



## Clean Transportation Program Brief May 2016

### New Energy Vehicles: New Calculation Methods for Electric Vehicle Subsidies 2016-2020

Pursuant to the national effort to accelerate adoption of New Energy Vehicles (NEV) and favorable tax and license plate exemption policies published since 2014<sup>1</sup>, the Ministry of Finance, National Reform and Development Commission, Ministry of Information Technology and Ministry of Science and Technology published the revised version of the National 2016-2020 Electric Vehicle Range Based Subsidy from 2013 in April 2015<sup>2</sup>. The new subsidy calculation major highlights are as follows:

**1. The subsidy rewards vehicles of four major types: passenger vehicles, buses, utility vehicles, and FCV vehicles.** A different calculation method is suggested for each vehicle type, with electric passenger cars and buses based on their range, utility vehicles based on their kWh, and FCVs based on the type of vehicle.

#### 1.1 Passenger Vehicle (PV) Electric Range Based Subsidy

##### *Current versus previous electric passenger vehicle subsidy calculation method*

Passenger Vehicle Type	Regulation period	EV Range (km)			
		100≤R<150	150≤R<250	R≥250	R≥50
Battery Electric Vehicle BEV (k RMB)	April 2015	25	45	55	/
	Sep 2013	35	50	60	/
Plug-In Hybrid Electric Vehicle PHEV (k RMB)	April 2015	/	/	/	30
	Sep 2013	/	/	/	35

While the previous calculation method provided EVs of 100≤R<150 with similar subsidy as PHEVs with R≥50 (RMB32k), the new calculation rewards PHEVs with higher subsidy than low-range EVs (RMB30k versus RMB25k, respectively).

<sup>1</sup> [http://www.gov.cn/zhengce/content/2014-07/21/content\\_8936.htm](http://www.gov.cn/zhengce/content/2014-07/21/content_8936.htm)

<sup>2</sup> [http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefagui/201504/t20150429\\_1224515.html](http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefagui/201504/t20150429_1224515.html)

## 2.1 Bus Energy Consumption Based Subsidy:

### *Current e-bus subsidy calculation method*

Type	Energy Consumption ( $E_{kg}$ , Wh/km·kg)	Standard Vehicle (10<Length≤12, meters)					
		Pure Electric Range (R) (km, constant speed test)					
		6≤R<20	20≤R<50	50≤R<100	100≤R<150	150≤R<250	R≥250
<b>E-Bus (k RMB)</b>	$E_{kg} < 0.25$	220	260	300	350	420	500
	$0.25 \leq E_{kg} < 0.35$	200	240	280	320	380	460
	$0.35 \leq E_{kg} < 0.5$	180	220	240	280	340	420
	$0.5 \leq E_{kg} < 0.6$	160	180	200	250	300	360
	$0.6 \leq E_{kg} < 0.7$	120	140	160	200	240	300
<b>PHE-Bus (k RMB)</b>		/	/	200	230	250	

In comparison, the previous subsidy was calculated in a more simplified and somewhat ambiguous way, as described in the below table. It is worth noting that the new regulation encourages the market introduction of E-buses with lower energy consumption and rewards fast charging buses. The new draft also rewards small PHE-buses aimed at cross-segment electrification, which were not previously rewarded.

### *Previous e-bus subsidy calculation method*

Type	Bus Length (meters)		
	6≤L<8	8≤L<10	L≥10
<b>E-bus (k RMB)</b>	300	400	500
<b>PFE-Bus (k RMB)</b>	/	/	250

## 1.3 Utility Vehicles Battery Capacity Based Subsidy:

Utility vehicles (garbage, cleaning and other municipality service trucks) are eligible for a subsidy of RMB 1.8k for each kWh, (in the original policy draft an upper limit of RMB 130k was set, yet removed from the final version). More detailed subsidy policies would be published based on vehicle category and performance index. Previous regulations rewarded each Kwh with RMB 2k, and limited the reward to RMB 150k per utility vehicle.

## 1.4 FCV subsidy

### *FCV subsidy by vehicle type*

Vehicle Type	Subsidy (k RMB per car)
<b>FCV Passenger Vehicle</b>	200
<b>FCV Light-duty Bus/Truck</b>	300
<b>FCV Large &amp; Medium-sized coaches and Heavy-duty Truck</b>	500

While in previous regulation FCVs were not rewarded, the regulation of 2015 provides FCVs with a subsidy based on the vehicle type (in somewhat ambiguous manner).

## **2. The subsidy is planned to be phased out** over time as follows:

### *Subsidy phase-out plan*

2016	2017	2018	2019	2020
<b>100%</b>	80%	80%	60%	60%

**3. The long awaited guarantee for electric battery performance** has been issued as part of the new subsidy calculation method. Vehicle manufacturers should provide guarantees of 8 years or 120,000 km range for passenger vehicles battery performance, and 5 years or 200,000km guarantee for commercial vehicles (including buses and utility vehicles). In practice, most manufacturers provide a 5 years guarantee on the battery<sup>3</sup>. It is worth noting that most EVs available on the Chinese market have not passed the crash-test, according to expert comments<sup>4</sup>.

**4. Testing requirements for validating the eligibility** of an EV or PHEV model to receive the subsidy are detailed as follows:

### *EVs test-based requirements for national subsidies eligibility*

Type	Passenger vehicle	Bus	Truck	Special utility vehicle	Test method
BEV	≥100	≥150	≥80	≥80	M1, N1-type via mode test, others using constant speed

<sup>3</sup> <http://www.askci.com/news/chanye/2015/11/25/151514v3pc.shtml>

<sup>4</sup> <http://www.evtimes.cn/html/201109/32697.html>

					test
PHE-Hybrid	≥50 (mode test)	≥50	≥50	≥50	M1, N1-type via mode test or 60km/h constant speed test, others using 40km/h constant speed test
	≥70 (constant speed test)				
FCV	≥150	≥150	≥200	≥200	M1, N1-type using mode test, others using 40km/h constant speed test

Notes to clarify the above testing requirements: Super-capacitor and LTO pure electric buses are not included; Max speed of no less than 100 km/h for 30 min is required for pure electric passenger vehicles to be eligible for national subsidy; M1-type refers to passenger vehicles with no more than 9 seats including the driver; N1-type refers to freight trucks weighing no more than 3500 kg.

### *PHEVs fuel consumption requirements for national subsidies eligibility*

Vehicle Type	Requirement
Passenger Vehicle	Fuel consumption/Existing CAFC target ≤ 60%
Commercial vehicle (including trucks and buses)	≤60%

**5. After-sales services** was also included in the new regulation. In order to be eligible for the subsidy, a company needs to demonstrate the vehicle meets the safety requirement and has a well-functioning after-sales service platform.

**6. The new regulation suggests penalties** would apply for vehicle manufacturers that failed to meet the performance requirement based on which they received their subsidy, including providing false marketing or technical information. Penalties include circulating a notice of criticism, subsidy deduction, subsidy disqualification, suspending or removing relative products in Recommended EV list. However, in the absence of a clear management system and agreement among ministries on penalty amounts, this section is merely wishful thinking.



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For more details, comments and collaboration, please contacts [maya.bd@icet.org.cn](mailto:maya.bd@icet.org.cn) or [lzqin@icet.org.cn](mailto:lzqin@icet.org.cn)