



A
PROGRAM
OF CALSTART

THE BEACHHEAD STRATEGY TO ACCELERATE ZERO-EMISSION COMMERCIAL VEHICLE MODEL AVAILABILITY AND DEPLOYMENT

加速推进零排放商用车车型多样化和市场发展的先锋战略

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Webinar Series on Commercial Vehicle ZEV Regulation

新能源商用车政策系列研讨会

March 25, 2021

2021年3月25日

CALSTART is a consortium of over 270 members to advance and accelerate clean transportation solutions

CALSTART是一家拥有超过270家成员的联合机构，我们提供先进的解决方案，加速推动清洁交通发展



Relevant CALSTART experience

CALSTART的相关经验

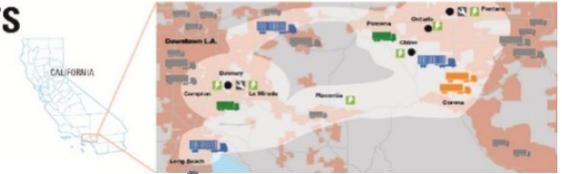
CALSTART oversees and evaluates key technology demonstration projects

CALSTART对重点技术示范项目进行监督和评估



Volvo LIGHTS

Volvo LIGHTS is the pathway to electrifying 4 different freight handling duty cycles to improve air quality in the South Coast Air Basin



CALSTART designs and manages smart incentives for leading regions in the U.S.

CALSTART为美国一些先进地区设计并管理一些智慧清洁交通激励方案



Truck Voucher Incentive Program



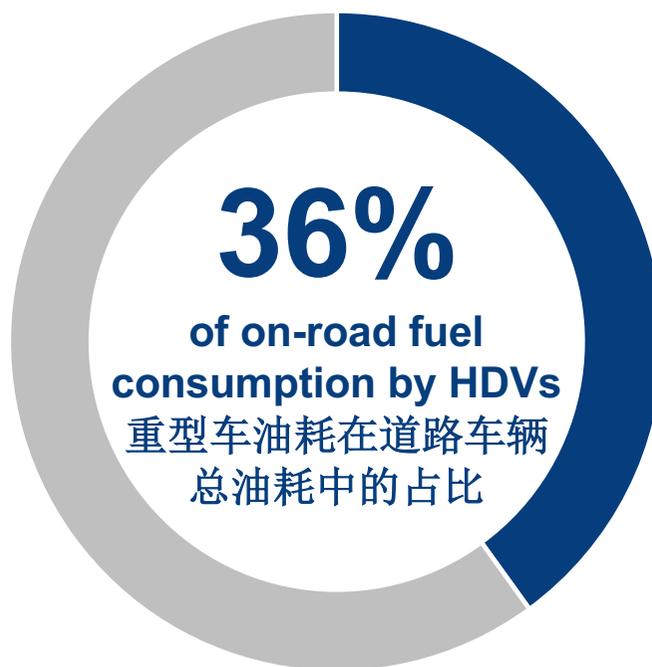
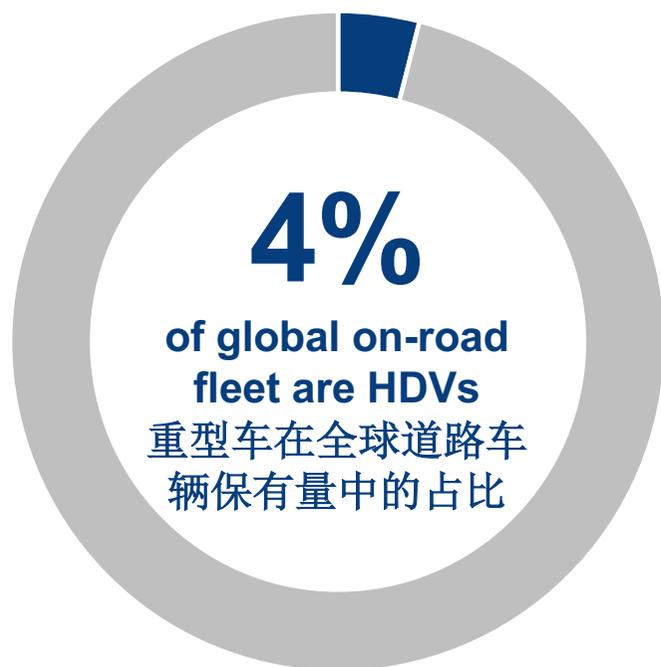
CALSTART leads the Global Commercial Drive to Zero Initiative

