

# NPS™ 100 - Wind Turbines

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Distributed Wind Energy Association 2025

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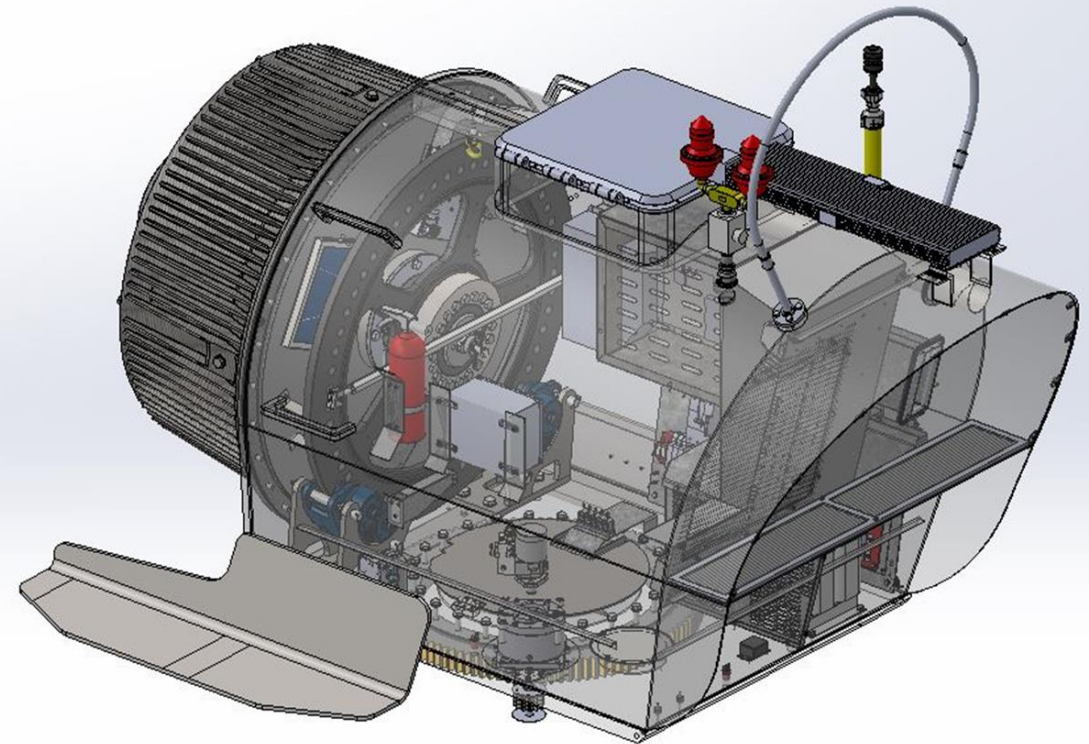
# NPS 100C – Big Boy Pants



# NPS 100C – turbine platform

## NPS 100 Distributed Wind Platform

- **Power output : 100 kW**
- **Technology: PMDD** (Permanent Magnet Direct Drive)  
**Upwind, Active Yaw Drive, Variable speed, stall control**
- **High AEP:** Large rotor diameter and optimized blade design – 21 -28 M rotor diameter – no Gear Box
- **Safety: Best-in-class brake system**
- **Enhanced Design:**
  - Electrical layout & improved generator cooling;
  - Proprietary power conversion with integrated isolation transformer
- **Additional Features:**
  - UL1741 SB – pending certification
  - Arctic Model – AK and Canada



