

The gasohol hoax

Plan could cut overall consumption percent, wreck farming

An organization dominated by the Kennedys, calling itself the New England Energy Conference and led by Senator Paul Tsongas (D-Mass.) issued a call this week for the United States to reduce consumption of fossil fuels by 50 percent in the space of one decade. American industry, according to the proposal, should burn wood to fuel factory operations.

At the Federal level, Senator Henry "Scoop" Jackson, with 18 co-sponsors inclusive of the Senate Energy Committee majority, has introduced an Omnibus Production Bill with a like-minded thrust: eliminating nuclear energy and emphasizing the energy "alternatives" in which the crumbling Nazi German economy dabbled—shale-oil, solar power and "biomass conversion," which would include the New England conference's wood-fuel. A featured item under the "biomass" category, however, is "gasohol," the mixture of gasoline (90 percent) and ethyl alcohol or ethanol (10 percent) whose consumption is now being pushed on American motorists.

The intent of such proposals is to make the United States into a feudal nation. Any of the "alternatives" mentioned as energy resources would have this result, because of the deindustrializing effects of the vastly

reduced energy throughput they would entail for the economy as a whole. As "energy alternatives," they are a hoax. "Gasohol" is a perfect case in point.

Gasohol is a double hoax. Its introduction on any significant scale, as in Brazil today, would absolutely reduce the fuel-energy supply and the energy-efficiency of American transportation, tending to make the current fuel-energy hoax into a real, worsening shortage. But just because gasohol could never significantly contribute to transportation fuel needs, unless mechanized transportation were drastically reduced, its advocates are more immediately concerned with the effects its production would have on American agriculture—the starting point of ethanol production. The effects of a gasohol-production program—and its purpose—would be a gross reduction in the productivity of American agriculture.

The simple hoax-nature of gasohol is demonstrated by its energy-efficiency credentials. Gasohol production uses up three times as much fuel-energy and fuel-energy products as its consumption can provide, at a greater dollar-cost than the fuel it replaces. Only a liar would call gasohol a "conservation measure."

The more sinister, purposive feature of the gasohol

Gasohol production: the facts

The basic facts concerning gasohol as fuel-energy are these:

1. A gallon of alcohol's production costs three to four times more in dollars and cents than the volume of gasoline it replaces, requiring that the government subsidize its production, to the tune of at least 66 to 88 cents per gallon, requiring higher taxes.

2. A gallon of alcohol costs from 2.5 to 2.8 times more fuel-energy to produce than the energy-value of the alcohol. The net result of gasohol production would be a growing waste of, in particular, natural gas and crude oil required for production ... not "conservation."

3. The net effect of these cost factors means the cost of producing ethanol, now higher than other energy fuels, must not only go still higher in the future, but increase at a more rapid rate than other energy-fuels.

4. Gasohol is "fuel efficient" only in a technologically backward nation like Brazil, providing more liquid fuel energy than its production consumes because its production employs only the energy of hand laborers, donkeys and push-carts, etc. The program could grow in the U.S. only through the de-mechanization of agriculture and distillation processes, a stated objective of "gasoholics."

Gasohol for food?

Because it is so expensive, gasohol is unpopular as an energy source. To make it more palatable, its proponents are proposing that its production could also yield a food substitute. According to Scott Sklar of the National Center for Appropriate Technology:

With fermentation, all you are taking is the starch and sugar out of the foodstuff. The protein and the vitamins stay. And that protein and vitamins can be used for people, which is why the World Bank has been interested. It can be used for cattle feed, which Seagrams gives out today. Or it can be used for fertilizer.

But, in all cases, you have to have an organic residue left and the most viable economic way to

dispose of that is either animals or people! So you're really not getting into 'food or fuel' issues....

The World Bank has always been concerned that America is sending its major grain to Third World countries. The Third World countries then become reliant on our food, then never try to develop their own basic food supply. They would much prefer the U.S. to supply food supplements, so that we could distribute high protein food supplements and that would be perfect for them.

