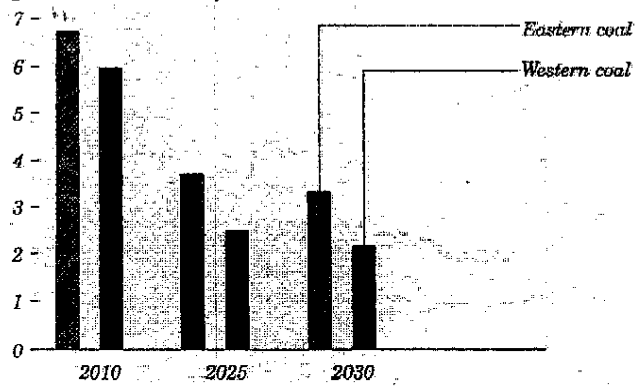
Rising Regional Coal Transportation Rates Depart from Historical Trend

Figure 101. Changes in regional coal transportation rates, 2010, 2025, and 2030 (percent increase from 2004 rates)



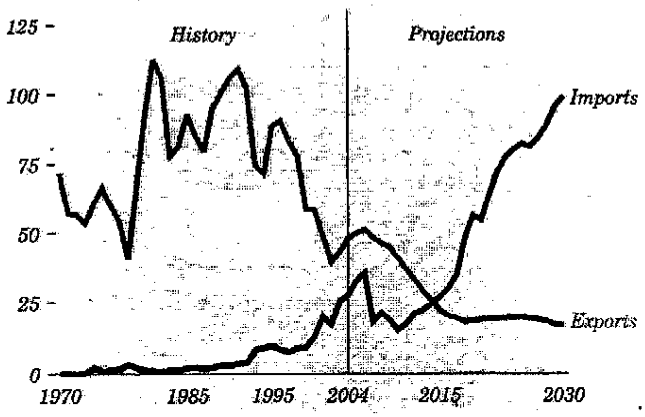
Coal transportation rates (in constant 2004 dollars), rise in the reference case, ending the decreasing trend of the past 20 years. Historically, infrastructure investments and subsequent overcapacity, as well as the efficiency gains associated with consolidation of the railroad industry, have steadily reduced coal transportation rates. Productivity improvements continue in the forecast, but they are dampened by larger demands on rail infrastructure and an expectation that investments will be made incrementally, as needed, rather than in anticipation of higher demand.

Periodic bottlenecks are likely as railroads adapt to increasing traffic flows from western mines and changing coal distribution patterns in the East. In constant dollars, coal transportation costs peak in 2010, then fall to 2.2 percent and 3.3 percent above 2004 levels in 2030 for coal originating in the West and East, respectively (Figure 101). In general, western suppliers are at a greater disadvantage than eastern suppliers when transportation rates rise, because western coal typically travels over longer distances.

Despite the increases in transportation rates, the national average continues to decline, because 76 percent of the increase in demand from 2004 to 2030 is from CTL plants and new electric power plants, many of which are expected to be built near sources of coal supply. In 2030, the average coal transportation rate for new electric power capacity is $7.14 per short ton (2004 dollars), compared with $8.63 for existing capacity.

Demand for Imported Coal Increases in the East and Southeast

Figure 102. U.S. coal exports and imports, 1970-2030 (million short tons)



U.S. imports of low-sulfur coal rise from 27 million tons in 2004 to 99 million tons in 2030 (Figure 102). In addition to further displacement of more expensive Central and Southern Appalachian coal at existing power plants, imports fuel some of the new coal-fired generating capacity expected to be built in the U.S. East and Southeast. Much of the additional import tonnage originates from mines in Colombia, Venezuela, and Indonesia.

U.S. coal exports have been in steady decline from their 1996 level of 90 million tons, falling to 40 million tons in 2002, despite a substantial increase in world coal trade (from 503 million tons to 656 million tons). Low-cost supplies of coal from China, Colombia, Indonesia, Russia, and Australia satisfied much of the growth in international demand for steam coal during the period, and low-cost supplies of coking coal from Australia supplanted substantial amounts of U.S. coking coal in world markets. Since 2002, however, U.S. exports have rebounded, including increases in steam coal exports to Canada in 2003 and coking coal to overseas customers in 2004.

Although U.S. exports remain near their 2004 level for the next several years, their share of total world coal trade ultimately falls from 6 percent in 2004 to 1 percent in 2030, as international competition intensifies and imports of coal to Europe and the Americas (excluding the United States) grow more slowly or decline. With the planned decommissioning of Ontario's five coal-fired generating plants, U.S. coal exports to Canada decline from 19 million tons in 2004 to 7 million tons in 2030.