

Wind

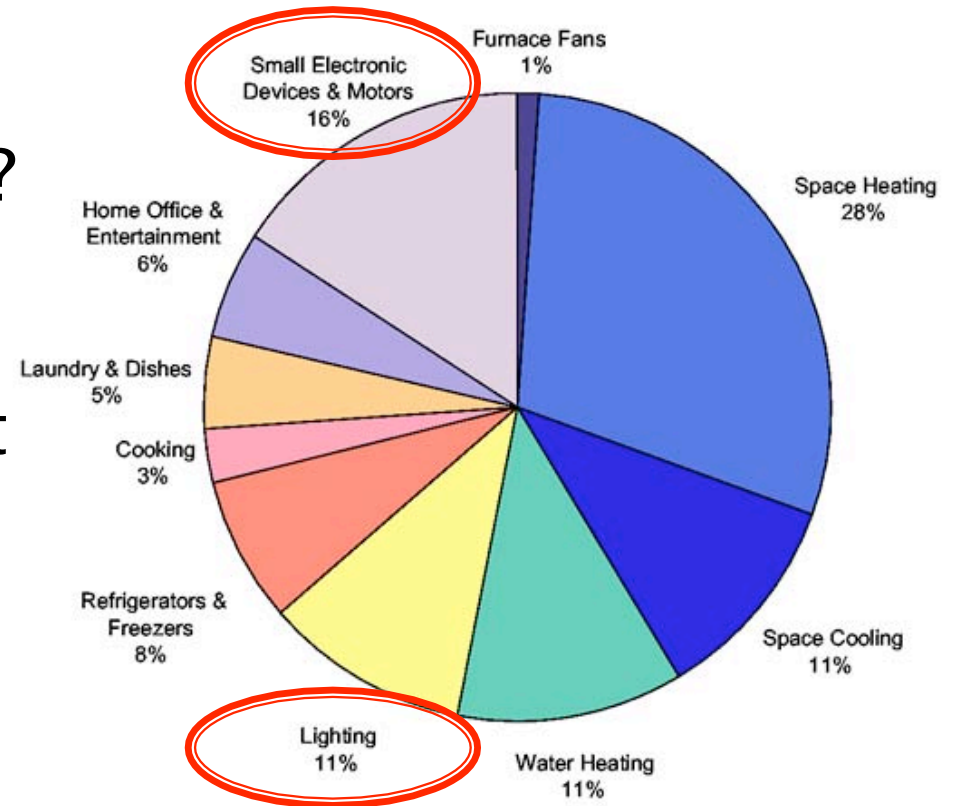
Clean, local and renewable

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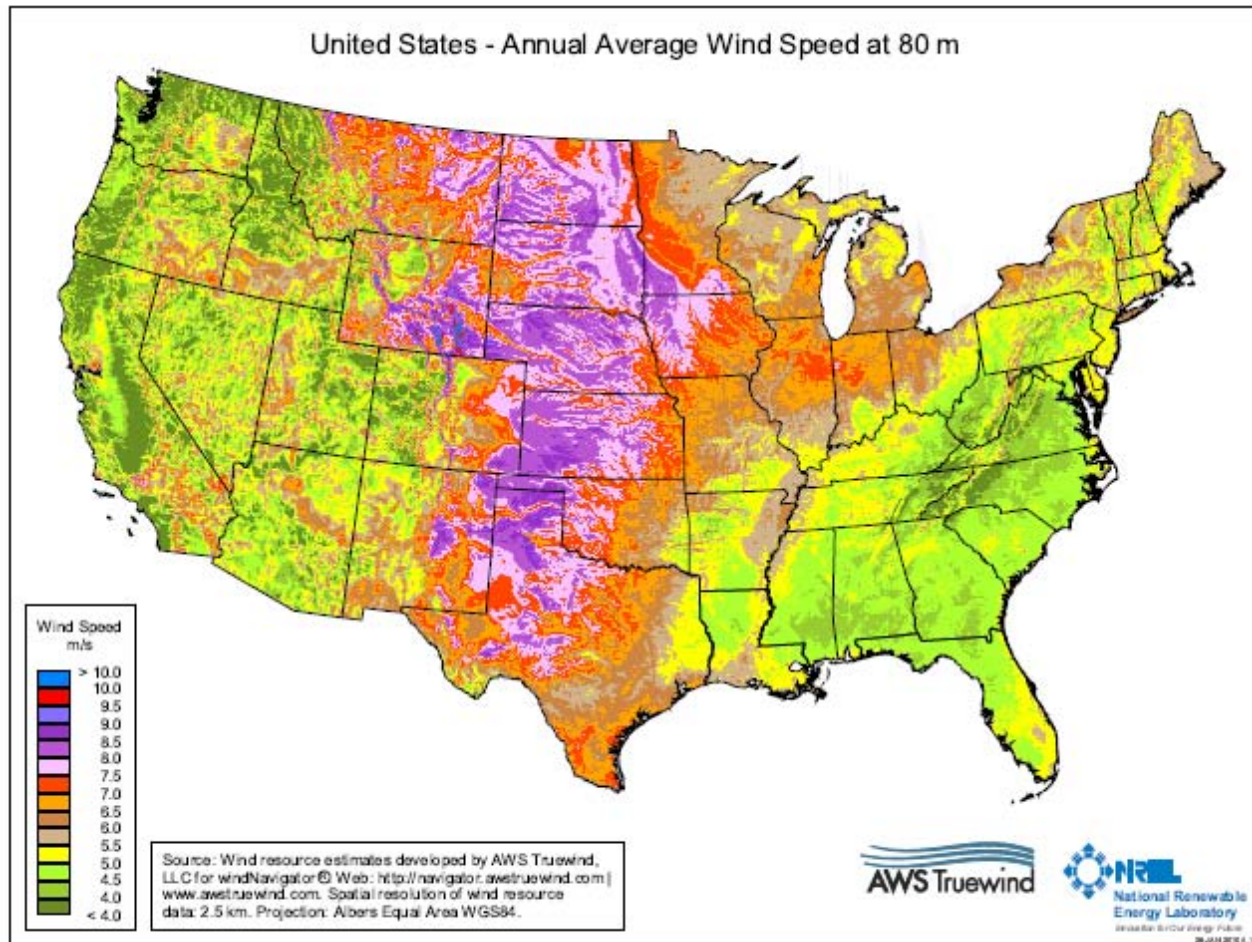


Low Hanging Fruit First

- ▶ Is the structure as efficient as it can be?
