

**STATEMENT OF ALICE M. RIVLIN
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**Before the
Subcommittee on Surface Transportation of the
Public Works and Transportation Committee
House of Representatives**

July 17, 1979

Mr. Chairman:

This morning I would like to discuss four major issues related to President Carter's proposal to create an Energy Security Trust Fund.

- o The amount of revenue that would be generated through the proposed windfall profits tax;
- o The advantages and disadvantages of using a trust fund to finance the mass transit portion of the President's proposal;
- o The energy efficiency of the transit programs to be funded from the trust fund;
- o The energy efficiency of alternative transportation programs that might be considered for trust fund financing.

Tax Revenues

The decontrol of domestic oil prices will generate a huge increase in the revenues of domestic oil producers, and a windfall profits tax would channel a portion of these revenues to the federal government. The amount of producer revenues generated over the next five years depends primarily on the future level of OPEC prices, while the potential federal tax revenues depend not only on future OPEC prices but also on the tax rate eventually enacted by the Congress. Since both future world oil prices and Congressional action on taxes are uncertain, CBO has estimated tax revenues under both the President's original proposal and the recently passed House bill

based on two different assumptions about future world oil prices (see Table 1).

The first assumption is an OPEC price of \$20.12 per barrel, increasing at an annual rate of 1.5 percent faster than the rate of inflation between 1980 and 1985. We believe that this is the most likely scenario. With this price assumption, producer revenues over this period would be about \$135 billion in current dollars. If this price prevails, the windfall tax liability incurred over the 1980-1985 period would be about \$72 billion under the President's original proposal and about \$86 billion under the House bill.

Higher prices are also possible. Thus, our second assumption is that the current OPEC price will rise to \$23.50 per barrel, which is the ceiling allowed under the June 26 OPEC agreement, and will then increase at 3.0 percent a year in real terms. With this higher price, about \$210 billion in additional producer revenues would be generated over the 1980-1985 period. In this case, the windfall tax liabilities over the 1980-1985 period would be about \$113 billion under the President's original proposal and about \$141 billion under the House bill.

Trust Fund Financing

In April, the President called for the creation of an Energy Security Trust Fund, and he proposed that three major initiatives should be financed

TABLE 1. ADDITIONAL PRODUCER REVENUES FROM OIL PRICE DECONTROL AND TAX REVENUES FROM ALTERNATIVE WINDFALL TAX PLANS UNDER TWO ASSUMPTIONS ABOUT OPEC OIL PRICES: IN BILLIONS OF CURRENT DOLLARS

| Calendar Year | Producer Revenues | | Tax Revenues President's Proposal | | Tax Revenues House Bill | |
|---------------|------------------------|----------------------|-----------------------------------|----------------------|-------------------------|----------------------|
| | Likely Price <u>a/</u> | High Price <u>b/</u> | Likely Price <u>a/</u> | High Price <u>b/</u> | Likely Price <u>a/</u> | High Price <u>b/</u> |
| 1980 | 7.6 | 11.0 | 4.6 | 7.0 | 5.6 | 8.7 |
| 1981 | 19.3 | 28.8 | 10.3 | 15.4 | 12.2 | 18.9 |
| 1982 | 25.2 | 37.9 | 13.4 | 20.4 | 16.0 | 25.1 |
| 1983 | 26.4 | 40.7 | 13.6 | 21.5 | 16.6 | 27.1 |
| 1984 | 27.6 | 43.9 | 14.5 | 23.4 | 17.2 | 29.2 |
| 1985 | <u>28.3</u> | <u>46.4</u> | <u>15.3</u> | <u>25.3</u> | <u>18.1</u> | <u>31.7</u> |
| TOTAL | 135.4 | 209.7 | 71.8 | 113.1 | 85.7 | 140.7 |

a/ Assumes a current world oil price of \$20.12 per barrel and a 1.5 percent real price increase per year.

b/ Assumes a current world oil price of \$23.50 per barrel and a 3.0 percent real price increase per year.

by this fund: rebates to low-income households to offset higher energy prices, investments to increase domestic energy production, and extended programs for public transportation. These programs were selected so that the revenues of the windfall profits tax would help to ease the hardships that rising oil prices would impose on low-income individuals, and would diminish U.S. dependence on foreign oil through new domestic production and conservation.

