# Energy: A Review of Federal and Indiana State Information Resources

By: Bert Chapman

Energy plays a critically important role in domestic and international economic activity and in our personal economic spending and behavior. Recent rises and declines in crude oil and gasoline prices have affected our personal purchasing power and domestic and international economic performance. International competition over natural resources such as oil also has the potential to produce regional or global conflict. There is also ongoing debate within governments, academic institutions, commercial businesses, and global scientific and political sectors about how to meet global demands for more energy resources — at a time when reserves of these commodities may decline coupled with concerns over the environmental impact these resources have on our lives, living standards, and global climate (Vietor, 1984; Fehner, 1994). This article describes authoritative national state and government online resources, available at no fee, that may be used by librarians and libraries for a variety of purposes, such as public access, reference, teaching, research, and library website and course guide improvements.

**U.S. Executive Branch Resources**

Several U.S. government agencies are involved in formulating and implementing federal energy policy and these agencies produce a cornucopia of publicly accessible information resources. The most important of these is the Department of Energy (DOE) whose website www.energy.gov/ is a gateway to a variety of resources. Established in 1977, this is the principal federal energy policymaking entity and the Secretary of Energy is responsible for advising the President on energy policies, plans, and programs (U. S. Office of the Federal Register, 2008).

DOE's website provides access to agency Washington, D.C. headquarters offices covering program areas such as energy efficiency and renewable energy, scientific research, the Office of Civilian Radioactive Waste Management, and the Office of Nuclear Energy. These offices provide detailed resources on programs administered by these agencies. The DOE site also provides access to resources produced by numerous DOE offices at various U.S. locations. Here are some noteworthy DOE agency information resources.

The Energy Information Administration (EIA, www.eia.doe.gov/) is DOE's main statistical and analytical branch. It prepares detailed updates and analyses of energy commodities such as electricity, gasoline, natural gas, nuclear energy, petroleum, and solar energy. It also prepares studies of energy conditions and reserves in U.S. states and foreign countries through publications such as its *Annual Energy Review*, and *International Energy Outlook*. EIA publications and data are essential resources for any substantive energy policy analysis.

The Federal Energy Regulatory Commission (FERC, www.ferc.gov/) is responsible for regulating the interstate transmission of electricity, natural gas, and oil. These responsibilities also include setting rates and charges for transporting and selling natural gas and transporting oil by pipelines (U. S. Office of the Federal Register, 2008). FERC's website reports agency activities, enforcement actions, and analysis of trends and developments in industrial sectors it regulates.

DOE responsibilities also include managing the U.S. nuclear weapons arsenal. The National Nuclear Security Administration (NNSA, http://nnsa.energy.gov/) is the organization responsible for managing the security and safety of the U.S. nuclear complex and naval nuclear reactor program while also promoting international nuclear safety and

nonproliferation programs. In addition, NNSA supports U.S. scientific and technological leadership (U.S. National Nuclear Security Administration, n.d.).

The National Renewable Energy Laboratory (NREL, www.nrel.gov/) in Golden, CO, is the primary national laboratory for renewable energy; energy efficiency research and development; and advancing national energy goals in areas such as renewable electricity and fuels (U.S. National Renewable Energy Laboratory, 2008, 1). Numerous reports on NREL activities are available through its website.

DOE's Office of Scientific and Technical Information (OSTI, www.osti.gov/) serves as a clearinghouse for accessing scientific research sponsored by DOE and private sector contractors. Resources accessible via OSTI include *Information Bridge* which provides access to full-text reports on topics as diverse as wind energy, petroleum, natural gas, and nuclear nonproliferation from 1991–present. *DOE Data Explorer* provides access to computer simulations, numeric data files, and interactive maps generated as part of DOE-sponsored research, and Science.gov provides access to the treasure trove of federal and federally-sponsored scientific research.