- ▶ A wind turbine will have the best impact if habits change
- ▶ Did you know that a wind turbine can be used to heat your water?



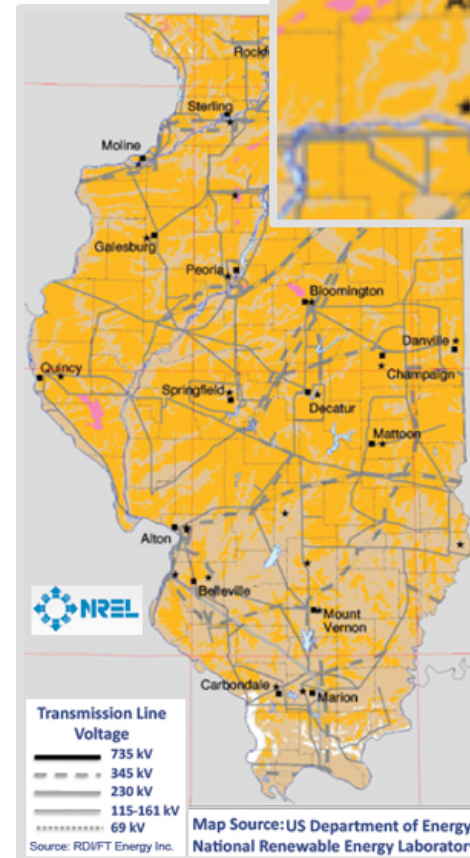
Where Does Wind Power Make Sense?



