

The Future is

BIGGER

Have you met my X?

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The Presentation Plan

- Boring company info
- Reminiscing
- Current Events
- Go on and on about my X
- We'll all laugh



The Company Specs



WORKFORCE

130 EMPLOYEES

UK	CA	US	DK	IT
48	57	12	10	3

UK MARKET SHARE

50-225 kW

~85%

VERTICALLY INTEGRATED

**DESIGN
TEST
BUILD
DISTRIBUTE
SUPPORT
INVEST**

PRODUCTION HISTORY

UNITS SHIPPED

>1,000

CUMULATIVE OPERATING HOURS

>21MM

GLOBAL FLEET AVAILABILITY

>98%

Leading global manufacturer of small and medium wind turbines
Since 2007

Multinational Company

CANADA

Vancouver
Headquarters
Manufacturing: E-Series



UK

West Midlands
Manufacturing: X-Series



DENMARK

Gadstrup
R&D, Design &
Engineering
Hub



US

Spanish Fork, Utah
Regional Testing Center



A Brief History of S, E, X



S-Series
5kW
2006 - ~2010



E-Series
50 - 85kW
Since 2008



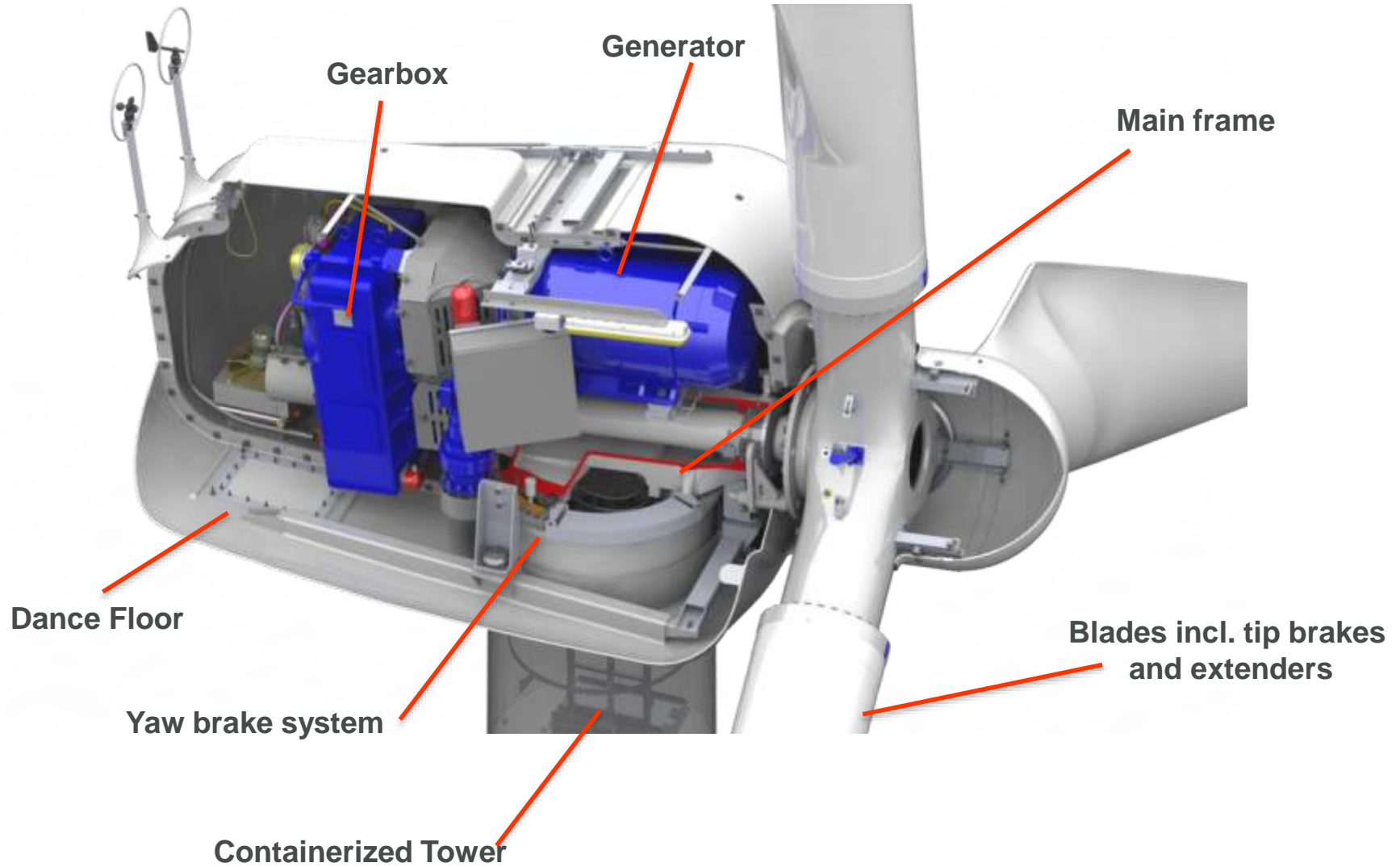
X-Series
180 - 225kW
Since 2012

A Trip Down Memory Lane with my X



- **1985:** The original X predecessor – the DANWIN 19 wind turbine – first installed
- **1992:** Norwin takes over the design and the GET27 version is certified by Germanischer Lloyd
- **2011:** The concept for modular X3x is formulated.
- **2012:** EWP acquired the licence for the 225 kW. 368 turbines are at this point installed worldwide, with over 100 still in operation, some close to 30 years.
- **2013:** The first updated X29 version is launched.
- **2014:** Norwin fully merges with EWP
- **2015:** The first modular X3x is installed and to date 54 X29 and X35 units are installed.
- **2016:** The first X35i with inverter/rpm control is installed for testing in Spanish Fork.