The primary advantage of trust funds as a financing mechanism is that they provide a built-in, self-adjusting device for channeling the revenues of a special tax into programs that are closely related to that tax. If the revenue source is steady, they also provide funding security for programs that require a lead time for state and local planning. Other funding mechanisms such as advance appropriation do, however, provide similar security without some of the disadvantages of trust funds.

A trust fund device may be less desirable when uncertainty regarding the amount of revenues that will enter a fund in future years inhibits careful planning and results in program inefficiency. This problem is potentially serious for the Energy Security Trust Fund since its revenues are extremely sensitive to future OPEC prices which are very difficult to project. This fact was made clear by the recent OPEC price increase, which almost doubled the estimates of trust fund revenues that prevailed only a few months ago. Earmarking such an unpredictable source of revenues for

programs in energy and transportation—areas where long-term investments are often needed before programs yield results—could hinder Congressional decisionmaking.

The Energy Security Trust Fund proposed by President Carter would be subject to the normal authorizing and appropriating processes. In principle, this would permit the Congress to adjust expenditures from the fund to fit with fiscal policy, other government programs, changing needs, and evolving legislative priorities. By earmarking the revenues that enter the trust fund for specified program purposes, however, the Congress would reduce its flexibility to redirect revenues toward changing priorities. The Congress' decision about yearly expenditures might possibly be based on the amount of revenues available in the trust fund.

Another disadvantage of the trust fund device is that expenditures for transportation and energy programs from a new trust fund would pose coordination problems for the Congress and for the executive agencies. The reason for this is that many current energy and transportation programs are funded through direct appropriations. Coordinating programs that are funded via several financing mechanisms is difficult and causes program inefficiency.

Whether the advantages of a new trust fund outweigh its disadvantages depends partly on how the current funding mechanisms would be modified or

coordinated with the new trust fund. With respect to the transportation component of the Energy Security Trust Fund, two alternatives are possible: the new funds could be channeled into a unified transportation trust fund or into a separate trust fund for mass transit. A unified trust fund could be implemented by combining the revenues from the Energy Security Trust Fund with those from the Highway Trust Fund and the Airport and Airway Trust Fund; all transportation expenditures could be made out of this unified fund. This would be an improvement over current financing practice since it would allow all modes to compete for transportation funds. Such an approach would also permit greater coordination of modal programs. A separate transit trust fund, however, would be a step back from the present financing system, since it would limit the ability of the Congress to change transportation priorities and it would institutionalize barriers to integrated modal policymaking.

Urban Transportation Programs Proposed by the President

In April, the President proposed to spend about \$300 million a year from the Energy Security Trust Fund for two transit programs involving modes that are particularly energy-efficient—acquiring more transit buses and modifying existing heavy rail systems. This past Sunday, the President proposed increasing this spending level to \$1 billion a year, in addition to the

