Renewable Energy Projects: Siting and Permitting Challenges

Legal Strategies to Select the Site, Choose the Permitting Authority, and Manage Environmental Constraints

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Renewable Energy Projects: Siting and Permitting Challenges

Strategies for Site Selection, Choosing a Siting and Permitting Body, and Addressing Environmental Constraints

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Factors Affecting Site Selection

Image Sources: European Union, National Renewable Energy Laboratory
Site Selection Issues

- Availability of Renewable Resource
- Transmission Lines and Other Infrastructure
- Regulatory Roadblocks
- Addressing Public Opposition
- Meeting Renewable Portfolio Standards
- Environmental Constraints
Site Selection - Location of resources

- Wind, geothermal, biomass and solar resources are limited to specific geographic areas.
  - Wind - Central Plains, Coastal Regions
  - Solar - Southwestern States (AZ, NM, CA, NV, UT, TX)
  - Geothermal - Western U.S.
  - Biomass - North Central U.S. and West Coast

- Resource location impacts regulatory jurisdiction
  - For Example: Development of wind in Texas requires minimal FERC involvement whereas development of solar resources in Southwest may trigger jurisdiction of FERC, Dep. of Interior, Bureau of Land Management Dep. of Agriculture, and Dep. of Fish and Wildlife Serv.
Site Selection - U.S. Wind Resources

Image Source: National Renewable Energy Laboratory
Site Selection - U.S. Solar Resources

Photovoltaic Solar Resource of the United States

Annual average solar resource data are shown for a tilt-latitude collector. The data for Hawaii and the contiguous states are a 10 km satellite modeled dataset (SUNY/NREL, 2007) representing data from 1998-2005.

The data for Alaska are a 40 km dataset produced by the Climatological Solar Radiation Model (NREL, 2003).

This map was produced by the National Renewable Energy Laboratory for the U.S. Department of Energy.

Image Source: National Renewable Energy Laboratory
Site Selection - U.S. Geothermal Resources

Photo Source: Southern Methodist University Geothermal Laboratory
Site Selection - U.S. Biomass Resources

Biomass Resources of the United States

This study estimates the annual technical biomass resources currently available in the United States by county. It includes the following feedstock categories:

- Agricultural residues (crops and animal manure)
- Wood residues (forest, primary mill, secondary mill, urban wood)
- Municipal/industrial (methane emissions from landfills and domestic wastewater treatment)
- Dedicated energy crops (switchgrass on Conservation Reserve Program lands)

Image Source: National Renewable Energy Laboratory

This map was produced by the National Renewable Energy Laboratory for the U.S. Department of Energy. See additional documentation for more information at http://www.nrel.gov/docs/fy06osti/39181.pdf
Site Selection - Transmission Limitations

- Finding good renewable resources doesn't make a successful project in the absence of adequate transmission
  - **Example**: Texas Panhandle has great wind, but SPP is still a weak market and the region lacks interconnections to ERCOT.
  - **Example**: Midwest wind resources in general do not have adequate transmission linking them to load in the west and east.
Site Selection - Regulatory Limitations

- Renewable portfolio standards or other frameworks, even when intended to encourage renewable development, may define and limit the practical sites for development.

  Example: Texas Competitive Renewable Energy Zone (CREZ) framework defined the best areas for development of wind resources and directed that transmission with specific capacities be built to those zones.

  - Defines the areas that will have transmission access
  - Limits the amount of transmission to be built for now
Site Selection - Wind Development in Texas

Texas Wind Map

Current CREZ Transmission Plan

Designated Zones

Image Sources: State Energy Conservation Office, Energy Reliability Council of Texas, and Texas Wind Energy Clearinghouse
Site Selection - States with RPSs

- States with RPSs

29 States and DC have an RPS
5 States have goals

State renewable portfolio standard
State renewable portfolio goal

Image Source: Database of State Incentives for Renewables & Efficiency (U.S. Dept. of Energy)
Site Selection - Traditional Challenges

- The unique challenges faced by developers seeking to locate renewable energy projects make it especially important (and often more difficult) to avoid the traditional challenges that confront all developers.
  - Public opposition (NIMBY, BANANA, NOPE)
  - Regulatory hurdles (development restrictions, land use planning, zoning)
  - Environmental constraints
Site Selection - Public Opposition

- Public opposition to renewable energy projects does not always follow traditional battle lines
  - Example: Environmental groups find themselves conflicted between support for clean energy and concern about other effects on the environment.
  - Example: Land owners and communities often divided between those who will receive payments and those who will not.

