

DRAFT
FOR DISCUSSION ONLY

HIGHLY AUTOMATED VEHICLES ACT

NATIONAL CONFERENCE OF COMMISSIONERS
ON UNIFORM STATE LAWS

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October 15, 2018

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1 **HIGHLY AUTOMATED VEHICLES ACT**

2 **REPORTER'S VERSION RELEASE NOTE**

3 This October 2018 version of the draft Highly Automated Vehicles Act incorporates comments
4 from participants in the Drafting Committee's February 2018 meeting, from commissioners at
5 the ULC's July 2018 annual meeting, and from others who have communicated formally or
6 informally in the intervening months.

7
8 The footnotes accompanying this version explain key changes, many of which are to conform to
9 ULC style conventions or to improve clarity and readability.

10
11 In particular, the sections on vehicle registration and automated driving providers have been
12 flipped, and the automated driving provider section now distinguishes more clearly among (1)
13 whether a person is qualified to be an automated driving provider, (2) how that person declares
14 itself to be an automated driving provider, (3) how that automated driving provider identifies its
15 associated automated vehicles, and (4) how that automated driving provider deidentifies
16 associated automated vehicles.

17 For important background information, please refer to the Issues Memorandum for the 2018
18 Annual Meeting, available at
19 [http://www.uniformlaws.org/shared/docs/highly%20automated%20vehicles/2018AM_HighlyAu](http://www.uniformlaws.org/shared/docs/highly%20automated%20vehicles/2018AM_HighlyAutomatedVehicles_Issues%20memo.pdf)
20 [tomatedVehicles_Issues%20memo.pdf](http://www.uniformlaws.org/shared/docs/highly%20automated%20vehicles/2018AM_HighlyAutomatedVehicles_Issues%20memo.pdf).

1 **HIGHLY AUTOMATED VEHICLES ACT**

2 **SECTION 1. SHORT TITLE.** This [act] may be cited as the Highly Automated
3 Vehicles Act.¹

4 **SECTION 2. DEFINITION.** In this [act]:

5 (1) “Associated automated vehicle” means an automated vehicle that an automated
6 driving provider identifies pursuant to Section 6.²

7 (2) “Automated driving provider” means a person that declares itself to the [relevant state
8 agency] pursuant to Section 6.

9 (3) “Automated driving system” means the combination of hardware and software
10 collectively capable of performing the entire dynamic driving task on a sustained basis.

11 (4) “Automated operation” means the performance of the entire dynamic driving task by
12 an automated driving system. Automated operation begins upon the performance of the entire
13 dynamic driving task by an automated driving system and continues until a human driver or
14 operator terminates the performance, but if a human driver or operator terminates the
15 performance to mitigate an imminent³ crash hazard caused by the automated driving system,
16 automated operation continues until the crash hazard is no longer present.⁴

17 (5) “Automated vehicle” means a motor vehicle with an automated driving system,
18 regardless of whether the vehicle is under automated operation.

19 (6) “Completely automated trip” means travel in an automated vehicle that, from the

¹ There continues to be discussion about the proper name for this act.

² An automated driving provider may or may not own some or all of its associated automated vehicles.

³ “Crash hazard” was changed to “imminent crash hazard” to provide somewhat greater precision.

⁴ This sentence has been returned to the definitions section to address the confusion caused by moving it elsewhere. Because “automated operation” is a legal term defined by this act, the sentence is correct. It means that, for example, a vehicle with an automated driving system that has unexpectedly malfunctioned is still under automated operation in a legal sense even if it is not under automated operation in a technical sense.

1 point of departure until the point of arrival, is under automated operation by means of an
2 automated driving system designed to achieve a minimal risk condition.

3 (7) “Dedicated automated vehicle” means an automated vehicle designed for exclusively
4 automated operation when used for transportation on a [road open to the public].⁵

5 (8) “Drive” means as provided in [this state’s vehicle code]⁶, except that an automated
6 driving provider exclusively drives an associated automated vehicle under automated operation.⁷

7 (9) “Driver” means as provided in the vehicle code, except that an automated driving
8 provider is the exclusive driver of an associated automated vehicle under automated operation.

9 (10) “Dynamic driving task” means the real-time operational and tactical functions
10 collectively required to operate a vehicle in on-road traffic, including controlling lateral and
11 longitudinal vehicle motion, monitoring the driving environment, executing responses to objects
12 and events, planning vehicle maneuvers, and enhancing vehicle conspicuity. The term does not
13 mean the strategic functions of driving, including scheduling trips, selecting destinations, and
14 specifying routes.

15 (11) “Minimal risk condition” means a condition to which a vehicle user or an automated
16 driving system may bring a vehicle to reduce the risk of a crash when a trip cannot or should not
17 be completed.

