
Perspectives

on current developments

Re-Regulating at the ICC: "The Congress Made Me Do It!"

If a competition were held for the deregulators' least favorite regulator in the Reagan administration, it would be won going away by Chairman Reese H. Taylor, Jr., of the Interstate Commerce Commission. Under his leadership, the commission seems to be executing a U-turn in the field of trucking reform, not only halting but in some respects reversing the progress made under former chairman Darius Gaskins during the latter years of the Carter administration.

The Motor Carrier Act of 1980 eased entry into the trucking industry in various ways—notably by shifting to the opponent of a qualified applicant the burden of proving that entry would *not* serve the public interest. It permitted generally applicable rates to be reduced 10 percent without commission approval, phased out antitrust immunity for some forms of collective ratemaking, and instructed the commission to eliminate certain types of operating restrictions, such as prohibition of service to intermediate points on the carrier's route, prohibition of return-trip haulage, and circuitous route limitations.

The Carter ICC not only implemented these liberalizations, but went a good deal further under its broadly discretionary authority to approve entry, rates, and operating conditions. It began approving almost all applications for new certificates ("operating authorities") and for the elimination of restrictions upon old ones. It also began approving extensive rate discounting—not just the across-the-board sort that the statute categorically permitted, but discounting on a regionally selective and even a customer-by-customer basis. Between July 1980 and October 1981 the commission had issued over 44,000 additional licenses to new and existing carriers, including many that permitted carriage of all commodities nationwide. The

new freedom of entry and pricing, along with the recession, led to what Standard & Poor's trucking analysts called "a ferocious rate war."

There is no doubt these pro-competitive policies have now changed. Whether that warrants pointing an accusatory finger at Chairman Taylor is, perhaps, more questionable.

In one important area, at least, the change can be blamed on the courts. The Motor Carrier Act required the commission to establish a procedure "to reasonably broaden the categories of property" authorized to be carried by existing licensees. The procedure adopted was one that in effect coerced applicants to seek broader authorizations than they in fact desired. It required any requested expansion to include all commodities in one of a limited number of broad classifications. Thus, for example, an expansion from one to another product within the "general commodities" classification would have to embrace all other general commodities as well, including bulk commodities (generally requiring tank trucks) and household goods (subject to special regulation). The commission adopted a similar rule with respect to applications for new certificates, and also required the geographical areas that a carrier sought to serve in its application to be no smaller in size than counties.

There is arguably no harm in inducing a carrier to apply for broader authority than he intends to use, so long as he has no *obligation* to use it. But there is the rub. Truckers are still "common carriers": they cannot pick and choose their customers, as they would in unregulated markets, but are supposed to "hold themselves out" to serve all shippers within the limits of their operating authorities. Moreover, in passing, as it must, on an applicant's "fitness" to receive a certificate, the commission is theoretically supposed to assess among other things the adequacy of his financial situation, business experience, and equipment to sustain service to all comers within his approved au-

thority. To be sure, the common-carrier obligation was more theory than reality—a 1979 Department of Transportation study showed that it had never really been enforced except as an excuse to keep new entrants out of lucrative markets. Nonetheless, even in theory the obligation could not be reconciled with a certification scheme that forced applicants into categories of service they were not even “willing,” much less “fit and able,” to assume.

The commission had, of course, realized this incompatibility, and issued a notice of proposed rulemaking to deal with “the interaction of broad certificate grants with the perception that a common carrier’s holding out must inevitably be defined by the authority contained in the carrier’s certificate.” As the statement of the question suggested, the commission’s proposed solution was to convert the common-carrier obligation into the mere perception of an obligation, and ultimately to define it away. It is doubtful whether that rulemaking will ever be completed, because the whole scheme was simply too much for the Fifth Circuit Court of Appeals. On October 1, in *American Trucking Associations, Inc., v. ICC*, that court struck down the broad restriction-removal and certification procedures, using reasoning that indicates the common-carrier obligation is alive and well. Though most of the opinion is framed in terms of protecting applicants against the imposition of service obligations they are not “willing” to assume, it makes it clear as well that the ICC’s approval of service authority that applicants are not “fit and able” to assume is invalid. The commission will have to come up with new rules governing certificate grants and expansions, and the status of the thousands of certificates granted or broadened under the old procedures is unclear.

