

The U.S. Clean Air Act and Mobile Source Programs

美国清洁空气法案和机动源管理项目

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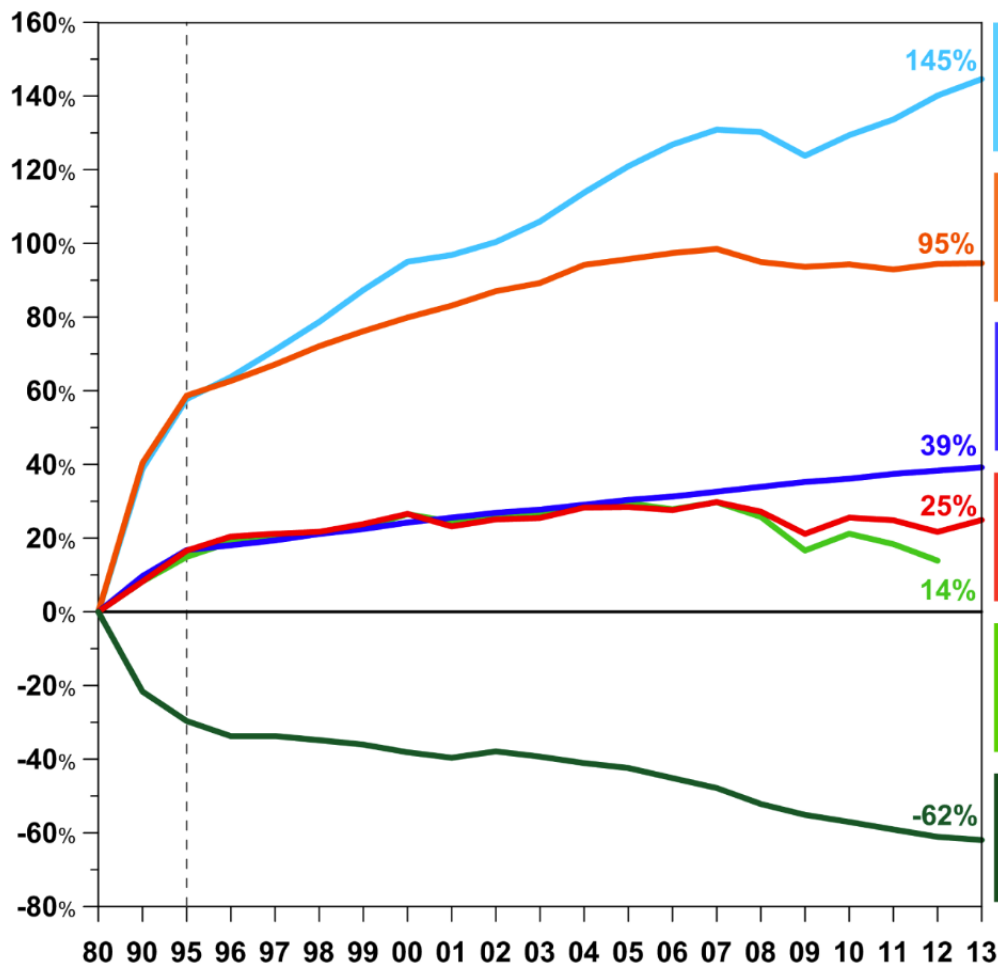
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Clean Air Act Progress

