EISPC Energy Zones Mapping Tool Newsletter

December Webinar Demonstration

Thursday, December 12, at 3pm ET/2 pm CT/1 pm MT
Use the following link to attend the webinar: http://anl.adobeconnect.com/eispc131212
Time for questions will be provided during the session.

Clean Energy Technology Spotlight: Wind Power

The tool includes many resources for understanding and analyzing Wind Power, including:

- Technology Descriptions
- Over 200 policies related to Wind Power (use more of the four options at the top of the page to filter further).
- Wind Energy Resource mapping layers, including Wind Power Density, Mean Annual Wind Speed, and Wind Turbine Gross Capacity Factor for both 80m and 100m heights.
- Other Wind Power mapping layers such as Wind Turbine Sites and Atlantic OCS Wind Energy Areas, with downloadable GIS data accessible within the tool.
- Metadata for all mapping layers describing the data sources and other details.
- User-configurable suitability models for land-based and offshore wind technologies.
- Pre-made PDF maps, such as this map of Wind Turbine Gross Capacity Factor at 100m Height.
- Links to other web-based wind resources, including the Great Lakes Wind Atlas, and NREL’s Wind Prospector.
December Mapping Tool Tips and Tricks

Right-click on layers in the Map Contents panel for additional options, including Layer Properties:

- Many layers can be displayed with multiple styles. In this example, different types of Planned Power Plants can be isolated on the map by choosing the desired type under the Styles tab.
- The Display tab allows the opacity (or transparency) of layers to be adjusted. This allows the base map or other layers to be seen underneath another one.
- Some of the layers with multiple style choices include:
  - Power Plant – Existing
  - Power Plant – Planned
  - Transmission Line
  - Protected Areas Database
  - Marine Protected Areas Database
  - Scenic Byway
  - Wave Energy Period
  - Wave Power Density
  - Significant Wave Height
- See the tool Help Manual or Help Videos for more details in using the tool. These are available at the top right of the Home Page.

Analysis Highlight: Investigating a Planned Transmission Line

As an example of the analysis capabilities in the tool, we added “Transmission Lines - Planned” to the map, zoomed in to a planned 500 kV line, used the Areas/Corridors tool to trace part of the route, and ran several reports. From the tool we gathered the following information:

- The name of the company planning the line, the rated voltage, number of circuits, and the names of the substations it connects.
- Counties, populated places, major roads, railroads, rivers, water bodies, transmission lines, substations, pipelines, military installations, and airports near, or crossing the route.
- A topographic profile and statistics about the steepest slopes along the route.
- Overall potential environmental sensitivity along the route, including Protected Lands, Habitat, and Imperiled Species.

<table>
<thead>
<tr>
<th>From Hilltop (m)</th>
<th>To Hilltop (m)</th>
<th>Recommendation</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0</td>
<td>12.0</td>
<td>No issues identified in data</td>
<td>3.85%</td>
</tr>
<tr>
<td>12.0</td>
<td>14.0</td>
<td>Develop with caution</td>
<td>96.15%</td>
</tr>
<tr>
<td>14.0</td>
<td>16.0</td>
<td>Develop with caution</td>
<td>62.96%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop with extreme caution</td>
<td>42.31%</td>
</tr>
</tbody>
</table>
• Specific Protected Lands and Habitat details along and near the route, including:
  o State Game Land
  o Two Scenic Byways
  o Several State-designated Core Habitat Areas
  o Two State-designated Landscape Conservation Areas
  o Eleven habitat mapping layers with data in the vicinity of the route
• Any of the above information can be displayed on the map for further analysis.
• Most of the GIS data used for the above information can be downloaded from the tool for further use.

Whitepapers and Reports

The Documents section of the web site includes:

• Energy Zones Study: A Comprehensive Web-Based Mapping Tool to Identify and Analyze Clean Energy Zones in the Eastern Interconnection
• Assessment of Demand Side Resources within EISPC
• Market Structures and Transmission Planning Processes in the Eastern Interconnection
• State-by-State Existing and Potential Clean Energy Zones: Survey of Relevant State Laws, Rules, Regulations and Orders in the Eastern Interconnection
• The Economic Ramifications of Resource Adequacy White Paper
• An Overview of Potential Environmental, Cultural, and Socioeconomic Impacts and Mitigation Measures for Utility-Scale Solar Energy Development

Recent EZ Mapping Tool Updates

• Updated State Summaries in energy policy results for states
• Added ability to open previously run Synergy Model and rerun with revised settings
• Added 14 raster layers to the exportable data layers in the Mapping Library
• Released updated mapping Data Layers:
  o Transmission Lines
  o Substations
  o Natural Gas Pipelines
  o Refined Product Pipelines
  o Crude Oil Pipelines
  o Existing Power Plants
  o Planned Power Plants
  o Existing Hydropower Dams (at least 50 MW)
  o Wind Turbine Sites
  o North American Saline Basin
  o National Conservation Easement Database
  o Important Bird Areas
  o Habitats of Particular Concern
  o Essential Fish Habitat
  o Navigational Aids
  o Submarine Cables
  o Anchorage Areas
  o Environmental Hazard Sites
  o Wilderness Areas