While this development—discouraging to deregulators—has been effected by the courts, rather than by the commission, it can hardly be said to be contrary to Chairman Taylor’s view of the law. He has stated that ignoring fitness is “a subversion of the commission’s legislatively mandated responsibilities,” and that the common-carrier obligation is the “cornerstone” of regulation.

In other areas, the commission’s retreat has not been prompted (or assisted) by the courts. An example is ratemaking. Since passage of the 1980 act, carriers have begun experi-

menting with a variety of rate discounts: across-the-board percentage reductions, volume discounts, discounts to specific shippers, and “multiple tender” discounts (discounts for separate shipments that a truck picks up at a single stop). A few carriers have used discounting as a promotional device when entering new marketing territories. The Carter ICC generally permitted these rate reductions to go into effect without delay.

Now, however, the commission is taking a much closer look at rates. On September 28, the commission declared discounts for specifically named shippers to be illegal on their face, denying no less than fifty-three such applications at one stroke. On October 14, it issued a blanket order rescinding all existing permissions for individual discounts, refusing to consider the arguments that discounts might be justified by cost factors, or that bargaining by individual shippers might help undermine collusively set rates. Taylor suggested in a recent Roadway Express rate case that promotional discounts to new shippers in a single section of the country might be predatory. The hard line on selective rate discounts is calling discounts in general into question: On November 2, a group of fifteen carriers asked the commission to promulgate standards on what discount tariffs it will consider lawful.

Another area in which backsliding has occurred is enforcement of the “public need” requirement for issuance of a certificate. Applicants have traditionally met this requirement by trotting out shippers to testify that, yes, they would like to have access to another carrier and, yes, it would be great to have more frequent service and lower rates. The “public need” requirement has always been the simplest of the restrictions for the commission to overcome when it wanted to, since it amounts to little more than a discretionary determination that another carrier in the field would improve service to the public. Under Chairman Gaskins, however, the requirement was almost entirely ignored, even as a theoretical matter.

Not so at the new ICC. Chairman Taylor asserted before the Joint Economic Committee on November 17 that since July 1, the commission has granted 95 percent of all applications “in whole or in part,” a grant rate higher than under the previous regime. But the “in part” label masks severe restrictions, some of which

In Brief-

Carcinogen of the Month. From the University of Illinois comes word that yet another common foodstuff has been implicated in the cancer epidemic now sweeping the nation's experimental rodent population. Researchers studying the hazards of cholesterol fed a diet consisting entirely of powdered egg yolk, mixed with whole milk in a concentration of 5 percent, to a group of rats of both sexes for life. The rats thrived, and in fact became downright obese. The researchers were surprised to discover, however, that instead of succumbing to hardening of the arteries from this high-cholesterol diet, as expected, the animals died of cancer. Of ten rats at risk, six developed tumors of the liver. No tumors were ob-



"I think we should change our research project to what doesn't cause cancer in rats."

served among a group of twenty-five rats fed a normal diet, a difference in incidence the authors describe as "highly significant." Some of the tumors measured as much as two inches across.

Even the most hard-boiled regulator is unlikely to enforce the Delaney clause in all its severity in this instance. Congressional reformers are already preparing to overhaul the clause, and a threatened ban would only be sure to egg them on.

Study? What Study? It was nearly a year ago that the Education Department announced, amid fanfare from the Cabinet Room, that it was ending its much-disputed push to impose bilingual education in the nation's classrooms (see Perspectives, *Regulation*, November-December 1980, and In Brief, March-April 1981). Word of the policy shift has apparently not filtered through to the rest of the federal government, at least to judge by a brief filed by the Justice Department before the Fifth Circuit Court of Appeals on November 17. That brief defends a lower court's ruling, in a case originally brought by the Justice Department eleven years ago, that Texas must impose strict bilingual teaching rules on every school district within its borders.

