



European
Electro-mobility
Observatory

Towards fact-based EV policy making



Funded by the EU



EEO Introduction



- The EEO was set up in 2012 and is funded by the EC
- The EEO's role is underlined in CPT directive (2013):
“...facilitate information exchange and coordinated regional action across the EU...”
- EEO is designed to:
 - answer key questions on drivers and support schemes as well as compile learning from experiences across Europe
 - identify robust deployment channels based on specific local conditions
 - become a major tool for policymakers at all levels:
 - monitoring current and planned infrastructure across Europe
 - analysing data and providing policy recommendations

EEO Consortium



EEO Components



- **Input**
 - Linking to stakeholder organisations (e.g. EVI, UITP, eMI3)
 - Linking to EU projects and programmes
 - National and regional data (through surveys)
 - Miscellaneous (Literature, symposia, etc.)
 - **Tools**
 - Web-based survey tool and database (regular data survey)
 - Specific Surveys
 - Workshops & Webinars
 - **Output**
 - Workshops & Webinars (knowledge exchange)
 - Analysis reports & Country factsheets
 - Communication and dissemination
-  www.ev-observatory.eu



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Overview of policies and models for the deployment of a charging infrastructure for EV

M. Weeda (ECN)

European Electromobility Plugged-in:
Stimulating EV infrastructure deployment,
3rd EEO workshop, 9 October 2014, Rotterdam



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EU Directive on the deployment of alternative fuels infrastructure



- Directive adopted on 29th of September 2014
 - Ensures a common legal framework
 - Sets out minimum requirements for build-up
 - Calls for national policy frameworks (action plans)
- Timeframes and time indications
 - Frameworks within 24 month after date of entry into force
 - Report on progress of implementation 3 years after 24 months period
- Quantitative guidelines for charging infrastructure
 - Installation of appropriate number of publicly accessible points by end 2020
 - Suggestion: at least 1 publicly accessible point per 10 cars

EU Directive on the deployment of alternative fuels infrastructure: reporting



- Report on progress of infra build-up shall include at least:
 - Targets and objectives:
 - Estimation of vehicles by 2020, 2025 and 2030
 - Level of achieving objectives for deployment of fuels
 - Level of achieving targets, year by year, for deployment of infrastructure
 - Infrastructure developments: capacity and utilization
 - Information on legal (legislative, regulatory, administrative) measures
 - Policy measures, incentives:
 - Direct incentives for vehicles and/or infrastructure
 - Tax incentives for vehicles and/or infrastructure
 - Use of public procurement
 - Demand-side non financial incentives
 - Public budgets allocated to support infrastructure deployment and manufacturing plants for alternative fuels technologies
 - Public budgets for RTD&D

EEO data survey (almost) in line with reporting requirement



- Plug-in Electric and Fuel Cell Electric Vehicles!
- The following topics are addressed in the survey:
 - Targets for vehicles and infrastructure deployment
 - Number of EVs per type and vehicle segment
 - Number and type of charging points and hydrogen refueling stations
 - Policy measures for deployment of EVs and related infrastructure
 - National programs and main projects
 - Knowledge needs and needs for exchange of experiences
- Web-based tool: ambition to update data 2x year

EEO data survey experiences



- EV initiated at local and regional level: too many entries, difficult to build complete picture bottom-up
- Wealth of data but no two numbers are the same: accuracy and quality, and up-to-date?
- Passenger cars are relatively easy but charging infrastructure is a challenge
- Not easy to categorize and describe incentives for deployment of vehicles and infrastructure in a concise and homogeneous way for purpose of comparison
- Need for:
 - Appropriate national monitoring structures
 - Central national liaisons for official data

Monitoring structure: Example from the Netherlands



- Update of numbers on a monthly bases! (Google 'cijfers elektrisch vervoer RVO' – unfortunately only in Dutch)

E.g.:

Type voertuig	Aantal per	31-12-2012	31-12-2013	30-06-2014	31-07-2014	31-08-2014
Personenauto (FEV)		1.910	4.161	5.084	5.151	5.329
Personenauto (E-REV, PHEV) #		4.348	24.512	32.223	33.015	33.732
Bedrijfsauto < 3500		494	669	741	766	777
Bedrijfsauto > 3500		23	39	45	45	47
Bus *		67	73	83	83	83
Quadricycles (vh driewielig)		469	632	705	720	723
Motorfiets		99	125	172	184	189
Totaal op de weg		7.410	30.211	39.053	39.964	40.880
Bromfietsen		2.853	3.130	3.281	3.316	3.330
Snorfietsen		17.748	19.772	21.592	22.069	22.474
Brommobielen		107	141	165	165	165
Totaal inclusief brom/snorfiets/brommobiel		28.118	53.254	64.091	65.514	66.849

