Regulation Review

Mandating Talking Cars: Costliest and Most Beneficial?

SAM BATKINS | DECEMBER 16, 2016

After roughly two years in the regulatory process, the Department of Transportation has released its 392-page "Vehicle-to-Vehicle" (V2V) communications proposed rule. First released in the form of an advanced notice of proposed rulemaking in 2014, the proposed version made its way to the White House in January, where it waited for 331 days under review at the Office of Information and Regulatory Affairs (OIRA). Given the rulemaking's possible effects on smart car innovation, billions of dollars in annual and costs and benefits, there are several reasons to understand its winding road to formal form this month.

Breakdown

- Annual Costs: $5 billion
- Annual Benefits: $71 billion
- Total Costs (in year 2060): $108 billion
- Paperwork: N/A
- Per Vehicle Cost Increases: $288
- Annual Lives Saved (in 2051): 1,321

What Does it Do?

As DOT notes, there are 3.4 million vehicle-to-vehicle crashes annually and the agency believes these are preventable with flexible rules. The proposed measure would require all new cars to install V2V communication in the form of "Basic Safety Messages" (BSM) over "Dedicated Short-Rage Radio Communication" (DSRC). This would allow drivers to have

data on the speed, heading, and brake status of the cars on the road. Essentially, all cars with V2V technology would be able to communicate with each other and reduce the probability of crashes. Manufacturers would have five years after the final rule for full compliance, although DOT will allow non-DSRC communication if it meets performance standards.

The proposed rule spends some time discussing "aftermarket" devices, that is equipment purchased for a used vehicle. Here, it would mean installing a V2V device on a car built in 2016, rather than purchase a new car with V2V technology in 2021, the first year of implementation. Despite assurances that as long as aftermarket devices meet performance standards, they will be compliant with the rule, there is little discussion of the current generation of smart and self-driving cars. To a large extent, this technology already exists. Uber and its fleet of cars were never specifically addressed in the proposal. The only mention of Google and its self-driving car was in response to a comment from the Competitive Enterprise Institute. In response, DOT highlighted these comments and noted, "The agency requests comment on the interplay between V2V and autonomous technologies."

This is perhaps the biggest fear with DOT's proposal. Technology offers the ability to save thousands of lives annually on the roads, but private businesses have been innovating in this sector for years, largely in the form of autonomous vehicles and rear-view cameras to prevent rollover accidents. Now, DOT will enter the space with specific standards on vehicle compliance. There is little doubt this regulation will save lives in the future, but could its interference in the vehicle market save fewer lives than a completely autonomous vehicle fleet? Does this rule complement emerging vehicle safety technology or crowd-out innovation?

Finally, there is also the issue of latency. Assuming there is no widespread adoption of aftermarket devices, it will take a generation for the benefits, nearing $71 billion annually from fewer crashes and fatalities, to be realized. In fact, DOT estimates a full V2V fleet by 2051. In the first five years of the rule, as the technology is being installed, costs exceed benefits. By the year 2030, however, benefits should exceed costs by $17.6 billion to $4.6 billion. This issue of latency is hardly novel. In the agency's rear visibility camera rule, the agency estimated full compliance wouldn't happen until 2054.

Regulatory Impacts

At $108 billion in long-term regulatory costs, if finalized, it would rank as the second most expensive regulation in more than a decade, according to AAF's Reg Rodeo. Only the 2017 to 2025 CAFE standards, at $156 billion in total costs, would top the V2V rulemaking. On an

annual basis ($5 billion), it would rank seventh on regulations finalized since 2005, but it would be the highest non-EPA measure.

How will these costs be borne? Likely in the form of higher prices to consumers. Like previous CAFE rules, past safety standards, and the new "sound for hybrids," measure, regulators often admit these new regulations will raises prices for consumers. Here is the agency's forecast by year and vehicle price increase:

- 2012: $176
- 2025: $288
- 2030: $271
- 2035: $264
- 2040: $256
- 2045: $252
- 2050: $248
- 2055: $245
- 2060: $243

These costs, and the potential impacts on innovation, are some reasons why the agency might have chosen to issue an advanced notice of proposed rulemaking first. The agency notes, however, these costs are paired against sizable benefits. For a safety measure, preventing 594,000 car accidents and saving 1,300 lives annually might make it one of the most beneficial rules in recent history. At $71 billion, it would rank at the third most beneficial rule since 2005 and the highest safety measure in more than a decade. At its peak, it could prevent nearly 1 in 5 light-vehicle accidents. If realized, that would be an incredible achievement. Again, once the rule is fully implemented in 2051, it's likely other autonomous vehicles will already be savings countless lives and reducing congestion.

Unsurprisingly, the rule triggers the Unfunded Mandates Reform Act, and it will impose far more in costs than the statutory threshold of $100 million (in 1995 dollars). Because the costs exceed $1 billion annually, the agency also performed a probabilistic uncertainty analysis.

In addition, DOT certifies the rule will not have a significant impact on small entities. DOT justifies this decision by noting it mostly impacts the 20 largest vehicle manufacturers. There are three small entities affected (fewer than 1,000 employees), but DOT does not view this as a significant number to trigger the Regulatory Flexibility Act.

What states will be most impacted? The DOT's analysis forecasts burdens on the "Automobile Manufacturing" industry (NAICS 336111). In reality, the burdens by state will be fairly uniform across the largest population centers, since the costs are ultimately passed to consumers, but strictly from a manufacturing perspective, the following states are most affected, based on the industry's geographic distribution and total regulatory costs.

State	**Possible Cost**
California	$19.8 billion
Michigan	$14.4 billion
Ohio	$7.2 billion
Texas	$6.2 billion
Illinois	$6 billion
Indiana	$5.4 billion

Conclusion

DOT called this rule a "free market approach" approach to vehicle safety since it offers performance standards on V2V communications. Free market proponents will likely bluster at the notion that a $100 billion regulation is "free market," but the biggest question with the rulemaking centers around its final stance on innovation. Will it work with or against smart cars and autonomous vehicle deployment? Will these smart cars be relatively standard by 2021? As regulators will admit, predicting the future, especially out to the year 2060, is nearly impossible. Thus, notions of $5 billion in costs and $71 billion in benefits might help sell the rulemaking initially, but ultimately technological advance will alleviate road fatalities, regardless of DOT intervention.