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## AGRICULTURE AND TRANSPORTATION — A POSITIVE IMPACT

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I'm pleased to have the opportunity to appear before your fine group today to discuss the role of the railroad industry in achieving an energy-efficient transportation system.

If you have a rather negative opinion about railroads, there are many in this country who share your view. For the past decade we have witnessed a continuing parade of front page stories such as the Penn-Central collapse, the Rock Island bankruptcy, staggering Amtrak deficits, and branch line abandonments. Good news seldom gets front page treatment, so you have read little about the many railroads in this country which are innovative, dependable, and profitable, a group which includes my own company, the Santa Fe.

Before getting into the advantages of railroads in an energy-short society — and those advantages are very real — I thought it might be well to consider how important dependable transportation, in the broad sense, is to a nation's agricultural community.

An article in the June 26 issue of the *Wall Street Journal* reported that production conditions in Zaire range from good to ideal. Zaire has the potential to feed much of the population on the continent of Africa. But it doesn't even feed its own people. The basic reason for this problem is simple. Zaire has a primitive transportation system, a decrepit railroad system and virtually no modern highways. The article reported the progress — if progress is the right word — of one truck which took between four and five days to make a 100-mile trip from the city to a farming area and return. It told of farmers who are giving up, because they simply can't get their crops to market.

I submit to you that our story wouldn't be so different in the United States without an efficient, broad-based transportation system. In January of 1977, the U.S. Department of Transportation released a report predicting that total ton miles in the United States

would almost double between 1975 and 1990. The actual growth rate from 1975 to 1979 was 23 percent, so those 1977 projections don't look so unrealistic.

This nation would be well served by placing increasing emphasis on the retention and strengthening of its railroads, as we look toward ways to accommodate this expected growth in a time of ever increasing fuel costs. This does not mean that the trucking industry is to be downgraded. I do intend to mention situations where I think rail is better than truck. But this nation needs all of its forms of transportation, and needs all of them to be healthy.

Santa Fe Railway has been in business 112 years. We started in Kansas, and played a key role in the agricultural development of not only that state, but also the surrounding states that make up the breadbasket of the world. Ships chartered by Santa Fe brought to this country the Mennonites who brought with them the seeds for Turkey Red wheat and led to this nation's emergence as a major wheat producer.

Santa Fe is rather proud of its early role in helping agriculture in America. That early interest in agriculture hasn't diminished. In 1979 wheat alone accounted for over 7 percent of our revenues, and more than 8 percent of our total carloads. Other farm products added 5.7 percent of our revenues and 5.5 percent of our carloadings. In addition to that, we handled large quantities of processed food products, fertilizers, agriculture implements, and so forth. Thus, it is fair to say that at least one-third of our business is agriculture related. When agriculture prospers, we prosper; and when agriculture suffers, we suffer.

I intend to talk specifically about some things we have done and are doing to improve transportation of agricultural commodities. First, though, I thought it might be well if I addressed this subject of energy efficiency.

I want to preface those remarks by repeating that my purpose is not to be critical of the trucking industry. As a matter of fact, our affiliated trucking company, Santa Fe Trail Transportation Company, operates as a motor common carrier over more than 23,000 route miles and handled 411 million ton miles of freight last year. We think trucks are vital to America, and to agriculture. But we also feel there are some areas where railroads not only serve the needs of the nation better, but do so at a significant savings in fuel.

Shortly after the 1973 Arab oil embargo and the subsequent fuel shortages and sharply escalating prices, all of us became more concerned with fuel economy whether it involved the family car, the furnace, or the tractor. Each mode of transportation made claims of fuel efficiency, and the railroad industry asserted that it

had an advantage of some three to four times over trucks. We still see that figure quoted in advertisements and, while it may well be true as a broad general statement, there are many situations in which it simply does not apply.