CALSTART正在牵头一项推动全球商用车迈向零排放项目



Commercial vehicles represent a relatively small share of the global on-road fleet but contribute to a disproportionate share of on-road fuel consumption and emissions

在全球道路车辆中，商用车的保有量占比是相对较小的，但这类车辆的燃油消耗量和污染物排放量所占的比例却相当大



Drive to Zero is an international multi-stakeholder initiative to accelerate the growth of zero-emission commercial vehicles

迈向零排放项目是一个多方联合的跨国行动项目，旨在加速推动零排放商用车的发展



Near- and zero-emission commercial vehicles cost-competitive and commercially viable in first-success applications and early-mover regions by 2025.

到2025年，在率先和成功推广应用零排放商用车的地区和领域，近零排放/零排放商用车应具备一定的成本竞争力和商业化市场基础。



Zero-emission commercial vehicles dominate new vehicle sales by 2040.

到2040年，零排放商用车应成为市场新车销售的主流产品。



1

TARGET ZECV DEPLOYMENT IN FIRST-SUCCESS MARKETS

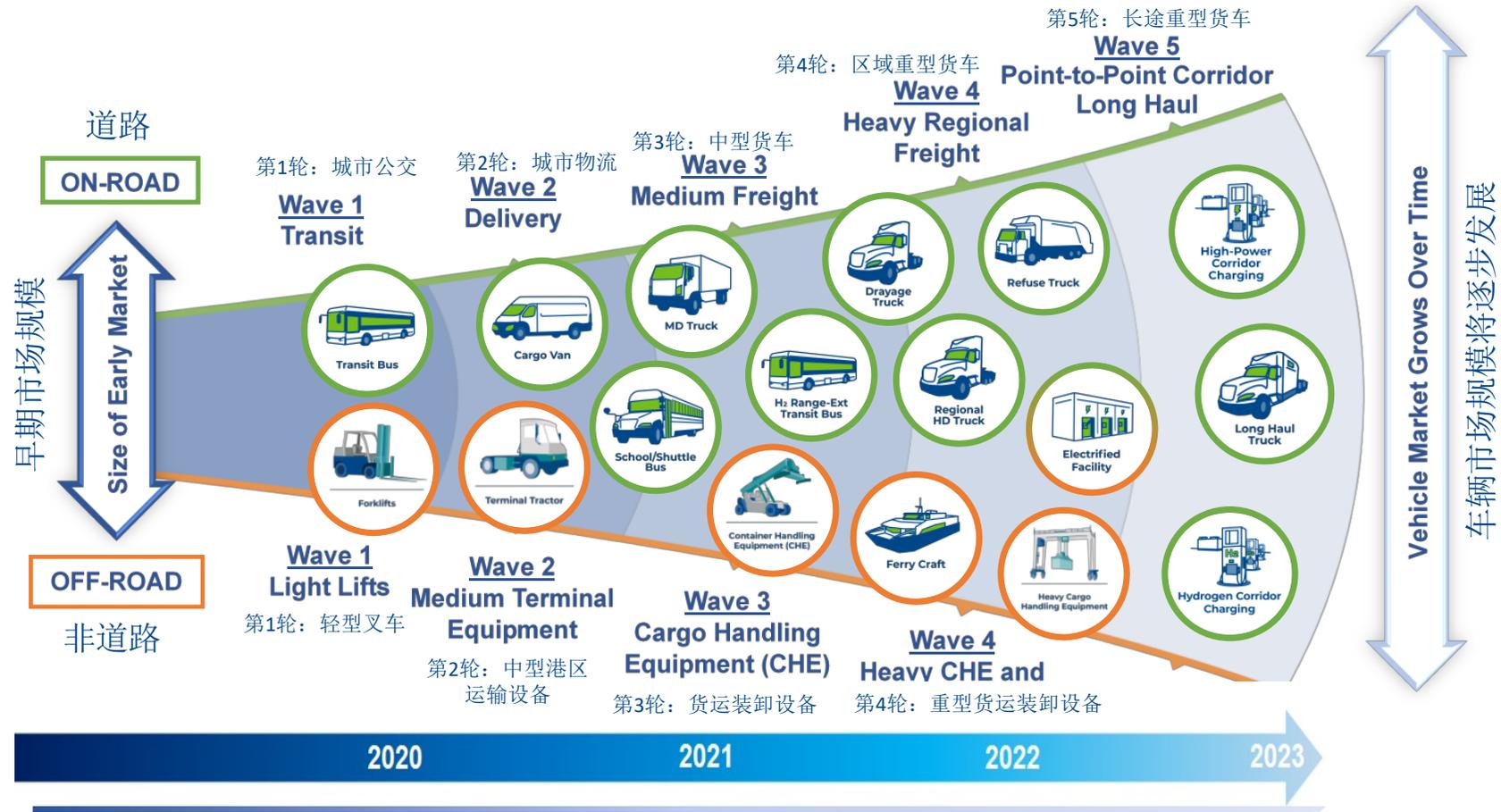
Typically urban applications where vehicles travel along known routes and return to base for charging

