The United Nations developed a technical regulation for passenger car emissions and CO 2. This world light-duty test procedure ("WLTP") is focused primarily on better aligning laboratory CO₂ and fuel consumption figures with customer-reported figures. The introduction of WLTP in Europe started in September 2017 and requires updates to CO₂ labeling, thereby impacting taxes in countries with a CO₂ tax scheme as well as CO₂ fleet regulations for passenger cars and light commercial vehicles. Costs associated with new or incremental testing for WLTP are significant.

Some European countries have implemented or are considering other initiatives for reducing CO 2 vehicle emissions, including fiscal measures and CO 2 labeling to address country specific targets associated with the Paris Accord. For example, the United Kingdom, France, Germany, Spain, Portugal, and the Netherlands, among others, have introduced taxation based on CO2 emissions. The EU CO2 requirements are likely to trigger further measures. In addition, delayed vehicle launches and supply shortages, as well as an insufficient charging infrastructure and lower demand for ZEV and low CO2 emission vehicles as certain electric vehicle incentives are reduced, can trigger compliance risks in all European markets.

Other National Requirements. The Canadian federal government regulates vehicle GHG emissions under the Canadian Environmental Protection Act. In October 2014, the Canadian federal government published the final changes to the regulation for light-duty vehicles, which maintain alignment with U.S. EPA vehicle GHG standards for the 2017-2025 model years. The revised U.S. EPA standards were automatically adopted in Canada by reference for the 2022-2025 model years, and draft amendments for a few standalone administrative elements not automatically adopted by reference were published in December 2022. The heavy-duty vehicle and engine GHG emissions regulations for the 2021 model year and beyond were published in May 2018 and are in line with U.S. requirements, subject to any change in those requirements.

China's Corporate Average Fuel Consumption and New Energy Vehicle ("NEV") Credit Administrative Rules contain fuel consumption requirements as well as credit mandates for NEV passenger vehicles, i.e., plug-in hybrids, battery electric vehicles, or fuel cell vehicles. The fuel consumption requirement uses a weight-based approach to establish targets, with year-over-year target reductions. China set a target of 5.0L/100km for the 2020 passenger vehicle industry fuel consumption fleet average, which lowers to 4.0L/100km by 2025 based on the New European Driving Cycle system. The government is projecting a further fuel consumption reduction in 2030, and is targeting 3.5L/100km based on the WLTP cycle ("WLTC") system. The NEV mandate requires that OEMs generate a specific amount of NEV credits each year, with NEV credits of at least 16%, 18%, 28%, and 38% of the annual ICE passenger vehicle production or import volume required in 2022, 2023, 2024, and 2025, respectively. Future percentages are currently under consideration.

As discussed below in Item 1A. Risk Factors under "Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, autonomous vehicle, and other regulations," a production disruption, stop ship, lower than planned market acceptance of our vehicles, or other intervening events may cause us to modify our product plans or, in some cases, purchase credits in order to comply with fuel economy standards.

Vehicle Safety

U.S. Requirements. The National Traffic and Motor Vehicle Safety Act of 1966 (the "Safety Act") regulates vehicles and vehicle equipment in two primary ways. First, the Safety Act prohibits the sale in the United States of any new vehicle or equipment that does not conform to applicable vehicle safety standards established by NHTSA. Meeting or exceeding many safety standards is costly and has continued to evolve as global compliance and public domain (e.g., New Car Assessment Programs ("NCAPs"), Insurance Institute for Highway Safety ("IIHS")) requirements continue to evolve, are increasing in demands, and lack harmonization globally. As we expand our business priorities to include autonomous vehicles and broader mobility products and services, our financial exposure has increased. Second, the Safety Act requires that defects related to motor vehicle safety be remedied through safety recall campaigns. A manufacturer is obligated to recall vehicles if it determines the vehicles do not comply with a safety standard. Should we or NHTSA determine that either a safety defect or noncompliance issue exists with respect to any of our vehicles, the cost of such recall campaigns could be substantial.

European Requirements. The EU has established vehicle safety standards and regulations and is likely to adopt additional or more stringent requirements in the future, especially in the areas of access to in-vehicle data, artificial intelligence, and autonomous vehicles.