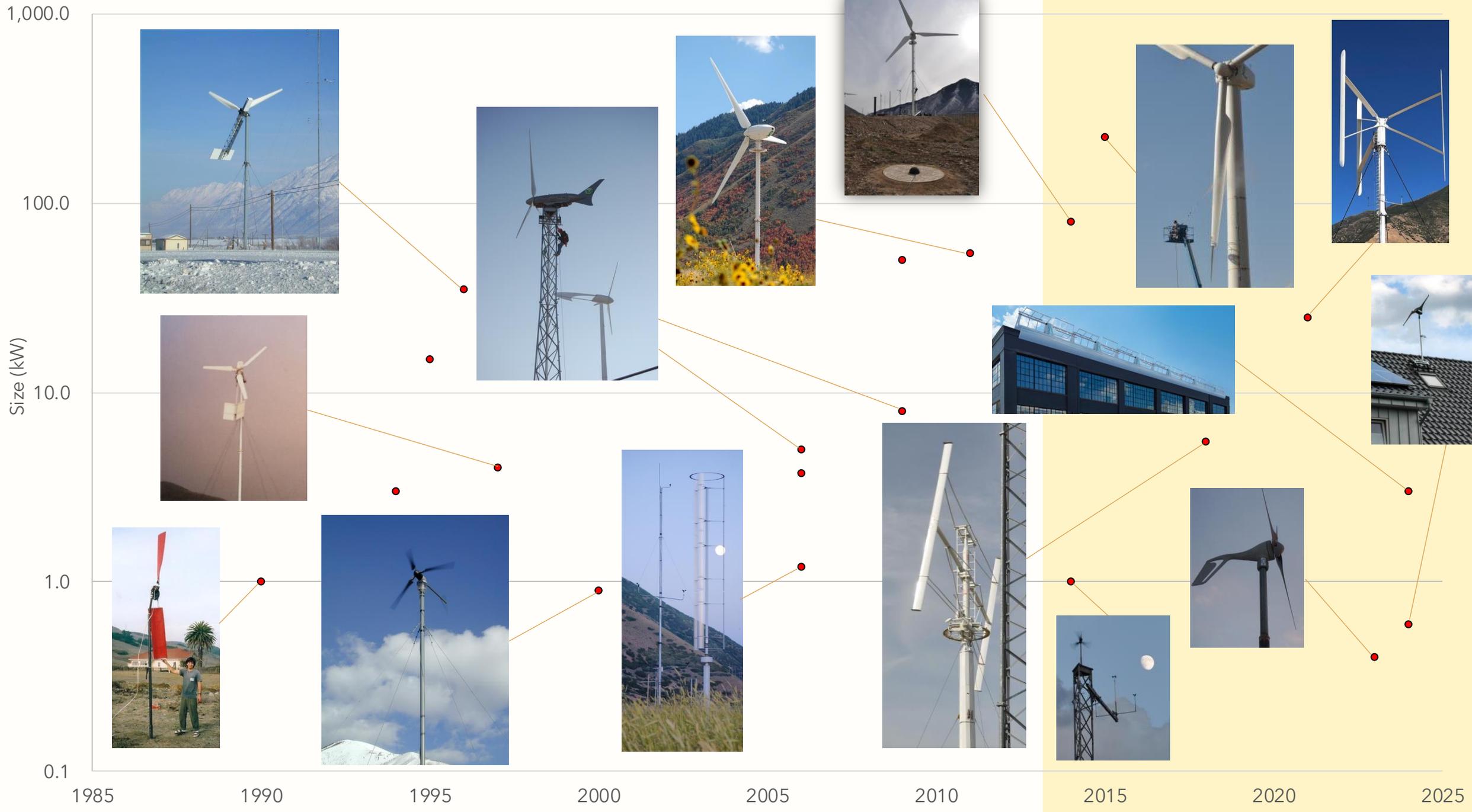
Endurance Wind Power - co-founded, 2007

Gale Force Designs Ltd. - co-founded, 2017

Floating Wind Technology Company - joined as partner, 2022

Beridi USA - co-founded, 2022





VAWTs, Built-environment, and Micro-turbines

Is the market chasing new siting territory?

- Height limits
- Aesthetics / neighbor acceptance
- Noise concerns
- Easier permitting and installation
- Lower O&M burden (or at least the promise of it)

Is the market looking to play a different role?

