



Geocube

A flexible energy and natural systems web mapping tool

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Working With Energy-Related Data

Energy Production

Energy Infrastructure

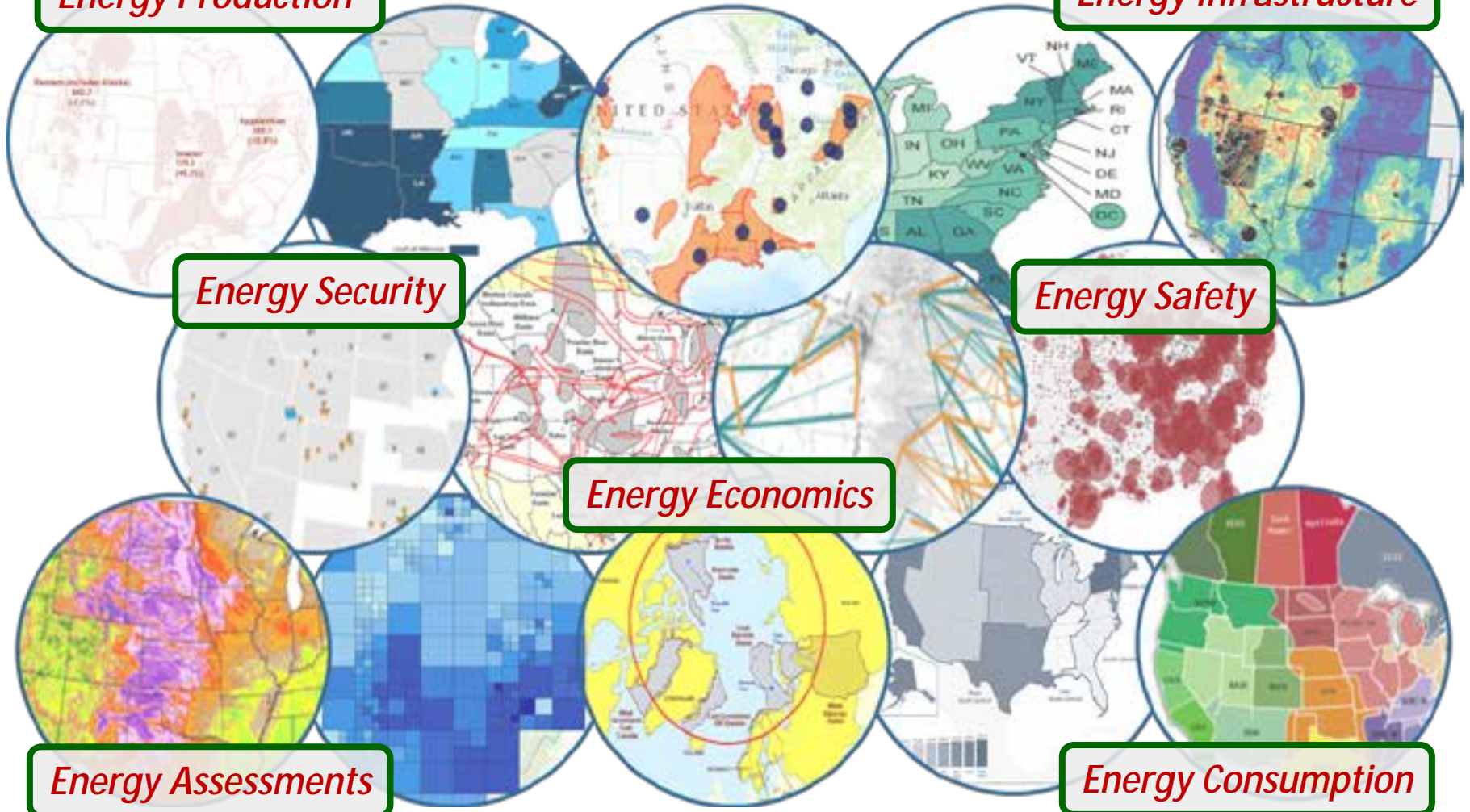
Energy Security

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Current solutions were either too specific, lacked flexibility, were restricted to specific users, or out of date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

Atlas of Unconventional Hydrocarbon Resources

Environmental Response Management Application (ERMA)

- **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*



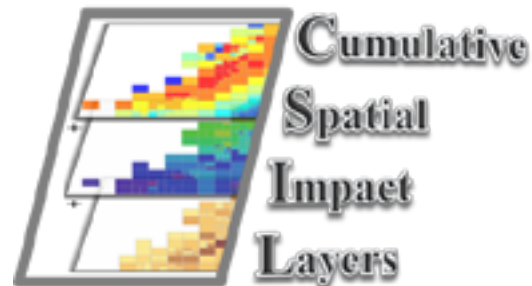
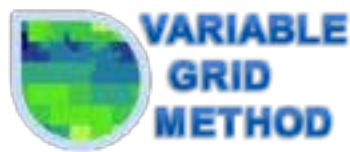
- **Focused on Regions**
 - Started in the Gulf of Mexico
- **Provide key energy-related datasets spanning subsurface to atmosphere and affiliated, supportive geospatial datasets**

Geocube Layer	Examples of Data Categories	Examples of Available Layers
Subsurface	Temperature	BSEE 2008 Sands, temperature gradient
	Pressure	Shut-in pressures, pressure logs
	Boreholes	BSEE & BOEM
Seafloor	Bottom Type	INSTAAR, BOEM, NOAA
	Pipelines	BOEM
	Bathymetry	SRTM, ETOPO, NOAA CRM, contours
Water Column	Drilling Platforms	BOEM
	Currents	NCOM
	Temperature	NOAA, AVHRR, NCOM
Surface (land and water)	Tourism	Beaches, hotels, etc.
	Shipping Lanes	NOAA
	Boundaries	State and Federal Jurisdictions, Planning Areas, Protected Areas, etc.

Demonstration

A screenshot of the GEO CUBE web application. The interface includes a search bar at the top left with the text "SEARCH EDX". Below it are input fields for "Name", "State", and "Region", along with a "SEARCH" button. The main area is a map of the Gulf of Mexico region, with a large dark overlay window in the center. This window contains the GEO CUBE logo and the text "Gulf of Mexico". Below the logo is a "NOTICE TO USERS" section with three paragraphs of text. At the bottom of the overlay are logos for NETL, Energy Data Exchange (EDX), and MATRIC. On the right side of the map, there is a legend window titled "Legend" with a list of layers: "Layer 1 (Visible)", "Layer 2 (Hidden)", and "Layer 3 (Hidden)". The map shows geographical features like the Gulf of Mexico, Florida, and parts of Mexico and Central America.

- **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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