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Dear Air Quality Section:

Following are my comments on a few of the voluntary and mandatory items in HGAC's quantified Short List Control Measures for inclusion in our SIP.

**COMMENTS ON HGAC SHORT LIST CONTROL MEASURES FOR INCLUSION IN TEXAS SIP**

HGAC should be certain to review proposed legislation from the last Congressional session which is likely to be reintroduced, current legislation awaiting regulations, and US Supreme Court rulings to help it quantify the short list measures. For example, The Energy Improvement and Extension Act of 2008 (Sep 2008, passed in House and Senate; latest version engrossed Senate version), provide a mechanism for quantifying, and funding new measures, in part, many of which are on the voluntary Short List Control Measures.[1]

The meshing of funding initiatives with the analyzed control measures is necessary to determine the level of and the extent to which the markets and affected governments will be willing to adopt these measures. That is, the money cannot be decoupled from the measures, particularly the voluntary measures.

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[1] An example of these measures not specifically tied to a short list item is provision for Qualified Energy Conservation Bonds. The Energy Improvement bill creates a new category of tax credit bonds to finance State and local government initiatives designed to reduce greenhouse emissions. There is a national limitation of $800 million, allocated to States, municipalities and tribal governments. The estimated cost of this proposal is $276 million over 10 years.

## MANDATORY MEASURES REQUIRING LEGISLATION, REGULATION, OR ORDINANCES

## PAY AS YOU DRIVE INSURANCE

This was the highest rated of the Environ Inc mechanisms, and I have a number of problems with the structure and implementation this mechanism. I am certain that many others have expressed these and similar problems with this provision.

Among the more notable concerns with pay as you drive insurance are (1) pricing of this "insurance" component—you can label it "insurance", but it is not insurance: it is a tax; and, consequently, must have regulated rates, presumably a floor and a cap, whether it has a market veneer, or insurable risk veneer, or not; (2) responsibility for reporting of the miles; (3) uninsured motorists and the vehicles subject to the insurance mandate: many light vehicles in HGAC cruise around without insurance, a problem likely to get worse; light vehicles register in other states or even areas outside HGAC, some of which are in attainment areas; there will be more and more inter-regional and interstate heavy vehicle travel.

### (1) This pay as you drive insurance is a tax. The VMT is a better tax measure.

This "insurance" is a tax, no matter how it is labeled and should be mutually exclusive of a pure VMT. The VMT tax seems much simpler, easier to administer nationwide, although it also has the same problems with rate design, reporting, enforcement, credits and exemptions, and demand elasticity that the insurance provision does.

### (2) Vehicles subject to the insurance mandate; large number of uninsured free riders; and exemptions; 3-part rates

Contrary to the assertion in the Master List that short mile drivers subsidize long mile drivers, insurance statistics consistently appear to indicate that most accidents within a few miles of the home.

Right now, insurance companies in the HGAC and Texas markets can compete on price, subject to a cap. With this new measure, the type(s) of vehicle insurance a driver would have to carry would have three parts: (1) a new mandatory component for miles traveled; (2) the current a flat rate for mandatory uninsured motorist insurance; and (3) whatever voluntary pieces the driver chose to purchase.

The guys driving around without insurance, the free riders, is presumably the easiest problem to overcome with this initiative: either the

SIP reduction claimed has to be reduced, so as not to include the miles of the uninsured, or the paying drivers have to pay for the uninsured (neither of which alternative is legally appealing to me). HGAC could make an assumption about their numbers, and deduct this amount from any savings that would otherwise be claimed through universal coverage or impose the miles driven rate the uninsured avoid on those paying for insurance. The ozone reduction benefits could not be passed on through the uninsured provisions for liability, because the insured drivers would still be driving; if they do not have to pay, the demand elasticity for them is zero.

Light-vehicle guys registered out of state or even outside HGAC, particularly in "attainment" areas, create legal problems and enforcement problems. Are these guys subject to this tax? Similar issues exist for cross-border truck traffic given the recent US Supreme Court ruling, and for trucks registered in other states, particularly in attainment states.

I strongly support electric vehicles and other alternative energy and fuel efficiency mandates for vehicles. To induce persons to drive such vehicles, there could be a partial exemption from this "insurance;" such an electric vehicle exemption creates the need for an additional term to the model calculations to avoid double counting.

