

The logo for AVERE, featuring the word "AVERE" in a bold, white, sans-serif font centered within a solid blue rectangular background.

AVERE

The European Association
for Electromobility

AVERE Webinar: The revision of the EU Alternative Fuels Infrastructure Directive

March 2020

The slide features decorative geometric shapes: a green triangle in the top-left corner, a blue triangle in the bottom-left corner, and a green triangle in the bottom-right corner.

History

AVERE – Passion to electrify since 1978

Vision

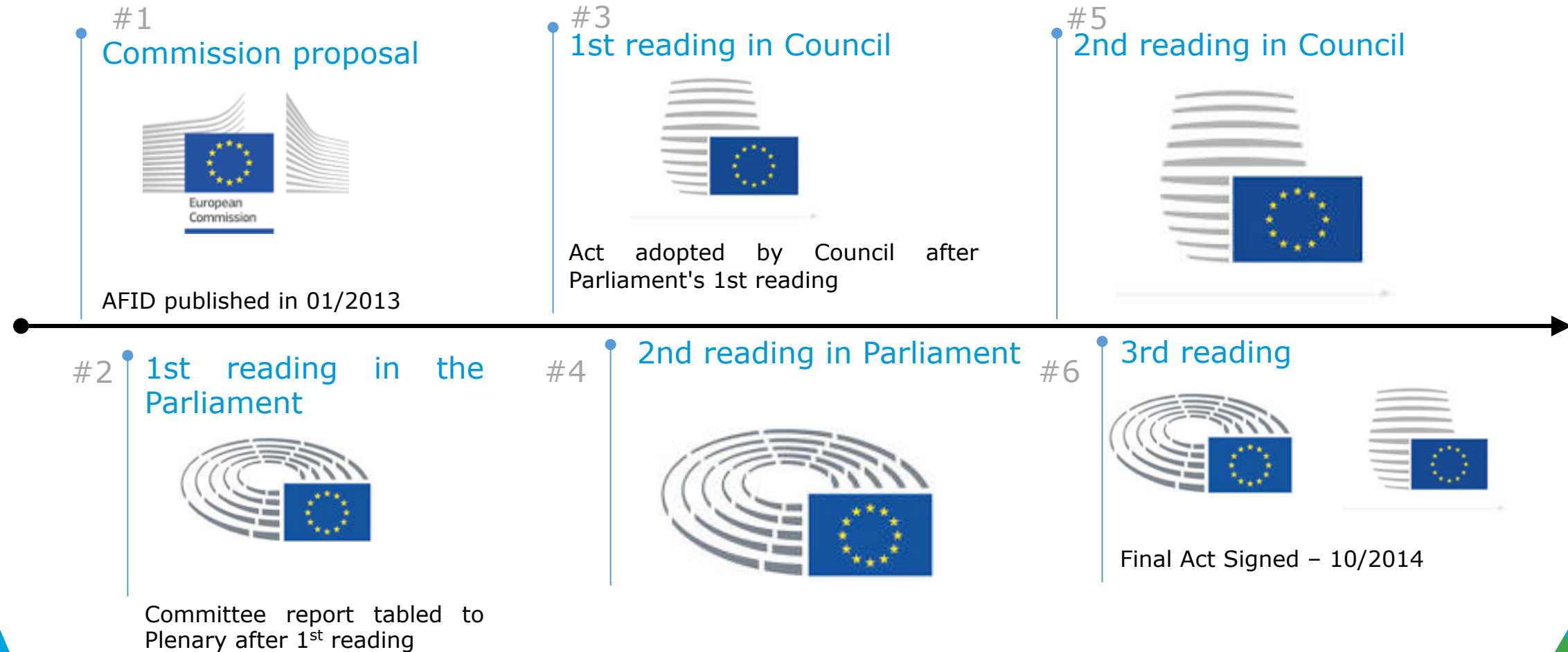
AVERE's electromobility vision for Europe is:

- A strong electromobility industry;
- Clean, quiet and healthy cities;
- Energy efficient transport;
- Independence of fossil fuels.



EU legislative process (1/2)

Ordinary legislative procedure is the general rule for adopting legislation at the EU level. A proposal needs the endorsement of the Parliament and the Council, which is called co-decision.



EU legislative process (2/2)

Proposal adopted

Once both the European Parliament and the Council have approved the final text of a legislative proposal, it is published and becomes official.

- AFID published in the official journal in 10/2014



The legislative proposal is adopted



The legislative proposal is not adopted

Proposal not adopted

If a legislative proposal is rejected at any stage of the procedure, or the Parliament and Council cannot reach a compromise, the proposal is not adopted and the procedure ends. A new procedure can start only with a new proposal from the Commission.

AFID: Overview

The AFID sets out *minimum requirements for the deployment of public alternative fuels infrastructure* for:

- Electricity
- Hydrogen
- CNG
- LNG

With regards to EV charging points, Member States must have

- The appropriate number of recharging points by 2020 in order to ensure that electric vehicles can circulate *at least in urban/suburban agglomerations*
- And, where appropriate, within networks determined by the Member States

As an *indication*, the appropriate average number of recharging points are to be equivalent to at least one recharging point per 10 electric cars.

By 31 December 2020,

- The Commission *must review* the implementation of this Directive, and, *as appropriate*, submit a proposal to amend it



Source: Malta Winds

AFID: What is an 'alternative fuel'?

'Alternative Fuels'

- fuels or power sources which serve, at least partly, as a substitute for fossil oil sources in the energy supply to transport and **which have the potential to contribute to its decarbonisation** and enhance the environmental performance of the transport sector.

