Beijing, 6th of March 2013 北京, 2013年3月6日

Workshop "Potentials for Low Carbon Transport Development in China – Scenario Analyses and Promising Measures" "中国低碳交通发展潜力 - 情景分析和减排措施"工作讨论会

Policies and measures for freight transport 货运政策与措施









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环境与交通部负责人

Content 内容

- 1. Impact categories of GHG reduction measures for freight transport 货运温室气体减排措施影响范畴
- 2. Exemplary measures in detail 具体示范性措施
- 3. Summary 总结









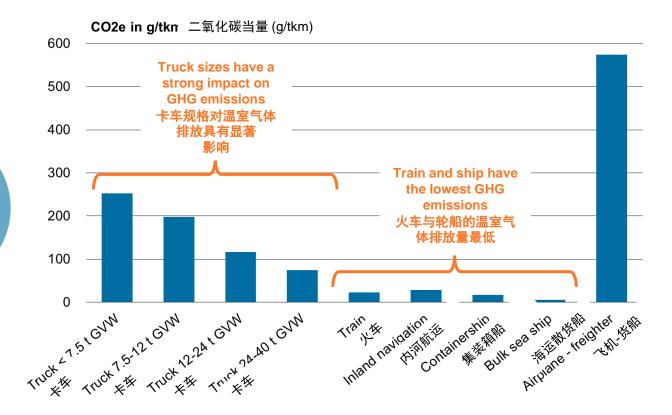
Impact categories 影响范畴

GHG emissions (calculated as CO₂ equivalents) of different freight transport modes in Europe 2010

欧洲 2010 年不同货运模式的温室气体排放情况(以二氧化碳当量 为计算单位)

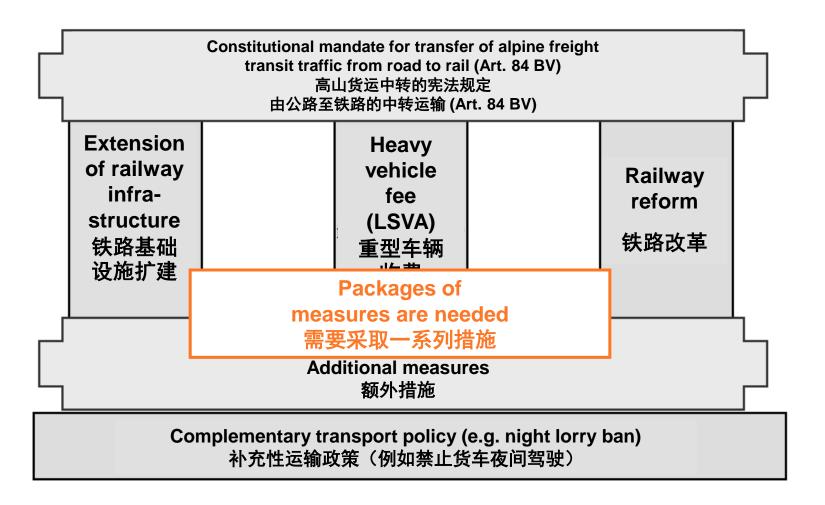
Environmental Impact

环境影响



Measures **Impact** Outcome 措施 影响 成果 Avoid **Market regulations** (reduction of trips and distances) Reduction of and access 避免 市场规则与准入 制度 energy (缩短行程与距离) consumption Regulatory measures (e.g. bans or incentives) - CO₂ and GHG **监管措施**(例如禁止或激励机制) Shift emissions (shifting to environ-mental-friendly - air pollutants Economic measures (e.g. taxes, modes) fees or PPP) 转变 - noise (转变为环境友好模式) **经济手段**(例如征收税费或购买力平 价措施) 以下方面得以降低 **Improve** Extension or new infrastructure (enlargement of 能耗 扩建或新增基础设施 energy efficiency) 二氧化碳与温室气体 改善 Integrated land use (提高能源效率) and transport planning 排放 土地利用与运输总体规划 Fuel - 空气污染 (reduction of CO2 intensity of energy subsidy programme (e.g. R&D, carrier) 噪音 pilot projects) 燃料 **补贴计划**(例如研发、试验项目) (降低能源载体的二氢化碳强度)

Basic elements of the heavy goods transport policy in Switzerland 瑞士重型货物运输政策的基本要素