In contrast, with the VMT tax, a more valuable tax credit can be offered to induce demand reduction for NOx and VOCs producing vehicles and administered on a nationwide basis.

**(3) Pricing of miles traveled "insurance" component, price elasticity, and effect on demand**

Efforts need to be made to get traffic off the roads during rush hour to help manage the number of exceedances of the 8 hour standard.

As to elasticity, TxDOT has statistics indicating how many people are driving to work. In the short run, it is not clear how many of these persons have an alternative mechanism for getting to work.

TxDOT generally says that 25% of the persons on the road during rush hours are making discretionary trips. If we want to get these folks to modify their driving habits (organize trips and drive during non-rush hour), a time-of-use mandate would work better than a flat miles traveled.

How high would the miles driven rate component be set to see an effect on demand? Would the VMT be in lieu of the fuels tax or in addition to? If in addition to current fuels tax, would the miles driven component be set higher that the liability component for a person's insurance? That would make sense if one accepts the insurance companies' data that most accidents occur close

to home. Could it be higher than a monthly car payment? Would there be block, or declining block, rates like for electricity?

A rate design with only a flat tax pay as you drive component does not incorporate the congestion pricing mechanisms authorized in SAFETEA-LU. TxDOT and TTI have long stated that 1/4$^{th}$ of rush hour drivers are not commuting to and from work. Commuter traffic and intervals must be meshed into the eight-hour ozone standard. Flat rate insurance on miles traveled would not seem to have any effect on discretionary driving during HGAC region rush hours.

## VMT TAX

A VMT is a good idea, either alone or in conjunction with a motors fuels tax, to raise money for transportation projects. The effect on demand would presumably be the same as the effect on demand caused by vehicle miles traveled "insurance".

As above, an assumption has to be made as to elasticity of demand (how much of a reduction in miles traveled). A simple VMT, without dynamic pricing, may not maximize the ozone reduction but would be simpler to collect and administer.

As to enforcement, the free rider problem could be controlled better than with the "insurance", but there would remain the verification issue as to how many miles were actually driven. Presumably this number could be verified as a part of the annual state emissions test for light vehicles and periodically verified for heavy trucks.

The VMT will be hard to impose and apportion on trucks that engage in a lot of interstate travel without some form of verified report. Since it is estimated that heavy vehicles cause 50% of the NOx, there would be issues as to apportioning both the VMT revenue, and more importantly for the SIP, the VMT credits for NOx reduction.

## BICYCLES-BENEFITS ARE INCORRECTLY ANALYZED AND UNDERCOUNTED

The bicycle cost effective analysis is not supportable and should be reanalyzed and the benefits recounted. The short list quantification does not count or even refer to benefits from increased use of existing facilities. Further the short list analysis only counts benefits from new capital construction, it implicitly assumes there would not be increased use of existing facilities. Moreover, the new construction analysis only counts bike use of facilities for work commutes and not for errands or other discretionary trips.

Many persons who might drive a short distance non-work errand could be induced to use a bike for such errands, particularly if they work far away from their home and would have a commute long enough to render bike use infeasible.

Many measures should be aggregated or bundled to avoid double counting or to increase the benefits from the measure, and thus get it higher up the short list. Some measures, however, need to be disaggregated to examine them correctly and fairly. Bicycles and other non-motorized vehicles need to be disaggregated into two components (1) voluntary increased use of existing facilities needing little funding except for education and public awareness; and (2) the projects analyzed in the short list which require construction.

1) **The Short List describes <u>only</u> increased use of bicycles if more facilities are constructed.**

The current analysis, see p 8 of the short list analysis, wholly ignores the increased use of bicycles using existing facilities (i.e. the marginal cost of using an existing bike path is zero or nearly zero). Not a single additional user is predicted from increased use of existing facilities due to voluntary measures and public awareness efforts.

