



Tesla Club Slovakia

Juraj Medek, Stano Kurek



Emobilita v Európe ako nezadržateľný smer, ako to robia najprogresívnejší.

- Prečo práve elektromobilita by mala byť ten správny smer v celom rade inovácií v automobilizme?
- Aké je smerovanie a podpora vo svete v EÚ a SR, kam by prostriedky mali smerovať?
- Má elektromobil šancu uspieť v konkurencii, kto je leader na trhu, ako sa autá nabíjajú, aké sú časy nabíjania a koľko to stojí?
- Auto, ako zdroj zásoby energie s prepojením na eHouse.
- Na tieto a ďalšie otázky budeme odpovedať v našom príspevku, s cieľom poskytnúť informácie odborníkom ako aj verejnosti.



TESLA MODEL S MODEL X SUPERCHARGER POWERWALL UPDATES FIND US MY TESLA

MODEL S

Test Drive Order

Euro NCAP 5-Star Safety Rating
Autopilot with Autosteer
Available Electric All-Wheel Drive
Zero to 100 kph in as little as 3.0 seconds
Over 528 kilometers range

ORDER YOURS **TEST DRIVE**



Charging Service Plan Corporate Sales Events

SPACEX FALCON 9 FALCON HEAVY DRAGON UPDATES ABOUT SPACEX CAREERS PRESS SHOP

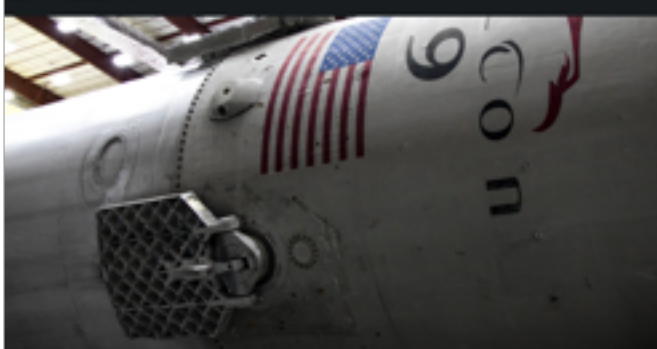


THE WORLD'S FIRST REUSABLE ROCKETS

WATCH VIDEO

11 JASON'S MISSION 12 ORBCOMM-2 MISSION: LAUNCH & LANDING 13 THE WORLD'S FIRST REUSABLE ROCKETS

SPACEX FALCON 9 FALCON HEAVY DRAGON UPDATES ABOUT SPACEX CAREERS PRESS SHOP

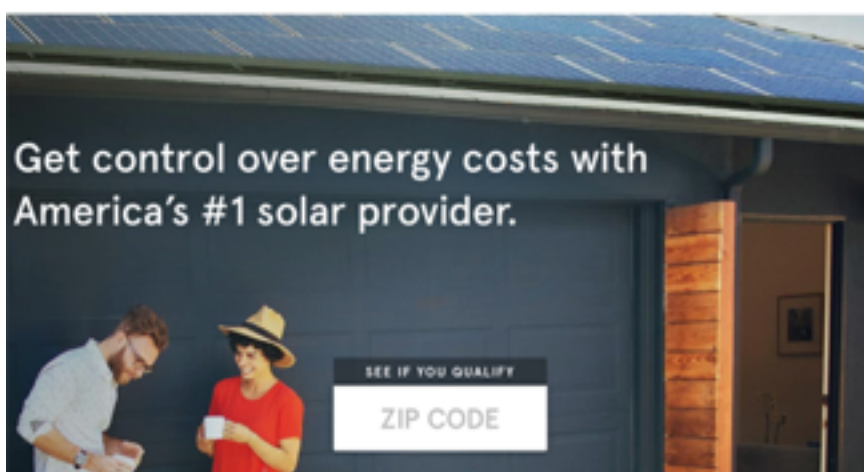


ORBCOMM-2 MISSION: LAUNCH & LANDING

WATCH REPLAY

11 JASON'S MISSION 12 ORBCOMM-2 MISSION: LAUNCH & LANDING 13 THE WORLD'S FIRST REUSABLE ROCKETS

SolarCity RESIDENTIAL BUSINESS & GOVERNMENT CAREERS COMPANY



Get control over energy costs with America's #1 solar provider.

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TESLA **TESLA CLUB .SK**
Pre fanárikov Tesla Motors a elektromobility.

Search

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Mark Channels Read Member List

Tesla Club Slovensko



Ako si objednáš Model S?

Tesla Motors nepoužíva dilerov, na rozdiel od tradičných výrobcov. Tesla používa vlastné obchody. Ale ani tie nie je tržba na obchodovanie. Tie...

1 2 3 4 5 6 7

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Média

Vitajte na TeslaClub.sk!

Naším cieľom je spájať nadšencov e-mobility a vecí s tým súvisiacich.

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Tesla Club Slovensko



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1999

• Sparsity
These operations involve

[Video](#)
YouTube & Google Video

Teach Memory Forum

46) **Tesla Motors**
 Discusses a revolutionary Tesla Motors

Model 3
 Disruption of Toxic Model 3

Subforums

- Model 5: objektívna, výnoka, doleho (1997b)
- Model 6: subjektívna, výnoka (1997b)

Model X

Visit us on TechieClub.sk!

Način držanja je važan! održavanje u ruci, a ne u špičcima prstiju.

1000,- € plus ma Model S

ANCIAZ Zinkette 2000.- € fixed



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QUESTIONS 1. TO JAMES

Chrysler's Model 2 was **4000** cubic inches, a jump from 1930 and the big new Model 3. The body on this Chrysler Model 3 was **4000** cubic inches, too, but it was a lighter body. A different part on this Model 3, 1934, was the **4000** cubic inches (Chrysler's new 1934). For more info, see www.chrysler.com.

TESLA SUPERCHARGER

Tesla Motors e Tesla Club Strada são projetos de alto nível técnico que representam o compromisso da Tesla com a inovação tecnológica.



Kde?



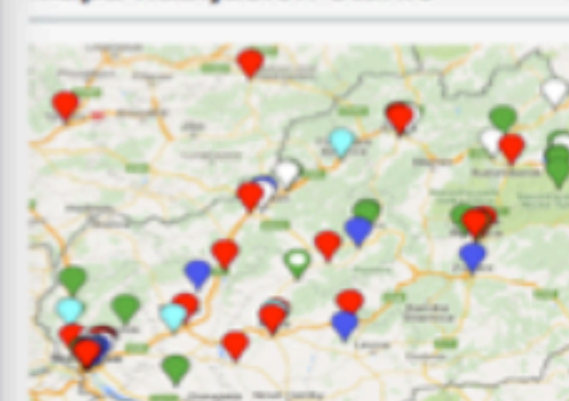
Kedy?
Sobota 23.1.2016

1200 head: griseus (ultraviolet)
1400 head: sphaeris (ultraviolet)
15-24 head: rest is sphaeris (not griseus)

kontakt:
Tesla Club Slovakia
<http://tesclub.sk>

[illegible]

