

Developing Low-Carbon Fuels and Vehicle Efficiency Policies and Standards in China



COP16 UNFCCC Conference
Cancun, Mexico

9 Dec 2010, 15:00-16:30

iCET Side Event

Low-carbon development in China: Clean technologies and GHG accounting

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The Innovation Center for
Energy and Transportation (iCET)



Outline

- Introduction to iCET
- Fuel Economy Policy Development
- Low Carbon Fuel Standards and Policies
- Green Car Rating and Consumer Outreach
- Electric Vehicle Research
- US-China Sub-national Collaboration

Overview of iCET Programs

➤ Low Carbon Transportation

- Low Carbon Fuel Standards and Policies
- Fuel Economy Standards and Policies for China
- Green Car Online Rating
- Electric Vehicle Research



➤ Climate Change Program

- Energy and Climate Registry (ECR) in China
- COP15 & COP 16 participation



中国能效与碳注册
ENERGY AND CLIMATE REGISTRY



➤ US-China Collaboration on Clean Energy

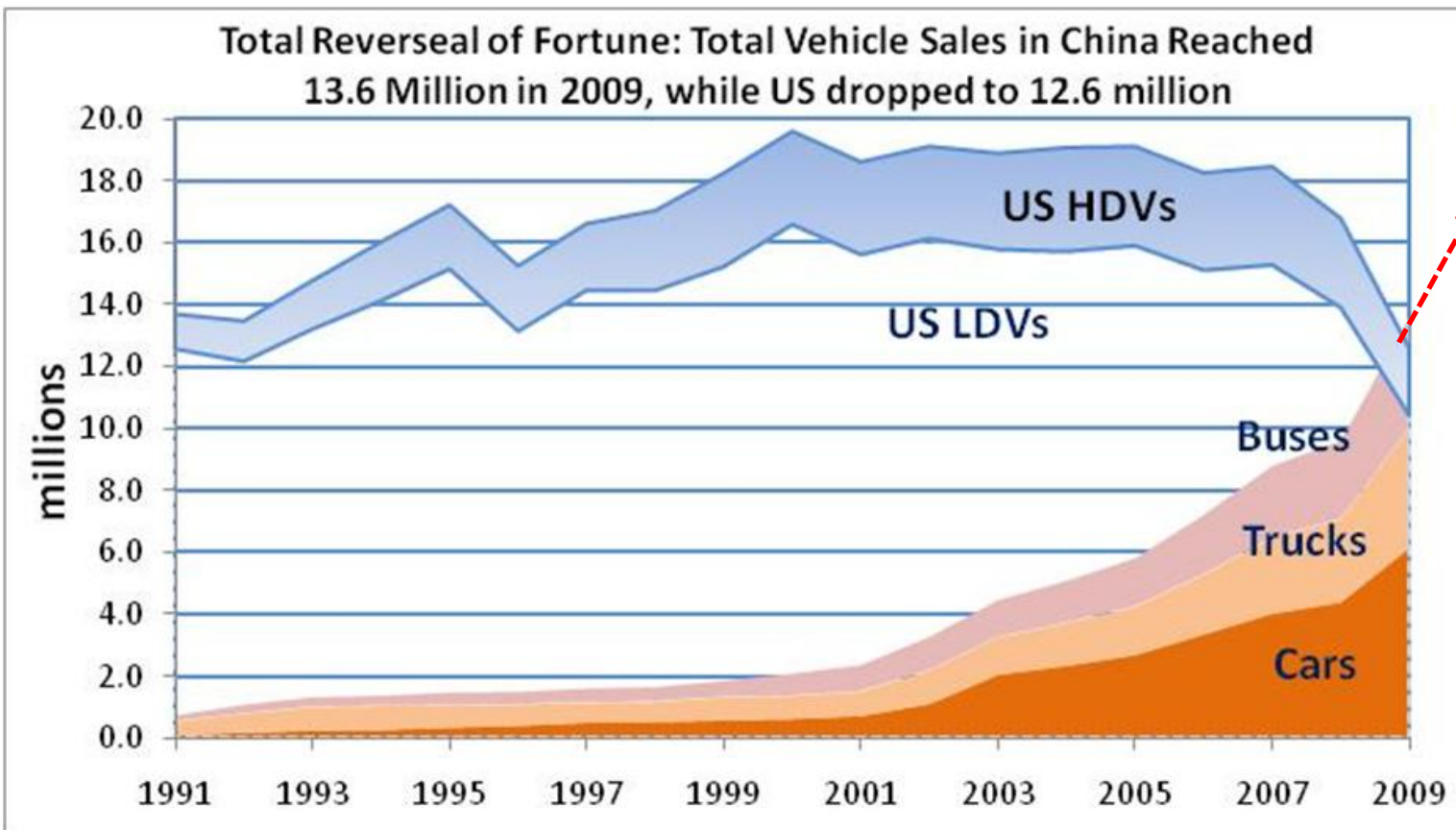
- Sub-National Collaborations
- LED lighting standards and related policies