Illinois Wind

Wind Power Class	Resource Potential	Average Wind Speed at 50m
1	Poor	< 12.5
2	Marginal	12.5 – 14.3
3	Fair	14.3 – 15.7
4	Good	15.7 – 16.8

Wind speeds based on a Weibull k value of 2.0



- ▶ IL Ranked 7th largest wind producing state
- ▶ IL has 1000 megawatts of wind generation (300,000 homes)
- ▶ Most of Illinois has moderate Class 3 winds
- ▶ Class 2 wind areas may be suitable for wind generation (subject to other site conditions)

Source: The Illinois Wind Energy Association



Large Wind Farms

- ▶ Important component of the sustainable energy grid
- ▶ Wind Energy is one of the cleanest energy resources
- ▶ US Dept of Energy has a goal of 20% wind energy by 2030
- ▶ As of December 31, 2009 nearly 35,000 MW installed
- ▶ Transmission Losses from power station to consumer is approximately 7-12%



Top 10 States with Wind Project Installations

1. Texas
2. Iowa
3. California
4. Washington
5. Minnesota
6. Oregon
- 7. Illinois**
8. New York
9. Colorado
10. North Dakota



Local Wind Turbines

- ▶ Small Wind Turbines produce less than 100kW of electricity
- ▶ Electricity produced and used on-site
- ▶ Simple to install
- ▶ Transmission lines are less than hundreds of feet long vs. hundreds of miles



Permit & Zoning Considerations

- ▶ Think before you permit:
 - Turbine size and weight are decreasing each year
 - Recognize technology is advancing each year
- ▶ Include wind turbines in your zoning language to alleviate confusion



AVA Power

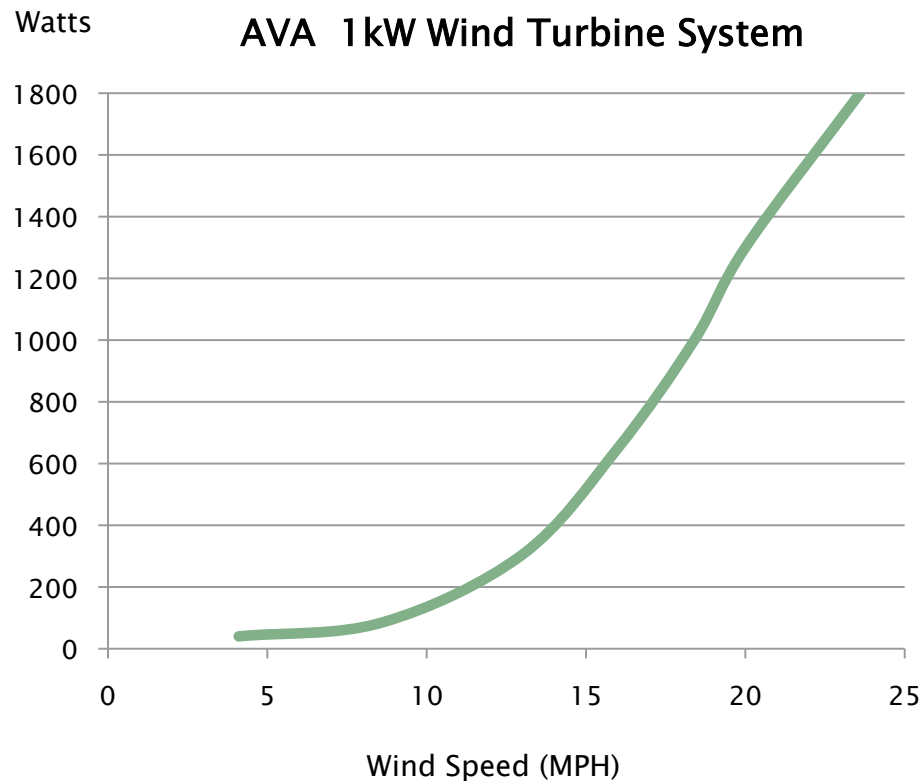
*AVA: Patent Pending
Vertical Axis Wind Turbine*

- Low Cost, efficient & small
- 1kW and 5kW sizes
- Reaches rated power less than 20mph
- www.avapower.com
- Public Performance Financing Available

