Energy Encroachment Challenges: DoD Collaboration with the States

Brief to NCSL
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Office of the Secretary of Defense
Briefing Purpose

• Provide an Overview of DoD Renewable Energy Infrastructure Compatibility Policy
• Discuss possible approaches for DoD work with state governments.
DoD Supports Renewable Energy Development

- US is largest wind energy producing country with 35,000 MW capacity.
- 10.5% of 2009 energy production from renewable sources; 1.8% from wind.
- Federal renewable energy goal: 20% by 2020.
- $2B in ARRA grants to renewable development – the new “gold rush.”
- Wind Turbines can screen targets from view, create false targets, or decrease radar sensitivity to a point of failure.
- Other types of development (hi-rise hotels, solar, off-shore) impact a variety of DOD equities, including environmental.
- DoD participates in the FAA’s Obstruction Evaluation Process to recommend a determination where development will impact military mission.
Existing Processes

FAA Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) Process

- Only regulatory governmental means to evaluate impact
- 40 yr old legislation, never designed to evaluate turbines.
- Limitations:
  - Required only 30 days prior to construction.
  - Too far into the project for DOD to affect.
  - Early engagement is voluntary.
  - Does not address all DOD concerns (Test, Training).

DoD Process

- 84th Radar Group Performs Technical Analysis & NORAD/NORTHCOM provides operational analysis

Since 2007, only 1.9% of proposals have warranted a DOD Determination of Hazard
DoD concerns

• Protection of Nation’s Long Range Radar Capability
  – Shepherds Flat, Oregon --- protect US interior
  – Oilton, Texas --- protect the border

• Military Readiness
  – Training
  – Testing
Way Ahead

- DoD is developing an overarching strategy to work with states and localities on energy encroachment
- Would appreciate your ideas on possible areas to explore
- Can discuss some current examples:
  - Kern County ordinance
  - Oregon, Wisconsin and Oklahoma statutes
Wind Resource Chart

United States - Wind Resource Map

Wind Power Classification

<table>
<thead>
<tr>
<th>Wind Power Class</th>
<th>Resource Potential</th>
<th>Wind Power Density at 50 m</th>
<th>Wind Speed at 50 m</th>
<th>Wind Speed at 50 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Marginal</td>
<td>200 - 300</td>
<td>5.6 - 6.4</td>
<td>12.5 - 14.3</td>
<td>14.3 - 15.7</td>
</tr>
<tr>
<td>3 Fair</td>
<td>300 - 400</td>
<td>6.4 - 7.0</td>
<td>15.7 - 16.8</td>
<td>16.6 - 17.9</td>
</tr>
<tr>
<td>4 Good</td>
<td>400 - 500</td>
<td>7.0 - 7.5</td>
<td>17.9 - 19.7</td>
<td>19.7 - 21.8</td>
</tr>
<tr>
<td>5 Excellent</td>
<td>500 - 600</td>
<td>7.5 - 8.0</td>
<td>19.7 - 24.8</td>
<td></td>
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<tr>
<td>6 Outstanding</td>
<td>600 - 800</td>
<td>8.0 - 8.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Superb</td>
<td>800 - 1600</td>
<td>8.8 - 11.1</td>
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Wind speeds are based on a Weibull k value of 2.0


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