And this stillage is perfect protein food supplement! It is easily stored; 40 percent lighter [than grain] and can last a longer time. And to me, that's the way to go! So that an Arab or African country raises their millet or their rice and then they pour on this powder and they have a balanced diet!"

program lies in the way it could disembowel the productive capability of American agriculture, with corresponding, far-reaching ecological results. A competent "environmental impact statement" on large-scale gasohol production would report a threat of damage to the environment on the qualitative order of a degradation of the biosphere as such.

The distillation of alcohol as a gasoline additive would require significant diversion of American croplands' output away from the food-cycle. Gasohol advocates, "gasoholics," state this to be an objective whether gasohol ever becomes a meaningful part of U.S. transportation fuel supplies. From the standpoint of the biosphere, plant vegetation as an element of the food-cycle represents a far more intensive and highly ordered energy flow than the same "biomass" constitutes when treated as fuel energy. The disruption of this critical energy flow is comparable to the far-reaching impact of deforestation (for wood-fuel and charcoal) on climactic, geological and biological processes. As a reduction of energy throughput in the biosphere, any program threatening food production, like gasohol, is a massive threat to the environment.

In this respect, the "gasohol" program is at least symbolic of the actual outcome of "New Dark Age" policies—the effort to produce a "new world order based on environmentalism" must instead produce an environmental holocaust potentially more devastating to life-forms than the thermonuclear variety.

The Federal program

Just as long lines sprouted at gasoline stations around the country, several Long Island, New York service stations began pumping "gasohol" into motorists tanks. At present, gasohol is being sold at about 800

stations in the midwestern corn belt and its influential proponents, including Senator Jacob Javits and Senator Charles Percy as well as several Carter administration officials, would like to universalize its use. In an April speech in Des Moines, President Carter committed himself to extending Federal subsidies and tax-breaks for gasohol producers.

Already, the Federal government has exempted gasohol from the 4 cent Highway Fund Tax until 1984. (Hence, 40 cents per gallon of "gasohol" is being cut out of highway tax revenues). In addition, ten states, mostly in the Midwest, have granted exemption from taxes or tax rebates. The Long Island publicity-experiment is being used by New York Gov. Carey to get such subsidies through his state legislature. In Kansas, the subsidy through exemption is equivalent to 85 cents per gallon, in Nebraska, 50 cents per gallon. Moreover, the Carter administration is seeking to make the Highway tax exemption permanent, and is already providing for a 20 percent investment tax credit on ethyl alcohol stills, while it considers other inducements to "raise demand."

The Carter administration currently plans for 500 to 600 million gallons of ethanol to be produced annually by 1985. Current gasoline production is roughly 110 billion gallons. Even this small percentage of gasohol substitution, under current subsidy arrangements, could cost the taxpayers \$600 million a year.

However, the evidence shows that existing subsidies will be nowhere near enough. Peter J. Reilly of Iowa State, referring to the energy-intensive nature of ethanol production which links its cost with other rising fuel costs, concluded his "Economics and Energy Requirements of Ethanol Production" by stating, "It is obvious ... that no single factor could possibly make gasohol

competitive without tax subsidy, and it is very difficult to envision any group of factors doing so. If anything, it appears that the gap between gasohol and gasoline will widen or stay constant in the future."

Cloud Cray of Midwest Solvents Corp., a highly efficient ethanol producer, told a seminar on gasohol in Brazil that his company's production facilities to just break even, would have to be subsidized at 66 to 80 cents per gallon of ethanol mixed with gasoline, double the fuel value of the ethanol. He also delivered Congressional testimony reporting that taxpayer subsidy of ethanol production for gasohol would have to equal \$3.12 per bushel of corn used, much more than what the farmer was paid. He concluded, "We think it is absolutely ridiculous that any government would subsidize an industry to the extent of twice its value for any appreciable period of time."

Yet that appears to be what the Carter administration and other "gasoholics" have in mind.

