International Energy Agency

The Electric Vehicles Initiative: International collaboration for electric mobility

Marine Gorner, International Energy Agency

Guangzhou, 15 November 2019

ELECTRIC VEHICLES INITIATIVE

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

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The Clean Energy Ministerial Electric Vehicles Initiative

ELECTRIC VEHICLES INITIATIVE
AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

Members (2018-19)

(Co-lead) (Co-lead)



Coordinator IEA

Activities

Analytical publications



Commitments

- EV30@30 Campaign (2017)
- Paris Declaration on Electro-Mobility and Climate Change (COP 21)
- Government Fleet Declaration (COP 22)

Collaborative projects

- Global EV Pilot City Programme

EV Pilot City Programme

- Global electric mobility project for emerging economies (with UNEP and the GEF)

UN environment gef IEA

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EV30@30 Campaign – reaching 30% EV market share by 2030

ELECTRIC VEHICLES INITIATIVE

Supporting Governments

Supporting companies

Supporting organisations





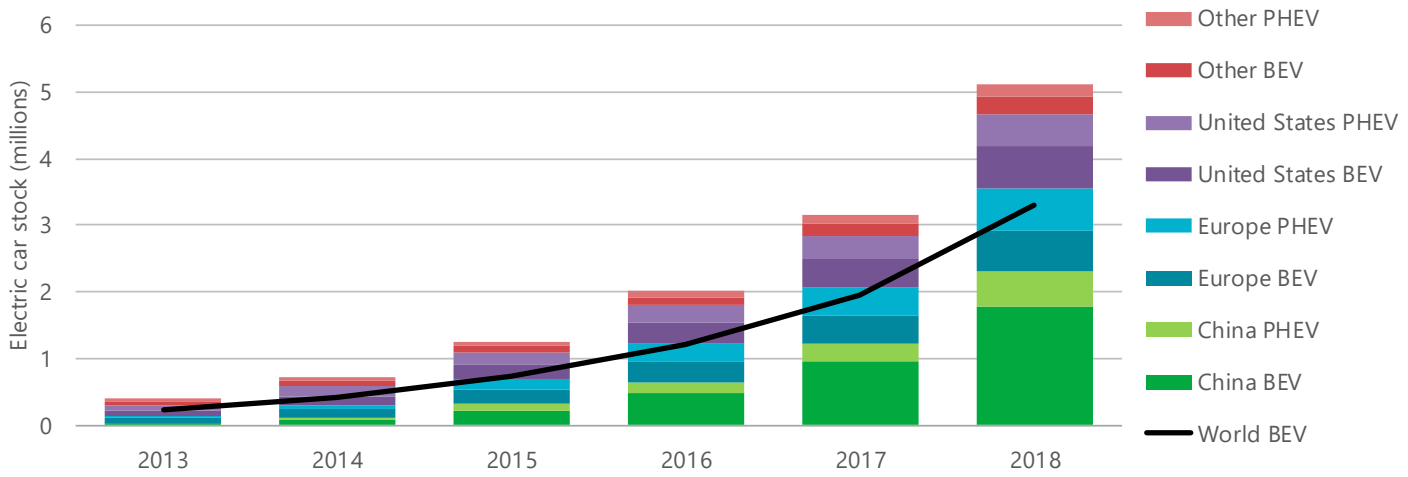
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The number of electric cars on the road continues to grow
电动汽车数量持续增长



webstore.iea.org/global-ev-outlook-2019

Global electric car stock, 2013-2018 全球电动汽车存量，2013-2018年



There were 5.1 million electric passenger cars on the road worldwide by the end of 2018, of which 45% were in China.
截至2018年底，全球共有510万辆电动乘用车，其中45%在中国。

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Electric mobility is not limited to cars and China is leading
电力交通并不局限于汽车，而中国是领航者