清洁空气法案的发展历程



Gross Domestic Product
国内生产总值



Vehicle Miles Traveled
车辆行驶里程



Population
人口



Energy Consumption
能源消耗量

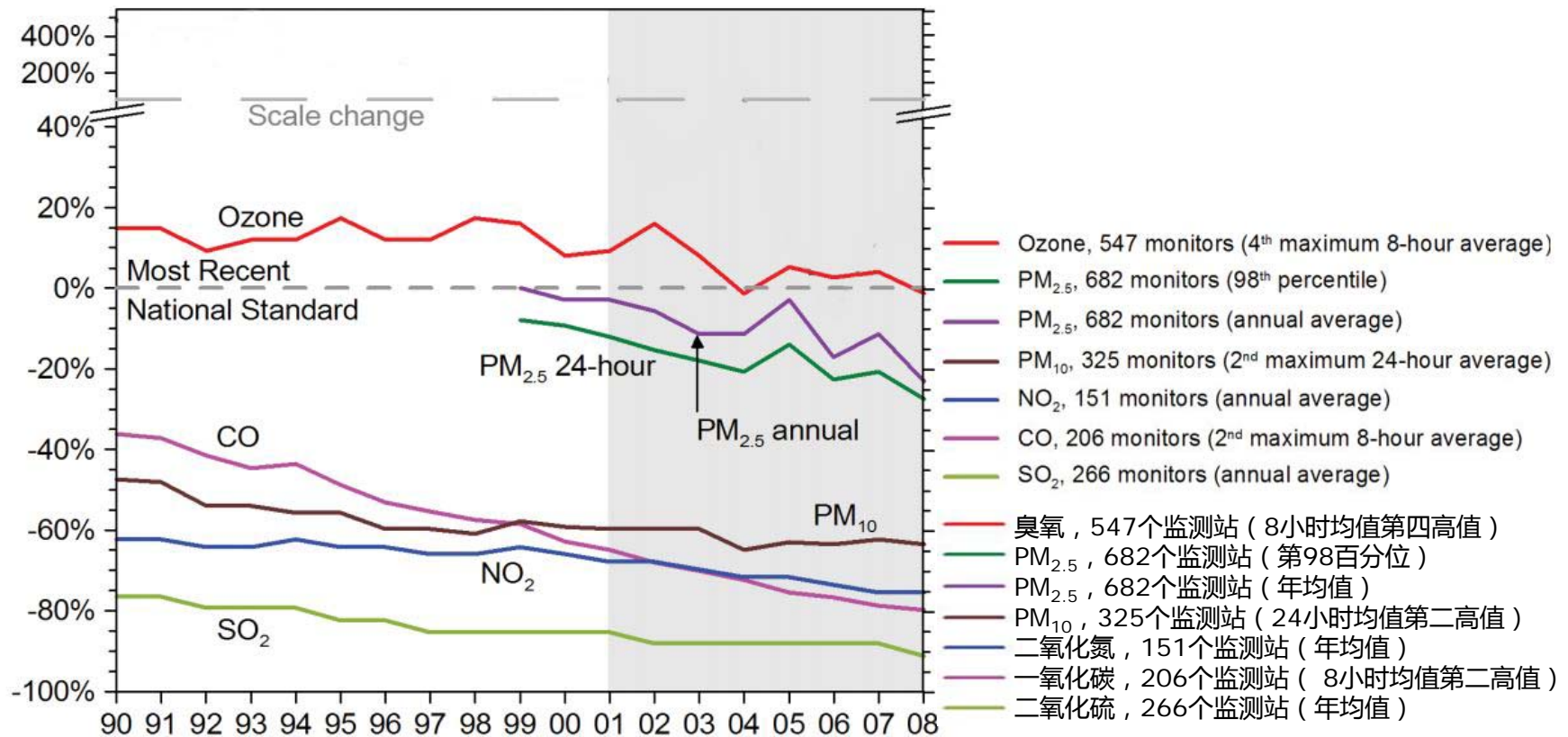


CO₂ Emissions
二氧化碳排放量



综合排放量