My X is Beautiful (on the inside)



My X's Best Features

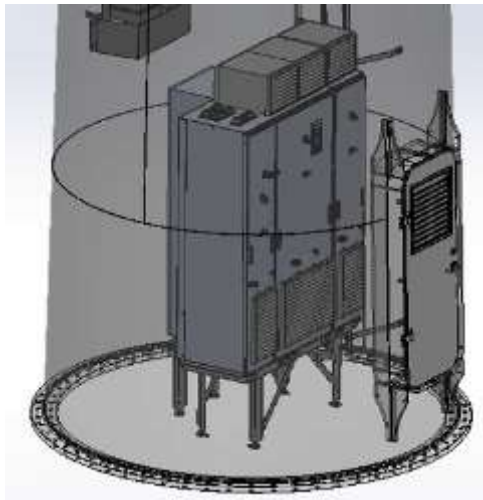
Aerodynamic
pitching tip brakes



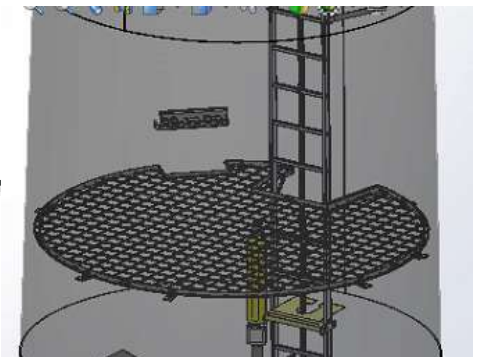
Penthouse views!
(with room for friends)



All wiring and control
cabinets in tower base



Internal climbing
ladder with platforms



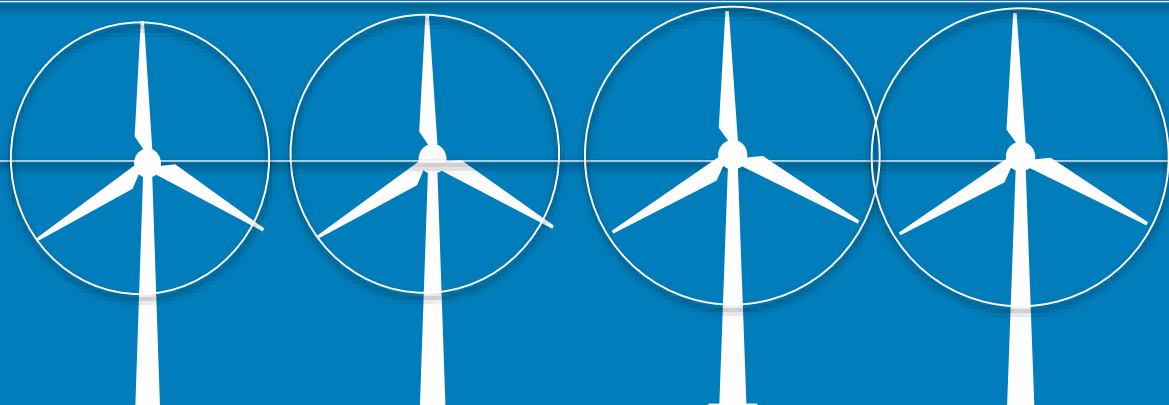
The X Series Wind Turbines

Wind Class IA, IIA and IIIA

Largest Rotor In Class = Low Cost of Energy

47.5m tip height

30m hub height



Versions:

X30/X30i

X33/X33i

X35Q/X35iQ

X35/X35i

X Series

Rated Power	225 kW	225 kW	180 kW	225 kW
AEP @ 7m/s	640,000 kWh	690,000 kWh	610,000 kWh	730,000 kWh
Hub Height Options	30/40/50m	30/40/50m	30/40/50m	30/40/50m

Xi Series | for Off/Smart-Grid System Integration

Xi Series Design Features

- Inverter add-on for off-grid and future-grid system integration
- Power output control via external integration system
- Reactive power input/output control
- Low Voltage Ride Through (LVRT)
- Potential dump load integration

X35i 225 kW

- Built on proven X35 design
- Ready June 2016
- Fully containerized shipment available if supplied with 30m tower



My X is Certifiable!

- DOE/NREL funding obtained for full type certification of X35i
- Effort underway with Intertek
 - Started May 2016
 - Targeted completion November 2017
- Spanish Fork to obtain Intertek RTL status:
 - Power Performance (IEC 61400-12-1)
 - Acoustic (IEC 61400-11)
 - Loads Measurements (IEC 61400-13)
- Full X3x family certification to follow



Endurance[®]
wind power

Any Questions about my X?