



ACEA

European
Automobile
Manufacturers
Association

EU-INDUSTRY EXPERIENCE WITH VECTO AND GLOBAL PERSPECTIVES

欧盟的VECTO行业经验与全球视野

4TH SINO-EU-WORKSHOP ON TRANSPORT
EMISSION REGULATIONS
第四届中欧交通运输排放法规研讨会

THOMAS FABIAN
Director Commercial Vehicles

商用车辆总监

5 March 2021
2021年3月5日



COMMERCIAL VEHICLE MEMBERS



1

HDV Roadmap to carbon-neutrality
HDV碳中和路线图

2

Policy framework
政策框架

3

VECTO – industry perspective
VECTO – 行业视角

4

Conclusions
结论



European
Automobile
Manufacturers
Association

HDV Roadmap to carbon-neutrality

HDV碳中和路线图



HDV ROADMAP TO CARBON-NEUTRALITY

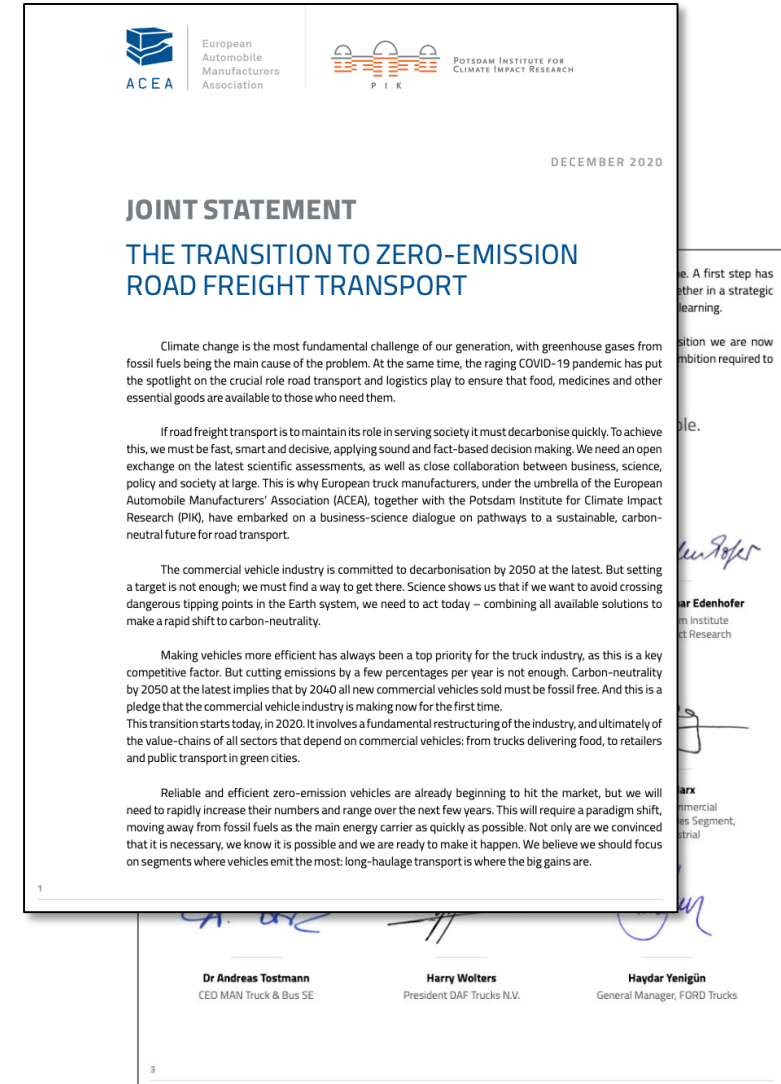
HDV 碳中和路线图

Industry committed to | 行业致力于:

- Carbon-neutrality by 2050 at the latest
最迟在2050年实现碳中和
- By 2040 all new HDVs sold will have to be fossil-free
到2040年, 所有出售的HDV新车都必须为非石化燃料车型
- Milestones and policy framework supported by science (Potsdam Institute for Climate Impact Research, PIK)
拥有科学技术支持的里程碑和政策框架 (波茨坦气候影响研究所, PIK)
- [ACEA Policy Paper](#) and [Joint Statement ACEA – PIK](#)
[《欧洲汽车制造商协会 \(ACEA\) 政策文件》](#) 和 [《ACEA-PIK联合声明》](#)