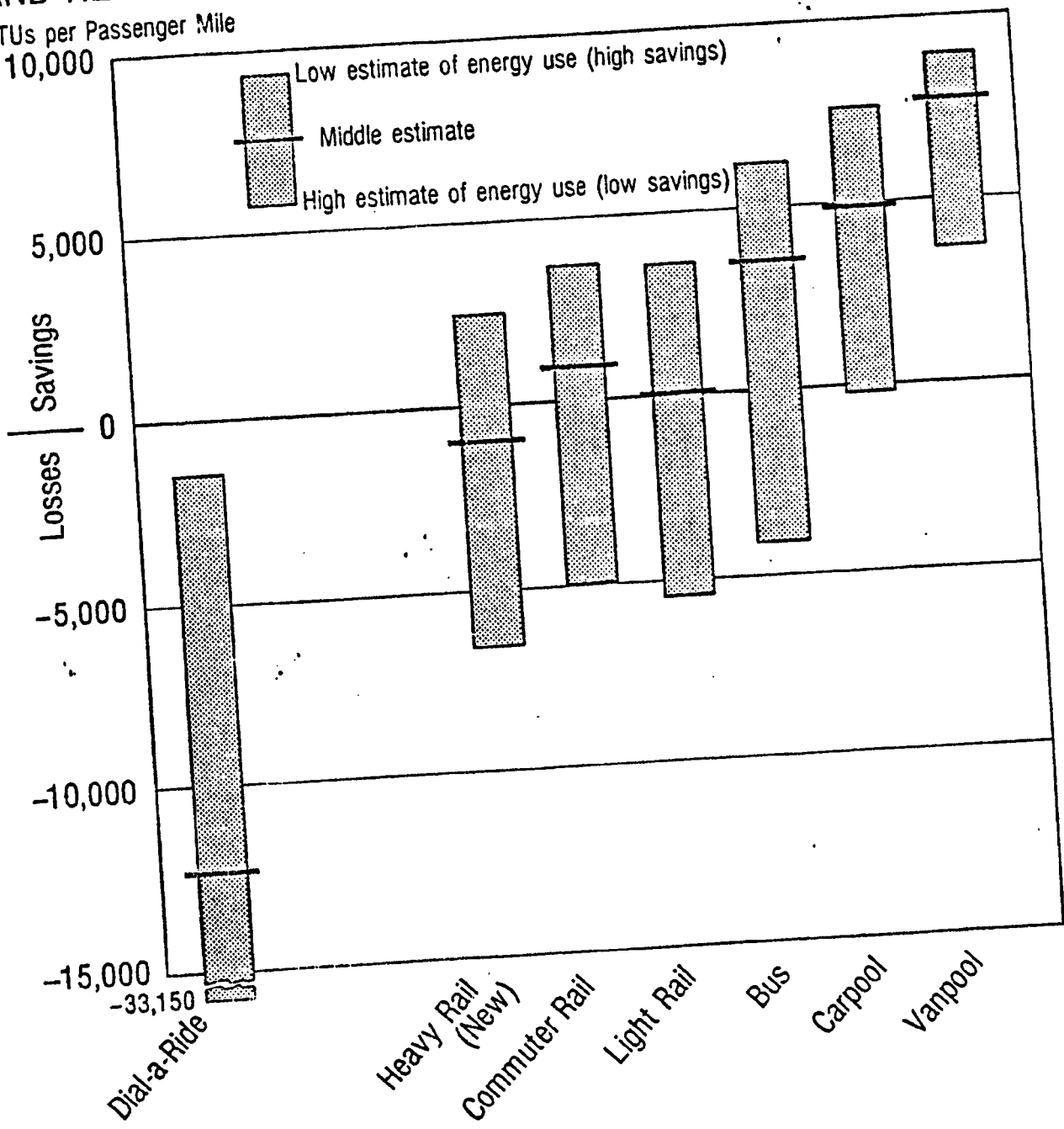
\$3.5 billion a year in transit programs that are already supported by general revenues.

In determining whether a transporting program would conserve energy, the Congress should consider the energy use of a program, not just that for operating the transportation vehicles. This means including the energy required to maintain the vehicles and operate the station, to manufacture vehicles, to construct the guideway, to travel to stations, and to account for the extra roundaboutness of some trips. In addition, any estimate of expected energy savings must be based on the net energy change—that is, the gain or loss when individuals adopt one mode and give up the previous mode. This last point is extremely important since attracting passengers from one energy-efficient mode to another saves very little energy.

Taking all these factors into account leads to the estimates of net energy savings per passenger-mile shown for each mode in Figure 1. The modes considered in this figure are dial-a-ride, new heavy rail, commuter rail, light rail, bus, carpool, and vanpool. The shaded areas represent a range of estimates for each mode, while the horizontal bars represent the CBO estimate of the most likely value for each. Vanpools and carpools are the most energy-efficient program areas, with energy savings of between 5,000 and 8,000 BTU's per passenger-mile. Buses also appear quite promising, saving an estimated 3,500 BTU's per passenger mile. On the

Figure 1.
**PROGRAM ENERGY^a—NET SAVINGS (POSITIVE NUMBERS)
 AND NET LOSSES (NEGATIVE NUMBERS)**

BTUs per Passenger Mile
 10,000



SOURCE: Congressional Budget Office estimates

^a Derived from a mode's propulsion energy per vehicle-mile, divided by the number of occupants carried, plus station and maintenance energy, construction energy, and vehicle manufacturing energy; also adjusted for mode of access, fraction of trip devoted to access, overall circuitry of trip, and source of new patronage.

other hand, new heavy rail, commuter rail, and light rail typically yield only small savings or even losses. Old heavy rail systems, such as those in New York City, Philadelphia, Chicago, or Boston, are not shown on the chart; in terms of energy savings, programs to modify these systems would probably be similar to the program for buses. Old heavy rail systems are energy efficient relative to new rail systems because a high proportion of passengers can walk to existing services and because they have fewer amenities such as escalators and air conditioning.

