

Projected US Energy Future

Demand for electricity is expected to increase 1.1 percent annually through 2030.¹

- ▶ Coal will increase its share of electricity generation to 54 percent by 2030, up from 49 percent today.
- ▶ Natural gas will decline from 22 percent to 14 percent due to the increased cost of bringing natural gas to market.
- ▶ Nuclear energy will expand its output, yet its share of electricity generation will remain stable at 18 percent.
- ▶ Renewables will increase to 14 percent--up from 9 percent in 2006--as a result of state renewable portfolio standards (RPS).



Demand for oil and other liquid fuels will increase by approximately 10 percent by 2030.²

- ▶ The price of oil will increase due to strong international demand and limited supply options.
- ▶ The share of oil from OPEC to the world market will remain steady at 40 percent and Brazil and central and southwestern Asia will increase their production.
- ▶ Domestic petroleum production will increase by 500,000 barrels per day over today's numbers of 5,000,000 barrels per day.
- ▶ A greater use of biofuels will result from the Energy Independence and Security Act of 2007, which mandates 36 billion gallons of biofuels by 2022.

Low carbon sources, such as renewable energy, will become more common.³

- ▶ An increased share of electricity will come from renewable sources driven by state RPS.
- ▶ An increased use of biofuels, particularly advanced biofuels such as cellulose, will result in lower GHG emissions from the transportation sector.
- ▶ Nuclear energy will continue to play a strong role in electricity generation.
- ▶ However, GHG emissions are projected to rise 16 percent between 2006 and 2030, as carbon capture and sequestration (CCS) is not forecasted to come online.

Policy actions and circumstances likely to alter the projections:

- ▶ Legislation mandating CCS—or establishing a federal cap and trade program-- could limit coal production and alter the balance of generation from coal.
- ▶ If the federal Production Tax Credit is allowed to lag, generation from renewable energy could stall.
- ▶ If biofuels prove prohibitively expensive and/or face other hurdles, the mandate might be eased and a greater reliance on imported oil could result.

¹ Energy Information Administration, Annual Energy Outlook 2008 with Projections to 2030, June 2008. Accessed from [http://www.eia.doe.gov/oiaf/aeo/pdf/0383\(2008\).pdf](http://www.eia.doe.gov/oiaf/aeo/pdf/0383(2008).pdf), on November 3, 2008, pp. 10–11.

² Ibid, for section, pp. 5, 7, 8 and 9.

³ Ibid, for section, pp. 11–12.

⁴ Ibid, p. 11.

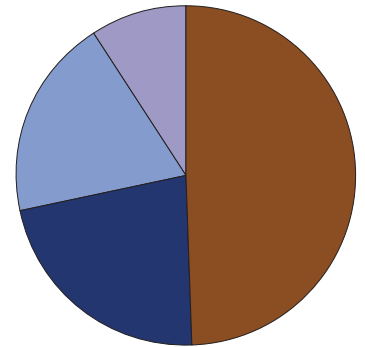
⁵ Ibid, p. 11.

⁶ EIA Electric Power Monthly, Oct 2008 Edition, chapters 1.7A, 1.10A, 1.12A, 1.13A and 1.14A, accessed from http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html on November 11, 2008.

PERCENTAGE OF ELECTRICITY GENERATED BY SOURCE BY STATE IN JULY 2007⁶

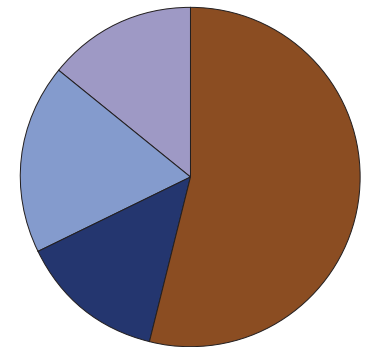
| State | Coal | Natural Gas | Nuclear | Renewables |
|----------------|------|-------------|---------|------------|
| Alabama | 51% | 20% | 24% | 5% |
| Alaska | 11% | 70% | 0% | 19% |
| Arizona | 32% | 38% | 24% | 6% |
| Arkansas | 44% | 22% | 22% | 11% |
| California | 1% | 53% | 16% | 30% |
| Colorado | 66% | 30% | 0% | 4% |
| Connecticut | 13% | 34% | 50% | 2% |
| Delaware | 63% | 36% | 0% | 1% |
| Florida | 33% | 51% | 15% | 2% |
| Georgia | 61% | 14% | 22% | 4% |
| Hawaii | 69% | 0% | 0% | 31% |
| Idaho | 0% | 8% | 0% | 92% |
| Illinois | 48% | 5% | 46% | 0% |
| Indiana | 94% | 5% | 0% | 1% |
| Iowa | 81% | 6% | 9% | 3% |
| Kansas | 69% | 9% | 19% | 3% |
| Kentucky | 97% | 2% | 0% | 2% |
| Louisiana | 25% | 54% | 17% | 4% |
| Maine | 2% | 48% | 0% | 50% |
| Maryland | 63% | 7% | 27% | 3% |
| Massachusetts | 21% | 64% | 12% | 3% |
| Michigan | 59% | 12% | 27% | 2% |
| Minnesota | 63% | 6% | 25% | 6% |
| Mississippi | 33% | 47% | 17% | 3% |
| Missouri | 79% | 8% | 10% | 3% |
| Montana | 56% | 0% | 0% | 44% |
| Nebraska | 64% | 6% | 30% | 1% |
| Nevada | 21% | 70% | 0% | 9% |
| New Hampshire | 13% | 33% | 44% | 11% |
| New Jersey | 15% | 39% | 45% | 1% |
| New Mexico | 79% | 21% | 0% | 0% |
| New York | 13% | 41% | 28% | 18% |
| North Carolina | 60% | 6% | 31% | 4% |
| North Dakota | 93% | 0% | 0% | 7% |
| Ohio | 84% | 4% | 12% | 0% |
| Oklahoma | 46% | 50% | 0% | 4% |
| Oregon | 8% | 25% | 0% | 67% |
| Pennsylvania | 54% | 13% | 33% | 1% |
| Rhode Island | 0% | 99% | 0% | 1% |
| South Carolina | 43% | 7% | 49% | 2% |
| South Dakota | 53% | 10% | 0% | 37% |
| Tennessee | 62% | 1% | 30% | 7% |
| Texas | 34% | 55% | 9% | 3% |
| Utah | 85% | 15% | 0% | 0% |
| Vermont | 0% | 0% | 92% | 8% |
| Virginia | 40% | 23% | 32% | 5% |
| Washington | 7% | 5% | 8% | 81% |
| West Virginia | 100% | 0% | 0% | 0% |
| Wisconsin | 68% | 11% | 19% | 2% |
| Wyoming | 98% | 1% | 0% | 1% |

PRIMARY SOURCES OF ELECTRICITY GENERATION 2006⁴



■ Coal
 ■ Nuclear
■ Natural Gas
 ■ Renewables

PRIMARY SOURCES OF ELECTRICITY GENERATION 2030⁵



■ Coal
 ■ Nuclear
■ Natural Gas
 ■ Renewables