

INTRODUCTION

Although small quantities of coal were first produced from the Appalachian basin in the early 1700s, the first production statistics of significance were gathered during the census of 1830 (Evenson, 1942). Since then, about 35 billion tons of bituminous coal have been produced from the Appalachian basin from an original potential coal reserve (PCR₀) estimated to range from about 60 to 90 billion tons. The term "reserve" refers to economically producible coal and a "potential coal reserve" (PCR₀) is an estimate of the amount of coal economically recoverable in a region (state, coalfield) over a defined time period (n = number of years) and under a range of economic, societal, and technological conditions. Thus, the current cumulative production plus the PCR₀ equals an estimated cumulative production (ECP₀). This series of maps (plates 1-4) was produced from a digital data base of historical and current coal production records by county. Sources of the original data include various State geological surveys; the U.S. Geological Survey; the former U.S. Bureau of Mines; and the U.S. Department of Energy's Energy Information Administration. This report is part of the U.S. Geological Survey's National Coal Resource Assessment Project.

The Appalachian basin consistently has led all other regions of the country in coal production, and, until 1970, produced 70 percent or more of the coal produced in the Nation (fig. 1). Since 1970, however, the relative amount of coal coming from the Appalachian basin has declined from about 70 percent to 43 percent. Historically, coal production from the Appalachian basin may be divided into three economically driven cycles: (1) from the inception of exploration and development of the resource through World War I (1914) to the Depression; (2) from the Depression through World War II (1944) to the production decline in 1961; and (3) from 1961 through the current period of increasing demand for coal by the electric power industry (fig. 2). Annual coal production from the Appalachian basin has not yet begun to decline during this third production cycle, in spite of rigorous competition from other areas of the country, or because of lessening demand or depletion of the more economically producible coal beds.

This report on Appalachian basin coal production consists of four maps, associated graphs and tables, and the basic data that were used to construct the maps. Sheet 1 shows the decade of maximum coal production by county (see data base for annual coal production figures and the specific year of maximum production). Sheet 2 shows the amount of coal produced (in tons) during the year of maximum coal production for each county. These data are sorted by decade. Sheet 3 illustrates the cumulative coal production (in tons) for each county since about the beginning of the 20th Century. Sheet 4 shows 1996 annual production by county.

YEAR OF MAXIMUM COAL PRODUCTION BY COUNTY

The map on sheet 1 shows the decade in which each county attained its year of maximum coal production and is designed to be used in conjunction with the other three maps in this report (sheets 2, 3, and 4). General conclusions about the remaining coal reserves in any given county may be made from these maps. For example, a county that produced 20 to 40 million tons of coal in 1935, has a cumulative production greater than 1 billion tons, and currently is producing less than 5 million tons of coal a year is probably near economic depletion.

Maximum production of coal from individual counties generally occurred first around the edges of the Appalachian basin and near the major population centers, especially in the industrial northeast. During the past decade, however, production reached a maximum in several counties in the central part of the basin in eastern Kentucky, southern West Virginia, and southwestern Virginia. Greene County, Pa., is the only county in the deep, northern part of the Appalachian basin where coal production is currently approaching a maximum.

EXPLANATION

Decade

- 1990-1996
- 1980-1989
- 1970-1979
- 1960-1969
- 1950-1959
- 1940-1949
- 1930-1939
- 1920-1929
- 1910-1919
- Prior to 1910

