PULASKI COUNTY WIND ENERGY FACILITY ORDINANCE

April 10, 2012

Why Wind Energy in Pulaski County?

- Volvo Trucks N.A. - 1.6million square feet; $300m+ investment
  - Since 1978
  - Highest employment at 3,200 in 2006; Currently around 2,400
- Volvo Trucks Core Values:
  - Quality
  - Safety
  - Environmental Care
- **Goal** - First Carbon Neutral automotive plant in US (Volvo's first was in Ghent, Belgium in 2007, same plant manager is now in Dublin, VA)
- Lower power grid consumption by 25-30%

Volvo's History with Wind Energy

- In 2006, request County amendment to Zoning Ordinance to allow small wind energy system (W.E.S.) for research
  - Partnership with JMU for ordinance assistance and grant funding for W.E.S.
- W.E.S. constructed late 2006, 5+ years of data shows strong case for wind energy production

Potential Obstacles for Volvo

- NRV Airport communication's beacon?? – still in question

- New River Valley Airport is located 3.5 miles north of NRV Plant (Volvo) and 0.3 miles from overlay zone

Ordinance Overview

- Application, Process, and Fees
- Zoning Requirements
- Design Standards
- Temporary Meteorological Towers
- Road Network Impacts and Additional Guidelines

Different Types of Wind Turbines Covered in the Ordinance

- **Small Wind Systems**
  - Create less than 20 kW of Electricity
  - 60 foot maximum height
- **Medium Wind Systems**
  - Create 20 kW to 100 kW of Electricity
  - 150 foot maximum height
- **Large Wind Systems**
  - Create more than 100 kW of Electricity
  - No height requirement

Temporary Meteorological Towers

- Permitted Use-operation and on site for a maximum of 2 years, any longer requires a special use permit. (possible staff extension)
- Temporary Meteorological Towers are limited to 198 feet in height.

Wind Turbine Application

- A narrative describing the proposed Wind Energy Facility.
- Identification of Property and Ownership.
- Site plan.
- Decommissioning plan.
- Wind Study. (demonstrate necessity of height)
- Additional applicable information as required (Federal and State Requirements).

Special Use Permit Process

1. Application to Pulaski County.
2. Telecommunications Advisory Committee performs technical review.
3. Planning Commission holds public hearing and makes recommendation to Board of Supervisors.
4. Board holds public meeting and makes determination.

(Process similar to Telecommunications Towers)

Application Fee & Setbacks

Facility Type	Fee
Small	$150.00
Medium	$300.00
Large	$2,500.00
Temp. Met. Tower	$25.00

Fees do not include Building Permit Fees.

Wind Energy Type	Minimum Setback Requirements		
	Occupied Buildings on Participating landowner property	Property Lines on Non-Participating Landowner Property	Public Roads and Rail Easements[1]
Small	0.0	1.1	1.5
Medium	1.1	1.5	1.5
Large	1.1	1.5	1.5
Temporary Met Tower	1.1	1.5	1.5

1 - The setback is calculated by multiplying the required setback number by the Wind Turbine Height and measured from the center of the Wind Turbine base to the property line, Public Road, or nearest point on the foundation of an Occupied Building.

Zoning District Regulations

Wind Energy Facility	Zoning Districts										
	A-1	C-1	CM-1	R	R-1	R-2	R-3	RR	I-0	I-1	PID
Small	P	S	P	S	P	S	S	P	S	P	S
Medium	P	S	S	S	S	S	S	S	S	P	S
Large	S	S	S	S	S	S	S	S	S	S	S
Temporary Met Tower	P	P	P	S	P	S	S	P	S	P	S

P= Permitted by-right

S= Special Use Permit Required

Design and Installation

- The following items are required:
  - Turbine design and its operational safety in accordance with State and Federal Law.
  - Visual Impact Assessment.
  - Fencing and site warnings.
  - Blade clearance must be at a height to ensure safety.

Other Considerations:

- Bonding & Liability
  - General Liability -$5,000,000 w/$500,000 per occurrence….$1,000,000 for Medium systems
  - Bonding required for decommissioning
- Transporting Wind Turbines
  - Close coordination with VDOT to document road conditions before and after transport (must be repaired to equal or better standard)
- Sound and Signal Interference
  - Not to exceed 55 dBA as measured from non-participating adjacent property line
  - Radio, television, telephone or similar signal shall not be disrupted. Must mitigate at owner's expense
- Decommissioning and Reporting
  - 12-month continuous "non-energy producing period" – negotiable because of maintenance issues or other concerns
  - Annual Report to Pulaski County Telecommunications Advisory Committee
- Emergency Services
  - Close coordination with County Emergency Services and volunteer fire departments

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