➤ Conferences and Outreach



Background

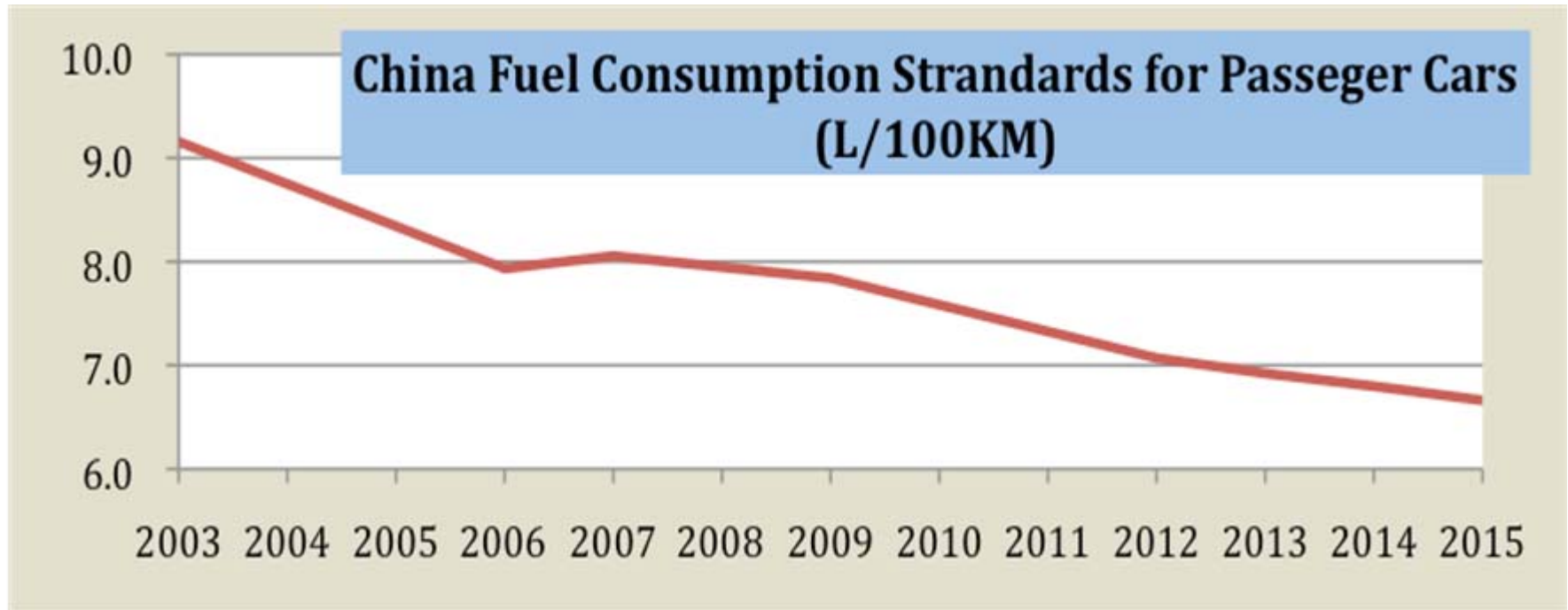
China's Stunning Path to Claim the Number One Status of the Global Auto Market