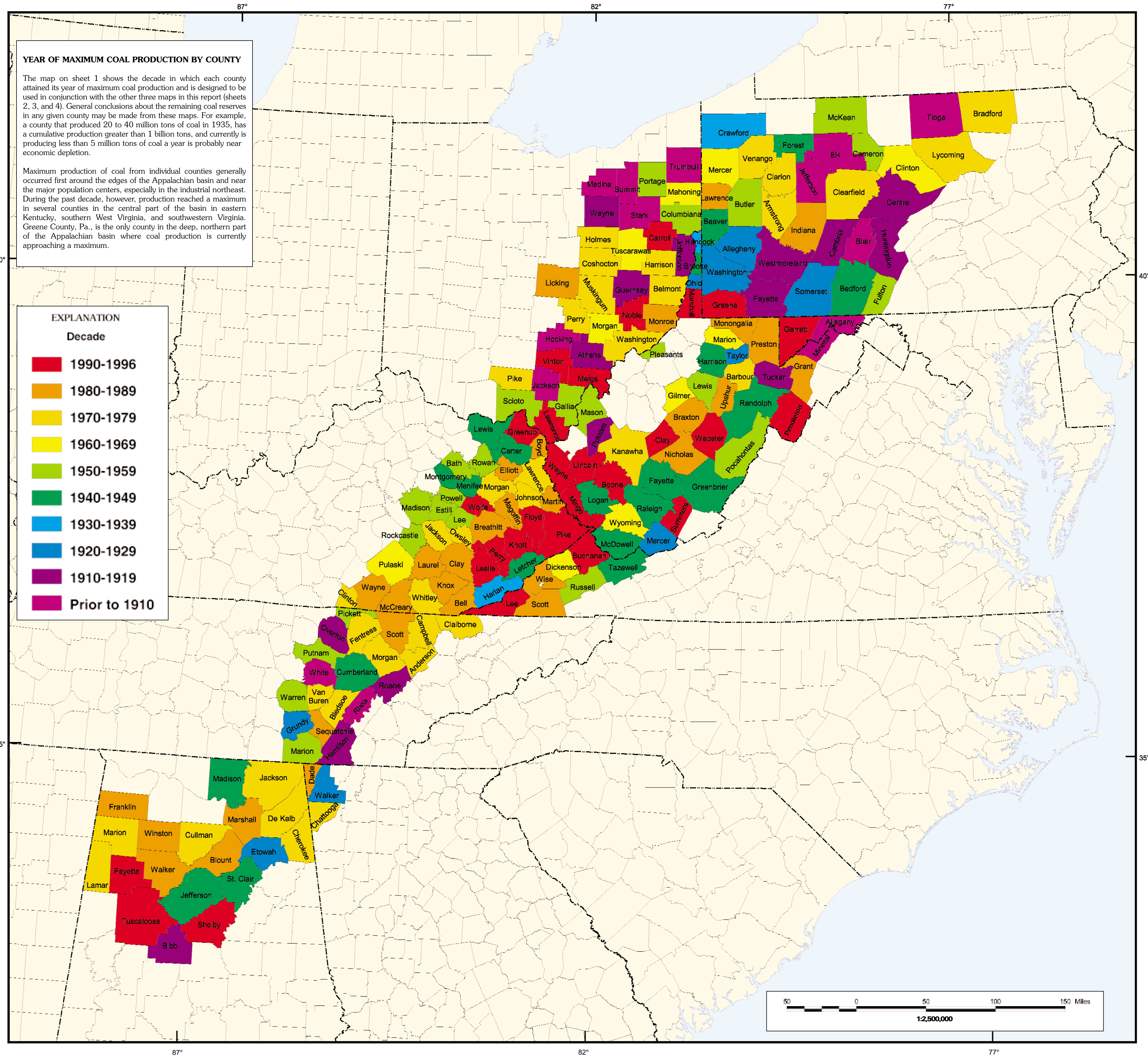


Figure 1. Graph showing percent of U.S. coal production by region.