The railroads' basic advantage is that the steel wheel on the steel rail produces less rolling resistance than a rubber tire on concrete. Also, railroad cars have a higher ratio of tare weight to payload than do trucks, especially when low density commodities are involved. I think any of us can look at a loaded coal train and conclude that this probably is a fuel efficient operation. We also can look at a local freight train running down some branch line with a 125-ton locomotive pulling four or five cars and a caboose and conclude that this probably is at the opposite end of the fuel efficiency spectrum.

In January of this year, David Paxson, an economist for the Association of American Railroads, presented a paper to the Transportation Research Board on the subject of energy and transportation. He cited the more obvious examples of efficient and inefficient train operation. In absolute terms, Paxson's study determined that the unit coal train achieved 350 net ton-miles per gallon of fuel while the local freight train produced only 40 net ton-miles per gallon. In comparing these two types of service to truck service, Paxson concluded that the unit train had a 4.421 fuel advantage over trucks while the trucks had a fuel advantage of about 1.721 over the local freight train.

Paxson's study also reports that when you compare long-haul piggyback service to comparable truck service, the rail fuel efficiency advantage is 2.3 to 1. When you compare short-haul piggyback to truck, the fuel efficiency advantage drops to 1.6 to 1. If you consider local service, the advantage turns to trucks on a ratio of 0.6 to 1.

There is one other bit of research I was able to do personally in this area, since, as I indicated, we operate a sizeable truck line of our own. In 1979 Santa Fe Railway consumed just over 366 million gallons of diesel fuel — just over a million gallons a day. That includes switch engines as well as road engines. By burning that much fuel, we produced 72.7 billion ton miles. In total, then, we produced just over 198 ton miles for each gallon of fuel.

Our trucking subsidiary consumed 7.7 million gallons of fuel in 1979. Of that total 4.4 million was utilized for cartage and pick-up and delivery of freight. The balance of 3.3 million gallons produced 151 million revenue ton miles of freight service, or 45.2 ton miles per gallon of fuel. Just in case someone is doing some arithmetic and wonders what happened to the other 260 million revenue ton miles which were handled by our truck line, this represented freight moved in piggyback service on our trains rather than over the highway.

While I'd agree our truck operations are not truly comparable to those of major motor carriers, I am confident that the data generated within our company are accurate. They substantiate the statement that rail service in general is about four times more fuel efficient than truck service.

It is our view, then, that in an energy-short society, this country would be best served by adopting policies that would encourage each mode of transportation to concentrate on those types of service where it is the most fuel efficient. For long haul service, it seems to me there is no question that rail transportation is most efficient. On the other hand, it is short sighted when legislative action or regulatory policy requires railroads to perpetuate inefficient gathering or distributing services that trucks can and should do at less expense. We don't want to put trucks out of business — we want to make partners out of them. And increasingly, we are doing just that. I'll give you just a few statistics and examples.

In the past 10 years we have tripled our inter-modal business at Santa Fe. Looking back just five years, in 1975 we handled just over 200,000 trailers or containers. Last year we handled more than 500,000. As the price of energy rises, we see new customers at our piggyback ramps almost every day. Many of them are major motor carriers who a few years ago wouldn't have considered rail movement.

While this tremendous growth was taking place, a trend was developing which we believe will support even greater growth in the future. I'm sure you know the railroads offer a variety of intermodal options ranging from ramp-to-ramp service — where the shipper has the responsibility to deliver and pick-up his trailer — to full service, including pick-up and delivery by the railroad or its cartage agent.

What we do best is provide ramp-to-ramp service, so we have been concentrating our marketing effort and service in that direction. As a result, in 1979, only 10 percent of our intermodal volume was full service. This means 90 percent of our intermodal business required an independent truck movement to and from our ramp. We believe motor carriers can provide the interface between the railroads and shippers for pick-up and delivery, consolidations, and short-haul service in the most efficient manner. It is in the best interest of both customers and our national goal of fuel efficiency to blend rail and truck so that each fulfills the role it does best. That's the partnership I referred to earlier.

Recent events have provided a big assist to the agricultural community and the railroads, specifically in the transportation of fresh fruits and vegetables. At one time, railroads were the dominant carrier for that commodity. But, over time, unregulated motor carriers reversed that position. As a regulated railroad, we were stuck with a rigid pricing structure, and could not compete with truckers who were able to tailor their price to the situation and location as appropriate.