They include:

- electricity
- hydrogen
- biofuels
- synthetic and paraffinic fuels
- natural gas, including biomethane, CNG and LNG
- liquefied petroleum gas (LPG)



AFID – Charging Speeds

‘recharging point’

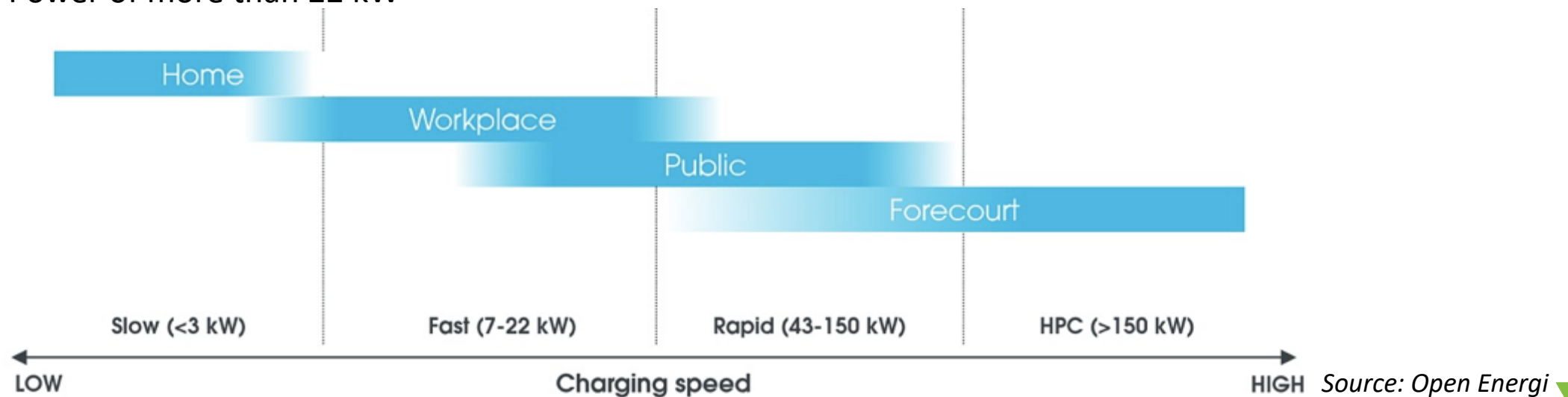
- means an interface that is capable of charging one electric vehicle at a time or exchanging a battery of one electric vehicle at a time

‘normal power recharging point’

- Power less than or equal to 22 kW

‘high power recharging point’