着力在早期获得一定成功的市场中零排放商用车发展

通常指那些具有既定行驶路线并且能够回到场站进行充电的城市车辆应用场景。

Zero-emission vehicles are coming in waves, taking foothold in beachhead applications where technology is ready first

零排放车辆正不断涌现，在技术已经成熟的应用领域率先扎根立足

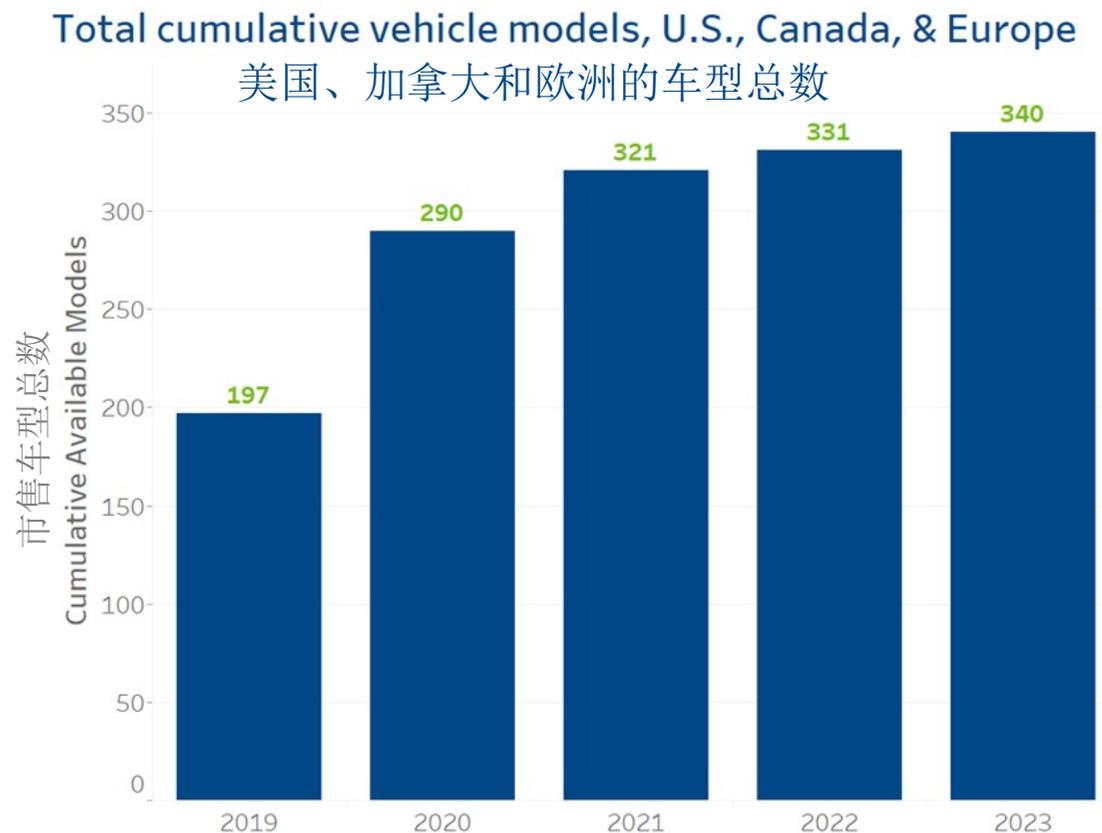




There are already over 300 existing and announced zero-emission commercial vehicle models

