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NW Wind and Wildlife Workshop
Siting Implementation

June 7, 2011
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Senior Developer
NW Region
Presentation Overview

- Why Windpower
- Why Windpower in the Northwest
- Key Factors in Site Selection
- Permitting Leads: Federal, State & County
- Requirements Similarities Across Permitting Leads
- County Example
- Key Takeaway: Agency and Public Involvement Early
Why Windpower

Continuum of Reasons

- First economically viable, utility-scale renewable resource
- Displace oil-fired power plants (1970’s – 1980’s)
- Repeal of the Fuel Use Act (1978 - 1987) opens utility market to natural gas
- Reduce greenhouse gases (1990’s to present)
- Reduce encroachment of housing developments on rural land (1970’s to present)
- Rural economic development (1970’s to present)
Why Windpower in the NW

► Attractions of the NW to Wind Developers

- Above-average to outstanding wind resource
- Existing transmission in some areas
- Recent adoption of Renewable Portfolio Standards (in-state markets)
- California market access (export market)
Renewable Portfolio Standard States

- **Blue**: Renewable Portfolio Standard
- **Pink**: Alternative Energy Portfolio Standard
- **Light Blue**: Renewable or Alternative Energy Goal

The map illustrates the states with different levels of renewable energy portfolio standards and goals.
Wind and Transmission - 2012

Total Between Balancing Areas Transfer >= 100 MW (all power classes, land-based and offshore) in 2012.

Wind power can be used locally within a Balancing Area (BA), represented by purple shading, or transferred out of the area on new or existing transmission lines, represented by red or blue arrows. Arrows originate and terminate at the centroid of the BA for visualization purposes; they do not represent physical locations of transmission lines.
Wind and Transmission - 2014

Total Between Balancing Areas Transfer $\geq 100$ MW (all power classes, land-based and offshore) in 2024.

Wind power can be used locally within a Balancing Area (BA), represented by purple shading, or transferred out of the area on new or existing transmission lines, represented by red or blue arrows. Arrows originate and terminate at the centroid of the BA for visualization purposes; they do not represent physical locations of transmission lines.
Key Factors in Site Selection

► Same factors weighed for every site
  ▪ Wind resource
  ▪ Transmission availability
  ▪ Site access and “constructability”
  ▪ Land availability (private or public leases)
  ▪ Species and habitat considerations
  ▪ Cultural considerations
  ▪ FAA
  ▪ Permitting environment
  ▪ Public sentiment

► Typical Permitting Timeline and Budget: 3-5 years, $750,000 - $1.2 million
Key Factors in Site Selection

- Wind Resource
- Transmission Availability
- Site Access
- Constructability
- Permitting Lead
- FAA
- Public Sentiment
- Cultural
- Species and Habitat
Permitting Leads in the NW

► Federal
  - BLM – Programmatic EIS
  - Forest Service

► State
  - Washington
  - Oregon
  - Wyoming

► County
  - Traditional land use permit focus
  - Conditional Use Permits
  - Special Wind Zones
## NW State Permitting

<table>
<thead>
<tr>
<th>Location</th>
<th>Federal</th>
<th>State</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Washington</strong></td>
<td>Limited development opportunities on BLM. More on Forest Service</td>
<td>Optional state permitting process, developer decides, county input</td>
<td>Conditional use permits in most counties, energy overlay zone in Klickitat County</td>
</tr>
<tr>
<td><strong>Oregon</strong></td>
<td>Extensive BLM development in southern Oregon</td>
<td>State permitting over 100 MW project size, county and agency input</td>
<td>Conditional use permit under state threshold</td>
</tr>
<tr>
<td><strong>Idaho</strong></td>
<td>Extensive BLM and Forest Service development</td>
<td>No state permitting process</td>
<td>Conditional use permits</td>
</tr>
<tr>
<td><strong>Montana</strong></td>
<td>Extensive BLM and Forest Service development</td>
<td>No state permitting process</td>
<td>Conditional use permits</td>
</tr>
<tr>
<td><strong>Wyoming</strong></td>
<td>Extensive BLM development</td>
<td>State Industrial Siting process for all projects, county and agency input</td>
<td>Input to state process</td>
</tr>
<tr>
<td><strong>Utah</strong></td>
<td>Extensive BLM development</td>
<td>No state process</td>
<td>Conditional use permits</td>
</tr>
</tbody>
</table>
Permitting Requirement Similarities

► Common elements across all permitting entities:
  - Public notification periods
  - EIS or Environmental Assessment-level analysis
  - Federal and State wildlife agency consultation and protocol approval
  - FAA consultation
  - Tribal consultation
  - Mitigation Plans (ABPP, HCP, CCA, CCAA)
  - Post-construction monitoring plans
  - Final permit approval before construction

► Other elements
  - Pre- and post-construction Technical Advisory Committee participation
  - Haul road agreement
  - Funded decommissioning plan
Project Permitting Example
Generic Timeline, Not Reflecting Guidance and Guidelines
County Permitting Example

► Miller Ranch, Klickitat County WA Energy Overlay Zone permit

- Initial site identification in 2005-2006
- Initial land lease in 2007
- Mitigation option proposal October 2007
- Energy Overlay Zone application November 2007
- SEPA checklist, tiered off of County Programmatic EIS, November 2007
- EOZ application deemed complete January 2008
- Public announcement and meeting January 2008
- Agency and public comments Jan – May 2008
- PPM waking appeal March 2008
- PPM waking appeal withdrawal March 2008

1 Not a comprehensive listing; main project permit items listed.
County Permitting Example (continued)

- WDFW appeal of mitigation proposal March 2008
- WDFW appeal withdrawn June 2008
- Energy Overlay Zone permit approval June 2008
- Continuing assessment and realignment, versions 1 – 80
- Layout revision request November 2009
- Technical Advisory committee invitations January 2010
- Building permits January 2010
- Layout revision approval February 2010
- Bird and Bat Monitoring Plan April 2010
- Revegetation Plan May 2010
- Decommissioning Plan approval June 2010
- Start of construction June 2010
## Effect of Proposed Eagle Guidance

<table>
<thead>
<tr>
<th>Study</th>
<th>5-yr project cost for surveys/reports before ECP guidance</th>
<th>5-year project cost including surveys/reports after ECP guidance</th>
<th>Duration of additional survey work due to ECP guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point count surveys</td>
<td>$90,000</td>
<td>$633,000</td>
<td>4 years&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Migration surveys</td>
<td>$0</td>
<td>$114,000</td>
<td>2 years</td>
</tr>
<tr>
<td>Raptor nest surveys</td>
<td>$15,000</td>
<td>$550,000</td>
<td>4 years&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Nest watch studies</td>
<td>$3,500</td>
<td>$154,000</td>
<td>2 years</td>
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<tr>
<td>Telemetry behavioral studies</td>
<td>$0</td>
<td>$184,000</td>
<td>3 years&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>ABPP and/or ECP</td>
<td>$40,000</td>
<td>$50,000</td>
<td>NA</td>
</tr>
<tr>
<td>EA associated with eagle conservation plan</td>
<td>$0</td>
<td>$50,000</td>
<td>NA</td>
</tr>
<tr>
<td>Mitigation</td>
<td>$560,000</td>
<td>$676,000</td>
<td>NA</td>
</tr>
<tr>
<td>Post-construction mortality monitoring</td>
<td>$310,000</td>
<td>$615,000</td>
<td>1 year&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$1,018,500</td>
<td>$3,026,000</td>
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<sup>1</sup> Based on a 100 MW generic project