



**APPALACHIAN
POWER®**

A unit of American Electric Power

***Virginia Wind Energy Collaborative
State Wind Symposium***

*At the
James Madison University
College of Integrated Science and Technology*

***Renewable Energy and
AEP - Appalachian Power***

Presented by

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Managing Director
Renewable Energy
American Electric Power***

*June 19, 2008
Harrisonburg, VA*

Overview



AEP and Appalachian Power Company

- ***Overview***
- ***Renewables Experience***

Appalachian Power Renewable RFP

- ***2007***
- ***2008***

Why Renewables for Appalachian Power

- ***RPS***
- ***Fuel Diversity***
- ***Carbon / Environmental Stewardship***

American Electric Power (AEP)

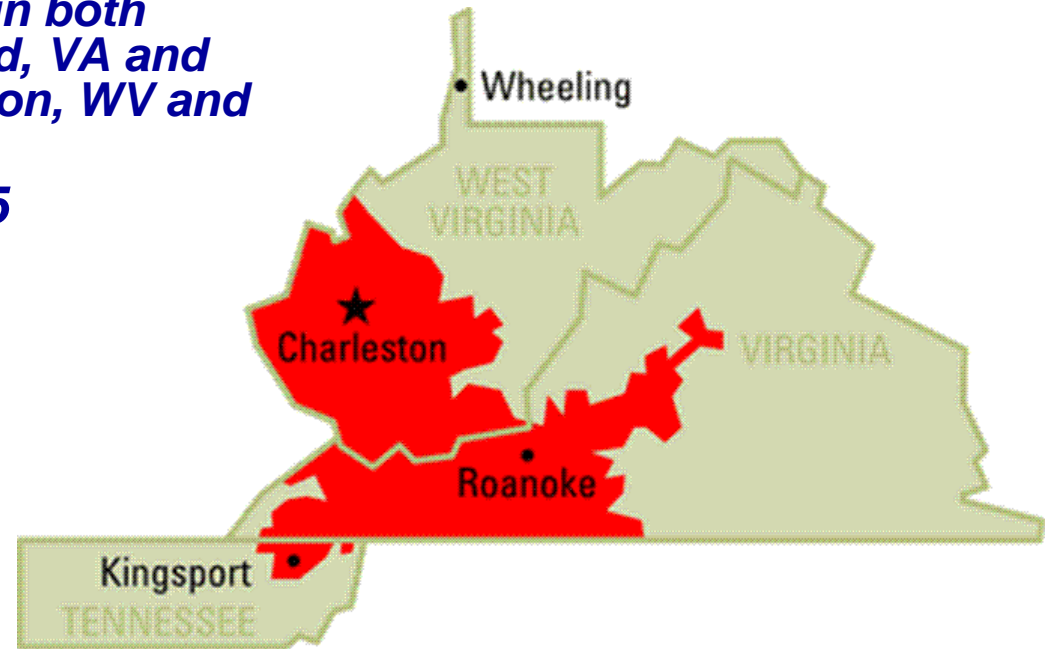
American Electric Power (NYSE: AEP)

- *Founded in 1906*
- *Employees: 20,861*
- *7 operating units in 11 states*
 - *TX, OK, LA, AR, OH, IN, MI, VA, WV, KY & TN*
 - *Includes: Appalachian Power Company*
- *38,000 MW of generating capacity; #2 in U.S.*
 - *Includes: Coal, natural gas, nuclear, hydro and wind*
- *Largest owner of transmission lines in U.S. (39,000 miles)*
 - *Operates in three RTOs: SPP, PJM, and ERCOT*
- *\$40.4 billion in assets*

Further Information on AEP can be viewed at: www.aep.com

Appalachian Power Company

- **Appalachian Power Company (APCo) serves approximately 1 million customers in West Virginia, Virginia and Tennessee**
- **Headquarters in Charleston, W. Va.,**
 - **Governmental Affairs offices in both Charleston, WV and Richmond, VA and operations offices in Charleston, WV and Roanoke, VA**
- **2,658 regional employees (4,085 including generating plants)**
- **6,732 transmission miles**
- **49,563 distribution miles**
- **6,282 MW of generation (coal, hydro & gas)**
- **\$5.6 billion in assets**