As a result, unregulated trucks became dominant. In recent years, though, the produce community began to complain that placing almost total reliance on unregulated trucks wasn't working, for such service was becoming less and less reliable, and more and more costly. Finally the Interstate Commerce Commission acknowledged that consumers were bearing the brunt through higher and higher prices for produce. In a move to increase competition, railroads were deregulated for the movement of fresh fruit and vegetables in the Spring of 1979.

Long in advance of that time Santa Fe had observed this development as an opportunity and had done its homework. I can recall sitting around the conference table in 1976 with our marketing staff and the top executives in our company, developing plans to compete with the unregulated trucker. We conceived a good plan, one we knew we could execute, and one we were confident would be well received by the produce community. But at that point we were still regulated, and the ICC had not yet changed its posture. As a result, we had to bide our time. But in retrospect, the advanced planning paid dividends.

We now offer both carload and piggyback service to our produce customers and we offer it in a variety of options. We have established Plan III piggyback rates on a contractual basis. We have a series of 5-year contracts in effect that maintain a stable price structure subject to review and escalation once a year.

This program began in 1979 with one customer and 150 shipper-owned trailers. By early 1980, the number increased to 600 trailers and by mid-year jumped to 1400 shipper-owned trailers. Based on plans we presently know about, this will increase again to over 2,000 trailers by year-end. During the first 12 months of deregulation, our business in this one commodity group increased 103 percent.

Piggyback is not the answer to every transportation need. The mechanical refrigerator car is appropriate for certain markets, certain shippers and certain shipment sizes. When we became deregulated, we initiated a flexible pricing structure for these shipments and now quote rates on fresh fruit and vegetables responsive to the competition. No longer do we sit with a price too high when trucks are in abundant supply. Conversely, when demand is high, our price is responsive to the market. In our view, the past 15 months of deregulation have had positive benefits both for us and our customers.

Before I leave the subject of piggyback, I should also mention our Fuel-Foiler trains, which were designed and built by Santa Fe. These unique, skeleton-like trains weigh 35 percent less than conventional equipment. This Spring we completed the last of our new Fuel Foiler Trains at a cost of \$8.5 million. The five Fuel Foilers we now have in service between Chicago and Los Angeles will save over 1.5 million gallons of diesel fuel annually, as compared with moving the same

amount of trailers on conventional flat cars. We think that's a rather significant development in the energy field.

It might also be significant to discuss briefly how fuel cost increases affect us. Since Santa Fe burns about a million gallons a day, a 1 cent increase raises our operating costs \$10,000 a day, or over \$3.5 million a year. Our average cost per gallon of diesel fuel 10 years ago, in 1970, was less than 11 cents per gallon. By 1975 that had increased to 30 cents a gallon, and for 1979 the figure was 54 cents per gallon.

Today at Santa Fe we are paying almost 81 cents per gallon, or 70 cents a gallon more than in 1970. Remembering that each 1 cent increase raises our operating costs \$10,000 a day, that means that in the past 10 years fuel costs alone have raised our operating expenses nearly \$750,000 a day. Anybody who thinks freight rates are too high might consider that figure for a few minutes.

I'd like to turn now to an area where railroads receive most criticism from the agricultural community. I'm talking about grain transportation and so-called "car shortages." When a shipper can't get empties delivered to his elevator, it's true that as far as he is concerned the problem is a shortage of cars. In reality though, the problem can relate to many different facets of the total grain transportation network.

In order for the system to function properly, there must be much more than an adequate supply of freight cars and locomotives. There must be adequate unloading facilities at the ports, enough ships moving in and out on a dependable schedule, enough capacity in freight yards at or near the ports, and enough train crews to move trains expeditiously. A breakdown in any of these areas echoes throughout the transportation system and results in a given shipper not getting all the cars requested.