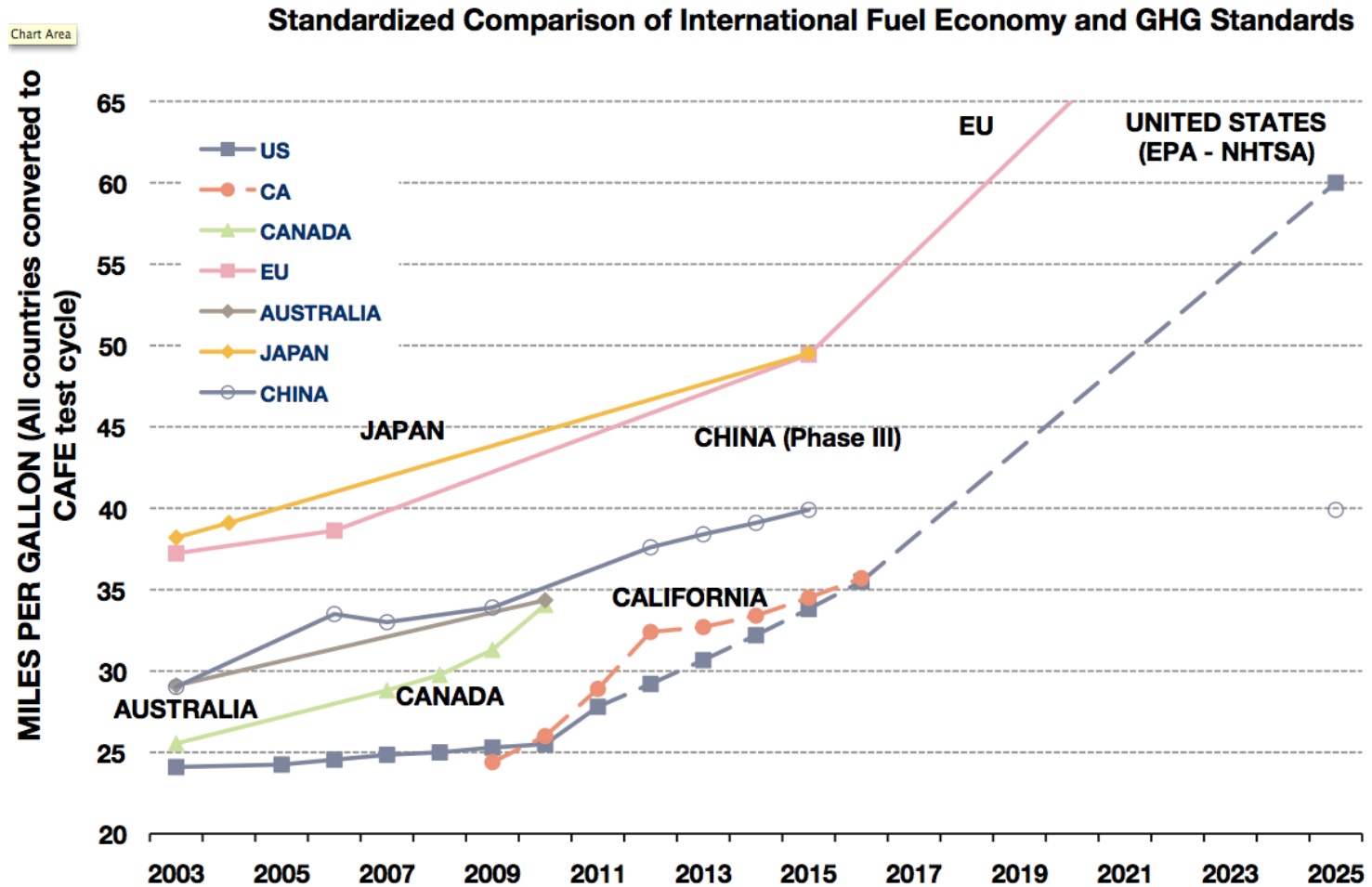
China's vehicle sales will grow 40% again this year to reach 17 million unit

Source: Feng An, iCET, 2010

Passenger Vehicle Manufacturer Fuel Consumption Trends in China (2003-2015)

