



The 3rd Workshop on moving

Fuel economy policy forward in Thailand

GIZ study on FE policies in land transport sector in Thailand: Result from phase I

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"Energy efficiency and climate change mitigation in the land transport sector in the ASEAN Region"

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Room 501, OTP



Outline

- # Results from GIZ's study (Phase I)
- # Possible paths toward FE improvement

Fuel Efficiency





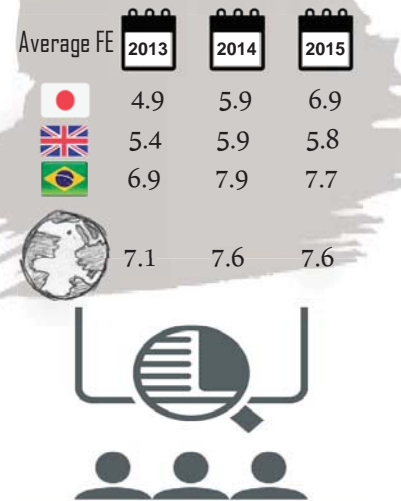
Results from GIZ's study (Phase I)



Average FE of Passenger Light Duty Vehicles (PLDV) sales during 2013-2015

$$FE = \frac{\sum_i^n Sales_i \times FE_i}{\sum_i^n Sales_i}$$

Vehicle types	New sale (Top 10 ranked vehicles)			Weight-averaged FC (L/ge/100km)		
	2013	2014	2015	2013	2014	2015
O1 Eco car	187,429	118,519	87,745	4.88	4.89	4.88
O2 City car, subcompact : Sedan & Hatchback	271,018	167,522	117,548	5.99	5.98	5.78
O3 Compact car C-segment : Sedan Hatchback Coupe Roadster	89,975	66,586	40,624	6.45	6.51	6.55
O4 : D-segment full size sedan	34,363	19,343	16,407	7.22	7.33	7.11
O5 : mini-MPV and B-SUV	42,046	41,046	50,690	7.44	6.95	6.62
O6 : SUV	10,307	10,617	14,332	8.83	7.74	7.59
O7 : PPV	58,942	48,646	69,063	9.52	9.17	8.43
O8 : Single cab	75,024	51,325	50,851	7.57	7.58	7.60
O9 : Extra cab	278,019	206,130	168,236	7.68	7.66	7.69
O10 : 4 doors pickup	164,650	114,385	107,986	8.65	8.60	8.58
Sub-total vehicle (% share of total vehicle registration)	1,211,773 (93.25%)	844,119 (93.28%)	723,482 (90.88%)			
Total new vehicle registration	1,299,508	904,969	769,089			
Annual weight-averaged FC				6.98	7.01	7.08