AEP Wind Experience

- **5 MW Ft. Davis Wind Farm: Early AEP R&D Project (1996 - 2004)** *Decommissioned*
- **75 MW Southwest Mesa PPA: Project built on AEP owned land (1998)** *AEPEP /SWEPCo*
- **150 MW Trent Wind Farm: AEP owned / developed IPP wind farm (2001)** *AEPEP*
- **160 MW Desert Sky Wind Farm: AEP owned IPP wind farm (2001)** *AEPEP*
- **147 MW Weatherford PPA: (2005)** *AEP - PSO*
- **151 MW Blue Canyon II PPA: (2005)** *AEP - PSO*
- **94.5 MW Sleeping Bear PPA: (2007)** *AEP - PSO*
- **100 MW Fowler Ridge PPA: Completion in Q4 – 2008** *AEP – Indiana Michigan Power*
- ■ **75 MW Camp Grove PPA: (2007)** *AEP – Appalachian Power*
- ■ **100 MW Fowler Ridge PPA: Completion in Q4 – 2008** *AEP – Appalachian Power*

- **2008 AEP Renewable Energy RFPs in Market**
 - **65 – 100 MW RFP issued by AEP – SWEPCO 4/18/08**
 - ■ **100 MW RFP issued by AEP – Appalachian Power 4/1/08**
 - **200 MW RFP issued by AEP – PSO 5/1/08**
 - **300 MW RFP issued by AEP – Ohio 5/28/08**

AEP Hydro Experience

- *AEP has a century of experience with harnessing renewable power from hydroelectric dams*

Ohio

Racine

Indiana

Elkhart, Twin Branch

Michigan

*Berrien Springs,
Buchanan, Constantine
(1902), Mottville*

➤ *Virginia*

*Buck (1912), Byllesby
(1912), Claytor, Leesville,
Niagra, Reusens, Smith
Mountain Pumped
Storage*

➤ *West
Virginia*

*London, Marmet,
Winfield*



*636 MW Smith Mountain Lake
Pumped Storage Hydro Facility*

Why Renewables for APCO?

- **VA RPS**
 - *Goal to provide up to 12% of generation via renewables*
 - *Hydro projects can help in fulfilling RPS goal*
 - *Wind and solar count double in meeting goal*
- **Fuel Diversity**
 - *Renewables provide some hedge value*
 - *Wind has typically been the cheapest method to add new renewables to portfolio in U.S.*
- **Environmental Stewardship**
 - *Carbon / Emissions*
 - *AEP Sustainability Goals*