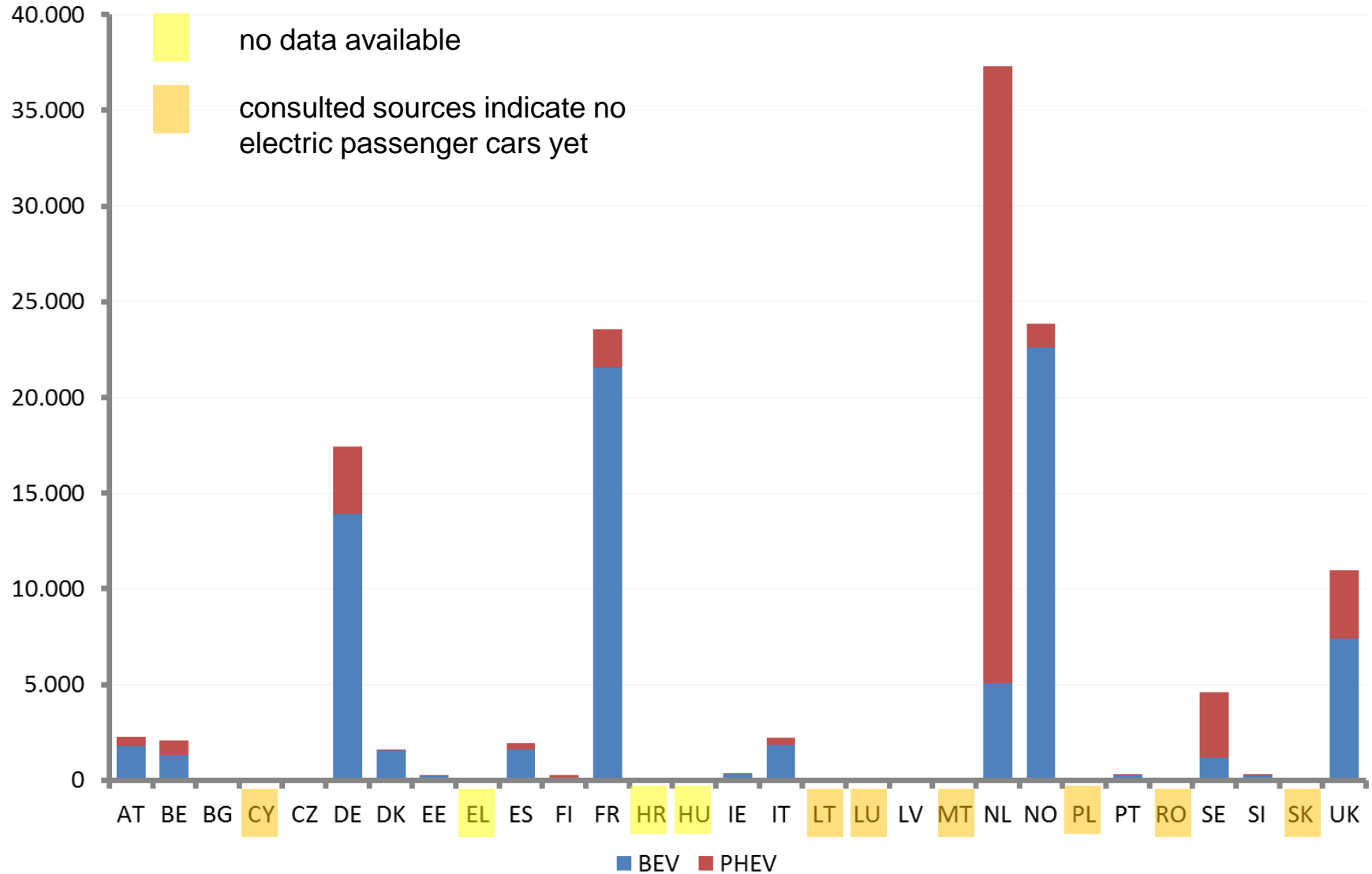
* Inclusief trolleybussen en een aantal hybride bussen; # Exclusief volledig hybride voertuigen