Senator Birch Bayh (D-Ind.) exhorted the Senate last summer, "it is my fervent hope that we can learn something from the Brazilian government's efforts in this area. ... Alcohol fuels work in Brazil, and they will work in the United States, if given a chance."

Senator Jacob Javits argues that alcoholic fuel made from fermenting a wide variety of food crops and agricultural and urban wastes is the ideal way of reducing American dependency on the Arab-OPEC oil suppliers, while at the same time putting our own land and people to work.

But Mr. Cray of Midwest Solvents has refuted both Bayh and Javits. "We say you are not reducing imports from abroad with this ... gasohol program. The only way you can ... is like Brazil does, bring your biomass to market in horse carts and burn it, or cut your forests down and bring them in, or use some other source of energy to convert this grain or agricultural source" into alcohol.

The Brazilian model

The Brazilian system Mr. Gray referred to employs a half-million virtual slaves producing sugar-cane at a wage of \$3 per day. It takes some 350,000 more laborers to produce a mere 70,000 barrels of alcohol per day. His point: the only way one can successfully produce alcohol from crops with a greater fuel value than the fossil fuels consumed is at the price of using cheap human hand labor and animal traction in every phase of the production process, from crops to transport to collection of crop residues to fermentation and distillation. With the use of mechanized processes befitting an industrial nation, countless studies have demonstrated that the energy-efficiency of alcohol production for fuel is sharply negative.

In short, gasohol appears "efficient" only in a technologically backward nation that plans to stay that

Gasohol energy efficiency

Gasohol yields only one-third to one-half the energy it takes to make it. The breakdown.

Energy inputs	Energy quality	Energy/Min. BTU	
		Corn	Sugar cane
Ag. production	High	2.1	1.8
Simple sugars	Medium	2.2	1.7
Fermentation and distillation	Low	6.4	5.1
Stillage drying	Low	1.2	1.2
Total		11.2	9.8
Energy outputs			
Ethanol	High	4.1	5.6

Note: "High" indicates liquid fuel of a quality required for internal combustion. "Medium" and "Low" indicate heats required at or below the boiling point of water.

way, or in a nation that is being deindustrialized and made backward.

For example, Midwest Solvents Co. is the most energy-efficient grain alcohol producer in the country. It still has to use 139,000 BTUs of natural gas or no. 6 fuel oil to ferment and distill a mere 85,000 BTUs worth of alcohol. This ratio does not include consideration of the energy involved in producing and transporting the sweet sorghum, corn, and wheat required. "Estimated conservatively," says Mr. Cray, "it takes 2.72 times the energy to produce one gallon of alcohol, if you consider all these other inputs to the process."

Even gasohol advocates like William Scheller of Nebraska, accused by the Department of Agriculture of fudging experimental data in favor of the program, and Edward Lipinski of Battelle Laboratories in Ohio acknowledge a 2:1 or 3:1 ratio between the total energy input and ethanol output (see chart).

In fact, the energy efficiency ratio taken from the standpoint of the economy as a whole, and not simply the ethanol production process itself, turns out even worse.

Seeking ways to eliminate fossil fuels from the distilling process, gasoholics have pointed to sugar cane, as in Brazil. By drying out water-laden fibers (bagasse) and then burning it to provide heat—not an easy task—you can theoretically cut down use of liquid fuels to the point of expending only 3.3 million BTU liquid fuel to obtain 5.6 million BTU alcohol. However, the U.S. has only 1.7 million acres of land suitable for sugar cane, capable of meeting only 1 percent of overall fuel needs if all were employed for this purpose.

As a result, the gasohol program now focuses on the burning of corn stalks and wheat straw, the latter

currently plowed under in the great midwest grain belt as a necessary source of oil nutrients. The energy-efficiency result? Dr. Leonard Schruben of Kansas State, writing in an article, "The Gasohol Bubble," calculated it would take 50 percent more straw than all the straw in Kansas to replace coal in a single Kansas electrical plant. "If stalks or straw, etc. are removed from the field, additional fertilizers would be needed to replace the plant nutrients lost. Fertilizer is energy costly. And costs of controlling erosion would increase if residue and organic matter were not returned to fields."