- Not In My Backyard
- Build Absolutely Nothing Anywhere Near Anything
- Not On Planet Earth
Site Selection - Traditional Regulatory Hurdles

- Restrictions on development
  - Example: Coastal Zone Management Act

- Tax Decisions
  - Example: Local Property Tax Abatement Decisions

- Transportation Access
  - Example: Limits on port access
  - Zoning Restrictions

- Land Use Planning Restrictions
Siting and Permitting Bodies
Permitting Bodies - State Authority

- State Regulatory Commissions
  - States still handle the bulk of the permitting when dealing with generation siting issues
  - Federal legislation and permitting generally only extends to interstate transmission facilities or facilities on federal lands
  - Developers must be prepared to deal with often widely divergent state regulatory frameworks
Permitting Bodies - Federal Authority

- Federal Legislation
  - Energy Policy Act of 2005
  - Coastal Zone Management Act

- Note - Federal legislation generally only extends over those matters which are not subject to regulation by the states, and therefore rarely address siting issues related to generation facilities.
Permitting Bodies - Federal Legislation

- **Energy Policy Act of 2005**
  - Provides for designation of National Interest Electric Transmission Corridors (NEITC) by Secretary of Energy

**MidAtlantic Corridor**

**Southwestern Area Corridor**

Image Source: U.S. Department of Energy
FERC may issue a construction permit for transmission facilities in NEITC if a state:

- "withholds" approval for more than one year,
- does not have authority to site a transmission facility, or
- cannot consider interstate project benefits of facilities proposed to be constructed within the NEITC.

Department of Energy (DOE) acts as lead agency in coordinating Federal Authorizations by:

- establishing deadlines for review of federal authorizations,
- establishing a pre-application mechanism for applicants to confer with various federal agencies, and
- preparing a single environmental review document to be used by all federal agencies.
Permitting Bodies - Federal Authority

Agencies covered by streamlined authorization process under the Energy Policy Act of 2005

- FERC
- Bureau of Land Management**
- National Park Service
- Bureau of Reclamation
- Fish and Wildlife Service
- Minerals Management Service
- Forest Service
- Department of Defense
- Army Corp of Engineers
- Environmental Protection Agency
- Oceanic and Atmospheric Admin.
- Marine Fisheries Service
- National Ocean Service
- Council on Environmental Quality
- Council on Historic Preservation
Permitting Bodies - Federal Authority

- Coastal Zone Management Act
  - Promotes limitations on development of coastal areas
  - Requires states to put in place coastal zone management plans or lose certain federal funds
  - Affects coastal wind locations that offer strong capacity factors during peak hours
  - Has been discovered by some environmental groups as a tool for fighting coastal wind projects.
MANAGING THE PERMITTING PROCESS AND STRATEGIES TO OVERCOME NIMBYs

TUESDAY, NOVEMBER 9, 2010
PRESENTATION FOR THE STAFFORD PUBLICATION WEBINAR ON RENEWABLE ENERGY PROJECTS

ROBBINS SCHWARTZ
NICHOLAS LIFTON & TAYLOR, LTD.
The State Permitting Process

- Project Summary
- Project Location, Land Use
- and Ownership
Equipment Specification and Certification of Compliance with Industry Standards

- Wind Turbine Generator
- Foundation
- Certification of Equipment and Design Standards
Construction and Installation

- Project Schedule
- Access Road
- Access and Utility Easements
- Power Collection System
- Geotechnical Work
- Site Transportation Impact Assessment
- Construction Permit
Operations

- Operation and Maintenance Plan
- Interconnection Agreement
Decommissioning Plan

- Decommissioning Project Description

- Estimated Cost for Decommissioning and Site Restoration
Public Health and Safety Considerations

- Environmental Benefits
- Setback Requirements
- Noise Standards
- Waste Management and Significant
Public Health and Safety Considerations

- Sewer and Water
- Fire
- Signage
- Aesthetics
Public Health and Safety Considerations

