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EISPC Energy Zones Mapping Tool Newsletter

Corridor Analysis to be Enhanced

Work to enhance the corridor analysis capabilities of the Energy Zones Mapping Tool has been funded by the U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability. Enhancements will include the ability to develop a corridor suitability map with user-specified criteria and weights (similar to the existing modeling process for generation technologies) and then to use that map to automatically generate a potential corridor route that follows the path of greatest suitability between two user-specified points.

A voluntary Corridor Focus Team is being formed to review the plans and provide feedback about the new corridor analysis tools as they are developed. 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, are especially welcome. Corridor Focus Team participation will include e-mail discussion and several teleconferences. To be considered for participating in the Corridor Focus Team, please e-mail eispctools@anl.gov by September 30, 2014. In the message, provide your organization name, and brief details about your expertise and interests related to corridor routing issues.

Clean Energy Technology Spotlight: Geothermal

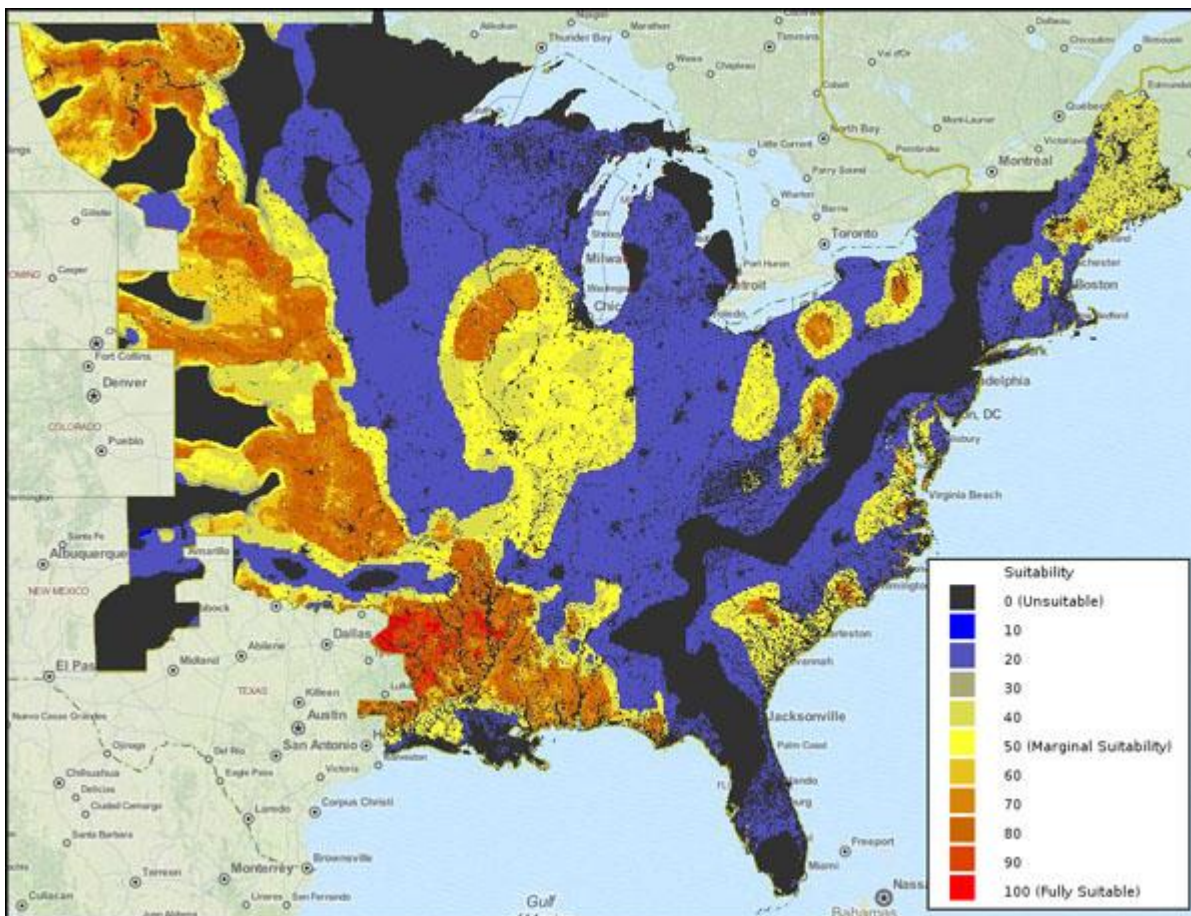
The tool includes many capabilities for understanding and analyzing geothermal energy technologies, including:

