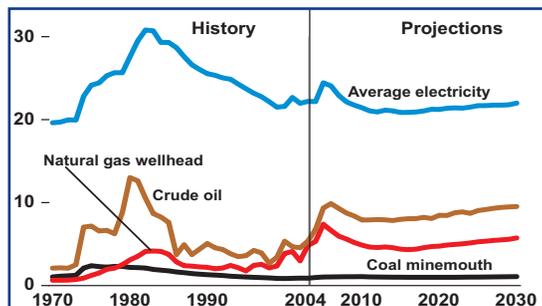


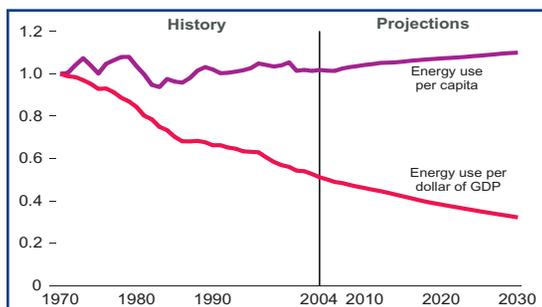
Annual Energy Outlook 2006 With Projections to 2030

Energy Prices, 1970-2030 (2003 dollars per million Btu)



- The reference case summarized in this brochure, one of the cases completed as part of the *Annual Energy Outlook 2006*, projects that world oil prices (2004 dollars), expressed in terms of the average price of imported low-sulfur crude oil to U.S. refiners, will fall from current levels to about \$47 per barrel in 2014, then rise to \$57 per barrel in 2030.
- Average natural gas wellhead prices (2004 dollars) are projected to fall from today's levels to \$4.46 per thousand cubic feet by 2016 as the availability of new import sources, such as liquefied natural gas (LNG), and increased drilling, expand available supply. After 2016, wellhead prices increase gradually, to over \$5.90 per thousand cubic feet in 2030.
- Projected average delivered electricity prices (2004 dollars) decline from 7.6 to 7.1 cents per kilowatt-hour between 2004 and 2015 as a result of a decline in natural gas prices and a slowdown in new construction. After 2015, real electricity prices are projected to increase to 7.5 cents per kilowatt-hour in 2030 as a result of increasing natural gas and coal prices.

Energy Use per Capita and per Dollar of Gross Domestic Product, 1970-2030 (index, 1970=1)



- Through 2030, projected energy use per 2000 dollar of gross domestic product (GDP) declines 1.8 percent per year and per capita energy consumption increases by 0.3 percent per year. Efficiency gains and structural shifts in the economy to less-energy-intensive industries partially offset growth in the demand for energy services, which results from population growth of 0.8 percent per year and projected economic growth of 3.0 percent per year.