18 (12) “Operate” means as provided in [this state’s vehicle code], except that an automated
19 driving provider exclusively operates an associated automated vehicle under automated
20 operation.

⁵ States use a variety of terms to describe these roads and other facilities.

⁶ The phrase “[this state’s vehicle code]” refers to the state’s laws on, inter alia, the licensing of drivers and the titling, registration, and operation of motor vehicles. These laws are generally statutory but may be regulatory. They generally include and are broader than the rules of the road.

⁷ This uniform act statutorily defines “drive,” “driver,” “operate,” and “operator” in the context of automated driving. Regardless of whether these terms are currently undefined, defined in a state’s vehicle code, or defined in caselaw, states are encouraged to retain all four definitions to reduce future interpretive ambiguity.

1 (13) “Operational design domain” means the environmental, geographic, time-of-day,
2 traffic, infrastructure, and other conditions under which an automated driving system is
3 specifically designed to function.

4 (14) “Operator” means as provided in [this state’s vehicle code], except that an automated
5 driving provider is the exclusive operator of an associated automated vehicle under automated
6 operation.

7 (15) “Person” means as provided in [this state’s vehicle code.] [means an individual,
8 estate, business or nonprofit entity, public corporation, government or governmental subdivision,
9 agency, or instrumentality, or other legal entity.]

10 **SECTION 3. APPLICATION; GOVERNING LAW.**

11 (a) This [act] applies to the ownership, registration, insurance, and operation of an
12 automated vehicle, even if the ownership, registration, insurance, and operation of the vehicle
13 complied with laws other than this [act] before [the effective date of this [act]].

14 (b) Except as specifically provided, this [act] does not displace a requirement under [this
15 state’s vehicle code].⁸

16 (c) The [relevant state agency or agencies] may make rules, issue interpretations, and take
17 other lawful⁹ actions to administer and enforce this [act].¹⁰

18 **SECTION 4. DRIVING LICENSING.**

19 (a) An individual is not required to hold a [driving license]¹¹ to undertake a completely

⁸ This paragraph clarifies that a state’s existing vehicle code—including, inter alia, rules for vehicle registration and operation—still applies with respect to automated vehicles.

⁹ A commissioner suggested removing “lawful” on the presumption that agencies act lawfully.

¹⁰ These agencies may include a department of motor vehicles and a department of insurance (or their equivalents). If an agency is not otherwise authorized to undertake a function listed in this paragraph, that function may be removed.

¹¹ The particular term used by the state should be substituted for “[driving license].”

1 automated trip.

2 (b) An automated driving provider is not required to hold a [driving license] to drive or
3 operate an automated vehicle under automated operation.

4 **SECTION 5. VEHICLE REGISTRATION.**¹²

5 (a) The owner of an automated vehicle must comply with [this state’s requirements for
6 the registration of motor vehicles].¹³

7 (b) The [relevant state agency] may grant, maintain, or renew the registration of an
8 automated vehicle only if an automated driving provider identifies the vehicle as an associated
9 automated vehicle pursuant to Section 6.¹⁴

10 (c) The [relevant state agency] may treat a notice provided to the owner of the automated
11 vehicle pursuant to Section 6(e)(2) as proof that the automated vehicle is an associated
12 automated vehicle.

13 (d) The [relevant state agency] may decline, suspend, revoke, or decline to renew the
14 registration of an automated vehicle that is not an associated automated vehicle, not properly
15 maintained, not insured in accordance with applicable law, not compliant with a registration
16 requirement, or otherwise not fit to be operated.

17 (e) If the [relevant state agency] declines, suspends, revokes, or declines to renew the
18 registration of an automated vehicle, the [relevant state agency] may grant a temporary
19 registration that applies to the vehicle only when it is not under automated operation.

¹² Sections 5 and 6 were flipped to improve comprehension.

¹³ This redundant paragraph is provided to emphasize that vehicle registration is the responsibility of the automated vehicle’s owner rather than the automated driving provider (if they are distinct persons). If a state requires or allows a motor vehicle to be registered by a person other than the vehicle’s owner, it may wish to modify this language.

¹⁴ The language used to describe registration may vary among states. For example, “registration” could refer either to a request by a vehicle owner to register that vehicle or to the issuance of that registration by the relevant state agency. Accordingly, a state may wish to modify this language to conform to its usage.

1 (f) Registration of a motor vehicle that is no longer an automated vehicle may be granted,
2 maintained, or renewed only if the registrant represents to the [relevant state agency] that the
3 vehicle cannot and will not be used under automated operation on a [road open to the public].

4 (g) Registration of an automated vehicle does not create a presumption as to the safety of
5 the vehicle or its equipment.