# NPS – Brief History

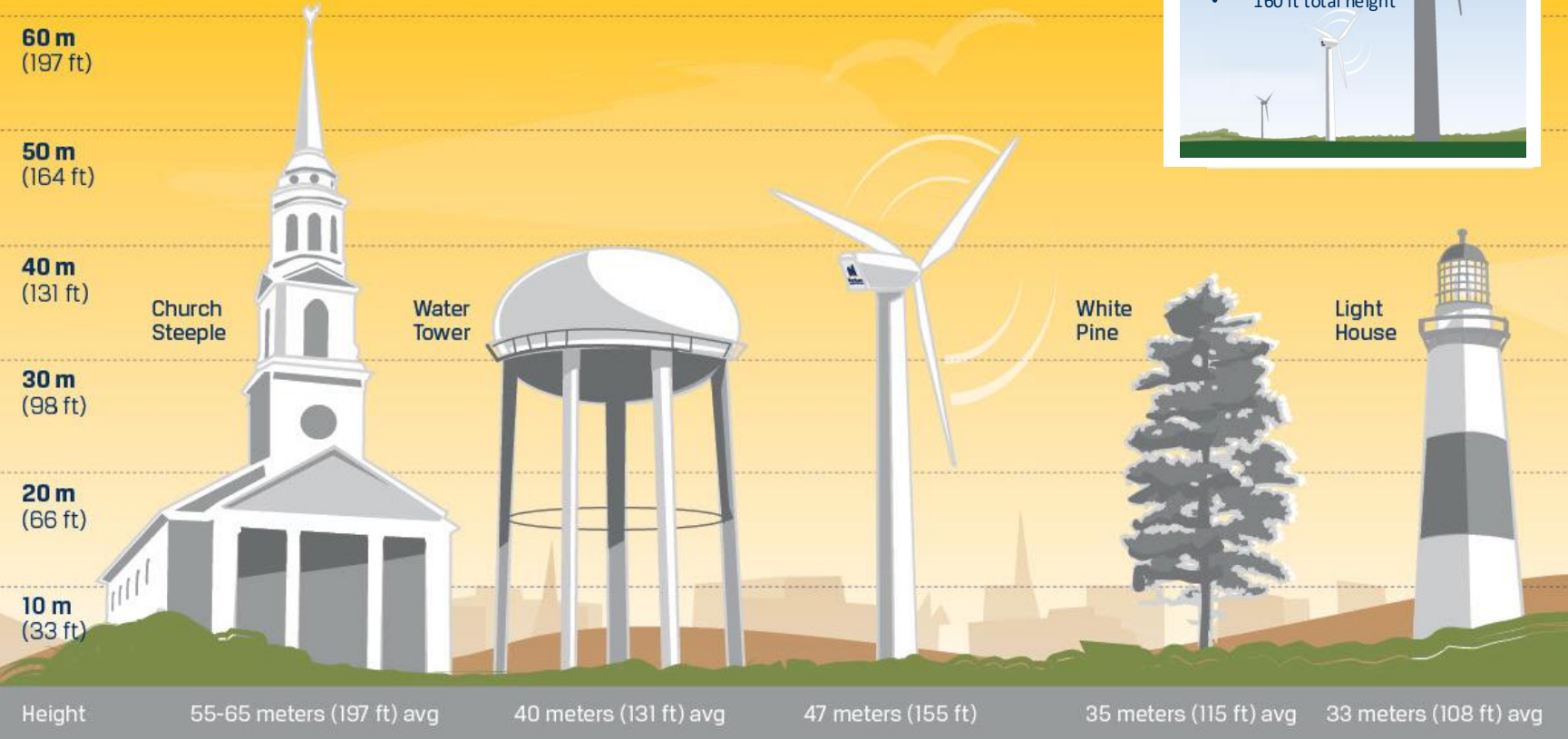
- 1974 - Founded in Vermont, USA. Pioneered direct drive wind turbines and remote power systems for extreme environments.
- 1990's - Developed **first 100 kW wind turbine**, proven in the extreme Alaskan environmental conditions.
- 2000's - Start of series production of 100kW wind turbines, initially as Northwind 100, later **NPS 100**.
- 2010 – Developed **NPS 2.3-93** utility scale wind turbine Prototypes installed in Michigan in 2012. Utility scale business sold to WEG in 2015.
- 2019 - Management buyout of EU business, acquired IP, Headquarter moved to Italy.
- 2023 - Re-entry into the US market, following implementation of IRA (Inflation Reduction Act).

- **NPS100** – PMDD generator offering best in class power performance and durability for renewable energy generation in **micro-grids, remote locations as well as grid-connected applications**.
- **Proven Reliability** - Survives **extreme environmental conditions**, from Alaskan colds to Caribbean hurricanes.
- **Global reach** - **>900 turbines** installed worldwide; more than 84 million operating hours.



# NPS 100C – Turbine scale

Larger than residential turbines and smaller than utility scale machines, the NPS 100 is the perfect size for commercial operations and the communities they are in.