- [Technology Descriptions](#) for Geothermal technologies.
- Over 200 [policies](#) related to geothermal technologies such as [these policies](#) in Mississippi.
- Pre-made PDF maps, such as this map of [Geothermal Resources: EGS Potential](#).
- Geothermal [mapping layers](#), with access to downloadable GIS data, including:
 - Enhanced Geothermal System (EGS) Potential



- Geopressure Energy Potential - Plan 2
- Geopressure Energy Potential - Plan 3
- [Metadata](#) for all mapping layers describing the data sources and other details.
- User-configurable Geopressed or Enhanced Geothermal Systems suitability [models](#).
- A model results [report](#) for a user-generated Geopressed or EGS suitability model. The report provides detailed information and graphs for analyzing the model results and determining what factors influence the suitability results.

Sample results of the Enhanced Geothermal System (EGS) suitability model are displayed in the map below. The areas with highest suitability for implementing EGS technologies are shown in orange and red.



Analysis Highlight: Statewide Generation Portfolios

The EZ Mapping Tool contains generation portfolio information for states of the Eastern Interconnection. This information can be obtained by searching the EZ Mapping Tool Policies and Regulations Database or running a Power Plant report. The Policies and Regulations Database includes all of the clean energy laws, regulations, incentives, and other related

policies in the Eastern Interconnection states and Canadian provinces, related to clean energy electricity generation. It was developed by the Clean Energy States Alliance.

For each state, a summary of electricity generation and clean energy policies is provided by searching the policy database for that state, then clicking the "Summary for (state)" link at the top of the results. A portion of the summary for Vermont, showing electricity **generation**, is shown below, illustrating that nuclear power accounts for more than 70 percent of the state's electricity generation, whereas hydroelectric accounts for almost 18 percent of the generation.

Introduction to Vermont

Electricity Generation

In 2012, electricity generators in Vermont generated 6,708 gigawatt-hours of electricity, using the following sources:

Nuclear	74.4%
Hydroelectric	17.8%
Biomass	6.0%
Wind	1.6%
Other	0.1%
Petroleum	0.1%

Note: These numbers reflect electricity **generation** from assets physically located in the state, excluding behind-the-meter generation. Electricity consumption numbers would be different because of electricity exports to other states and/or imports from outside the state.
Source: US Energy Information Administration's Electric Power Monthly (www.eia.gov/electricity/monthly).

Information about a state's **operating capacity** portfolio can be obtained by running a Power Plants report with the **Analyze** function of the tool and specifying the state as the analysis area. Power Plant reports display a bar graph illustrating the operating capacity (MW) by resource type for the user-specified area, as well as two buffer zones (distances specified by the user). The Vermont Power Plants report graph below illustrates Vermont's operating capacity by energy resource type (green bars). Results for two distance zones are shown in blue and red.

Power Plant reports include many other details beyond the portion shown below. This example shows that the majority of Vermont's operating capacity comes from one nuclear power plant and 71 hydropower plants.

