



**LAND DEVELOPMENT REGULATION ADVISORY BOARD (LDRAB)
RENEWABLE ENERGY (WIND) SUB-COMMITTEE**

WEDNESDAY, MARCH 2, 2011 AGENDA

2300 NORTH JOG ROAD

CONFERENCE ROOM VC-2E-12 – 2ND FLOOR 10:30 AM – 12:00 PM

A. CALL TO ORDER

1. Introduction of Subcommittee Members and Interested Parties
2. Select Chair and Vice Chair
3. Additions, Substitutions and Deletions to Agenda
4. Motion to Adopt Agenda

B. PURPOSE AND INTENT

1. Goal of Subcommittee – January 6, 2011 BCC Direction
2. Timeframe/Schedule
3. Overview of Existing ULDC Provisions for Renewable Energy Facilities

C. PRESENTATION: OVERVIEW OF WIND ENERGY (EXHIBIT A)

D. PRELIMINARY REVIEW OF PROPOSED ULDC AMENDMENTS (EXHIBIT B)

E. DISCUSSION

F. TOPICS FOR NEXT MEETING

G. PUBLIC COMMENT

H. Adjourn



Palm Beach County Project, LLC

February 9, 2011

Planner:

Agenda

- Introductions
- Wind Capital Group
- Four basics of a wind farm
- Why Florida?
- Environmental Process
- How we build a wind farm

Planner:

Wind Capital Group



- Independently developed and sold 600 MW of wind farms
- Built another 163 MW in partnership with John Deere
- Built, own and operate a 150 MW facility at Lost Creek, MO.
 \$340 Million investment – largest project in State
- HQ in St Louis, Missouri
- Recognized by the industry and the U.S. Government as a leader in wind energy

Planner:

Energy Generation Comparison

Environmental Impacts of Electricity Sources

	Wind	Nuclear	Coal	Natural Gas
Global Warming Pollution	None	None	Yes	Yes
Air Pollution	None	None	Yes	Limited
Mercury	None	None	Yes	None
Mining/Extraction	None	Yes	Yes	Yes
Waste	None	Yes	Yes	None
Water Use	None	Yes	Yes	Yes
Habitat Impacts	Yes	Yes	Yes	Yes

AMERICAN WIND ENERGY ASSOCIATION | www.awea.org | 202.383.2500

Planner:

Four Basics of Wind

- Wind Resource
- Land
- Transmission
- Market

Planner:

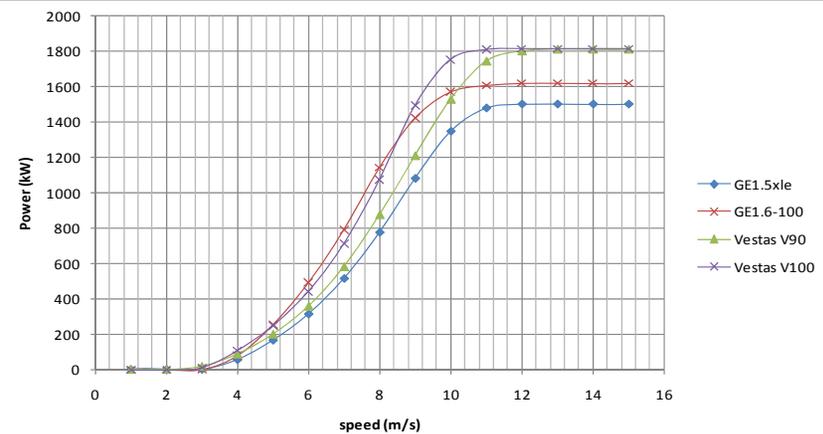
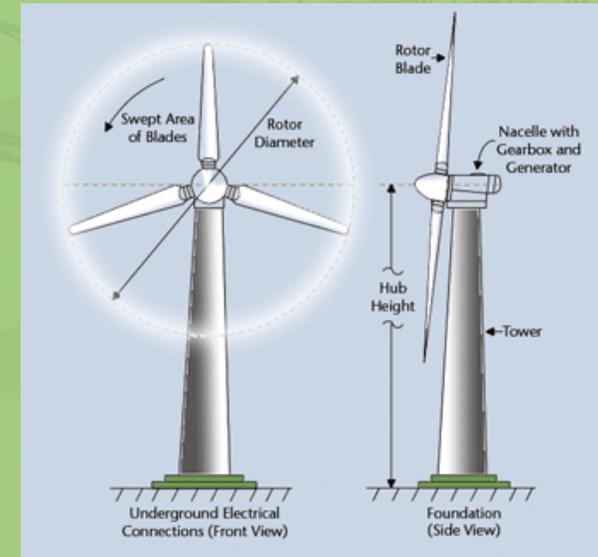
Wind in Florida ?

- Accepted wisdom is that wind is not economic in Florida, so what's changed?
- Technology enhancement
 - Turbine developments
 - Larger rotor blades
 - Taller Turbines
 - Better prospecting tools
 - Meso-scaling mapping
 - GIS site screening

Planner:

Wind Turbine Performance

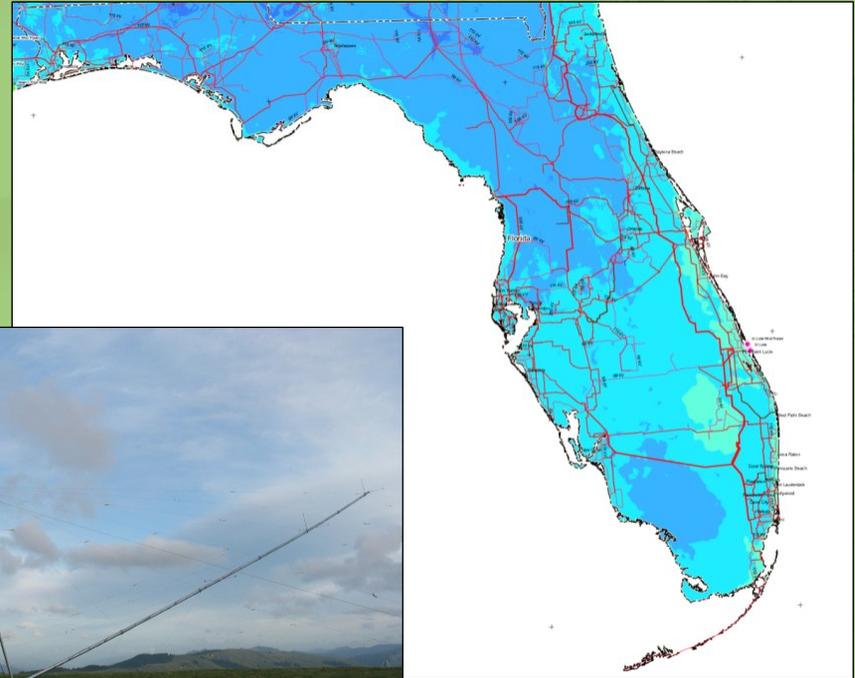
- Performance of Wind Turbines depends on:
 - Average Wind Speed at the Site
 - Rotor Size
 - Generator Size
 - Hub Height
 - Wind Farm Layout
 - Air density



Planner.

Wind Prospecting Process

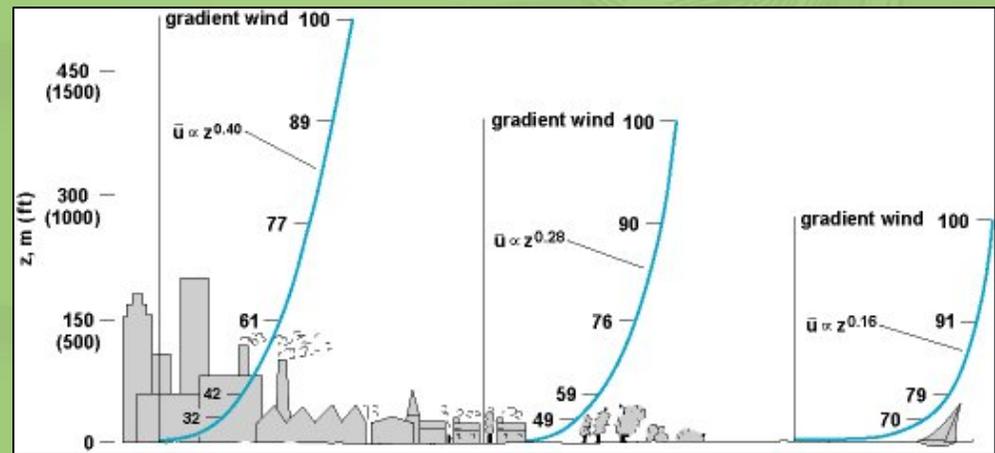
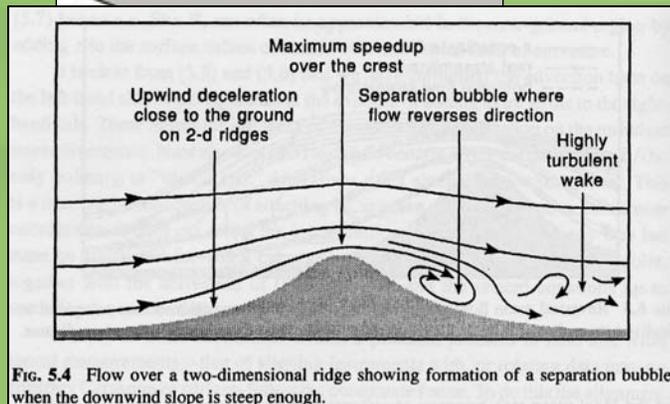
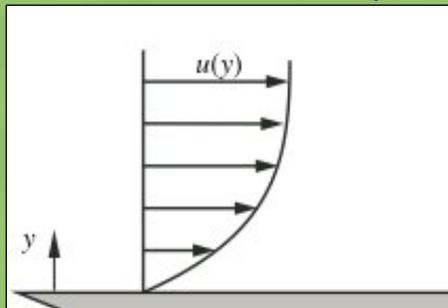
- Regional Development Teams
- Meteorology
- Transmission
- Environmental
- Siting and Mapping
- Real Estate Leasing
- Community Relations
- Government Relations
- Power Sales



