Bayern: Ein Windenergieatlas als Planungsgrundlage mit Blick auf Landschaftsbildfragen

Präsentation de l’atlas éolien de Bavière: un outil de planification tenant compte des aspects paysagers

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1. Energy Transition and Wind Power

2014:
797 installations, capacity 1.500 MW
producing 1,5 billion kwh = 2 % of electricity production
= 5 % of renewable electricity
1. Energy Transition and Wind Power - **Legal Basis**

- License according to Federal Immission Control Act (height > 50m)
- Environmental impact assessment for 3/6/20 installations
- Compliance with regional planning
- Compliance with urban land-use planning or „privileged status“ according to Federal Building Code

- Compliance with **Federal and State Nature Conservation Acts**

**Objectives:** permanently safeguard
1. biological diversity,
2. the performance and functioning of the natural balance and
3. the diversity, characteristic features and beauty of nature and landscape, as well as their recreational value.
1. Energy Transition and Wind Power - Legal Basis

Instruments of nature protection law:
1. Protected areas: NATURA 2000 and national areas
2. Landscape planning
3. Protection of endangered species (Habitat and Bird Directive)
4. Interventions in nature and landscape and resulting obligations
   - Definition
   - Avoidance of significant adverse effects
   - Compensation measures
   - Substitution measures
   - Monetary substitution (exception after weighing up of all requirements)

Bavaria:
- Administrative Instruction of 2011
- Planning aid for wind power in Bavarian Energy Atlas
2. Developing Criteria for the Assessment of Landscape

Legal criteria: diversity, characteristic features, beauty and recreational value

Basis: Landscape Development Concepts and Landscape Frame Plans for 18 planning regions:

- Dividing the planning regions into homogenous units of characteristic landscape,
- Summarizing the assessment in a unit profile with 5 value levels for characteristic features and 3 for recreational value
- Criteria for the assessment of characteristics: soil, landform configuration, natural outfit (e.g. forests), characteristic structures (rivers, hedges), visible key structures (e.g. mountain ridges), diversity of land use, single elements with long range effects, natural attractions, monuments as elements of landscape, historical forms of land use
2. Developing Criteria for the assessment of landscape

Modifications for the administrative instruction on wind power:

4 value levels of characteristic features

Additional correctives:
• Upgrade for landscape or cultural highlights
• Degradation for previous impacts
2. Developing Criteria for the assessment of landscape

**Value level 1:**

- Low importance for landscape characteristics
- Typical scenery of landscape largely changed
- Degradation by previous technical impacts
2. Developing Criteria for the assessment of landscape

Value level 2:

• Middle importance for landscape scenery
• Landscape intensively used on a large scale (with previous impacts)
2. Developing Criteria for the assessment of landscape

Value level 3:

- High importance for landscape scenery
- Well preserved characteristics of this landscape unit
- Landscape close to nature with extensive, small scale use
2. Developing Criteria for the assessment of landscape

Value level 4:

- Very high importance for landscape scenery
- Natural characteristics well preserved
- High proportion of landscape elements typical for this area of cultural-historical importance
3. Assessment of Landscape - Implementation

Implementation:

1. **Administrative Instruction** of 2011 on the planning and licensing of wind turbines:
   - Simplified application of conditions for approval according to defined types of area
   - Regulation of compensatory payments for interventions into landscape

2. **Planning aid for wind power in Bavarian Energy Atlas**
   - Technical and practical information
   - Maps with types of areas
   - Animated graphics

[Link to website: www.energieatlas.bayern.de]
Legend of Wind Planning Aid – excerpt: nature protection criteria

- **Probably suited area**
  (> 10 ha), middle wind speed of 4.5 to 4.9 m/s in 140 m altitude

- **Probably suited area**
  (> 10 ha), middle wind speed of 5 m/s and more in 140 m altitude

- **Sensitive area**
  Decision on a case-by-case basis, e.g. landscape protection areas

- **Regular exclusion area**
  Special Protection Areas according to birds directive, in case of possible adverse effects on conservation objectives

- **General exclusion area**
  E.g. National Park, Natural Reserve

- **Not examined area**
  Middle wind speed lower than 4.5 m/s in 140 m altitude
Example: Map east of Augsburg
## 3. Implementation: Compensation Payments (in €/m height)

<table>
<thead>
<tr>
<th>Value level</th>
<th>Single installation</th>
<th>Wind farm 3 - 7</th>
<th>Wind farm &gt; 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 low</td>
<td>180</td>
<td>135</td>
<td>90</td>
</tr>
<tr>
<td>2 middle</td>
<td>360</td>
<td>315</td>
<td>270</td>
</tr>
<tr>
<td>3 high</td>
<td>600</td>
<td>555</td>
<td>510</td>
</tr>
<tr>
<td>4 very high</td>
<td>1200</td>
<td>1155</td>
<td>1100</td>
</tr>
</tbody>
</table>

- **Maximum amount of compensation payment for a single installation with a height of 200 m**
- **Minimum amount (in brackets 50 % reduction) for one installation with a height of 200 m**

18.000 € / 9.000 € in „Green“ or Priority Areas

240.000 €**
3. Implementation: Landscape Viewer 3-D
4. Perspectives and Results

- Fast growing number of installations
- Successful protection of landscape (and heritage?): concentration and choice of sites
- Administrative instruction accepted by jurisdiction
- Simplification and acceleration of licensing procedures
- More planning security for municipalities and investors
- Impulse for planning regions
- Legitimation by procedure (Luhmann) and more quality in debate

- Legitimation is not always acceptance: citizens as investors and opponents, local concern and general opposition, regional differences
- Main debate: wind turbines and new high tension power lines
- Decreasing feed-in remuneration
- Effects of Bavarian “10h-regulation”