



# Tall Towers for Small Wind

Small Wind Conference, Steven's Point, WI  
June 14, 2011

**David Blittersdorf**, President/CEO, AllEarth Renewables, Inc.

- **Manufacturer of towers for small wind and solar trackers**
- **Founded as Earth Turbines in 2005 as wind turbine manufacturer**
- **Serves small wind and solar industry**
- **Began manufacturing AllSun Trackers June 2009 – 800 installed in 2 years**
- **Fastest 5 year growth energy company in Vermont**
- **Employs 26 people in Williston, VT**
- **CEO, David Blittersdorf – Founder of NRG Systems, global leader of wind measurement systems**



# Your Competition



4kw tracker-6000 kwh/yr  
\$30,000 installed



144 kw, 36 tracker orchard-200,000 kwh/y  
\$900,000 installed



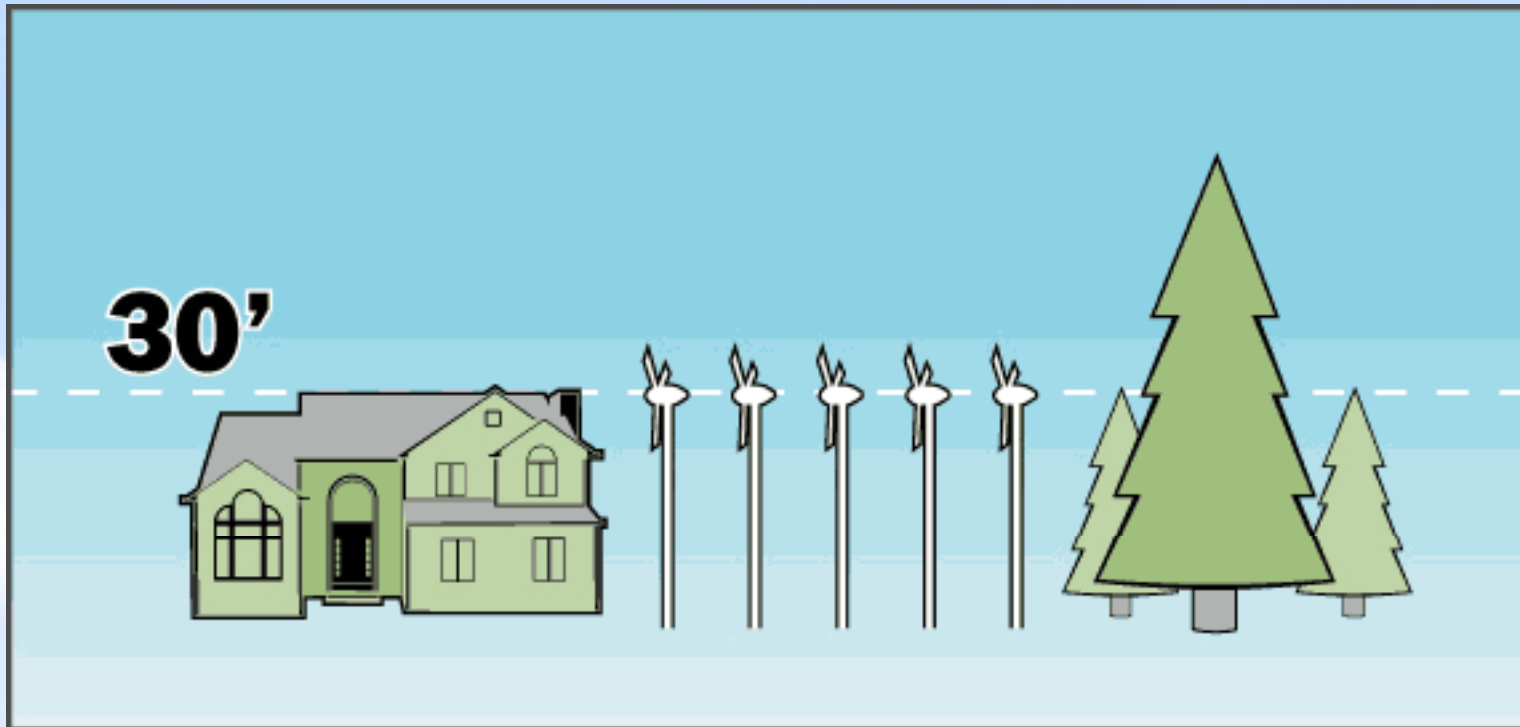


- Grid-connected, downwind
- Patented direct-drive 2.5kw gearless induction generator
- 112' tilt-up tower (34 meters), 450 lbs.
- 22 operating test sites
- Total # of operating hours on current version = ~300,000
- NOT IN PRODUCTION
- Installed cost: \$30,000
- Top 2 sites in VT (of 22): 3000 kwh/yr



