Presentation to the **Senate Committee on Energy and Natural Resources Full Committee Forum: Infrastructure, Transportation, Research and Innovation**

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UPS has over 90,000 trucks worldwide, and an annual fuel bill in excess of $4 billion that fluctuates unpredictably. Domestic natural gas now makes it thinkable for UPS to de-couple a substantial portion of its 17,000 heavy trucks from oil.

UPS has tested compressed natural gas (CNG) in our brown "package cars" since 1989, and liquid natural gas (LNG) in heavy trucks since 2001. We currently have nearly 3,000 alternative fuel vehicles in service worldwide in our "rolling laboratory." This experience has taught us a great deal.

First, there is no alternative fuel "silver bullet". In fact, we are fuel neutral. We can use different fuels at different hubs, each centrally fueled, in our hub and spoke system.

Second, to make alternative fuel vehicles affordable, we need multiple options in vehicle and fuels technology, so competition drives down the higher initial vehicle cost. So for our brown package cars we have compressed natural gas, diesel electric hybrid, hydraulic hybrid, propane, and plug-in electric, as options to petroleum. Even then the economics are marginal, and usually unfavorable.

Our heavy trucks consume far more petroleum and thus offer greater fuel savings to offset the higher initial cost of an LNG tractor. We now have over 100 LNG heavy trucks and have announced plans to buy 700 more by the end of 2014. The problem: they cost about twice that of a conventional diesel truck. We need more technological options, "competition" in a word in the heavy truck space.

This leads to a third conclusion: government has a key role. Government research funding and national lab expertise were certainly vital in George Mitchell's long quest for viable fracking technology. America's vast natural gas resource base would seem to invite more research on the use of natural gas and its derivatives for dual-fuel vehicles. UPS has already joined with EPA in tests of medium trucks using methanol injection with intriguing results. The methanol is typically made from natural gas. We would like to see similar

tests on heavy trucks as well, and research on other dual-fuel trucks using natural gas or derivatives of natural gas to displace diesel.

Future changing environmental requirements will impose new technological challenges on our vehicles. Scott Davis, our CEO calls LNG "a bridge between traditional fossil fuels and emerging renewable alternative fuels."

Our alternative fuel fleet of nearly 3,000 vehicles was all purchased with the necessary help of federal and state government financial incentives.

We prefer to deploy natural gas powered trucks without incentives. The economics are there for heavy trucks in some locations. But for other types of vehicles, like electric vehicles, we still need assistance, although we anticipate battery costs will decline.

There are some areas where current government policy penalizes us for trying to do the right thing. The 12% Federal Excise Tax on new trucks adds $12,000 extra taxes for a new LNG tractor, compared to a conventional diesel truck. Further, LNG is taxed at 17 cents per gallon more than diesel fuel on an energy equivalent basis. Finally, federal truck weight limits penalize the LNG truck that requires an extra-heavy insulated fuel tank. Working with NGVA, we hope to convince Congress to address these federal disincentives to the use of alternative fuel vehicles.

Thank you again for permitting me to participate.