The Supreme Court has ruled that federal civil rights law requires schools to give special help to students who do not speak English, but left open the question of what kind of help it was to be. The Justice Department's brief re-

lies on Texas's failure to show the lower court substantial evidence that there were any practical alternatives to bilingual teaching.

Such evidence is now available—in the form of a comprehensive study carried out by none other than the Education Department itself. It found that bilingual methods, while quite expensive, were not noticeably more effective than other teaching methods such as intensive English-as-a-second-language training. Texas owes ED (as it is called) no thanks for the new revelations, however; the department has refused to publish the study officially, and journalists had to drag it out under the Freedom of Information Act.

The Case of the Truckers that Couldn't Afford to Die. If you think it's tough to enter the trucking industry, you should try getting out. Last year Congress passed a law guaranteeing union pension plans like the one the Teamsters run in trucking. Among the law's provisions is one affecting truckers that go out of business. They get stuck with "withdrawal liability"—a hefty share of the pension plan's unfunded promises. (These may include promises to workers who never worked for the firm that is folding, since when one firm defaults on this liability, all the other firms are left holding the bag.) Now unprofitable carriers are staying in business just to avoid withdrawal liability, according to *Business Week*, and the resulting oversupply is depressing the industry.

are attributable to rigid enforcement of the "public need" requirement. For example, Hagen, Inc., a trucker in Sioux City, Iowa, applied for authority to haul general commodities nationwide. The commission granted the application "in part"—that part for which the shipper had demonstrated "public need." It allowed Hagen to haul chemicals between plants of Terra Chemicals International, Inc., and other points in the United States, and gave it other similarly limited authorities.

Taylor denies that he is out to reverse de-regulation. For one thing, he says, "the horse is

already out of the barn": too many firms have entered the market to permit any return to the old days of detailed market segmentation. But the real barometer of cartelization in the trucking industry is the market value of operating certificates. If entry into the industry is genuinely free, new entrants should be unwilling to buy the rights to operate in a certain market from existing operators. As one would expect, the value of operating rights dropped to zero under the commission's previous leadership. Now, according to scattered reports, they once again have a positive market value.

Chairman Taylor's best response to his critics is by way of justification rather than denial. He is, he insists, only following the law as it stands, and his detractors are people who "expect me to enforce the bill they wanted, not the one that passed." There is much to this. The bill that passed Congress last year was, in the words of both the Senate and House committees, "a middle ground between continuing the status quo, on the one hand, and total deregulation on the other hand." That is clear enough from the revised statement of national transportation policy governing motor carriers that it adopted:

to promote competitive and efficient transportation services in order to (A) meet the needs of shippers, receivers, and consumers; (B) allow a variety of quality and price options to meet changing market demands and the diverse requirements of the shipping public; (C) allow the most productive use of equipment and energy resources; (D) enable efficient and well-managed carriers to earn adequate profits, attract capital, and maintain fair wages and working conditions; (E) provide and maintain service to small communities and small shippers; (F) improve and maintain a sound, safe, and competitive privately-owned motor carrier system; (G) promote greater participation by minorities in the motor carrier system; and (H) promote intermodal transportation.

At least objectives (D) and (F) are unquestionably protectionist, and at least objectives (E) and (G) cannot be ensured in any system that is exclusively market-based.

As noted earlier, the Motor Carrier Act took some clear but limited steps to permit a margin of rate-setting freedom, to simplify entry, and to end certain types of certificate restrictions. But it left the basic structure of public-utility regulation intact. The rates charged by motor carriers must still be "reasonable," and "the burden is on the carrier proposing [a] changed rate . . . to prove that the change is reasonable." Whatever that means, it surely cannot be taken to mean that anything goes. Nor can the provision that a carrier "may not subject a person, place, port, or type of traffic to unreasonable discrimination." And surely some artificial protection against the democracy of the market is intended by the requirement that the commission's standards and

procedures "allow the carriers to achieve revenue levels that will . . . attract and retain capital in amounts adequate to provide a sound motor carrier transportation system in the United States." The necessity of finding that the applicant is "fit, willing, and able" to provide the approved service was *not* eliminated; nor was the necessity of finding public need "on the basis of evidence presented by persons supporting the issuance of the certificate." And in making those findings the commission is directed to consider not only the (partly protectionist) national transportation policy quoted above, but also "the effect of issuance of the certificate on existing carriers." Perhaps the mealy-mouthed nature of the compromise is best reflected in the proviso that was attached to the latter requirement—namely, that the commission "shall not find diversion of revenue or traffic from existing carriers to be *in and of itself* inconsistent with the public convenience and necessity" (emphasis added).