Reference Case Highlights	2003	2004	2010	2015	2020	2025	2030	Growth Rate 2004-2030
Primary Energy Production (quadrillion Btu)								
Petroleum	14.40	13.93	14.83	14.94	14.41	13.17	12.25	-0.5%
Dry Natural Gas	19.63	19.02	19.13	20.97	22.09	21.80	21.45	0.5%
Coal	22.12	22.86	25.78	25.73	27.30	30.61	34.10	1.6%
Nuclear Power	7.96	8.23	8.44	8.66	9.09	9.09	9.09	0.4%
Renewable Energy	5.69	5.74	7.08	7.43	8.00	8.61	9.02	1.8%
Other	0.72	0.64	2.16	2.85	3.16	3.32	3.44	6.7%
Total Primary Energy Production	70.52	70.42	77.42	80.58	84.05	86.59	89.36	0.9%
Net Imports (quadrillion Btu)								
Petroleum	24.19	25.88	26.22	28.02	30.39	33.11	36.49	1.3%
Natural Gas	3.39	3.49	4.45	5.23	5.15	5.50	5.72	1.9%
Coal/other	-0.45	-0.42	-0.58	0.20	0.90	1.54	2.02	N/A
Total Net Imports	27.13	28.95	30.09	33.44	36.44	40.15	44.23	1.6%
Consumption (quadrillion Btu)								
Petroleum Products	38.96	40.08	43.14	45.69	48.14	50.57	53.58	1.1%
Natural Gas	23.04	23.07	24.04	26.67	27.70	27.78	27.66	0.7%
Coal	22.38	22.53	25.09	25.66	27.65	30.89	34.49	1.7%
Nuclear Power	7.96	8.23	8.44	8.66	9.09	9.09	9.09	0.4%
Renewable Energy	5.70	5.74	7.08	7.43	8.00	8.61	9.02	1.8%
Other	0.02	0.04	0.07	0.08	0.05	0.05	0.05	0.9%
Total Consumption	98.05	99.68	107.87	114.18	120.63	126.99	133.88	1.1%
Petroleum (million barrels per day)								
Domestic Crude Production	5.69	5.42	5.88	5.84	5.55	4.99	4.57	-0.7%
Other Domestic Production	3.10	3.21	3.99	4.50	4.90	5.45	5.84	2.3%
Net Imports	11.25	12.11	12.33	13.23	14.42	15.68	17.24	1.4%
Consumption	20.05	20.76	22.17	23.53	24.81	26.05	27.57	1.1%
Natural Gas (trillion cubic feet)								
Production	19.11	18.52	18.65	20.44	21.52	21.24	20.90	0.5%
Net Imports	3.29	3.40	4.35	5.10	5.02	5.37	5.57	1.9%
Consumption	22.34	22.41	23.35	25.91	26.92	26.99	26.86	0.7%
Coal (million short tons)								
Production	1083	1125	1261	1272	1355	1530	1703	1.6%
Net Imports	-18	-21	-26	5	36	63	83	N/A
Consumption	1095	1104	1233	1276	1390	1592	1784	1.9%
Prices (2004 dollars)								
Imported Low-Sulfur Light Crude Oil (dollars per barrel)	31.72	40.49	47.29	47.79	50.70	54.08	56.97	1.3%
Imported Crude Oil (dollars per barrel)	28.46	35.99	43.99	43.00	44.99	47.99	49.99	1.3%
Natural Gas Wellhead Price (dollars per thousand cubic feet)	5.08	5.49	5.03	4.52	4.90	5.43	5.92	0.3%
Coal Minemouth Price (dollars per ton)	18.40	20.07	22.23	20.39	20.20	20.63	21.73	0.3%
Electricity (cents per kilowatt-hour)	7.6	7.6	7.3	7.1	7.2	7.4	7.5	0.0%
Economic Indicators								
Real Gross Domestic Product (billion 2000 dollars)	10321	10756	13043	15082	17541	20123	23112	3.0%
GDP Chain-Type Price Index (index, 2000=1.000)	1.063	1.091	1.235	1.398	1.597	1.818	2.048	2.5%
Real Disposable Personal Income (billion 2000 dollars)	7742	8004	9622	11058	13057	15182	17562	3.1%
Value of Manufacturing Shipments (billion 2000 dollars)	5378	5643	6355	7036	7778	8589	9578	2.1%
Energy Intensity, Primary (thousand Btu per 2000 dollars of GDP)	9.51	9.27	8.28	7.58	6.88	6.32	5.80	-1.8%
Carbon Dioxide Emissions (million metric tons)	5815	5919	6365	6718	7119	7587	8115	1.2%

Notes: Quantities are derived from historical volumes and assumed thermal conversion factors. "Other" production includes liquid hydrogen, methanol, supplemental natural gas, and some inputs to refineries. Net imports of petroleum include oil, petroleum products, unfinished oils, alcohol, ethers, and blending components. "Other" net imports include coal coke and electricity. "Other" consumption includes net electricity imports, liquid hydrogen, and methanol.

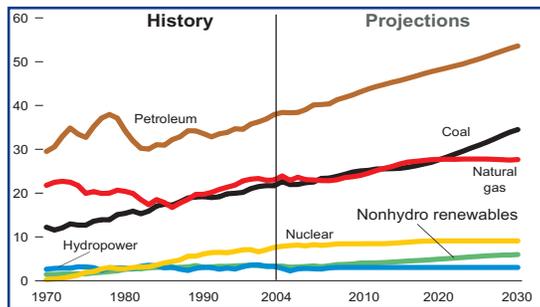
Sources: Tables A1, A19, and A20 from the forthcoming *Annual Energy Outlook 2006*, February 2006.