Three interdependent building blocks | 三个相互依赖的基本构成要素

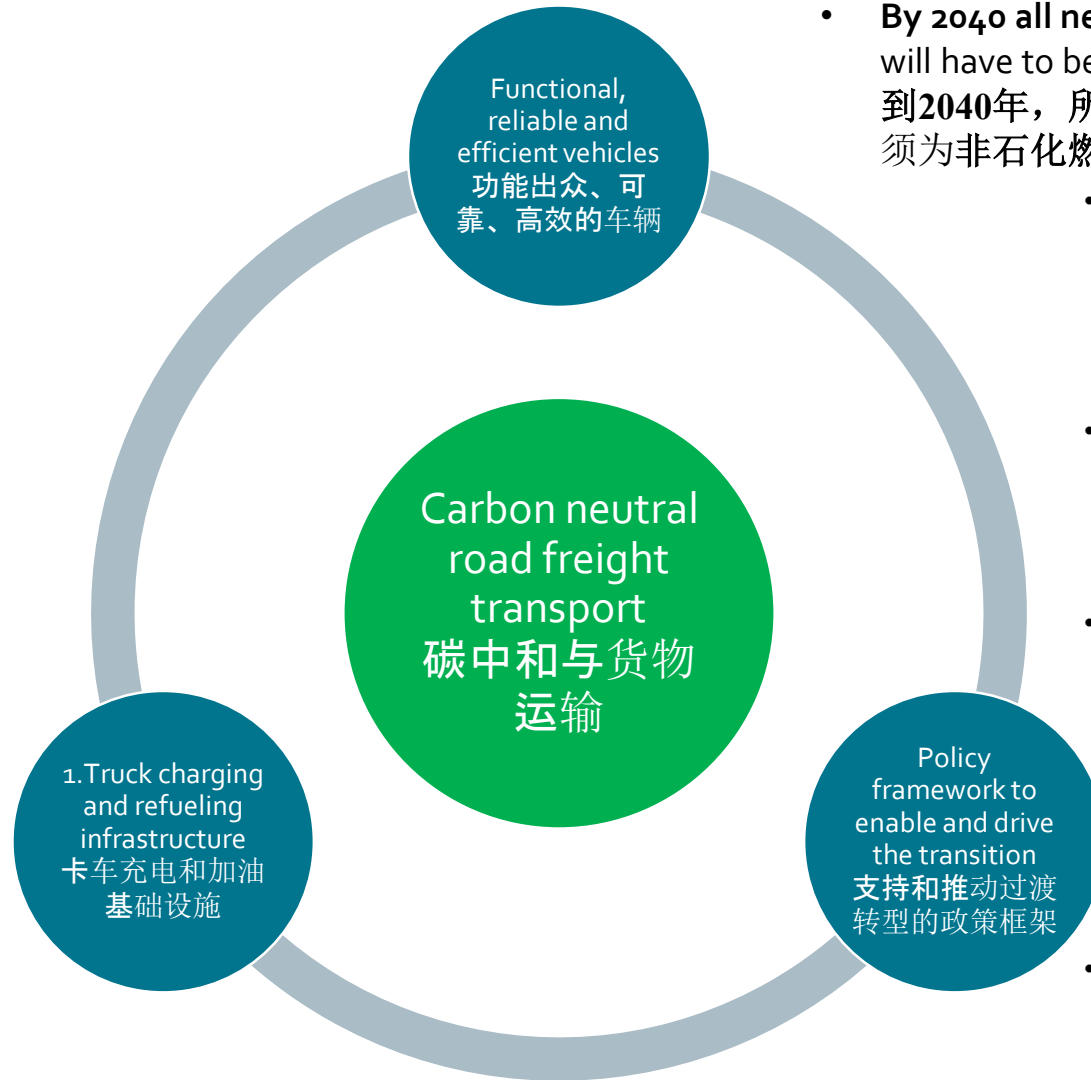
- To define roles and leadership in establishing a carbon-neutral road freight transport system
明确在建立碳中和道路货物运输系统方面的角色和领导地位
 1. **Functional, reliable and efficient vehicles**
功能出众、可靠、高效的车辆
 2. **Charging/ refueling infrastructure suitable for trucks**
适用于卡车的充电/加油基础设施
 3. **Coherent policy framework which enables and drives the transition**
支持和推动转型过渡的一致政策框架