2) **Further, and equally important, the analysis only forecasts use by cyclists for commutes or work trips while the rest of the control measures focus on metrics such as VMT, examining both work and non-work related trips.**

Besides being flawed, this analysis puts the bicycle analysis at a disadvantage relative to other measures. Bicycle users may be willing to ride a bike for discretionary travel, which it may be impractical to ride a bike to work. Work may be further away than the 3.5 mile metric used in the study, but the bank and drug store may well be within pedaling distance and not raise grooming, all day storage, and other issues that confront many commuting bike riders.

While these two types of projects (existing and new facilities use) probably induce demand interdependently, I do not quibble with the methodology employed in the capital outlay analysis for the second type of project (new construction) except that it ignores the use of bikes for noncommute trips. The Short List analysis represents only those who would not ride a bike, but for the additional expenditure; i.e. I ain't getting on a bike unless you make these capital improvements, and then only those going to and from work. (I ain't getting on this bike to go to the post office or gym.)

The analysis mentioned difficulties in counting bike riders. First, most of the short list metrics are modeled (predicted, not counted); but second, counter cords could be placed randomly much like local traffic counters are used to get measurements from which to model.

Not only does SAFETEA-LU, in its current formulation, provide for grants for bicycles and walking, the The Energy Improvement and Extension Act of 2008, provides for Bicycle Commuters. The bill allows employers to provide employees who commute to work by bicycle limited fringe benefits to offset the costs of such commuting (e.g., storage). The estimated cost of this proposal is $10 million over 10 years. This provision is limited to commuters, but the SIP need not be.

## ON ROAD SPEED REDUCTION: BOTH HEAVY AND LIGHT VEHICLES

The short list addresses reduced truck speed, but neither the master nor short lists address fuel savings of reducing speed for light vehicles. In addition to supporting mandates for speed reduction for heavy vehicles—not just trucks, I support the reduction of the speed limit to 55mph in urban areas and 60 mph in rural areas in HGAC for light vehicles. Many new fuel efficiency standards, such as the California standards and CAFÉ standards are not tied to persons speeding. The HGAC TPC could hold meetings on why people think they need to drive faster than 60 mph given the drop in fuel efficiency. I am not addressing attainment areas for this speed limit.

## FUEL REFORMULATIONS & VEHICLE EFFICIENCY STANDARDS

I support all federal fuel reformulations and California efficiency standards described in the master list. See my comments above regarding speed limits to be used in conjunction with these standards.

## VOLUNTARY MEASURES REQUIRING BEHAVIOR MODIFICATION & DEMAND REDUCTION, REPORTING & VERIFICATION SYSTEMS

## IDLING - MANDATORY AND VOLUNTARY

Mandatory and voluntary restrictions on idling are my favorite form of fuel savings without reducing vehicular miles traveled.

Intuitively, it will be harder to get large vehicles to constrain idling and measures for heavy vehicles—trucks, rail, waterborne vehicles--will need to be mandatory or financial incentives will need to be provided.

**Heavy: trucks, buses, truck stop electrification, off road construction equipment, federally regulated ships and rail; advanced insulation**

Appropriate regulations and ordinances, whether state, federal, or local, should mandate a limit on truck and other heavy vehicle idling, except for safety and emergency vehicles, school buses at stops, and jet engines.

Several truck stop electrification facilities are either in operation or near date of commencement of commercial operations. This is a good way to save fuel, and to provide truckers a higher quality stop. The California Climate Registry is adopting protocols for Truck Stop Electrification to assist in the financing of these facilities that Texas could adopt particularly if we are going to have all this trade traffic coming through HGAC.

Federal regulations should be adopted to control fuel used for idling or during demurrage of container ships and passenger ships.

Local Metro bus drivers absolutely do not have to idle their engines while they are on break. Some metric has to be adopted as to how long they idle before turning off the fuel.

The Energy Improvement and Extension Act of 2008 "Incentives for Idling Reduction Units and Advanced Insulation for Heavy Trucks," provides an exemption from the heavy vehicle excise tax for the cost of idling reduction units, such as auxiliary power units (APUs), which are designed to eliminate the need for truck engine idling (e.g., to provide heating, air conditioning, or electricity) at vehicle rest stops or other temporary parking locations.

The bill also exempts the installation of advanced insulation, which can reduce the need for energy consumption by transportation vehicles carrying refrigerated cargo. Such advanced insulation has the co-benefit of reduction of GHG due to the lower need for refrigerants.