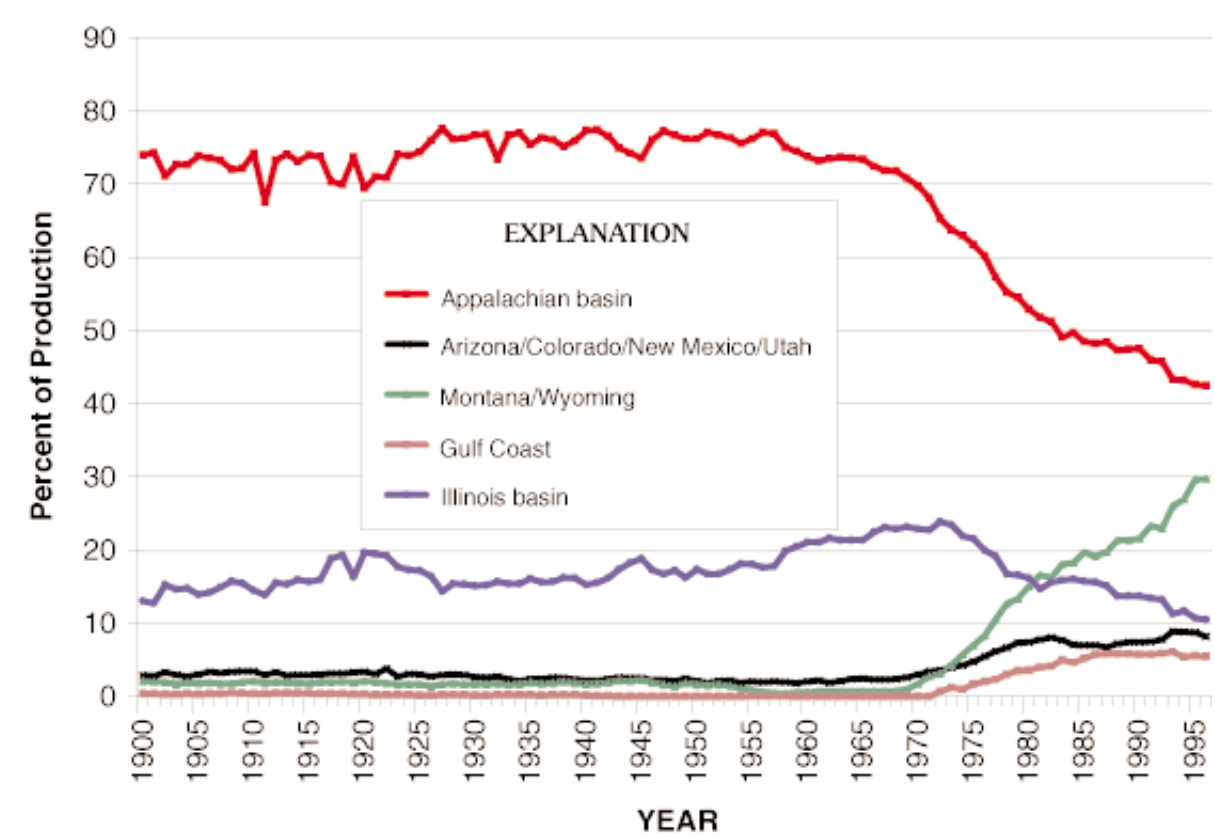
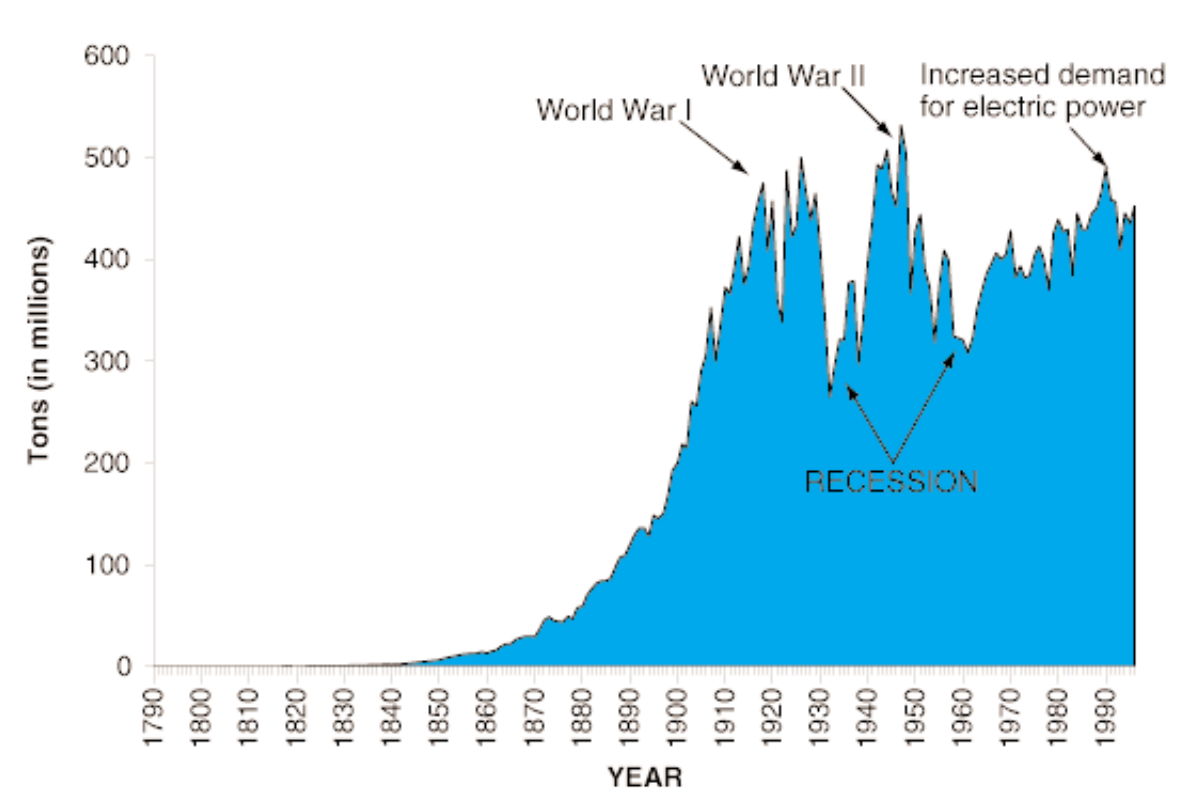


Figure 2. Graph showing peak coal production in the Appalachian basin.



YEAR OF MAXIMUM COAL PRODUCTION BY COUNTY

BITUMINOUS COAL PRODUCTION IN THE APPALACHIAN BASIN—PAST, PRESENT, AND FUTURE

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