Understanding Boundary Layer Flows – The Physics

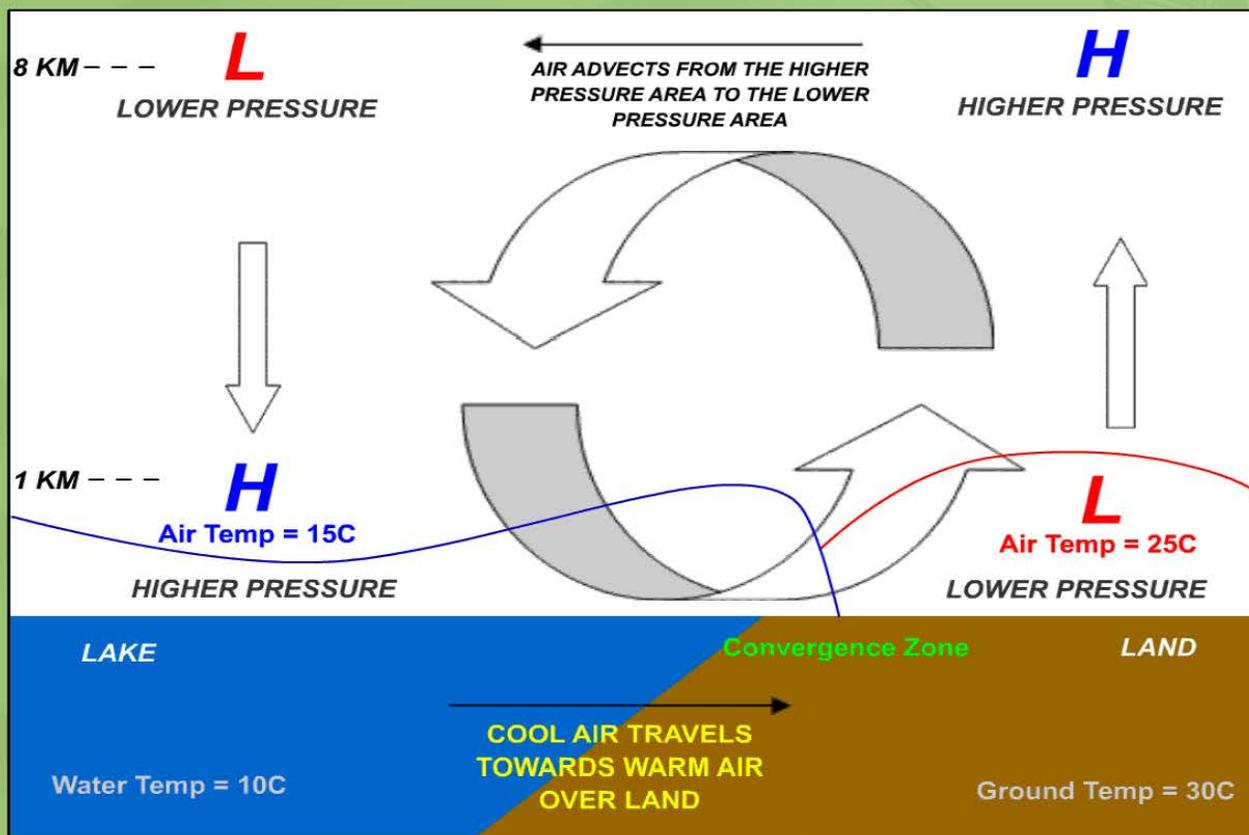
- Factors that determine available wind speed are:
 - Topography
 - Shear layers

$$\frac{V_1}{V_2} = \left(\frac{h_1}{h_2} \right)^n$$



Planner:

Sea and Lake Breezes



- Sea breezes always blow inland
 - Often associated with thunderstorms
 - Extent can vary from 1 mile to several miles inland
- Planner:

Wind Monitoring



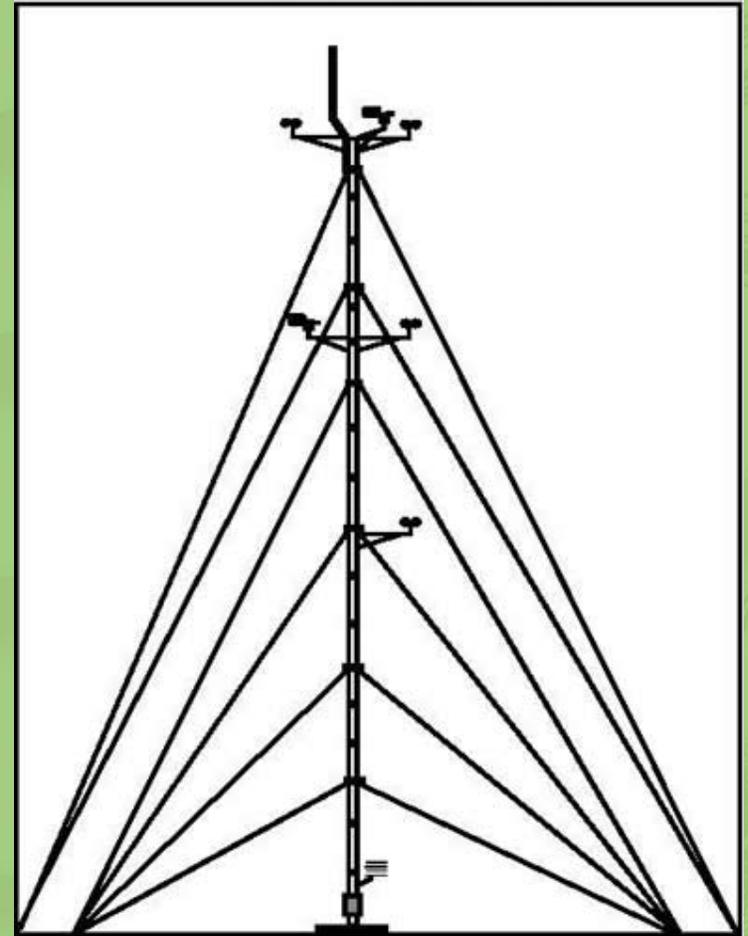
Meteorological Tower

Top – 2 Anemometers + Vane

Mid – 2 Anemometers + Vane

Lower – 2 Anemometer

Ground – Temperature,
Pressure and Logger



Met Tower Schematic

Planner:

Met Monitoring Equipment

Cup Anemometer



Data Logger



Direction Vane



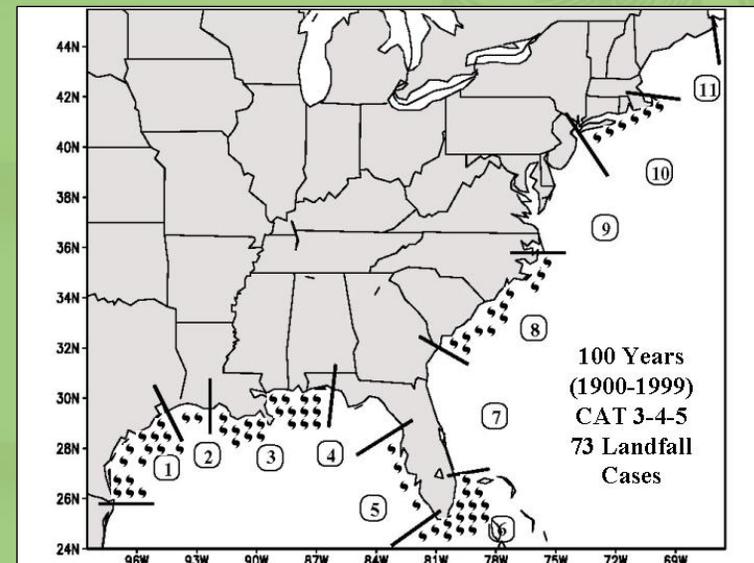
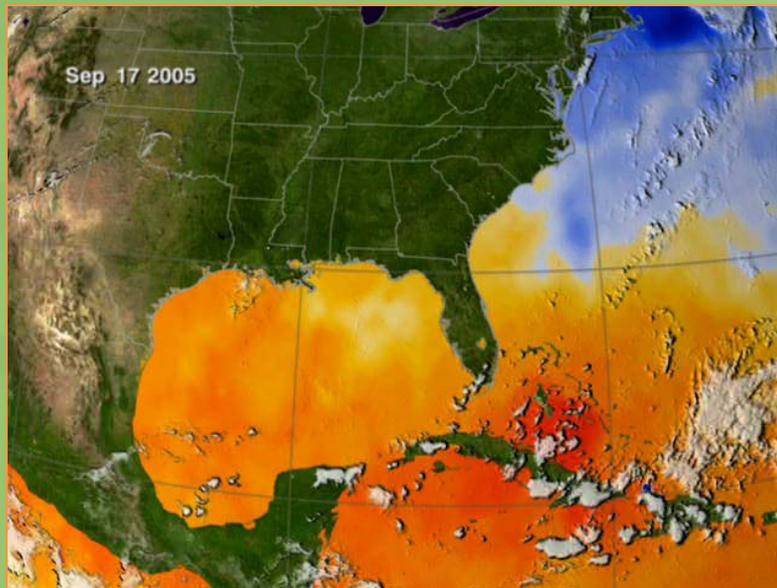
Temperature Sensor



Planner:

Hurricanes and Extreme Wind Events

- Turbines are located within Hurricane Zones
- Turbines rated to withstand high wind
- Insurable risk



Planner:

Local Investments into the Community

- Materials
 - Rental of equipment
 - Concrete
 - Steel
- Lodging
- Food
- Employment Opportunities
- On going maintenance and repair
- Vocational Training



Environmental Program

- Environmental Program Spans All Phases
 - Prospecting, Development, Construction, Operations
 - Corporate Avian Bat Protection Plan
- Site Specific Study and Management Plans
 - Desktop, Field Work, and Risk Modeling
- Utilize Consultants and Resources Specialists
- Collaborative Relationships
 - Regulators
 - Landowners
 - Stakeholders
- Creative Solutions



Planner:

Environmental Evaluation and Permitting Process

- Design and Implement Site-Specific Study Plan
- Meet with Environmental Regulators and Stakeholders
- Share Study Results and Update Study Plan
- Design Project to Avoid or Minimize Impacts
- Prepare Permit Applications or Mitigation Plans if needed
- Implement Environmental Plan During Construction
- Conduct Post-Construction Monitoring if needed

Planner:

Environmental Evaluation at Big Lake

- High Level Landscape Screening and Critical Issues Assessment Completed
- Habitat Loss/Fragmentation Not a Concern
- Collisions Main Issue to Focus On
 - Federally Protected Species
 - Wood Storks
 - Snail Kites
 - Caracara
 - Bald Eagle
 - Other Species of Concern
 - Florida Bonneted Bat
 - State Listed Bats and Migratory Tree Bats
 - Wading Birds
 - Raptors



Planner:

Environmental Study Plan at Big Lake

Avian Surveys

- Pre-Construction Bird Surveys

12 Months Planned

Started in November

5 days/wk for 50 weeks

- Standard Point Counts

40 over project area

Additional at outlying points

Unlimited radius for 20 minutes: Species, abundance, flight height (measured and estimated), and direction

– Species/Guild Specific Protocols

- Skywatch
- Raptor and Wading Bird Behavior and Nest Surveys
- Nocturnal



Planner:

Environmental Study Plan at Big Lake Bat Surveys

– Pre-Construction Bat Surveys

12 Months Planned

Started in November

4 monitoring stations on met towers

Utilizing full spectrum ReBAT Technology

Monitor bat activity at rotor swept height

Analyze data to species to address species specific mortality risk

Analyze bat data relative to atmospheric conditions

– Eumops grant from FWC



Planner:

Environmental Study Plan at Big Lake

Other Studies

- Sensitive Species Risk Assessment
- Wetlands and Waterways Analysis and Permitting
- Cultural Resource Review
- Creation of Avian Bat Protection Plan
- Coordination with Local, State, and Federal Agencies and Other Environmental Stakeholders
- Post-Construction Monitoring Plan

Planner:

Wind Turbine Type

- New Technologies have reduced Wildlife Issues:
 - Tower Type : Lattice vs. Monopole
 - Turbine Height
 - Wind Farm Layout
 - Rotation Speed



Planner:

How we build a wind farm

Planner:

Site Prep

- Material staging area
- Access Roads
- Widening Existing Roads
- Temporary Bridge Crossings



Planner:

Collection system



Planner:

Foundation excavation



Planner:

Foundation steel



Planner:

Foundation process/backfill



Planner:

Equipment Deliveries



Planner:

Turbine Installation



Planner:

Turbine Installation



Planner:

Setting The Nacelle



Planner:

Flying Blades



Planner:

Restoration



Planner:

Substation



Planner:



Planner:



Planner:



Planner:

EXHIBIT B

RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)

1
2 Part 1. ULDC, Art. 1.I.2, Definitions [Related to Electric Power Facilities and Renewable
3 Energy] (pages 34, 54, 72, 96 and 105 of 114), is hereby amended as follows:
4

Reason for amendments: []

5 CHAPTER I DEFINITIONS & ACRONYMS

6 Section 2 Definitions

7 A. Terms defined herein or referenced in this Article shall have the following meanings:

8

9 ~~68. Anemometer – An instrument for indicating and measuring wind force and velocity.~~
10 **[Renumber Accordingly]**

11 E. Terms defined herein or referenced in this Article shall have the following meanings:

12

13 12. **Electric Power Facilities** - Any electric generating facility that uses any process or fuel and
14 includes any associated facility that directly supports the operation of the electrical power
15 facility. **[Ord. 2006-004] [2009-040] [Ord. 2010-005]**

16

17 M. Terms defined herein or referenced in this Article shall have the following meanings:

18

19 ~~35. Meteorological Tower (MET) – A tower erected to measure wind speed and directions plus
20 other data for the siting or operation of renewable wind energy facilities, or other similar uses.~~

21 **[Renumber Accordingly]**

22 R. Terms defined herein or referenced in this Article shall have the following meanings:

23

24 23. **Renewable Energy Facility, Wind** – A facility that uses one or more wind turbines, ~~or~~ other
25 systems with a principal use of producing electrical or mechanical power from the wind, and
26 other related accessory structures and buildings. **[Ord. 2010-005]**

27 **[Renumber Accordingly]**

28 S. Terms defined herein or referenced in this Article shall have the following meanings:

29

30 ~~71. Specific Purpose Survey – A survey performed for a purpose other than the purposes
31 detailed in paragraphs 5J-17.050 (10)(a)-(i) or (k), F.A.C.~~

32 **[Renumber Accordingly]**

33 T. Terms defined herein or referenced in this Article shall have the following meanings:

34

35 74. **Turbine, Wind** – A rotary engine assembly with attached blades utilized in the process to
36 convert wind into energy. **[Ord. 2010-005]**

37

Comment [Bill C1]: Pending additional clarification from Engineering/Surveying.

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Notes:

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EXHIBIT B

**RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)**

1
2 **Part 2. ULDC, Table 3.E.1.B, PDD Use Matrix [Related to Renewable Energy] (pages 147 of**
3 **231), is hereby amended as follows:**
4

5 Reason for amendments: []

Table 3.E.1.B - PDD Use Matrix cont'd

Use Type	PUD				MUPD				MXPD	PIPD			LCC		N O T E			
	Pods				FLU				FLU	Use Zone			FLU					
	R E S	C O M	R C V	C A P	C L O	C H O	C L O	C H O	I N D	I N D	C H O	C H O	I N D	I N D		M H D	R V P	C L H
Utilities and Excavation Uses																		
.....																		
Renewable Energy Facility, Wind					R	R	R	R	R	R	R	R	R	R	R			106-2
Meteorological Tower					R	R	R	R	R	R	R	R	R	R	R			106.3
.....																		
[Ord. 2005-002] [Ord. 2006-004] [Ord. 2007-001] [Ord. 2009-040] [Ord. 2010-005]																		
Notes:																		
P Permitted by right																		
D Permitted subject to approval by the DRO																		
S Permitted in the district only if approved by Special Permit																		
R Permitted in the district only if approved by the Board of County Commissioners (BCC) as a requested use.																		

Comment [Bill C2]: Supplemental standards may: 1) Allow for this use to be part of an approval of an overall Wind Renewable Energy Facility; and, establish criteria that allows for reduced thresholds for approval, with factors such as location or whether or not use is permanent or temporary.

Comment [Bill C3]: Need for separate category to be discussed.

6
7
8 **Part 3. ULDC, Table 3.F.1.F-45, TDD Use Matrix [Related to Renewable Energy] (pages 196 of**
9 **231), is hereby amended as follows:**
10

11 Reason for amendments: []

Table 3.F.1.F – Traditional Development Permitted Use Schedule (Continued)

District Tier Land Use Zone	TND						TMD				N O T E S	
	Urban/Suburban (U/S)			Exurban/Rural			U/S	Ex/ Rural	AGR			
	Res	Neighborhood Center (NC)	Open Space/ Rec	Res	N/C	Open Space/ Rec			Dev	Preserve		
Utilities and Excavation												
.....												
Renewable Energy Facility, Wind												106-2
Meteorological Tower												106.3
.....												
[Ord. 2005 – 002] [Ord. 2005-041] [Ord. 2006-036] [Ord. 2007-001] [Ord. 2008-037][Ord. 2009-040] [Ord. 2010-005] [Ord. 2010-022]												
Notes:												
P Permitted by right.												
D Permitted subject to approval by the DRO.												
S Permitted in the district only if approved by Special Permit.												
R Requested Use.												

Comment [Bill C4]: Need for separate category to be discussed.