- Telecommunication Considerations
- Electric and Magnetic Fields
- Ice Throws
- Shadow Flicker Assessment
- Avian Effect
Compliance with other State Regulatory Standards

- Illinois Department of Natural Resources Consultation
- Stormwater Permit
- Archaeology Survey
- Illinois Department of Agriculture Approval
Strategies for Dealing with NIMBYs

- Provide the Truth
- Show Financial Benefits to Local Community
- Raise the Green Flag
- Raise the Stars and Stripes
Assessed Value of Wind Turbines in Illinois per 35 ILCS 200/100–600

2007 Full Value Real Property per Megawatt $360,000.00
Size of Each Turbine IN Megawatts x 2.3
Full Value Real Prop. Per 2.3 Megawatt Turbine $828,000.00
Level of Assessment x .3333
2007 Assessed Value per 2.3 Megawatt Turbine $275,972.40
Estimated Tax Revenue to School District
for 131 2.3 Megawatt Wind Turbines

Assessed Value Per Turbine $ 275,974.40
Number of Turbines in School’s Jurisdiction x 131
Total Assessed Value in School’s Jurisdiction $36,152,384.40
School’s Tax Rate x .0550793
Estimated Total Annual Tax Revenue $ 1,991,248.03
or
Estimated Tax Revenue per Turbine $ 15,200.36
Revenue to Land Owners

- Approximately $2,500–$3,500 per megawatt per turbine site per year with annual adjustments of 1.5%–2.5% and periodic CPI adjustments.

PLUS

- Access roads at $.50–$1.00 per lineal foot and collection lines at $.025–$1.00 per lineal foot
Permitting Bodies - Debate over authority

- Energy Policy Act of 2005
  - Act provides a Federal "hammer" for building interstate transmission facilities
    - NEITC can be designated for reasons other than reliability concerns (e.g., economic, supply diversity)
    - Provides short timelines for issuance of construction permits by FERC
  - Although States retain predominant control over generation, the Act encourages development of an interstate transmission network over the hub and spoke paradigm traditionally employed by states
Permitting Bodies - Debate over authority

- **Piedmont Environmental Council v. FERC**
  - Addresses issue of FERC's authority to issue construction permit when state "withholds approval for more than one year."
  - 4th Circuit rejected FERC's argument that "withhold approval" included a state's outright denial of a transmission facility.
  - Case represents a limitation on federal ability to circumvent a state's transmission siting authority under the Federal Power Act.
Permitting Bodies - On the Horizon

- Potential Impact of American Reinvestment and Recovery Act on siting

- State Developments
  - Market Deregulation
  - Transition to Nodal Pricing

- Renewable Projects to Keep an Eye On
Dealing with Environmental & Other Legal Challenges
Legal Challenges to Renewable Projects

- Environmental challenges can be made to any renewable technology
  - Wind: Endangered Species Act, Migratory Bird Treaty Act, Coastal Zone Management Act
  - Solar: Large area requirements invite ESA and Environmental Impact Statement challenges
  - Geothermal: Waste water and underground injection issues

- Nuisance suits
- Opponents are becoming more sophisticated
What is a Nuisance Generally?

- **Nuisance**
  - A condition that substantially interferes with the use and enjoyment of land by causing unreasonable discomfort or annoyance to persons of ordinary sensibilities.
  - An interference with the private use and enjoyment of another's land is unreasonable when the gravity of the harm outweighs the social value of the activity alleged to cause the harm.

- **Key element for a nuisance claim is unreasonable interference; the test is not "no interference"**
What is Not a Wind Farm Nuisance?

- **Unattractive aesthetics**
  - The wind farm is abnormal
  - The turbines are out of place in their surroundings
  - Makes me want to cry when I see the wind turbines
  - No one wants to stay at my bed and breakfast if they have to look at these

- **Unreasonable fear or apprehension**
  - Fear of tower collapsing near home unreasonable where tower engineered for a larger model than turbine in place
  - Fear of blades or ice chunks being thrown from wind turbine unreasonable where safety features installed to eliminate those dangers
Potential Wind Farm Nuisance Claims

- Blinking lights near home
- Shadow flicker or strobe effects at dusk and dawn
- Noise
- Health impacts
- Wildlife impacts
Factors for Nuisance Claims