Gasohol vs. agriculture

The logic behind the gasohol program keeps coming back to the same point. Just as the program can only succeed as American industry becomes more backward, gasohol production can only proceed by effecting a major reduction in the productivity of American farmers. Gasoholics confirm that this is their objective.

Scott Sklar, a former Javits aide now of the National Center for Appropriate Technology, laments that U.S. agriculture is so efficient "It only employs three percent of the people but consumes 25 percent of the energy." His organization's aim, he admitted, was to use the gasohol program as part of a plan to induce farmers to abandon high-technology energy-intensive methods which have doubled productivity in one generation in favor of returning to the primitive approach of the Maoist peasant.

America's technology-proud farmers have known for a long time that one can obtain heat from burning stalks. But why waste the effort to do so? Dr. Lipinski, writing in Swann's Energy Digest, says that "motivation of the farmer to collect and handle lower-valued biomass—corn stalks or straw—may take the form of direct use of biomass to dry grain or operate irrigation pumps where the benefit to the farmer is immediately evident. Other categories of processes with viable motivation include toll arrangements in which the farmer sells a biomass raw material and buys back nitrogenous fertilizers or tractor fuel made from biomass (gasohol)."

With such persons as former vice-presidential candidate Senator Robert Dole (R-Kansas) in the lead, many farmers are being duped by a massive "educational" campaign to the purpose of eliminating agricultural productivity.

Gasohol or moonshine?

The *Economist* magazine of London, in a May 19 article, "Stepping on the gasohol," firmly endorsed President Carter's promise of an \$11 million loan program for small-scale stills on "family farms" as a

"stimulus for development of a new cottage industry." Scott Sklar says that thanks to the gasoline hoax, he now draws 500 to a thousand farmers a night to his midwestern gasohol "teaching sessions." Sklar sees gasohol leading back toward the self-sufficient—and inefficient—family farm. "If we can decentralize energy and fertilizer dependency, it may save the small farmer." Doesn't this mean much more primitive and labor-intensive farming? "Sure," says Sklar, "but farmers see the gain. President Carter's \$11 million program for small technology skills—that'll fire it up."

There is another feature of the "backyard still" plan which, the London *Economist* chortled, may have a lot to do with farmer interest. Debt-strapped Colombian peasants shifted into marijuana production to make ends meet. The fact is, according to the *Economist*, ethanol stills are "akin to making moonshine" and the farmer can count on being able to siphon off a bit of bootleg whiskey for himself.

Low and behold, the Carter administration is promising to eliminate a whole series of anti-moonshining laws and regulations.

Sklar is not the only person who is explicit about the "Brazilianization" of American agriculture. Next to the United States, Brazil is the world's second greatest agricultural exporter. Its gasohol program, however, has so diverted croplands and labor resources from food production that that nation is now running into severe food shortages, high rates of food price inflation, and the need to import over \$1 billion of foodstuffs that could be cheaply produced at home. And as if this were not a sufficient evil, a massive degradation of the agricultural workforce has occurred in low-wage gasohol production processes.

Senator Jacob Javits has proposed just such "Brazilianization" in this country. The Senator has proposed employing ghetto teenagers to scavenge through rotting fruits and vegetables in supermarket trash bins, selecting salvageable things for use in the ethanol fermentation and distillation process.

The London *Economist* points out that unemployed could be put to work elsewhere too. Waste products and useless things could provide boundless raw materials for the gasohol program, says the magazine. "There are enough reeds in Minnesota marshes and lakes to make 1.8 billion gallons a year."

Morover, says Scott Sklar, gasohol production could even provide "food" if it's done right. Following a World Bank prescription on this matter, Sklar's Center for Appropriate Technologies recommends turning the dried distillery wastes, the residue of distillation processes, into edible material. Soylent Green, anyone?

—Mark Sonnenblick