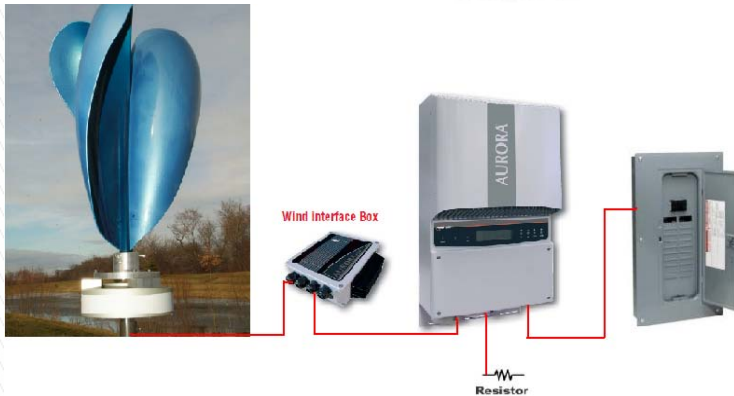
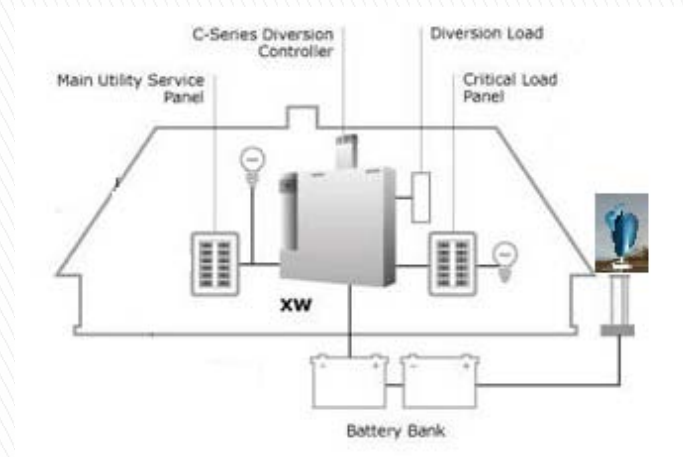
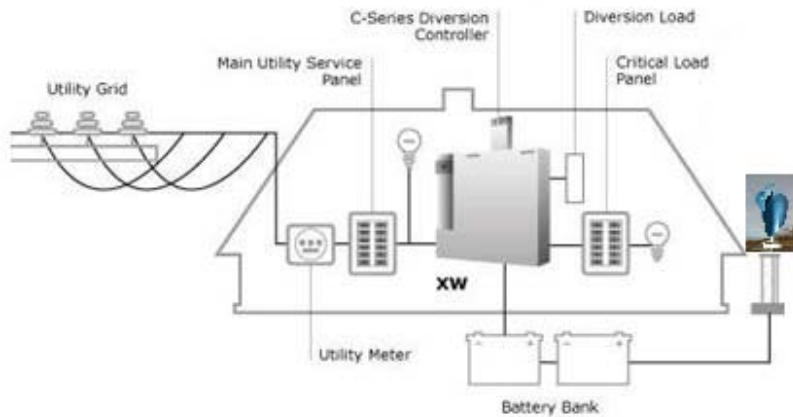


AVA Tested At UL Certified Wind Facility.

- ▶ Start-Up Power at <5 MPH
- ▶ Rated Power at <20 MPH



Local Wind Turbine Systems



Grid Connect

Battery Back-up With
Potential Hot Water Heating

Available Grants & Financing

- Visit <http://dsireusa.org>
 - Illinois Clean Energy Community Foundation Grants
 - Illinois Finance Authority Renewable Energy Project Financing
 - Illinois Department of Commerce and Economic Opportunity (DCEO)
- Public private partnerships



Resources

- ▶ www.AWEA.org
- ▶ www.citizensutilityboard.org/cubServices_pubs.html
- ▶ www.planetgreen.discovery.com/
- ▶ www.windforillinois.com
- ▶ www.dsireusa.org
- ▶ www.energy.gov
- ▶ www.windpoweringamerica.gov
- ▶ www.commerce.state.il.us/dceo/Bureaus
- ▶ www.illinoiscleanenergy.org
- ▶ www.illinoiswind.org
- ▶ www.avapower.com



Thank You

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