- Power of more than 22 kW



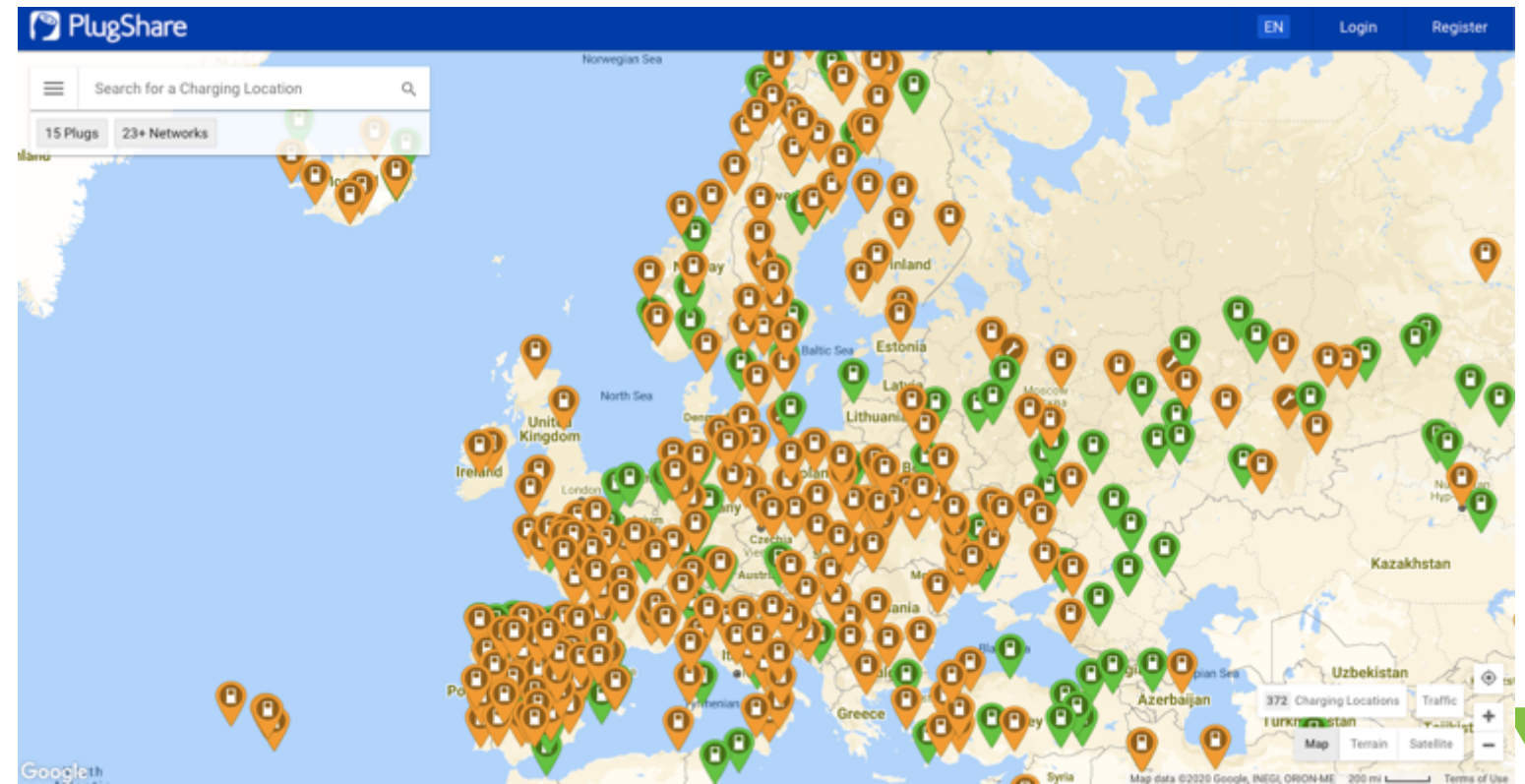
AFID - Transparency

All recharging points accessible to the public shall allow for charging

- *on an ad hoc basis* without entering into a contract

Member States shall ensure prices are

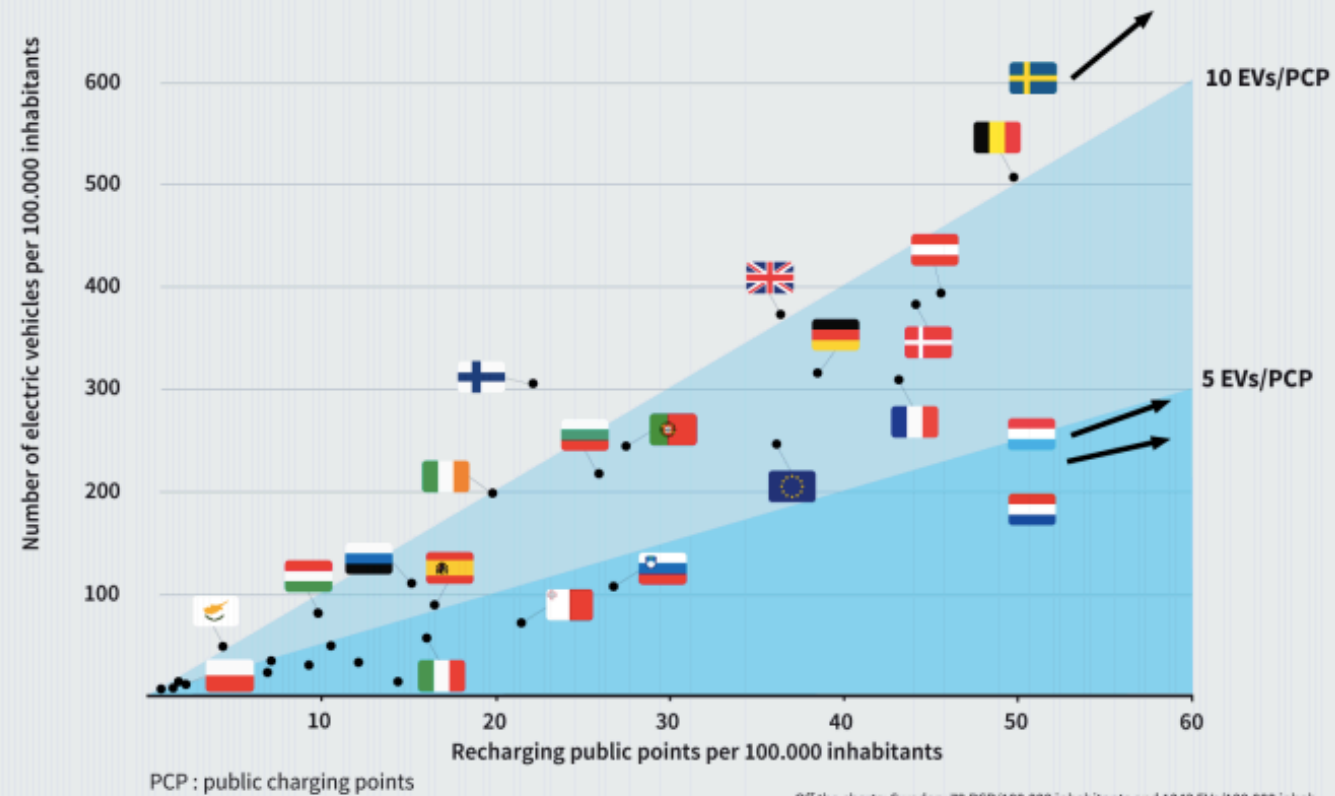
- reasonable
- easily and clearly comparable
- transparent
- non-discriminatory



Poll #1

EV Infrastructure: today