KEY MESSAGES 关键信息:

- **Clean electricity, hydrogen and low-/ zero-carbon fuels** are crucial for the transition
清洁电力、氢燃料和低碳/零碳燃料对过渡转型至关重要
- Vehicle deployment will only be successful if **infrastructure** is rolled out rapidly
只有**基础设施**迅速铺开，车辆部署才能取得成功
- Commitment of **all stakeholders/ policy makers must match ambition** level set for vehicle industry
所有利益相关者/决策者的承诺必须匹配汽车行业设定的目标水平
- OEMs ready to support roll-out by collaborating with public and private stakeholders
OEM制造商准备好通过与公共和私人利益相关者合作来支持推广



- Commitment to **carbon-neutrality by 2050 at the latest.**
最迟在**2050年**实现碳中和的承诺
- **By 2040 all new commercial vehicles sold will have to be fossil-free.**
到**2040年**，所有出售的商用车辆新车都必须为**非石化燃料车型**
 - Zero-emission vehicles will have to become **best option and preferred choice of transport operators.**
零排放车辆将成为**运输运营商的最佳选择和首选车辆。**
 - Enabling **policy framework** is indispensable to **shift key cost factors**
实施**政策框架**对于**转变关键成本因素**必不可少
 - In line with science, an **ambitious carbon price**, which gradually increases to significantly higher levels than today is crucial to drive the deployment of zero-emission technologies.
与科学技术相比，**具有雄心壮志的碳排放价格**是推动零排放技术应用的关键；其可逐步提高到比现在更高的水平。
 - Decarbonisation requires **clear focus and all resources to be devoted exclusively** to reaching target as soon as possible.
脱碳需要有**明确的重点**，并且，**所有资源都要专门用于**尽快实现目标。



European
Automobile
Manufacturers
Association

Policy framework 政策框架



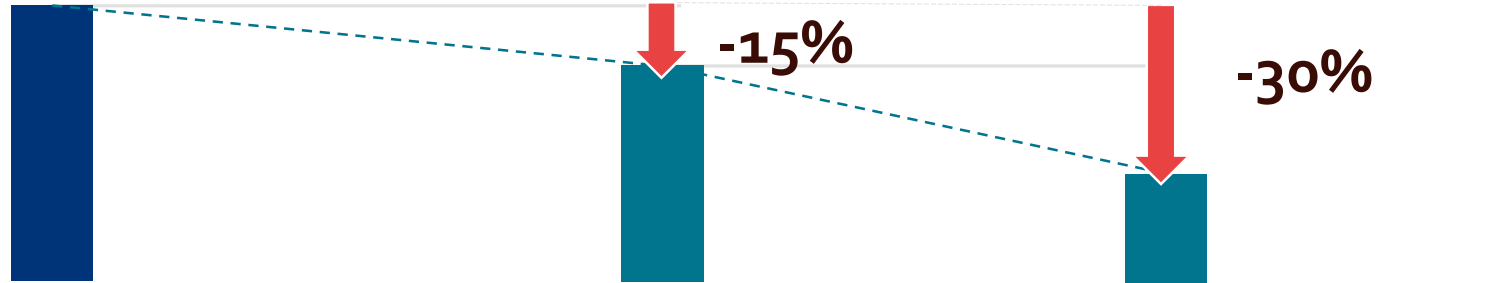
CO₂ STANDARDS TRUCKS

卡车CO₂标准

Baseline 2019
2019年基准线

Target 2025
2025年目标

Target 2030
2030年目标



Supercredits 2019 -2024
超级积分 2019-2024

Benchmark 2025 level
2025年基准水平

Benchmark
2030 level
2030年基准水平

Incentive scheme
激励计划

- ZEV counts 2x → lowers OEM fleet value
ZEV车辆计为2辆车 → 可降低OEM车队价值
- If early credits gained, usable in 2025 only
如果获得早期的积分，仅限于2025年使用
- 1.5% ZEVs outside regulation can be counted
可计算监管范围之外的1.5% ZEV车辆

Incentive scheme
激励计划

- If >2% ZEV share relief on OEM fleet value
如果 >2% OEM车队价值ZEV份额减免
- Max. 3%-points relief at 5% ZEV share (cap)
5% ZEV车辆份额（上限）最高3%积分减免
- 3.5% ZEVs outside regulation can be counted (precondition: at least 0.75% ZEV within regulation scope)
可计算监管范围之外的3.5% ZEV车辆（前提：至少0.75% ZEV车辆在监管范围内）