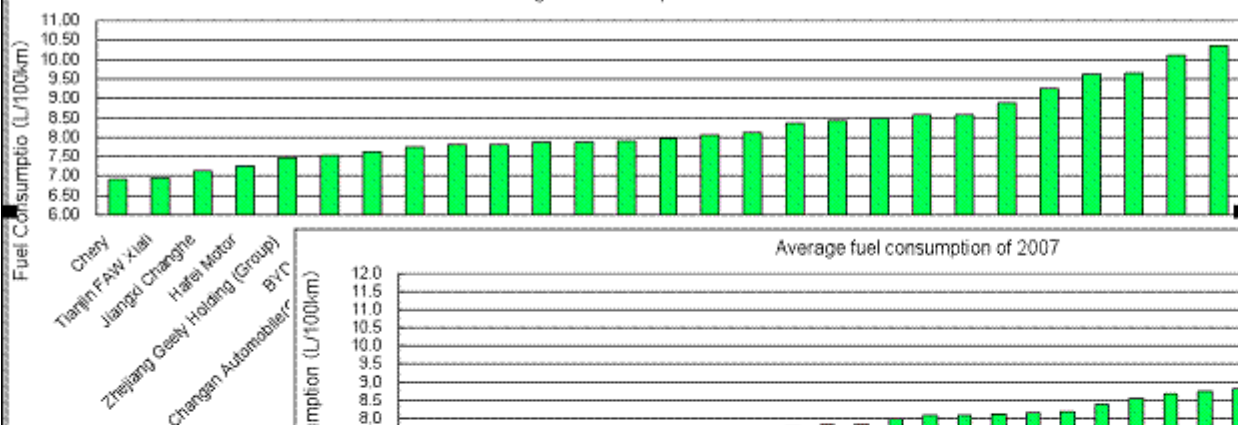


Comparison of World-wide Fuel Economy Standards

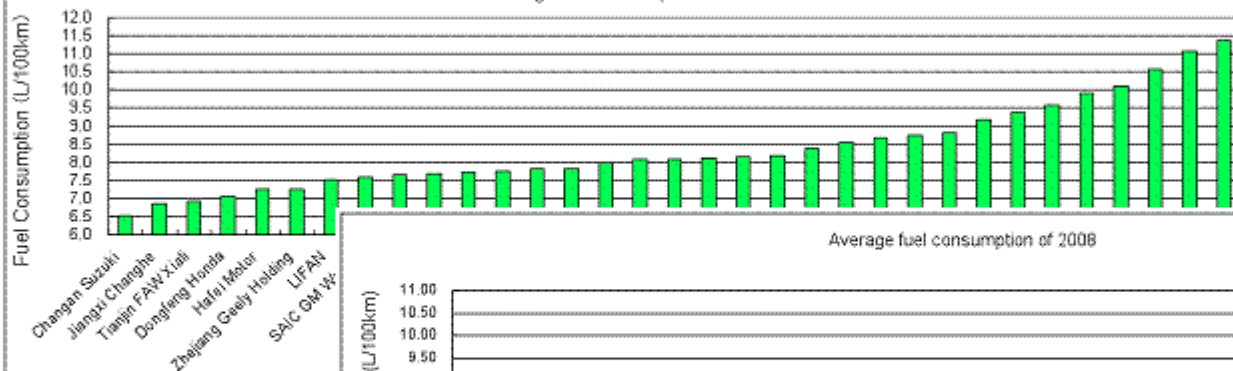


Ranking and Tracking of China Corporate Average Fuel Economy among 27 Auto groups (2006 – 2008)