- Other wind farms and transmission lines in area
- Other commercial or industrial developments in area
- Proximity to urban area or other development
- Distance between home of neighbor and nearest wind turbine
- Distance between neighboring property line and nearest wind turbine
- Compliance with siting standards
- Turbine design
- Recreational property versus primary residence
Good Defense Factors for Nuisance Claims

- Whether owner moved to property after wind farm permitted or built
- Evidence of negotiations with neighbor over wind farm lease — case is about price, not nuisance
- Local support for wind farm
- Whether turbines are built versus ongoing construction
- Number of turbines and relative location to property
- Whether turbines cause interference inside home versus other areas on property
Rankin v. FPL Energy (Tex. App.—Eastland 2008)

- Claim for injunction and damages against Horse Hollow Wind Farm (421 turbines, Taylor & Nolan County, TX)
  - Wind farm abnormal, out of place in its surroundings
- Court acknowledges aesthetic impact of wind farm caused property values to decline (objective harm)
  - Analogy made to condemnation with no obligation to pay
- Court nonetheless rejects aesthetic-based nuisance claim for policy reasons
  - Wind farm is a lawful activity
  - Aesthetic-based nuisance claim based on emotional responses
    - Too subjective
    - Gives neighbors right to zone surrounding property if recognized
- Potential battle of experts on noise/light claims
  - For noise, debate about what standard applies
Prospective nuisance and injunction claims brought to prevent construction of wind farm (200 turbines, Grant County, WV)

- Allegations: wind farm will create constant noise, strobing effect, risk of broken blades, ice throws and collapsing towers, and reduction in property values
- Standard of review: whether plaintiffs alleged facts sufficient to avoid dismissal on the pleadings (low bar)

Holdings

- State utility agency site approval did not abrogate court's jurisdiction to hear state common law nuisance claims
- An unsightly activity- i.e., one that diminishes neighboring property values, may be abated when it occurs in a residential area and is accompanied by other nuisances

- Issuance of injunction not required on remand (but possible)
- Like Rankin, aesthetic impact alone not enough
Rassier v. Houim (N.D. 1992)

- Private nuisance claim based on neighboring landowner's use of single, non-industrial wind turbine in residential area (40 feet from plaintiff's home)

- Key facts
  - Plaintiff moved to neighborhood after wind turbine installed and operating
  - Plaintiff sued only after independent conflicts with defendant arose
  - Tower engineered for larger model than one in place
  - Safety features added to eliminate danger of blades or ice being thrown from wind turbine
  - Although wind turbine violated restrictive covenant, developer and residents of subdivision had abandoned those provisions

- Held: No nuisance established

- Dissent: When a commercial nuisance comes to a residential area, application of the "coming-to-the-nuisance" doctrine to a residence built there is inappropriate
Remedies

- Money damage claims
  - Loss in market value in landowner's property
  - Past loss of use and enjoyment
  - Future loss of use and enjoyment
  - Punitive damages where malicious conduct shown (upheld in sheep feedlot case in Texas; not yet applied to wind farm case)
- No attorneys fees for nuisance claims (in Texas)
- Pre-judgment and post-judgment interest

- Injunction
  - Possible but unlikely because plaintiff
    - Would have to show irreparable injury and imminent harm
    - Would typically need to post a bond
Other Claims

Invasion of privacy

- An intentional intrusion on seclusion and solitude in a way that would be highly offensive to persons with reasonable and ordinary sensibilities causing mental anguish

- This claim failed in *GTE Mobilnet v. Pascouet* (Tex. App.—Houston 2001) (cell phone tower with two strong floodlights and equipment building with two noisy air conditioners 20 feet from plaintiffs' backyard was nuisance but not invasion of privacy)
  - GTE later built 12-foot high fence between equipment building and plaintiff's property so workers could not look into their backyard
  - GTE terminated its use of floodlights

- Potential for claim in wind farm cases, particularly during construction or if maintenance shed too close to landowner's home
Who is Your Neighbor on the Texas Coast?

Coastal Habitat Alliance v. Patterson (Fifth Circuit 2010)

- Issue: whether a non-profit environmental group has standing under the federal Coastal Zone Management Act ("CZMA") and the Constitution to enjoin construction of a wind farm
- 5th Circuit: no private cause of action under CZMA