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EXHIBIT B

**RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)**

1
2
3 **Part 4. ULDC, Art. 4.A.3.A-1, Use Matrix [Related to Renewable Energy] (pages 18 of 166), is**
4 **hereby amended as follows:**

5 Reason for amendments: []
6

Table 4.A.3.A - Use Matrix Continued

Use Type	Zoning District/Overlay																N O T E
	Agriculture/ Conservation			Residential				Commercial				Industry/Public					
	P C R	A G P	A P	AR R U S A A	R E T S M	R R R R	C N L C H O	C C C C C C	C C C C C C	C C C C C C	I L G O P I P I	I L G O P I P I	P O P F	P O P F			
Utilities & Excavation																	
.....																	
Renewable Energy Facility, Wind <u>Meteorological Tower</u>		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
.....		A	A	A													
[Ord. 2006-004] [Ord. 2007-001] [Ord. 2009-040] [Ord. 2010-005]																	
Key:																	
P Permitted by right																	
D Permitted subject to approval by the DRO																	
S Permitted in the district only if approved by Special Permit																	
B Permitted in the district only if approved by the Zoning Commission (ZC)																	
A Permitted in the district only if approved by the Board of County Commissioners (BCC)																	

Comment [Bill C5]: Supplemental standards may: 1) Allow for this use to be part of an approval of an overall Wind Renewable Energy Facility; and, establish criteria that allows for reduced thresholds for approval, with factors such as location or whether or not use is permanent or temporary.

Comment [Bill C6]: Need for separate category to be discussed.

7
8
9 **Part 5. ULDC, Art. 4.B.1.A.106.2, Renewable Energy Facility (Wind) (page 79-81 of 166), is**
10 **hereby amended as follows:**

11 Reason for amendments: []
12

13 **CHAPTER B SUPPLEMENTARY USE STANDARDS**

14 **Section 1 Uses**

15 **A. Definitions and Supplementary Standards for Specific Uses**
16 **106-2.Renewable Energy Facility, Wind**
17 A facility that uses one or more wind turbines, ~~or~~ other systems with a principal use of
18 producing electric or mechanical power from the wind, and other related structures and
19 buildings. [Ord. 2010-005]
20

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EXHIBIT B
RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)

1

Figure: 4.B.1.A – Typical Renewable Wind Turbines Structure



[Ord. 2010-005]

2

Figure: 4.B.1.A-11-Typical Renewable Wind Energy Facility



[Ord. 2010-...]

3
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a. Pre-Submittal Requirements

Prior to submitting an application for zoning approval, the applicant shall provide documentation a letter of engagement from the Florida Fish and Wildlife Conservation Commission or US Fish and Wildlife Service indicating that the proposed facility complies with is under review for their applicable siting requirements for bat and bird migration

Comment [Bill C7]: Pending: Requires verification from affected agency and ERM consultation.

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EXHIBIT B

RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)

1 patterns. The documentation shall be submitted to the Zoning Division, with the zoning
2 application, and reviewed by ERM. [Ord. 2010-005]
3 b. Minimum Lot Size
4 Lots shall comply with the minimum lot dimension requirements pursuant to Table
5 3.D.1.A, Property Development Regulations, or the applicable PDD requirements. [Ord.
6 2010-005]
7 c. Minimum Setback Requirements
8 Accessory electric poles, distribution and transmission lines shall be exempt from the
9 minimum setback requirements indicated below. [Ord. 2010-005]
10 1) All Lots
11 Facilities shall comply with the minimum setback requirements of the applicable
12 zoning district, unless permitted otherwise. [Ord. 2010-005]
13 2) Lots Adjacent to Existing Residential Uses
14 Facilities located on lots adjacent to existing residential uses, Zoning or FLU
15 designation, shall be setback a minimum of 110 percent of the height of the structure.
16 The height shall be measured from finished grade to the top of the turbine blade.
17 The setback shall be measured from the residential property line. [Ord. 2010-005]
18 3) Additional Setback
19 One additional foot of setback shall be required in addition to the minimum setback
20 indicated above for each one foot of height, or fraction thereof, over 35 feet, when
21 adjacent to an existing residential or commercial zoning district. [Ord. 2010-005]
22 4) Exceptions
23 Facilities located in the AP Zoning District, Glades Tier, GA-O, or SCGCFO that are
24 contiguous to properties that are part of an aggregated renewable wind energy
25 facility may be exempt from the property setback regulations, subject to the following:
26 a) Property owners may be permitted to waive setback requirements for property
27 lines or occupied buildings on the participating landowner property or non-
28 participating landowner property by signing a waiver that sets forth the applicable
29 setback provision(s) and the proposed changes;
30 b) The written waiver shall notify applicable property owner(s) required setbacks,
31 describe how a wind turbine, MET tower, or accessory structures are not in
32 compliance, and state that consent is granted to waive the setback as required
33 by this ordinance; and
34 c) Any such waiver shall be signed by the applicant, the participating land owner(s)
35 or non-participating landowner(s), and recorded.
36 d. Perimeter Buffers and Interior Tree Requirements
37 1) A Type I incompatibility buffer shall be required when the subject site is adjacent to or
38 visible from any street or parcels with a conservation (when open to the public),
39 commercial, public and civic, or residential use. In addition, a Type II incompatibility
40 buffer shall be required around the perimeter of all ground-mounted equipment or
41 accessory buildings. Palms may be substituted for 50 percent of the required canopy
42 trees. These buffers may be modified pursuant to Article 7.B.3, Alternative
43 Landscape Plan. [Ord. 2010-005]
44 2) These facilities shall be exempt from interior landscape requirements for the
45 developable area pursuant to Table 7.C.3, Minimum Tier Requirements. [Ord. 2010-
46 005]
47 e. Substation
48 Substations associated with the facility shall be subject to the requirements of Article
49 4.1.A.134, Utility Minor. [Ord. 2010-005]
50 f. Collocation with Existing Electric Power Facilities
51 1) Wind facilities located on a site with an existing electric power facility shall be
52 approved pursuant to the approval process indicated in the appropriate use matrix,
53 and shall not be subject to a legislative development order amendment, pursuant to
54 Article 2.B.2.H, Development Order Amendment. [Ord. 2010-005]
55 2) Exceptions
56 a) Adding wind turbines to an existing wind energy facility within the existing project
57 boundary may be approved through the Development Review Officer (DRO)
58 process; and
59 b) Expansion of the project acreage up to five percent of the approved project
60 acreage to add additional turbines, may be approved through the DRO process.
61 g. Decommissioning or Abandonment
62 If no electricity is generated for 18 consecutive months, the facility or turbine owner or
63 property owner shall have three months to remedy any safety issues/concerns or
64 complete the decommissioning of the facility or turbine to the satisfaction of the Building
65 Official.

