Report to Congress

Advanced Crash Avoidance Technologies and Vulnerable Road User Safety Technologies

Section 24213(b), "New Car Assessment Program," of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA), amended Section 32302 of Title 49, United States Code by adding the following:

> *" (e) ADVANCED CRASH-AVOIDANCE TECHNOLOGIES.—*
> *" (1) NOTICE.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall publish a notice, for purposes of public review and comment, to establish, distinct from crashworthiness information, a means for providing to consumers information relating to advanced crash-avoidance technologies, in accordance with subsection (a).*
> *" (2) INCLUSIONS.—The notice under paragraph (1) shall include—*
> *" (A) an appropriate methodology for—*
> *" (i) determining which advanced crash-avoidance technologies shall be included in the information;*
> *" (ii) developing performance test criteria for use by manufacturers in evaluating advanced crash-avoidance technologies;*
> *" (iii) determining a distinct rating involving each advanced crash-avoidance technology to be included; and*
> *" (iv) updating overall vehicle ratings to incorporate advanced crash-avoidance technology ratings; and*
> *" (B) such other information and analyses as the Secretary determines to be necessary to implement the rating of advanced crash-avoidance technologies.*
> *" (3) REPORT.—Not later than 18 months after the date of enactment of this subsection, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Energy and Commerce of the House of Representatives a report that describes a plan for implementing an advanced crash-avoidance technology information and rating system, in accordance with subsection (a).*
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> *" (f) VULNERABLE ROAD USER SAFETY.—*
> *" (1) NOTICE.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall publish a notice, for purposes of public review and comment, to establish a means for providing to consumers information relating to pedestrian, bicyclist, or other vulnerable road user safety technologies, in accordance with subsection (a).*
> *" (2) INCLUSIONS.—The notice under paragraph (1) shall include—*
> *" (A) an appropriate methodology for—*
> *" (i) determining which technologies shall be included in the information;*
> *" (ii) developing performance test criteria for use by manufacturers in evaluating the extent to which automated pedestrian safety systems in light vehicles attempt to prevent and mitigate, to the best extent possible, pedestrian injury;*
> *" (iii) determining a distinct rating involving each technology to be included; and*
> *" (iv) updating overall vehicle ratings to incorporate vulnerable road user safety technology ratings; and*

> *" (B) such other information and analyses as the Secretary determines to be necessary to implement the rating of vulnerable road user safety technologies.*
> *" (3) REPORT.—Not later than 18 months after the date of enactment of this subsection, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Energy and Commerce of the House of Representatives a report that describes a plan for implementing an information and rating system for vulnerable road user safety technologies, in accordance with subsection (a)."*

The National Highway Traffic Safety Administration (NHTSA) submits the following report regarding its plan to implement vehicle safety information and rating system for advanced crash avoidance technologies and vulnerable road user safety technologies.

PLAN TO IMPLEMENT AN INFORMATION AND RATING SYSTEM MEETING THE REQUIREMENTS OF BIL

In order to implement an advanced crash avoidance and vulnerable road user safety technologies information and rating system, the first step that NHTSA has taken is to propose, and then finalize, two separate requests for comment (RFC). Once finalized, these notices would provide valuable vehicle safety information to consumers on advanced crash avoidance and vulnerable road user safety technologies. After finalization, NHTSA intends to issue a third RFC proposing a rating system that meets the requirements specified in BIL.

On March 9, 2022, NHTSA published an RFC proposing to add four new advanced driver assistance system (ADAS) technologies to the New Car Assessment Program (NCAP)[1] and to increase the stringency of the performance evaluation of the four currently recommended ADAS technologies in NCAP.[2] One of the proposed technologies was pedestrian automatic emergency braking (PAEB), which is a vulnerable road user safety technology. The March 2022 RFC notice described how NHTSA could consider rating vehicles equipped with these ADAS technologies, discussed ways of implementing a future crash avoidance ratings program, and requested comment on how best to develop and implement the crash avoidance rating program. This RFC was the first RFC to include the substantive components that would serve as the basis for a future rating system.

The March 2022 RFC discussed the Agency's plan to develop a future rating system for new vehicles based on the availability and performance of all the NCAP-recommended crash avoidance technologies. Currently, NCAP only recommends crash avoidance technologies to consumers via the Agency's website and identifies the vehicles that offer the recommended technologies that pass NCAP system performance criteria. Unlike its crashworthiness and rollover protection programs that offer a combined rating based on vehicle performance in frontal, side, and rollover tests, the NCAP crash avoidance program does not currently have a rating system to differentiate the performance of ADAS technologies. NHTSA discussed various options in the March 2022 RFC for

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[1] The March 2022 RFC proposed adding four more ADAS technologies: blind spot detection (BSD), blind spot intervention (BSI), lane keeping support (LKS), and pedestrian automatic emergency braking (PAEB). See https://www.federalregister.gov/documents/2022/03/09/2022-04894/new-car-assessment-program.

[2] The current technologies are forward collision warning (FCW), lane departure warning (LDW), crash imminent braking (CIB), and dynamic brake support (DBS) (with the latter two collectively referred to as "automatic emergency braking). See https://www.nhtsa.gov/equipment/driver-assistance-technologies. The March 2022 RFC proposed changes (including an increase in stringency) to the test procedures and performance criteria for LDW, CIB, DBS, and FCW to (1) enable enhanced evaluation of their capabilities in current vehicle models, (2) reduce test burden, and (3) harmonize with other consumer information programs.

a rating system for ADAS technologies to provide purchasers improved data with which to compare and shop for vehicles. The Agency believes it is important to develop an ADAS rating system that is not only flexible (i.e., one that can adapt or change over time) to keep pace with advancements in technologies, but also effective in providing consumer information that encourages the proliferation of life-saving technology. NHTSA sought public input in the March 2022 RFC on the various concepts discussed for a rating system for ADAS technologies, the need for and development of an overall ADAS rating system, and approaches to effectively convey the ADAS ratings to the consumer. NHTSA intends to use the information received in response to the March 2022 RFC to inform a future RFC that will propose the rating system that will meet the requirements specified in BIL (and listed earlier in this document).

In addition to PAEB, on May 26, 2023, NHTSA issued an RFC that proposes including crashworthiness pedestrian protection technology in the program. Crashworthiness pedestrian protection systems and PAEB are complementary protection systems. These technologies work together to mitigate pedestrian fatalities and injuries by either (1) avoiding pedestrian collisions, or (2) mitigating injuries to pedestrians hit by the vehicle if the PAEB system cannot completely avoid the impact.

Until an ADAS rating system is developed, NHTSA plans to provide information to consumers about which vehicle models offer PAEB that meets NCAP performance criteria (i.e., continue to provide consumers with information on the Agency's website, as it does today). As stated above, the March 2022 RFC sought public comment on a rating system combining various ADAS technologies and for an overall rating system. NHTSA is also conducting consumer research to modernize the vehicle safety rating section of the Monroney label to enhance information provided for consumer purchasing decisions. The results of the consumer research along with the public comments received on the March 2022 RFC will guide the Agency in updating the safety rating section of the Monroney label to include safety information on crash avoidance and pedestrian protection technologies.