In short, if one believes that it is the function of the ICC to implement the law as Congress apparently intended, rather than to write the law anew, Chairman Taylor is right to condemn total elimination of the "fitness" requirement; he is right to end wholesale and automatic approval of rate reductions; he is right to require some evidentiary showing of "public need"; and he is even right (God help us) to call the common-carrier obligation the "cornerstone" of regulation. Perhaps, in the evaluation of Chairman Taylor, we come to a parting of the ways between two groups that have generally walked arm-in-arm (against the wind) ever since the New Deal—those who believe ardently in deregulation and those who believe ardently in bureaucratic responsiveness and faithfulness to the law. Or perhaps it is just a split between economists and picky-picky lawyers.

But there is a way of reconciling the old allies and coming up with a common assessment of Taylor's performance. Even if he is, as he asserts, merely trying to avoid a "subversion of the commission's legislatively mandated responsibilities," he does not have to be so damned happy about it. One would expect, from a chairman appointed by a deregulating (on the one hand) but nonetheless law-abiding (on the other hand) administration, a decent amount of complaint about the anticom-



petitive restrictions that the law requires him to impose. One would expect him to carry deregulation to the limit the law will fairly allow and then to propose statutory changes to eliminate the remaining obstacles. One would expect him, when groping for a metaphor to describe elements of the current anticompetitive structure, to come up with the word "millstone" rather than "cornerstone."

But such deregulatory zeal seems not to be there. The problem is not that Chairman Taylor believes the law is the law; it is that he believes the law is, by and large, good. While he has reverted to a more faithful application of the law as written, he has suggested only one pro-competitive change in the law: not the elimination of the "fitness" requirement or the common-carrier obligation; not the expansion of the rate-setting freedom initiated in the 1980 amendments; not the termination of the anti-trust immunity which continues to protect across-the-board collective ratemaking and commodity classification; but rather merely the elimination of what has in the past been one of the most easily avoidable constraints, the "public need" requirement. He has also suggested revision of the "fitness" test—not necessarily to liberalize it, but just to make it

more "precise" and "meaningful," so that "it doesn't fluctuate in severity or laxity with a change in administrations." The latter objective is of course admirable, but the project as a whole lacks adequate attention to what it is we will not fluctuate *from*. One is tempted to paraphrase an earlier non-administration: Precision in the conferral of monopoly control is no virtue; fluctuation in the application of cartelization is no vice.

When Chairman Taylor says "the horse is already out of the barn," there springs to mind the image of the statue adorning the Federal Trade Commission headquarters—a huge, muscular, WPA-type stallion, representing to the imagination the vigorous forces of industry and commerce, being held under control by a huge, muscular, WPA-type workman, representing (to the even more lively imagination) FTC Chairman Jim Miller. Well, the forces unleashed by the 1980 law are surely not such a horse; indeed, they barely amount to a pony, if, as the ICC has declared, they can haul no heavier loads than chemicals from the plants of Terra Chemicals International, Inc. Or perhaps a briefer equine-derived rejoinder would be more appropriate.

Should Courts Draw the Lines?

The gerrymander has a hoary, if not entirely dignified, place in American political history. Until the last few years, it was an art wholly confined to the legislative branch. Even when the federal courts began to draw up redistricting plans of their own, after the one-man-one-vote decisions, they hastened to declare that *their* reapportionment schemes were not gerrymanders at all, since they followed neutral, objective criteria.

Now in Chicago, one of the native habitats of legislative gerrymander, a three-judge federal district court has ordered into effect what might be called a judicial gerrymander—a reapportionment scheme imposed by a court on explicitly political grounds and intended to achieve a specific partisan result. The decision, rendered on November 23, is of interest not only as the first of many court battles over redistricting resulting from the 1980 census, but because the court's eagerness to draw "party-conscious" lines raises new and grave questions about judicial competence.