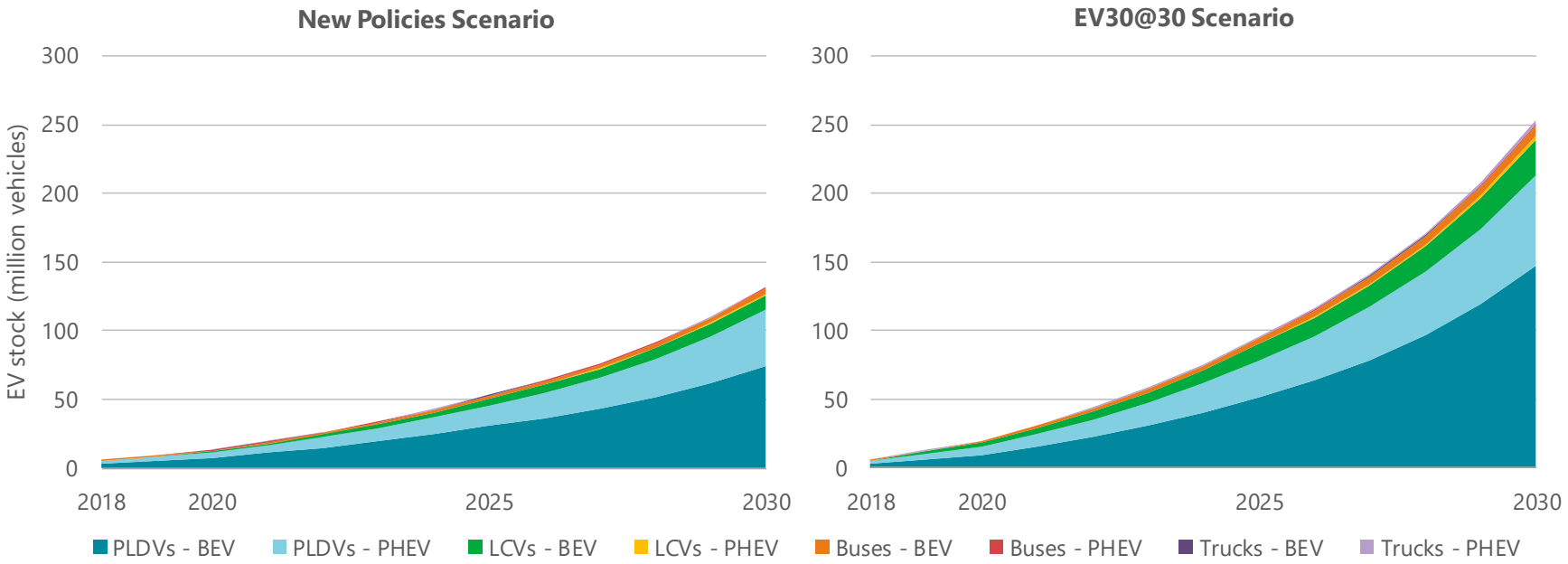
By 2030, there will be 2-4 times more electric 2-wheelers on the road than electric cars and over 8 million electric buses and minibuses. **到**2030**年**，电动两轮车的数量将是电动汽车的2-4**倍**，电动巴士和小型巴士将**超**过800**万**辆。

The Chinese industry is leading today in electric 2-wheelers and electric bus deployment.
目前，**中国在**电动两轮车和电动巴**士普及方面**处于领先地位。

Electric 2-wheelers in China are cost-effective already today. Electric buses as well on a TCO basis.
如今中国的电动两轮车已具成本效益，电动巴士在总体持有成本方面亦然。

