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EISPC Energy Zones Mapping Tool Newsletter

December Webinar Demonstration:

Tuesday, December 16, at 3pm ET/2 pm CT/1 pm MT

Use the following link to attend the webinar: http://anl.adobeconnect.com/eispc_tool_demo
(Audio via the webinar or by phone: 1-877-685-5350, participant code: 853223).

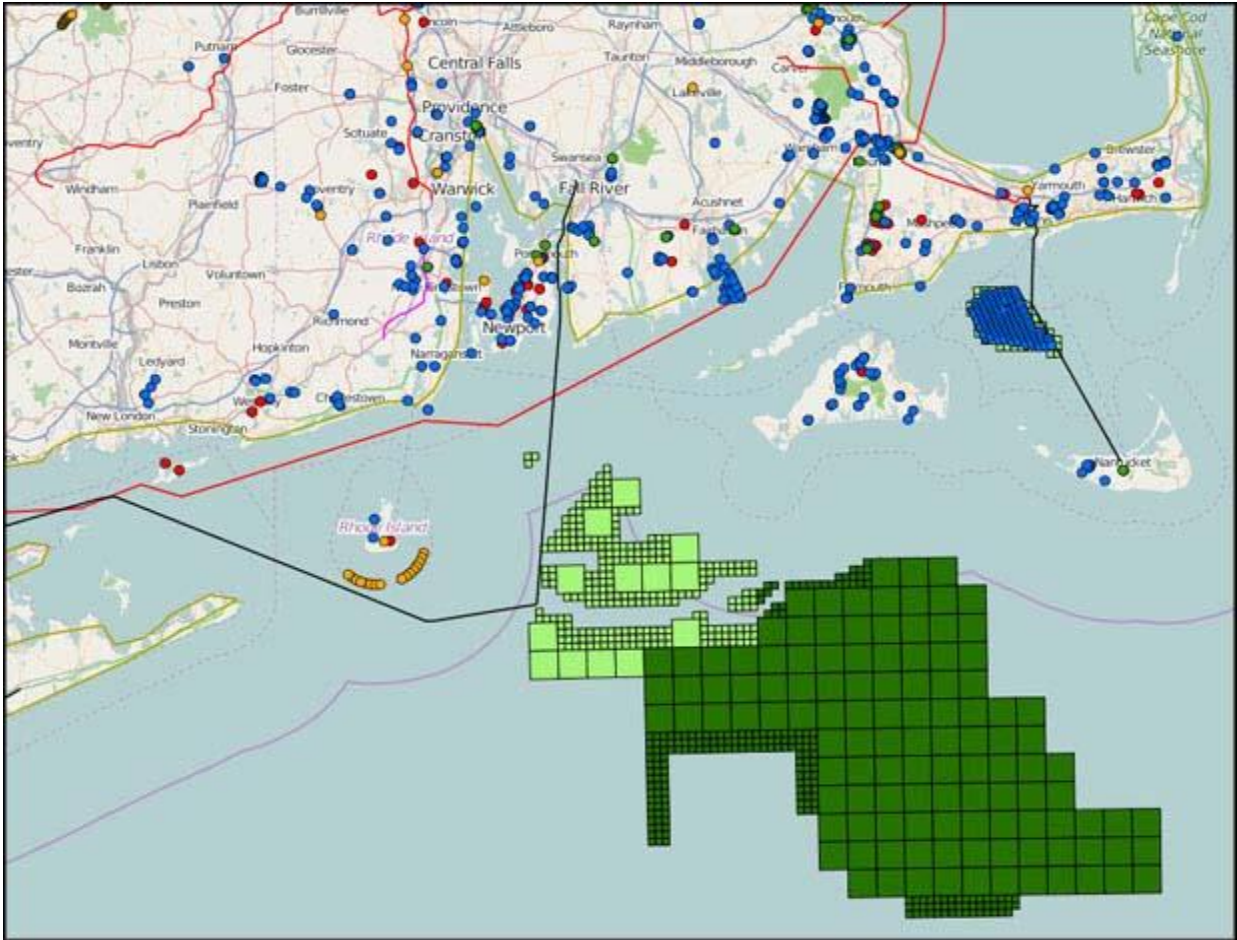
This one-hour demonstration will highlight issues related to energy and water, including the data and analysis capabilities currently in the tool, and planned enhancements:

- Power plant water use data,
- 2014 National Climate Assessment data, and
- Water Availability, Cost, and Future Demand data.

In the News...