These comparisons focus on savings of total energy rather than savings of petroleum. Electricity-powered systems can substitute some non-petroleum energy for petroleum, so that the estimated savings of the modes change somewhat if petroleum savings, by themselves, are evaluated. As before, however, carpool and vanpool rank as the most petroleum-efficient modes, new heavy rail and dial-a-ride as the least petroleum-efficient modes; bus, light rail, and commuter rail tend to cluster in the middle.

Based on these estimates of energy-saving potential, the Administration has proposed two of the most promising programs for additional federal funding: acquisition of buses and improvement of existing heavy rail. The bus grants proposed by the President in April would purchase about 8,000 additional buses by 1985—a 15 percent expansion in fleet size. The resulting

increases in bus ridership could save as much as 5,000 barrels of oil per work day in 1985. This extension of bus service, however, could increase operating deficits by as much as \$300 million a year in 1985, requiring increased federal, state, or local subsidies or higher transit fares. The President's proposal to upgrade existing rail systems should help to slow or halt the decline in patronage they have experienced over the last five years. While it is difficult to quantify energy savings from such expenditures, they would appear to be high relative to other alternatives.

Other Transportation Programs

Although details of the President's proposal to spend an additional \$1 billion a year on public transportation have not yet been released, steps to stimulate greater use of carpools, vanpools, and buses appear to be most promising.

The federal government could stimulate patronage for buses, as well as carpools and vanpools, by giving them greater priority in traffic through exclusive right-of-ways, special traffic signaling, or ramp metering. By directing the additional funds requested by the President this past Sunday toward programs to acquire and construct exclusive right-of-ways for these high-occupancy vehicles, the Congress would stimulate more service of this

kind. In addition to developing exclusive bus lanes and reverse flow lanes, such a program could be broadly interpreted to include relocating on-street parking to off-street to obtain greater capacity from existing facilities, and constructing bridges, by-passes, and other facilities to enhance the movement of high-occupancy vehicles. While the energy savings of such a program are difficult to estimate, they could be substantial. Like the programs proposed by the President, they would promote efficient and convenient public transportation.

Although carpools and vanpools rank higher than buses and existing heavy rail systems in terms of energy savings, federal programs to subsidize them are probably not the most reasonable way to encourage their expansion. Corporations already receive a 20 percent investment tax credit for vans purchased for vanpools. While additional corporate tax incentives might be helpful in forming more vanpools, the lack of large capital or operating subsidies does not appear to be the major barrier to more rapid development of these modes. Rather, institutional problems such as lack of information and potential insurance liabilities are the major constraints.

In addition to these programs, some have argued that the Congress should increase its support for new heavy rail systems. This approach does not appear promising, because new heavy rail systems, on average, increase

energy use rather than reduce it, as is shown in Figure 1. This surprising finding appears to conflict with the fact that, in terms of propulsion energy per passenger-mile, rail ranks among the most energy-efficient modes. But, when such factors as construction and station energy, the energy used to get to and from stations, and the roundaboutness of rail travel are considered, the energy per passenger-mile computed from door-to-door for rail rapid transit is greater than that for buses, commuter rail, or light rail. The principal reasons for this poor showing on total energy use are that private cars, typically with only one or two passengers, are commonly used to get to new rapid transit stations, and that many of the passengers of new heavy rail systems are drawn from buses or other energy-efficient modes.

Conclusion

The revenue generated by the windfall profits tax will be massive—from \$86 billion to \$141 billion under the House version of the tax. The two transportation programs that are proposed—bus acquisition and heavy rail modification—appear to rank among the most energy-efficient and petroleum-efficient ways to expand public transportation services. The additional \$700 million a year that was proposed by the President on Sunday could produce further conservation, particularly if it is channeled into programs for busways, special signal systems, and other devices that help

buses and other high-occupancy vehicles travel swiftly through congested metropolitan areas.

Mr. Chairman, I will be happy to answer any questions that you or members of the subcommittee might have.

