Attachment 1: Description of Emissions Reduction Measure Form

Title: *Improving Transportation System Equity*

Type of Measure (check all that apply):

☑ Direct regulation	☐ Market-based compliance:
☑ Monetary Incentive	☐ Non-monetary incentive
☑ Voluntary	☐ Alternative Compliance Mechanism
☐ Other Describe:	

Responsible Agency: California Air Resources Board and/or the state agency identified in the measure. Where no specific agency is listed, CARB is the responsible agency.

Sector:

☑ Transportation	☐ Electricity Generation
☐ Other Industrial	☐ Refineries
☐ Agriculture	☐ Cement
☐ Sequestration	☐ Other Describe:

2020 Baseline Emissions Assumed (MMT CO2E):

Percent Reduction in 2020: See below.

Cost effectiveness ($/metric ton CO2E) in 2020: See below.

Description

The AB 32 process presents a valuable opportunity to adopt policies that will both reduce transportation sector greenhouse gas emissions and improve the equity of the transportation system. Over a third of California's residents are not licensed to drive and must rely on other forms of transportation for access to jobs, education, healthcare and other vital daily needs, yet typically 80% of surface transportation funds are spent on highways, with less than 20% going to transit services. Low-income residents and persons of color are disproportionately represented among the transit dependent; therefore, continuing to reduce funding for public transit –as the state recently did— unfairly disadvantages this group. In addition, many municipalities fail to design complete streets that safely provide for pedestrians and bicyclists. According to the Latino Issues Forum in San Francisco, Latino and African-Americans are disproportionately likely to be the victims of vehicle-pedestrian crashes relative to their overall share of the population – an unacceptable reality of the status quo. Finally, an auto–based system undermines the ability of the poorest Californians to accumulate wealth and improve their quality of life. The poorest fifth of American families pay 42% of their income for the purchase, operation, and maintenance of automobiles. Designing communities that allow people to live without cars removes an important barrier to wealth creation for California's poorest residents.

NRDC proposes a series of policies below to reduce transportation sector greenhouse gases and other criteria pollutants emissions, while at the same time achieving an important equity outcome.

The vision is best articulated by the Surface Transportation Policy Project's New Transportation Charter:

> "The transportation system should be socially equitable and strengthen civil rights; enabling all people to gain access to good jobs, education and training, and needed services. Where possible, personal transportation expenses should be minimized in ways that support wealth creation. Integrated with land use planning, transportation should also enhance the quality, livability and character of communities and support revitalization without displacement. The transportation system should allow every American to participate fully in society whether or not they own a car and regardless of age, ability, ethnicity, or income[i]."

California has to recognize and change course from a legacy of transportation planning that has centered around the automobile for the last sixty years. In order to create a balanced and multi-modal transportation system that achieves social equity, we will need an aggressive system of targeted investments to raise the quality of public transportation and facilities for walking and biking across the state.

In order to reach this outcome, the policies below aim to achieve two specific objectives. The first is revenue generation to fund investments that reduce greenhouse gas emissions and improve the equity of the transportation system. Pricing driving represents an opportunity to raise substantial funds to invest aggressively in alternative modes. The second is economic efficiency. The literature shows that some reduction in driving is achievable when pricing policies reveal the true cost of driving to consumers. With more complete information, consumers are more likely to make better transportation decisions, thus providing some reduction in vehicle miles traveled and greenhouse gas emissions.

We are committed to crafting policies that do not disproportionately impact low-income communities – from a financial or mobility standpoint. If properly crafted, almost any pricing policy can be designed to be progressive with respect to income. It should be acknowledged that certain pricing policies have the potential to have a regressive impact *in the collection of revenue*, thus it is vital that any policy solutions adopted have a strong progressive bias *in their implementation or distribution of revenue generated*. Since low income and communities of color tend to use public transit, and walking and bicycling modes more frequently than other members of society, we recommend investing revenue from congestion pricing schemes in public transit and supportive infrastructure as a way to ensure that pricing programs are progressive on balance. It is also important to recognize that mobility needs and options vary dramatically by region of the state and that a context-sensitive approach to pricing policies is necessary to assure social equity. These recommendations are not exhaustive of the funding and market-correcting mechanisms available to CARB, and should be further analyzed to ensure that they meet the objective of improving the equity of the transportation system.