We have had situations where dozens of loaded trains were backed up in Texas, unable to unload at Gulf ports because of a shortage of ships, a shortage of elevator capacity, or other reasons beyond our control. Obviously those cars can't be sent back for another load while waiting to be unloaded.

When this occurs, we could cover the state of Kansas with a million cars and that still wouldn't take care of the problem, because there would be no place to move those cars. The real controlling factor is the amount of grain that can be run thru port elevators and loaded onto ships.

Once such a jam-up occurs, it doesn't unlog easily, either. When trains become bogged down due to congestion at the ports, the crews must be relieved and returned to their home terminal. When the source of the original problem is corrected, new crews must be brought out to handle the trains — a process that is both costly and time consuming.

There has been a recurring cycle in grain car supply during the past decade, relating primarily to government export programs. There was a general surplus of cars from 1970 through 1972, an extreme shortage during 1973-74 — the time of the first big sales to Russia — another surplus during 1975-76, and then a general shortage from 1977 through early 1980 when we again had a surplus. These are really artificial peaks and valleys, created by decisions that are sometimes political in nature. It is difficult for everyone involved — transportation companies, grain dealers, elevators, and ports — to make long-range plans for meeting future transportation requirements when those requirements are unclear.

There are several reasons why the industry was able to do a superior job on grain transportation this year when there were few problems. First, the past winter was the mildest in several years, so we started the new season without having to catch up on a significant backlog. Equally as significant, as the harvest season began the industry had some 32,000 more jumbo covered hoppers and 800-plus more diesels than a year ago.

On the Santa Fe, we have raised our fleet of owned and leased jumbo covered hoppers to 14,755 — about 750 more than a year earlier — and we also have more than 1,500 intermediate-sized hoppers suitable for grain. We added 141 new diesel units in 1979, and another 140 this year. Overall, we have spent \$1.5 billion on improvements in the past decade. This capital program, while obviously not undertaken solely to benefit any one segment of our business, enabled us to move more than 83,000 carloads of wheat this year through August 21 — about 30 percent more than the same period last year.

Many factors in the overall grain transportation system are beyond control of the railroads. But I'll give you a couple of examples of things that are being done or could be done. We have a truck allowance program which enables country grain shippers to apply part of the rail rate to the cost of moving grain to terminal elevators by truck during peak harvest periods. Using trucks for that short haul means that covered hoppers can concentrate on what they do best — the long haul. In June over 3,200 truckloads moved under this plan on the Santa Fe, and in July that rose to 21,000 truckloads.

Another factor that could improve car utilization would be to have grain sampling done at origin. Inspection during transit requires switching of cars to and from an inspection track at terminal points where congestion is often heaviest. This results in thousands of lost car days. Santa Fe has published tariff items to encourage origin sampling. There have been some steps taken by a few shippers, but by and large the grain industry has registered origin sampling.

One final proposal, which we believe would do much to provide a long-run solution to problems related to handling of agricultural



products, is the need for further deregulation of railroads. We subscribe to the basic theme that removal of the onerous regulations which have historically constrained railroads from acting prudently and efficiently would greatly enhance their ability to meet the transportation needs of the agricultural community. Rail deregulation legislation has experienced a rather stormy trip through Congress, and at this time bills have passed both houses, but there has been no conference to resolve differences between the two versions. We are hopeful the issue can be resolved, and that appropriate legislation will eventually be passed into law.

In closing, I want to repeat four points. First, the nation needs a strong, healthy transportation system, including all modes. Second, agriculture is extremely important to the railroad industry. Third, the railroad industry is improving its service to agriculture, and I believe it could do much more in that direction if we could rid ourselves of some of the government shackles that currently bind us. Fourth, and last, railroads are the most energy efficient form of transportation for the long haul, and it would seem to be in the best interests of the nation to encourage growth of that type of rail service.

America needs agriculture, not only domestically, but also as a tool in its foreign policy. And America needs its transportation system. Both agriculture and transportation have problems today, but I believe we are making progress. If we continue to work together, our collective impact on the future of this nation will indeed be a positive one.

# ***Energy Policy Issues***