目前已上市或已发布的零排放商用车车型超过300种

Model availability is increasing rapidly 市场上的可选车型正在快速增加

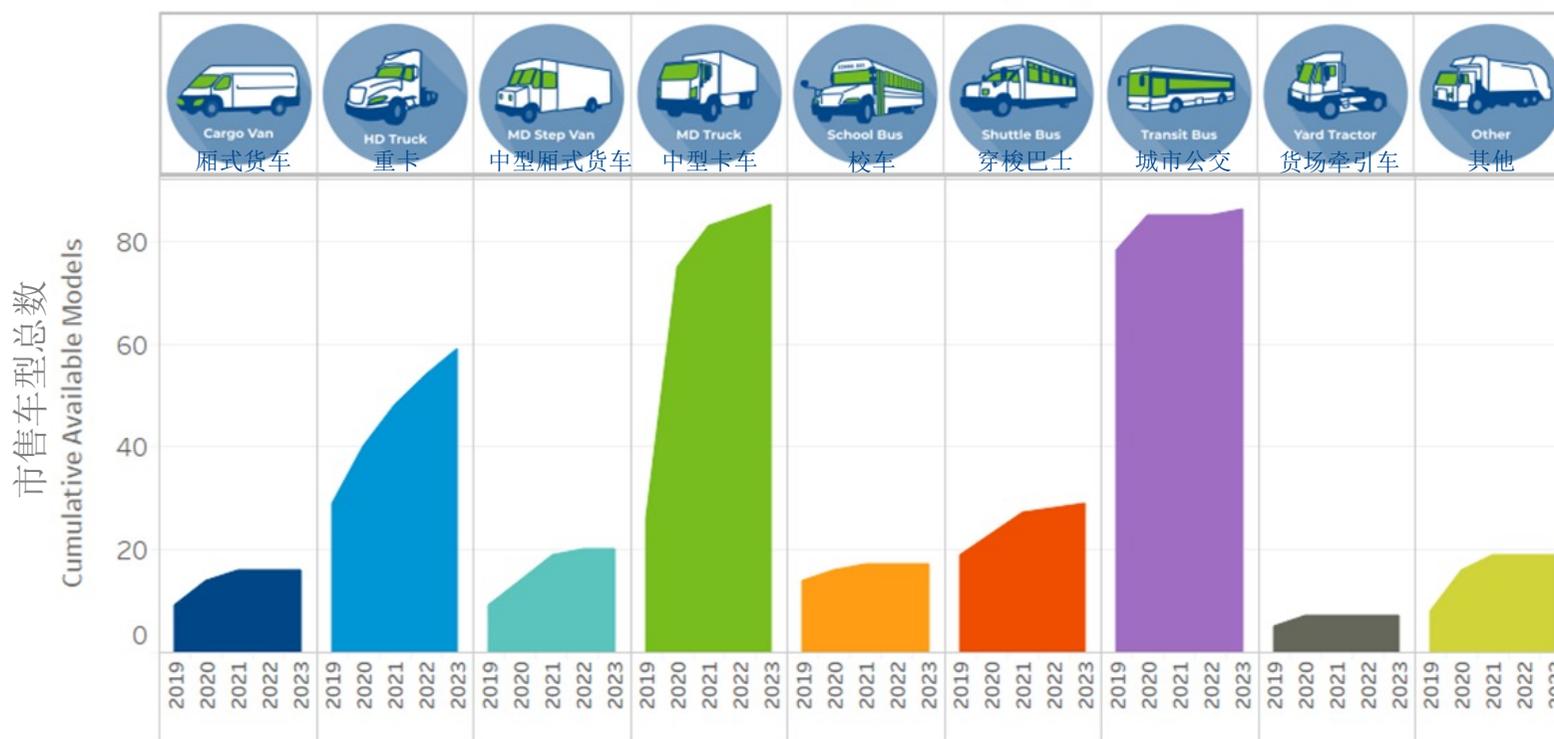


Source来源: <https://globaldrivetozero.org/tools/zero-emission-technology-inventory/>