Current number of public chargers and EVs across Europe



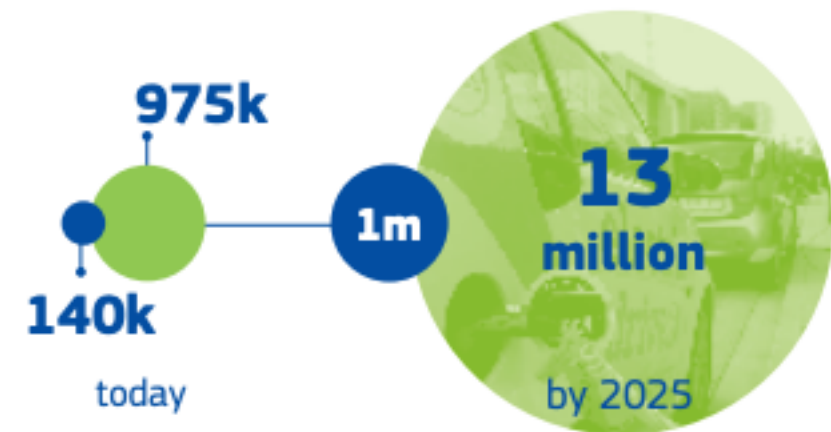
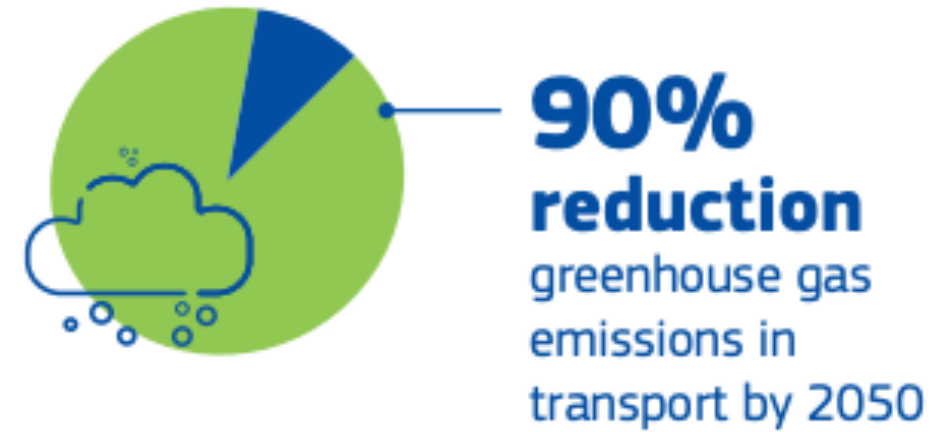
Off the charts: Sweden: 79 PCP/100,000 inhabitants and 1043 EVs/100,000 inhab.
 Netherlands: 296 PCP/100,000inhab and 996 EVs/100,000 inhab.
 Luxembourg: 153 PCP/100,000 inhabitants and 755 EVs/100,000 inhab.
 Source: T&E analysis of Plugsurfing, OpenChargemap and EAFO

