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Good morning, Mr. Chairman and Members of the committee. I appreciate this opportunity to present the views of the Department of Transportation on the impacts various changes to the Clean Air Act (CAA) currently under consideration in the House could have on the operation of programs of the Department, and particularly the Federal Highway Administration and the Urban Mass Transportation Administration.

Transportation, and in particular, highway and highway borne transit, are properly considered to be key elements in the effort to improve urban air quality. Mobile source emissions are a significant portion of total emissions and must be dealt with through a combination of approaches, including improvements in engine emission characteristics and fuels used, and improvements in vehicle operating conditions.

Traffic congestion is increasing in urban areas of all sizes. Nationwide, 65 percent of peak-period urban Interstate System travel occurred under conditions of congestion in 1987. Highway travel delays in urban areas now total more than two billion hours annually. Vehicle delay is a significant contributor to mobile source emissions because of increased hours of engine operation as well as less efficient operation at lower speeds.

Increases in system capacity through highway construction, rigorous application of coordinated low cost capacity

improvements, demand management strategies and more effective use of public transit, will be needed to address the long term implications of urban traffic congestion and vehicle emissions. Innovative system design, system management, capital improvements, and coordination among transportation, land use and air quality planning are all elements that must be considered in addressing urban congestion and vehicle emissions problems.

Over the past 20 years, transportation, air quality and automobile industry professionals have grappled with and learned a great deal about how to account for and control mobile source air pollution problems. A great deal has been accomplished, mostly through technical modifications to the vehicle fleet. It is costing \$15-20 billion per year but these costs have been accepted by the traveling public and the expenditure has resulted in dramatic reductions in automotive air pollution, without the need to reduce personal mobility.

Today, highway related carbon monoxide (CO) emissions, which have long been targeted as the only controllable source of urban CO, are half what they were in 1970, even though vehicle travel nearly doubled during the past 20 years.

The Environmental Protection Agency (EPA) estimates that mobile source CO emissions should continue to decline for the next several years, as older less controlled vehicles are retired and other CO control strategies such as inspection and maintenance programs take effect, even though vehicle use will continue to increase. It does not appear that these reductions alone will eliminate the remaining CO problems. Other approaches will be

necessary, targeted at specific locations and time periods, as well as continued improvement in vehicle and fuel technology.

Progress toward the attainment of the ozone standard has been slower, for several reasons. First, while mobile source emissions have been reduced, they are one of several major contributors of hydrocarbon (HC) emissions. Hydrocarbons, along with oxides of nitrogen, are the principal precursors of ozone. Second, stationary and area wide sources of HC have been reduced, but not as much as expected due to growth. Finally, the interaction of emissions and meteorology in forming ozone is quite complicated and varies with weather patterns.

At the time the Administration's Clean Air Act proposal was drafted, the relationship of transportation to air quality was examined at length. The conclusion reached was that the current law and regulations provide a sound and workable basis for achieving air quality objectives and should be retained, but with appropriate adjustments. We believe that the Administration proposal, H.R. 3030 as originally introduced, represents a balance between transportation needs and protection and restoration of the environment. However, several amendments adopted by the Energy and Commerce Committee, as well as provisions in the Senate bill, would affect transportation programs. We have four concerns: provisions affecting funding sanctions imposed on the highway program for a state's failure to comply with air quality requirements; redefinition for conformity of federal activities to the state air quality implementation plan; Highway Trust Fund revenue impacts; and urban transit bus impacts.

HIGHWAY FUNDING SANCTIONS

In 1977 Congress provided EPA the ability to use the Federal-aid highway program as a lever, to insure that States submitted air quality implementation plan revisions in 1979 and 1982, which considered all of the Part D plan requirements in the CAA. While states generally submitted their SIPs on time, several were unwilling to develop vehicle emissions inspection and maintenance (I/M) programs as required by the CAA or did not develop I/M programs that were acceptable to EPA. I/M programs are designed to ensure that vehicle emission control devices remain operable. Highway funding sanctions were applied in these cases to gain State acceptance of the need for the I/M program.