Aggregate Emissions
(Six Common Pollutants)
六种常见污染物

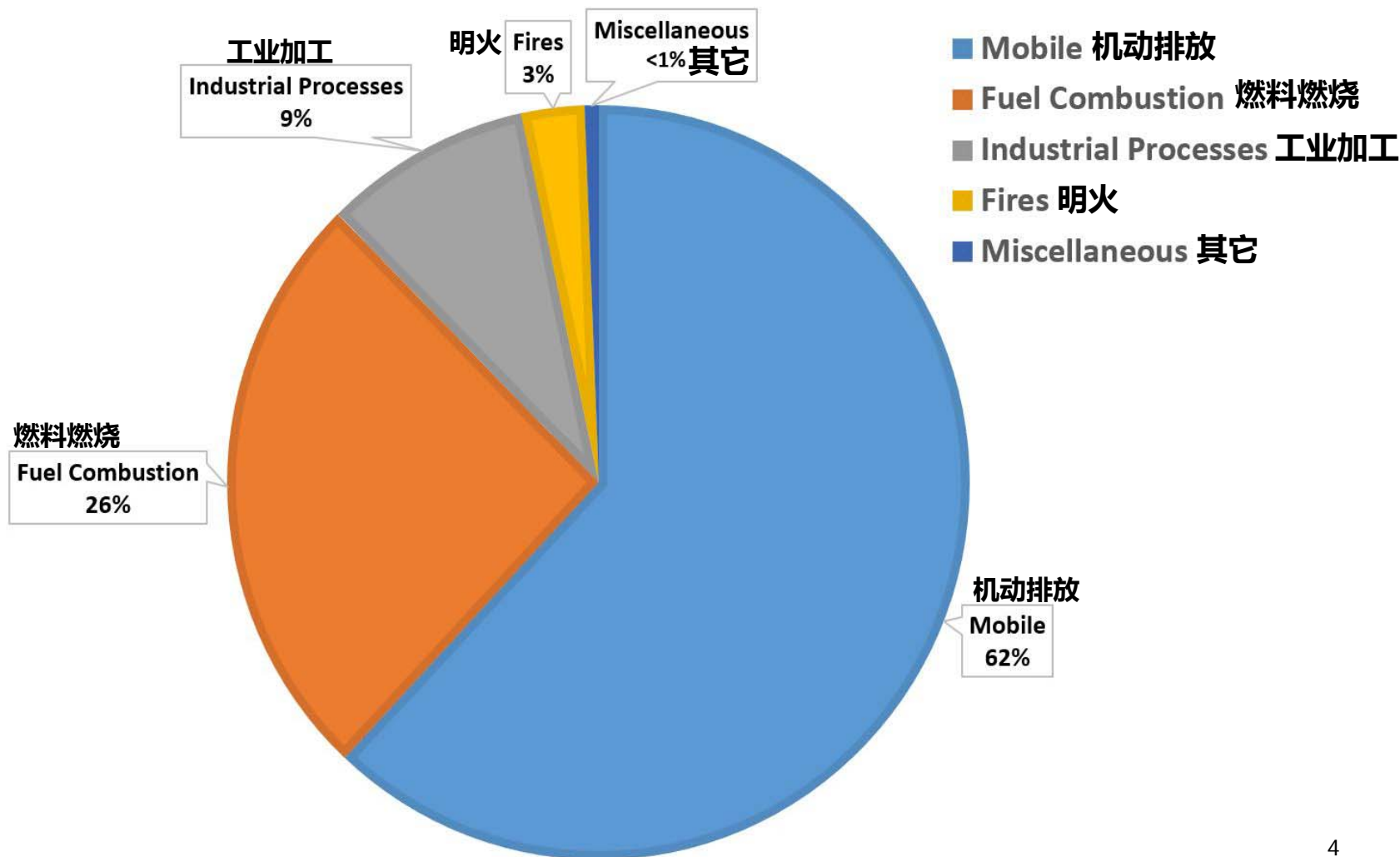
Comparison of Criteria Pollutant Levels to Air Quality Standards (1990-2008) 主要污染物水平与空气质量标准的比较 (1990-2008)





