public pledge to Doko to balance the budget by 1985.

The current Prime Minister, Yasuhiro Nakasone, is not bound by such a promise. But nobody in Japan was surprised that Nakasone's first official visitor after he took office was Toshio Doko.

## A Soviet Oil Squeeze?

"Is There an Energy Crisis in the Soviet Union?" by Jonathan Kamin, in *East European Quarterly* (Sept. 1983), 1200 University Ave., Boulder, Colo. 80309.

The Soviet Union possesses 59 percent of the world's known reserves of coal, 30 percent of all natural gas. It pumps more oil (12.1 million barrels per day) than any other nation. Yet it may be on the brink of a major energy crisis.

The U.S. Central Intelligence Agency estimates that Soviet oil output will drop to 10 million barrels daily by 1985. Mismanagement explains some of Moscow's woes, writes Kamin, a Northwestern University researcher. Soviet planners' pursuit of short-term gains over long-term potential is now paying grim dividends. To speed extraction, for example, the Soviets pump water under high pressure into oil wells. At first, the wells yield more oil, but gradually water dilutes the flow and cuts productivity. (The average Soviet well now pumps 50 percent water.)

The Soviets would have to boost output in oil-rich Siberia by 70 percent during the next few years to compensate for the loss of production in such wells. But in a region where the ground can freeze a mile deep in winter, development is costly and total success unlikely. To make up for the shortfall, Soviet planners hope to generate 20–25 percent of the nation's electricity from nuclear power by 1990, compared with six percent today, and to accelerate coal production. Kamin thinks their targets are unrealistic.

Could conservation ease the Soviet oil squeeze? There will be no relatively painless cuts in gasoline consumption as there were in the United States after 1974. Since there is only one car for every 42 people, autos are not big consumers. Industry, which accounts for 59 percent of Soviet energy use, could conserve by investing in energy-efficient machinery, but Moscow has to spend most of its available cash on expanding oil, gas, and coal production. Given autonomy, individual factory managers could cut energy use, but liberalization is anathema to Moscow.

The only bright spot for Moscow appears to be natural gas, which promises to replace oil as the nation's chief energy source by 1990. Gas exports to Western Europe will probably bring in \$1.6 billion annually in hard currency through the year 2000, allowing the Soviets to buy much-needed Western energy technology.

Even so, Kamin believes, the Soviets face hard times. So do their Eastern European clients, who rely on the Soviet Union for much of their fuel. Barring an unlikely about-face in Moscow on economic reform, massive investments will be needed in the Siberian oil fields—money that will come out of the pockets of Soviet workers.