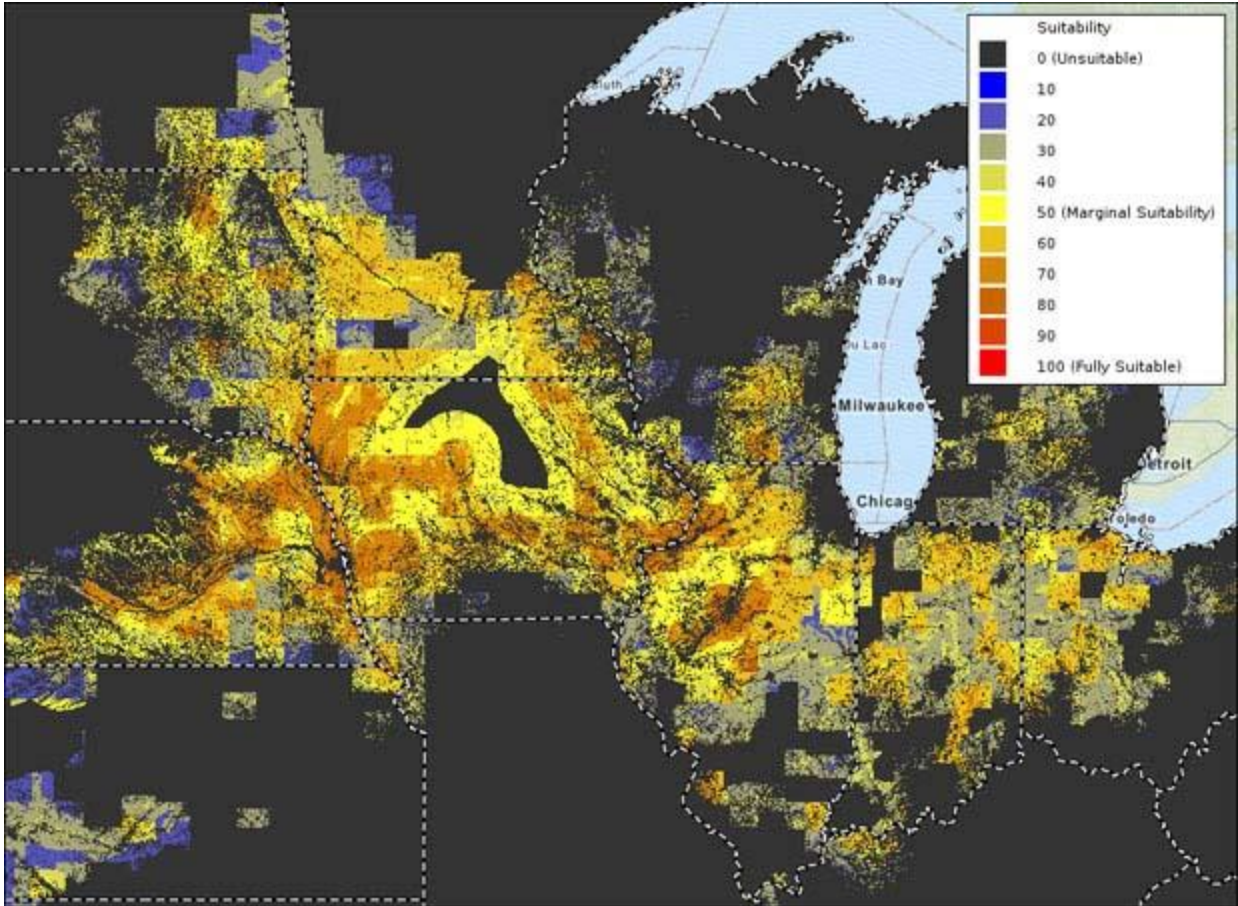
Recent news helps illustrate how the EISPC Energy Zones Mapping Tool (EZMT) provides relevant data and analysis for current developments:

- The Bureau of Ocean Energy Development (BOEM) announced a [January 2015 auction of 742,000 acres offshore of Massachusetts for commercial wind energy development](#). This Massachusetts Wind Energy Area could potentially support 4-5 gigawatts of commercial wind capacity if fully developed. The "Renewable Energy Leasing Areas" layer from BOEM was recently added to the EZMT, and the area being auctioned is shown below. The tool has many other useful capabilities that can assist with evaluating this location for wind energy, including map layers for wind speed, wind power, wind turbine capacity factors, layers shown in the map below, and many more. Also the EZMT models and reports are useful for studying the suitability of offshore wind turbines in specific zones.



