

## THE UNITED STATES: OIL PRODUCER IN DECLINE

### *A. U.S. Energy Supply and Demand*

In common with other industrialized countries, the U.S. energy system has experienced a profound transition in the twentieth century. Coal, commercially mined in the United States for two and one-half centuries, was the major fuel during the industrial transformation of the late nineteenth century. As recently as 1945, coal satisfied half of the domestic demand for primary energy.

In the decade following World War II, consumption of coal fell sharply as crude oil and natural gas moved in tandem to supplant its use. From a 51% share of primary energy demand in 1945, coal fell to 29% in 1955. Figure 24 displays the evolution in U.S. primary energy demand since 1945. In 1984, crude oil satisfied 42.1% of primary energy demand; natural gas and NGL accounted for 24.6%; coal for 23.3%; hydro-electricity for 5.2%; and nuclear-electricity for 4.8%. Note that Figure 24 excludes the consumption of fuelwood (which has accounted for less than 5% of U.S. energy use throughout the postwar period); the chart displays relative shifts in the consumption of oil, gas, coal and primary electricity.

Natural gas continues to be the fuel most readily substitutable for oil in the United States. Although U.S. gas resources are considered to be larger than those of conventional oil, the recent collapse in world oil prices reduced petroleum drilling activity and new gas reserves are not being established at a rate commensurate with the anticipated growth in demand for this fuel. The National Petroleum Council claims that excessive regulation of the natural gas sector has worked against the efficient production, transportation and use of this resource.

Despite increasing efficiency in energy use, the United States continues to consume substantially more energy than it produces. This inability to match energy demand with supply is displayed in Figure 25. U.S. energy supply and demand were roughly in balance until domestic oil output peaked in 1970 and a gap quickly developed. The shortfall in energy supply may become more pronounced in the future. Conventional crude oil output is almost certainly on its way down; future natural gas production has been hurt by low prices, short-term excess producing capability and a complicated regulatory regime; the prime hydro-electric sites in the United States have been exploited; and the nuclear-electric power program is in disarray. Only coal seems in a strong position among the conventional energy forms to increase its share of the energy market, and even here the environmental concerns stemming from expanded coal use, particularly with respect to acid rain, are mounting.