

[http://science.nasa.gov/MSL1/combustion\\_why.htm](http://science.nasa.gov/MSL1/combustion_why.htm)

*Do you know the potential for return on investment in Combustion Research?:*

In any area of the economy where a huge amount of money is spent, even the most modest improvements in efficiency can mean savings of very large amounts of money. One goal of the combustion research within NASA's microgravity science program is to generate knowledge that may eventually lead to more efficient combustion, and therefore a saving of fuel.

In the first half of 1996, the United States imported an average of 9,285,000 barrels of oil per day.\* In addition, to this imported oil, we used about 18,000,000 barrels of domestic oil per day.\* On September 9, 1996, a barrel of OPEC crude oil cost \$20.34.\* One can therefore estimate the yearly expenditure on crude oil as nearly \$200 billion.

*This amount of money would finance one space shuttle mission each day for a year.*

A mere 1 percent increase in fuel efficiency, like taking your gas mileage from 25 miles per gallon to 25.25 miles per gallon, would translate into a savings to America of nearly 100 million barrels of oil a year (roughly \$5.5 million per day), repaying more than the cost of the entire mission every year.

*\*Data Obtained from the American Petroleum Institute Web-Site,*

<http://www.api.org/news/factglnc.htm>

*Did You Know That:*

The cost of a space shuttle mission is about \$2 per person in America. In 1992, Americans spent over \$114 billion dollars at the pump, or about \$456 per person.\*\* So, the same 1 percent increase in efficiency above, which each American taxpayer would pay \$2 to obtain, would save them \$4.56 each year.

*\*\*Data obtained from 1992 Census of Retail Trade published by the Census Bureau*

If one assumes Carbon deposits penalize fuel economy 10% in the fleet. Then using that 10% restoration in fuel economy alone with the price per barrel of crude at \$40 . Using the equation above the savings in the USA alone are in excess of \$ 100,000,000.00 per day