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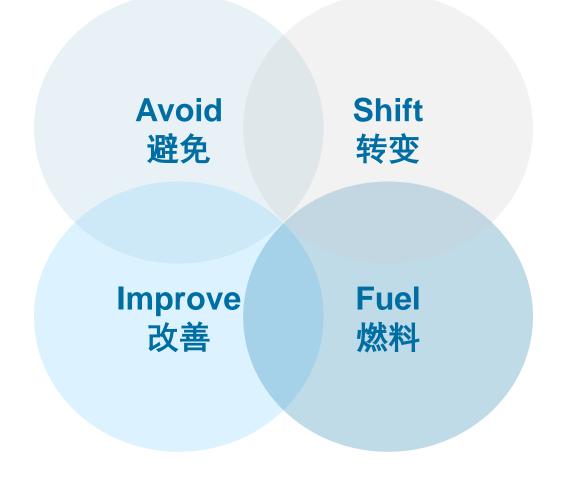








Impact categories of GHG reduction measures for freight transport
货运温室气体减排措施影响范畴



Overview of exemplary measures to avoid GHG emissions of freight transport

避免货运温室气体排放的示范性措施概述

Vehicle dimensions and weights HDV charges for roads/areas 公路/地区的重型车辆收费

Innovative city 车辆规格与重量 logistic concepts

创新性城市 物流概念

Alliances for general cargo 一般货运联盟

Internet-based freight exchanges 互联网运价交易

Avoid

避免

Shift 转换

Improve 改善

Fuel 燃料

资料来源: INFRAS。

Example for avoid: HDV charges

for roads or areas

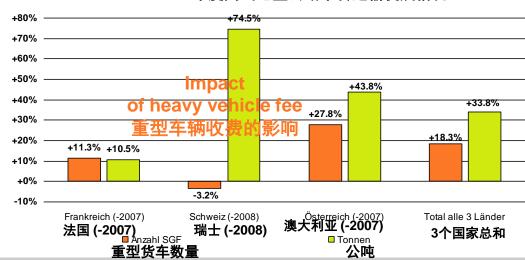
公路或地区的重型车辆收费

Heavy vehicle fee in Switzerland (LSVA) 瑞士重型车辆收费 (LSVA)

- •Fee considers external cost of road transport 收费考虑到公路运输的外部成本
- •Fee is based on km and gross vehicle weight 收费基于公里数和车辆总重

Development of alpine transit freight traffic by road between 1999 and 2008





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Avoid 避免

Example for avoid: Enhancement of vehicle dimensions and weights

避免示例: 优化车辆规格与重量

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Avoid 避免

Double-decker trailer 双层拖车



Double stack container trains 双层集装箱列车



Longer trucks (25 m) 加长卡车 (25 m)



Increase of train length 增大列车长度



Example for avoid: Innovative city

logistic concepts

避免示例: 创新性城市物流概念

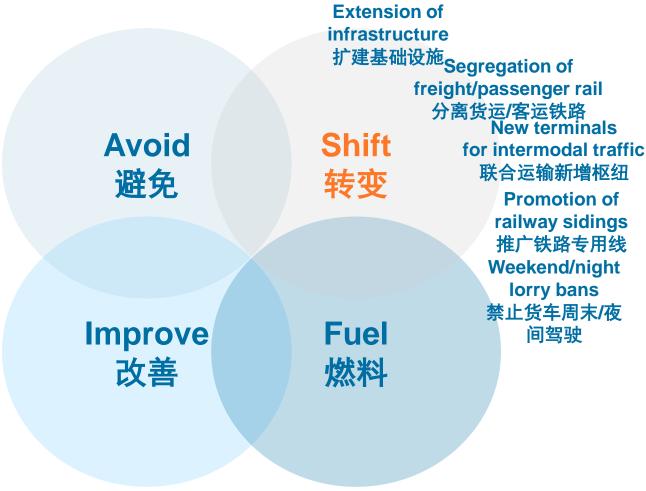
Pilot project in Nuremberg (Germany): Beverage logistics 纽伦堡(德国)试点项目:饮料物流 **Today** 现今 **Direct supply:** Dire $5 \times 8 = 40$ relationships 直接供应: **Future** 8 Customer Trans-5 x 8 = 40 个关系 未来 shipment 8位客户 center **⇒** Bundling effect 转运中心 reduce VKT by 32%! ⇨ 捆绑效应将行车公 X-Dock 里数降低32%! X-码头 Supply via x-Dock: 5 + 8 = 13 relationships 通过X-码头供应: 5+8=13个关系

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Avoid 避免

Measures in detail 具体措施 Overview of different measures to shift freight from road to rail and ship