Model availability is increasing rapidly

市场上的可选车型正在快速增加

按车辆类型和年份划分的美国、加拿大和欧洲的车辆总数
 Total cumulative vehicle models by vehicle type and year, U.S., Canada, and Europe

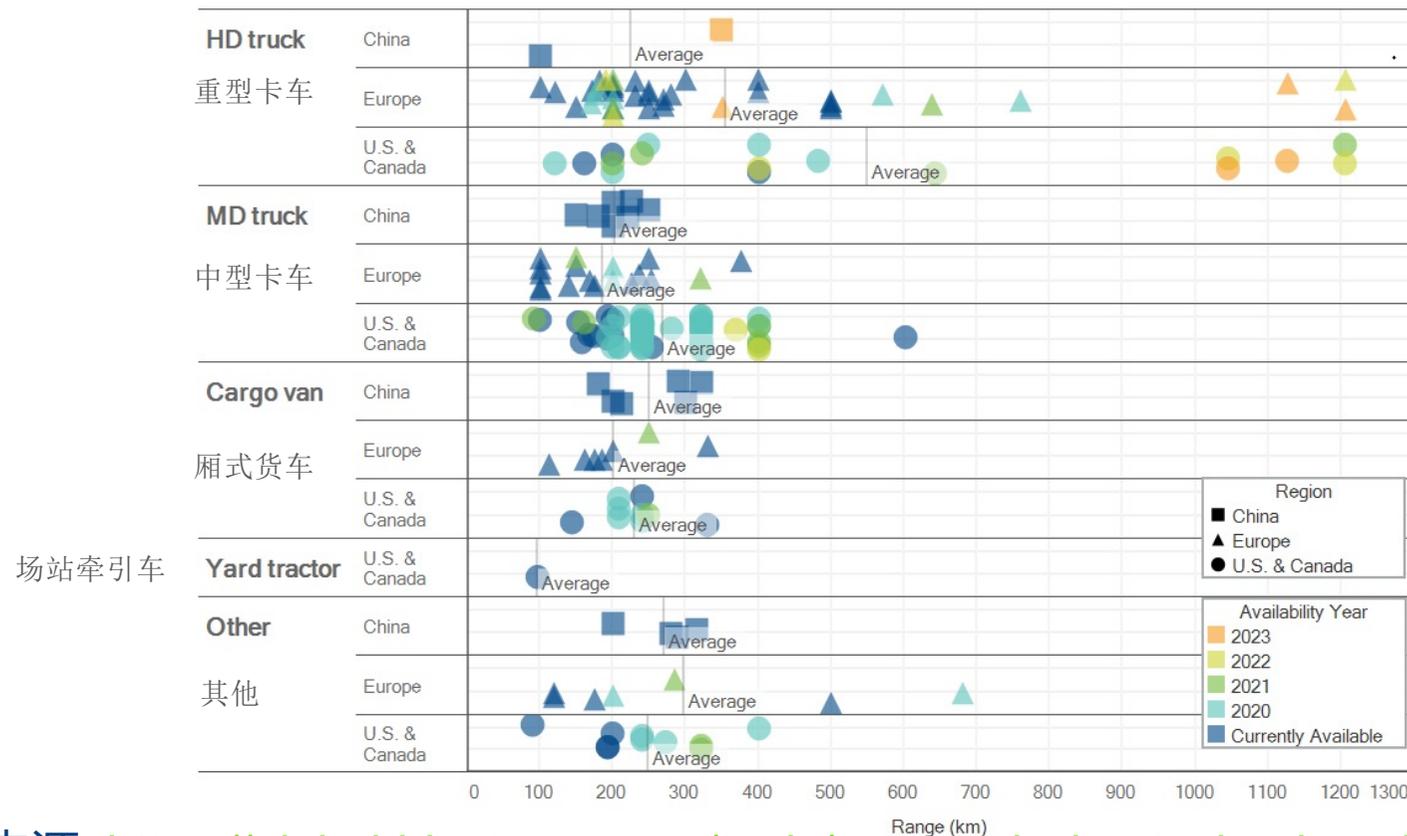


Source来源: <https://globaldrivetozero.org/tools/zero-emission-technology-inventory/>