Figure 1: Current supply overview of EVs and public chargers across the EU countries

European Green Deal



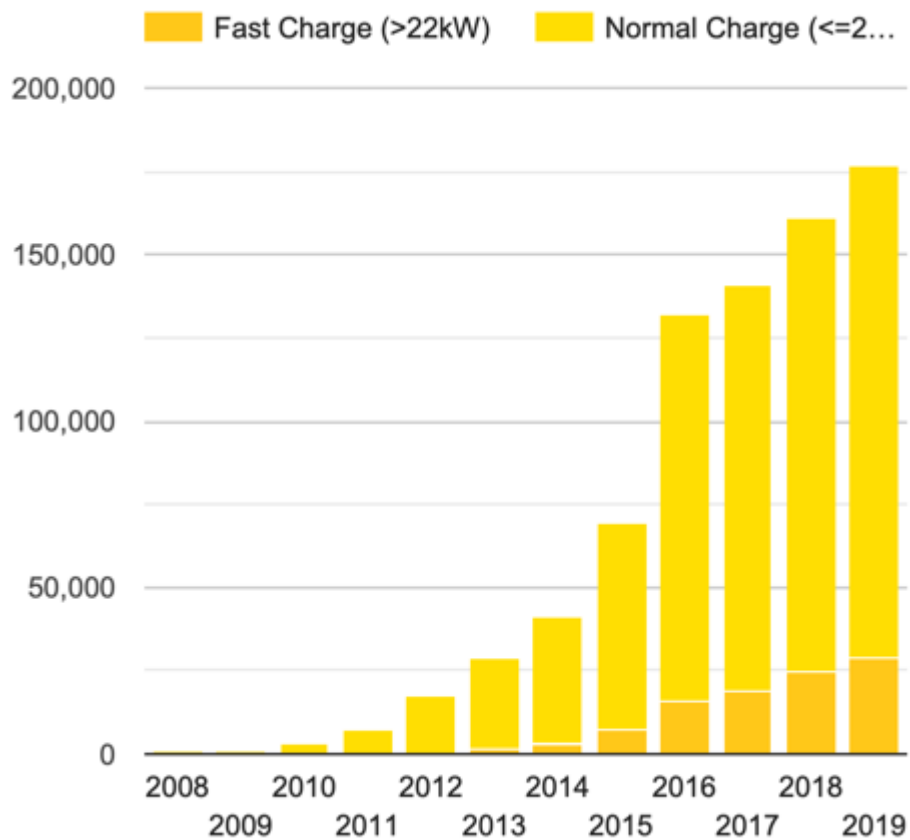
Source: European
Commission,
2019



● Recharging
points

● Low-emission
vehicles

EV Infrastructure Europe

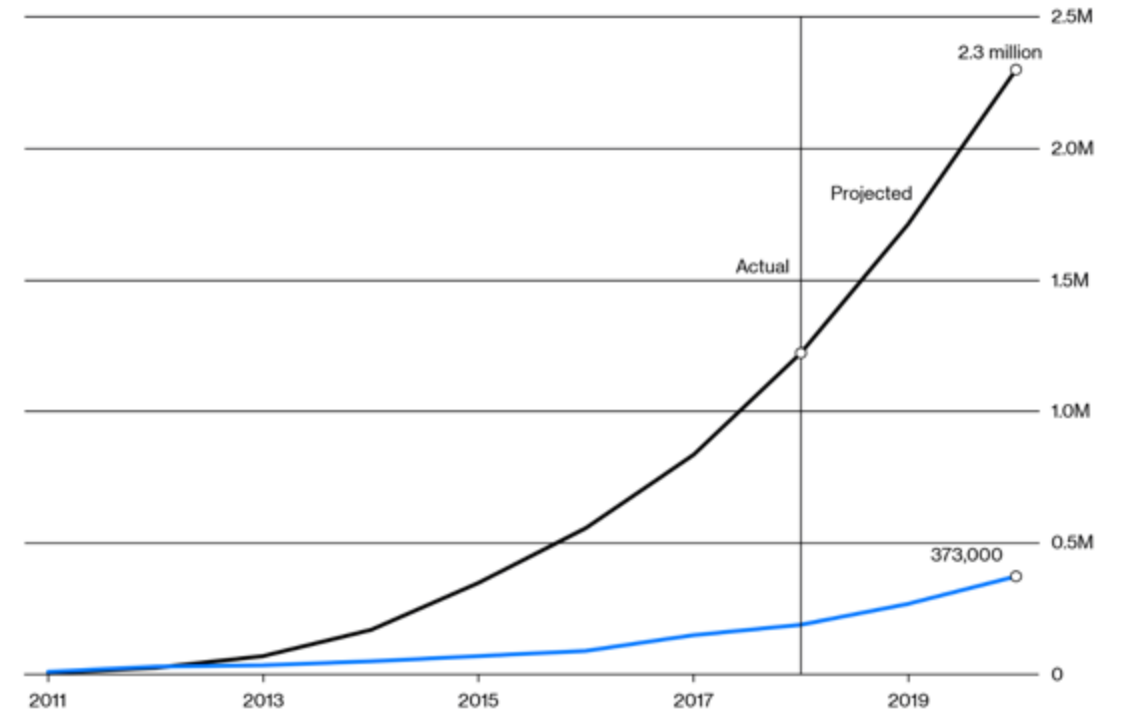


Source: EAFO

Europe Shifting to EVs

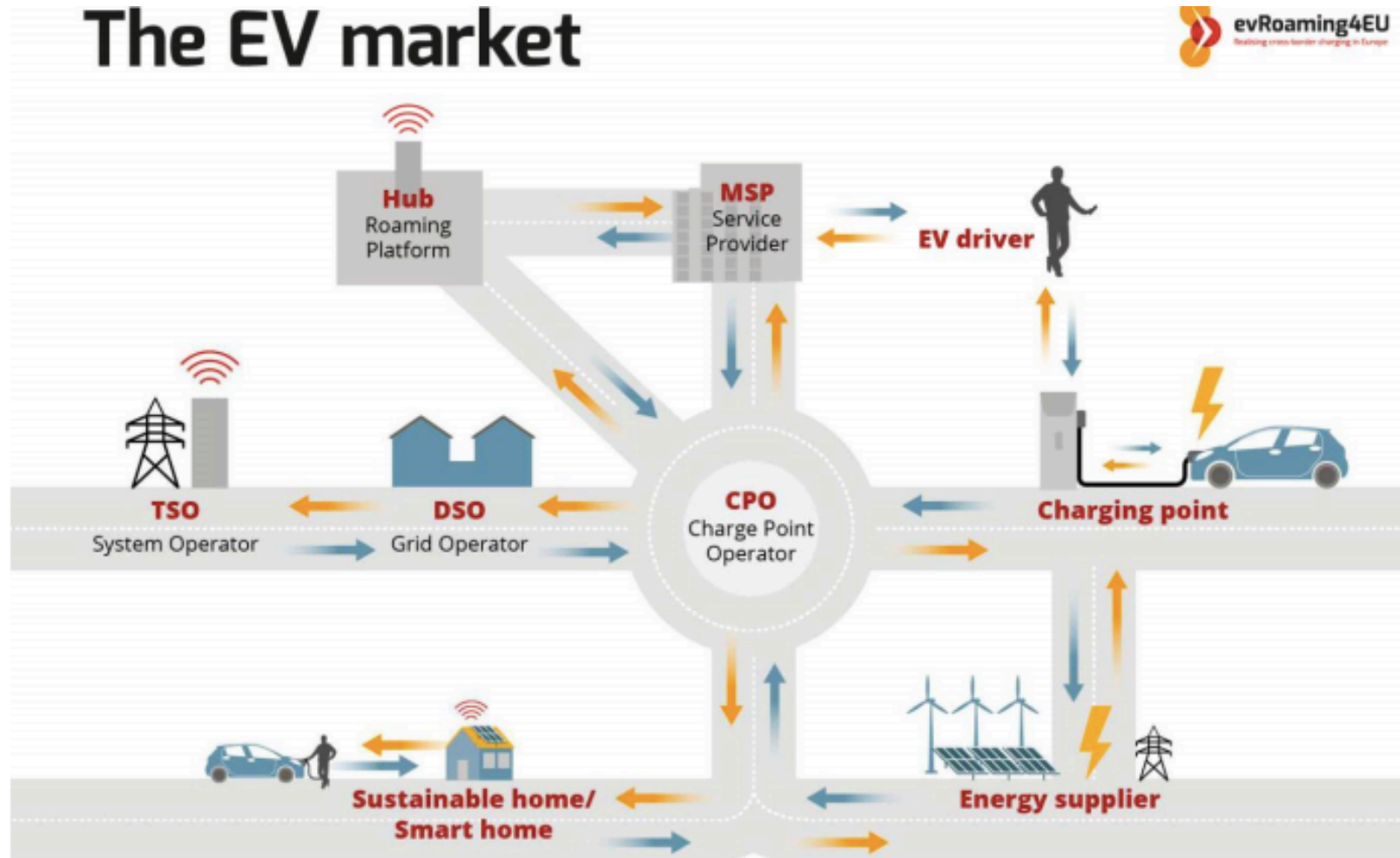
Charging network improves as EU's compatibility standards take hold