Illinois, like nine other states, is seeing its delegation in the House of Representatives shrink as a result of the 1980 census. Its legislature found itself unable to agree on how to eliminate two of the state's twenty-four seats, fourteen of which are now held by Republicans. The Republican-controlled lower house passed a plan that would have eliminated two Democratic districts, on the grounds that Democratic districts had lost population relative to Republican. The Democratic-controlled upper house passed a different plan, and the deadlock could not be resolved.

Leaders of both parties rushed to federal court. The Republicans continued to press for their House-passed plan, but the Democrats came up with a new scheme that would save the seats of three black Chicago Democrats while eliminating two Republicans. An independent group headed by prominent politicians of both parties urged the protection of the three blacks, but would have taken one seat apiece from each of the two parties. Each of the plans created districts of practically identical population. The deviation between largest and smallest districts were 768 people in the Republican plan, 665 in the bipartisan plan, and only 135 in the Democratic plan. In districts of half

a million people such distinctions are practically meaningless. A two-judge majority of the court nevertheless seized upon the deviations as justification for ordering the Democratic plan into effect. Then, recognizing the weakness of this argument, they buttressed their position by openly political arguments of a sort not normally thought appropriate for a supposedly nonpartisan judiciary. Speaking for the majority, Judge Robert Sprecher argued, first, that minorities were entitled to special consideration, relying not on any Supreme Court precedent, but on the *dissent* of Justice Thurgood Marshall that the Court had rejected in *City of Mobile v. Bolden* (1980). Any "retrogression of black voting power," he said, "must be avoided." Even though all three plans created three black-majority districts, advocates of the Democratic plan argued that black candidates could not be sure of election in a district unless more than 65 percent of its population were black, a standard that only the Democratic plan met.

Next, Judge Sprecher blithely declared that any plan should reflect the partisan composition of the state—as evidenced not by elections for Congress, but by elections for the University of Illinois Board of Trustees. He deduced that the twenty-two districts should be equally divided between the parties, which meant cutting two of the Republican seats, placing another in jeopardy of a Democratic takeover, and protecting all the Democrats.

Judge Frank J. McGarr, the dissenter, placed just as much reliance on political factors as the majority had, though he arrived at a different result. He agreed that the black seats must be protected at all costs, but argued that the court should also have sought to minimize the fracturing of political subdivisions. (The Democratic plan submerged chunks of surrounding suburbs in districts dominated by Chicago voters, doing violence, in Judge McGarr's view, to natural political alignments.) He also took issue with the majority's use of obscure educational elections to determine partisan division, when congressional elections had in fact produced a four-seat edge for the Republicans. Judge McGarr proposed to preserve that edge by taking one seat from each party.

Nowhere in either opinion is there the slightest suggestion that either result is in any way compelled by the Constitution. Indeed, the

judges do not bother to hide the fact that in their resolution of political matters they are acting as legislators. As Judge Sprecher put it, "Given the legislature's complete abdication of its constitutional responsibility, this court shoulders the burden of approving a reapportionment plan for Illinois." As other states, most notably Missouri, Colorado, and South Carolina, reach deadlocks, other judges will, with varying degrees of eagerness, shoulder that burden.

Judges have not always been so heavy laden. Until the Supreme Court's decision in *Baker v. Carr* (1962), federal courts had nothing to say about the boundaries of state legislative districts, and not until two years later, in *Wesberry v. Sanders* (1964), was congressional apportionment subjected to their review. As Justice Harlan noted in his dissent in *Wesberry*, federal supervision of redistricting was itself not new. The task, however, had up to then been performed by Congress, not the courts. In 1842, for example, Congress voted to require states to use single-member districts of contiguous territory, and in 1872 it provided that each district should contain "as nearly as practicable an equal number of inhabitants." Those rules were repealed in 1929, and a new law was enacted for the 1930 reapportionment that was made permanent in 1941. That statute, still in effect, provides three rules for reapportionment where a state has suffered a "complete abdication of its constitutional responsibility": (1) where the state has the same number of seats, the old districts are to be used; (2) where a state loses seats, all representatives are to be elected at large; (3) where a state gains seats, the old districts continue as before, while the new representatives are elected at large. This law was easy to enforce, and several states in fact fell under its provisions.