Number of registered
EVs in the Netherlands

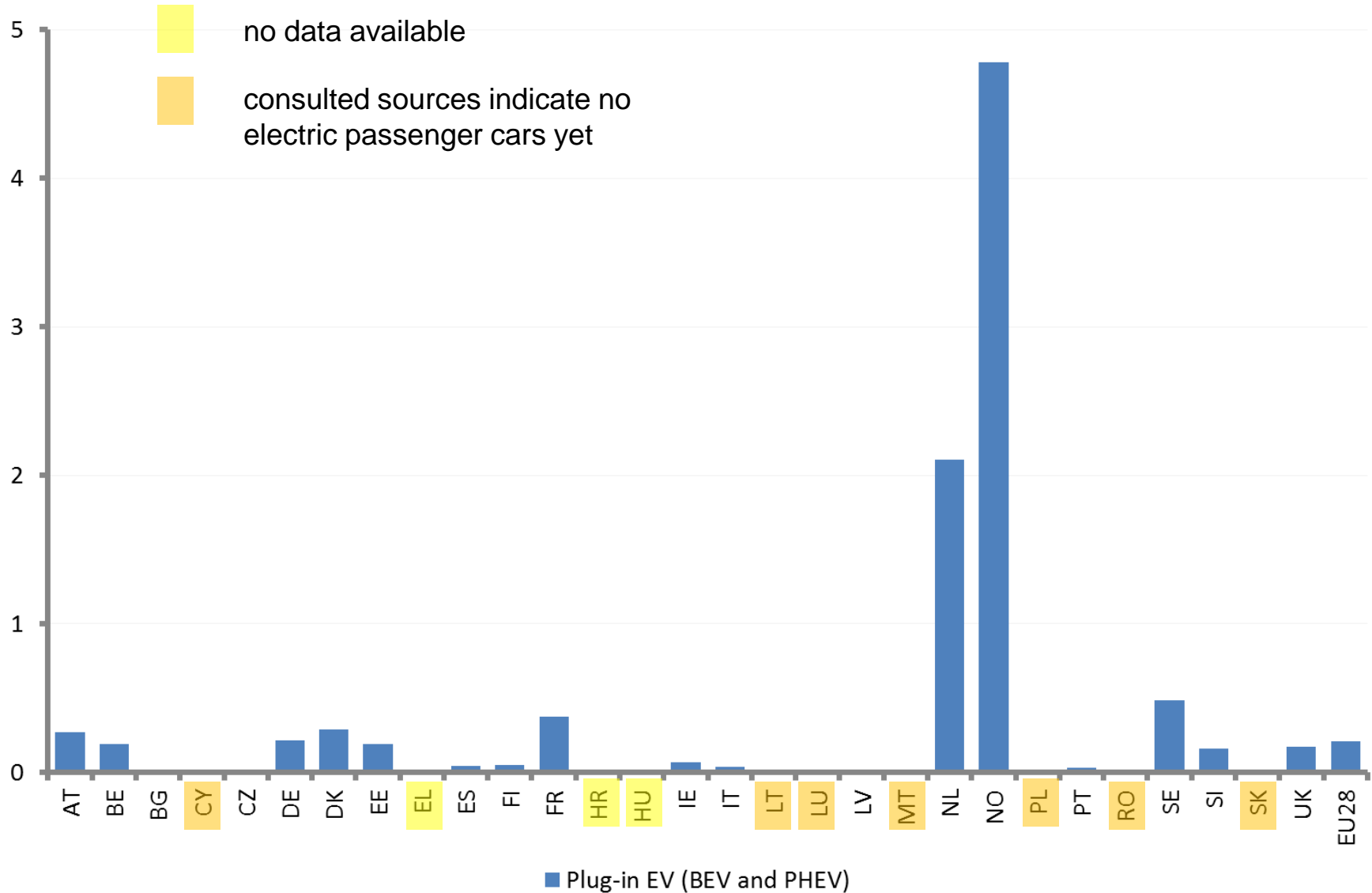
Aantal geïnstalleerd per	31-12-2012	31-12-2013	30-06-2014	31-08-2014
Standaard laadpunten				
Publiek (24/7 openbaar toegankelijk)	2.782	3.521	4.512	4.096
Semi-publiek (beperkt openbaar toegankelijk)	829	2.249	5.897	6.202
Snellaadpunten				
Publiek en semi-publiek	63	106	186	162
Private laadpunten				
Inschatting op basis van onderzoek in 2012 en extrapolatie en geschatte toename op basis van geregistreerde EVs	4.500 – 5.500	18.000		