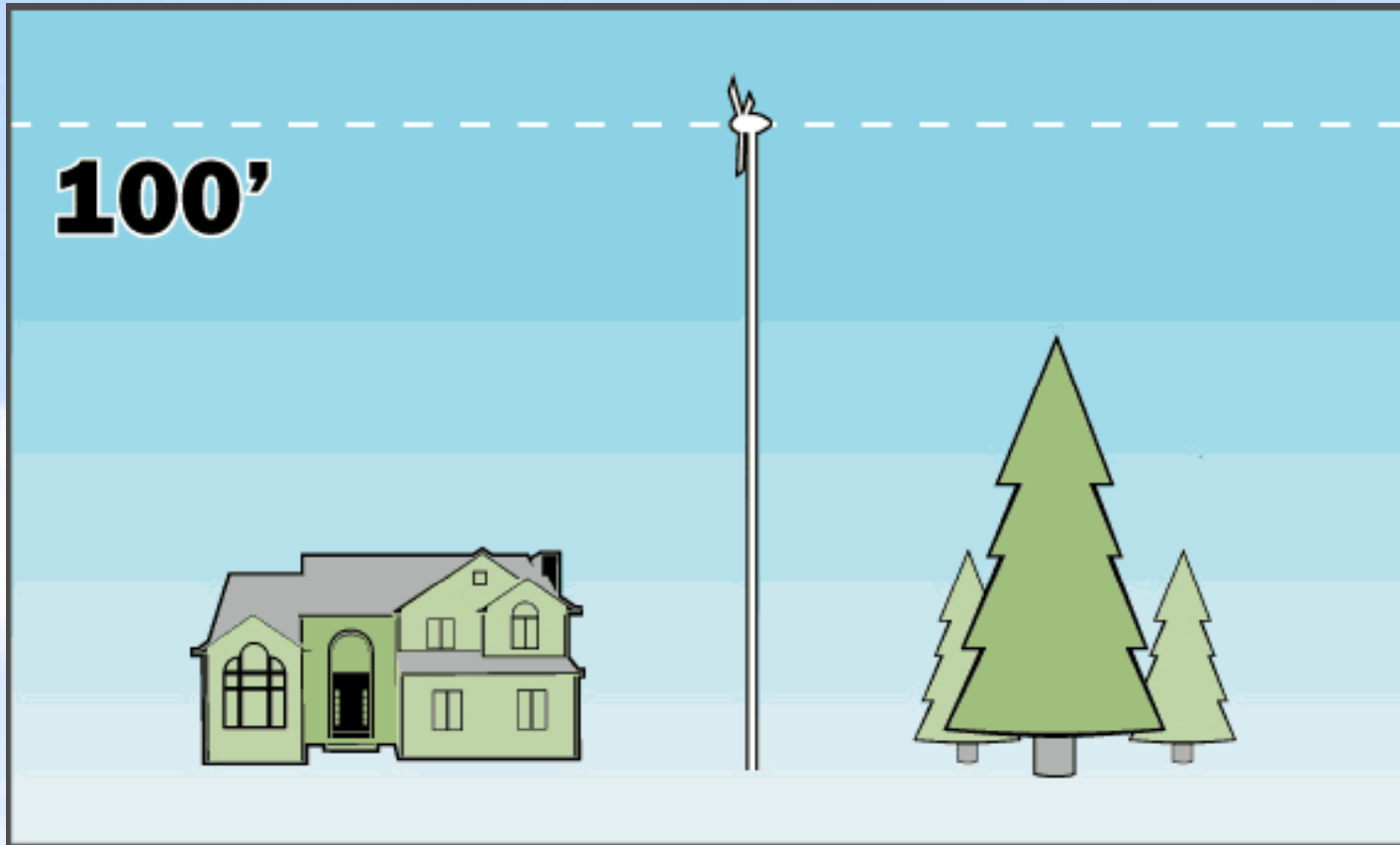
# Why so High?

- It takes five 30-foot turbines . . .