EV fleet size / Charging stations

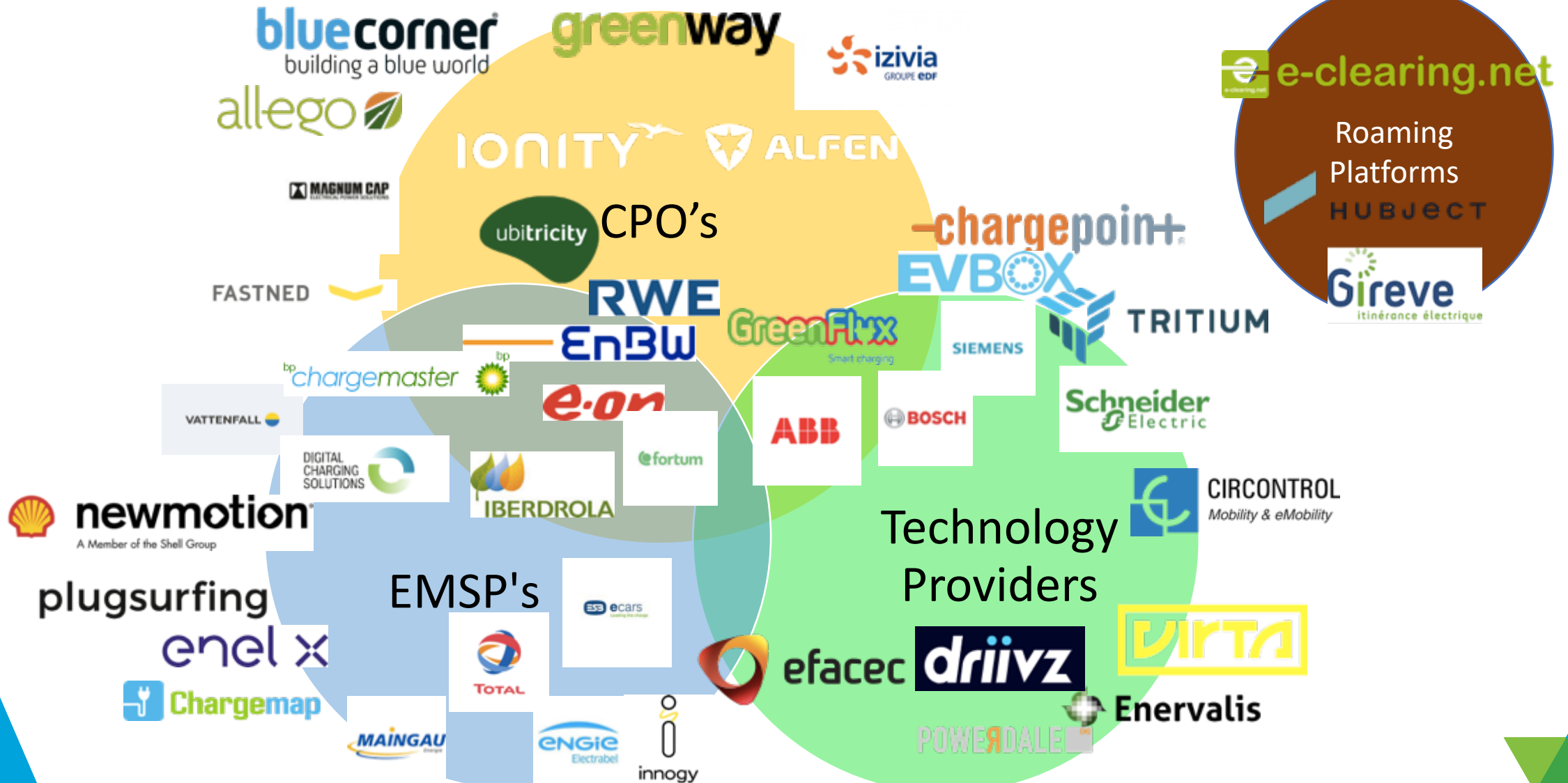


Source: Bloomberg New Energy Finance

EV Infrastructure Market



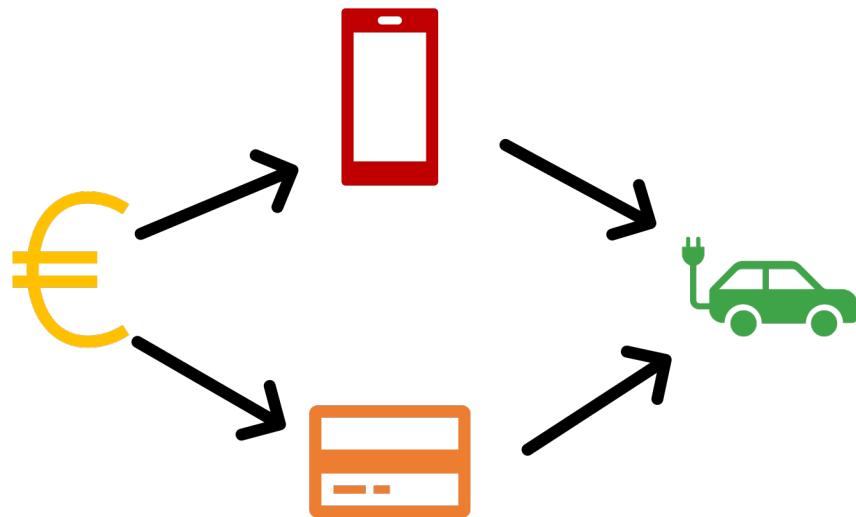
Market Development



EV Infrastructure issues: the consumer perspective

Key issues today:

- Roaming with an EV (ad-hoc & subscription-based)
- Price transparency
- Payment methods
- Charging in Buildings
- Chargepoint availability & real time information



EV Infrastructure issues: the business perspective

Cost-effectiveness (i.e. for high and ultra fast charging)

Public Tendering processes

Communication protocols

- communications from vehicle to recharging point,
- from vehicle to DSO, from recharging point to CPO
- from recharging point to recharging point
- from CPO to roaming platform

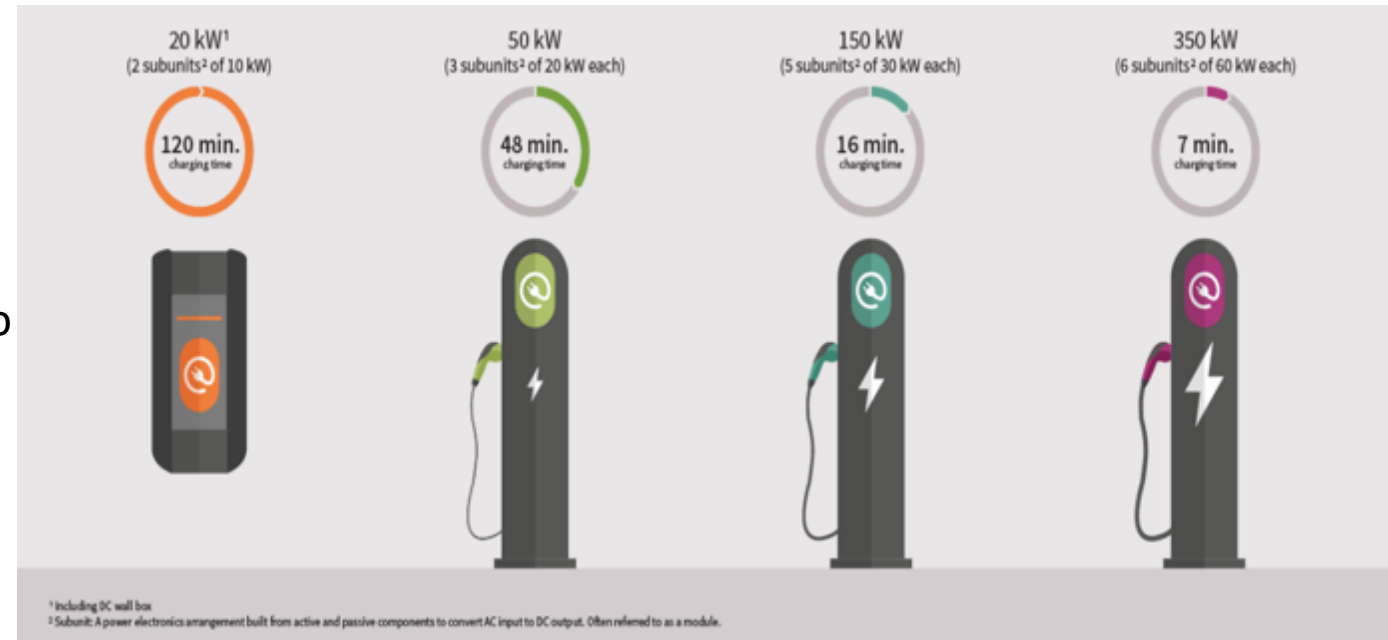


Poll #2

A revised AFID(R): Definitions and binding targets

An AFI Regulation would eliminate inconsistent implementation and interpretation across the EU

- Go beyond pure public infrastructure into the private domain and supporting the 'right to plug' (i.e. in buildings)



Binding targets for EV charging infrastructure for Member States for 2025 & 2030 timeframes

Source: Infineon

Revised definitions for:

- 'alternative fuels' - focusing on zero emission mobility
- A more robust definition of 'slow', 'normal', and 'fast charging'
- 'semi-public' charging points – those that are not accessible 24/7 or are partly restricted (i.e. Ikea/Colruyt)