Zero-emission commercial models across nearly all vehicle types currently demonstrate driving range capabilities commensurate with user needs

现有的零排放商用车中，几乎所有车型都展示出了能够满足用户需求的续航里程能力

按车辆类型和上市年份划分的美国、加拿大、欧洲和中国卡车的续航里程范围
Truck range by vehicle type and availability year, U.S., Canada, Europe, and China



Source来源: <https://globaldrivetozero.org/tools/zero-emission-technology-inventory/>



2

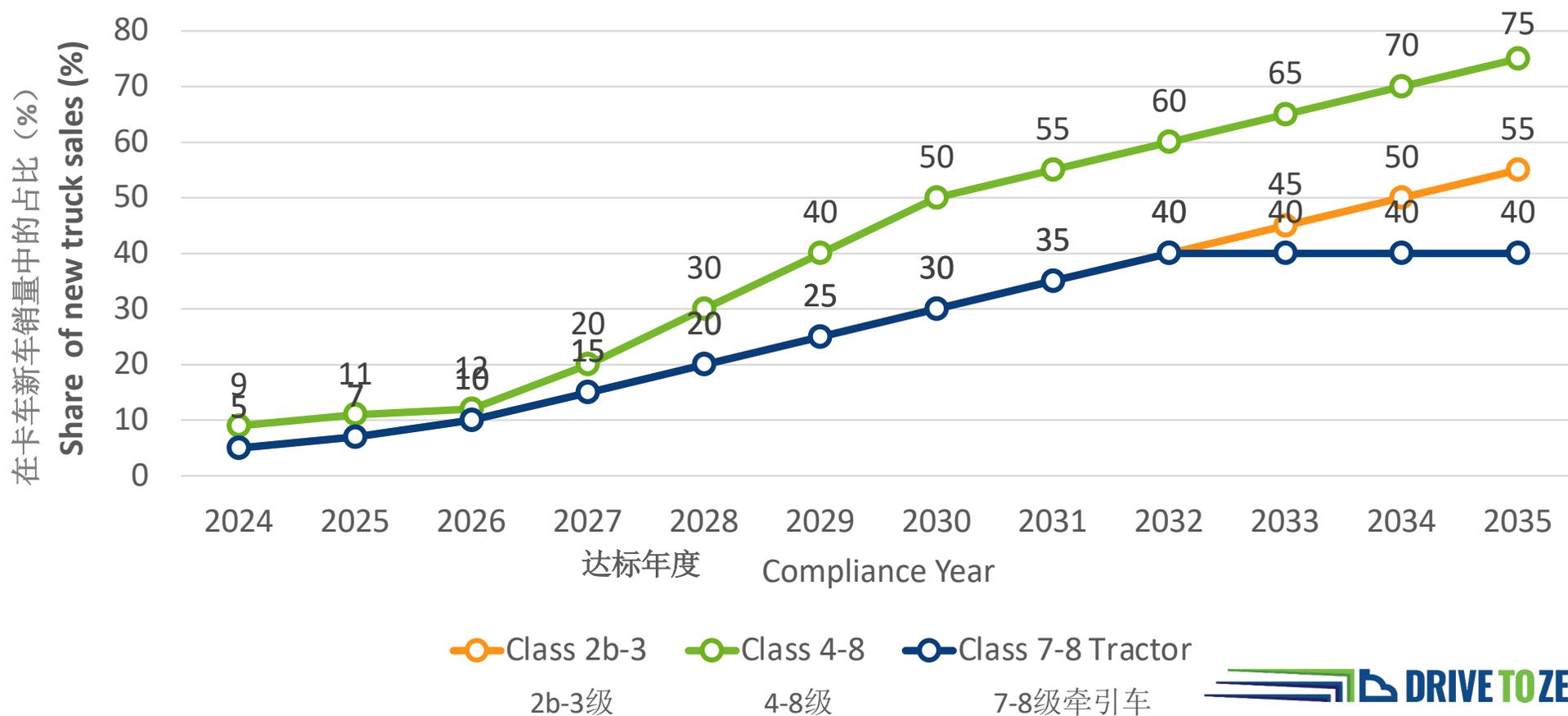
ALIGN DEPLOYMENT AND ECOSYSTEMS GLOBALLY