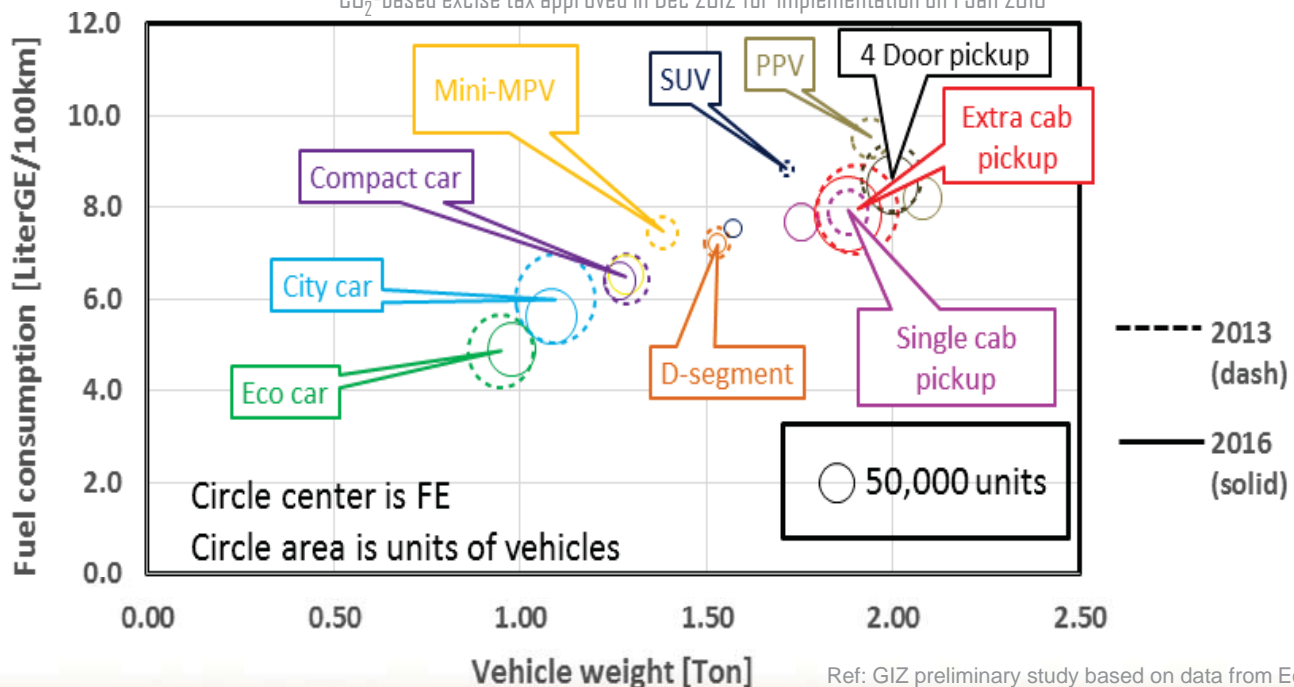
Ref: GIZ preliminary study based on data from Department of Land Transport
<http://www.fiafoundation.org/media/45112/wp11-iea-report-update-2014.pdf>
<https://www.globalfueleconomy.org/media/418761/wp15-ldv-comparison.pdf>



Results from GIZ's study (Phase I)

Effect of CO₂-based excise tax by vehicle weight

CO₂-based excise tax approved in Dec 2012 for implementation on 1 Jan 2016



Ref: GIZ preliminary study based on data from Eco-sticker



Results from GIZ's study (Phase I)

Average FE of motorcycle sales during 2013-2015



Top 4 brand of MC	New sale (Collected from DLT 2016)			Weight-averaged FC (Lge/100km)		
	2013	2014	2015	2013	2014	2015
Brand1	1,412,238	1,261,949	1,248,402	1.80	1.81	1.73
Brand2	322,121	185,675	182,074	2.16	2.14	2.05
Brand3	4,338	1,645	1,801	2.83	2.39	2.52
Brand4	3,712	19,125	12,947	1.61	1.61	1.61
Sub-total MC (% share of total new MC registration (87.17%))	1,742,409	1,468,394	1,445,224			
Total new MC registration	1,998,934	1,698,984	1,625,742			
Annual weight-averaged FC				1.87	1.85	1.77