DOE also has several national laboratories sponsoring energy, environmental, national security, and scientific research that provide significant public access to these resources. The laboratories include Illinois' Argonne National Laboratory (ANL, www.anl.gov/); California's Lawrence Livermore National Laboratory (LLNL, www.llnl.gov/); New Mexico's Los Alamos National Laboratory (LANL, www.lanl.gov/); and Tennessee's Oak Ridge National Laboratory (ORNL, www.ornl.gov/). The history, management practices, and controversies experienced by these facilities have been well described, and analyzed. (Johnson & Schaffer, 1994; Holl, 1997; Lawrence Livermore National Laboratory, 2007; and Shroyer, 1998).

The Defense Nuclear Facilities Safety Board (DNFSB, www.dnfsb.gov/) is an important regulatory agency responsible for monitoring the safety of DOE's nuclear weapons complex (Chapman, 2000). DNFSB's website is a rich repository of resources documenting board inspections and regulatory activities at DOE facilities including the national laboratories and annual reports to Congress from 1991–present.

The economic censuses produced every five years by the U.S. Census Bureau, released in years ending in 2 and 7, are excellent information sources for general statistical data about energy industries although they do not reveal information about the operations of individual companies. Accessible at www.census.gov/econ/census07/ these resources provide information on energy industry activities in individual states and in selected metropolitan areas. In one example, users may determine how many utility companies are located in Kokomo and Peru.

Interior Department agencies such as the U.S. Geological Survey (USGS), Minerals Management Service (MMS), U.S. Bureau of Reclamation (USBR), and Bureau of Land Management (BLM) are also important contributors to federal energy policymaking and produce significant quantities of energy information resources. Established in 1879, USGS conducts geological analyses of domestic and international geologic resources (Manning, 1967; Gohn, 2004). The USGS Mineral Resources Program, http://minerals.usgs.gov/, provides access to a variety of detailed scientific and economic information about U.S. and foreign mineral industry resources, trends, and developments. Its annual *Minerals Yearbook* analyzes topics from 1994–present, including domestic mineral industries such as silver; minerals industries in each state; and mineral trends and developments for countries around the world.

The Department of Interior, Minerals Management Service (MMS) was established in 1982 and its responsibilities include assessing the nature, extent, recoverability, and value of leasable materials such as oil and natural gas on the Outer Continental Shelf and authorizing and regulating the extraction of such resources (U.S. Office of the Federal Register, 2008; U.S. Minerals Management Service, 1997). The MMS website, www.mms.gov/, provides access to a variety of resources on agency activities including environmental impact statements; the agency's budget; congressional testimony by agency officials; royalty program statistics

and analysis; assessments of agency programs in locales as varied as the Gulf of Mexico and Bering Sea; and the text of laws and regulations it is responsible for enforcing.

The U.S. Bureau of Reclamation (USBR, www.usbr.gov/) was created in 1902 and is the largest water wholesaler in the U.S. It supplies water to many areas of the western United States and is responsible for managing various hydroelectric projects in this region including Hoover Dam on the Colorado River and Grand Coulee Dam on the Columbia River (Robinson, 1979; Pisani, 2002). Numerous resources about USBR activities, including its hydropower programs, are provided on its website.

The Department of Interior, Bureau of Land Management (BLM) was established in 1946, consolidating the General Land Office established in 1812 and the Grazing Service established in 1934. BLM is responsible for managing 262 million surface acres of land and more than 700 million subsurface mineral estate acres nationwide with particular emphasis on 12 western states including Alaska. Bureau responsibilities encompass timber, solid minerals, oil and gas, geothermal energy, and other resources on these lands. These responsibilities also include overseeing and managing energy and mineral lease developments and ensuring compliance with existing regulations governing extraction of these resources (US. Office of the Federal Register, 2008; Muhn & Stuart, 1988; Durant, 1992; U.S. Congress, 2001a); U.S. Congress, 2001b; Skillen, 2009).

Information on BLM natural resource and energy activities is available at www.blm.gov/wo/st/en/prog/energy.html. Resources include links to state BLM websites; descriptions of how the Bureau seeks to implement relevant provisions of the Energy Policy Act of 2005; details and statistics about oil and gas lease sales, fees, and royalty programs; and information about BLM activities for energy sectors such as biomass, coal, geothermal, natural gas, oil, oil shale, tar sands, and wind energy.