Build aligned “ecosystems” of success in key first-mover regions made up of aligned policies, incentives, infrastructure investments, and pilot projects

在全球范围内协同零排放商用车的发展和其“生态系统”的构建

在关键的率先发展地区协同构建成功推广零排放商用车“生态体系”，包括协同一致的推广政策、激励措施、基础设施投资和试点项目

California adopted the first regulation for zero-emission trucks and 14 other U.S. states are sending strong market signals supporting zero-emission trucks
 加州率先实施了零排放卡车管理方案，随后美国另外14个州也加入进来，向市场释放出了强烈的零排放卡车支持信号



Leading regions should adopt “ecosystems” of complementary, aligned regulations, incentives and investments

率先发展地区应构建协同一致的管理法规、激励措施和投资“生态体系”



Sales requirements for zero-emission trucks

出台零排放卡车销量要求



Fleet purchase requirements that mirror sales mandates

根据强制性销量要求，对车队提出购置要求



Incentives for vehicle up-front costs

通过鼓励措施降低车辆的前端成本



Infrastructure investments to match vehicle incentives

配合车辆鼓励政策，投资基础设施建设



Development of zero-emission zones for delivery vehicles

推进发展快递车零排放区



Launched in Sep/18, the program has gained incredible momentum, recruiting 100+ pledge partners and building strong regional and global partnerships

迈向零排放商用车行动项目于9月18日启动，获得了巨大成功，招募了100多家承诺合作伙伴并建立了强大的区域和全球合作关系

Nine nations agreed to join forces to accelerate the adoption of zero-emission commercial vehicles worldwide

已有9个国家达成一致意愿，在全球范围内加速推进商用车零排放化



100+ organizations worldwide have signed the Pledge

世界各地有100多家机构签署了承诺

THE PLEDGE 承诺

Cities, governments, manufacturers, fleets and fuel suppliers agree to:

- Work together to accelerate early markets for zero- and near-zero emission trucks, buses and equipment.

- Share information with peer regions.

- Access best tools, research, assistance, data.

城市、政府部门、生产企业、车队和燃料供应商一致同意:

- 共同协作，加速零排放和近零排放卡车、公交车和机械设备的早期市场推广

- 实现地区之间的信息共享

- 共同探求最佳推进手段、开展研究、彼此协助和数据共享

NATIONAL GOVERNMENTS 国家政府

Canada 加拿大
 Chile – Sustainable Energy Agency 智利
 China 中国
 Finland – Ministry of Economic Affairs and Employment 芬兰
 Germany – VDI/VDE Innovation + Technik GmbH 德国
 Japan – Ministry of Economy, Trade and Industry (observer) 日本
 Netherlands – Ministry of Infrastructure and Water Management 荷兰
 Norway – Norwegian Public Roads Administration 挪威
 Sweden 瑞典

CITIES & REGIONAL GOVERNMENTS 地方政府

Bay Area Air Quality Management District (BAAQMD) 湾区空气质量管理区
 British Columbia, Canada 加拿大不列颠哥伦比亚
 California Air Resources Board (CARB) 加州空气资源委员会
 California Energy Commission (CEC) 加州能源委员会
 Gothenburg, Sweden - Business Region Göteborg 瑞典哥德堡
 Helmond, Netherlands 荷兰赫尔蒙德
 K'uL Group, Canada 加拿大K'uL集团
 Los Angeles, CA, USA - Mayor Eric Garcetti 美国加州洛杉矶
 Los Angeles Department of Transportation (LADOT) 洛杉矶交通局
 Madison, WI, USA 美国威斯康星麦迪逊
 New York, NY, USA 美国纽约
 New York State Energy Research & Development Authority 纽约能源研究与发展机构
 Oslo, Norway - Mayor Raymond Johansen 挪威奥斯陆
 Quebec, Canada 加拿大魁北克
 Sacramento, CA, USA - Mayor Darrell Steinberg 美国加州萨克拉门托
 South Coast Air Quality Management District (SCAQMD) 南岸空气质量管理区
 Stockton, CA, USA - Mayor Michael D. Tubbs 加州斯托克顿
 Vancouver, BC, Canada 加拿大温哥华
 Västra Götaland Region, Sweden 瑞典西约塔兰省

