

GLOBAL COMMERCIAL VEHICLE DRIVE TO ZERO PROGRAM



A
PROGRAM
OF CALSTART

The Global Commercial Vehicle Drive to Zero Program (Drive to Zero) is a strategic international initiative designed to catalyze the growth of near- and zero-emission commercial vehicles (ZECVs). It seeks to unite key regions of change worldwide, along with leading manufacturers, fleet users, government agencies, infrastructure providers and innovators to collaboratively speed change by setting in place supportive policies, financial incentives, infrastructure investments and pilot projects to support early market success.

Tackling Emissions & Air Quality

By focusing its efforts on a critical, but complex, vehicle space – medium- and heavy-duty goods movement, people movement and equipment – Drive to Zero helps nations achieve the greenhouse gas emissions targets established under the Paris Accord and improve urban air quality. Commercial vehicles represent less than 5% of the global on-road fleet, but consume over 35% of on-road fuel and emit over 70% of on-road particulates that negatively affect air quality and human health.

Visit www.globaldrivetozero.org

Goals

- Near- and zero-emission commercial vehicle beachhead applications are commercially viable and cost competitive in target global markets by 2025.
- Zero-emission commercial vehicles achieve full market penetration by 2040.

The Ask

The Pledge: Governments, manufacturers, fleets and infrastructure providers agree to collaboratively accelerate the early first-success markets for zero- and near-zero-emission commercial vehicles.

The Strategy: Target the right vehicles for first-market success - in the right order for sustainable industry growth and in the right regions embracing and supporting change. Collaboration and concurrent action is key to success and needed volumes. The result can be viable products by 2025 in all beachhead segments.

The Request: Endorse and sign the pledge. Adopt the strategy individually and as a group of partners. Set in motion supporting actions across your region and stakeholder group. Be active first-movers of the Drive to Zero program.

The Beachhead Strategy

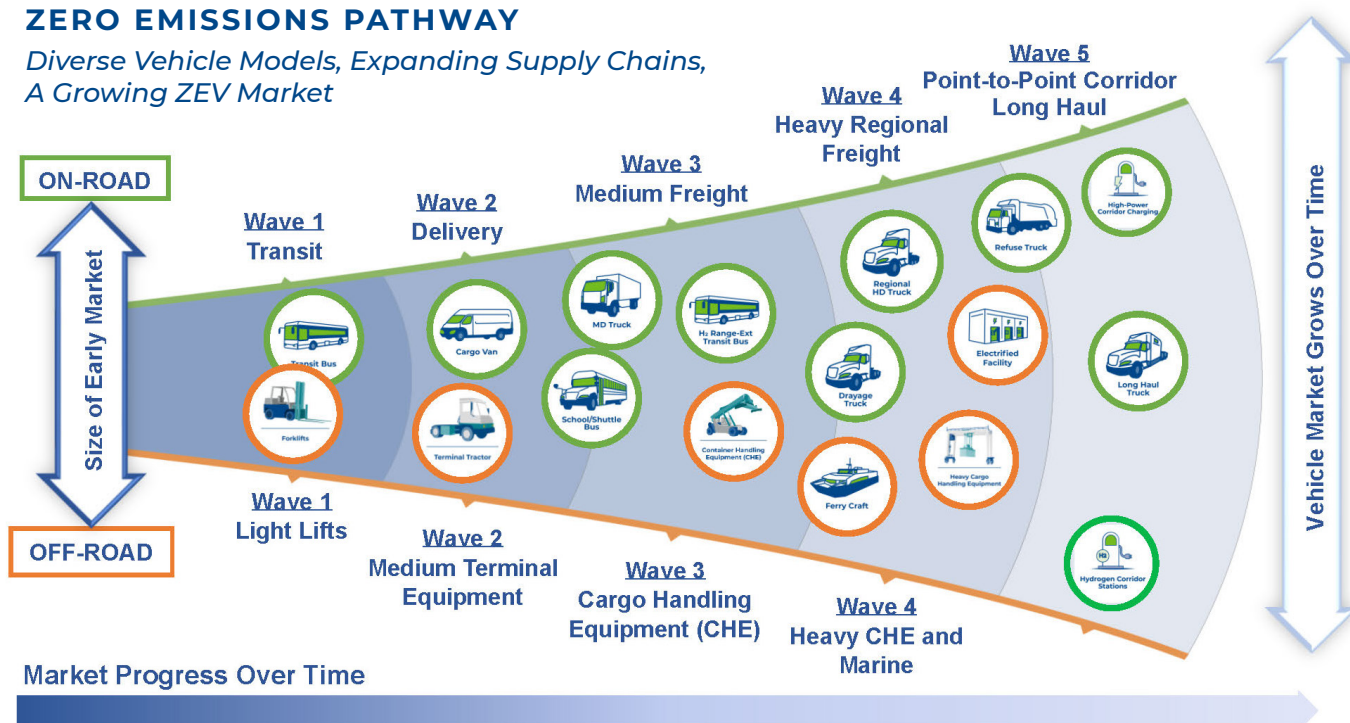
Drive to Zero is built upon the Beachhead Strategy, a technology commercialization strategy for change. The Beachhead Strategy identifies the commercial vehicle market segments where zero- and near-zero technologies are most likely to succeed first. Those are typically urban applications where vehicles operate along known routes and relatively shorter distances and can charge overnight at depots. Key identifying factors include technology readiness, duty cycle and use, industrial activity and capacity, and user economics. For zero-emission technologies, early beachhead markets include transit buses, shuttle vans, package and delivery vans and trucks, terminal tractors, port equipment, and regional distribution (freight) trucks.



