

What Is The True Energy Picture?

By ROBERT C. ANDERSON

The energy situation is probably the single most important issue facing our society today. The basic issue is whether adequate energy supplies will be available at a reasonable cost to drive the economy or whether shortages and unnecessarily high prices will act as constraints to development. Our actions during the next few years to resolve our energy problems will determine the level and type of economic development that will occur both at the State and national levels in the future. They will also determine, to a large extent, our standard of living and life styles.

As recent events have shown, we are at a crossroad concerning energy. We can no longer afford to take either availability or price for granted. We are moving from a situation of abundant low cost energy to a future of energy-related supply problems and uncertainties.

From an economic development standpoint, it is feasible to maintain a healthy and growing economy with a much lower rate of energy consumption than we have had in the past. This will require that the transition to lower growth rates in consumption be properly managed.

We know that: Energy, in most cases, is still a relatively small percent of total production costs. Industries can adjust to gradually rising prices. Industry has great difficulty in adjusting to rapid price increases or precipitous reductions in supply, etc. We need to develop programs that will result in gradual adjustments over time, rather than create disruption.

As Energy prices rise, as a matter of business and basic economics, energy efficiency will improve substantially. By energy efficiency, I mean more output per unit of energy input.

It will mean more fuel efficient cars, more efficient buildings and products and placing greater emphasis on the development of new and improved industrial techniques as well as conservation. It does not mean a back-to-the-caves reduction in amenities, quality of products, working conditions, etc. At the consumer level, it will mean less of some things as consump-

tion patterns are adjusted to compensate for higher energy prices and more limited supplies.

Increasing energy efficiency in the industrial sector, as well as the residential and commercial sectors, would reduce or moderate (notice I don't say eliminate) the need for new mines, power plants, refineries, and synthetic fuel plants, and reduce the capital outlays required for expanding our supplies of energy.

This capital could be plowed into other productivity enhancing investments that might be more economic and socially desirable, i.e. creating new employment opportunities and new and improved technology. Energy conservation is capital conservation.

A *Business Week* article discussed the current situation in terms of capital requirements of investor owned utilities. These utilities produce 77 percent of all U.S. power (May 28, 1979 "A Dark Future For Utilities").

- The article stated that "Even under the lowest growth forecast, the investor-owned utility industry figures that it will need at least \$500 billion over the next 15 years to build enough capacity to meet demand . . ." (data in current dollars).

- The same article discussed the experience of Pacific Power and Light Company in Portland, Oregon, that was recently granted authority to approach customers with an offer to insulate their homes free. In return, the utility would be granted a lien on the homeowner's mortgage to recover the cost of insulation when the home was sold.

- As of May 1979, 1,000 houses have been retrofitted (insulated), and 6,900 homeowners wanted to sign up for the program.

- The company estimates that insulating an electric home in its service area costs 1.5 cents per kilowatt hour saved, compared to more than 4 cents for producing

that same amount of power with new capacity. As the company has stated, "If we can in effect generate kilowatt hours from your house by insulating your ceiling cheaper than we can by building new power plants then it's in everybody's interest to do it.

- Other utilities, including PUD's, are looking at this and other means of load management—it's the coming thing.

It is innovative ideas such as this example, coupled with development of alternative sources of energy supplies, that are going to help the region and the nation make the required energy adjustments. This transition will not be totally smooth and not without false starts, but I'm sure that we will make it.

Washington State is not a producer of either petroleum or natural gas. We depend on our supply from domestic production in other states, Canadian and other foreign sources. Our future supplies of these energy sources are tied to the national and international energy situation. The energy resource which makes Washington and other Pacific Northwest states unique is our hydroelectric capacity. It is renewable and low cost.

It was the excess capacity in hydro generating capacity which resulted in much of the industrial diversification that occurred in Washington during and after the Second World War. Our per capita consumption of electricity is double the national average while our total energy consumption is close to the national norm. The Pacific Northwest holds 35 percent of the nation's installed hydroelectric capacity. About 80 percent of the region's total electrical power is produced by these facilities. This compares with a national average of roughly five percent.

Economic growth in the region continues to place increased pressure on this resource. We are in a situation where there are essentially no new large scale hydroelectric sites available for develop-