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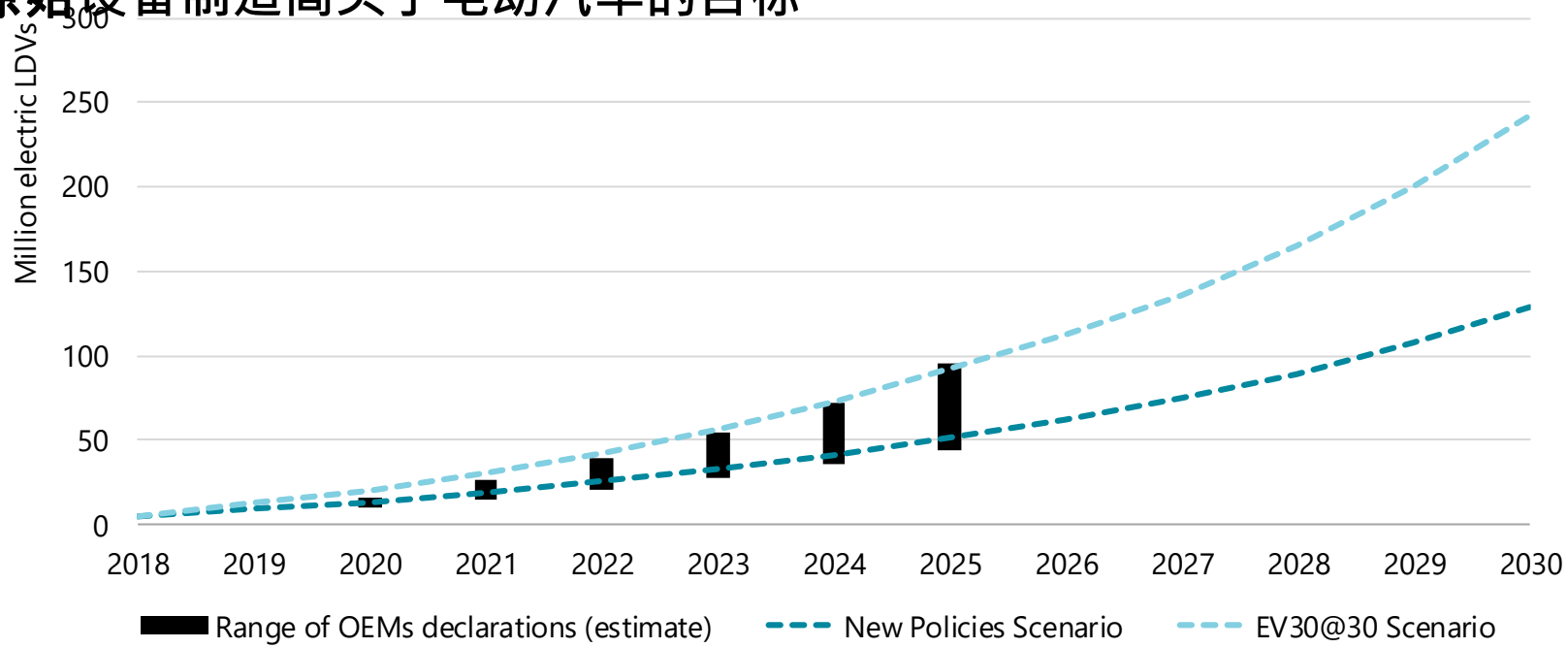
Future global EV stock under the NPS and the EV30@30 scenario
新政策情景与EV30@30情景下的未来全球电动车存量



In 2030, the global EV stock exceeds 130 million vehicles in the New Policies Scenario (excluding two- and three-wheelers). In the EV30@30 Scenario, the EV stock reaches over 250 million by 2030.
2030年，新政策情景下全球电动车存量将超过1.3亿辆(不包括两轮和三轮车)；在EV30@30情景下，电动汽车存量将超过2.5亿辆。

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Industry announces scale-ups – OEM targets
原始设备制造商关于电动汽车的目标

