Alaska's Energy Policy in a Global Context

There is no historical basis for the assumption that fossil-fuel prices will increase enough in the future to make the Susitna hydroelectric project an economical source of electrical energy, according to a recent paper by Arlon Tussing, adjunct professor of economics at the Institute of Social and Economic Research and well-known energy consultant.

In his paper, "Alaska's Energy Policy in a Global Context," Tussing adds that the long-term economic viability of Susitna as well as other large-scale energy projects proposed for Alaska depend on steadily increasing fuel prices. Yet, both history and recent events tell us that the only long-term certainty about energy markets is that prices will fluctuate.

Historical Record Not Encouraging

While one hundred and thirty years of oil prices in the United States show almost constant variation, they show no long-term trends either upward or downward. Overall, prices have averaged somewhere on the order of $15 a barrel at today's prices.

The only time oil prices have remained relatively level was the period 1935-1972, when Texas producers controlled a strategic fraction of the world's discretionary oil-producing capacity, and the Texas Railroad Commission manipulated this capacity to stabilize world oil prices. This long period of stable prices led the world to shift almost wholly to oil for its industrial, electrical generation, and transportation fuels.

After 1972, control of oil prices passed temporarily to Middle Eastern oil-exporting countries. Individually and collectively they reduced their production enough to sustain the price increases that were touched off by consumer panics following the Arab embargo of 1973-74 and the 1979 Iranian revolution. But these cutbacks pushed the price of oil so high that it eventually priced itself out of the market for electric-utility and industrial fuels, and stimulated massive investments in conservation. By 1980, massive shifts were under way to cheaper coal or natural gas, and to more fuel-efficient industrial, transportation, or electrical generating equipment.

Beginning in the early 1980s this backlash resulted in a world oil surplus that is likely to continue for many years. The lesson: In the long run oil is not strategically indispensable—it is only a commodity that must compete with other fuels and other methods of providing heat, light, and motive power. At any price above $20 per barrel in today's dollars, there is no market for oil as an industrial bulk fuel or for generation of electricity, wherever coal or natural gas can be made available. This lesson, of course, also applies to coal, natural gas, and nuclear energy. There is no endlessly increasing demand for any one energy source at any price, as long as a cheaper alternative exists.

Susitna in Context of WPPSS and Other Mistakes

The recent experiences of large-scale electrical generation projects in the Pacific Northwest show the dangers of assuming that fuel prices will increase endlessly and that the demand for electricity itself is largely insensitive to price. For example, the Washington Public Power Supply System (WPPSS) invested in a nuclear future. Private utilities in several Western states invested in expensive coal-fired plants, while British Columbia's public power agency pushed toward massive hydropower development. Today, all of these agencies are having trouble selling electricity at prices that will cover the service on the debts they incurred in construction. Northwest utilities and public power agencies are all troubled by excess generating capacity bearing high fixed costs, and by a lack of local demand that is in part the result of these high costs.

Such experiences bear directly on the economic viability of the Susitna project. To undertake such a capital-intensive investment while Alaska has 20 to 70 years of proved gas reserves in Cook Inlet (with good prospects for discovering much more) and enormous undeveloped coal reserves, defies all prudence and logic. This is especially true at a time when the state is facing diminished revenues from both falling oil prices and the imminent decline of Prudhoe Bay production.
The Yukon-Pacific Plan and Market Realities

The same world market forces that affect Susitna also directly affect schemes for exporting liquefied natural gas to the Far East via a North Slope-to-tideport pipeline. The Yukon-Pacific plan for exporting North Slope gas is based on the notion that the Japanese and Koreans will surely wish to purchase Alaska’s gas, even if utilities in the lower U.S. do not. Such proposals are based on the expressed desire of the Japanese and Koreans to diversify their energy sources in order to reduce dependence on Middle Eastern energy sources. However, the Japanese and Koreans, like everyone else, still looking for diversity at the lowest possible price relative to Persian Gulf Oil. And that is the hitch. Because of the recent slide in oil prices and the possibility of further price drops, no investor—either North American or East Asian—will commit to a new oil displacement project that could not economically survive a continued downward drift in oil prices for perhaps another 10 years.

Worse yet, potential importers of LNG now have access to huge surpluses of flared or shut-in gas elsewhere in the Pacific Basin that do not require a multi-billion-dollar pipeline to reach tidewater. It is this gas-to-gas competition, rather than Middle Eastern oil prices that will henceforth determine the export value of North American LNG.

Conclusions

What is going on outside of Alaska does indeed affect energy choices in this state. If Alaskans suppose that an exceptionally expensive capital-intensive hydropower project is justified by the expectation of further increases in the price of fossil fuels and that Alaska’s natural gas and coal are more valuable as exports than as domestic fuels, they are taking the risk of replacing the lowest-priced thermal energy in North America with about the highest-cost central-station electrical generation anywhere in the world.

The argument for many high-cost energy supply ventures rests on the proposition that they will pay for themselves in 20, 30, or 50 years, even if they are uneconomic at the beginning. It should be obvious, however, that projections of energy needs, fuel costs, and technical options extending more than 20 years are merely convenient fictions, and they should have little credibility as the basis for today’s investment decisions.

This Research Summary was taken from the paper, “Alaska’s Energy Policy In a Global Context,” by Arlon Tussing. Tussing is an adjunct professor of economics with the University of Alaska’s Institute of Social and Economic Research (Anchorage) and is president of ARTA, Inc. (Seattle), an energy consulting firm. The paper has appeared in The Northern Engineer (Vol. 16, No. 2), and the September issue of the University of Alaska Magazine. Copies of the paper may be obtained for $1.00 (copying costs) from: Librarian, Institute of Social and Economic Research, 707 A Street, Suite 206, Anchorage, Alaska 99501, phone 278-4621.