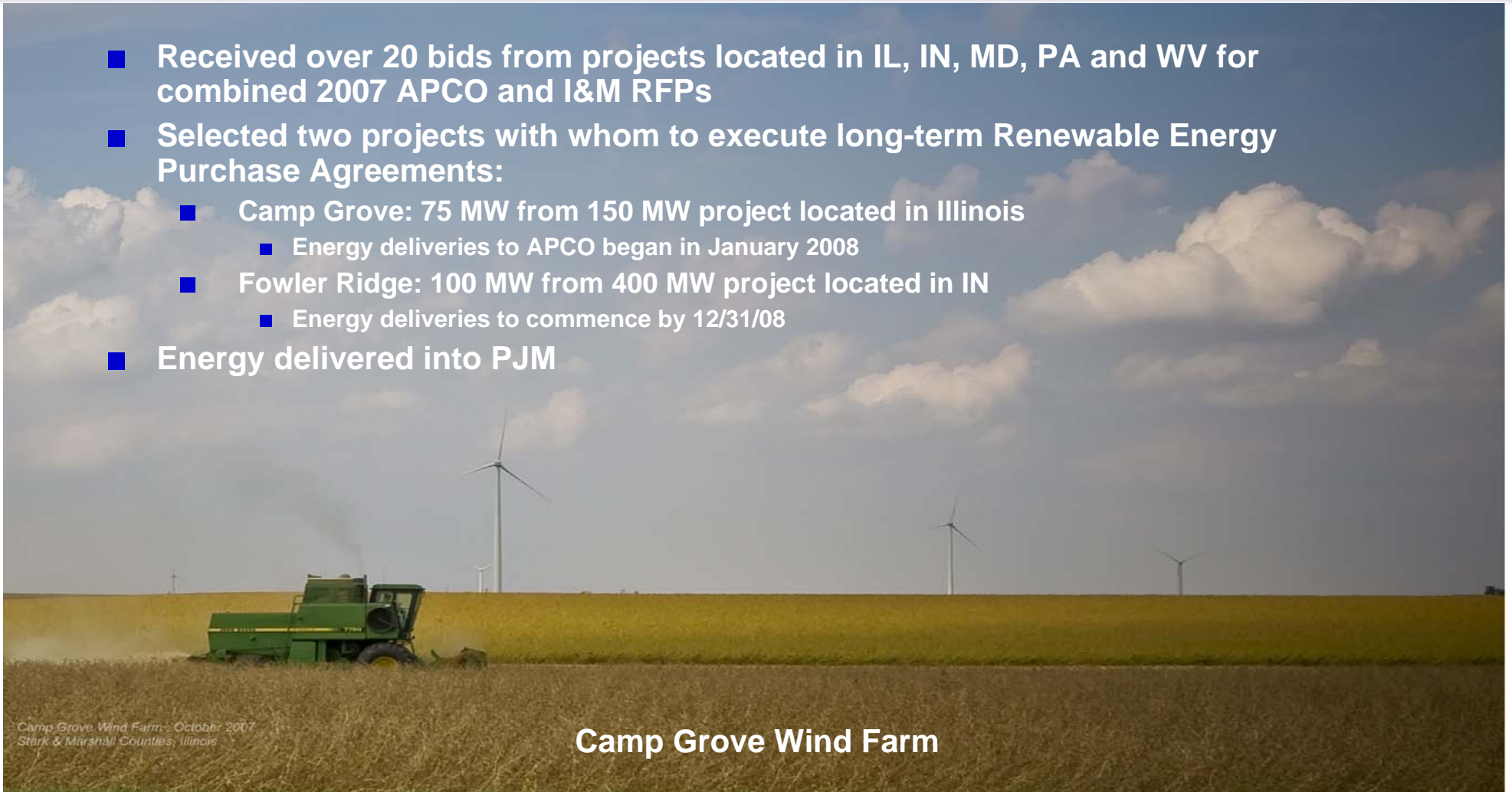
The Virginia RPS

- **Significant R.E. Components in RPS Legislation**
 1. Determined that Renewables were in the public interest
 2. Established that costs for renewables could be recovered in rates
 3. Set standards with incentives for meeting goals vs. mandates with penalties

- **Keys to successful implementation of the VA RPS**
 1. Path to recovery must be clear (i.e. certainty) if decision makers are to move forward and implement the goals set forth in legislation
 2. Recovery must be timely

2007 APCO RFP Results

- Received over 20 bids from projects located in IL, IN, MD, PA and WV for combined 2007 APCO and I&M RFPs
- Selected two projects with whom to execute long-term Renewable Energy Purchase Agreements:
 - Camp Grove: 75 MW from 150 MW project located in Illinois
 - Energy deliveries to APCO began in January 2008
 - Fowler Ridge: 100 MW from 400 MW project located in IN
 - Energy deliveries to commence by 12/31/08
- Energy delivered into PJM



Camp Grove Wind Farm - October 2007
Stark & Marshall Counties, Illinois

Camp Grove Wind Farm

2008 APCO RE RFP

- Issued 4/1/08
- Seeking approximately 100 MW of cost effective renewable energy
 - Expanded source to include solar, biomass, low-impact hydro as well as wind projects
- Renewable Energy Purchase Agreement (REPA)
 - 20 year agreement
 - Energy + Capacity + Environmental Attributes
- Bidder must be directly interconnected to PJM
 - PJM queue process must be well underway
- Pricing
 - Time of day / seasonal, with annual escalator
- Bids were due: 5/30/08
- Currently in RFP short-list process



American Electric Power Service Corporation

as agent for

Appalachian Power Company (APCO)

Request for Proposals

totaling approximately

100 MW

of name-plate rated

Renewable Energy Resources

Capable of being on-line by 12/31/2010

Pre-Bid Meeting (Conference Call):

April 24th, 2008 1:00 p.m. EDT

Bids Due:

May 30, 2008 12:00 noon EPT (Columbus, OH)

Issued

April 1, 2008

Web Address: www.appalachianpower.com/go/rfp

Observations

- ***AEP has long-standing experience in renewables sector***
 - ***Renewables present a hedge on future environmental compliance costs and provide fuel diversity***
- ***Costs of new generation, including renewables, is increasing***
- ***Wind is generally still the cheapest renewable***
 - ***Turbine shortages and commodity cost increases have combined to cause cost increases for wind too***
- ***Virginia has some wind resources available***
 - ***Land use issues and transmission will ultimately determine success of utility scale wind development in Virginia***

Questions?