Mapa nabíjacích staníc



- [Pridať ďalšiu stanicu do fóra](#)
- [Zoznam operátorov nablíacich staníc](#)



Tesla Club Slovakia tour

18.3.2016 o 16.30 / PREDNÁŠKA + DISKUSIA + TESTOVACIE JAZDY

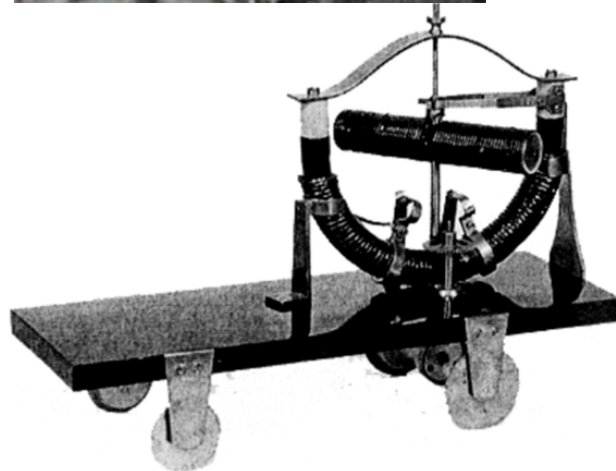


Charging with us is easy.

WEEK 1	10/10/10
WEEK 2	10/10/10
WEEK 3	10/10/10
WEEK 4	10/10/10



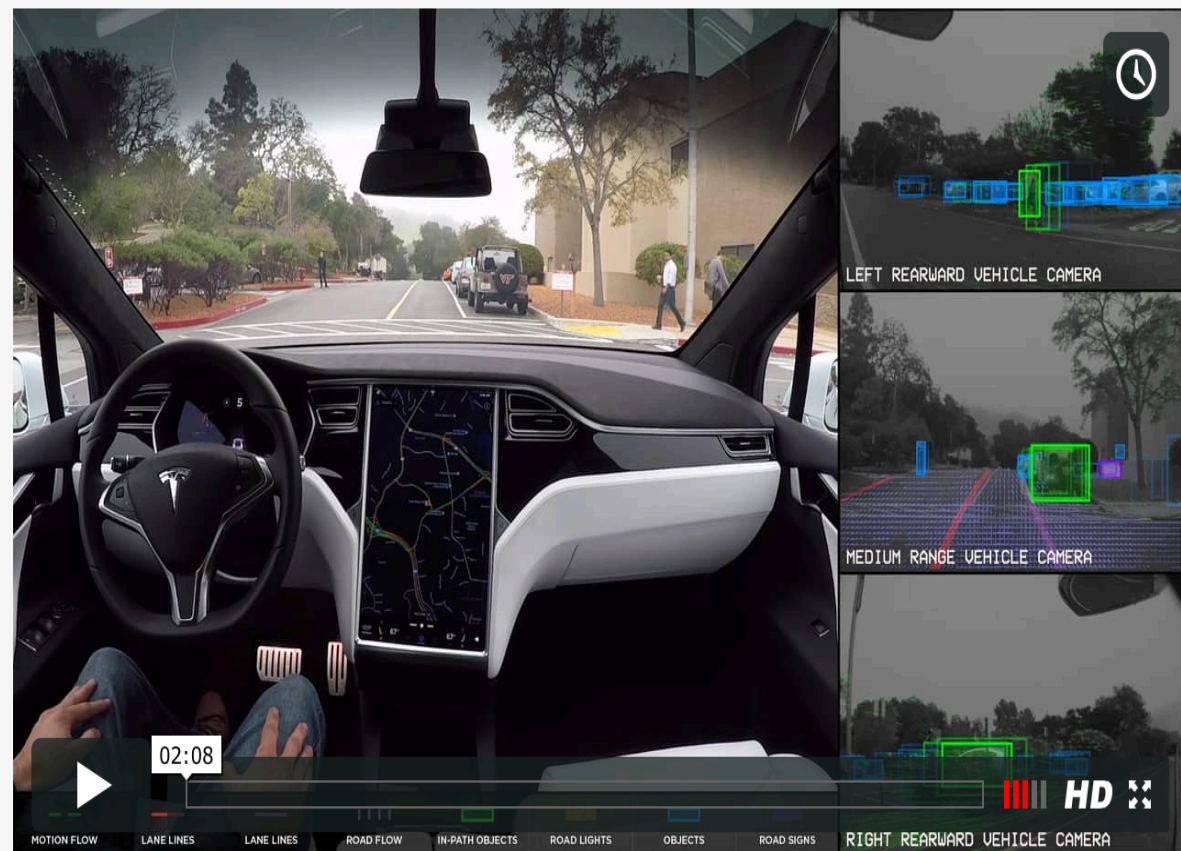
- **Prečo práve elektromobilita by mala byť ten správny smer v celom rade inovácií v automobilizme?**