A revised AFID(R): consumer perspective

Key areas to improve for transparency:

- Enable, seamless, interoperable and harmonized ad-hoc and/or subscription based charging
- Set proportionate, transparent and fair pricing, i.e.:
 - Show the price by kWh, and, if necessary extra fees (to be transparently provided)
 - Show the price by 'euros/national currencies per 100km'



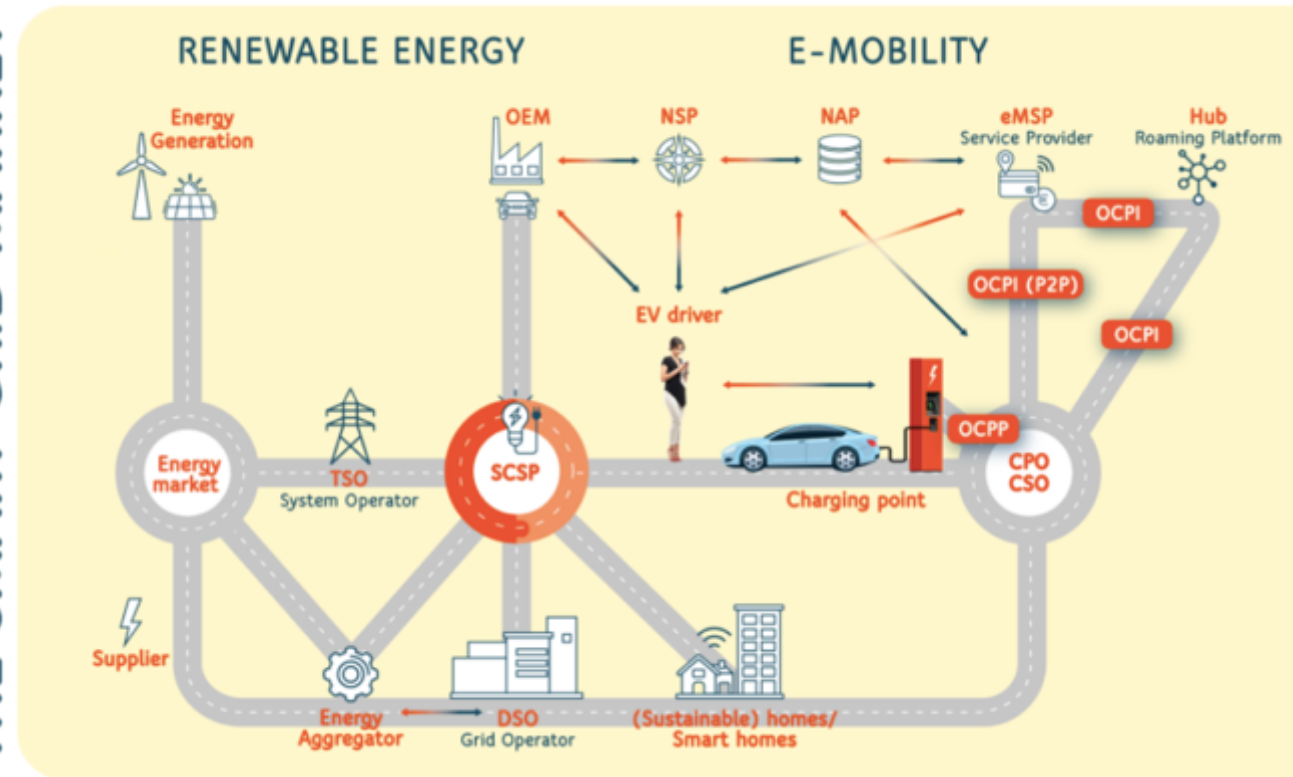
A revised AFID(R): business perspective

The AFIR could align on minimum roaming protocols which would help develop the seamless consumer friendly charging experience

Provide and recommend streamlined minimum tendering processes for municipalities

Provide funding for not profitable investments (i.e. ultra fast charging), linked to mandatory targets for EV infrastructure to boost public investment.