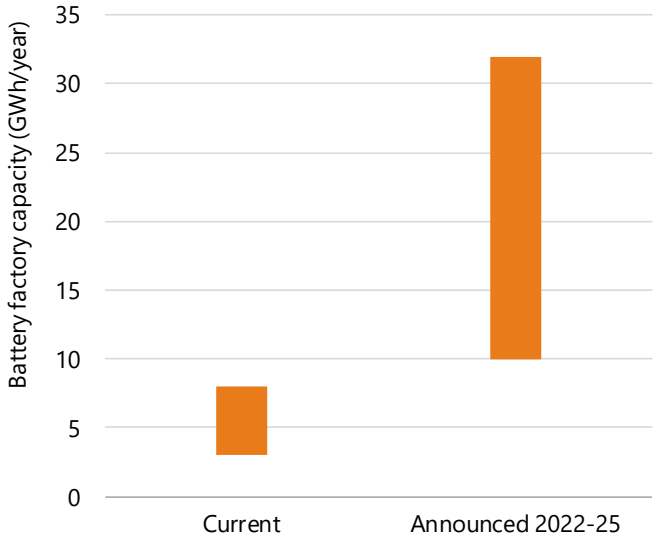


The OEM commitments will need to be followed through to put transport on a sustainable path.
原始设备制造商需要将承诺贯彻到底，**以使交通运**输走上可持续发展的道路。

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Industry announces scale-ups - EV battery capacity
扩大电动车电池容量-行业宣布将扩大规模

Range of battery manufacturing facility sizes, current and announced
电池制造规模范围，目前情况与已宣布的政策目标



Eight plants with a capacity of more than 20 GWh/year are expected to be in production by 2023.
Cars are the main driver of growing demand for batteries in the EV market by 2030.
预计到2023年，8个容量超过20吉瓦时/年的工厂将投产。到2030年，汽车将成为电动车市场上不断增长的电池需求的主要推动力。

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A broad portfolio of supporting policies 配套政策

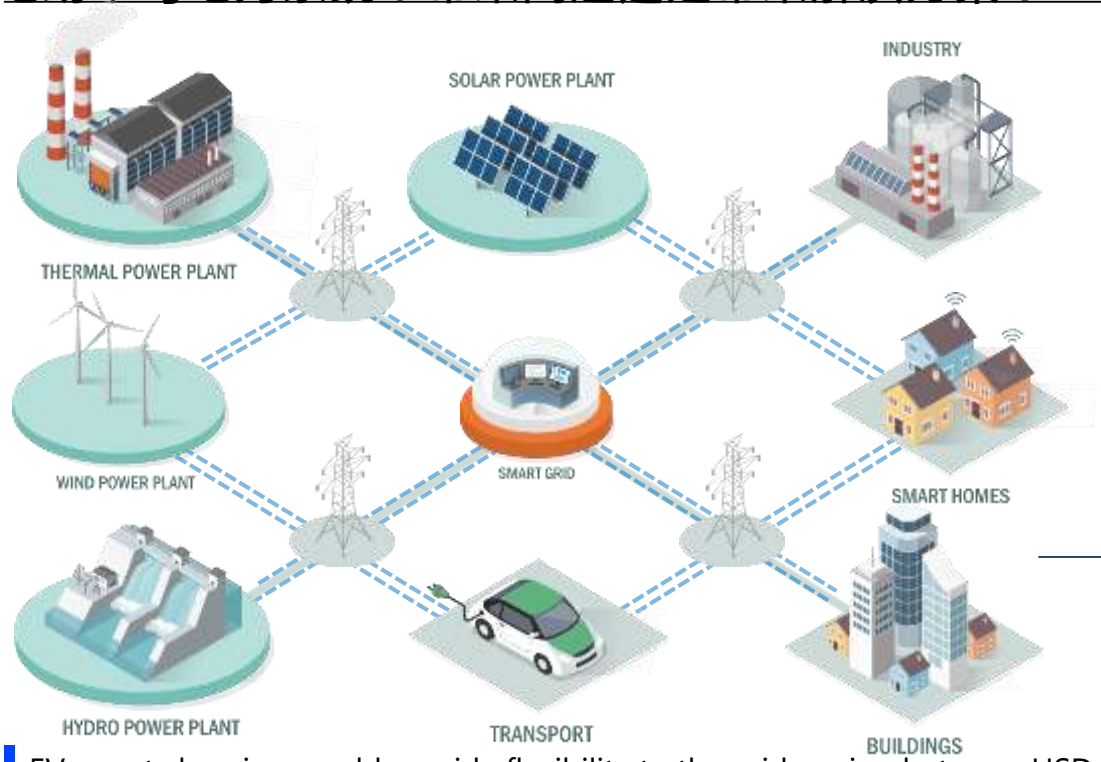
		Canada	China	European Union	India	Japan	United States
Incentives (vehicles)	Fiscal incentives	✓	✓	✓	✓	✓	✓
Regulations (vehicles)	**Fuel economy standards**	✓	✓	✓	✓	✓	✓
	ZEV mandate	✓	✓				✓
Industrial policies	**Subsidy**	✓	✓			✓	