Jedlíkov mobil auta na elektrický pohon.
Foto: wikipedia.org

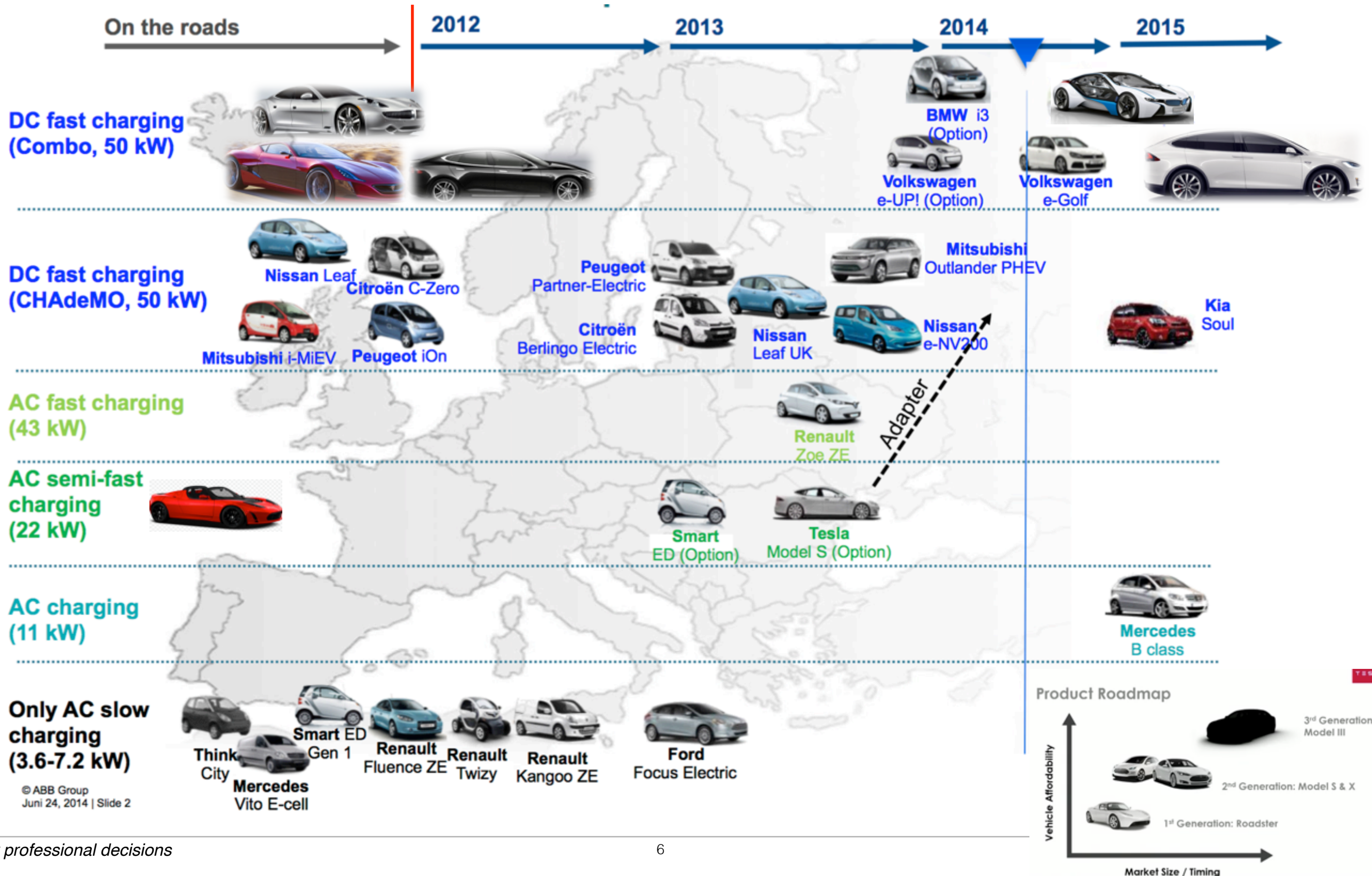


Full Self-Driving Hardware on your Model X



Princíp elektrického motoru objavil člen Uhorskej akadémie vied Štefan Anián Jedlík. Tento kňaz s koreňmi na Slovensku v roku 1828 predstavil prvý koncept malého vozidla.

Vývoj elektromobility: v troch vlnách



- **Aké je smerovanie a podpora vo svete v EÚ a SR, kam by prostriedky mali smerovať?**

SR: podpora štátu - jedna nabíjačka na desať elektromobilov:

- 16 opatrení (ako dostať na naše cesty viac áut na elektrinu)
- Národná sieť nabíjacích centier (súkromný i verejný sektor)
- SEVA + Tesla Club Slovakia (V4)
- [Konzervatívneho scenára](#) : do roku 2020 bude 10 tis.elektromobilov
- [Technologický scenár](#): do roku 2020 bude 25 tis.elektromobilov
- Legislatíva
- Smart elektromery resp. nabíjacie systémy
- 5000 Eur – podpora pri kúpe eAutomobilu

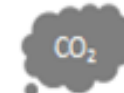
EU:

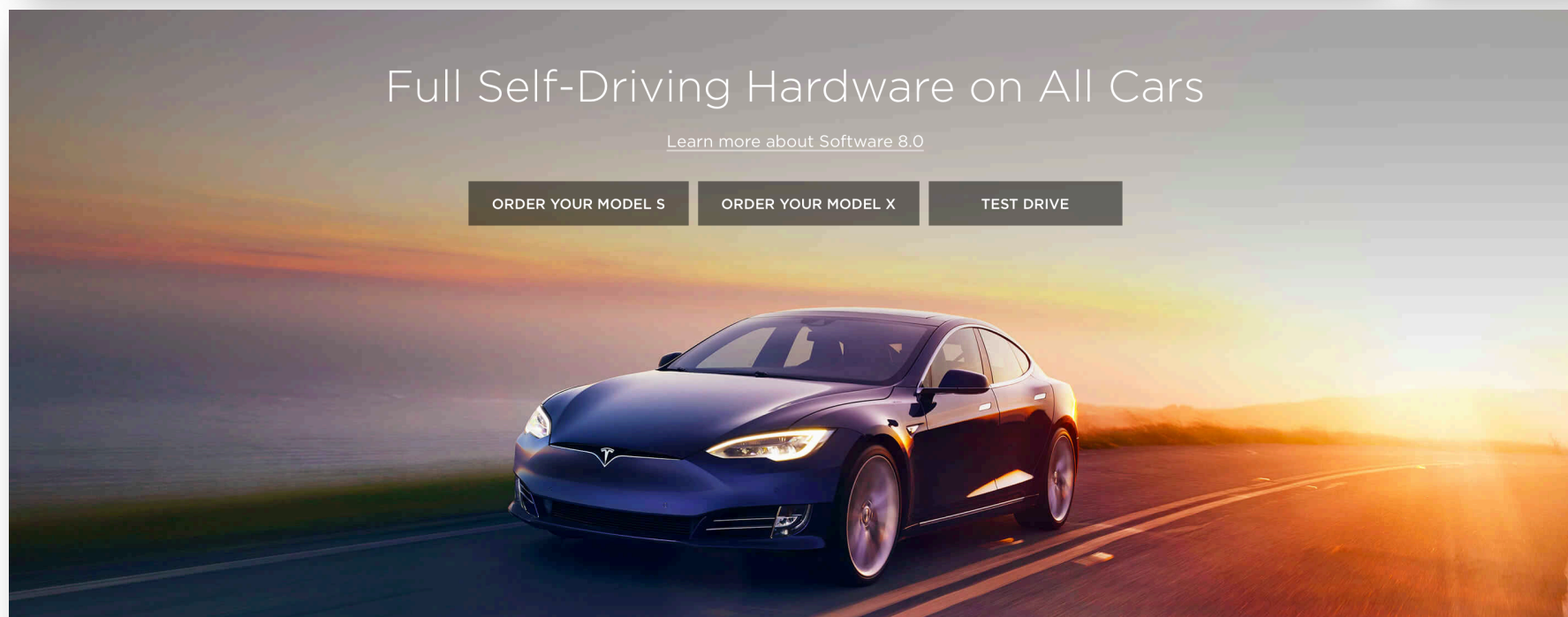
- podpora pri kúpe elektromobilu
- odpustenie poplatkov (dialničná známka, registrácia, ...)
- vyhradené zóny parkovania a pruhy pre dopravu

Svet:

- kupa, poplatky, jazda v zónach (D1), mestách, parkovanie, energia,...

- Má elektromobil šancu uspieť v konkurencii, kto je leader na trhu, ako sa autá nabíjajú, aké sú časy nabíjania a koľko to stojí?