THE SMART GRID MARKET

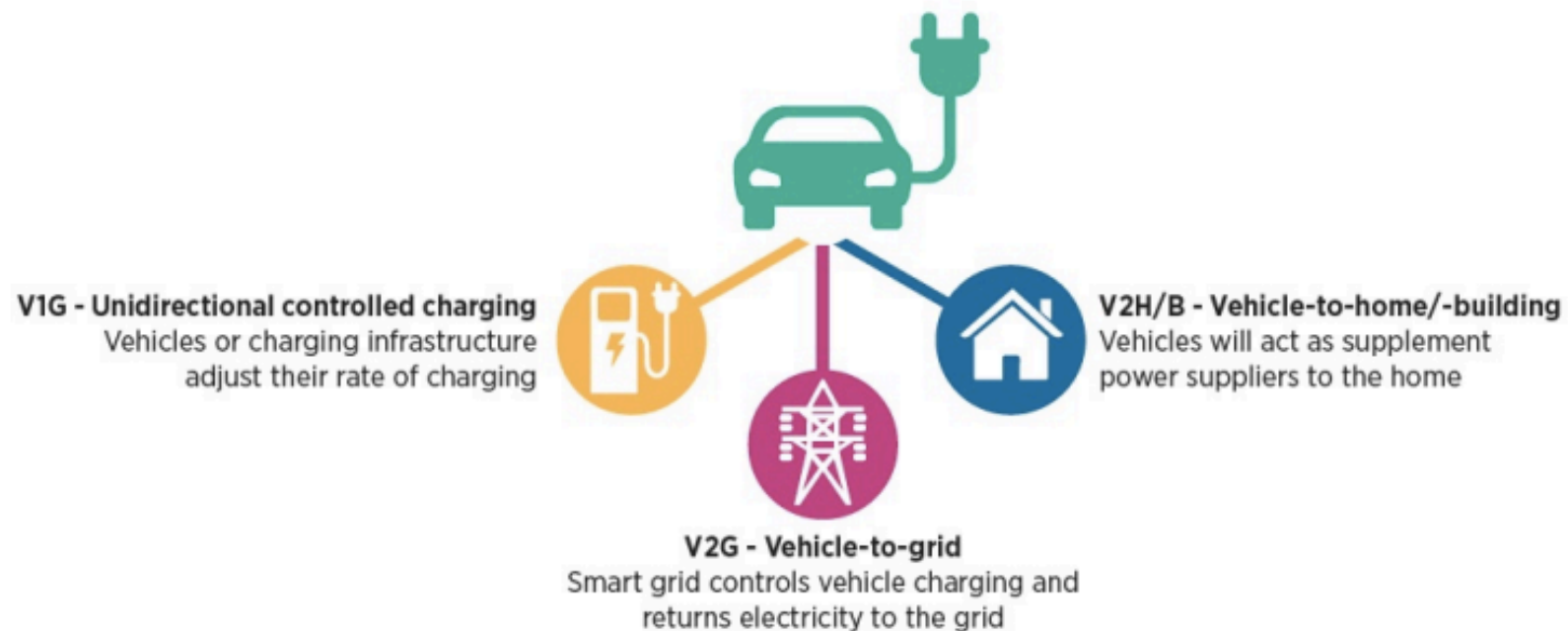


Source: *evRoaming4EU*

A revised AFID(R): Smart charging

Ensure that EV charging infrastructure is equipped with **smart charging technology** – the precondition for successful and cost-effective EV grid integration

- i.e., when the charging of the vehicle can be controlled, slowed, accelerated, stopped, or postponed



Source: IRENA

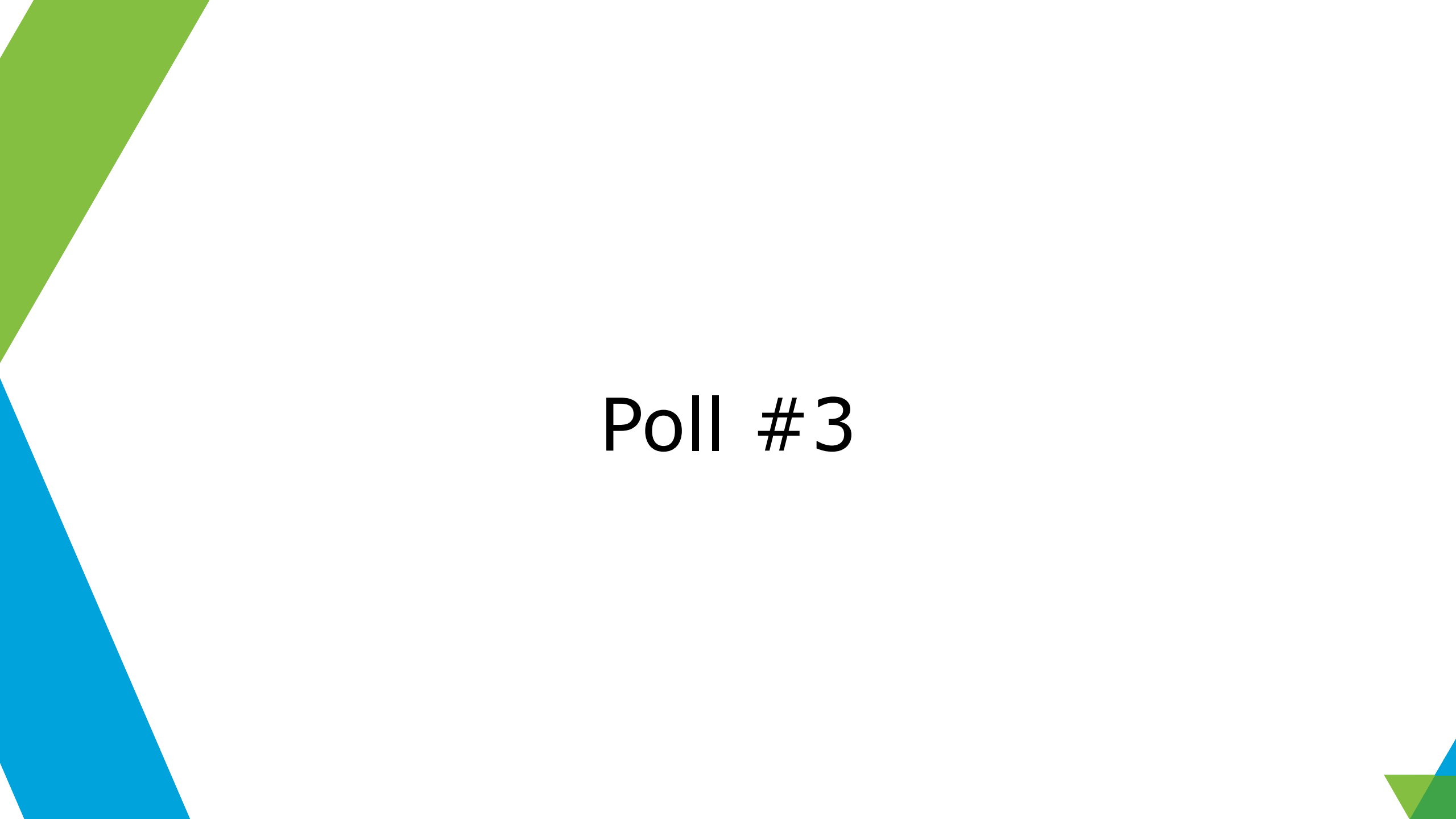
SEEV4-City: Flexpower

Overview

- A total of 456 charging stations with 912 charging points or a 1/3 of all charging stations in the city
- Charging stations provide less electricity between 18.00 to 21.00, and charge more at night when consumption is low or during the day when a lot of local solar power is being produced.
- As most electric cars are charged outside peak hours, electric car drivers benefit from quicker charging



Source: SEEV4-City



Poll #3

Q/A

Please submit your questions through the Q&A



Join our upcoming webinars

Thank you and don't forget to register to our upcoming webinars!

02/04 – 10am CET: Pricing of public charging for electric vehicles and the EAFO project: We will present the work of the European Alternative Fuel Observatory (EAFO), the ongoing research, the challenges to the research, and the future of pricing and business model for charging.

09/04 – 10am CET: Raw materials supply chain for batteries: We will focus on the future of the supply chain for raw materials for batteries used in electric vehicles, from available resources, responsible sources, potential substitutes and the future of the supply market.