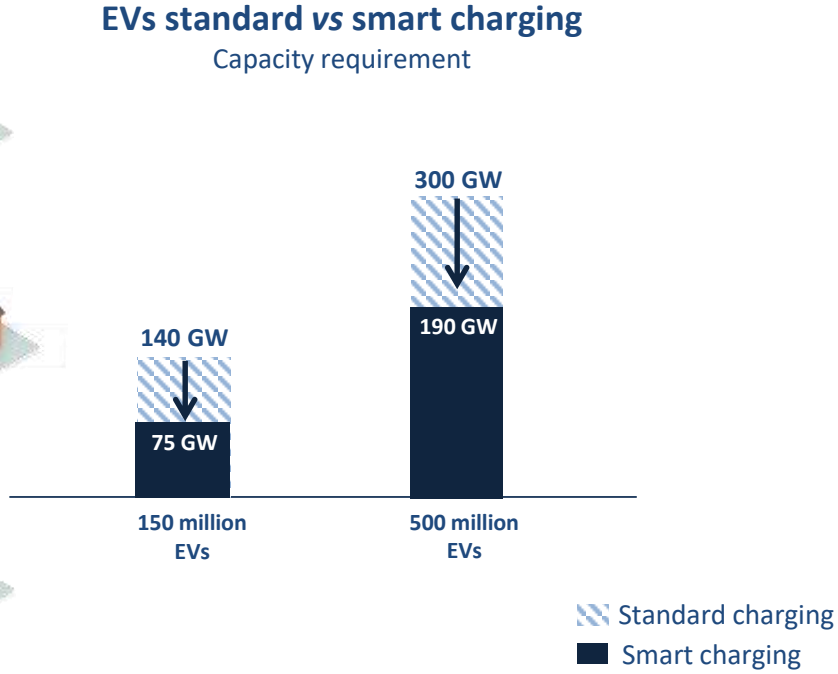
Policies have been a major driver of electric mobility deployment triggering industry ambition and supporting cost reductions.

政策一向是推广电动车的主要驱动力，**催**发了行业积极性与雄心，**并促**进成本降低。

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EVs and the power system: part of the problem or part of the solution?
电动车与电力系统：带来问题还是带来解决方案？





EV smart charging would provide flexibility to the grid, saving between USD 100-280 billion investment in new electricity infrastructure.