	 Efektívne spaľovacie (ICE)	 Hybrid (HEV)	 Plug - in hybrid (PHEV)	 Range extender (REEV)	 Elektrické Batériové (BEV)
Emisie	 CO ₂	 CO ₂	 CO ₂	 iba dlhé trasy	žiadne emisie
Spotreba		 + 	 + 	 + 	
Zdroj energie			 + 	 + 	



- Tesla Motors
- Nabíjanie 1: 2-4-6 hod.
- Nabíjanie SCH: 30 - 75min
- Cena 1: 1-X Eur/100km (10Eur na 500 km)
- Cena TCH: 0 Eur vs. nový program - kredit



Nabíjanie :

			
Home Charging	Office Charging	Commercial Charging	Route Charging
Sleep and Chago (AC)	Park and Chago (AC)	Shop and Chago (AC / DC)	Stop and Chago (DC)
Typical charging time: 4-24 h	Typical charging time: 4-24 h	Typical charging time: 1-2 h	Typical charging time: 15-30 min
	Charging management	Charging management	Charging management



Nabíjanie: AC

TurboDock EV Charging Stations



VOLVO 30 AMP - 25FT CABLE

Level 2, 30A, 240V, 25' cable
\$799.00



AV 30 AMP - 25FT CABLE

Level 2, 30A, 240V, 25' cable
\$1,049.00 **\$799.00**



TURBODOCK - MODULE
TurboDock EV Charger Module

\$1,299.00

Ship To:



TURBODOCK - WALL MOUNT
Wall Mounted TurboDock EV Charger

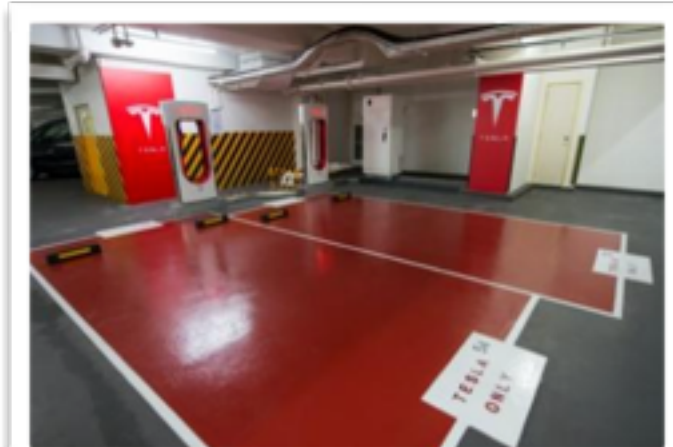
\$1,798.00 [Price Details](#)



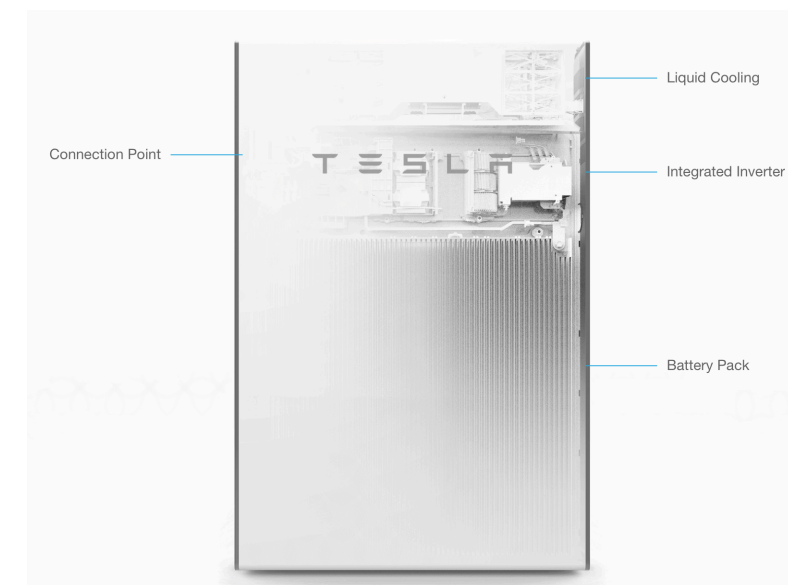
TURBODOCK - PEDESTAL
Pedestal Mounted TurboDock EV Charger

\$1,798.00 [Price Details](#)



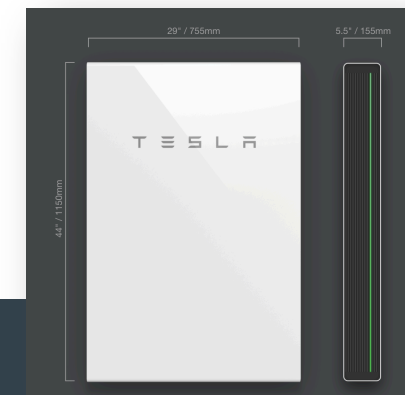


- **Elektromobil, ako zdroj zásoby energie s prepojením na eHouse.**





- **Auto, ako zdroj zásoby energie s prepojením na eHouse.**



Join the world's transition to sustainable energy

Powerwall 2 is a battery for homes and small businesses that stores the sun's energy and delivers clean, reliable electricity when the sun isn't shining. Combine Powerwall, solar and an electric vehicle to create a zero emission lifestyle.



Use more of your solar

Most homes use a fraction of the solar energy they collect. Instead of sending excess solar energy into the grid, Powerwall stores it for use any time.



Your path off grid

Combine solar and one or more Powerwalls to power your home independently from the utility grid.



Backup your home

Powerwall protects your home during a power outage, keeping your lights, Wi-Fi and refrigerator running.



Touch-safe

Touch safe for the entire family with no live wires or bulky vents.



Flexible Installation

Wall mounted or floor mounted, stack up to nine Powerwall units to power homes of any size.



Durable Design

Water resistant and dustproof enclosure for installation inside or outdoors.



Always Connected

Monitor your solar energy use in real-time and receive alerts when Powerwall is preparing for cloudy or severe weather.

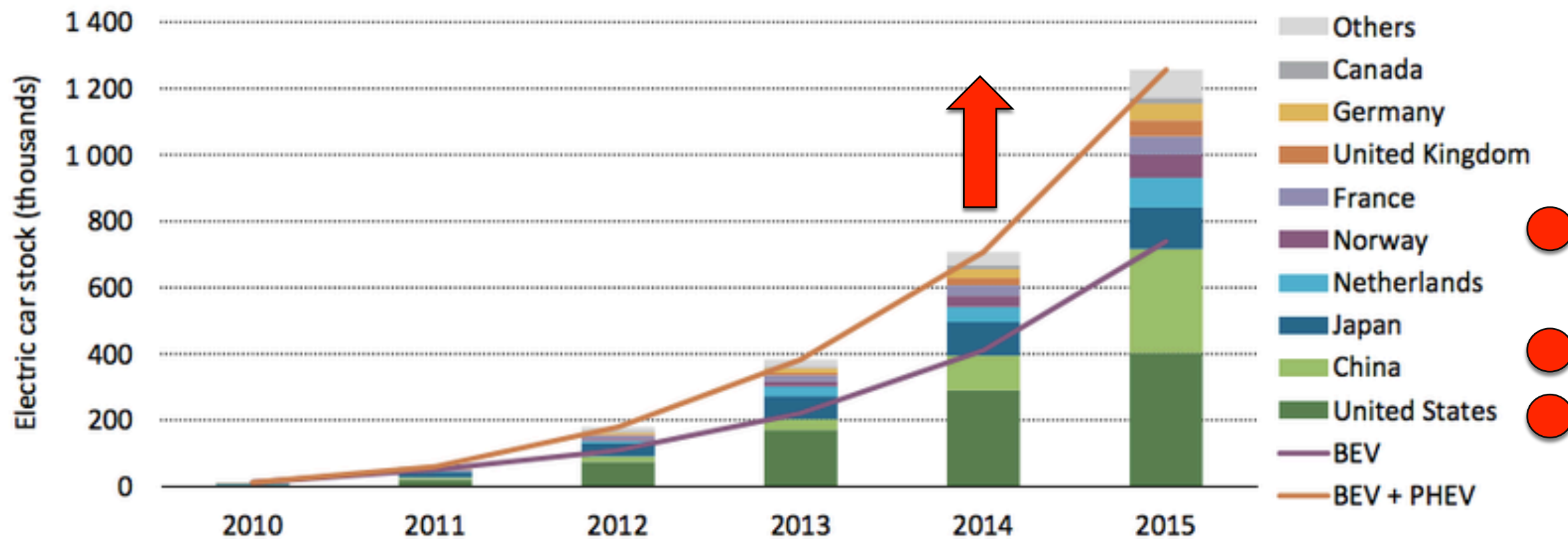
Inteligentný dom – smart home:



Trend v grafoch:

Rast počtu elektromobilov:

Figure 1 • Evolution of the global electric car stock, 2010-15



Note: the EV stock shown here is primarily estimated on the basis of cumulative sales since 2005.

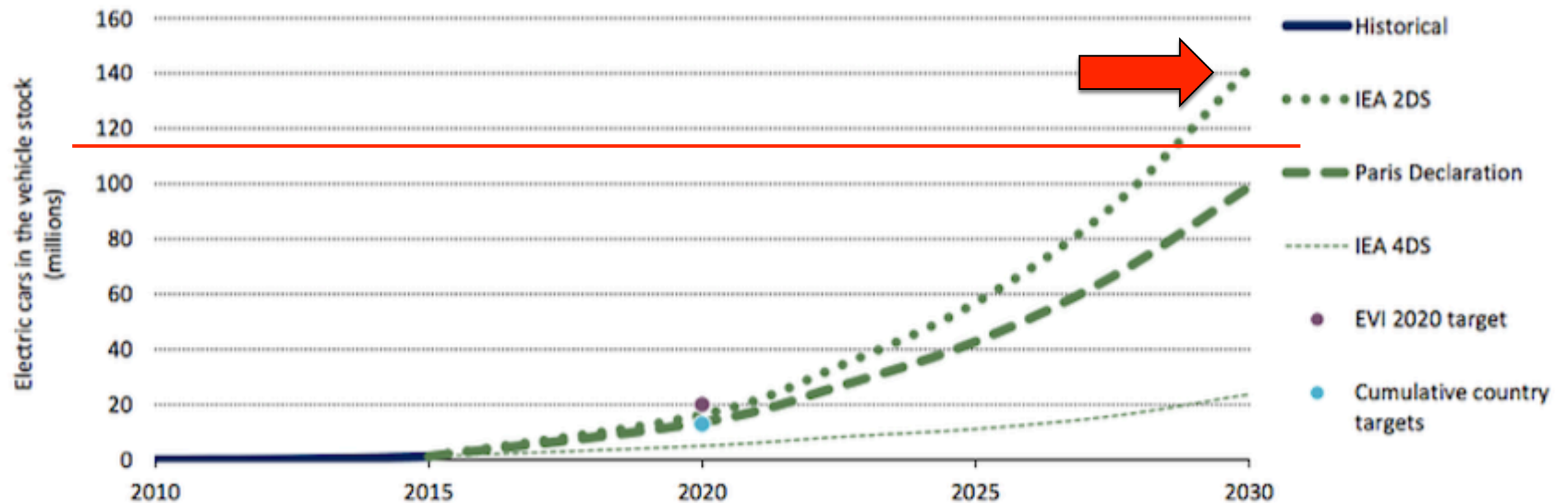
Table 1 • Summary of policy support mechanisms for EV uptake in place in selected countries in 2015

	EV purchase incentives				EV use and circulation incentives				Waivers on access restrictions			Tailpipe emissions standards		Market share of electric cars in 2015
	Rebates at registration/sale	Sales tax exemptions (excl. VAT)	VAT exemptions	Tax credits	Circulation tax exemptions	Waivers on fees (e.g. tolls, parking, ferries)	Electricity supply reductions/exemptions	Tax credits (company cars)	Access to bus lanes	Access to HOV lanes	Access to restricted traffic zones*	Fuel economy standards/regulations including elements	Road vehicles tailpipe pollutant emissions standards	
Canada													Tier 2	0.4%
China													China 5	1.0%
Denmark													Euro 6	2.2%
France													Euro 6	1.2%
Germany													Euro 6	0.7%
India													Bharat 3	0.1%
Italy													Euro 6	0.1%
Japan													JPN 2009	0.6%
Netherlands													Euro 6	9.7%
Norway													Euro 6	23.3%
Portugal													Euro 6	0.7%
South Korea													Kor 3	0.2%
Spain													Euro 6	0.2%
Sweden													Euro 6	2.4%
United Kingdom													Euro 6	1.0%
United States													Tier 2	0.7%

Legend:	
	No policy
	Targeted policy **
	Widespread policy***
	Nationwide policy
	General fuel economy standard, indirectly favouring EV deployment
	Pollutant emissions standard in place in 2015
	Euro 6



Figure 3 • Deployment scenarios for the stock of electric cars to 2030



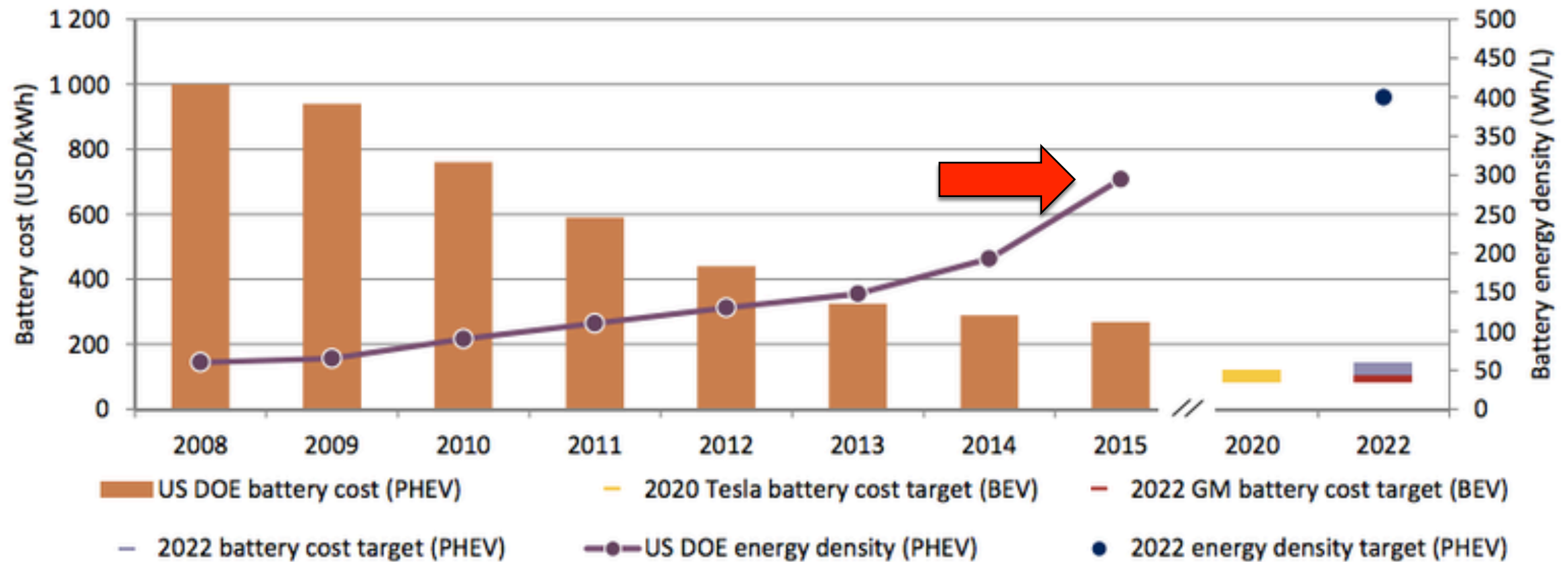
Note: 2DS = 2°C Scenario; 4DS = 4°C Scenario.