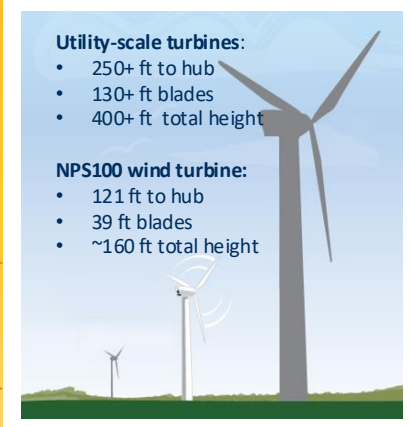


**Utility-scale turbines:**

- 250+ ft to hub
- 130+ ft blades
- 400+ ft total height

**NPS100 wind turbine:**

- 121 ft to hub
- 39 ft blades
- ~160 ft total height



# NPS – Global Deployment

## Key markets:

- Europe
- Americas
- Select markets elsewhere

900+ units worldwide

79M+ operating hours

 WEG (Partner)  
2MW WTGs



# NPS – Global Deployment

- Installations around the world



**bSKYb** Headquarters  
London, UK



**Boston**  
MA, USA



**Over Yonder**  
Cay



**Unalakleet, AK,**  
USA



**Deadhorse**  
AK, USA



**Necker Island,**  
Sir Richard Branson

# NPS 100C – Manufacturing



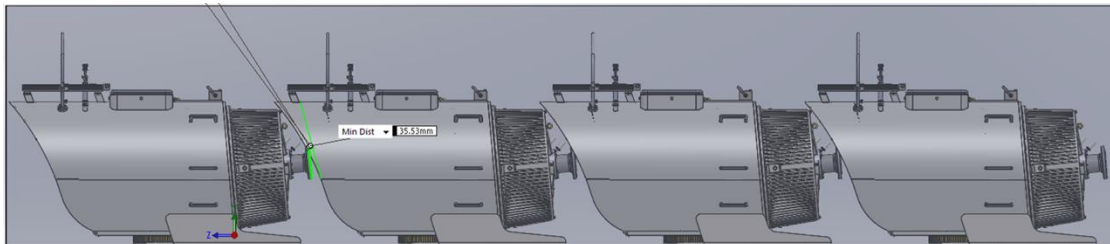
**Engineered  
in the US**

**Manufactured  
and serviced in  
Europe & the US**



# NPS 100C – Transportation

- **Cost efficient:** Optimized design with fewer parts.
- **Easy Shipping:** Fits in **standard 40ft ISO containers**.
- **Flexible Logistics:** No oversize or overweight permits needed.
- **Accessible Anywhere:** Suitable for over-the-road transport with moderate equipment.



# NPS 100C in Remote Location / Microgrids



## NPS 100 in Microgrids Reducing Costs, enhancing Sustainability

- Proven, **cost-efficient renewable energy solutions for microgrids** and remote islands worldwide.
- **Reducing the use of diesel generated power**, enhancing energy resilience and sustainability.
- **Proven performance** across diverse environmental conditions
- **>80 units installed globally in microgrids**

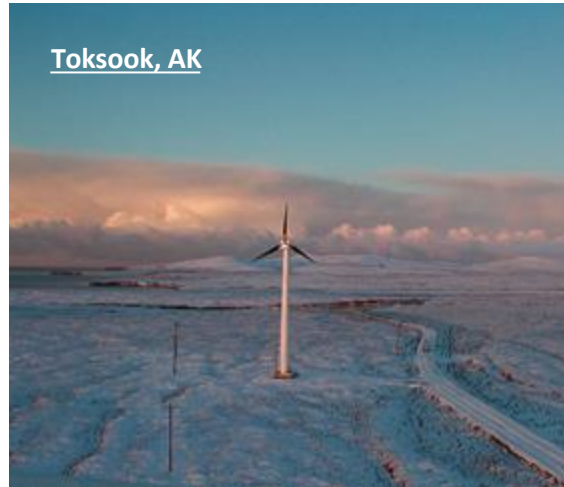


# NPS 100C Alaska Wind-Diesel Microgrid Projects



## Innovative solutions for sustainable energy in remote coastal villages

- **Coverage:** 36 turbines across 12 coastal villages, integrated into diesel-based microgrids.
- **Longevity:** Oldest turbines in operation for over 20 years.
- **Performance:** Reliable operation even in extreme temperatures of  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ).
- **Impact:** Over 3 million gallons of diesel saved to date.
- **Future Developments:**
  - Integrating batteries for enhanced storage
  - Adding solar solutions in select villages
  - Repowering older turbines for improved efficiency

