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CAN THE GOAL OF THE ADMINISTRATION'S
NATIONAL ENERGY PLAN BE MET?

by

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presented to

National Conference on Financing U.S.
Energy Requirements

co-sponsored by

The Bureau of National Affairs'
Energy Users Report

and

The Council For Energy Studies

August 1, 1977

It is now three months since the Administration unveiled its National Energy Plan. While we don't know quite how the Plan will look after it has passed through the political screen of both Houses of Congress, so far it has lived up to early expectations that the key features of the Plan would, with some modifications, be acceptable to Congress and would eventually become the law of the land. Up to now, most of the changes have been in the direction of blunting the impact of the Plan on both energy users and energy producers without changing its structure. The dropping of the gasoline stand-by tax, the changing of the industrial fuel users tax into a two-tier system and the more liberal definition of "new" oil and gas production than in the Administration's Plan are examples of these modifications which are significant but peripheral to the core of the Plan.

Oil Imports In 1985

As the Plan makes its way through Congressional committees, it is becoming increasingly clear that even without the modifications, the Administration's energy policy is something less than "the moral equivalent of war", as the President called it when he presented it to the public. It is not even a radical departure from the energy policy of the previous Administration, but rather, builds on it. As a result, more and more analysts of the Plan, in Congress, academia and business, have come to the conclusion that it is unlikely to achieve, or even approach, its target of a 6 million b/d oil import level in 1985, any more than would have the previous Administration which had set itself

the same target. Recent reports by the General Accounting Office, the Congressional Budget Office and the Congressional Research Service of the Library of Congress all come, implicitly or explicitly, to this conclusion. The same can be said of the forecasts to 1985 made by oil, gas and coal industry analysts.

The projected shortfall from its target is not necessarily a condemnation of the Plan. It merely means that a reduction of oil imports from this year's level of 8.5 million b/d to 6 million b/d in eight years, in the face of even a very modest increase in oil demand, is an overly ambitious target. If the Plan contributes to limiting imports to 9.5-10.0 million b/d in 1985, which may be feasible under optimistic assumptions, it could still be considered a success when contrasted to the likely level of 12 million b/d in the absence of any energy policy designed to curb the growth in oil imports.

Availability Of Foreign Oil

The question of whether 9.5-10 million b/d of imports would be available for the U.S. in 1985 without creating a global shortage can be answered with an unequivocal yes on the basis of potential productive capacity around the world. The same answer applies with a slightly lower degree of probability for 1990. However, whether actual production levels in OPEC will be allowed to rise from last year's 31 million b/d to about 41 million b/d in 1985, the likely volume required to meet a world import demand which includes 10 million b/d for the U.S., is less certain, since OPEC production levels are determined by each country's own political, economic and resource considerations. Thus, while there is no question

about OPEC's capacity to produce the required amount (it could almost do so now), there is some question about its collective willingness to do so. This is where the risk lies in the next 10-12 years, not in the adequacy of the resource base.

Let us now return to the U.S. situation and briefly examine some of the reasons that the President's import target of 6 million b/d is unlikely to be met. I believe most of them are likely to be found on the demand side. The Plan's 1985 supply targets for the various domestic fuels might be reached under optimistic assumptions, although more emphasis on producer incentives and less producer regulation would increase the probability of doing so, especially in the case of natural gas.

Coal's Role In The Energy Plan

One major reason the Plan will fall short of its target is its excessive reliance on coal as a substitute for oil and gas as an industrial fuel. It foresees an increase in total industrial coal demand of 273 million tons, or 163%, between 1976 and 1985. Since nearly 60% of industrial coal demand last year consisted of coking coal whose future demand is a function of steel production and, hence, is not affected by energy policy, virtually the entire increase would have to come from industries using coal as boiler fuel. Last year these industries used 61 million tons of coal. By 1985 they would have to use 5 or 6 times as much to meet the Administration's goal. This would require not only that virtually all new industrial plants use coal but also that a very large number of existing plants convert to coal. From the point of view of boiler availability, conversion cost, plant location and maintenance

of air quality standards this is clearly not feasible. The House Ways and Means Committee has recognized this by changing the Administration's proposed industrial user tax on oil and gas to a two-tier system with a substantially lower rate for industries that cannot convert. In addition, it has exempted a number of industries from the requirement to use coal even in new plants. The Administration has estimated that the changes will increase oil import requirements in 1985 by 1.8 million b/d. Yet, it is unlikely that industrial coal consumption would be substantially higher even under the Administration's proposals. Oil and gas consumption might be somewhat lower because some existing plants would be forced to curtail operations and some new plants would not be built. But this sort of reduction would come at the expense of employment and, thus, would conflict with the Administration's stated policy in another area.