Established in 1974, the Nuclear Regulatory Commission (NRC, www.nrc.gov/), like its predecessor the Atomic Energy Commission, is responsible for regulating operating conditions at U.S. civilian nuclear power plants (Walker, 2000). NRC's website provides copious information resources on its inspection, licensing, and enforcement activities.

**Congressional Sources**

Congressional information sources are critical for effectively understanding federal energy policy. It is possible to examine the text of congressional bills from 1993–present at www.gpoaccess.gov/bills/ for proposed and passed legislation changing existing federal energy laws. Another important resource, GPO Access, www.gpoaccess.gov/, provides access to congressional committee reports on legislation; the text of U.S. laws in the *United States Code*; and the text of regulations used to enforce laws in the *Code of Federal Regulations*. Proposed federal regulations in the *Federal Register* and the ability to comment on these proposed regulations are available at http://regulations.gov/.

Congressional committees are excellent sources of energy policy information because these committees are responsible for approving and revising legislation, conducting oversight of federal agency programs, and funding these programs. These committees have the legal authority to subpoena witnesses. The transcripts of committee hearings include committee members questioning witnesses, sometimes in heated discussion, and the text of reports inserted into the transcript by members and witnesses (Sullivan, 2007; Glassman, 2008).

Noteworthy U.S. House of Representatives energy oversight committees include the Energy and Commerce Committee http://energycommerce.house.gov/. Its website provides the text of current and recent hearings, listings of committee members, webcasts of some hearings, witness opening statements, and a variety of other information resources documenting committee activities. Examples of recent hearings by this committee include *Continuing Security Concerns at Los Alamos National Laboratory* (2007) and 2006 *Prudhoe Bay Shutdown: Will Recent Regulatory Changes and BP Management Reforms Prevent Future Failures?* (2008). Representatives Baron Hill (D-IN) and Steve Buyer (R-IN) are currently members of this committee.

The website of the House Select Committee on Energy Independence and Global Warming http://globalwarming.house.gov/ also contains relevant energy information. Examples of recent hearings include *Auto Bailout: Hearing to Explore Energy Independence Implications* (2008) and *What's Cooking With Natural Gas?: Hearing to Examine Fuel's Role in Global Warming Solutions* (2008).

The website of the House Natural Resources Committee, http://resourcescommittee.house.gov/, provides information on natural resources development and energy policy. It covers issues such as climate change, oil and gas development, Western water development, mining law, and ocean pollution. Examples of recent hearings include *Surface Mining Control and Reclamation Act of 1977: A 30th Anniversary Review* (2007) and *Recent Interior Department Inspector General Investigations on Federal Oil and Gas Royalty Collections* (2008).

Another noteworthy House committee is the Appropriations Committee, http://appropriations.house.gov/. Appropriations committees in the House and Senate are responsible for determining how much money can be allocated to federal agencies' budgets. This is accomplished through the powerful Appropriations Committees subcommittees. In the House, the Appropriations subcommittee charged with energy issues is the Energy and Water Subcommittee, currently chaired by Representative Peter Visclosky (D-IN).

Senate committees are particularly important because they are also responsible under the U.S. Constitution for confirming presidential appointments like the Secretary of Energy and and also confirming treaties with foreign countries that affect natural resources and energy policy. The Senate Energy and Natural Resources Committee, http://energy.senate.gov/, is the primary Senate energy policy committee. Examples of its recent hearings include *Oil and Gas Reserves on the Outer Continental Shelf* (2007) and Oil Inventory Policies (2008). Senator Evan Bayh (D-IN) is currently a member of this committee.

The Senate Environment and Public Works Committee, http://epw.senate.gov/, and Senate Appropriations Committee, http://appropriations.senate.gov/, also sculpt federal energy policy. Committee websites in both legislative chambers link to the perspectives of the minority party members on issues their committees are examining, which may differ significantly from those of the current majority party.

**Congressional Support Organizations**

Congress' extensive oversight responsibilities require it to rely on support organizations possessing substantive expertise beyond that held by members, congressional committees, and the professional support staff assisting members and committees. There are three principal congressional support organizations providing analytical expertise to assist Congress in its oversight responsibilities: Congressional Budget Office (CBO), Congressional Research Service (CRS), and Government Accountability Office (GAO). All three organizations provide reports and analysis on energy issues to Congress. Most are available online and cover current and historical aspects of topics.