6 **SECTION 6. AUTOMATED DRIVING PROVIDERS AND ASSOCIATED**
7 **AUTOMATED VEHICLES.**¹⁵

8 [(a) To qualify as an automated driving provider, a person must:¹⁶

9 [(1) have participated in a substantial manner in the development of an automated
10 driving system;]

11 [(2) have submitted to the United States National Highway Traffic Safety
12 Administration a safety self-assessment or equivalent report for the automated driving system;]

13 [(3) be registered as a manufacturer of motor vehicles or motor vehicle equipment
14 pursuant to the requirements of the United States National Highway Traffic Safety
15 Administration;] [and] [or]

16 [(4) be registered as a motor vehicle manufacturer pursuant to the motor vehicle
17 manufacturer registration laws of this state;]]

¹⁵ This section has been reorganized to improve comprehension and to more clearly distinguish among automated driving provider qualifications, automated driving provider declarations, associated automated vehicle identifications, and associated automated vehicle deidentifications.

¹⁶ In an earlier draft, any person that could make the representation in subparagraph 6(c)(2) was eligible to be an automated driving provider. This is because automated driving provider was intended to be a flexible concept that can apply regardless of the particular way in which an automated vehicle is deployed (including fleet ownership versus individual ownership). However, at the February 2018 meeting, several participants requested language to narrow the set of potential automated driving providers. Subparagraphs 6(a)(1), (2), (3), and (4) are options that respond to this request. Because the committee has yet to determine whether any of these additional requirements are appropriate, they are bracketed in this version.

1 (b) A person is an automated driving provider only if the person declares¹⁷ itself as an
2 automated driving provider to the [relevant state agency], to a cooperating agency in another
3 state, or to a cooperating federal agency.¹⁸

4 (c) To declare itself as an automated driving provider, a person must in a form acceptable
5 to the [relevant state agency]:

6 (1) represent to the [relevant state agency] that the person qualifies as an
7 automated driving provider;

8 (2) represent to the [relevant state agency] that sufficient evidence demonstrates
9 that

10 **OPTION 1:** the automated operation of each associated automated vehicle
11 is reasonably safe and complies with [this state’s rules of the road];

12 **OPTION 2:** the automated operation of each associated automated vehicle
13 complies with [this state’s rules of the road];

14 **OPTION 3:** the automated operation of each associated automated vehicle
15 complies with [this state’s rules of the road], except when necessary for safety.

16 **OPTION 4:** the automated driving system of each associated automated
17 vehicle can comply with [this state’s rules of the road];

18 **OPTION 5:** the automated driving system of each associated automated
19 vehicle is designed to detect and respond to vehicle and roadway situations in compliance with

¹⁷ This was changed from “registration” to “certification” to reduce confusion with vehicle registration. Other alternatives could include “certification,” “identification,” “enrollment,” “filing,” and “recognition.”

¹⁸ This paragraph clarifies that becoming an automated driving provider requires taking an affirmative step. This paragraph also contemplates future cooperation among states or between states and the federal government to streamline automated driving provider declarations. “Cooperating” can be further clarified in either a definition or a legislative note.

1 [this state’s vehicle code] and with local law applicable to the performance of the dynamic
2 driving task in the operational design domain of the system, except when necessary to enhance
3 the safety of the occupants of the vehicle, other road users, or other persons;¹⁹

4 (3) warrant to the public that [REPEAT THE OPTION SELECTED ABOVE];²⁰

5 (4) irrevocably appoint the [relevant state agency] as a lawful agent upon which
6 process may be served in an action arising from the automated operation of an associated
7 automated vehicle; and

8 (5) pay a fee specified by the [relevant state agency] for processing the automated
9 driving provider declaration.

10 (d) An automated vehicle is an associated automated vehicle only if so identified by an
11 automated driving provider.

12 (e) To identify an associated automated vehicle, an automated driving provider must with
13 specific reference to the vehicle identification number of the automated vehicle and in a form
14 acceptable to the [relevant state agency]:

15 (1) notify the [relevant state agency], a cooperating agency in another state, or a
16 cooperating federal agency; or²¹

17 (2) notify the owner of the automated vehicle.

18 (f) An automated vehicle is an associated automated vehicle unless and until the
19 automated driving provider either ceases to exist or deidentifies the associated automated
20 vehicle.

21 (g) To deidentify an associated automated vehicle, the automated driving provider must

¹⁹ Adapted from California language at the request of a participant at the February 2018 drafting meeting.

²⁰ Removing this paragraph may be a potential point of compromise for stakeholders who may then be more comfortable with the automated driving provider concept.

²¹ The automated driving provider could do either (if acceptable to the relevant state agency).