Sources: IEA analysis based on IEA (2016), UNFCCC (2015b), the EVI 2020 target and the country targets assessment made in Table 3.



		
345 km Range per charge	Under 6 seconds Zero to 100 km/h	Seating for 5 Adults
		
Designed to achieve 5-Star Safety Rating	Autopilot Hardware	Supercharging

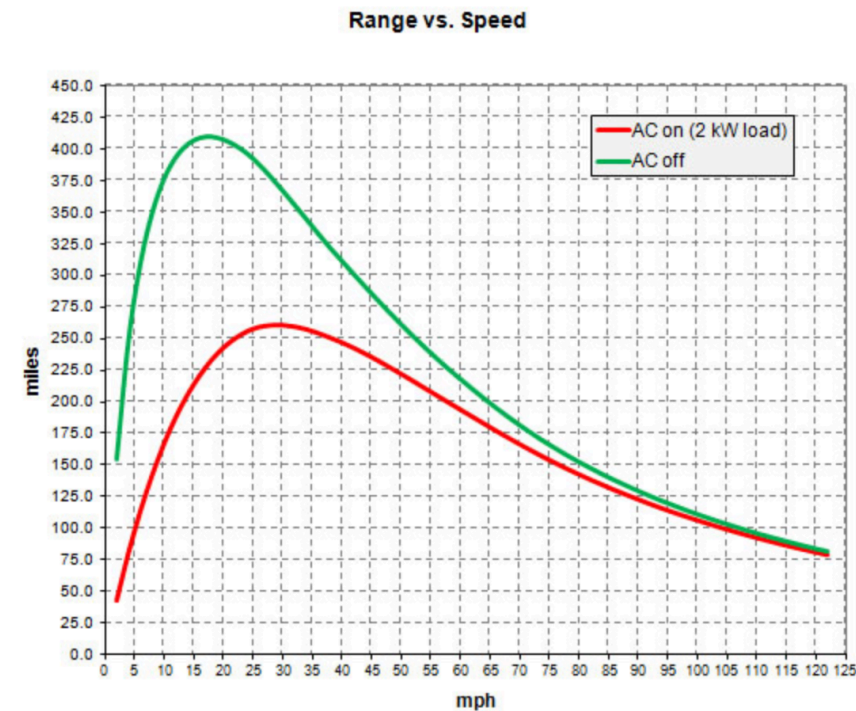
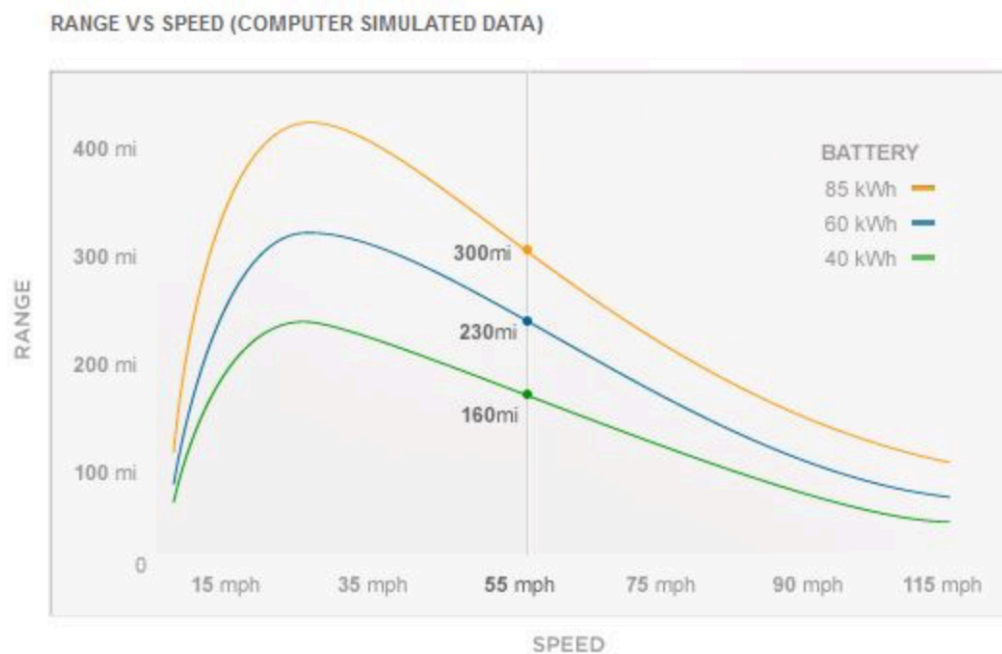
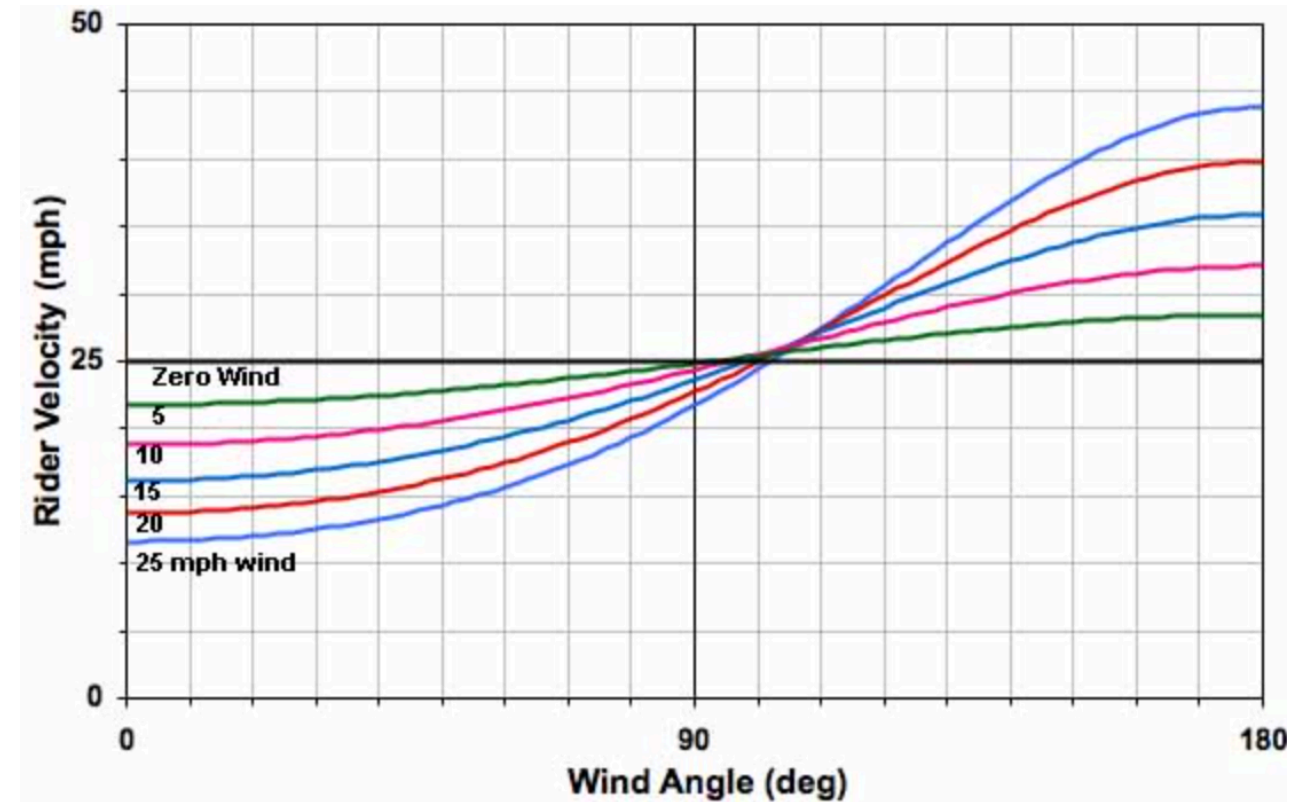
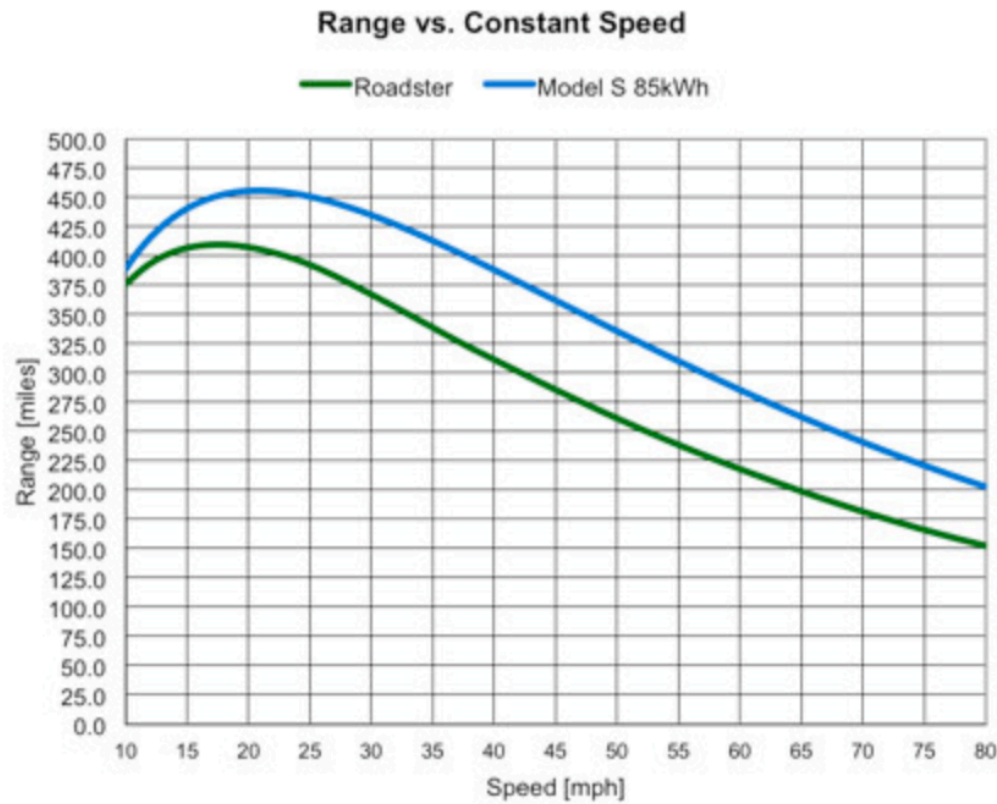
Figure 2 • Evolution of battery energy density and cost