Ref: GIZ preliminary study based on data from Department of Land Transport

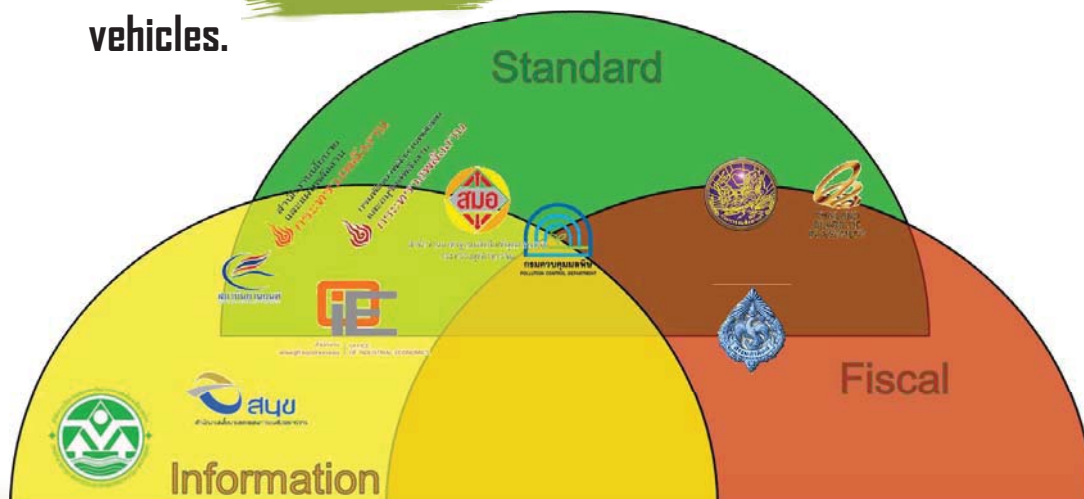


Results from GIZ's study (Phase I)

Government stakeholders' interviews and workshops

To understand each stakeholder's role and propose mutual interest

- ① Improve the eco sticker.
- ② Revise the excise tax scheme for new vehicles.
- ③ Additional fiscal measures for fuel efficient vehicles.





Possible paths toward FE improvement

① Improve the **eco sticker**.



- ✓ By showing the fuel economy of the car under consideration in relation with the average fuel economy of all passenger cars of that year
- ✓ To allow the consumer to understand whether the car under consideration achieves a good, average, or poor fuel economy.

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Possible paths toward FE improvement

② Options for revision of the **excise tax** scheme for new vehicles.

- ✓ Introduce a continuous linear function to relate vehicle specific carbon emissions (in gCO₂ per km) to the level of excise tax (instead of using the current step function).
- ✓ Raise the incentive to buy more efficient vehicles by making the price increase for inefficient vehicles more progressive (i.e. increase the slope of the linear function), or even provide rebates for very efficient cars.
- ✓ Foster the uptake of plug-in hybrids and battery electric vehicles by excluding them from the excise tax.



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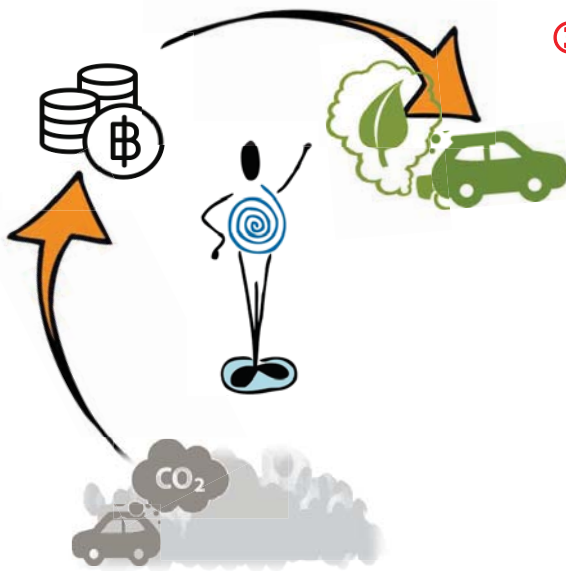
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Possible paths toward FE improvement



③ Consider the introduction of additional **fiscal measures** to stimulate the use of fuel efficient vehicles.

- ✓ To further incentivise the uptake of efficient vehicles in the short term, focus on the use of additional fuel economy-based (Lge per 100km) or carbon emission-based (gCO₂ per km) fiscal measures instead of the complex task of introducing fuel economy standards, e.g. an annual carbon emission based vehicle registration tax or an increase of the fuel tax.



THANK YOU
for your kind attention!



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All information on FE study can be found at



For more information, please visit
www.TransportandClimateChange.org



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