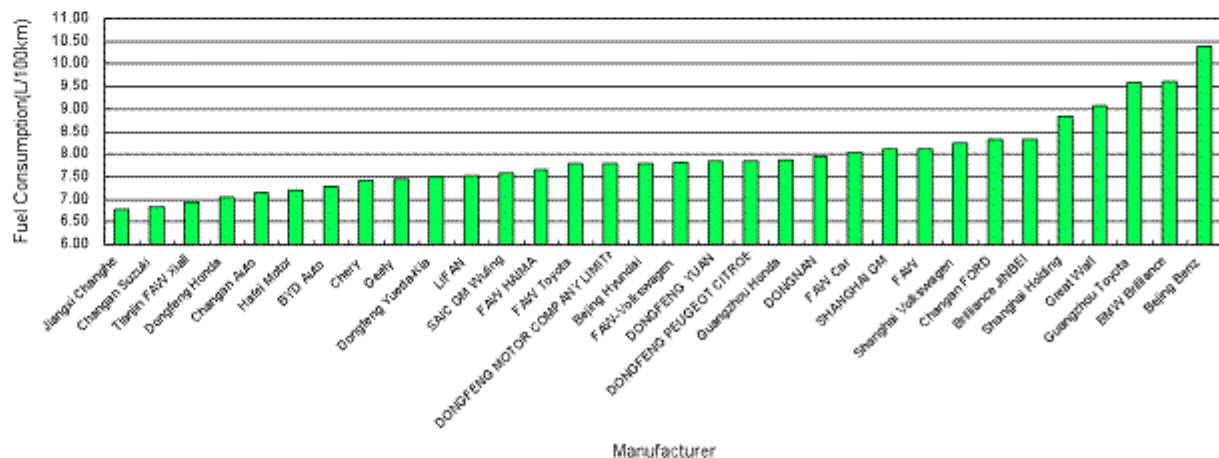
Average fuel consumption of 2006



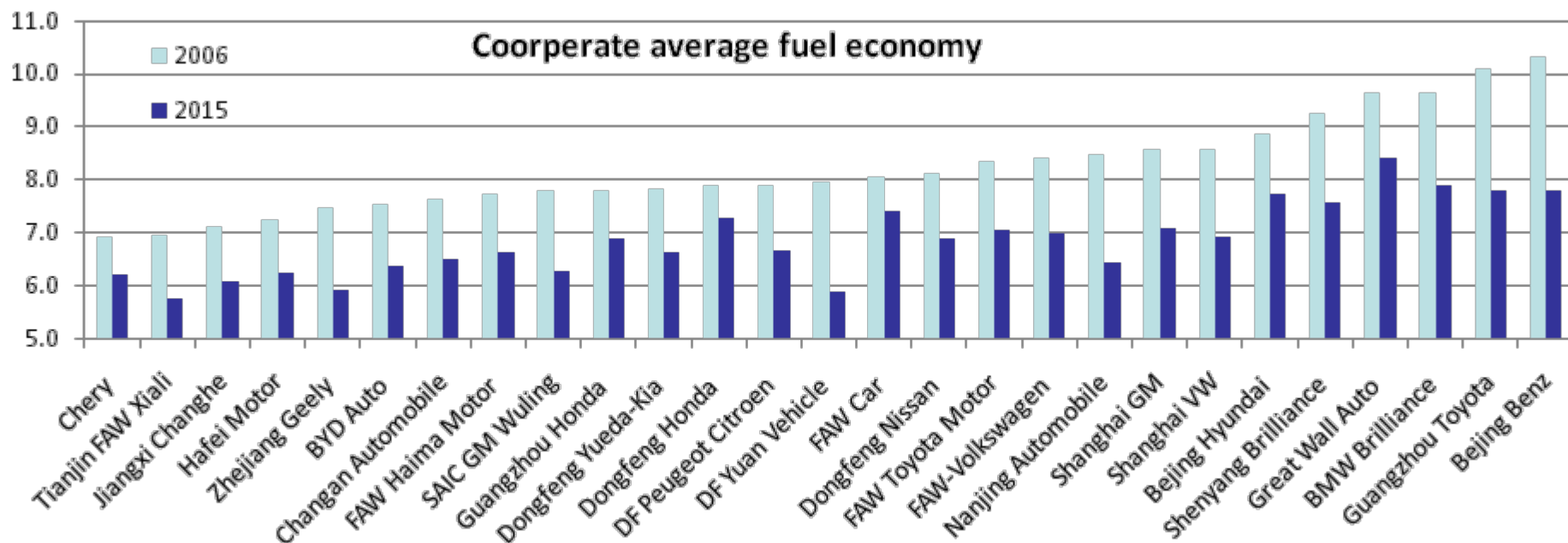
Average fuel consumption of 2007



Average fuel consumption of 2008



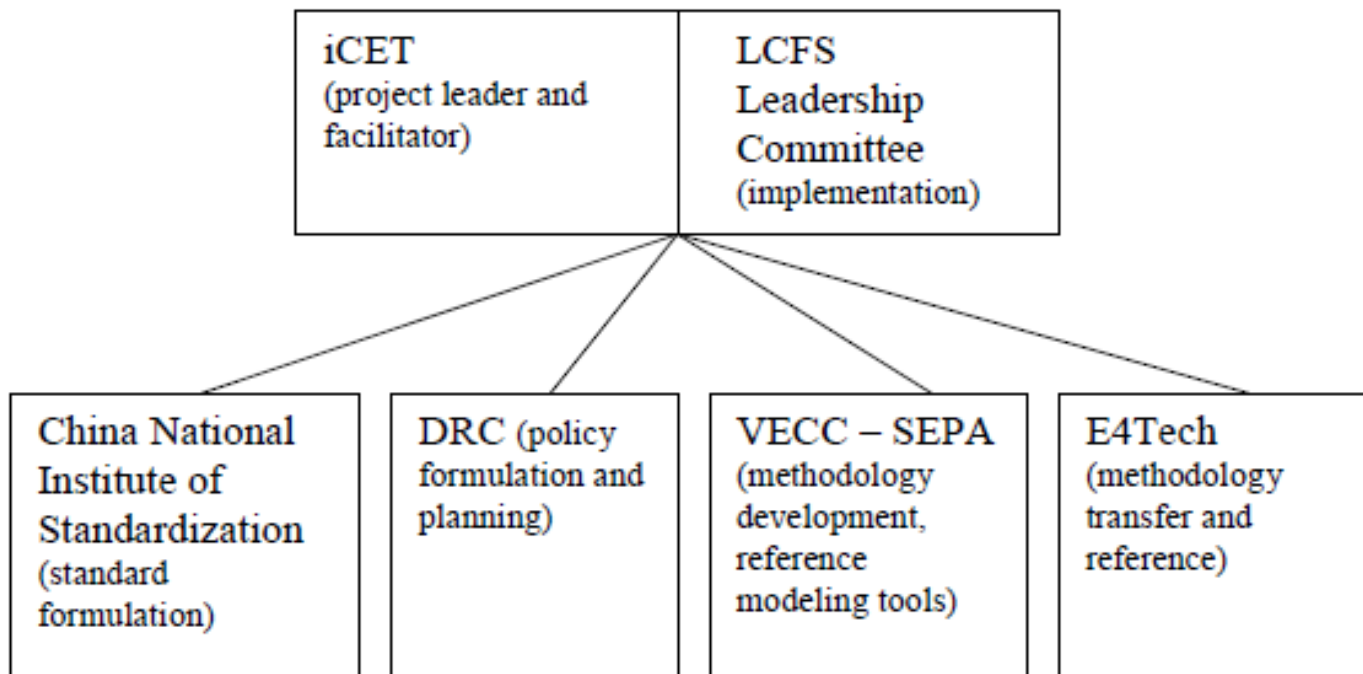
Phase III (2015) Chinese FE Target Analysis – 27 auto groups fleet average targets



Source: Feng An & Cheng Wang, iCET, 2009

iCET Initiated Low Carbon Fuel Project in 2007

Project Implementation Team



Project Partners





Low Carbon Fuel Policies and Standards

- Completed in 2010:
 - Policy Recommendations Paper – Reviewed by Expert Committee March 28, 2010
 - Policy Briefing Paper with Development Research Center of the State Council (To be submitted by mid-November)
 - Drafting process of two national standards by China National Institute of Standardization (to be submitted to SAC by end of November):
 - *The principles and requirements of life cycle assessment calculation and reporting for transportation fuel greenhouse gas emission*
 - *Requirements for transportation fuel life cycle greenhouse gas emission report verification*
 - Research paper comparing different uses of biomass for energy



China Low Carbon Fuel Policy Recommendations

1. Emphasize low carbon **liquid** fuels
2. Develop of **environmentally sustainable biofuels**, achieve current targets, and set more aggressive targets for sustainable biofuels;
3. **Limit coal-based liquid fuels.** Continue to develop CTL as a strategic technology, without commercial development;
4. Establish an *Office of Low Carbon and Sustainable Transport Energy at the National Energy Administration*;
5. Establish a *National Fuel Lifecycle Assessment Center*;
6. Establish an **enforceable carbon intensity reporting system** and eventually establish a model of Chinese fuel chains based on actual collected data;
7. Set medium- and long-term transport energy **carbon intensity reduction targets**:

iCET recommends that **by 2030, China should reduce the carbon intensity of its fuel system by 10% compared to 2005 levels.**