Notes: USD/kWh = United States dollars per kilowatt-hour; Wh/L = watt-hours per litre. PHEV battery cost and energy density data shown here are based on an observed industry-wide trend, include useful energy only, refer to battery packs and suppose an annual battery production of 100 000 units for each manufacturer.

Sources: US DOE (2015 and 2016) for PHEV battery cost and energy density estimates; EV Obsession (2015); and HybridCARS (2015).

Dojazd: 120 - 250 - 450 - 600... 1200km



Gigafactory:

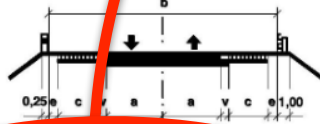


Zdroj: <http://electrek.co/2016/03/09/will-human-hands-ever-touch-tesla-gigafactory-battery-cells/>

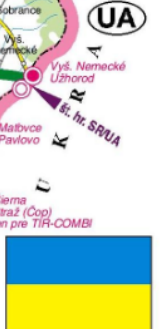
Radius 100 km

znak	Kategoría		Šírka				
	b m	návrhová rýchlosť km/h	a ¹⁾ m	v m	c m	e m	
R	11,5 ^{b)}	100; 80; 70	3,50	0,25	1,50	0,50	

a) Základná hodnota bez rozšírenia v smerevom oblúku.
b) Ak sa navrhuje kategória R 11,5 musí sa v dokumentácii v záujme bezpečnosti dopravnej premávky navrhovať najvyššia dovolená rýchlosť max. 100 km/h.