**Light Vehicles: idling at schools, airports, banks, and other public areas with waiting facilities**

Idling by light vehicles in recurring circumstances such as at schools is the stupidest form of fuel waste, and education programs could be adopted to encourage an end to this practice and the damage it does to the air, their kids' lungs, and to our dependence on foreign oil. These education programs could be instituted at schools at little cost and through public announcements.

In some areas, restrictions on idling by light vehicles could be mandatory or enforceable by law, such as at airports and other areas where

already on-duty law enforcement could induce people to move or go to the parking areas. Ticketing practices could be adopted to enforce the prohibition.

Situations at unpredictably long waits, such as at drive through banks, can best be altered by education, direct deposits, electronic banking, or parking the car, turning off the ignition, and going inside.

## ELECTRIC VEHICLES

GM and others are rolling out electric vehicles in significant numbers in 2010, and I urge HGAC to reexamine the cost effectiveness of these vehicles. Of course, the electricity has to come from somewhere initially, and in ERCOT that somewhere may be a fossil burning generator.

In the near future, little electric cars will be able to plug into the grid at a retail outlet or other, and sell electricity back to the grid. However, for right now, persons can be induced to buy these cars with a tax credit; in Texas, this would need to be a federal tax credit.

The Energy Improvement and Extension Act of 2008, establishes a new credit for plug-in electric drive vehicles. Additionally, while not a mobile measure, the Energy Improvements Bill also provides for accelerated depreciation for Smart Grid and Smart Meter initiatives. This right to take accelerated depreciation would probably be sought in ratemaking by wires utilities and wires merchants, but these features would improve the availability of a repowering station, making it more convenient for electric vehicle owners to repower while away from home base.

## STATIONS AND FACILITIES FOR ALTERNATIVE & NEW FUELS

To encourage people in the HGAC area to use non-carbon or carbon-based renewable fuels, there must be stations or access to the fuels. The Extension Act recognizes this and provides for new or reformulated stations. Regrettably Exxon left the retail service station market, but other providers such as Shell, Chevron, BP, and Valero should be encouraged to participate in these ventures.

Specifically, the aforementioned improvements bill provides for an Extension and Expansion of the Alternative Refueling Stations Credit. The bill extends the 30% credit for alternative refueling property, such as natural gas or E85 pumps, through 2010. The bill also adds electric vehicle recharging property to the types of property eligible for the credit. The credit for hydrogen refueling property is unchanged.

I do not favor the use of ethanol even switchgrass and other celulosic fiber. Corn is for people and animals to eat. Ethanol does not have the BTU value of conventional hydrocarbons blended into gasoline, so it is inefficient, and it is still carbon-based.

## COMPRESSED WORK SCHEDULES

Compressed work schedules and telecommuting should be aggregated or bundled: these could be adopted by ordinance or statute for government employees; but they would be voluntary for private employers. To reduce uncertainty from the voluntary component and to meet the enforceability criterion, a simple local reporting system needs to be adopted for major companies' local offices to report whether such plan will be and is used.

## CERTAIN CONTROL MEASURES SHOULD BE WITHDRAWN FROM HGAC SIP SHORT LIST

This is an example of a CM that at this stage should be dropped from the short list, possibly to be reinstated later.

Control Measure: #127, Heavy Duty Vehicle Border Inspection Program explains that the number of cross-border vehicles that currently travel beyond a 20 mile zone is small. We assume that given NAFTA and the newly branded, fragmented, Trans Texas Corridor, the number of cross border trucks that could come into HGAC could increase.

Given recent US Supreme Court rulings regarding Safety, NAFTA, and NEPA, it would be difficult to implement this CM without federal legislation and implementing regulations. The numerical assumptions for this initiative are too difficult without a better regulatory metric that has withstood NAFTA challenges in court.

I submit these comments individually, but I am also a member of the Board of Directors of the Citizens' Transportation Coalition and an experienced instructor in electric power regulations, the CAA, NOx, Sox, and GHG regulations, state and federal initiatives, litigation, and evolving cap and trade programs. I am not a chemical engineer.

I greatly appreciate the very complicated undertaking of HGAC staff and consultants and would be happy to assist with your efforts.

Best regards,

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