Fewer jobs, lower productivity is the agenda behind the BTU tax

by Anthony Wikrent and Richard Freeman

The environmentalist agenda behind the Clinton regime's proposal to impose a tax on the number of British thermal units (BTUs) in various energy sources is clear: Oil is taxed at more than twice the rate of other fossil fuels, and "alternative" sources of energy are not to be taxed at all. Even more interesting is Clinton's original proposal to tax electric utilities operating nuclear fission reactors for more BTUs than they use, and the tax's effect of making natural gas competitive in cost with coal for the generation of electricity. This conforms to the vested interest certain people in the Clinton regime have in the natural gas industry, such as White House Chief of Staff Mack McLarty and Secretary of Energy Hazel O'Leary (see *EIR,* Feb. 26).

The tax, as proposed, will be phased in over three years beginning July 1, 1994, and take full effect starting July 1, 1996. Alternative energy sources, such as solar, wind, geothermal, and biomass, will not be taxed. Coal, natural gas, nuclear power, hydropower, and electricity will be taxed at a base rate of 25.7¢ per million BTUs. An additional 34.2¢ per million BTUs will be levied on petroleum and petroleum products, such as gasoline, jet fuel, and heating oil. Fuels consumed for non-energy uses, such as feedstocks for making chemicals or plastics, would be exempted.

The Clinton administration estimates that the tax will cost Americans $22 billion a year, according to preliminary budget estimates released in mid-February. But this figure assumes that the tax will cause a substantial decrease in energy use. According to industry analysts cited in the Feb. 23 *New York Times,* the tax will actually cost $33 billion or more. Charles DiBona, president of the American Petroleum Institute, said that the administration figures "underestimate the effect on a family of four by 50%," and that the new tax will raise retail prices for gasoline by 10¢ a gallon, not the 7.5¢ projected by the Clinton administration.

Former Energy Secretary James Schlesinger, now at Georgetown University's Center for Strategic and International Studies, said, "The numbers just don't stack up. . . . The tax turns out to be understated. The oil industry will by itself pay about $20 billion."

600,000 jobs at risk

Many industry analysts believe that the BTU tax will impair economic growth and job creation. In a press release issued in mid-February, the American Petroleum Institute claimed that the tax would eliminate $170 billion from gross domestic product and cause the loss of 600,000 jobs over five years. An API spokesman told *EIR* that those figures were obtained from a study of the probable effect of the BTU tax conducted by the Data Resources Institute of McGraw-Hill.

In fact, a tax on BTUs in effect targets the link between energy, on the one side, and transportation, industry, and households, on the other. In the trucking industry, for example, diesel fuel accounts for 16% of operating expenses. With 5.825 million BTUs per 42-gallon barrel of distillate fuel oil, a 59.9¢ tax per million BTUs would increase the cost of a gallon of diesel fuel by 8.3¢. That is a price increase of 7.3% from the $1.10 a gallon currently in effect in the mid-Atlantic eastern seaboard. American Trucking Association President Thomas J. Donohue wrote in the Feb. 8 *Journal of Commerce* that the trucking industry is currently operating with barely a 2% profit margin, and an increase of just 10¢ a gallon in the price of fuel would render many small trucking firms unprofitable. Even larger companies, which are locked into year-long contracts, would suffer, since they would have to absorb the increase in fuel costs for months before being able to readjust contracts. If the BTU tax is paid by refiners and distributors, as well as end-users, the net increase in price paid by truckers will be well over 10¢ a gallon. Almost all finished goods reach their final destination by truck.

Even more vulnerable are airlines and inland waterway operators. Fuel accounts for between one-quarter and one-third of an airline's operating expenses (the airline industry has lost more money in the past three years than it has made in the entire seven-decade history of commercial aviation). Estimates are that the industry will lose another $2 billion or more this year.

On the inland waterways, barges carry 15% of the nation's freight, including more than half of U.S. grain exports, a quarter of all coal moved, and a third of all petroleum moved. Fuel costs account for almost half of operating expenses, and the industry already faces new waterway user charges and other fees proposed by Clinton that will increase the tax on distillate and residual fuel from 17¢ a gallon currently, to $1.20 by 1997. A towboat working the lower Mississippi would find its daily fuel bill doubled, to $20,000 a day. Harry Cook, president of the National Waterways Conference, said that

Clinton's proposals, if implemented, "would destroy the inland waterways system." Joe Farrel, president of American Waterways Operators, wryly noted, "I assume this tax proposal is an error born of lack of understanding."