A 1967 law, now under consideration by a federal court in Missouri, has complicated the situation somewhat. An amendment to a private immigration bill proposed on the floor by Senator Howard Baker (Republican, Tennessee) and eventually adopted by both houses provides that "there shall be established by law a number of districts equal to the number of representatives to which such state is so entitled." The new law makes no reference to court-ordered remedies or to the previously existing law. There is no committee report to

which members could have turned for explanation, and the floor debates are less than clear. Twice Senator Baker said his amendment was not binding on the courts, before appearing to agree with Senator Birch Bayh (Democrat, Indiana) that it was. While existing law was mentioned in the debate, no one suggested that it was being repealed.

Under the usual rules of statutory construction, repeals-by-implication are not favored, and apparently conflicting statutes should be reconciled if possible. In that light, the 1967 law may be seen as embodying the general rule that at-large elections ought not to be allowed. The earlier law provides a temporary exception to the general rule, to be applied in the limited circumstances where a state has failed to redistrict after a new census, and it can therefore be enforced by the courts. If the law is interpreted in this manner, there is really no issue for the Illinois court to consider, since federal statutory law itself provides unequivocally the manner in which the Illinois representatives—absent action by the state legislature—are to be elected.

It is important to note that the Supreme Court has recognized a state legislature's right to consider partisan balance, geographic boundaries, and political subdivisions in its redistricting. A legislature may also seek to carve out districts to ensure the election (but not the defeat) of minority representatives. But the Court has never approved, let alone compelled, the use of explicitly political criteria by the courts themselves.

There is no lack of reasonably clear and objective rules for court-imposed redistricting. The at-large election remedy of the 1941 act, which was one of the solutions suggested by the Court in *Wesberry*, can be applied to states that have lost seats. For states that have not lost seats, the 1941 act's remedy of keeping the old lines would not achieve anything close to mathematical equality, since some districts have gained population and others lost. In those cases, the Court might adopt a geometrical rule requiring the most compact districts possible, a solution made possible by the wonders of modern computer programming. This rule also recognizes the 1967 statute's clear preference for single-member districts, even though that statute by its terms binds only the legislatures and not the courts.

The threat of either plan would impel the incumbents of both parties, and their allies throughout the state's political structure, to cut a deal acceptable to a majority of the legislature and the governor. The present system allows the contending forces to get close to a deal, leaving the courts to resolve only a few contested areas. Incumbents who are given safe districts under both parties' plans have no incentive to push for a full agreement. If they know that the court will throw out all plans and start from scratch, every politician will have the maximum incentive to see that the legislature carries out its constitutional responsibility to redistrict.

Such a revival of the political process would be to the benefit of both politicians and judges. Justice Frankfurter, in his dissent in *Baker v. Carr*, warned that judicial intervention in the political process would ultimately harm the courts more than the politicians:

The Court's authority—possessed neither of the purse nor the sword—ultimately rests on sustained public confidence in its moral sanction. Such feeling must be nourished by the Court's complete detachment, in fact and appearance, from political entanglements and by abstention from injecting itself into the clash of political forces in political settlements.

That warning is more timely than ever in light of burgeoning proposals to redistrict the judiciary in various ways. Attorney General Smith recently remarked that courts "get into the political arena and [thereby] subject themselves to the same kind of to-do that the political branches are subjected to." The courts will help restore public confidence in their impartiality if they withdraw from the political arena of redistricting and force the political branches to fight it out.

The Gasohol Hangover

Alcohol seems to work its intoxicating effects on lawmakers in their public as well as private capacity. Last year Congress passed, as part of the Energy Security Act of 1980, an ambitious program of subsidies, preferences, and tax exemptions aimed at shifting, within ten years, 10 percent of the nation's gasoline use to alco-

hol distilled from crops and other organic sources. Since regular gasoline is blended with alcohol in a nine-to-one mix to make gasohol, virtually every motorist in the nation would have to shift to gasohol to meet that goal.

