

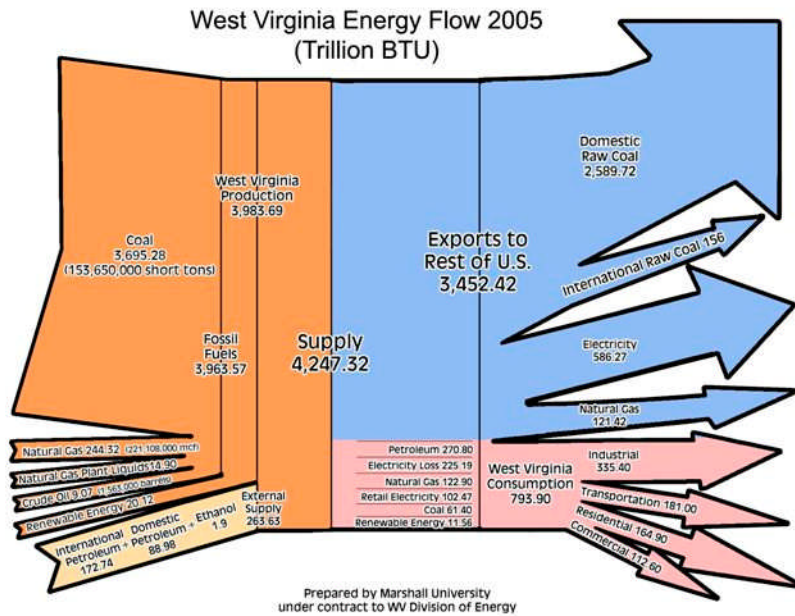
2008 Annual Development Plan West Virginia Division of Energy

The West Virginia Division of Energy (WVDOE) is required by 5B-2F-2(f) of the *West Virginia Code* to submit an annual report to the Governor and the Joint Committee on Government and Finance. It requires that the report “shall relate to the division’s implementation of the energy policy and the activities of the division during the previous year” on or before the first day of December of each year. This submission addresses activities for the period of Dec. 1, 2007, through Nov. 30, 2008.

The WVDOE consists of two divisions: the Office of Coalfield Community Development (OCCD) and the Energy Efficiency Program (EEP). The WVDOE director serves as chairman of the West Virginia Public Energy Authority (PEA) and administers its daily operation. The activities for the reporting period are addressed by energy source resource area as described in the state energy plan, “West Virginia Energy Opportunities”: fossil fuels, renewable energy and energy efficiency. This report will address each resource area and the activities of WVDOE in supporting these objectives.

Fossil fuels

- WVDOE and the West Virginia University National Research Center for Coal and Energy are continuing a multi-agency task force to address fossil energy priorities identified in the state energy plan, “West Virginia Energy Opportunities.” Resultant activities under way include the identification of sites for coal-to-liquid (CTL) plants, assessing carbon sequestration opportunities in West Virginia, natural gas pipeline constraints and identifying water resources for energy development.
- The West Virginia Governor’s Office, the West Virginia Department of Commerce, the West Virginia Division of Energy and the Southern States Energy Board hosted “Energy Summit: Advancing Domestic Resources in an Era of Carbon Challenges” in December 2007. The conference featured presentations on energy independence, carbon regulation, alternate fuels and coal resources. Four state governors and seven governors’ energy advisers participated in the summit, which drew more than 200 participants. A 2008 Energy Summit will be held Dec. 9, 2008.
- The Center for Business and Economic Research (CBER) at Marshall University engaged in several components of work outlined in S.B. 177 related to preparation of an energy use database. The CBER created energy flow charts for the state of West Virginia for the years 2005 and 2006 describing energy production by resource, exports by resource and consumption by sector. **(See chart, West Virginia Energy flow 2005 (Trillion BTU) on next page.)** Time series data on the components of the charts were also collected and posted within CBER’s website. A report was also produced describing calculations related to inputs of water, coal, electricity, natural gas and petroleum per unit of energy product produced in the state. Additional reports included maps and data describing West Virginia’s coal transportation infrastructure for waterborne, rail and road modes. A dataset of school energy expenditures and calculated energy consumed per square foot of school space was also analyzed and submitted including energy consumption per student. The CBER also made an effort to collect data on state facilities although that information is not yet available in sufficient quantity to be usable as a baseline for future energy consumption.



- Coal/biomass to liquids activities include assessments of biomass harvesting/collection systems, identification of biomass resources and meetings regarding coal-to-liquid operations. Upon request, WVDOE supports the production of reports on the availability of biomass resources within 50 and 100 miles of a proposed business location.
- The division is working with a consultant to identify how coal conversion projects can be co-located with industrial facilities in PM 2.5 non-attainment regions. These regions include Charleston, Huntington, Parkersburg, the Northern Panhandle and Berkeley County. Most of these areas have been considered for advanced coal projects.
- The division provided a presentation to the West Virginia Legislature's Joint Commission on Economic Development and the West Virginia Coal Forum on coal technologies and trends in coal utilization.
- The OCCD activities for the period included:
 - The review of approximately 160 permits during the period, consisting of approximately 130 original notifications of requirement to file community impact statements (CIS). The office approved 31 new and updated CIS plans during the period.
 - OCCD approved more than 450 exemptions from requirements to file CIS plans. Most of these exemptions were granted to non-surface mine operations and permits beyond their first renewal period.

