Geocube

A flexible energy and natural systems web mapping tool

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Working With Energy-Related Data

Energy Production

Energy Infrastructure

Energy Security

Energy Safety

Energy Economics

Energy Assessments

Energy Consumption

How to Cope with Energy Data Needs?

Current solutions were either too specific, lacked flexibility, were restricted to specific users, or out of date.

Need of an online solution that provides:

- Access to various **authoritative and accurate datasets**,
- Capacity to **view and analyze** data, spatial relationships, and broad trends
- Ability **to develop and share** maps and outputs for a variety of user’s needs
Enter Geocube

• **Flexible, customizable Web Mapping Application**
  – Provides access to key datasets, basic tools to analyze data, relationships and trends, and save and share final products

• **Key Component of NETL’s solution for Energy Data Needs**
  – Pairs with NETL’s Energy Data eXchange (EDX)
    • Secure, online *coordination and collaboration platform* supports energy research tech transfer and data needs
    • Provides *access* to historic and current R&D *data, data driven products, and a suite of online tools*
    • Ability to *contribute* data and products, either to the *public or within private groups*
Initial Development

- **Focused on Regions**
  - Started in the Gulf of Mexico
- **Provide key energy-related datasets spanning subsurface to atmosphere and affiliated, supportive geospatial datasets**

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<th>Geocube Layer</th>
<th>Examples of Data Categories</th>
<th>Examples of Available Layers</th>
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<td><strong>Subsurface</strong></td>
<td>Temperature</td>
<td>BSEE 2008 Sands, temperature gradient</td>
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<td>Pressure</td>
<td>Shut-in pressures, pressure logs</td>
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<td>Pipelines</td>
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<td>Bathymetry</td>
<td>SRTM, ETOPO, NOAA CRM, contours</td>
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<td><strong>Water Column</strong></td>
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<td>Currents</td>
<td>NCOM</td>
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<td></td>
<td>Temperature</td>
<td>NOAA, AVHRR, NCOM</td>
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<td><strong>Surface (land and water)</strong></td>
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<td>Shipping Lanes</td>
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<td>Boundaries</td>
<td>State and Federal Jurisdictions, Planning Areas, Protected Areas, etc.</td>
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Demonstration
Putting Geocube to Use at NETL

• Access to built-in geoprocessing capabilities
  – Extract data
  – Hot Spot Analysis
  – Inverse Distance Weighted (IDW)

• Access to NETL R&D products, such as data-driven tools and models
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Useful Links:
  EDX
  https://edx.netl.doe.gov
  Geocube
  https://edx.netl.doe.gov/gom-geocube

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