The Congressional Budget Office (CBO, www.cbo.gov/) provides analysis on the U.S. government budget and the budgetary implications of individual federal programs. Examples of relevant energy studies on the CBO website include *Nuclear Power's Role in Generating Electricity* (2008) and *Effects of Gasoline Prices on Driving Behavior and Vehicle Markets* (2008).

The Congressional Research Service is a branch of the Library of Congress providing congressional members and their staff with expert and unbiased analysis of public policy issues. CRS does not have their own publicly accessible website but access to CRS reports is provided by many academic institutions and nonprofit organizations. Purdue University has a gateway to some CRS resources at www.lib.purdue.edu/govdocs/leg.html. Individual members of Congress may also publish selected CRS reports on their websites. Examples of relevant CRS energy studies include *Wind Power in the United States: Technology, Economic, and Policy Issues* (2008) and *Fuel Ethanol: Background and Public Policy Issues* (2008).

The Government Accountability Office, www.gao.gov/, is responsible for issuing reports on the management performance of government programs. The GAO website includes the text of current reports as well as the testimony of GAO witnesses before Congress. Examples of recently produced GAO energy reports include *Research and Development: DOE Could Enhance the Project Selection Process for Government Oil and Natural Gas Research* (2008) and *Nuclear Safety: Department of Energy Needs to Strengthen Its Independent Oversight of Nuclear Facilities and Operations* (2008).

Congressional support agency reports can help citizens gain enhanced understanding of federal programs and agency activities and to immerse themselves in the guts of the federal policymaking process. Librarians, students and research have online public access to agency reports covering energy issues and much more.

**National Academies of Science**

The National Academies of Science (NAS, www.nas.edu/) is an independent quasi-governmental organization often used by Congress and government agencies to provide rigorous scientific analysis of scientific and technologically oriented issues. The NAS Board on Energy and Environmental Systems, http://sites.nationalacademies.org/deps/BEES/, examines energy and environmental issues and publishes reports on these topics, recent examples being *Assessment of Technologies for Improving Light Duty Vehicle Fuel Economy* (2008) and *Review of Research Program for the Freedom Car and Fuel Partnership: Second Report* (2008).

**Indiana State Agencies & Institutions**

Indiana has an important history and ongoing interest in developing its energy economy and enhancing energy conservation. The natural gas boom affecting east central Indiana from approximately 1886–1901 had a significant impact on Indiana's economic development and also demonstrated the presence of some oil reserves (Miller, 1999; Glass, 2000). Coal has been mined in Indiana counties such as Vermilion, Clay, and other Wabash River Valley counties, and natural resources extraction has been an important part of Indiana's modern economy. Indiana's unmined coal reserves include approximately 57 billion tons with nearly 17 billion tons being recoverable using current technology. These reserves may last more than 500 years (Sisson, Zacher, & Cayton, 2007; Indiana Geological Survey, 2009). In the area of nuclear energy, Indiana has been involved with contentious energy policy debates on the role of nuclear power. One example is the controversy over Jefferson County's Marble Hill nuclear power plant in the early 1980's (Public Service Indiana, 1983; Indiana Governor's Task Force 1984).

Significant energy-related scientific and technical research occurs in Indiana at institutions such as Purdue University and Indiana companies are developing new sources of clean energy. Sources such as ethanol and wind power are becoming important factors in Indiana's economy. This is demonstrated by the Biotown alternative fuel program in Reynolds in White County which seeks to use Indiana's abundant agricultural resources to lessen dependence on foreign fuel sources. The growing presence of wind turbines in Benton County takes advantage of wind power in this flat and sparsely populated location. Indiana is also involved in the debate over clean coal technology as a solution for national energy problems.