Renewable energy

- WVDOE continues to promote the development of renewable energy in West Virginia, working with project developers to locate projects including hydroelectric, wood-fired power and wind.
- As of December 2008 25 West Virginia county school systems power their school buses with biodiesel. WVDOE provided fuel labels for the more than 1,800 school buses using the fuel statewide.
- WVDOE sponsored the 2008 National Alternative Fuel Odyssey event in Fairmont, which showcased alternative fuels and vehicles available in West Virginia. The WVDOE's new Chevy Malibu hybrid vehicle was also on display.

- WVDOE sponsored bioenergy forums in Morgantown and Charleston focusing on the use and production of biodiesel as well as the challenges of growing bioenergy crops in West Virginia.
- WVDOE seeks funding from the Appalachian Regional Commission for the development of renewable energy projects on surface-mined lands.
- The West Virginia Wind Working Group, in cooperation with WVDOE, hosted its annual symposium on wind energy development in West Virginia. More than 65 representatives of the wind energy industry, government, utilities and the environmental community attended the session, which featured a presentation on the new 264 mw Shell WindEnergy, Nedpower and Dominion wind operation located at Mt. Storm, WV.
- WVDOE, in cooperation with WVUIT, has established a program to examine residential solar applications.
- WVDOE, in cooperation with Shepherd University, sponsored “Solar Solutions for West Virginia,” a conference that drew more than 200 people. As part of the conference participants installed an off-grid solar system on a campus building. The conference also featured an alternative vehicle exposition, including GM’s hydrogen fuel cell vehicle.
- WVDOE continues to sponsor the West Virginia Hydrogen Working Group, which is developing plans for the construction of two hydrogen refueling stations in Charleston and Morgantown.
- Meetings were conducted with electric utilities about the prospect of locating wood-fired electric generation facilities in West Virginia.

Energy efficiency

- Supported by WVDOE, student teams with the WVU Projects with Industry program have provided process energy analyses at Crown Industries (Weirton), Intrawest Corporation (Snowshoe) and PPG Industries (Natrium).
- Manufacturers who participated in WVDOE-supported programs, Industrial Gas Utilization and Industrial Assessment, at WVU in 2008 include Century Aluminum (Ravenswood), Al-Rec (Millwood), Techno Corp. (Glen Dale), Laurel Creek Hardwoods (Richwood), Special Metals (Huntington), Chemtura (Morgantown), Cytec Industries (Willow Island), AGC Flat Glass (Bridgeport), American Woodmark (Moorefield), Davis Lynch Glass (Star City), Shingleton Wood (Augusta), National Wood Products (Huntington), Corhart Saint-Gorbain (Buckhannon), A.L. Lee (Lester) and Marathon Domestic, LLC (Neal).
- The respective WVDOE-supported Centers for Building Energy Use (CBEU) at WVU and WVUIT have provided energy benchmarking and technical assistance in 2008 to county school systems in Brooke, Monongalia, Greenbrier, Roane, Hardy, Hampshire and Wyoming counties. Benchmarking determines a baseline of energy use against which future energy savings will be measured.
- The CBEU program has assisted two organizations in getting ENERGY STAR® building recognition for their facilities. Six schools in the Wyoming County Schools system have earned the award, the most of any county school system in West Virginia. Fairmont State University received an ENERGY STAR® building award for Morrow Hall. A building must be in the top 25 percent (in terms of BTUs of energy used per square foot) of its type nationally to receive this award.
- Legislation was passed to provide a sales tax-free holiday for ENERGY STAR® labeled appliances. From Sept. 1-7, 2008, the state’s ENERGY STAR sales tax holiday was approximated to have saved West Virginia taxpayers \$300,000. WVDOE supported this effort through a news release and media event, a four-color handout and promotion on its website.

- The West Virginia Division of Energy sponsored the current ENERGY STAR® Change-A-Light campaign. A total of 6,373 West Virginians have pledged to change 25,681 bulbs, saving \$927,095 in energy costs.
- In 2008, WVDOE has conducted 27 building lighting audits and processed more than \$162,000 in lighting grant awards.
- WVDOE sponsored advanced building practice training for more than 100 architects, engineers, building code officials and other W.Va. residents during workshops in Charleston, Huntington and Beckley.
- WVDOE was instrumental in the inclusion of the “Advanced Energy Design Guide for K-12 School Buildings” in Policy 6200, the policy governing the construction of new schools in West Virginia, as well as a directive that new schools will meet the statewide building code.
- WVDOE participated in the development of energy efficiency recommendations to state of West Virginia employees.
- WVDOE works with the Consumer Advocate Division of the Public Service Commission to explore possibilities for demand-side energy efficiency programs to be offered through the state’s utilities.
- WVDOE is part of the Mid-Atlantic Collaborate on Home Performance with ENERGY STAR, which is sharing best practices among Maryland, Delaware, the District of Columbia, Virginia, Pennsylvania and New Jersey as states develop programs to train contractors to perform residential energy retrofits.
- WVDOE participates on the Contractor Subcommittee of the Interagency Housing Council, to quantify and solve a shortage of contractors who can perform residential energy retrofits.