U.S. NO_x Emissions by Sector

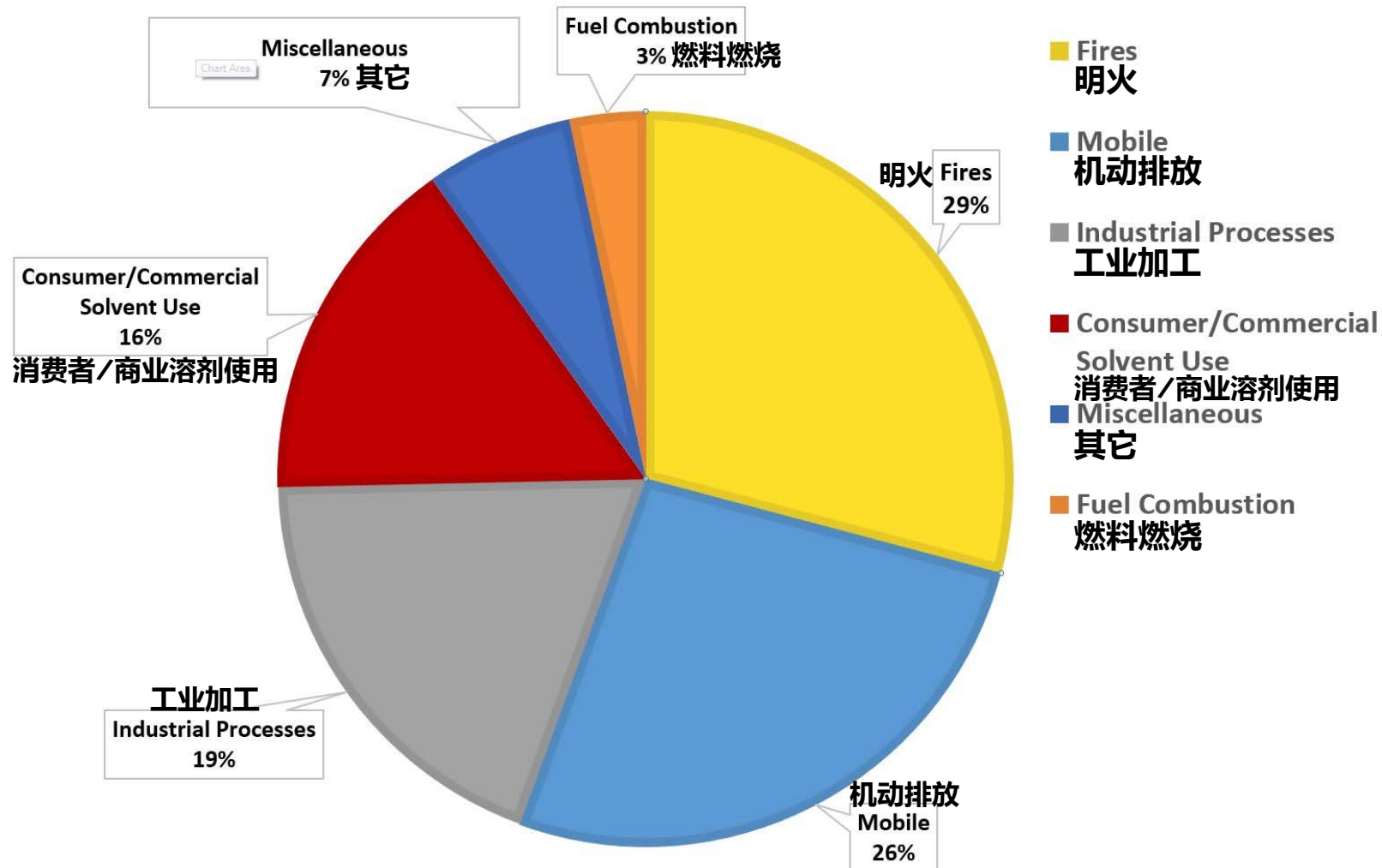
美国氮氧化物排放来源





U.S. Hydrocarbons Emissions by Sector

美国碳氢化合物排放来源





Mobile Source Clean Air Rules

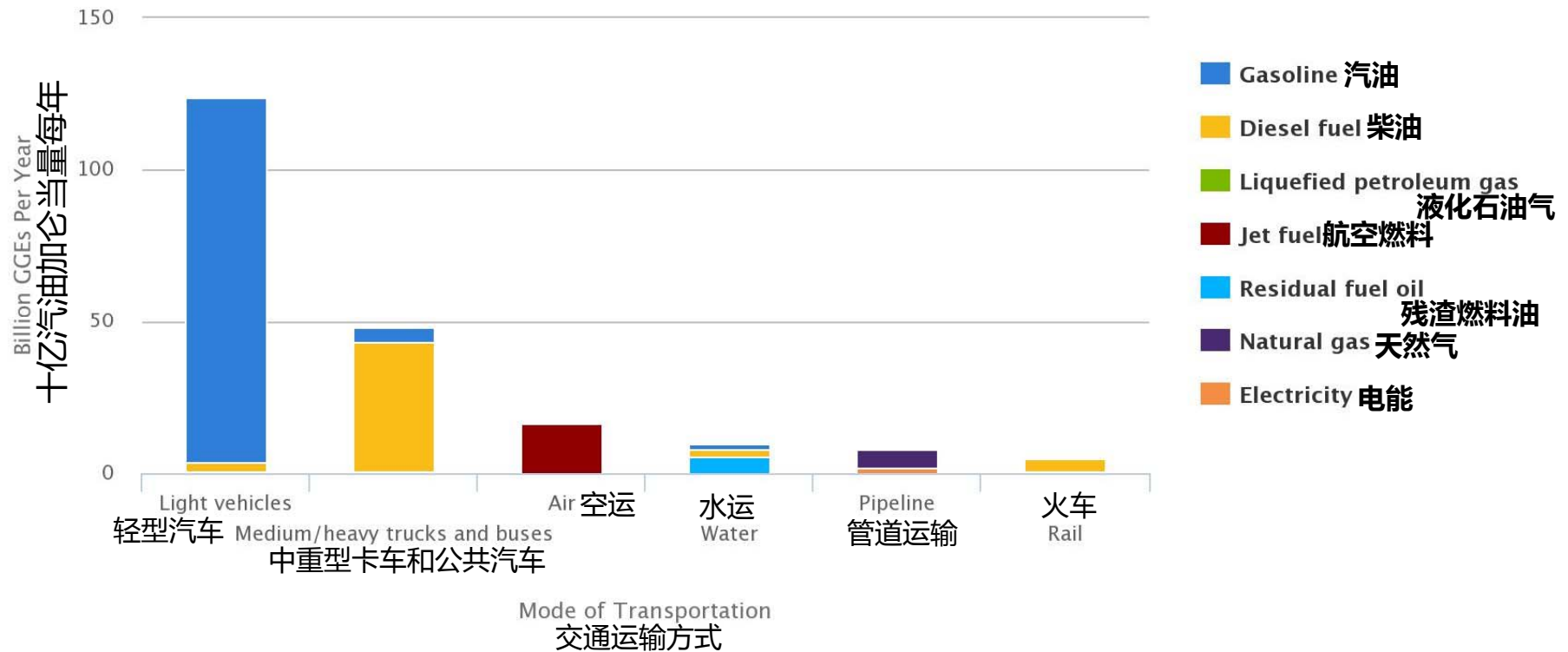
移动源清洁空气条例

- Clean Cars and Passenger Trucks –Tier 3
清洁小客车和大客车 – Tier 3标准
- Clean Heavy-Duty Trucks and Buses
清洁重型卡车和公共汽车
- Mobile Source Air Toxics Rule
移动源空气有毒物条例
- Clean Non-road Diesel Engines and Equipment
清洁非道路用柴油发动机和设备
- Locomotive and Marine Diesel Standards
铁路船运柴油标准
- Ocean-going Vessels
远洋船只
- Small Gasoline and Recreational Marine Standards
小型汽艇和游船标准
- Ultra-low Sulfur Fuel Requirements
超低硫燃料管理办法
- Renewable Fuel Standards
可再生燃料标准