Several Indiana state government agencies produce energy related information resources and are responsible for developing and implementing state energy policy. These include: the Indiana Office of Energy and Defense Development, www.in.gov/oed/, which serves as the state's principal energy policy program; Biofuels Indiana, www.in.gov/isda/biofuels/, which is part of the Indiana Department of Agriculture and seeks to promote bioenergy research and programs; the Indiana Department of Natural Resources whose Oil and Gas Division, www.in.gov/dnr/dnroil/, seeks to encourage the safe and responsible development of Indiana's oil and natural gas resources; the Indiana Utility Regulatory Commission, www.in.gov/iurc/, which seeks to regulate the service reliability and prices charged to consumers by utility companies delivering services such as electricity, natural gas, steam, water, and sewer utilities; the Office of Utility Consumer Counselor, www.in.gov/oucc/, whose responsibilities include representing residential and business ratepayer interests before state

and federal regulatory commissions; and the Indiana Office of Inspector General, www.in.gov/ig/, which is responsible for evaluating the management performance of state agency programs and uncovering waste in those programs.

**Indiana General Assembly**

The Indiana General Assembly, www.ai.org/legislative/, publishes the text of Indiana state energy laws in the *Indiana Code*, regulations in the *Indiana Administrative Code*, and proposed regulations in the *Indiana Register*. The General Assembly website provides access to the text of bills being considered by the General Assembly and the status of those bills. It lists the member for relevant General Assembly energy policy committees such as the House Natural Resources Committee and Senate Energy and Environmental Affairs Committee.

**Academic Institution Resources**

Additional government energy information policy resources are produced by Indiana academic institutions. Purdue University's State Utility Forecasting Group (SUFG, www.purdue.edu/dp/energy/SUFG/) assists the state of Indiana by forecasting electricity consumption, prices, and resource requirements, and by analyzing energy industry trends and developments. One SUFG research product is *The Projected Impacts of Carbon Dioxide Emissions Reduction Legislation on Electricity Prices in Indiana* (2008). Purdue's Energy Center, www.purdue.edu/dp/energy/, provides access to information about ongoing energy research occurring at Purdue. The Indiana Center for Coal Technology Research, www.purdue.edu/dp/energy/CCTR/, seeks to promote economically and environmentally sound use of Indiana coal reserves and produces publications like *The 2008 Forecast of Indiana Coal Production and Use* (2008) and *Indiana Coal Report 2009* (2009).

The following research guides provide links to numerous resources on energy policy issues from Purdue Libraries Government Documents Department and cover U.S., foreign, and international government organization perspectives:

- *Government Documents on Energy*, www.lib.purdue.edu/subjectguides/govenergy
- *Government Documents on Nuclear Energy*, www.lib.purdue.edu/subjectguides/govnuceng/
- *Government Documents on Water*, www.lib.purdue.edu/subjectguides/govwater/

Indiana University's Indiana Geological Survey, http://igs.indiana.edu/, provides access to numerous materials on Indiana geology and natural resources including a biofuels map, coal mine information system, and historical aerial photographs. Its petroleum database management system features information on over 70,000 petroleum wells drilled in Indiana.

The Indiana Database of University Research Expertise (INDURE, www.indure.org/) provides the names of experts in energy and other fields at Ball State University, Indiana University, Purdue University, and the University of Notre Dame, with links to these individuals' professional websites and contact information. Determined researchers will benefit from learning about the individuals working at our major universities that represent Indiana's intellectual capital on the topic of energy.

**Conclusion**

A rich variety of publicly accessible resources on U.S. federal and Indiana state energy resources and energy policy are provided online by government agencies. These resources should stimulate further analysis, debate, discussion, and study of the complicated role energy products and services play in our personal lives and in state and national economic and political policymaking. Libraries may rely on these authoritative government websites for reference use, online subject guides, and curriculum enhancement. Since energy has global impacts, the truly engaged researcher should also try examining the abundant proliferation of online energy information resources and policy documents produced by other U.S. states, foreign national governments, and international government organizations to gain further understanding of energy's importance in early 21st century global politics.

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**About the Author**

Bert Chapman is Government Information and Political Science Librarian/Professor of Library Science at Purdue University Libraries. He received his B.A. in history and political science at Taylor University-Upland, an M.A. in history at the University of Toledo, and an M.S.L.S. from the University of Kentucky. He has written three books on researching national security policy and his articles have appeared in journals such as *Government Information Quarterly*, *Journal of Government Information*, and *RSR: Reference Services Review*.