So, clearly, as National Coal Association chairman Gen. Richard Lawson charged on the Today Show recently, "A BTU tax is a special interest tax by the environmental groups to constrain economic productivity. . . . We will see growth lowered and jobs lost in areas with a concentration of energy-intensive industries, such as steel, mining, automotive, aluminum, where unemployment is already high."

Nuclear takes the biggest hit

It is not yet clear how Clinton will propose to tax electric companies operating nuclear power plants. A source in the tax policy office of the Treasury Department said that the method of calculating a tax for nuclear power is still under consideration, following an "education" provided by the nuclear power industry. The original proposal, which would probably have taxed the entire BTU content of uranium, one pound of which is equivalent to over 200,000 tons of coal, was abandoned after the industry pointed out that it is prohibited, by law, from utilizing the full heat of uranium. It would obviously be unfair to tax the industry for something it would have to break the law to use, the source said.

A spokesman for the U.S. Council on Energy Awareness, the trade association for the nuclear power industry, explained that only a small fraction of the uranium fuel is actually consumed in the annual cycle of energy generation, making it problematic to compute a BTU tax on the basis of weight. Second, the generating plant does not buy lumps of uranium. Rather, it buys rods in which the nuclear fuel is embedded, and therefore the direct cost of uranium per pound is not immediately apparent.

Thus, the computation of a BTU tax on the nuclear power industry is best done by working from the amount of electrical power generated. As a rough, but accurate rule of thumb, the utility, with approximately a 33% thermal efficiency, requires three BTUs of input for each BTU of generated electricity output. So, the utility can take the electricity output, based in kilowatt hours, convert that into BTUs, and assume that three times that amount of BTUs is the BTU value of the inputted nuclear fuel consumed. As a more practical measure, the U.S. Council on Energy Awareness spokesman said, each generating plant will record for the year how much thermal heat was generated at the plant to produce its annual electrical output. If the plant is nuclear-powered, then it has a record of how much nuclear power went into the plant as thermal heat, and can apply the tax to that figure directly.

Thermal efficiency ignored

Perhaps the most insidious effect of the proposed BTU tax is that it renders natural gas competitive in price with coal for electric generating utilities. This is because it is *not* the heat content of the fuel being used to generate electricity that is important, *but the technological means by which that heat content is made to do work*. The key measure here is thermal efficiency.

The thermal efficiency of a nuclear power plant, which uses uranium fission to produce heat, to generate steam, which drives a turbine, which is coupled to a generator, is about 33%. This is also the approximate thermal efficiency of most fossil-fuel power plants, whether they use coal, natural gas, or fuel oil, because they all use the heat generated to run a steam cycle.

Power plants built today have achieved thermal efficiencies of about 40%, meaning that they consume 2.5 BTUs to produce one BTU of electricity. However, this savings in fuel is more than offset by the capital investment required for pollution abatement equipment.

However, General Electric, drawing on its expertise in manufacturing high-performance jet engines for military aircraft, has developed a series of turbines powered by natural gas that achieve thermal efficiencies of nearly 50%. The steam cycle is eliminated because of the design of the turbines, which make use of special ceramic coatings and other means to operate at temperatures well above the melting point of the metal components.

If the waste heat of this gas turbine is used to generate steam to power a secondary steam turbine, the resulting combined cycle electric power generating plant is able to achieve a thermal efficiency of over 50%. This is the first time a power plant has been able to deliver more power than it wastes, meaning that two or less BTUs of fuel must be burned to generate one BTU of electricity.

A tax of 25.7¢ per million BTUs has the effect of rendering natural gas less expensive per BTU of electricity generated at 50% thermal efficiency than coal burned at a 33% thermal efficiency.

According to the table entitled "Quantity and cost of fossil-fuel receipts at steam-electric utility plants" in the January 1993 *Monthly Energy Review* of the U.S. Energy Information Administration, the average cost of a million BTUs of coal during the first nine months of 1992 was $1.417, and that of natural gas was $2.187. Without the extra 25.7¢ BTU tax added on, the cost of three units of coal (the number required to yield one BTU of electricity at 33% thermal efficiency) is $4.251, while the cost of two units of gas (the number required to yield one BTU of electricity at 50% thermal efficiency) is $4.374. But with the tax added on, the cost of three units of coal is $5.022, compared to the $4.888 cost of two units of natural gas.

At a thermal efficiency of 51%, the non-taxed cost of natural gas to produce 1 million BTUs is $4.288, compared to the $4.251 for coal burned at 33% thermal efficiency. But with the tax added, the cost of natural gas is $4.792, compared to $5.022 for coal.