Key framework conditions 关键框架条件

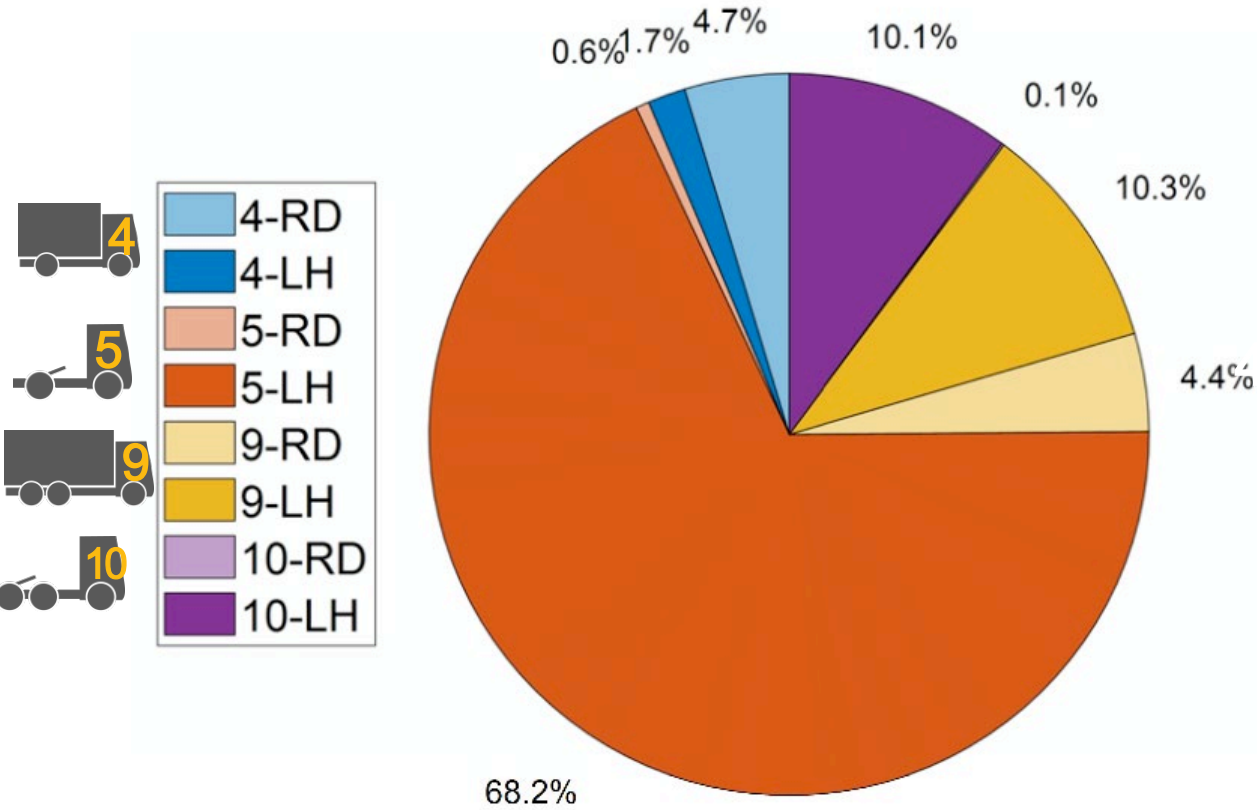
- Ambitious targets 2025/ 2030
2025/2030年的宏伟目标
- Baseline yet unknown; to be published by April 2021
基线未知；将于2021年4月发布
- Comprehensive review of key elements in 2022
全面回顾2022年的关键要素
- High non-compliance fines
高额违规罚款
2025-29年 → 4.250 €/ g/ tkm
2030年 → 6.800 €/ g/ tkm