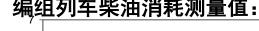
由公路到铁路和轮船的中转运输不同措施概述

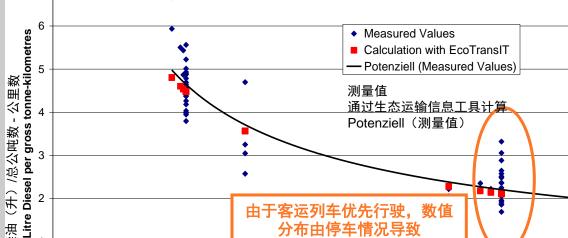


Example for shift: Segregation of freight and passenger railway network

转变示例:分离货运/客运铁路系统

Measured diesel consumption for block train (one relation): 编组列车柴油消耗测量值:





Shift 转变

(升)/总公吨数

無

0

通过生态运输信息工具计算

Potenziell(测量值)

1,000 2,000 3,000 1,500 2,500 Gross tons (weight of freight + weight of train)

Source: Öko-Institut 资料来源:

4,000

3,500

500

总重(货物重量+列车重量)

Example for shift: New terminals and for intermodal traffic and promotion of railway sidings

转变示例:联合运输新增枢纽与推广铁路专用线

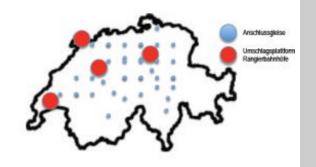
Development of (intermodal) freight distribution centres (GVZ) in Germany

德国(联合运输)货运配送中心 (GVZ) 的发展情况



Development of intermodal terminals (red) and railway siding (blue) in Switzerland

瑞士联合运输新增枢纽(红色)与铁路 专用线(蓝色)的发展情况



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Shift 转变

Exemplary measures to improve energy efficiency and reduce GHG emissions of freight transport 能耗改善以及货运温室气体减排示范性措性

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Avoid Shift 避免 转变

CO₂ targets for vehicles sold 售出车辆的二氧化碳排放目标 Operational measures 运营措施

Obligatory eco-driving

强制性环保驾驶

Labels for low rolling resistance tyres 低滚动阻力轮胎标签

Vehicle taxes 车辆征税 Fuel 燃料

资料来源: INFRAS。

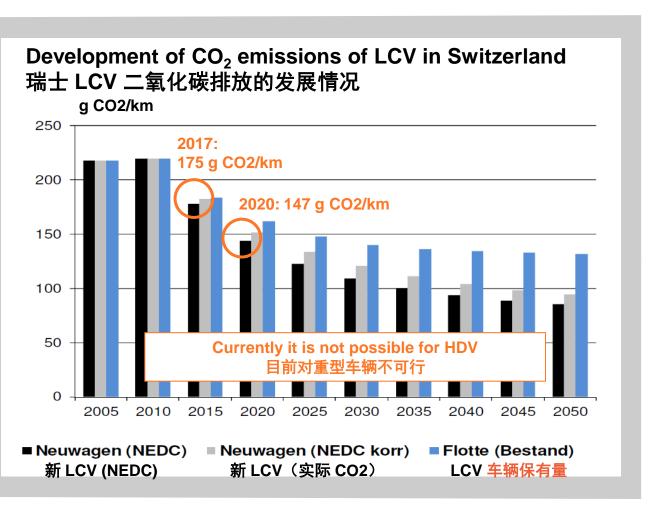
改善

Example for improve: CO₂ emission targets for light commercial vehicles (LCV) newly sold

改善示例: 新售出的轻型商用车 (LCV) 二氧化碳排放目标

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Improve 改善

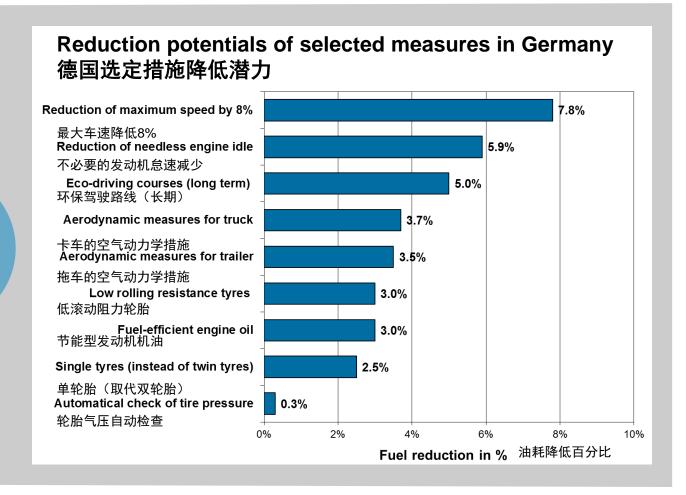


Example for improve: Operational measures by companies (e.g. due to increasing fuel prices)