MANUFACTURERS

生产企业

Advanced Electric Machines
 Arrival Automotive Inc
 AxleTech
 BAE Systems
 Ballard Power Systems
 BYD
 BYD Canada
 Canadian Electric Vehicles
 Chanje Energy
 Coaster Cycles
 DANNAR
 DiPP-R AB
 Effenco
 Inventev
 Lightning eMotors
 Mitsubishi Fuso Truck
 Motiv Power Systems
 New Flyer Industries
 Nikola Corporation
 Nuvera Fuel Cells
 Orange EV
 Prestolite eDrive Systems
 Proterra
 Roush CleanTech
 Scania
 SEA Electric
 StrapWing
 Tevva
 The Lion Electric Co.
 TransPower
 Unique Electric Solutions LLC
 US Hybrid
 Viatec
 Volta Trucks
 Workhorse
 XL Fleet
 XOS
 Zenith Motors

FLEETS & USERS

车队&企业用户

Blue Mountain Resorts
 DHL
 East Bay Municipal Utility District
 Foothill Transit
 Fresh City Farms
 Ingka Group (IKEA)
 Mayor Logistics
 Revolv
 Ryder
 Sim International
 The Green Cab

UTILITIES & INFRASTRUCTURE PROVIDERS

基础设施供应商

Black & Veatch
 East Bay Community Energy (EBCE)
 Green Energy Technology
 San Diego Gas & Electric (SDG&E)
 Siemens
 Southern California Edison
 USGRDCO
 West Valley Construction Company
 ZeroGreenSolutions

KNOWLEDGE & SERVICE ORGANIZATIONS

研究和服务机构

7 Generation Capital
 Auto Research Center (ARC)
 AVL
 Charge across town
 Clean Energy Canada
 Climate Change Mitigation Technologies
 Climate Law & Policy Project
 Coast to Coast Smart e-Mobility
 Denver Metro Clean Cities
 Dunksy Energy Consulting
 East Bay Clean Cities Coalition
 Electric Vehicle Assoc. of Atlantic Canada
 Empire Clean Cities
 Geotab
 Greener by Design, LLC
 Hsubject
 Prospect Silicon Valley
 The Pembina Institute
 Tirm Technology s.r.o.
 Windfall Ecology Centre
 ZEV2030

<https://globaldrivetozero.org/about/pledge/>



3

REACH ECONOMIES OF SCALE FASTER AND EXPAND ZECV MARKET

Expand to succeeding success markets as supply chain grows, costs decrease, and business case expands.

加快实现规模经济，扩大零排放商用车市场

随着供应链发展、成本降低和商业化应用领域的扩展，市场的成功趋势也将进一步拓展

We are developing tools to drive market success 我们正在开发能够推动市场迈向成功的手段

ZE TECH INVENTORY
零排放技术清单

POLICY AND ACTION TOOLKIT
政策和行动措施工具包

TCO CALCULATOR
拥车总成本计算工具

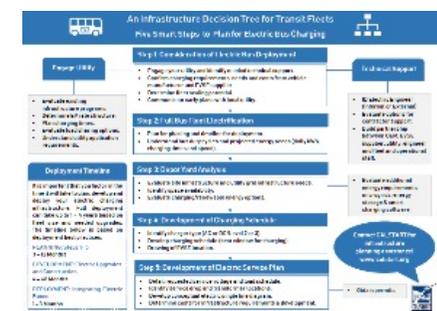
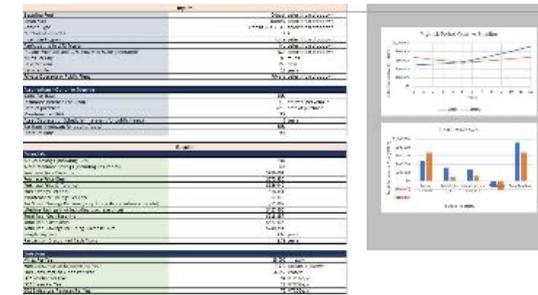
INFRA PLANNING GUIDANCE
基础设施规划指南

Live
现有

Live
现有

Live
现有

Coming soon
敬请期待



Resources for Transformation 来源: <https://globaldrivetozero.org/resources/>



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Thank you!
谢谢!

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For more information 更多信息:
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@TeamDriveToZero