

Establishing a National Maximum Speed of 55 MPH:  
Saving Gas, the Environment, and Lives

MLA

November 13, 2009

## Abstract

From the 70' to 90's there was a national maximum speed. Congress should, again, mandate a national maximum speed of 55 MPH. This would save fuel and consequently consumers' money. It would significantly reduce traffic fatalities. It would reduce health-damaging and climate-changing emissions. This should be done despite the fact that the implications of non-compliance are overstated. What costs there are, are vastly outweighed by the benefits mentioned.

In 1974 President Nixon signed into law the National Maximum Speed Law (NMSL) with the intent to save oil. The law mandated that states set the speed limit of highways to 55 MPH. If they did not do this, then federal funds for highway management would be withheld from the states. In 1987 select highways were allowed to go up to 65 MPH. The law was repealed in 1995 with the National Highway System Designation Act under objection from the White House (“Senate Votes”).

Now that the implementation and the repeal of a national speed limit have been experienced, more is known about the effects of a national 55 MPH speed limit. Congress should mandate that states set speed limits no higher than 55 MPH. First, this would increase gas mileage, and save consumers money. Second, this would make the roads safer for motorists. Third, this would reduce the negative impacts of emissions. Fourth, opponents have exaggerated concerns of non-compliance, one of the reasons the law was repealed. Finally, the inconvenience and costs due to inefficiency are outweighed by the previously mentioned benefits.

### **Fuel Savings**

A speed limit of 55 MPH would result in better gas mileage for vehicles, which would in turn save money for consumers. As a vehicle speeds up, the force of air resistance increases exponentially. Since all vehicle models are shaped differently the drag is different for all car models. A local maximum for efficiency is generally reached between 30 and 60 MPH. For most cars traveling over 45 MPH a decrease in speed of 5 MPH would result in a 5 to 10 percent savings through gas mileage (Gaffigan, 2-3). The Department of Energy calculated that a national speed limit of 55 MPH would save anywhere between 175 to 275 thousand barrels of oil per day. The study assumed a 50% compliance rate, and that 35% of miles driven were effected, meaning that 35% of miles driven were on a highway (Gaffigan, 5). At the current cost of a barrel of oil, \$77.43, saving that many barrels of oil would save between 4.9 and 7.7 billion dollars each year (“Oil Tumbles Below \$78”). Fifty-eight percent of the petroleum the United States consumes is foreign. That means that this savings would result in a lot of money staying in the United States economy (“How Dependent”).

### **Safety**

A reduction in the maximum speed limit would lead to a reduction of traffic fatalities. After the NMSL was implemented there was a sharp decline in traffic fatalities. Opponents of the NMSL say that this could be due to safety improvements that had been made, a decrease in the dispersion of speeds, or people driving less because they could not afford it. A longitudinal study was conducted. They factored out the effects of long-term safety improvements, showing that they would not be able to have such an immediate effect. While other studies factored out a decreased dispersion of speeds this study did not, because they found the decrease in dispersion was due to people slowing down because of the NMSL; no one sped up to 55 MPH when the law was implemented, so the law was responsible for any decrease in fatalities due to a decrease in dispersion. They then accounted for reduced travel. The study ultimately determined that traffic fatalities fell by approximately 10,000 deaths the year after the NMSL was implemented (Meier, 163-5). A study of traffic fatalities from 1995 to 2005 found that the repeal of the NMSL resulted in a 3.2% increase in traffic fatalities, and that over the 10 years there were 12,545 excess lives lost (Friedman, 1628). Using the more conservative estimates from the latter study with the statistical value of a life used by the USDOT, \$5,800,000 (Duvall), and the number of traffic fatalities in 2008, 37,261 (“National Statistics”) the yearly cost of the repeal of the NMSL due to traffic fatalities is 6.9 billion dollars.