改善示例:企业运营措施(例如由于燃料价格上升)

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Improve 改进



Exemplary measures to reduce the CO₂ content of fuels

燃料中二氧化碳含量降低的示范性措施

Avoid Shift 避免 转变 CO₂ fuel taxes 二氧化碳燃料税 Sustainable Standards for biofuels **Improve Fuel** 生物燃料可持续 标准 改善 燃料 **Biofuel quotas** 生物燃料配额 Reduced **Alternative** petroleum tax fuelled for alternative vehicles fuels 替代燃料车 石油税降低资料来源: INFRAS。

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Fuel

燃料

Example for fuel: Promotion of alternative fuelled vehicles

燃料示例:推广替代燃料车

Examples of electric vehicles in the freight sector

货运业电动车辆示例

Hybrid truck:

混合动力卡车:



Trolley trucks:

电动卡车:



Battery electric vehicle:





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资料来源: Öko-研究所。

Example for fuel: Reduced petroleum tax for biofuels and biofuel quotas

燃料示例:燃料与生物燃料的石油税降低

Development of sales figures of biodiesel in Germany 德国生物柴油销售数字的发展趋势 Stabilisation by biodiesell quotas 3,5 Removal of 通过生物燃料配额 reduced tax for 保持稳定 2,87 3,0 biodiesel .58 生物柴油税 2,5 降低调整 1,94 E 2,0 1,84 1,5 1,42 1.08 1,0 0,5 0,29 0,24 0,06 0.0 2006 2007 2008 2009 2010 2011 ■ Beimischung ■■ B100 --- Gesamtabsatz 混合 总计

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Fuel 燃料

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Summary 总结

Overview of selected measures to avoid and reduce GHG emissions of freight transport

货运温室气体避免与减排选定措施概述

货运政策与措施 | 2013 年 3 月 6 日 | Martin Schmied | 第23页

Extension of Vehicle dimensions infrastructure and weights **HDV** charges 扩建基础设施 Segregation of for roads/areas 车辆规格与重量 freight/passenger rail 公路/地区的重型车辆收费 分离货运/客运铁路 **Innovative city** logistic concepts **New terminals** Shift **Avoid** 创新性城市物流概念 for intermodal traffic Alliances for 联合运输新增枢纽 避免 转变 general cargo Weekend/night 一般货运联盟 **lorry** bans Internet-based 禁止货车周末/夜间 freight exchanges 驾驶 互联网运价 CO₂ fuel CO2 targets for taxes vehicle sold 二氧化碳燃料 售出车辆的二氧化碳排放目标 **Fuel** 税 **Improve Operational Sustainable Standards** measures 燃料 改善 forbiofuels 运营措施 生物燃料可持续性标准 **Obligatory Biofuel quotas** eco-driving Vehicle 生物燃料配额 强制性环保驾驶 **Alternative** taxes Labels for low rolling resistance **fuelled** Reduced 车辆征税 tyres vehicles petroleum tax 低滚动阻力轮胎标签 替代燃料车 for alternative fuels 石油税降低 Policies and measures for freight transport | 6th of March 2013 | Martin Schmied | Page 23

资料来源: INFRAS。

Summary 总结

Measures to avoid or reduce GHG emissions in the freight transport sector: conclusions

货运业温室气体避免与减排措施: 结论

In Europe government and cities can only indirectly influence the environmental impacts of freight transport by measures
 在欧洲,政府与市政机构只能通过相应措施对货运环境影响施加间接影响

 In principle, a comprehensive set of measures are available for low carbon freight transport

原则上,有一系列低碳货运综合措施可供选用

- The most crucial point is to find the optimal package of measures to ensure the best impact:
 - combination of measures
 - · intenseness of measures

最关键的是寻找优化的配套措施,确保产生最佳影响:

- 措施组合
- 措施强度
- Quantification of the assessment of the GHG emission reduction measures is partially demanding (e.g. for infrastructure measures or logistic concepts) 对温室气体减排措施评估量化有部分要求(例如基础设施措施或物流概念)
- Companies play an important role for green solutions 企业对绿色解决方案起到重要作用



感谢您的关注

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