Power Plants Report

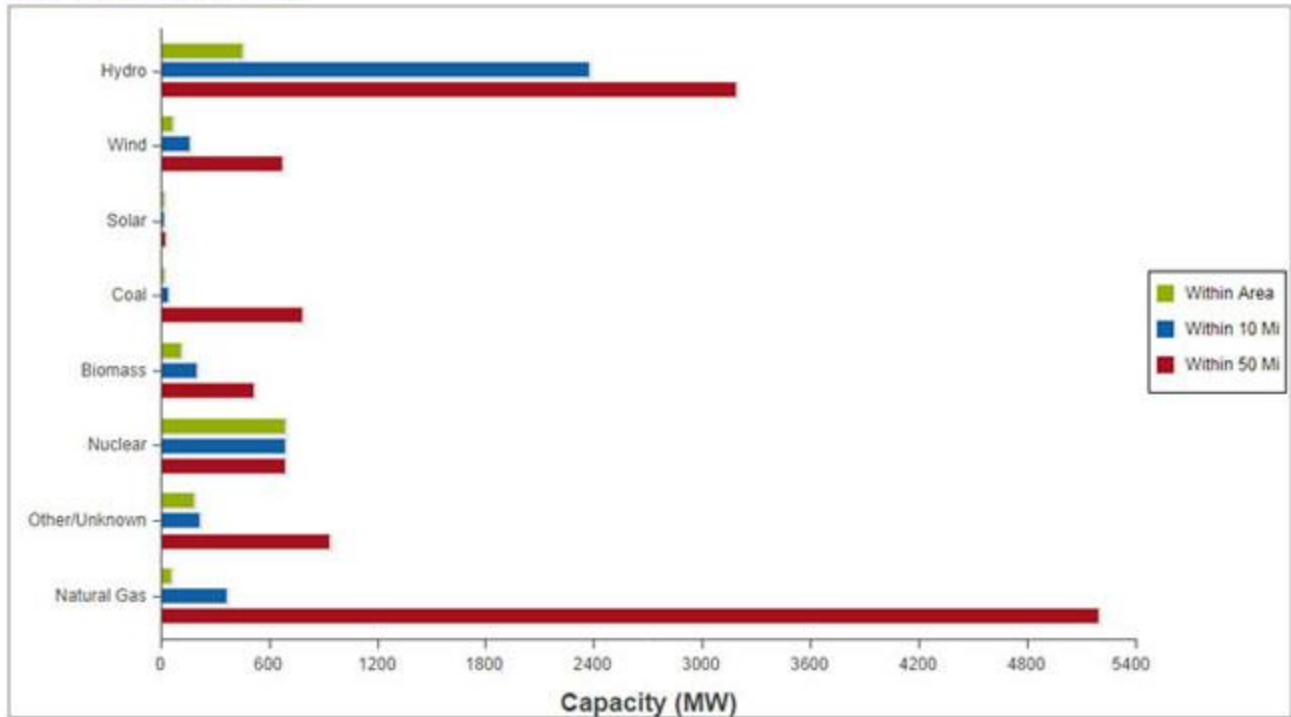
Location Analyzed: Vermont

The area of interest is located at **44° 4' 20.066" N , 72° 39' 38.362" W**.

It covers some or all of **Berkshire and Franklin** in Massachusetts, **Cheshire, Coos, Grafton, and Sullivan** in New Hampshire, **Clinton, Essex, Rensselaer, and Washington** in New York, and **Addison, Bennington, Caledonia, Chittenden, Essex, Franklin, Grand Isle, Lamoille, Orange, Orleans, Rutland, Washington, Windham, and Windsor** in Vermont.

It has an area of **9603.081 square miles** with surrounding buffers of areas **14776.108** and **40872.022 square miles**.

Existing: Summary



EISPC Energy Resource Type	Total Number within Analysis Area	Total Operating Capacity (MW) within Analysis Area	Total Number within 10 Miles of Analysis Area	Total Operating Capacity (MW) within 10 Miles of Analysis Area	Total Number within 50 Miles of Analysis Area	Total Operating Capacity (MW) within 50 Miles of Analysis Area
Natural Gas	1	40.00	4	350.30	22	5,178.05
Other/Unknown	11	165.40	14	195.20	30	916.80
Nuclear	1	673.40	1	673.40	1	673.40
Biomass	5	93.02	11	179.92	34	498.12
Coal	0	0	1	21.90	6	768.20
Solar	0	0	0	0	3	6.00
Wind	3	46.20	4	145.20	17	652.80
Hydro	71	435.56	103	2,359.85	222	3,175.84
TOTAL	92	1,453.58	138	3,925.77	335	11,869.21

Source: [Platts/Bentek Energy\(Power Plant - Existing\)](#)

For planned facilities, the report provides total nameplate capacity in MW and the number of facilities by resource type. The report also lists facility names, operators, locations, primary fuel type, and operating capacity in MW, by resource, for both existing and planned power plants. The example below also shows that the graphs displayed within the browser are interactive. In this case the "Within 10 Mi" and "Within 50 Mi" items in the legend were clicked to turn them off.



See the tool [Help Manual](#) or help videos such as [Running a Report](#) for more details. These are available at the top right of the [Home Page](#).

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.