February 26, 2019

PERSPECTIVE

Autonomous Vehicles and Export Controls

In spring 2016, Transport Canada and the United States Department of Transportation announced a number of initiatives to collaborate on Vehicle-to-Vehicle and Vehicle to Infrastructure technology to support "seamless cross-border vehicle operations". Despite cross-border regulatory initiatives like this, the underlying technology in these vehicles is heavily regulated by Canadian and U.S. export controls that restrict the cross-border flow of autonomous vehicle technology outside the U.S. and Canada.

What are export controls?

Export controls regulate the flow of goods across borders and establish permitting systems to track certain goods with the aim of preserving Canadian and international security.

Canadian export control legislation

Canada's domestic export control legislation implements its international commitments made under the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, the Treaty on the Non-Proliferation of Nuclear Weapons, the Missile Technology Control Regime, and the Australia Group controls on chemical weapons.

The Export and Import Permits Act implements Canada's international export control obligations for dual-use goods (i.e., military/security and civil applications) and other goods under the above noted instruments. The Act aims to ensure that exports are aligned with Canada's foreign policy and other strategic interests. Goods subject to export controls are listed in the Export Control List (ECL), which is enforced by the Trade & Export Controls Division of Global Affairs Canada. The Act prohibits exports of controlled goods without a permit from the Minister of Foreign Affairs.

Canadian export control and autonomous vehicles

Many of the components of autonomous vehicles and their related hardware, software and technology are controlled pursuant to the dual-use provisions in Group 1 of the ECL.

In particular, the cryptography used in operating autonomous vehicles is a controlled dual-use product under Canadian export legislation and as a result, export permits are required to export those components, the technology required to make them and vehicles containing those components (subject to certain narrow exceptions).

Goods containing cryptography may be exported under the authority of individual export permits identifying specific consignees, or multi-destination export permits, which allow for exports to multiple destinations without specifying consignees. Applicants must satisfy various conditions to obtain a multi-destination permit including implementation of an export control compliance plan. In addition, two general export permits (GEP) are available for exporters to use without an application in specified circumstances: (1) GEP 45 – Cryptography for the Development or Production of a Product; (2) GEP 46 – Cryptography for Use by Certain Consignees. In both instances, conditions and restrictions apply in relation to the countries of destination and the nationality and ultimate control of the consignees.

U.S. export control law

Recent policy developments in the United States may make it more difficult to export autonomous vehicle technology from the U.S. and Canada. The U.S. Export Administration Regulations (EAR) regulate exports of U.S.-origin dual-use goods, software and technology, including re-exports from Canada and other countries, as well as re-exports of goods containing U.S.-origin inputs or technology. More recently, the U.S. enacted the Export Control Reform Act of 2018 (ECRA) which allows the Department of Commerce to establish controls on export, re-export or transfer (in country) of "emerging and foundational technologies" (ECRA, section 1758).

On November 19, 2018, the Bureau of Industry and Security (BIS), which controls the export of dual-use items under the EAR, announced a notice of proposed rulemaking, seeking public comment on "criteria for identifying emerging technologies that are essential to U.S. national security". This process will likely result in proposed rules for new Export Control Classification Numbers for the Commerce Control List.

It is likely that the BIS' findings on "emerging and foundational technologies" will include technology like the artificial intelligence behind computer vision, an important component of autonomous technology. Any tightening of U.S. export controls will directly affect Canadian exports since U.S. export authorization will be required to export products incorporating such components or technology from Canada over and above any applicable Canadian export permits.

Conclusion

Autonomous vehicles raise the prospect of broad economic and social impacts in personal and commercial transportation, public infrastructure and municipal planning, supply chain management, related trades and professions, and many other fields. At the same time, the security risks inherent in autonomous vehicles and their control systems are potentially acute. Governments can be expected to play a role in the implementation and dissemination of autonomous vehicle technology, including export controls related encryption and AI technology. In light of the close integration of Canadian and U.S. supply chains as well as shared strategic and defence interests, there is a high likelihood that Canada will follow suit with parallel

restrictions on exports of “emerging and foundational technologies”. Businesses involved in the development and manufacturing of autonomous vehicles and related technology and inputs would be well advised to review and upgrade their security and compliance policies, including those relating to export controls.