### **Emissions**

The negative health and environmental effects of emissions would decrease with a maximum speed law. In 2005, motor vehicles in the United States produced \$56 billion in health and other non-climate-related damages due to pollution through the effects of increased asthma, for example. This study not only included the emissions from the tail pipe, but also extraction, refining, and transportation of fuels. The study considered the effects on human health, crop yields, buildings and recreation (The National Academies). Given that in 2005 the US consumed 9 million barrels of oil each day to make gasoline (United States Department of Energy), and a national speed limit of 55 MPH would save between 175 and 275 thousand barrels of oil per day (Gaffigan, 5), and assuming that the cost of these damages are proportional to the gas used, then the benefit to public health of a national speed law would be 1.0 to 1.6 billion dollars.

The decrease in emissions would also help combat climate change. If unchecked, climate change will have a devastating effect on the United States. Water resources will become severely stressed, because of droughts, and loss of water from disappearing snow melt. Crop and livestock production will face many increasing challenges. Coastal regions will be put at great risk from sea-level rise and storm surges, a fact that will not be helped by an increased demand on these regions. The health of Americans will be negatively affected by increases in “heat stress, waterborne diseases, poor air quality, extreme weather events, and diseases transmitted by insects and rodents,” (Karl, 12). Unfortunately, it is very hard to put a cost to climate change because of the complexities and variations in climate models. To calculate driving’s portion of the responsibility would be ever harder, because while it is relatively easy to calculate the carbon emissions from cars, it is very difficult to calculate the carbon emissions from the agricultural industry, for example. However, climate change should still be taken into account, and the precautionary principle implemented.

### **Non-Compliance**

Opponents of a 55 MPH speed limit exaggerate the implications of non-compliance. With the possible exception of the cost of enforcement, there are no costs incurred through a 55 MPH speed limit that would not have otherwise existed. People who exceed the 55 MPH limit would have gone the same speed if not faster had the law not been in place. There could be concern that there would be an increase in the dispersion of speeds. This would happen if the slower portion of the driving population slowed down even more to comply with the law while the faster portion completely disregarded it. This increase in dispersion could be dangerous because cars going much faster or slower than the average speed are more likely to get in a crash. However this is not the case. The lower speed limit decreased dispersion. The standard deviation of speeds was 6.8 MPH with the national limit and 9.8 MPH without the limit (Meier, 164).

Admittedly non-compliance is a serious issue. On rural interstates the Department of Transportation found 75.4 percent of drivers exceeded the 55 MPH limit (“National 55”, 289). But how many people don’t follow the law is not the important part. How much does the law slow traffic down is the important part. In Virginia when the speed limit was raised from 55 MPH to 65 MPH the number of drivers going over 70 MPH tripled. Opponents may point to a low increase in average speed, but this is misleading because there are a large number of drivers who do not speed up. The increase in dispersion and the high speed of the few do add considerable danger to the road (Retting).

### **Costs**

The costs of a national maximum speed law are outweighed by the benefits. A study of these costs for the year 1983 was performed. The cost per additional travel time on commercial vehicles was calculated by adding the driver compensation with the opportunity cost of

ownership in dollars per vehicle-hour. This can then be multiplied by the number of extra commercial vehicle hours spent driving. This comes out to 1.843 billion dollars for commercial trucks and busses. The study made a rough estimate of enforcement costs based on the assumption that only speeds over 65 MPH would result in police action. They found it to be in the range of 121 million dollars (Kamerud, 344-346).

The inconvenience must also be measured. In 1978 American spent an extra 456,300 years on the road because of the national speed limit. However, to put this in perspective, premature death due to traffic fatalities that would have happened if not for the speed law would have shortened lives by 316,600 years (Forester, 636-637).

### **Conclusion**

Congress should reinstate the National Maximum Speed Law. The lower speed saves consumers a lot of money, some of which would have left the national economy. The limit makes the highways much safer for motorists. It reduces health-damaging and climate-changing emissions. The implications of non-compliance are often over stated. Finally, the costs pale in comparison to the benefits. This policy would clearly benefit the people; therefore it is congress's responsibility to put it into effect.

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