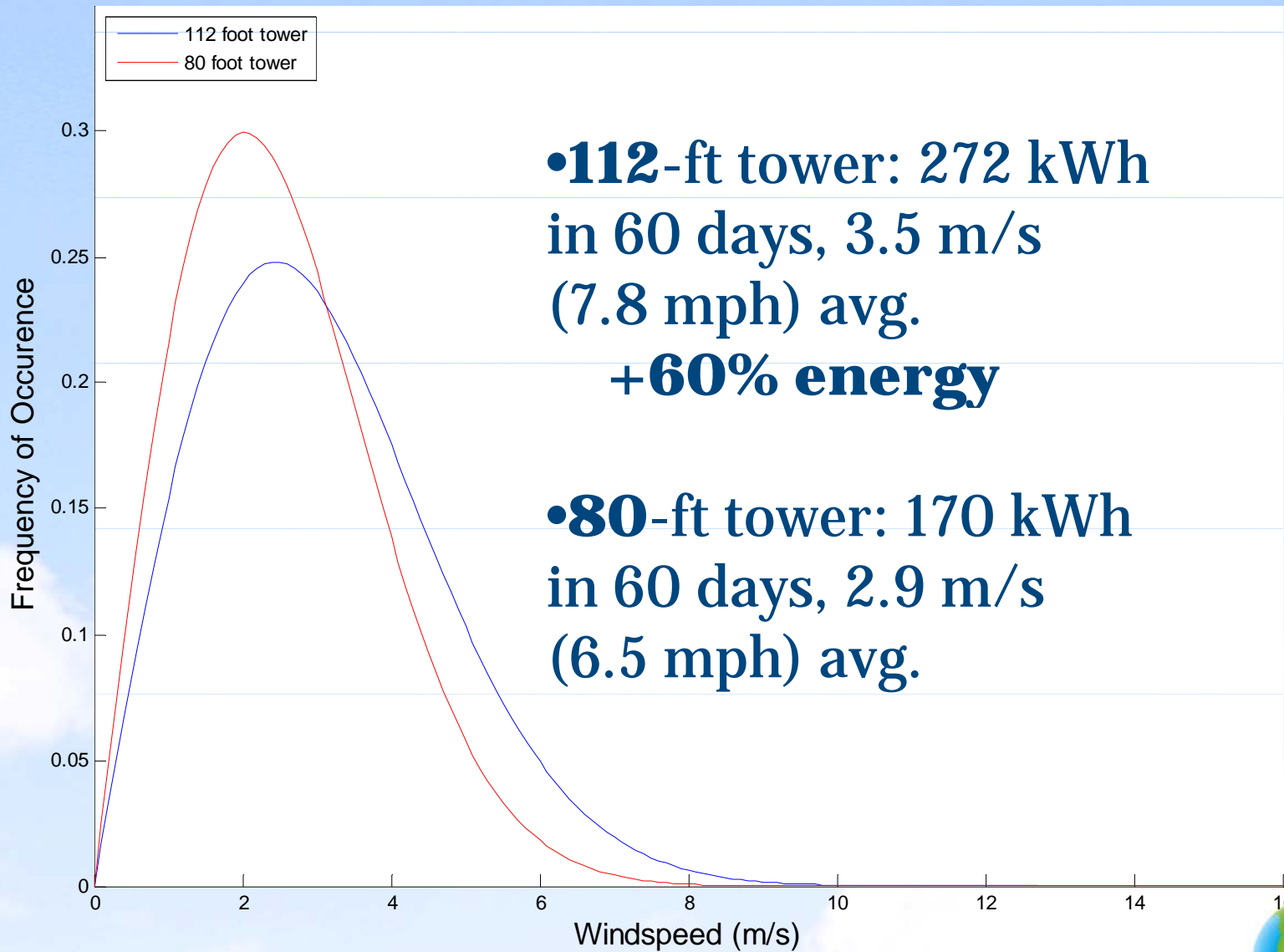
# That's Where the Wind Is!

- . . . to generate the same amount of electricity as one 100-foot turbine.



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# Earth Turbine: 112' vs. 80'



• **112-ft tower: 272 kWh**  
in 60 days, 3.5 m/s  
(7.8 mph) avg.  
**+60% energy**

• **80-ft tower: 170 kWh**  
in 60 days, 2.9 m/s  
(6.5 mph) avg.





# Advantages of 112' Tall Towers

- Easy to transport – FREE shipping in 48 states
- 5-year warranty
- Will work with other small wind turbines
- No climbing, no cranes
- Height = more wind, higher-producing installations are better for your customer and your profits
- Allows you to compete with solar PV

Earth Turbine on a 112-foot tower





# 34m Tower Specs

- 112' tall (34 meters)
- tilt-up, guyed, gal. steel
- screw-in or concrete base
- screw-in anchors
- operator can reach manual shutoff/furling mechanism while vertical
- required installation area = 80' dia. circle with 112' clear in one direction
- Installed with ginpole and winch (electric or hydraulic)



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Skystream on a 112 foot tower

# Skystream on Tilt-Up Tower



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# 34m Tower Packing System



## Dimensions (L x W x H)

231 cm x 119 cm x 72 cm  
91 inches x 47 inches x 28 inches

## Weight

563 kg  
1240 lbs

## Volume

2.20 cubic meters  
74.61 cubic feet

**34 meter NRG TallTower™ Envirocrate**  
*(As shipped from NRG Systems - Hinesburg, VT USA)*



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# A Tower the Industry needs NOW

- ❖ Almost 30 years of tower tilt-up tower designs for wind measurement and small turbines – over 20,000 NRG Met. towers sold
- ❖ Earth Turbine 2500 NOT going into production, AllSun solar trackers is our core business
- ❖ Have designs for up to 7.5m (25') diameter rotors
- ❖ Tilt-up, tubular guyed tower is lowest cost for rural homeowners (same as 45' self-supporting monopole)
- ❖ Advanced, quick (one day) field installation lowers costs and increases dealer's profit
- ❖ Don't keep shooting off your feet!
- ❖ **Dealers – Ask your turbine supplier for this tower**

**TODAY**



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[www.allearthrenewables.com](http://www.allearthrenewables.com)

# Thank you.

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