- On-site autonomy (sailboats, remote cabin, telecom, mobile)
- Supplement solar: generate at night/winter
- Not as focused on lowest LCOE

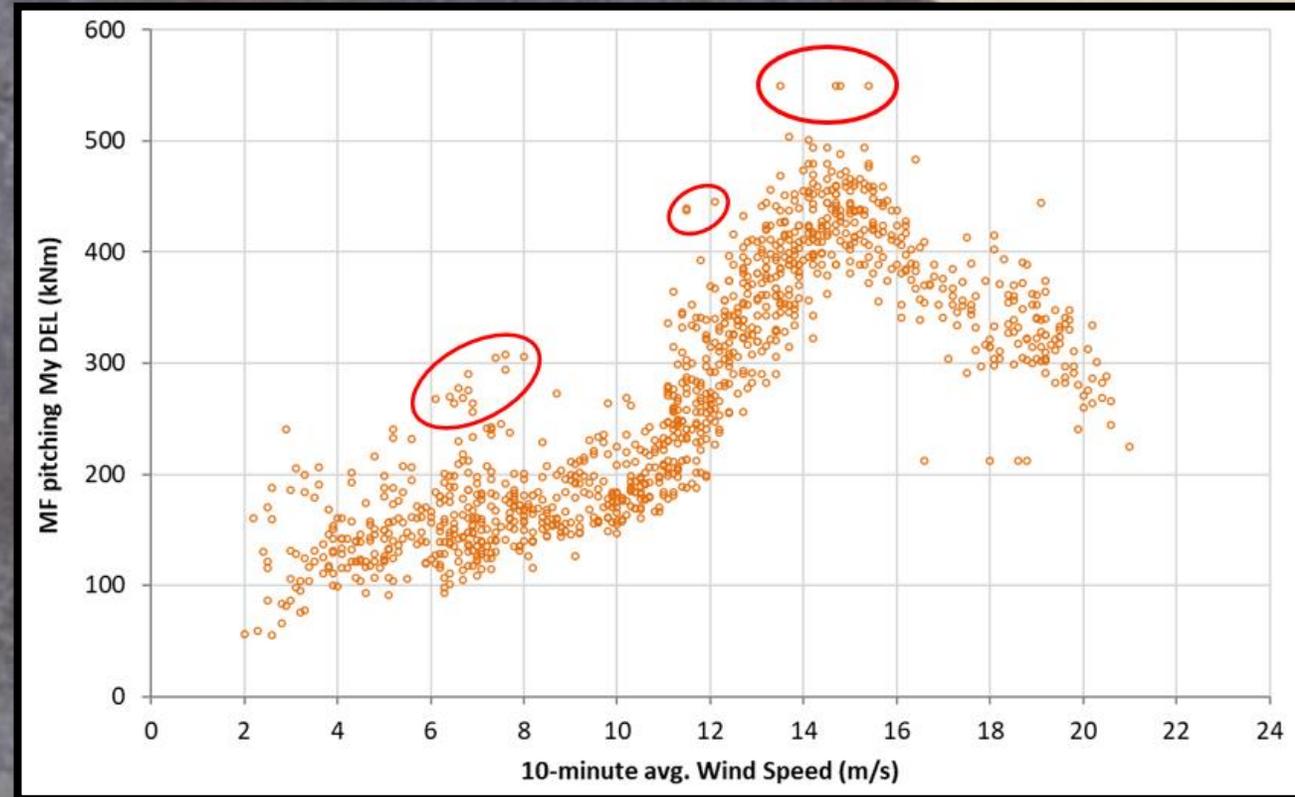
Or is the validation testing shifting to smaller/new concepts?

- Large HAWTs are more mature designs, using established OEM test procedures and facilities
- More innovation is happening in smaller/new form factors → creating more need for independent testing



Experience From 31 Years of Field Testing

- Collect data to:
 - Evaluate operational safety & performance
 - Validate your model
 - but also, to find where your model is invalid
- Collect enough data to:
 - Find the "Gotchas"
- Run as long as possible to:
 - Give Mother Nature time to break it!





Perspective from Spanish Fork

Wind is expanding into new & old environments and roles

Innovation is concentrated in smaller and emerging turbines

Independent testing establishes reliability and enables adoption

“In the end, the future of distributed wind won’t be decided by what we design - it will be decided by what proves itself in the field.”