

Case Study
15 kW Repower in
Garner, ND – The
First Commercial
Delivery of a BWC
Excel 15

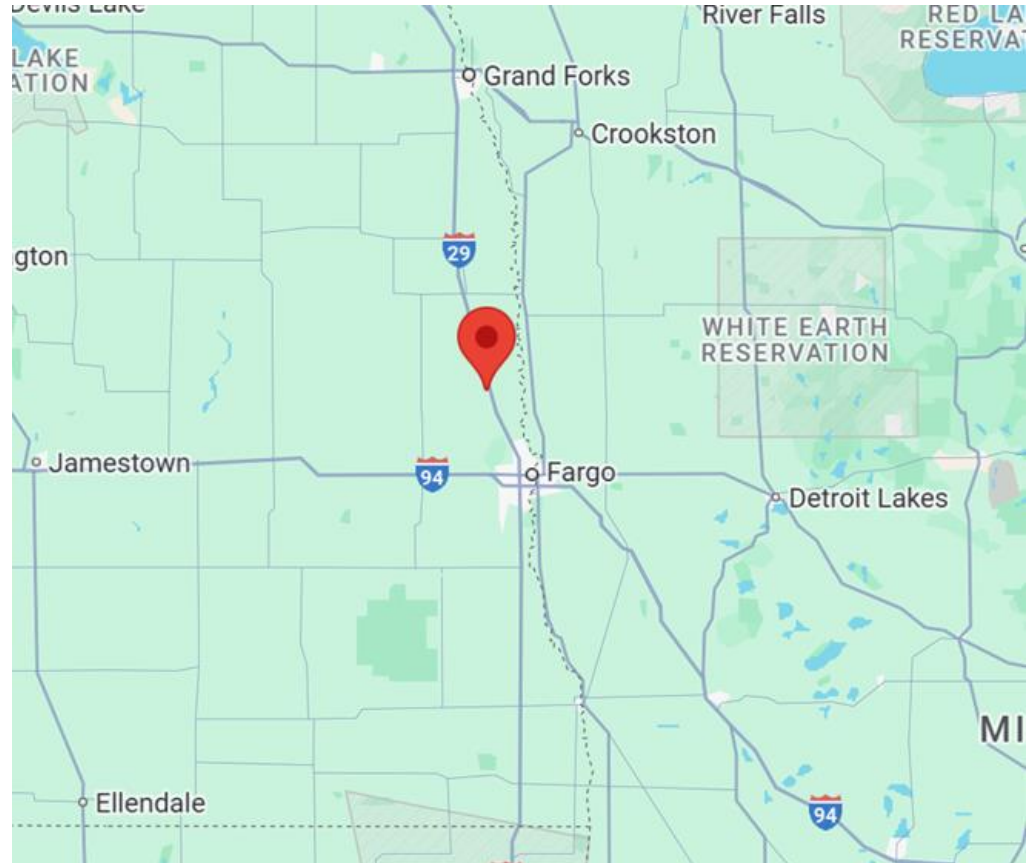
Distributed Wind 2025

Mike Bergey
President & CEO



Andy Steinberger Farm Project

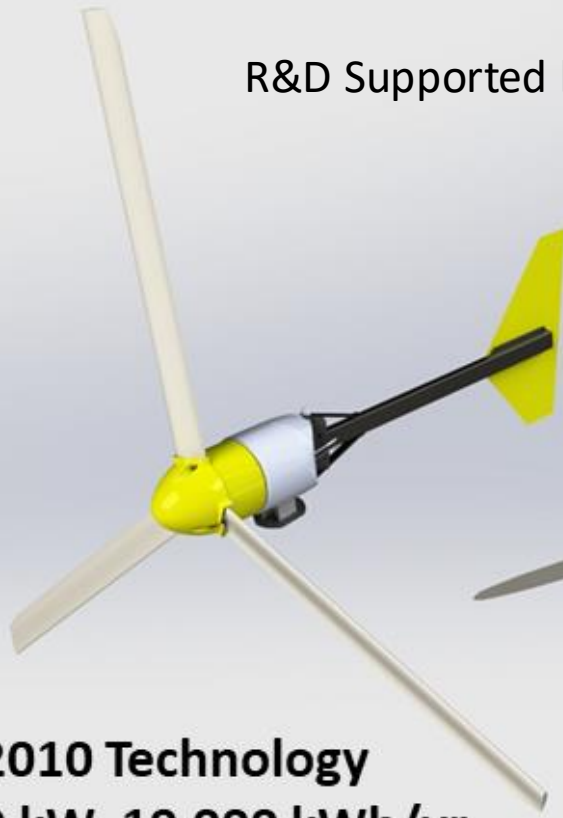
- ❖ 3rd Generation Farmer - ~1,500 acres, mostly soybeans
- ❖ Installed a 10 kW Bergey Turbine in 1994
- ❖ Installed the turbine himself
- ❖ Purchased a used 80' tilt-up tower from a Carter 25 kW turbine



Bergey Excel 15

Advanced Distributed Wind Technology

R&D Supported by US-DOE



2010 Technology
9 kW, 19,000 kWh/yr
LCOE: 21¢/kWh



2020 Technology
16 kW, 45,000 kWh/yr
LCOE: 9¢/kWh

Excel 15 - Advanced Technology



- Tailored Aerodynamics – Larger Rotor (9.6m Dia.)
- Carbon Fiber “One-Shot” Blades
- Variable Speed with Stall Control
- 2 Moving Parts (Rotor & Yaw)
- No scheduled maintenance; 3 Year Inspection Interval; 30 – 75 Year Predicted Operational Life
- Gen-1 Powersync III Inverter

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- ❖ Upgraded to the Excel 15 in March 2019
- ❖ Did the work himself
- ❖ Costs:
 - Turbine and Inverter: \$28,500
 - Shipping: \$1,070
 - Estimated Misc.: \$250
 - Total: \$29,820**
- ❖ Tax Credit: \$8,950
- ❖ Depreciation Tax Savings: \$5,070
- ❖ Final Cost: \$15,800



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- ❖ Turbine produces ~ 45,000 kWh per year
- ❖ Best Day: 461 kWh (19.2 kW average, CF = 123%)
- ❖ Annual Savings: \$5,000
- ❖ Simple Payback: 3.2 years



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- ❖ One Alternator Failure - Warranty
- ❖ Two Inverter Failures – Warranty
 - ❖ None in last 3 years