Visit the Energy Analysis & Forecasting Web Site at:
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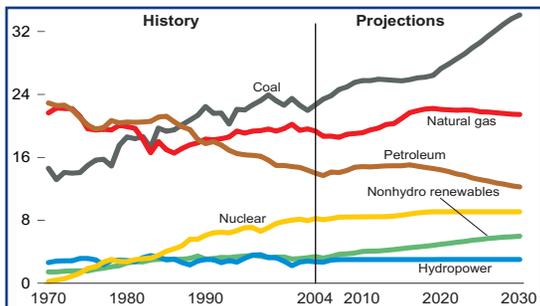
For further information, contact:
National Energy Information Center
Washington, DC
(202)586-8800 infoctr@eia.doe.gov

Energy Consumption by Fuel, 1970-2030 (quadrillion Btu)



- Projected primary energy demand grows at a rate of 1.1 percent per year through 2030. Improved equipment and building efficiency moderate energy demand growth. The transportation sector is expected to grow the most rapidly, due to increased personal and freight travel, slow stock turnover, and consumer preferences for performance over efficiency.
- Electricity demand growth is projected to slow over time, averaging 1.6 percent per year through 2030. Rapid growth in computers, other office equipment, and electrical appliances is only partially offset by improved efficiency.
- Projected natural gas demand grows at a rate of 0.7 percent per year, with the most rapid growth for electricity generation. Projected coal demand grows by 1.9 percent annually, with well over 80 percent used for electricity generation.

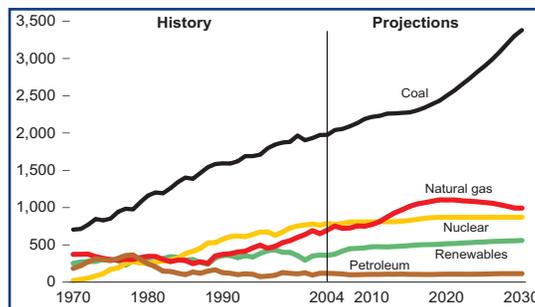
Energy Production by Fuel, 1970-2030 (quadrillion Btu)



- Projected U.S. domestic crude oil production reaches 5.9 million barrels per day in 2010 as increased offshore production offsets declines in onshore lower-48 and Alaskan production. Production remains relatively constant through 2016 before it begins to decline, falling to 4.6 million barrels per day in 2030. Net petroleum imports rise as domestic production falls, accounting for 62 percent of demand by 2030, up from 58 percent in 2004.
- Total natural gas supply is projected to increase to 26.5 trillion cubic feet in 2030, with major contributions from LNG imports, the completion of an Alaskan natural gas pipeline in 2015, and domestic unconventional production. Net LNG imports are projected to increase to 4.4 trillion cubic feet in 2030, production from Alaska reaches 2.1 trillion cubic feet by 2030, and unconventional production grows to 9.5 trillion cubic feet in 2030.

- Domestic coal production grows at a rate of 1.6 percent per year, from 1,125 million tons in 2004 to 1,703 million tons in 2030 as coal captures electricity generation market share from natural gas and as coal use for coal-to-liquids production grows.

Electricity Generation by Fuel, 1970-2030 (billion kilowatthours)



- Electricity generation from natural gas, coal, nuclear, and renewable fuels is projected to increase by 2030. Coal remains the primary fuel for generation with its share of generation increasing from 50 percent in 2004 to 57 percent in 2030. The natural gas share of generation decreases from 18 percent in 2004 to 17 percent in 2030.
- Nuclear generation increases over the forecast, as the capacity at some facilities is updated and 6 gigawatts of new capacity is added in response to incentives provided in the Energy Policy Act of 2005.
- Nonhydroelectric renewable technologies are projected to grow rapidly, but their contribution is expected to remain small. Fossil technologies, particularly coal and natural gas, are expected to dominate new capacity additions.
- Carbon dioxide emissions from energy use grow by 1.2 percent per year from 5,919 million metric tons in 2004 to 8,115 million metric tons in 2030 due to growth in fossil fuel demand and slow penetration by renewables and only a modest increase in nuclear generation.
- The carbon dioxide emissions intensity of the U.S. economy is projected to fall from 550 metric tons per million dollars of GDP in 2004 to 377 metric tons per million dollars of GDP in 2025—an average decline of 1.8 percent per year—and to 351 metric tons per million dollars of GDP in 2030.

Annual Energy Outlook 2006

With Projections to 2030