Now, on the sober morning after, two separate studies suggest that Congress overindulged. One, written by Fred Sanderson of the Brookings Institution for Resources for the Future, highlights the role of gasohol subsidies in driving up food prices. The other, written by Thomas Stauffer for Harvard's Energy and Environmental Policy Center, challenges gasohol's claimed potential to displace large amounts of imported oil.

Cost, not feasibility, is the problem, both authors agree. "The program is a notable rarity," Stauffer says, "in the sense that it is one of the very few energy programs where targets are likely to be met." The raw material is virtually limitless: it is possible to distill alcohol from all sorts of familiar crops, including potatoes (vodka) and sugar cane (rum), and even from unwanted matter like crop wastes, fallen leaves, and outright garbage. "Free" sources like the latter, however, are really quite expensive, since their transport and processing costs are high. For cost-effectiveness, it seems, there's just nothing like corn. While it is more expensive to grow than some alternatives, it yields the most promising type of alcohol, ethanol (the same sort that people drink), along with useful by-products like animal feed and cooking oil. According to estimates made before the Science Committee of the House of Representatives last year, these by-products were worth thirty-eight cents in 1979 for every gallon of corn ethanol. Corn prices would have to double in real terms, Sanderson says, before other sources of alcohol became competitive.

Ethanol is no ordinary corn likker. For one thing, the revenooers are not after it. Quite the contrary. They forgive it and the gasohol of which it is a part the four-cents-a-gallon federal gasoline tax—which is a much steeper tax abatement than it seems at first glance, since ethanol makes up only 10 percent of gasohol. About half the states provide for a similar exemption. Also, distillers of alcohol fuels get a special 10 percent federal investment tax credit.

On the subsidy side, some of gasohol's advantages are evaporating. The Reagan ad-

ministration has ended the crude oil entitlement program, which included a preference for gasohol, and has moved to curtail a \$1.05 billion batch of grants, loans, and loan guarantees. But several other types of subsidy remain. Federal auto fleets, and perhaps those of federal contractors (depending on statutory interpretation), must use gasohol when it is available at "reasonable prices." Natural gas, with its low regulated prices, is important both in making fertilizer to grow the crop and in fueling distilleries, and both the farmers and the distillers of crop fuels have official priority in case of a natural gas shortage. The Agriculture Department is authorized to pay farmers to devote their set-aside acreage to fuel crops, and can also give alcohol producers preferred access to federal corn stockpiles at low prices.

The total value of the subsidies and tax preferences varies greatly from one distillery to another. The absolute minimum is forty-three cents per gallon of ethanol, counting forty cents' worth of federal gas tax exemption and three cents' worth of investment tax credit. It is much more difficult to fix a maximum. Gas tax exemptions offered in some states of up to ten cents a gallon for gasohol are worth up to a dollar a gallon of ethanol. Stauffer estimates that price controls on natural gas can represent as much as a seventy cents a gallon subsidy for ethanol and low-interest loans from the Small Business Administration another

thirty cents. A distiller that managed to nab all of these preferences could obtain a cost advantage of close to \$2.50 a gallon.

Even with advantages of this sort, gasohol has found it hard to compete with regular gasoline on the market. In Iowa it is a penny or two more expensive than regular unleaded gasoline, and in the Northeast the difference can be ten cents or more. Texaco, the leading gasohol marketer among oil companies, has just announced that it will end its two-year-old effort to sell gasohol in fifteen northeastern states; it blamed its decision on high transportation costs, "the lack of significant state tax incentives," and the current oil glut.

If the price differential for gasohol reflects a difference in production costs, it implies that ethanol is considerably more expensive to produce than regular gasoline—at least a dollar a gallon more. Stauffer estimates that ethanol's true current cost is at least \$1.80 a gallon; but the Department of Energy, ever optimistic, has pegged it at \$1.10 to \$1.20 a gallon, a figure that would make gasohol cheaper than regular gasoline even if their tax treatment were alike.

