Carbon Emissions from U.S. Dependence on Oil for Transportation

PA 8001: Transforming Public Policy

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Carbon dioxide (CO2) emissions are the most significant human-made greenhouse gases that contribute to global warming. CO2 is released mainly from burning fossil fuels such as coal, natural gas, and oil. According to the Energy Information Administration (EIA), transportation is the largest carbon dioxide emitter among end-use sectors in energy consumption, and is the second largest emitter in terms of primary energy consumption\(^1\). From 1990 to 2007, carbon dioxide emissions from transportation have increased 26.8\(^2\). The threat of incremental climate change and environmental deterioration appeals for a low-carbon energy source for transportation.

In the United States, energy consumption for transportation mostly depends on importing oil from foreign countries. At current oil prices, the U.S. is transferring about $1.56 billion per day to foreign economies (or $569 billion per year)\(^3\). For the transportation sector alone, the amount equals more than 9 million barrels per day, totaling $1.07 billion leaving the U.S. economy every day\(^4\). Broad concerns about the implications of oil dependency on national security and economic stability call for new policy for the transportation sector. Therefore, our project will try to reconcile the transportation sector with the environment, by implementing policy to promote advanced, fuel-efficient automotive technology and low-carbon fuels.

\(^1\) http://www.eia.doe.gov/oiaf/1605/flash/flash.html
\(^2\) http://www.eia.doe.gov/oiaf/1605/flash/flash.html
\(^3\) http://www.eia.doe.gov/basics/quickoil.html
\(^4\) http://www.eia.doe.gov/basics/quickoil.html