Comment [Bill C8]: To be discussed – verify need to preclude eligibility for variance relief.

Comment [Bill C9]: To be discussed – verify Art. 3 height provisions don't already apply, or if desire is to preclude eligibility for variance relief.

Comment [Bill C10]: Pending: Staff does not support this request.

Comment [Bill C11]: PENDING: Requires additional review by multiple agencies.

Comment [Bill C12]: Pending: Staff does not support, as includes parcels with LR-1 or other FLU designations.

Comment [Bill C13]: Pending: Staff does not support, as these areas are either redundant, or include properties in the U/S Tier portion of the Glades.

Comment [Bill C14]: Pending: Staff does not support.

Comment [Bill C15]: Pending: Implies properties not included in approval for Renewable Wind Energy Facility – staff does not support. Also contradictory to scope outlined in originating text above.

Comment [Bill C16]: Pending: Staff does not support request. May be room to allow for some deviations in farm fields, or where accessory facilities are not visible from roadways, or other similar thresholds.

Comment [Bill C17]: Pending: If considered, may be relocated to Art. 2.D.1.G.1, Amendments to BCC/ZC approvals.

Comment [Bill C18]: Pending: Staff does not support, would be problematic as relates to boundary of approval in originating Resolution.

Comment [Bill C19]: Pending: Good concept; however, there are several issues with authority, arbitrary guidelines or thresholds.

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EXHIBIT B

RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)

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- 1) The Zoning Director may grant extensions of time for repair or maintenance, for good cause, such as the need to back-order parts that are not currently available from the manufacturer or supplier or the need to repair multiple turbines damaged or inoperative subsequent to a storm event or other unforeseeable natural disaster;
- 2) Decommissioning shall include removal of wind turbines and buildings, down to 36 inches below grade; and.
- 3) Disturbed earth shall be graded, and reseeded, unless the landowner notices the Zoning Director in writing otherwise.

h. Exceptions to Survey Submittal Requirements

Facilities located within the AP Zoning District, Glades Tier, GA-O or the SCGCFO designation, a special purpose survey may be submitted in lieu of an abstracted survey per the submittal requirements of the Technical Manual.

i. Timing of Tower Placement and Final Plan Approval

Wind turbines or MET towers located in the AP Zoning District, Glades Tier, GA-O, or SCGCFO may be field adjusted to avoid conflicts with farming operations or as needed based on meteorological data. All field adjustments to wind turbine locations shall continue to meet all setback requirements, unless setbacks are waived per the waiver above. All field adjustments will be recorded by an as-built survey submitted to the County's Building Department prior to issuance of a final Certificate of Completion.

Comment [Bill C20]: Pending. See similar above.

Comment [Bill C21]: PENDING.

Comment [Bill C22]: Pending: See similar above.

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EXHIBIT B

RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)

1
2 Part 6. ULDC, Art. 4.B.1.A, Definitions and Supplementary Standards for Specific Uses (page
3 79-81 of 166), is hereby amended as follows:
4

5 Reason for amendments: []

6 CHAPTER B SUPPLEMENTARY USE STANDARDS

7 Section 1 Uses

8 A. Definitions and Supplementary Standards for Specific Uses

9
10 106.4 Meteorological Tower (MET)
11 A tower erected to measure wind speed and direction or other meteorological data for the
12 siting or operation of renewable wind energy facilities, or other similar uses.
13

Figure: 4.B.1.A-12-Typical Metrological Tower (MET)



[Ord. 2010-...]

- 14
15 a. Approval Exceptions
16 1. MET towers located in the AP Zoning District, Glades Tier, GA-O, or the SCGCFO
17 shall be considered a permitted accessory structure to an approved renewable wind
18 energy facility in accordance with the requirements of this section;
19 2. MET towers located with AP Zoning district, Glades Tier, GA-O or the SCGCFO
20 designation a specific purpose survey may be submitted in lieu of an abstracted
21 survey per the submittal requirements of the Technical Manual;

Notes:

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EXHIBIT B

RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)

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3. A temporary MET tower may be approved by the DRO when located in the AP district.

b. Minimum Lot Size

Lots shall comply with the minimum lot dimension requirements pursuant to Table 3.D.1.A, Property Development Regulations, or the applicable PDD requirements.

c. Minimum Setback Requirements

Accessory electric poles, distribution and transmission lines shall be exempt from the minimum setback requirements indicated below.

1) All Lots

Permanent MET Towers shall comply with the minimum setback requirements of the applicable zoning district.

2) Lots Adjacent to Existing Residential Uses

MET Towers to be located on lots adjacent to existing residential uses shall be setback a minimum of 110 percent of the height of the structure. The height shall be measured from finished grade to the top of the Tower. The setback shall be measured from the residential property line.

3) Additional Setback

One additional foot of setback shall be required in addition to the minimum setback indicated above for each one foot of height, or fraction thereof, over 35 feet, when adjacent to existing residential or commercial uses.