电动车智能充电将为电网增加灵活性，**在新的**电力基础设施上节省1000**至**2800亿美元投资。

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Policies favouring the transition to electric mobility



CARBON PRICING OF FUELS



PUBLIC PROCUREMENT



BRIDGING THE PRICE GAP



FUEL ECONOMY STANDARDS



LOCAL ACCESS REGULATIONS



ROAD PRICING



PRIVATE & PUBLIC EVSE ROLLOUT



DEMAND-DRIVEN & BUSINESS-DRIVEN EVSE



SUCCESSFUL GRID INTEGRATION



MATERIAL DEMAND MANAGEMENT



SECOND LIFE, END-OF-LIFE AND RECYCLING

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Charging regimes of selected urban electric bus operations

City	Number of vehicles	OEM	Charging regime
Santiago de Chile, Chile	100	BYD	Overnight depot charging with 100 chargers.
Santiago de Chile, Chile	100	Yutong	Charging at terminal.
Indore, India	40	Tata Motor Limited	2 chargers along route.
Kolkata, India	40	Tata Motor Limited	40 chargers.
Leiden, Netherlands	23	Volvo	Charging at terminal.
Nottingham	45	Optare	Charging at terminal and depot.
Paris	23	Bluebus	Overnight depot charging.
Schiphol Airport, Netherlands	100	VDL	Charging at terminal (450 kW) and overnight depot charging (30 kW).
Shenzhen, China	>16 000	BYD, Nanjing Golden Dragon	Mostly overnight depot charging.

A variety of charging bus regimes exist in different cities.

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EVI > EV30@30 > Global EV Pilot City Programme (PCP)

Goal: Achieve 100 EV-Friendly Cities over five years



- Support greater **dialogue** with and provide **support** to municipal governments
- Identify **good practices** and facilitate their **replication** and improvement
- Annual **Pilot City Forum** (Helsinki 2018, Guangzhou 2019)
- **Monitor and report** progress : data and information sharing among PCP members
- Joint Secretariat: iea 安亭·上海国际汽车城 Anting Shanghai International Automobile City

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EVI Global EV Pilot City Programme



www.iea.org/topics/transport/evi/pcp/

The EVI's city network now includes 40 member cities across five continents.

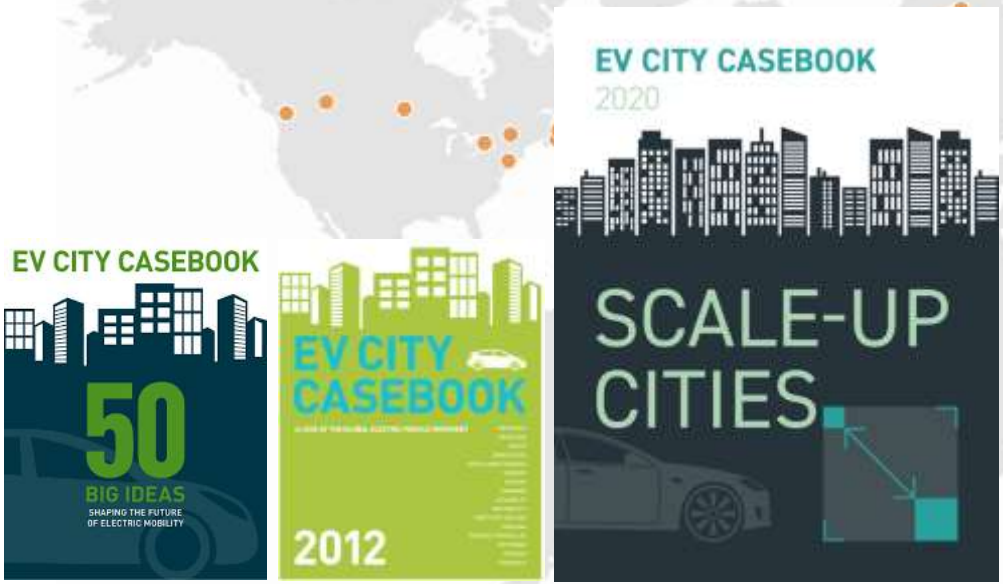
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EVI Global EV Pilot City Programme





EV Pilot City Programme



SMC

www.iea.org/topics/transport/evi/pcp/

Pilot City Forums, webinars, EV City Casebook provide platforms for content learning and exchange.

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Welcome to the 2nd EVI Global EV Pilot City Forum

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