NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

February 12, 2025

Representative Dan Ruby
Chair, House Transportation Committee
State Capitol
600 East Boulevard Avenue
Bismarck, ND 58505

Dear Chairman Ruby and Members of the House Transportation Committee:

My name is Denver Tolliver. I am Director of North Dakota State University's Upper Great Plains Transportation Institute. For the past few years, I have studied the potential benefits of autonomous trucks in North Dakota, working with autonomous truck companies, the Autonomous Vehicle Industry Association (AVIA), agricultural industries and companies that utilize truck services, and the North Dakota Motor Carriers Association. In addition to my brief statement, I would like to draw the committee's attention to the detailed statement of Jeff Farrah of the AVIA.

In my short statement, I will focus on the potential economic benefits of autonomous trucks, which offer an effective way of preserving and improving freight services in areas with driver shortages. In addition to labor savings, autonomous trucks offer enhanced fuel efficiency by optimizing highway speeds and vehicle controls and reducing idling time. In one study, a savings in diesel fuel consumption of 11% was estimated for autonomous trucks.[1]

Because of more uniform driving practices and speeds, autonomous operations can reduce the wear and tear of vehicle components. According to one manufacturer, vehicle maintenance has been reduced by 13% for autonomous haulage trucks used in mining operations, with a 40% improvement in tire and brake life[2].

When considered collectively, the efficiency gains offered by autonomous trucks can dramatically reduce trucking costs in North Dakota, benefiting all sectors of the state's economy. Moreover, autonomous trucks offer a pathway to Vision Zero by preventing many of the highway fatalities associated with large trucks.

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[1] TuSimple. (2023, September). *TuSimple Demonstrates Autonomous System Fuel Efficiency Improvements Through On-Road Maneuver Performance Study.*
[2] Komatsu. *FrontRunner Autonomous Haulage System (AHS)*.

In addition to cost savings, the unprecedented productivity and reliability of autonomous trucks have the potential to transform agricultural logistics. During harvest and other periods of peak demand, autonomous trucks can operate nearly 24/7, moving the maximum quantity of goods possible during a day. In the future, autonomous trucks may benefit North Dakota's oil and gas industry by hauling non-hazardous inputs such as proppants and supplies, much like the operations currently underway in the Permian Basin.[3]

My purpose in providing this brief statement is to highlight the potential economic benefits of autonomous trucks in North Dakota. My statement is neutral in status.

Sincerely

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[3] Atlas Energy Solutions. *Kodiak Delivers Customer-Owned Autonomous RoboTrucks to Atlas Energy Solutions, Completes 100 Loads of Proppant with First-Ever Driverless Commercial Semi-Truck Service*, 01/24/2025.