GNP Growth And The Energy Plan

This brings me to the second major reason the Administration's oil import target will not be met. The plan foresees a 2.3% growth rate in energy demand and a 4.3% growth rate in the real GNP from 1976 through 1985. This would mean a substantially slower energy growth rate and a substantially faster GNP growth rate than the historical average. It implies that every percentage point change in the GNP will be accompanied by just over half a percentage point change in energy consumption. Prior to 1973 the long term energy/GNP ratio fluctuated around 1.0. Last year it was about 0.8. This year it will be about the same. There is no question that with planned energy conservation and improvements in

energy technology the energy/GNP ratio can be progressively reduced. By the mid-1980's it may reach a level close to 0.5. But to assume such a level for the entire 9-year period, as the Plan does, is unrealistic. The principal form of energy conservation is through replacement of the capital stock such as automobiles, houses, appliances, utilities and industrial plants. Obviously, this takes time. Furthermore, initially, the energy savings are likely to be at least partly offset by the additional amount of energy expended in bringing the savings about. Also, energy efficiency improvements do not always reduce oil and gas consumption by the full amount of the savings. An example is the replacement of steel by plastic material to make automobiles lighter and therefore more fuel efficient. The principal energy component of steel is of course coal, while plastics are made from oil or gas.

So, when the Administration forecasts "a healthy annual pace of 5% or more" in the GNP growth for the second half of this year and hopes to maintain the same rate next year, it cannot expect a simultaneous drastic drop in the energy growth rate. Through 1985 that rate will therefore be higher than projected in the Plan but lower than the historic rate. If it can be held to 2.6-2.7% annually, this could still be considered a significant achievement. Yet it would increase oil and gas import requirements in 1985 by 1.4-1.8 million b/d above the Plan's target.

Voluntary Energy Conservation

Finally, in arriving at its 6 million b/d import target, the Plan assumes voluntary additional oil conservation of at least 1 million b/d which would be equal to about 7% of the projected oil demand in the Plan.

Why would the public make such a significant further reduction which would not directly result from the higher prices nor the mandated or encouraged conservation measures contained in the Plan? The answer is that it probably would not. There was no indication whatever of such a voluntary consumption curtailment last year or in the first half of this year, nor should it be realistically expected. Oil is not in short supply now nor has it been in the past except for such extraneous short term reasons as war in the Middle East or the freezing of rivers and harbors during an exceptionally cold winter. This situation can be expected to continue for at least the next 6 to 7 years at any likely oil import level. Thus, with supplies readily obtainable now and in the foreseeable future, the public will buy whatever fuel it can afford at prevailing prices for its existing equipment. Significant voluntary energy self-restrictions in the absence of a visible or immediately looming real shortage are therefore unlikely. Left to itself, the public can be expected to react rationally to market conditions as it perceives them but not to market predictions for which it sees no evidence.

When the President's National Energy Plan is adjusted for all these qualifications and some others which I have not mentioned here, it becomes clear not only that the 6 million b/d target is unachievable but that keeping imports at or slightly below 10 million b/d in 1985 will be quite an achievement. Thus, the Plan's principal failure lies not in its structure but in its expectations. I doubt whether any Plan

that would really reduce imports to 6 million b/d within that time frame would be politically and economically acceptable to the present Administration or Congress or consumers.

Neglect Of Shale Oil and Synthetic Fuels

This does not mean that the structure of the Plan could not be improved, particularly on the supply side. Let me briefly suggest one improvement: The Plan shows surprisingly little interest in shale oil and coal-based synthetic fuels. It permits private companies to spend their funds in this very risky and unchartered area. But there is virtually no active support from the government beyond the research stage in the development of these potentially enormous resources.

It is somewhat surprising that an Administration which by its actions and proposals has made it clear that it does not have much faith in the effective working of the market mechanism in the energy sector is willing to leave such an important activity entirely to the profit motives of private companies. Where the previous Administration went too far with its proposed \$100 billion Energy Independence Authority, this Administration is clearly not going far enough in encouraging the speedy development of these resources.

It would seem that a program of government loans or guarantees or minimum prices or direct participation, or a combination of these, could make a significant contribution in helping to speed up the commercial utilization of these resources, or at least determine to what extent they can be commercially utilized. If the government's assumption of a world oil resource crisis in the 1990's is correct, we have literally no time to lose in the development of these new fuels.