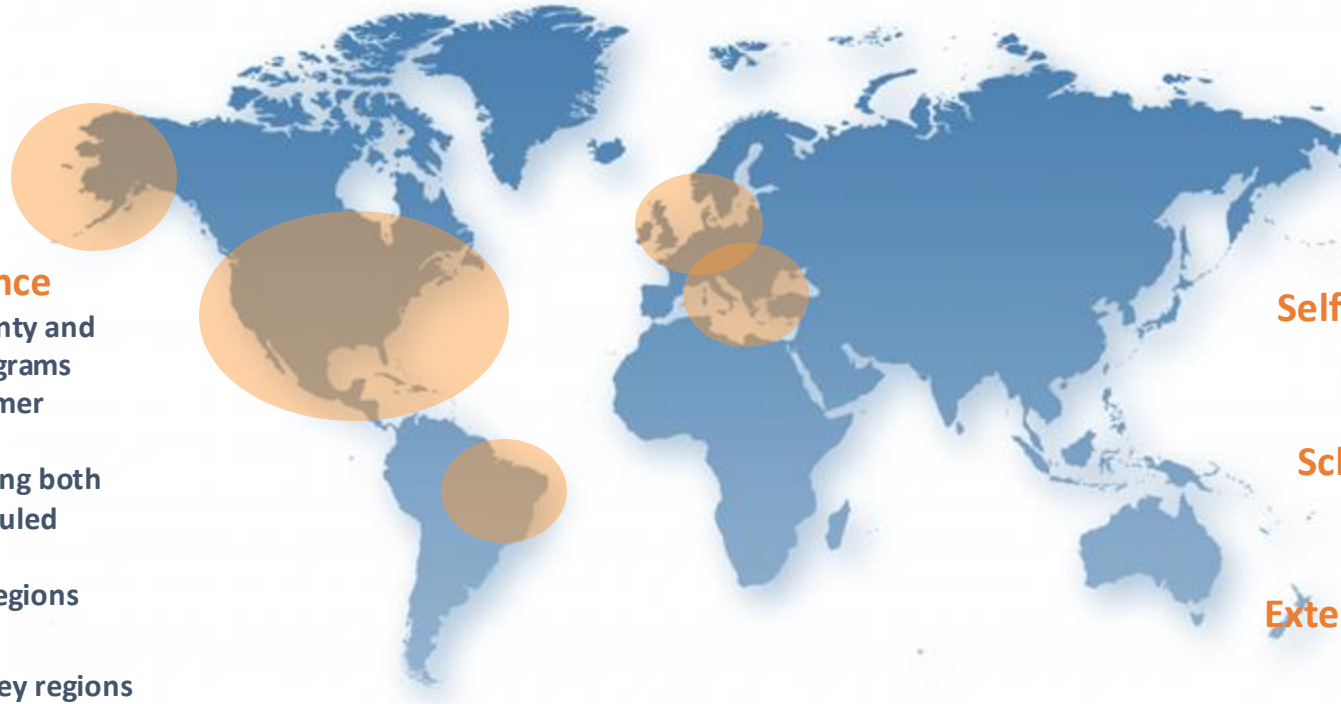


# Services and Global Footprint



## Installation & Service Offerings

- **Installation Service**
  - Global Installation and Commissioning Teams
- **Operation & Maintenance**
  - Various standard warranty and extended warranty programs offered based on customer requirements
  - Service contracts covering both scheduled and unscheduled maintenance
  - Parts Inventory in key regions
- **Regional Support**
  - Local service teams in key regions



## Remote Monitoring & Maintenance

- **SmartView Platform**
  - 24/7/365
- **Self-Support or Full Service options**
- **Scheduled & unscheduled Maintenance**
- **Extended Warranty Options**

# NPS 100C – Development Partners

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- Storke LLC
- All Energy Management
- Power Grid Partners
- DAKI Green Energy
- Visionary AG Solutions



**ALL ENERGY**  
MANAGEMENT



Seeking new Development Partners in North America



Thank you

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For additional information please visit  
our website: [nps100.com](http://nps100.com)