Parking pricing

Free parking is a misnomer. *Someone* pays for "free" parking, and the current situation spreads this cost to all residents—in the form of more expensive goods or housing—whether or not they drive. Pricing policies can be applied to street parking (which is often free or at or below market price), existing paid parking (which is often priced below its cost), or free/validated parking (which recovers little or none of its cost, and represents a subsidy to motor vehicles, especially solo drivers, over other transportation choices).

In 1992, California passed parking cash-out legislation AB 2109 (Katz) to require businesses to offer employees the option of the cash-in hand value of a parking space, or continued use of a subsidized space. Despite promising results, this legislation has been enforced on a limited basis. CARB and Caltrans should identify barriers to implementation and put into place a plan to publicize and enforce existing legislation. If, upon research, additional legislation is found necessary to broaden the scope of California's current parking cash-out law, it should be proposed. In addition, Caltrans should compile literature illustrating the detrimental effects of circling traffic (estimated at 10-20% of urban congestion) and highlighting simple solutions and case studies (such as Pasadena's Central Business District—which prices parking to constantly maintain a 15% vacancy rate). Such literature should be distributed through a technical assistance program to local agencies, with information on the health and air quality benefits of reducing circling traffic.

Pay-as-you-drive (PAYD) insurance

PAYD insurance converts vehicle insurance from a relatively fixed annual amount (which varies little by mileage), to a mostly mileage-based rate. For example, instead of paying $480, $600 or $720 annually depending on one's actuarial bracket, one would pay $.04, $.05 or $.06 per mile (based on the national average of 12,000 annual miles), plus perhaps a fixed amount to reflect theft or certain other largely mileage-independent risks. This measure has been shown to be a more accurate and equitable reflection of actual risks, and has already been adopted as an insurance option in several states.

In conjunction with Caltrans, CARB and the Department of Insurance should develop and implement a pay as you drive insurance program in California. Washington and Texas currently have PAYD programs either proposed or in place and can serve as models.

Congestion Pricing/Cordon Pricing

Research suggests that introducing tolls on congested highways or in congested areas can be very effective at increasing vehicle occupancy or encouraging travel alternatives. Congestion/Cordon pricing policies are most effective and most equitable when the revenue generated is invested in creating a balanced, multi-modal transportation system

so that those who do not want to pay to drive have comparable, safe, convenient and enjoyable alternatives.

In partnership with CARB, Caltrans should identify particularly congested corridors or central business districts, where an equitable accessibility and mobility improvement plan including congestion pricing, appropriate transit, bicycle and pedestrian investments could reduce GHGs substantially. Caltrans should identify any legal barriers to road pricing in priority areas, propose legislation needed to resolve these barriers, and consider equity concerns in distributing funding generated by congestion pricing schemes. Through a state program of technical assistance contemplated in NRDC's land use/smart growth policy recommendations, CARB and Caltrans should create and distribute technical assistance information on implementation of pricing strategies to local and regional planning agencies.

Intercity tolls

Similar to congestion pricing, intercity tolls are a measure to expose consumers to the true cost of driving in efforts to reduce VMT and GHGs, and to raise substantial revenue for an ailing transportation system. Already present on many turnpikes and similar toll roads, these measures are being expanded in part due to new private or public-private partnership toll highways, or the conversion of existing highways to this status. These tolls are more likely to change behavior near urban areas, but may also have marginal effects on mode choice or destination choices (including forgoing a long-distance trip).