4) Exceptions

Facilities located in the AP Zoning District, Glades Tier, GA-O, or SCGCFO that are contiguous to properties that are part of an aggregated renewable wind energy facility may be exempt from the property setback regulations, subject to the following:

- a) Property owners may be permitted to waive setback requirements for property lines or occupied buildings on the participating landowner property or non-participating landowner property by signing a waiver that sets forth the applicable setback provision(s) and the proposed changes;
- b) The written waiver shall notify applicable property owner(s) required setbacks, describe how a MET tower or accessory structures are not in compliance, and state that consent is granted to waive the setback as required by this ordinance; and,
- c) Any such waiver shall be signed by the applicant, the participating land owner(s) or non-participating landowner(s), and recorded.

d. Perimeter Buffers and Interior Tree Requirements

These towers shall be exempt from perimeter buffers and interior landscape requirements for the developable area pursuant to Table 7.C.3, Minimum Tier Requirements.

e. Collocation with Existing Electric Power Facilities

Permanent MET Towers shall be permitted pursuant to the DRO approval process, pursuant to Article 2.D.1.C, within an existing wind facility or electric power facility. The proposed Permanent MET location may not increase the existing project acreage by more than five percent.

f. Decommissioning or Abandonment

- 1) If no electricity is generated for 18 consecutive months, the facility or turbine owner and/or property owner shall have three months to remedy any safety issues/concerns or complete the decommissioning of the facility or turbine to the satisfaction of the building official.
- 2) The Zoning Director may grant extensions of time for repair and/or maintenance, for good cause, such as the need to back-order parts that are not currently available from the manufacturer or supplier or the need to repair multiple turbines damaged or inoperative subsequent to a storm event or other unforeseeable natural disaster.
- 3) Decommissioning shall include removal of wind turbines and buildings, down to 36 inches below grade.
- 4) Disturbed earth shall be graded, and reseeded, unless the landowner notifies the Zoning Director in writing otherwise.

g. Decommissioning or Abandonment

If no electricity is generated for 18 consecutive months, the facility or turbine owner or property owner shall have three months to remedy any safety issues/concerns or complete the decommissioning of the facility or turbine to the satisfaction of the Building Official.

- 1) The Zoning Director may grant extensions of time for repair or maintenance, for good cause, such as the need to back-order parts that are not currently available from the manufacturer or supplier or the need to repair multiple turbines damaged or inoperative subsequent to a storm event or other unforeseeable natural disaster;

Comment [Bill C23]: Pending: To be discussed.

Comment [Bill C24]: Pending: Staff does not support.

Comment [Bill C25]: PENDING: Requires additional review by multiple agencies.

Comment [Bill C26]: Pending: Staff does not support, as includes parcels with LR-1 or other FLU designations.

Comment [Bill C27]: Pending: Staff does not support, as these areas are either redundant, or include properties in the U/S Tier portion of the Glades.

Comment [Bill C28]: Pending: Staff does not support.

Comment [Bill C29]: Pending: Implies properties not included in approval for Renewable Wind Energy Facility – staff does not support. Also contradictory to scope outlined in originating text above.

Comment [Bill C30]: Pending: Similar issues as language proposed for Renewable Wind Energy Facilities

Comment [Bill C31]: Pending: Staff does not support where approved by BCC/ZC due to issues with boundaries in originating Resolution.

Comment [Bill C32]: Pending: Good concept; however, there are several issues with authority, arbitrary guidelines or thresholds.

Notes:

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EXHIBIT B

**RENEWABLE ENERGY (WIND)
SUMMARY OF AMENDMENTS
(Updated 2-22-11)**

- 1 2) Decommissioning shall include removal of wind turbines and buildings, down to 36
 2 inches below grade; and,
 3 3) Disturbed earth shall be graded, and reseeded, unless the landowner notices the
 4 Zoning Director in writing otherwise.
 5 **h. Timing of Tower Placement and Final Plan Approval**
 6 MET towers located in the AP Zoning District, Glades Tier, GA-O, or SCGCFO may be
 7 field adjusted to avoid conflicts with farming operations or as needed based on
 8 meteorological data. All field adjustments to wind turbine locations shall continue to meet
 9 all setback requirements, unless setbacks are waived per the waiver above. All field
 10 adjustments will be recorded by an as-built survey submitted to the County's Building
 11 Department prior to issuance of a final Certificate of Completion.

Comment [Bill C33]: PENDING.
Comment [Bill C34]: Pending: See similar above.

14 **Part 7. ULDC, Table. 6.A.1.B, Minimum Off-Street Parking and Loading Requirements [Related**
 15 **to Electric Power Facilities and Renewable Energy] (page 73 of 155), is hereby**
 16 **amended as follows:**

Table 6.A.1.B - Minimum Off-Street Parking and Loading Requirements – Cont'd

Use Type: Utilities and Excavation	Parking ¹	Loading ²
Renewable Energy Facility, Wind	<u>1 space per site; and 1 space per 200 sq. ft. of office space</u> <u>Exempt from parking requirements unless otherwise required</u> <u>by the Zoning director</u>	N/A
....		
[Ord. 2005-002] [Ord. 2009-040] [Ord. 2010-005]		
Loading Key:		
Standard "A" - One space for the first 5,000 square feet of GFA, plus one for each additional 30,000 square feet of GFA.		
Standard "B" - One space for the first 10,000 square feet of GFA, plus one for each additional 15,000 square feet of GFA.		
Standard "C" - One space for the first 10,000 square feet of GFA, plus one for each additional 100,000 square feet of GFA.		
Standard "D" - One space for each 50 beds for all facilities containing 20 or more beds.		
Standard "E" - One space for the first 10,000 square feet of GFA, plus one for each additional 20,000 square feet of GFA. The space shall be a minimum of 12 feet in width and 18.5 feet in length for uses that require limited loading.		

Comment [Bill C35]: PENDING: Staff does not support, not feasible, applicable – nor necessary?

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