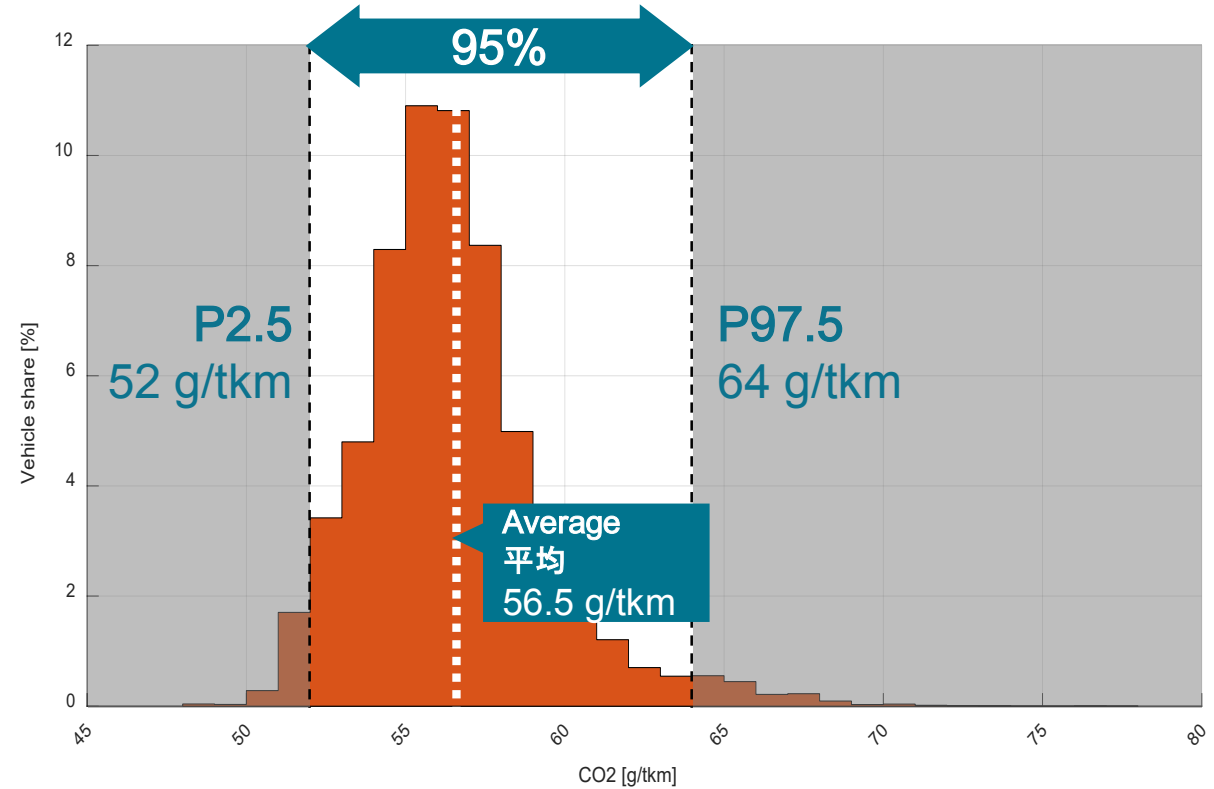
HDV CO₂ EMISSIONS IN EUROPE

欧洲HDV CO₂排放

Annual CO₂ share per subgroup 每个子分组的年度CO₂份额



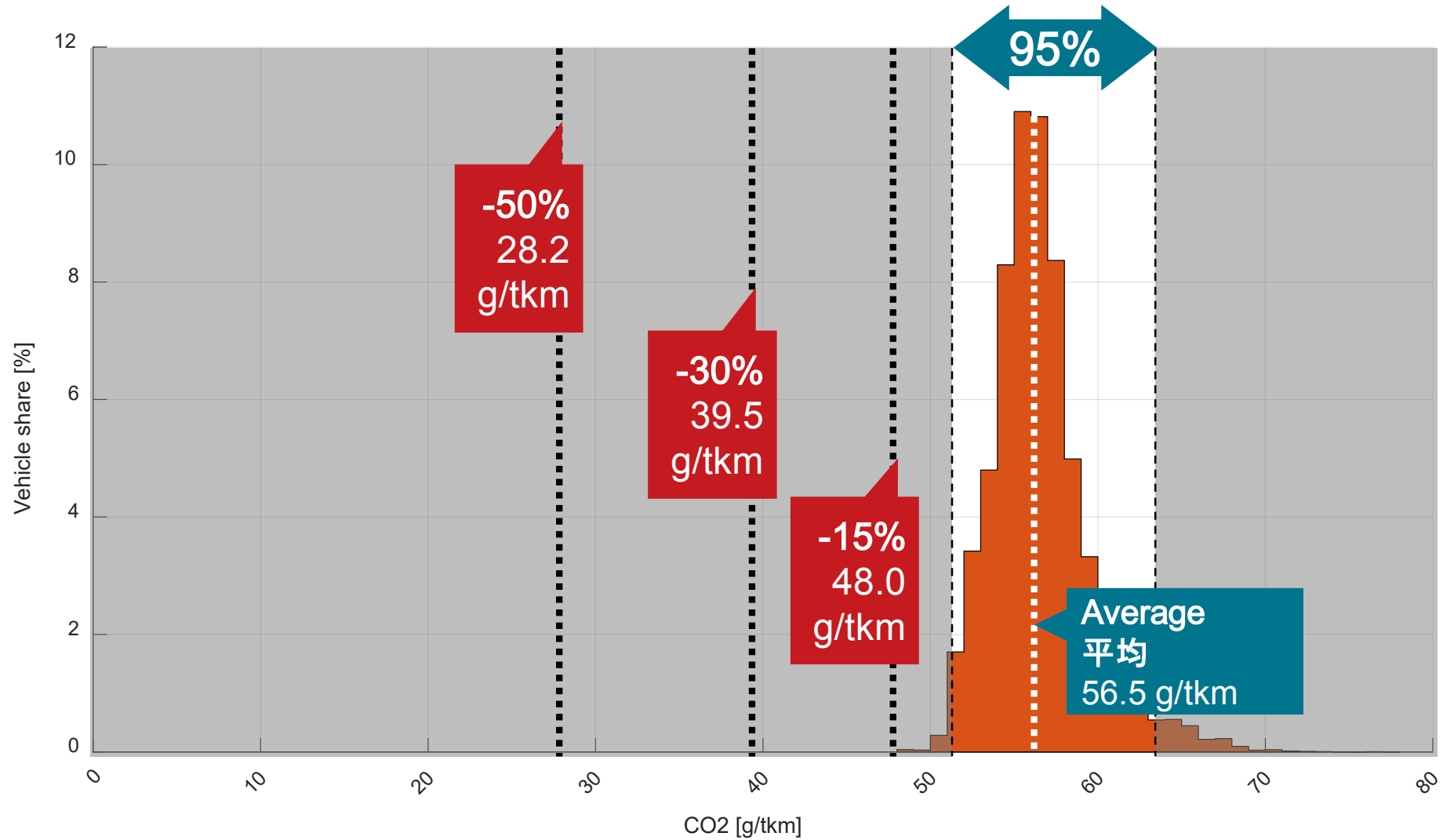
Subgroup 5-LH | 子分组5-LH (62.8% share of sales) (销量的62.8%份额)





SUBGROUP 5-LH

子分组5-LH





POLICY FRAMEWORK | 政策框架

1. **Charging and re-fueling infrastructure suitable for trucks**
适用于卡车的充电和加油基础设施
 - Mandatory targets for member states, incl. enforcement measures
成员国的强制性目标，包括强制性措施
2. **Policy framework which enables and drives the transition**
支持和推动过渡转型的政策框架
 - Carbon-pricing, CO₂-based road charging, fuel taxation, ...
碳定价、基于CO₂的道路收费、燃油税...
3. **Holistic approach to carbon neutrality**
碳中和的整体方法
 - Distinct responsibilities “tank-to-wheel” and “well-to-tank”
“油罐到车轮”和“油井到油罐”的明确责任
 - Policies to reduce GHG intensity of fuels (REDII, FQD)
减少燃料温室气体（GHG）强度的政策（REDII、FQD）
 - Tackle use of vehicles in current fleet
解决现有车队车辆的使用问题

HDV SUITABLE INFRASTRUCTURE | 适用于HDV的基础设施

Minimum requirements | 最低要求

Publicly accessible | 向公众开放



Charging 充电	Currently available 当前可用	2025	2030
DC <100 kW	<10*	4,000 (+20,000**)	50,000 (+200,000**)
DC 350 kW	0	11,000	20,000
DC >500 kW	0	2,000	20,000



H2 (compressed/ liquified) (压缩/液化)	16 (350 bar for buses) (350巴, 用于公共汽车)	at least 50 至少50	at least 500 至少500
--	---	---------------------	-----------------------