Transportation Energy Use by Mode and Fuel Type

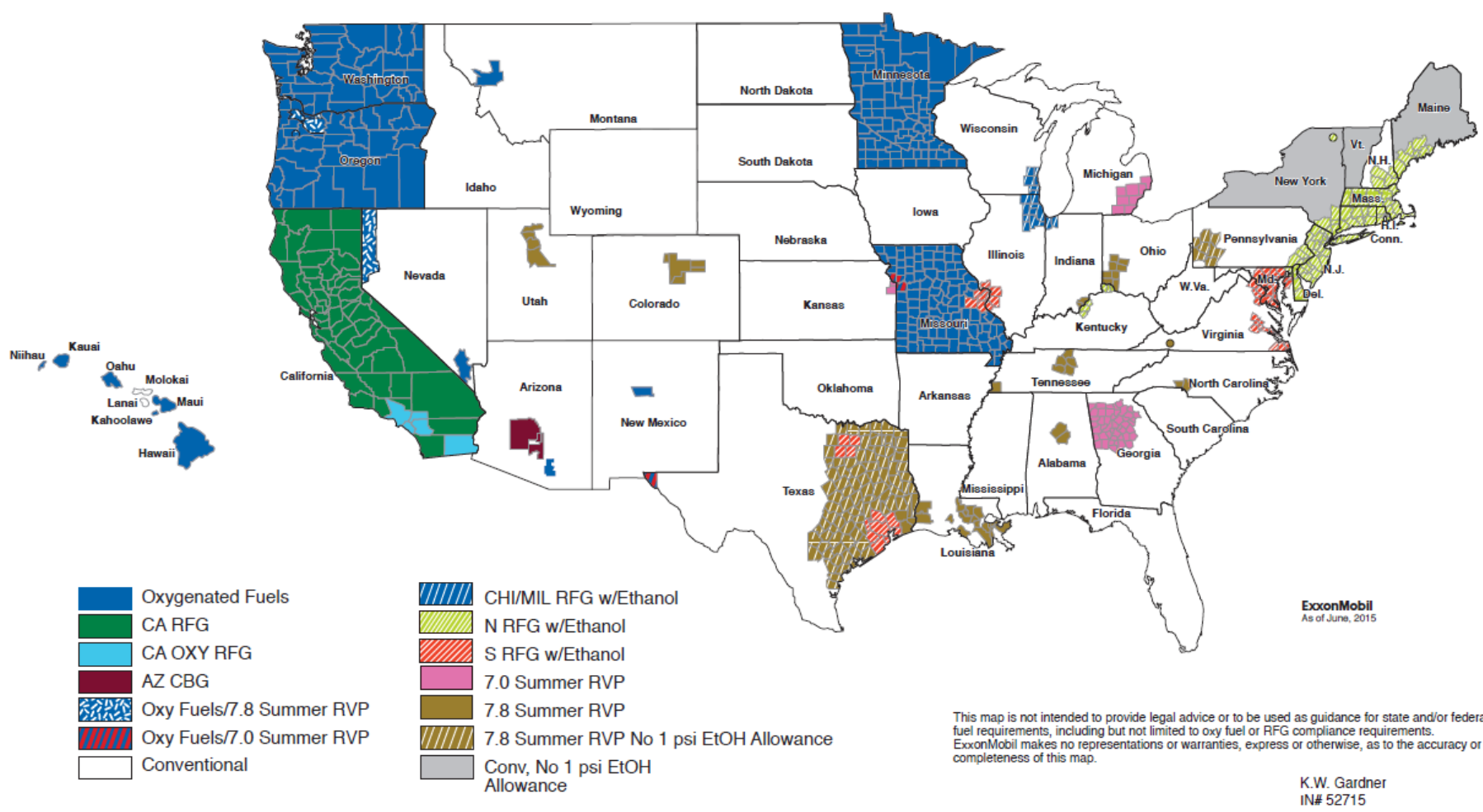
交通能源消耗量--按燃料种类和运输方式划分





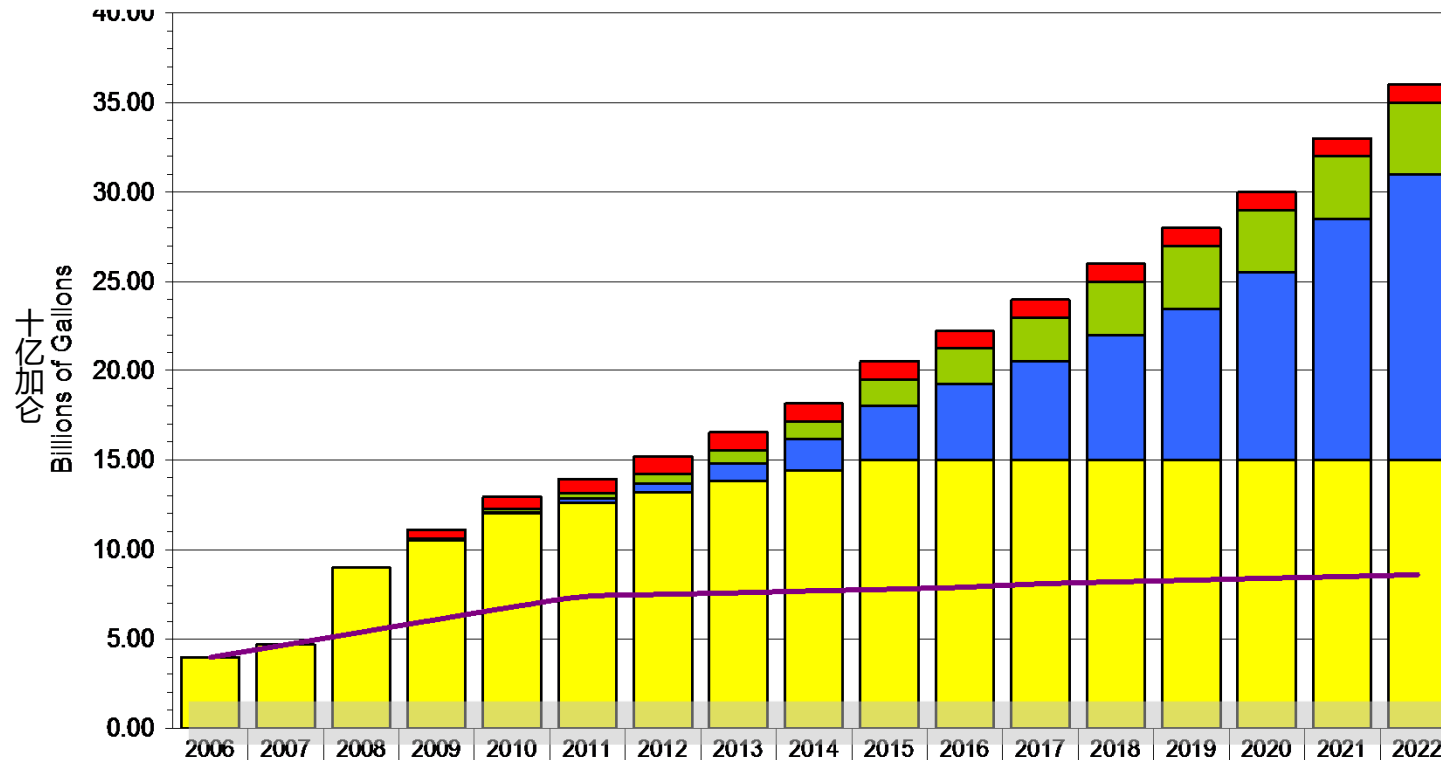
美国的汽油燃料规定

U.S. Gasoline Requirements



Renewable Fuel Standard (RFS), 2007-2022

可再生燃料标准法 (RFS) 2007-2022



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Biomass-based Diesel 生物柴油				0.50	0.65	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Balance of Advanced 其余的先进生物燃料				0.10	0.20	0.30	0.50	0.75	1.00	1.50	2.00	2.50	3.00	3.50	3.50	3.50	4.00
Cellosic Advanced 先进纤维素生物燃料					0.10	0.25	0.50	1.00	1.75	3.00	4.25	5.50	7.00	8.50	10.50	13.50	16.00
传统生物燃料 Conventional Biofuels	4.00	4.70	9.00	10.50	12.00	12.60	13.20	13.80	14.40	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Current RFS 现有RFS	4.00	4.70	5.40	6.10	6.80	7.40	7.50	7.60	7.70	7.80	7.90	8.10	8.20	8.30	8.40	8.50	8.60

PL 109-58

Source: DOE/NREL





Summary 总结

- The Clean Air Act has been successful in dramatically reducing air pollution in the United States.
美国的清洁空气法案成绩卓越，大幅降低了美国的空气污染。
- Reduction in pollution from all types of motor vehicles has been critical to meeting air quality goals.
各种机动车污染的减少对空气质量达标起到了关键性作用。
- Regulation of motor vehicle fuels at the national level, combined with local fuel requirements, has brought many areas to within health-based air quality standards.
美国全境范围内机动车燃料的管理，与各地区的燃料规章制度相结合，使很多地区的空气质量水平达到了健康标准。
- Use of oxygenates in fuels, primarily ethanol, has been an important component of fuels programs in the U.S.
燃料中增氧剂的使用，以燃料乙醇为主，是美国燃料管理项目的重要组成部分。
- Ethanol will play a very strong role in national fuels programs in the future, including efforts to address GHG emissions.
燃料乙醇将成为美国燃料管理项目中一个非常重要的内容，其中包括应对温室气体排放方面的工作。