Framework given in Europe

Agents :

* Distribution system operator (DSO): owner and operator of the distribution good (generally a monopoly)
* Supplier : the agent that sells energy to final customer
* Final customer: agent requiring electricity; forbidden to resell electricity. He can be residential, commercial or industrial customer
* Independent System Operator (ISO) or transmission system operator (TSO): responsible for keeping a secure system operation at the regional or national transmission level. He can procure system services, like operational reserves and frequency regulation, from market participants.
* Plug-in electric vehicle owner (EV): owns an electric vehicle and wants to charge its battery
* EV supplier-aggregator (EVSA): agent selling electricity to the EV owner
* EV charging point manager (CPM): acts as a final customer for electricity, he is assumed to install the charging infrastructure. He can buy the electricity to charge his own EV or resell it to other EV owners connected to the charging station under a commercial agreement. The access to the charging stations depends on the terms and conditions it sets; but it should obtain a license to exercise this activity, like technical capability and financial liability. He could be:
  + a residential customer who installs the charging station at home for private use
  + an office building owner who installs the charging station in the office parking area for the private use of the employees
  + a commercial building owner who installs the charging stations for the use of its clients
  + a charging station owner who installs the charging stations to deliver this service for the public
  + If the charging station is installed in a public area, the business is regulated and charging stations developed by the corresponding DSO in the area. The access is universal to EV owners contracted with different EV suppliers.

Subsidies and regulations:

* Netherlands

Exemption from BPM (vehicle purchase tax)

Exemption from MRB (vehicle circulation tax)

Income tax addition for the private use of company cars of 4 percent for FEVs and 7% for PHEVs (1-50g CO2 emissions)

MIA environmental investment rebate (up to 36% of 50000€ max)

3000-5000€ on the purchase of electric taxis and delivery vans

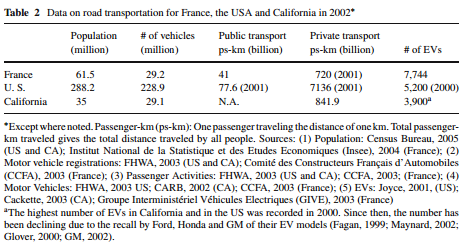
Source <https://www.rvo.nl/sites/default/files/2014/04/Electromobility%20in%20the%20Netherlands%20Highlights%202013.pdf>

<http://www.acea.be/search/de7db054743d8d51591526e8c57a5d02/>

<http://www.acea.be/publications/article/overview-of-incentives-for-buying-electric-vehicles>

|  |  |
| --- | --- |
| Country | Incentive |
| US |  |
| California |  |
| Netherlands | Exempt from registration tax BPM  Below 50g/km exempt from annual circulation tax (5,324€ over 4 years for individuals, 19,000€ for companies over 5 years) until 2014; from now, 4% registration fee for EVs and 7% for hybrids vehicle  3000-5000€ on the purchase of electric taxis and delivery vans |
| Norway |  |
| Denmark | Vehicles weighing less than 2000kg are exempt from registration tax |
| Sweden | If <37kwh/100km, exemption from annual circulation tax for 5 years  \_ taxable value of the car of a company car is reduced by 40% compared with the comparable petrol or diesel car, not exceeding 16,000 SEK per year  \_ 40,000 SEK premium granted (emissions <50g/km)(for private and companies) for companies, the premium is 35% of the price difference between the car and the corresponding petrol/diesel car, with max of 40,000 SEK |
| France | \_ (E+H <20g/km) 6,300€ under bonus-malus scheme, not exceeding 27% of purchase price  \_ Exempt from the company car tax |
| UK | Below 75g/km ; grant up to 5,000£. Organized in 3 categories  Below 100g/km exempted from annual circulation tax |
| Germany | Exemption from annual circulation tax for a period of 10 years from the date of the first registration |
| China |  |

<http://en.wikipedia.org/wiki/Government_incentives_for_plug-in_electric_vehicles>



http://download-v2.springer.com/static/pdf/17/art%253A10.1007%252Fs11077-006-9022-7.pdf?token2=exp=1428895907~acl=%2Fstatic%2Fpdf%2F17%2Fart%25253A10.1007%25252Fs11077-006-9022-7.pdf\*~hmac=91a3413d8f20858f13686d39e675d455327118631082badc869bccb4687e68ef

The **National Electrical Code** (**NEC**), or **NFPA 70**, is a regionally adoptable standard for the safe installation of [electrical wiring](http://en.wikipedia.org/wiki/Electrical_wiring) and equipment in the [United States](http://en.wikipedia.org/wiki/United_States).

🡪 Standardization in the us