New information on production costs, by itself, may not suffice to discourage gasohol advocates. During the "energy crisis" the federal government began to keep two sets of analytical books, an economic set and an energy set, for calculating a policy's costs and benefits. A policy that failed the economic test



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might still be embraced if it saved more energy than it cost. How much oil, then, does gasohol save?

Despite years of experience, there is still no consensus on even the basic question of whether cars get better mileage from gasohol or regular gasoline. Stauffer argues that a gallon of ethanol contributes no more than its energy equivalent in gasoline, or about 63 percent of a gallon, resulting in a "mileage penalty" of 37 percent for pure ethanol (or 3.7 percent for gasohol in the usual nine-to-one blend); Sanderson assumes that the mileage penalty for ethanol is 20 percent. On the other hand, ethanol enhances the octane content of fuel, enabling refineries to save crude oil. In Sanderson's estimate there is a 20 percent fuel saving, just enough to balance the mileage penalty; Stauffer believes the saving is somewhat lower.

The major energy costs of gasohol are indirect. If oil, alcohol, and natural gas are grouped under a common heading of easily substituted "premium fuels," it may not even be true that gasohol always increases the nation's net fuel supply. It takes on average at least 25 percent of the energy content of ethanol just to grow the corn. If marginal land is brought into production to meet a surge in demand for corn, energy use may be much higher still, since such land requires extra doses of energy-laden fertilizer and energy-transported irrigation water. For example, Stauffer says, it takes nearly twice as much energy to grow a bushel of corn in Nebraska as in Iowa, primarily because of irrigation power. In addition, most ethanol distilleries burn large quantities of scarce oil or natural gas (although there are two that burn only coal). If a typical gas-burning distillery uses corn grown on marginal land, Stauffer says, it runs at a net premium-fuel loss, and oil imports increase. A new, more efficient generation of gas-burning distilleries will improve matters somewhat, Stauffer says, but even they will still consume from 59 percent to 85 percent of a barrel of oil for each barrel of ethanol they produce, depending on whether average or marginal energy input went into growing the corn. If ethanol costs remain at Stauffer's estimated level of \$1.80 a gallon, the cost of replacing imported oil will run from \$127 a barrel (for average corn) to \$287 a barrel (for marginal corn). Those costs are over and above the

current cost of the imported oil, which is around \$35 a barrel. Even a newly designed coal-burning distillery, in Stauffer's view, would cost at least \$70 to \$80 for each barrel of imported oil it displaced.

The assumption that ethanol costs will remain stable, however, may be pure moonshine. Gasohol production is still in its infancy, and federal plans call for it to rise more than twentyfold by 1990. Without gasohol, total domestic and foreign demand for U.S. grain in that year is expected to reach 330 million tons. That is about 20 percent above current levels, an increase that could be met by improved productivity without a significant rise in real food prices. Federal gasohol targets, however, call for an added 100 million tons of grain by 1990. Even allowing due credit for the by-products of distilling, Sanderson says, it is "all but certain" that a gasohol program of this size "will push real prices of corn and other feed grains to twice their 1979-80 levels."

Such a doubling of feed prices, which several earlier studies have also predicted, would have dramatic implications for food prices in general. Feed grains make up two-thirds of the production cost of chicken and eggs, one-half of the cost of pork, close to half of the cost of milk, and one-quarter of the price of beef. In all, according to Sanderson, food prices as a whole would rise by about 12 percent.

The most ironic cost of the gasohol program may show up in the nation's balance of payments. Not all the demand for grain for distilling will be met by increased production; some will be taken out of exports and domestic consumption. While the U.S. can probably raise prices to monopoly levels on some crops, making exports more lucrative, it will surely lose sales of crops for which it does not have a large competitive advantage. Since a drop in domestic food consumption will be extremely unpopular, the government will also be under pressure from consumers (as well as distillers) to curb exports in order to supply domestic wants. Finally, foreign countries will seek ways to cut their newly expensive food imports from the United States, just as we are trying to avoid buying oil from OPEC. If they succeed, and U.S. food exports decline dramatically, gasohol will lose even its most modest claim, that of improving the nation's balance of payments.