Environmentally Friendly Vehicle (EFV) Program





Environmentally Friendly Vehicle (EFV) Program



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Low Carbon Trip Planning: Autonavi Minimap and iCET

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Add Destination - Show options

Driving directions to 高德软件有

Suggested routes

Route	Distance	Time
北三环东路/北三环东路	21.7 km	22 mins
北四环中路/北四环中路	22.1 km	21 mins
西三环北路/西三环北路	26.9 km	38 mins

China Beijing Chao Yang Qu Guang Hua Lu 12号

1. Head west on 光华路/光華路 toward 东三环中路 辅路/东三环中路辅路 250 m
2. Turn right at 光华桥/光華橋 onto 东三环中路辅路/东三环中路辅路 240 m
3. Take the ramp on the left onto 东三环中路/东三环中路 450 m
4. Continue onto 东三环北路/东三环北路 4.3 km

beijing, china

2 mi 2 km

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Your vehicle: Honda Civic
Trip cost: 15 RMB
Trip CO2: 2.5 kg



China Green Car Guide



2010

Innovation Center for Energy and Transportation
Green Car Online Rating System

www.GreenCarChina.org



Overall Green Car Ranking

Ranking	Model	Model Name	Green Rating	Price (ten thousand RMB)	Fuel consumption (L/100km)
1		Smart Fortwo	6.79	11.08-22.10	4.9
2		Chery QQ3	6.77	2.16-5.08	4.9
3		Honda Civic Hybrid	6.70	19.98-26.98	4.7
4		Toyota Prius	6.68	23.78-29.33	4.7
5		JAC Yueyue	6.59	3.50-5.50	5.3
6		Xiali N3+	6.53	2.63-4.58	5.5
7		VW Jetta	6.50	5.94-10.10	5.3
8		Chevrolet Spark	6.47	3.38-5.48	5.6
9		Chery COWIN1	6.42	3.08-5.38	5.6
10		Jiangnan ALTO	6.42	1.88-2.38	5.9

Medium Car Green Ranking

Ranking	Model	Model Name	Green Rating	Price (ten thousand RMB)	Fuel consumption (L/100km)
1		VW Passat	6.01	12.98-31.08	6.1
2		Toyota Camry	5.96	13.10-28.38	6.0
3		VW Magotan	5.82	15.98-26.38	6.5
4		Skoda Superb	5.73	13.69-28.98	6.7
5		Brilliance M1	5.52	10.98-25.48	7.1
6		Chery Eastar	5.42	7.98-12.88	7.3
7		VW Santana	5.34	5.98-7.98	7.9
8		Audi A4L	5.32	23.98-57.91	7.5
9		Chevrolet Epica	5.27	8.79-16.19	7.7
10		Mazda6	5.26	12.38-21.98	7.8

中美电动汽车论坛 U.S.-China Electric Vehicles Forum

主办：中国科学技术部 美国能源部
Sponsors: Ministry of Science and Technology, P.R.C. Department of Energy, U.S.A



2009年9月28日~29日
Sep. 28th-29th, 2009

中国·北京
Beijing, China



The Ministry of Science and Technology,
People's Republic of China

Summary of the First U.S. - China Electric Vehicle Forum

September 28-29, 2009 – Beijing, China



Prepared for: United States Department of Energy
Office of Policy and International Affairs
Prepared by: The Innovation Center for Energy and
Transportation

iCET as only Chinese Organization to Sign R20 Initiative at Governor's Climate Summit 3



iCET helped to facilitate Jiangsu – California Strategic Agreement on Energy and Environment



Signing Ceremony of MOU on Solar Energy Cooperation between Los Angeles and Jiangsu on July 17, 2009, Los Angeles, CA



Sept 15th 2009, California delegation received warm welcome by the deputy governor of Jiangsu - Mr. Zhao Kezhi.



October 2nd, 2009 Jiangsu and California signed the Framework Agreement on Strategic Cooperation of Energy & Environment