The Administration proposal retains the sanction provision for failure to submit a plan and expands its use by authorizing highway sanctions if EPA disapproves a major portion of a SIP. But EPA would only be allowed to use the highway sanction mechanism once in each consecutive 5 year period commencing with the date of enactment. Other non-highway sanctions would be available to EPA to assure that States implement their plans and achieve required emission reductions, including bans on constructing new or modified stationary pollution sources, bans on new drinking water service, and withholding of air quality planning funds.

In contrast, H.R. 3030 as ordered reported by the Energy and Commerce Committee would extend highway funding sanctions to failure to make any submission required by the Act, including annual VMT estimates and emission inventories, or for failure to implement "any" provision of the approved State air quality plan.

A relationship to transportation problems is no longer required. Sanctions can also be applied statewide, rather than being limited to the nonattainment area as provided in current law. In addition, failure to achieve a required 3 percent annual emission reduction could also lead to sanctions in some nonattainment areas. This is a serious concern, because even with the substantial emission reductions that have occurred in the past ten years, a 3 percent annual reduction has not been achieved.

The drinking water hook-up sanction has been eliminated and a two to one emission offset sanction has replaced the ban on new or modified stationary sources. Highway funding sanctions would therefore become the primary Federal enforcement mechanism, and would be continually available, along with the other two sanctions, rather than once every 5 years. We are concerned that the expanded conditions for imposition of highway program sanctions and the limited other sanctions available could result in frequent and widespread delays and stoppage in State transportation programs. This would seriously undermine the ability of State and local officials to use federal transportation programs to solve an area's most pressing transportation problems. We recommend that the sanctions provisions in the Administration bill be retained.

SANCTION EXEMPTIONS

Under existing law, safety, mass transit, and air quality improvement projects are exempt from highway funding sanctions. Further, the Federal Highway Administration is responsible for determining which projects may proceed during a period of

sanctions. The Administration's proposal retains these exemption categories but would require DOT to consult with EPA before approving a project under the air quality improvement exemption. H.R. 3030 as reported would limit exemptions to safety and transit projects. This would preclude use of highway funds in sanctioned areas for projects which could achieve air quality improvements. We believe that funding of such projects should be permitted.

We are also very concerned about provisions of S. 1630 relating to sanction exemptions. The Senate bill specifies types of projects which could be funded despite sanctions. The bill would make all highway apportionments to a state "available without limitation" to implement these transit, air quality improvement and vehicle occupancy programs, with a state matching requirement not to exceed 10 percent. Further, States would be able to redirect Title 23 funds available to an area to these activities even if sanctions are not in force. This would be a significant change to the highway program and is opposed by the Administration. The exemption of programs from the obligation limitation would inappropriately reduce the Federal government's budgetary control over the Federal-aid highway program, and the maximum 10 percent State matching ratio is contrary to the principle of increased State contribution laid out in the National Transportation Policy. It could result in diversion of highway funds from around a State into the air quality nonattainment areas; would provide funding for certain categories of projects which are not now eligible for Title 23 funding, such as programs to convert fleet vehicles to clean fuel vehicles, inspection and maintenance programs, and implementation of employer trip

reduction programs; and would establish a maximum 10 percent state matching ratio for projects that currently require a 20-25 percent state share. Finally, the Senate bill would confine the exemption for safety and bridge rehabilitation projects to specific programs and would condition DOT approval of these projects upon a determination by the EPA Administrator that "such a project is consistent with maintaining air quality".

We strongly support the provisions of the Administration proposal relating to sanctions exemptions, and recommend their enactment.

CONFORMITY OF PLANS PROGRAMS AND PROJECTS

The current CAA requires each Federal agency to assure that its plans, programs, and projects conform to and give priority to the implementation of any approved or promulgated SIP. This requirement resulted in a joint DOT/EPA agreement which FHWA has since adopted as a regulation. Essentially, the procedure calls for a comparison of transportation plans and programs with commitments and prohibitions contained in the SIP and assuring that transportation projects are abiding by the commitments. In the event a conformity finding cannot be made, Federal-aid funding is suspended until the problems are corrected. The procedure recognizes that control of transportation-related air pollution is dependent on the entire transportation system, not just on individual elements or projects.

