

Table 1. Summary of AEO2004 Cases

Case name	Description	Integration mode
Reference	Baseline economic growth, world oil price, and technology assumptions	Fully integrated
Low Economic Growth	Gross domestic product grows at an average annual rate of 2.4 percent from 2002 through 2025, compared to the reference case growth of 3.0 percent	Fully integrated
High Economic Growth	Gross domestic product grows at an average annual rate of 3.5 percent from 2002 through 2025, compared to the reference case growth of 3.0 percent	Fully integrated
Low World Oil Price	World oil prices are \$19.04 per barrel in 2025, compared to \$26.57 per barrel in the reference case	Fully integrated
High World Oil Price	World oil prices are \$33.05 per barrel in 2025, compared to \$26.57 per barrel in the reference case	Fully integrated
Residential: 2004 Technology	Future equipment purchases based on equipment available in 2004. Existing building shell efficiencies fixed at 2004 levels	With commercial
Residential: High Technology	Earlier availability, lower costs, and higher efficiencies assumed for more advanced equipment. Heating shell efficiency increases by 13 percent from 2001 values by 2025.	With commercial
Residential: Best Available Technology	Future equipment purchases and new building shells based on most efficient technologies available. Heating shell efficiency increases by 18 percent from 2001 values by 2025	With commercial
Commercial: 2004 Technology	Future equipment purchases based on equipment available in 2004. Building shell efficiencies fixed at 2004 levels.	With residential
Commercial: High Technology	Earlier availability, lower costs, and higher efficiencies assumed for more advanced equipment. Heating shell efficiencies for new and existing buildings increase by 8.75 and 6.25 percent, respectively, from 1999 values by 2025.	With residential
Commercial: Best Available Technology	Future equipment purchases based on most efficient technologies available. Heating shell efficiencies for new and existing buildings increase by 10.5 and 7.5 percent, respectively, from 1999 values by 2025.	With residential
Industrial: 2004 Technology	Efficiency of plant and equipment fixed at 2004 levels.	Standalone
Industrial: High Technology	Earlier availability, lower costs, and higher efficiencies assumed for more advanced equipment	Standalone
Transportation: 2004 Technology	Efficiencies for new equipment in all modes of travel are fixed at 2004 levels	Standalone
Transportation: High Technology	Reduced costs and improved efficiencies are assumed for advanced technologies.	Standalone
Integrated 2004 Technology	Combination of the residential, commercial, industrial, and transportation 2004 technology cases, electricity low fossil technology case, and assumption of renewable technologies fixed at 2004 levels	Fully Integrated
Integrated High Technology	Combination of the residential, commercial, industrial, and transportation high technology cases, electricity high fossil technology case, high renewables case, and advanced nuclear cost case.	Fully Integrated

Table 1. Summary of AEO2003 Cases (Continued)

Cases	Description	Integration Mode
Electricity: Advanced Nuclear Cost	New nuclear capacity is assumed to have 10 percent lower capital and operating costs in 2025 than in the reference case	Fully integrated
Electricity: Nuclear AP1000 Case	New nuclear capacity is assumed to have lower capital costs, based on vendor goals for the AP1000 reactor	Fully Integrated
Electricity: Nuclear Vendor Estimate Case	New nuclear capacity is assumed to have lower capital costs, based on vendor goals for the AP1000 and CANDU reactors	Fully Integrated
Electricity: High Demand	Electricity demand increases at an annual rate of 2.5 percent, compared to 1.8 percent in the reference case	Partially Integrated
Electricity: Low Fossil Technology	New advanced fossil generating technologies are assumed not to improve over time from 2004	Partially Integrated
Electricity: High Fossil Technology	Costs and efficiencies for advanced fossil-fired generating technologies improve by 10 percent in 2025 from reference case values	Partially Integrated
Electricity: DOE Fossil Goals	Costs and/or efficiencies for advanced fossil-fired generating technologies improve from reference case values, based on Department goals	Partially Integrated
Renewables: Low Renewables	New renewable generating technologies are assumed not to improve over time from 2004	Fully Integrated
Renewables: High Renewables	Levelized cost of energy for nonhydropower renewable generating technologies declines by 10 percent in 2025 from reference case values	Fully Integrated
Renewables: DOE Goals	Lower costs and higher efficiencies for central-station renewable generating technologies and for distributed photovoltaics, approximating U.S. Department of Energy goals for 2025. Includes greater improvements in residential and commercial photovoltaic systems, more rapid improvement in recovery of industrial biomass byproducts, and more rapid improvement in cellulosic ethanol production technology.	Fully Integrated
Oil and Gas: Slow Technology	Cost, finding rate, and success rate parameters adjusted for 50-percent slower improvement than in the reference case	Fully integrated
Oil and Gas: Rapid Technology	Cost, finding rate, and success rate parameters adjusted for 50-percent more rapid improvement than in the reference case.	Fully integrated
Coal: Low Mining Cost	Productivity increases at an annual rate of 2.9 percent, compared to the reference case growth of 1.3 percent. Real wages and real mine equipment costs decrease by 0.5 percent annually, compared to constant real wages and equipment costs in the reference case.	Fully integrated
Coal: High Mining Cost	Productivity decreases at an annual rate of 0.6 percent, compared to the reference case growth of 1.3 percent. Real wages and real mine equipment costs increase by 0.5 percent annually, compared to constant real wages and equipment costs in the reference case.	Fully integrated