BOEM-Administered Renewable Energy Leasing Area near Massachusetts (Light Green) with Wind Energy Areas (Dark Green), Permits Under Consideration for Wind Turbines (Points), and Planned Transmission Lines (Red and Black Lines)

- This announcement about [Bioenergy Feedstocks Logistics Development](#) ties in well with data in the EZMT tool showing the distribution of these biomass resources, and models for determining what areas would be most feasible to employ them for energy production. The example below shows model results for a new power plant fueled with corn stover material. The model takes into account the presence of corn stover biomass within a 50-mile radius of the new power plant, infrastructure for transporting it, and other key factors such as population density, surface water (for plant cooling), slope, flood plain exclusion areas, proximity to transmission lines, and environmental factors (protected land, habitat, and imperiled species.) The model could be easily adjusted by users to focus the analysis on a biofuel production plant rather than electrical generation.



Results of Suitability Model for a New Power Plant Using Corn Stover Resources

- [This announcement](#) about "low-head" hydropower technologies for existing non-powered dams and other sites ties in well with previous studies (such as [An Assessment of Energy Potential at Non-Powered Dams in the United States](#)), and data and analysis capabilities in the EZMT. The EZMT report shown below shows existing non-powered dams with the potential to generate at least 1MW along the Missouri/Illinois reach of the Mississippi River.

Non-powered Dam Report

Location Analyzed: Missouri/Illinois Mississippi Corridor

The area of interest is located at 38° 52' 31.849" N , 90° 31' 7.679" W .
It covers some or all of Adams, Alexander, Brown, Calhoun, Greene, Hancock, Jackson, Jersey, Macoupin, Madison, Monroe, Pike, Randolph, Scott, St. Clair, and Union in Illinois and Bollinger, Cape Girardeau, Clark, Jefferson, Lewis, Lincoln, Madison, Marion, Perry, Pike, Ralls, St. Charles, St. Francois, St. Louis, St. Louis City, and Ste. Genevieve in Missouri.
It has an area of 7586.914 square miles with surrounding buffers of areas 8134.384 and 10385.030 square miles .

New Output from Existing Non-Powered Dams

With Potential Capacity of 1MW or Greater

Name	Owner	Year Completed	Year Modified	County	State	Estimated Total Installed Capacity (MW) inside Analysis Area	Estimated Total Installed Capacity (MW) within 1 Miles of Analysis Area	Estimated Total Installed Capacity (MW) within 5 Miles of Analysis Area
KASKASKIA LOCK & DAM	CEMVS	1974		RANDOLPH	IL	17.85	17.85	17.85
MELVIN PRICE LOCKS & DAM	CEMVS	1990		MADISON	IL	299.28	299.28	299.28
LOCK & DAM 25	CEMVS	1939		LINCOLN	MO	147.26	147.26	147.26
LOCK & DAM 24	CEMVS	1940		PIKE	MO	146.49	146.49	146.49
MISSISSIPPI RIVER DAM 22	CEMVR	1938	1988	RALLS	MO	94.92	94.92	94.92
MISSISSIPPI RIVER DAM 21	CEMVR	1938	1988	ADAMS	MO	93.08	93.08	93.08
MISSISSIPPI RIVER DAM 20	CEMVR	1936	1987	LEWIS	MO	92.24	92.24	92.24
TOTAL						891.12	891.12	891.12

Source: [Oak Ridge National Laboratory \(Energy Potential Non-Powered Dam\)](#)

Non-powered Dam Report for the Missouri/Illinois reach of the Mississippi River

Advisory Groups Update

- Two **Corridor Focus Team (CFT)** web-based meetings have been held to help guide the process of adding a corridor routing modeling tool to the system. Subject-matter experts with experience in the factors that most significantly influence corridor routes, available GIS data associated with those factors, and challenging conflicts such as crossing National Trails or rivers, are participating in the CFT.
- Similar to the CFT, an **Energy-Water Focus Team (EWFT)** is being formed to review the plans and provide feedback about the energy-water data and new reports being added. Subject-matter experts with experience in the many connections between energy production and water, climate change, and the associated data (power plant water use, 2014 National Climate Assessment, and Water Availability, Cost, and Future Demand) are participating.

New members are welcome for either team. E-mail eispctools@anl.gov for more information.

Recent EZ Mapping Tool Updates

The following new mapping layers were added:

- Renewable Energy Leasing Areas
- National Wild and Scenic Rivers System
- Nationwide Rivers Inventory

This message is being sent to registered users of the EISPC Energy Zones Mapping Tool (<http://eispctools.anl.gov>) who indicated in their profile they are interested in e-mail updates. If you are no longer interested you can log in and change this preference by using the Profile option under the My Account menu at the top right of the home page, or simply reply to this message with a request to unsubscribe to the updates.