It further recognizes the dominant importance of the SIP as the primary air quality planning and implementation process for assuring attainment and maintenance of the air quality standards.

The air quality impact of transportation systems is an important issue which requires clear decisions from the affected community. The DOT believes that these decisions are best made on the system basis, not on a project basis. The Administration considered this issue and retained the conformity and priority provisions of the current law. Of course, achieving clean air in our cities will require close coordination between DOT and EPA and State and local governments.

The bill ordered reported by the Energy and Commerce Committee would change the conformity requirement from conforming with an approved SIP, to conforming with the SIP purpose of achieving the air quality standards. This change could require that each individual project be analyzed to demonstrate that air quality standards would be met and might not allow projects which result in a very small contribution to a failure to meet standards, even if the SIP had taken this into account. Further, the conformity definition would require that a project not contribute to a failure to meet standards, or to a delay in meeting those standards or meeting the required annual 3 percent emission reduction. We believe that the 3 percent emission reduction will be difficult to achieve in many nonattainment areas, and that conformity should not be tied to its achievement. If each individual project were to be analyzed, the cost of attempting to perform such analysis along with the limited accuracy of available analysis techniques would make this approach unworkable.

The Energy and Commerce bill further provides that the Administrator, in consultation with DOT, shall issue criteria for

determining conformity. We do not believe that these changes are necessary because DOT will work closely with EPA to make conformity work, consistent with the intent of new Clean Air Act amendments.

Again, we recommend that the Administration's proposal not to change the conformity provisions of the existing act be retained, in order to avoid serious disruption to the highway program.

IMPACTS ON THE HIGHWAY TRUST FUND

The Administration's proposal would require areas with sustained high carbon monoxide (CO) levels to sell gasoline with such level of oxygen as is necessary, in combination with other measures, to provide for carbon monoxide attainment. We do not believe that this proposal would contribute to substantial revenue losses to the Highway Trust Fund.

In contrast, the House Committee reported bill would mandate a 2.0% oxygen content in moderate CO nonattainment areas and a 2.7% oxygen level in serious CO areas. This requirement has the potential to decrease Highway Trust Fund and General Tax revenues and may increase the budget deficit.

The Senate bill calls for an even higher level. S. 1630 would set a 3.1 percent oxygen content standard for all "serious" CO nonattainment areas. A 3.1 percent standard probably would increase the use in these areas of gasohol, which is exempt from 6 cents of the 9.1 cent per gallon highway user fee. A required 3.1 percent standard in all CO nonattainment areas could result in losses to the HTF of as high as \$560 million annually, assuming an effective emissions trading program; this would be in

addition to \$480 million annual losses due to sales of gasohol at this time. Total Trust Fund losses could thus be over \$1 billion annually.

For these reasons, we strongly prefer the Administration's oxygenated fuels proposal that allows States and local governments to determine the oxygen content needed to attain and maintain air quality standards and we oppose both the House Committee's proposal and the Senate's 3.1% oxygen content mandate.

H.R. 3030 as ordered reported by the Energy and Commerce Committee would provide for development of clean fuel vehicles meeting specified emission standards. Clean alternative fuel would include reformulated gasoline, diesel and other fuels meeting the emission standards. Possible Highway Trust Fund (HTF) impact of the alternate fuels provisions would depend upon which types of alternative fuel vehicles are sold to meet the requirements, since some fuels are taxed, some are exempt from part of the tax and some are not taxed at all. There would be no impact if new fuels would be subject to fuel excise taxes on an energy equivalent basis. If vehicles powered by methanol or reformulated gasoline were used to meet the requirement, the impact would be zero or minimal. If only vehicles powered by electricity or compressed natural gas (CNG) were used, the impacts on the HTF could be substantial. While the impact on the HTF will need to be carefully watched, the overall HTF impact cannot be reliably estimated until it becomes clearer what mix of fuels would be used to meet the requirement.