Developed in partnership between CALSTART and the California Air Resources Board (CARB), the Beachhead Strategy aligns closely with the market and product strategies of major bus, truck and component makers worldwide and has been incorporated into CARB's three-year investment plan strategy.

ZERO EMISSIONS PATHWAY

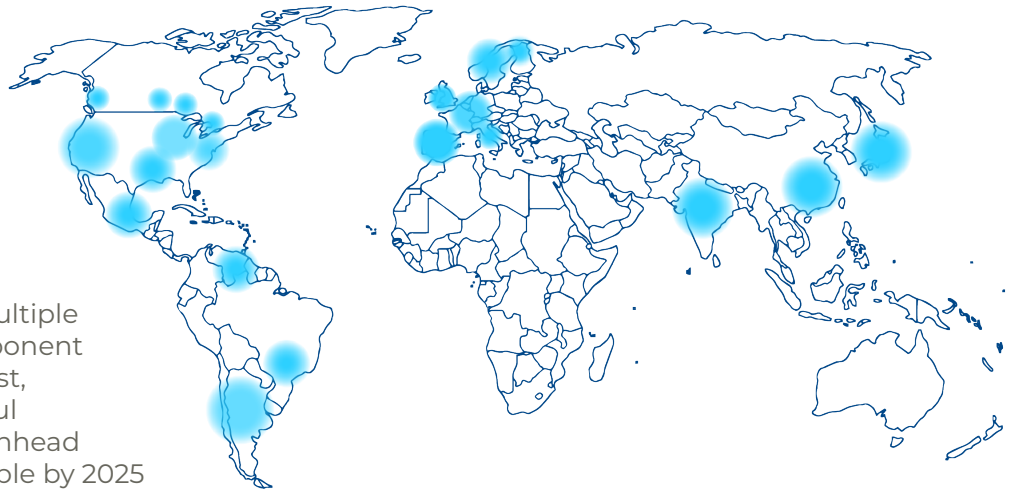
*Diverse Vehicle Models, Expanding Supply Chains,
A Growing ZEV Market*



Full Market Penetration by 2040

This powerful strategy matches vehicle makers' timelines and production capacity. By coordinating deployments of similar vehicle applications in multiple markets at once, common component volumes increase and reduce cost, speeding investments. Successful collaboration can drive the beachhead markets being commercially viable by 2025

in leading cities/regions of Asia, North and South America and Europe. The size of these beachheads can create a sustainable ecosystem enabling fully zero-emission technology to expand to other commercial vehicle segments in the 2025-2035 timeframe with full market penetration occurring by 2040.



Tools to Drive Market Success

Drive to Zero works to support and coordinate partner action. It is now expanding its partner base, developing vehicle availability data and assembling a menu of implementation tools designed to drive market success:

- **Policies and Actions Toolkit** - A living, regularly updated portfolio of the key policies, actions and investments governments and industry can take to spur faster near- and zero-emission commercial vehicle deployment.
- **Zero-Emission Technology Inventory (ZETI) tool** - Track in real time where, what type and when new vehicles will be available and manufacturer information. We have already expanded ZETI to 5 continents (North America, Europe, China, India, South America), and we are working with international partners to improve data coverage in Europe and China.
- **ZETI Analytics** - New findings and trends in the zero-emission commercial vehicle segment identified through analyzing data from ZETI.
- **Total Cost of Ownership Estimator** - Pinpoint the best vehicles for the job. Explore and compare the costs associated with different vehicles.
- **Infrastructure planning guide** - as infrastructure is emerging as one of the key issues towards large-scale deployments, this guide will include insights and step-by-step to properly plan for infrastructure.

Access our tools and more at www.globaldrivetozero.org.

Partner Engagement

Government agencies, vehicle and component manufacturers, fleets, utilities and innovators have signed the Drive to Zero pledge and agreed to:

- Agree to work together, take actions locally and regionally to support growth of zero-emission commercial vehicle markets;
- Share Information share with peer regions; and
- Access to best tools, research, assistance, data.

There is no cost to take part in the Drive to Zero program, just your commitment!

Visit us at: www.globaldrivetozero.org

Follow us: [@TeamDriveToZero](https://twitter.com/TeamDriveToZero)

Contact: info@globaldrivetozero.org

Who We Are

Drive to Zero is a program of CALSTART, a clean transportation industry non-profit consortium with over 250 members. With offices in New York, Michigan, Colorado and California, CALSTART partners with industry leaders and agency innovators to build a prosperous, efficient and clean high-tech transportation industry.



CALSTART President and CEO John Boesel, Drive to Zero pledge partners Minister George Heyman of British Columbia and Minister Benoît Charette of Quebec.



Drive to Zero pledge partners gathered at CALSTART's Climate Week NYC workshop Sept. 24, 2019.



Ingka Group's (IKEA) Angela Hultberg signs the pledge to Drive to Zero.

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