By: Milos Barutciski, Julia Webster

Services: International Trade & Investment, Autonomous Vehicles

---

Table of contents

2024 Series

- Ontario’s newly proposed pilot program for automated commercial vehicle testing - November

2023 Series

- Autonomous vehicle laws in Canada: Provincial & territorial regulatory review - January
- Driving into the future: U.K. announces regulatory scheme for the use of automated vehicles - December

2022 Series

Autonomous vehicles: Key 2022 industry hotspots – April

Autonomous vehicle laws in the States: Congress offers hope for national regulatory framework – June

Autonomous vehicles: cross jurisdictional regulatory perspectives update – October

2021 Series

Autonomous vehicles: Moving forward in 2021 – January

Full steam ahead: Recent developments in maritime autonomous technology – February

Next-gen spotlight: 5G, autonomous vehicles and connected devices – March

Raising financing during turbulent times: Debt capital options for tech companies – April

Construction and autonomous vehicles: Considerations for increased adoption – May

Autonomy on the roads: Intelligent Transportation Systems – June

Autonomous vehicles in mining operations: Key legal considerations – July

Autonomous technology in Calgary: Reducing emergency vehicle travel times – August

Autonomous vehicles: Cross jurisdictional regulatory perspectives –September

Transport Canada: 2021 Guidelines for Testing Automated Driving Systems in Canada – October

Autonomous vehicles: Canada’s readiness for the future – November

Autonomous vehicle laws in Canada: Provincial & territorial regulatory landscape – December

2020 Series

Driving change: The year ahead in autonomous vehicles – January

Mobility-as-a-service & smart infrastructure: A new risk paradigm – February

The future of farming: Autonomous agriculture – March

Autonomous transportation in the time of COVID-19 – April

Driverless vehicles: Two years of autonomy on Québec roads – May

A review of Canada's vehicle cybersecurity guidance – June

Highlights of the connected and autonomous vehicles report by ICTC and CAVCOE – July

Raising financing during turbulent times: The takeaways – August

Raising financing during turbulent times: Exploring for capital in the public markets – September

Advanced driving assistance systems: Three issues impacting litigation and safe adoption – October

Autonomous vehicles and big data: Managing the personal information deluge – November

Payments on wheels: Self-driving vehicles and the future of financial services – December

2019 Series

The Legal Crystal Ball: Autonomous Vehicles Development to Watch For in 2019 – January

Autonomous Vehicles and Export Controls – February

The State of Insurance and Autonomous Vehicles in Ontario – March

Collective Bargaining and the Implementation of Autonomous Vehicles Technologies – April

Building a Privacy-Compliant Autonomous Vehicles Business – May

The State of Autonomous Vehicles in Alberta – June

Unfamiliar Waters: Navigating Autonomous Vessels' Potential and Perils – July

The Lay of the Land: Obtaining a License for Testing Autonomous Vehicles in Ontario – August

The State of Autonomous Vehicles in Saskatchewan – September

Lingua Vehiculum: The Competition for Connected Car Communication – October

Autonomous Vehicles and Equipment in Construction – November

The Future of Mobility: The 2020 Autonomous Vehicles Readiness Matrix Legal Summit – December

2018 Series

Current Industry Developments – February

Managing Cybersecurity Risks – March

Québec Regulation Update – April

The Connected City – May

Are Patent Wars Coming for AVs? – June

Automated Vehicles May Revolutionize Mobility but Perhaps not Auto Insurance – July

Cleared for Take-off: Autonomous Technology and Aviation Litigation – August

The Ultimate Mobility Synergy: Autonomous Vehicles and Electric Vehicles – September

Automotive and Insurance Industries Consider Hot Issues Faced by the Autonomous Vehicles Sector – October

Insuring Automated Vehicles: The Insurance Bureau of Canada Recommends "Single Insurance Policy" – November

Autonomous and Connected Vehicles – "Ideal" for a Class Action? – December