SIET DIAĽNIC A RÝCHLOSTNÝCH CIEST SR NETWORK OF MOTORWAYS AND EXPRESSROADS IN THE SLOVAK REPUBLIC



znak	b m	návrhová rýchlosť km/h	Šírka					b ₁ , b ₂ m
			a ¹⁾ m	v ₁ m	v ₂ m	c m	d m	e m
C	22,5	100; 80; 70	3,50	0,25	0,50	1,50	3,00	0,50
R	22,5	120; 100; 80	3,50	0,25	0,50	1,50	3,00	0,50
D a R	24,5	120; 100; 80	3,75	0,25	0,50	2,00	3,00	0,50
D a R	26,5	120; 100; 80	3,75	0,25	0,50	2,50	4,00	0,50
D	28 ^{b)}	120; 100; 80	3,75 ^{d)}	0,25	0,75 ^{e)}	3,00	4,00	0,50

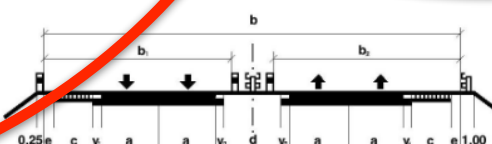
a) Základná hodnota bez rozšírenia v smerevom oblúku.
b) Kategória D 28 sa navrhuje v prípade, že očakávaná výhľadová intenzita dopravy dosiahne do 20 rokov od predpokladaného dátumu uvedenia do prevádzky väčšiu hodnotu ako 19 000 voz./24 h.
c) V strednom deliacom páse sa líce zvodidla zvyčajne umiestňuje min. 0,50 m od hrany spevnenia, v odôvodnených prípadoch (pri podperách nadjazdov, pri oporných stĺpoch portálov a pod.) sa môže líce zvodidla umiestniť min. 0,25 m od hrany spevnenia. Potom je b₁, b₂ len 12,25 m.
d) Ak treba z kapacitných dôvodov navrhovať šesť- alebo viacpruhovú D, príp. R, navrhuje sa tri, príp. ďalší pruh (pri strednom deliacom páse) šírky 3,50 m.

a) Základná hodnota bez rozšírenia v smerevom oblúku.
b) Kategória D 28 sa navrhuje v prípade, že očakávaná výhľadová intenzita dopravy dosiahne do 20 rokov od predpokladaného dátumu uvedenia do prevádzky väčšiu hodnotu ako 19 000 voz./24 h.
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Vysvetlivky Legend

- D 1** diaľnica v prevádzke motorway in operation
- D 2** diaľnica vo výstavbe motorway under construction
- D 3** diaľnica v príprave motorway in preparation
- D 4** alternatívna trasa alternative route
- D 5** diaľnica v prevádzke v 1/2 profile motorway in operation single carriageway (two lanes)
- D 6** diaľnica v prevádzke v 1/2 profile motorway in operation single carriageway (two lanes)
- D 7** diaľnica v príprave - alt. riešenie expressroad in preparation - alternative
- E 71** medzinárodné cesty „E“ international „E“ roads
- K V** multimodálne koridory multimodal corridors
- L** cesta I. triedy class roads
- O** ostatné cesty other roads
- R 1** rýchlostná cesta v prevádzke expressroad in operation
- R 2** rýchlostná cesta vo výstavbe expressroad under construction
- R 3** rýchlostná cesta v príprave expressroad in preparation
- R 4** alternatívna trasa alternative route
- R 5** rýchlostná cesta v prevádzke v 1/2 profile expressroad in operation single carriageway (two lanes)
- R 6** rýchlostná cesta v príprave - alt. riešenie expressroad in preparation - alternative
- hraničný priechod existujúci existing border crossing
- medzinárodný hraničný priechod aj pre TIR international border crossing also for TIR
- hraničný priechod plánovaný planned border crossing
- medzinárodný hraničný priechod plánovaný aj pre TIR international border crossing planned also for TIR
- ✕ hraničný priechod s nákladnou dopravou do 3,5 t border crossing with freight transport up to 3,5 t
- ... len osobná doprava passenger cars only
- ... len chodci a cyklisti pedestrians and cyclists only

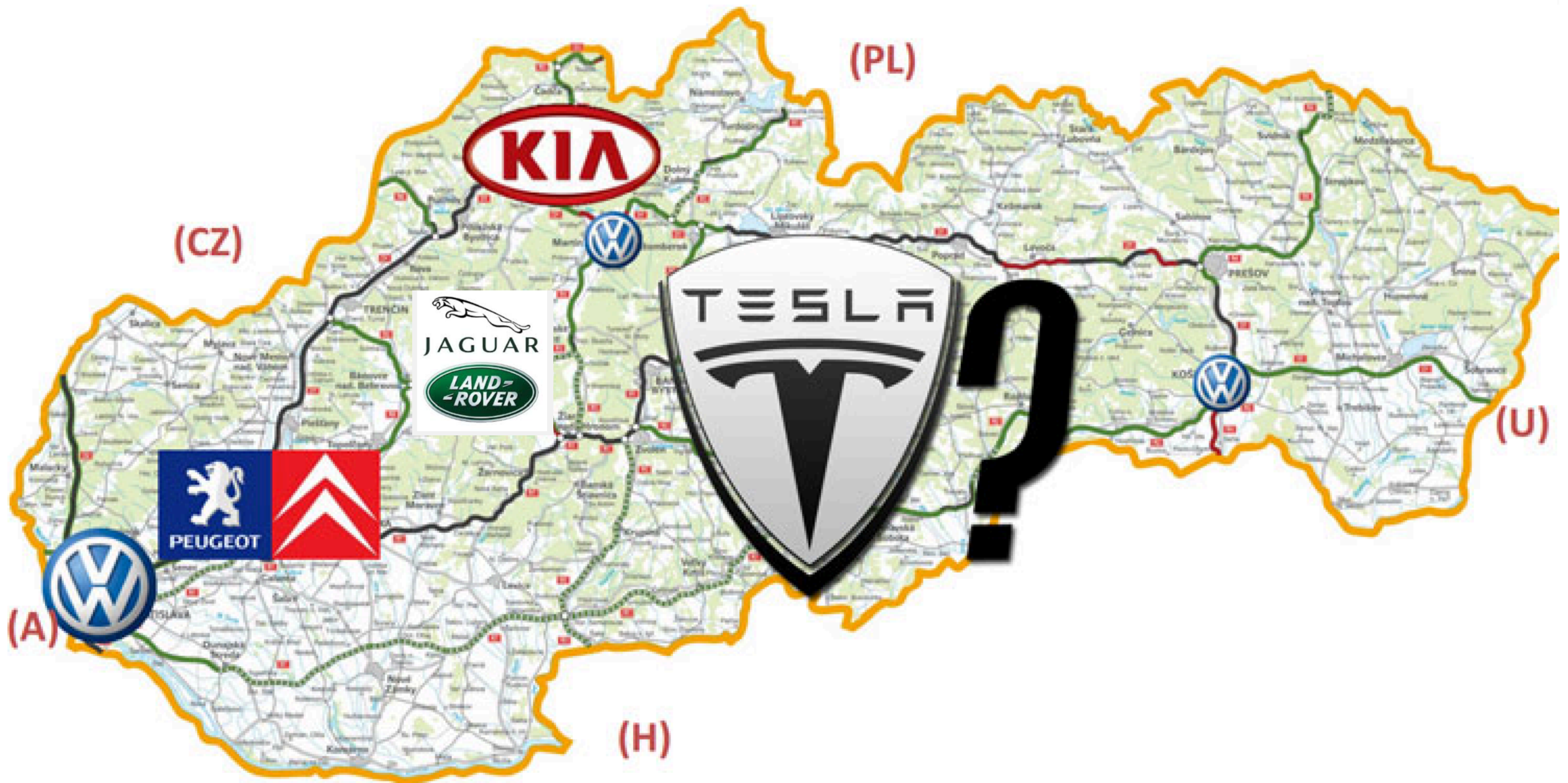
0 10 20 30 40 50 km



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