CNG	300	400	500
LNG	252	at least 750 至少750	at least 1,500 至少1500

* No detailed information available. | * 没有详细资料

** Depot-charging not publicly accessible. | ** 站场充电无法向公众开放。



European
Automobile
Manufacturers
Association

VECTO – industry perspective
VECTO – 行业视角



VECTO IN EU-INDUSTRY PERSPECTIVE 欧盟VECTO行业视角

- **VECTO and European regulation framework provide solid and comprehensive basis for HDV CO₂ emission determination, certification and regulation**
VECTO和欧洲的法规框架为HDV CO₂排放的测定、认证和监管提供了坚实且全面的基础
- **Robust CO₂ certification framework**
稳健的CO₂认证框架
 - Member state contribution and implementation needs further improvement
成员国的贡献和执行需要进一步改进
- **VECTO scope and coverage should be extended further, e.g.**
应该进一步扩大VECTO的范围和覆盖范围，例如：
 - vehicle categories
车辆分类
 - new powertrain and other advanced technologies
新的动力系统和其他先进技术



NEXT STEPS

后续步骤

- **Dedicated methodology should be considered to allow quick integration of new technologies beyond regular update procedures | 应该考虑使用专门的方法，使新技术能够在常规更新程序之外快速集成**
 - “Fast-track methodology”
“快速方法”
- **VECTO updates could generally be accelerated further | VECTO更新通常可进一步加速**
 - Future development of VECTO test procedures as technical standards, e.g., under CEN or ISO, should be explored
应该探索未来将VECTO测试程序发展成为技术标准的可能性，例如：CEN或ISO
 - **Technical test procedures are well suited to be maintained and developed as technical standards**
技术测试程序非常适合作为技术标准来维护和发展
 - **Faster due to non-political procedure, max 3 - 3,5 year for new CEN-standard**
由于非政治程序，进程会更快，新的CEN标准最快3-3.5年完成
 - **Use the existing framework (procedures, working groups, voting, etc.)**
使用现有框架（程序、工作组、投票等）
 - **Simplify global harmonization of test methods**
简化测试方法的全局协调
 - Stability for long-term management and development of the simulation tool
长期管理的稳定性和仿真模拟工具的开发
 - Streamline development of VECTO-variants in different regions
长期管理的稳定性和仿真模拟工具的开发



FUTURE OF VECTO | VECTO 的未来

International harmonization | 国际协调

- **VECTO as an international standard to**
VECTO作为国际标准
 - Minimize administrative burdens for global commercial vehicle industry
减少全球商用车行业的行政管理负担
 - **E.g. by mutual recognition of input parameter to avoid double testing**
例如：通过相互识别输入参数来避免重复测试
 - Allow direct regulatory comparison of different markets
允许针对不同市场进行直接监管比较
 - Harmonise national/ regional HDV efficiency regulations by:
通过以下方法协调国家/地区的HDV效率法规：
 - **Identifying national/ regional specific vehicle categories**
识别国家/地区的特定车辆类别
 - **Developing duty cycles and payloads representative for the market**
开发具有市场代表性的负载循环和有效负载
 - **Other region-specific parameters should reflect local market applications; e.g. auxiliary load; standard bodies**
其他特定区域的参数应反映当地市场的应用情况；例如：辅助负载、标准机构



European
Automobile
Manufacturers
Association

Conclusions

结论



KEY TAKEAWAY MESSAGES

关键点摘录

- **HDV CO₂ regulations effectively push for fuel efficiency and low-/zero-emission vehicles**
HDV CO₂法规可有效推动燃油效率和低排放/零排放车辆的发展
- **Complementary enabling policy framework still largely missing**
仍然大规模缺少互补的支出政策框架
 - Carbon-pricing to create level playing field between conventional and new powertrain technologies
碳定价将在传统和新型动力系统技术之间创造一个公平的竞争环境
 - Truck-suitable charging and refuelling infrastructure
适用于卡车的充电和加油基础设施
- **International harmonisation should be pursued urgently**
各国应迫切寻求国际协调



European
Automobile
Manufacturers
Association

ACEA represents the 15 major Europe-based
car, van, truck and bus manufacturers

www.acea.be
+32 2 732 55 50
communications@acea.be



twitter.com/ACEA_eu



linkedin.com/company/ACEA



youtube.com/ACEAeu