1 with specific reference to the vehicle identification number of the automated vehicle and in a
2 form acceptable to the [relevant state agency]:

3 (1) notify the [relevant state agency], a cooperating agency in another state, or a
4 cooperating federal agency; and²²

5 (2) notify the owner of the automated vehicle.

6 **SECTION 7. EQUIPMENT.**

7 (a) [This state’s vehicle code] must be interpreted to facilitate the development and
8 deployment of automated vehicles in a way that improves traffic safety.

9 (b) An automated vehicle must be properly maintained.

10 (c) A provision of [this state’s vehicle code] requiring equipment that is necessary only
11 for the performance of the dynamic driving task by a human driver or operator does not apply
12 with respect to a dedicated automated vehicle.

13 (d) A provision of [this state’s vehicle code] prohibiting an electronic device in a vehicle,
14 other than a device used to evade law enforcement, does not apply with respect to a dedicated
15 automated vehicle.

16 (e) A provision of [this state’s vehicle code] prohibiting an electronic device in a vehicle,
17 other than a device used to evade law enforcement, may not be enforced with respect to an
18 automated vehicle under automated operation.

19 **SECTION 8. RULES OF THE ROAD.**

20 (a) [This state’s rules of the road]²³ must be interpreted to facilitate the development and

²² The automated driving provider would need to do both.

²³ The phrase “[this state’s rules of the road]” refers to the state’s laws on the operation of motor vehicles. These laws are generally statutory but may be regulatory. They are generally part of and narrower than the entire vehicle code.

1 deployment of automated vehicles in a way that improves traffic safety.

2 (b) Automated operation of an automated vehicle in accordance with applicable federal,
3 state, and local law and in a reasonably safe manner is lawful.²⁴

4 (c) An automated driving provider must take reasonable steps to comply with [this state’s
5 rules of the road] during automated operation of an associated automated vehicle.

6 (d) An automated driving provider is liable for a failure to comply with [this state’s rules
7 of the road] during the automated operation of an associated automated vehicle as a human
8 driver or operator would be if the vehicle were not under automated operation.²⁵

9 (e) An automated vehicle may not be operated on a [road open to the public] if the
10 vehicle is not properly maintained, not insured in accordance with applicable law, not compliant
11 with a registration requirement, or otherwise not fit to be operated.

12 (f) An automated vehicle under automated operation is not considered unattended or
13 abandoned solely because an individual is not in or near the vehicle, unless the vehicle is not
14 lawfully registered, poses a risk to public safety, or unreasonably obstructs other road users.

15 (g) A child, incapacitated person, or pet in an automated vehicle is not considered
16 attended solely because the vehicle is under automated operation.

17 (h) A restriction under [this state’s vehicle code] on the use of an in-vehicle electronic
18 device, other than a device used to evade law enforcement, does not apply during the automated
19 operation of an automated vehicle.

20 (i) A requirement under [this state’s vehicle code] that imposes a minimum following
21 distance other than a reasonable and prudent distance does not apply to the automated operation
22 of an automated vehicle.

²⁴ This paragraph merely clarifies that automated operation of an automated vehicle is lawful.

²⁵ A legislative note explaining this provision may be helpful.

1 **[SECTION 9. INSURANCE.**

2 (a) An automated driving provider is a [permissive driver]²⁶ under an insurance policy
3 applicable to an associated automated vehicle.

4 (b) The coverage limits applicable to the automated driving provider as a [permissive
5 driver] are the bodily injury and property damage liability limits under the policy unless the
6 policy or an endorsement to the policy specifies different limits applicable to the automated
7 driving provider as a [permissive driver], but the bodily injury and property damage liability
8 limits may not be less than the amounts set forth in [this state’s financial responsibility law].

9 (c) This section does not modify or limit the liability of an automated driving provider
10 under statutory or common law.

11 (d) This [act] does not displace other insurance requirements, and the insurance required
12 under this [act] does not satisfy other insurance requirements.]

13 **SECTION 10. VIOLATIONS.** A violation of this [act] is a violation of [this state’s
14 vehicle code] and does not preclude liability under other laws.

15 **SECTION 11. UNIFORMITY OF APPLICATION AND CONSTRUCTION.** In
16 applying and construing this uniform act, consideration must be given to the need to promote
17 uniformity of the law with respect to its subject matter among states that enact it.

18 **[SECTION 12. SEVERABILITY.** If a provision of this [act] or its application to a
19 person or circumstance is held invalid, the invalidity does not affect other provisions or
20 applications of this [act] which can be given effect without the invalid provision or application,
21 and to this end the provisions of this [act] are severable.]²⁷

²⁶ States (and insurers) may use different terms for a permissive driver.

²⁷ Include this section only if this state lacks a general severability statute or a decision by the highest court of this state stating a general rule of severability.

1 **SECTION 13. EFFECTIVE DATE.** This [act] takes effect