CARB and Caltrans should identify heavily congested corridors and promote increased tolling as a means to increase vehicle ridership and reduce greenhouse gas emissions.

Emission Reduction Calculations and Assumptions:

NRDC is committed to working with CARB throughout the scoping plan process to develop further detail on these policy recommendations, to prioritize the policies, and evaluate the emission reductions and economic costs and savings associated with the policies. In the interim, a number of resources provide estimates of the VMT and GHG reductions achieved with adoption of smart growth policies.

- Preliminary analysis by CARB suggests that where parking cash-out was implemented, single occupant vehicle driving decreased 17%;[ii].
- Littman estimates that parking cash out could apply to 20% of vehicle travel, for potential total VMT reductions of 2-6%. Littman further estimates congestion pricing could reduce total VMT by 3-6%, and PAYD insurance could achieve 8-10% VMT reductions[iii].
- Cowart found cordon pricing reduces VMT 10 – 25% in the priced area with little effect on diverting traffic outside the area[iv].

- Littman estimates that parking pricing can reduce drive alone commuter trips 10 – 30%, and that the proportion of VMT affected by these policies is roughly 40%, for a 4 -8% reduction in VMT.

Cost-Effectiveness Calculation and Assumptions:

The cost-effectiveness of any particular measure depends upon the degree to which it is implemented, details specific to the region of implementation, such as the existing built environment, and whether complementary measures are enacted. Without more specifics on the details of adoption, it is difficult to provide cost estimates at this time.

Implementation Barriers and Ways to Overcome Them:

The primary objection to the types of measures discussed above that correct market distortions are typically made on equity grounds, by those who argue that pricing policies favor those who able to pay more, and harm low income residents. By ensuring that funds generated from pricing policies are invested in infrastructure that benefits low income residents (.e.g., public transit), certain concerns can be alleviated. At the same time, fixing these market distortions can improve equity. For example, a supermarket that provides free parking for all customers is essentially subsidizing the cost of providing these spaces by raising prices of goods for all customers, whether or not they drive and take advantage of the free parking. By charging drivers a fee to park their cars, the establishment allocates this cost to those taking advantage of this resource more directly, and theoretically should be able to reduce the cost of goods for those who do not drive. The same is true for public transit agencies (i.e. BART) that provide free parking as a perk for certain commuters, and pass the cost of providing this parking along to all commuters in the form of higher fares. Businesses may raise objections to parking pricing on the grounds that it will deter customers. Parking should not be priced at a level to deter customers, rather it should be priced at a level to ensure a constant availability of approximately 15%, sufficient to ensure that potential customers can always easily find a space.

Another common barrier will be the general resistance among the public to measures that adjust pricing. Educating the public regarding the link between transportation and climate change, and the related environmental, financial, economic and strategic security issues - a strategy suggested by the Climate Action Team - can increase public understanding and acceptance of these policies.

Potential Impacts on Criteria and Toxic Pollutants:

All of the measures described above are designed to more fully reflect the true cost of driving and parking and the lower cost to consumers of alternative forms of transportation, and to thereby encourage shifts to other transportation choices, such as ride-sharing/carpooling, an alternative mode (public transportation, walking, or cycling), trip-chaining (combining trips or errands), or closer destinations. As such, many of these measures should reduce peak period driving and decrease emissions of criteria pollutants.

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[i] http://www.transact.org/library/factsheets/equity.asp Accessed 9.27.07
[ii] Cal EPA Research Notes: http://www.arb.ca.gov/research/resnotes/notes/98-3.htm Accessed 9.27.07,
[iii] Littman, T. "Win - Win Emission Reduction Strategies: Smart Transportation Strategies Can Achieve Emission Reduction Targets And Provide Other Important Economic, Social and Environmental Benefits." www.vtpi.org.
[iv] Cowart, B. "Improving Transportation Choices." Natural Resources Defense Council. December 2007. Washington, D.C. Forthcoming.