IMPACT ON TRANSIT

The Administration's proposal would require that all new transit buses in standard metropolitan areas over 1,000,000 in population be capable of using and be operated on clean alternative fuels. The requirement would be phased in between 1991 and 1994. The requirement could be postponed for up to two years if EPA determines that delays will substantially advance the technology, improve the benefits or lower the cost of the program.

The requirements could increase somewhat the capital and operating costs for urban buses. However, the DOT supports the urban bus proposals in the Administration bill, and believes that they balance transportation and air quality concerns appropriately.

Cost impacts could occur in a number of areas:

- o Increased cost of vehicles capable of using clean fuels;
- o Cost of retrofitting fueling and maintenance facilities to handle alternative fuels; and
- o Increased operating costs of some alternative fuels.

At present, of the national total bus fleet of about 51,000, about 39,000 buses are in metropolitan areas over 1,000,000.

Alternatively fueled buses can be expected to cost between 6-17 percent more than diesel buses, depending on the fuel used and the success of manufacturers in developing and marketing alternate fueled buses.

In order to accommodate clean fuel vehicles (other than diesel), it will be necessary to modify vehicle fueling and maintenance facilities to account for the differences in the characteristics of clean fuel vehicles. Turning to fuel costs,

for CNG, it is estimated that fuel costs would be about the same as for diesel. For methanol, fuel costs per vehicle mile are expected to be somewhat higher than diesel fuel in initial years, accounting for both the higher amount of fuel needed to operate per mile, and the currently higher price of methanol per gallon.

Vehicle maintenance costs for clean fuel vehicles are expected to be about the same as maintenance costs for diesel fueled vehicles.

The Administration proposal also provides that the present requirement that all diesel buses be able to meet the 0.10 grams per brake horsepower hour (gm/bph-hr) particulate requirement by 1991 would be relaxed by setting the standard for 1991 through 1993 at 0.25 gm/bhp-hr, the same as for diesel trucks. This proposal will eliminate a potentially severe problem in the market for diesel buses. In contrast, the Senate bill would mandate that transit buses shall meet the .10 gm/bhp-hr standard in 1992. It will be difficult for buses to meet this standard. We believe it is very important that the Administration's proposal to match truck and bus requirements be retained. The engines for trucks and buses are the same and are built by the same manufacturers, but buses account for less than 3 percent of the market. We have been told by bus engine manufacturers that they do not expect to produce bus engines meeting the .10 standard before the standard becomes applicable to truck engines.

H.R. 3030, as ordered reported by the Energy and Commerce Committee, differs from the Administration proposal by requiring new clean fuel buses in consolidated metropolitan statistical areas over 750,000 population. In addition, we interpret the

definition of clean fuel to include diesel fuel which can meet applicable standards. We support the inclusion of diesel fuel in the definition of clean alternative fuels, provided that it is clear that clean diesel fueled buses must meet the same emission levels as other clean fueled buses.

Changing the program population threshold from 1 million to 750,000 in the requirement for clean fueled buses and changing the requirement to cover consolidated metropolitan statistical areas (CMSAs) would add a significant number of smaller jurisdictions which are less well equipped to deal with the maintenance and fueling system needs for alternate fuels, and added costs of purchasing new alternate fueled buses. We recommend that the applicability requirements of the Administration bill be retained.

Finally, the bill also would require the EPA Administrator to issue regulations for clean fuel engines in buses having their engines replaced or rebuilt after January 1, 1995, taking into account cost, energy, safety, leadtime and other factors, and allowing EPA to delay application of the requirements for up to two years on the basis of technology, lower costs or improved benefits. The Senate bill would be more onerous, requiring buses with rebuilt engines to meet new bus standards in 1992. We prefer the House approach.

Mr. Chairman, this concludes my prepared testimony. Thank you for the opportunity to present the Department's views. I would be pleased to answer any questions you or the Members of the Committee may have.