Number of charging
points in the Netherlands

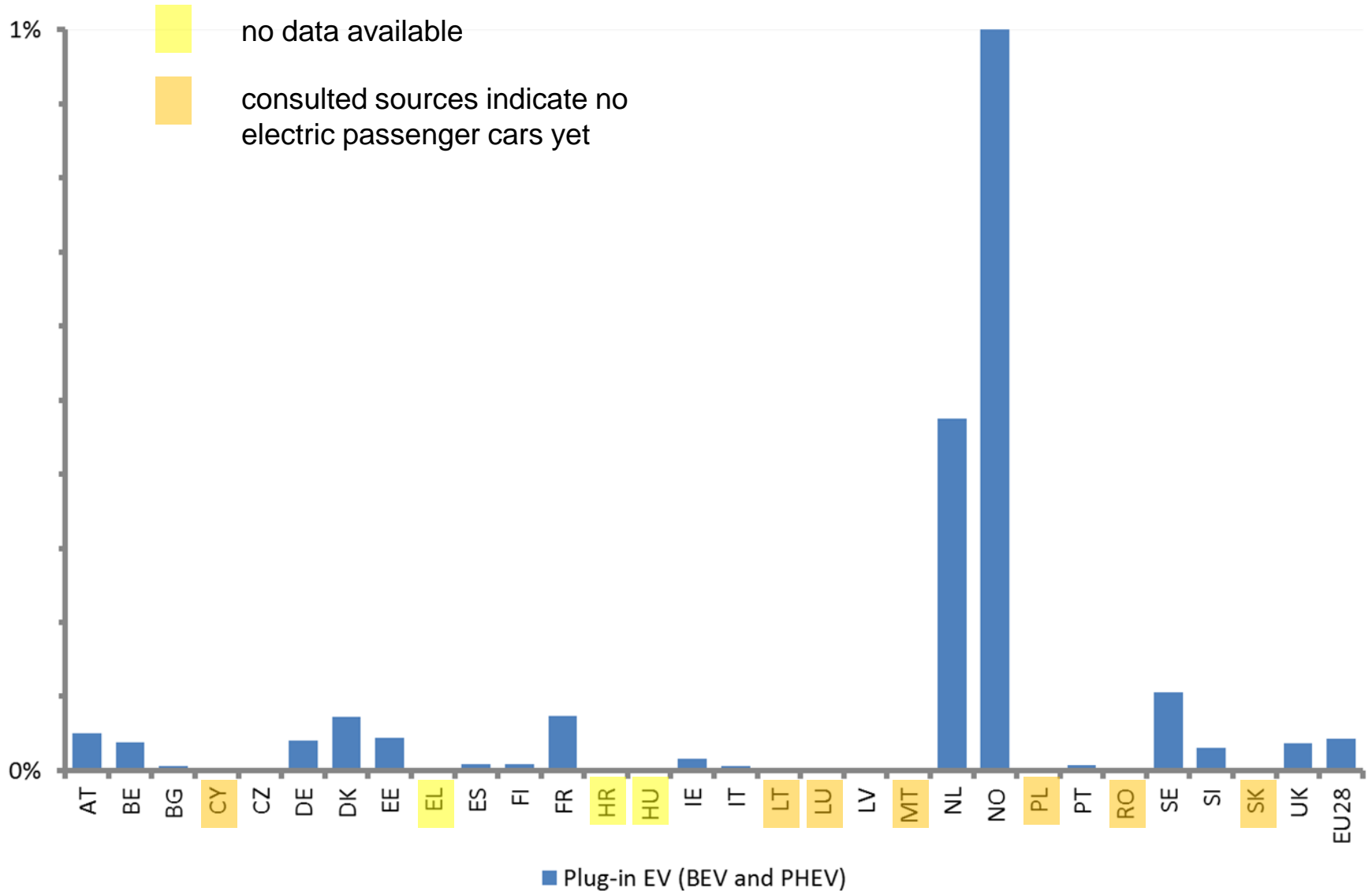
Number of electric passenger cars per country by 6/2014



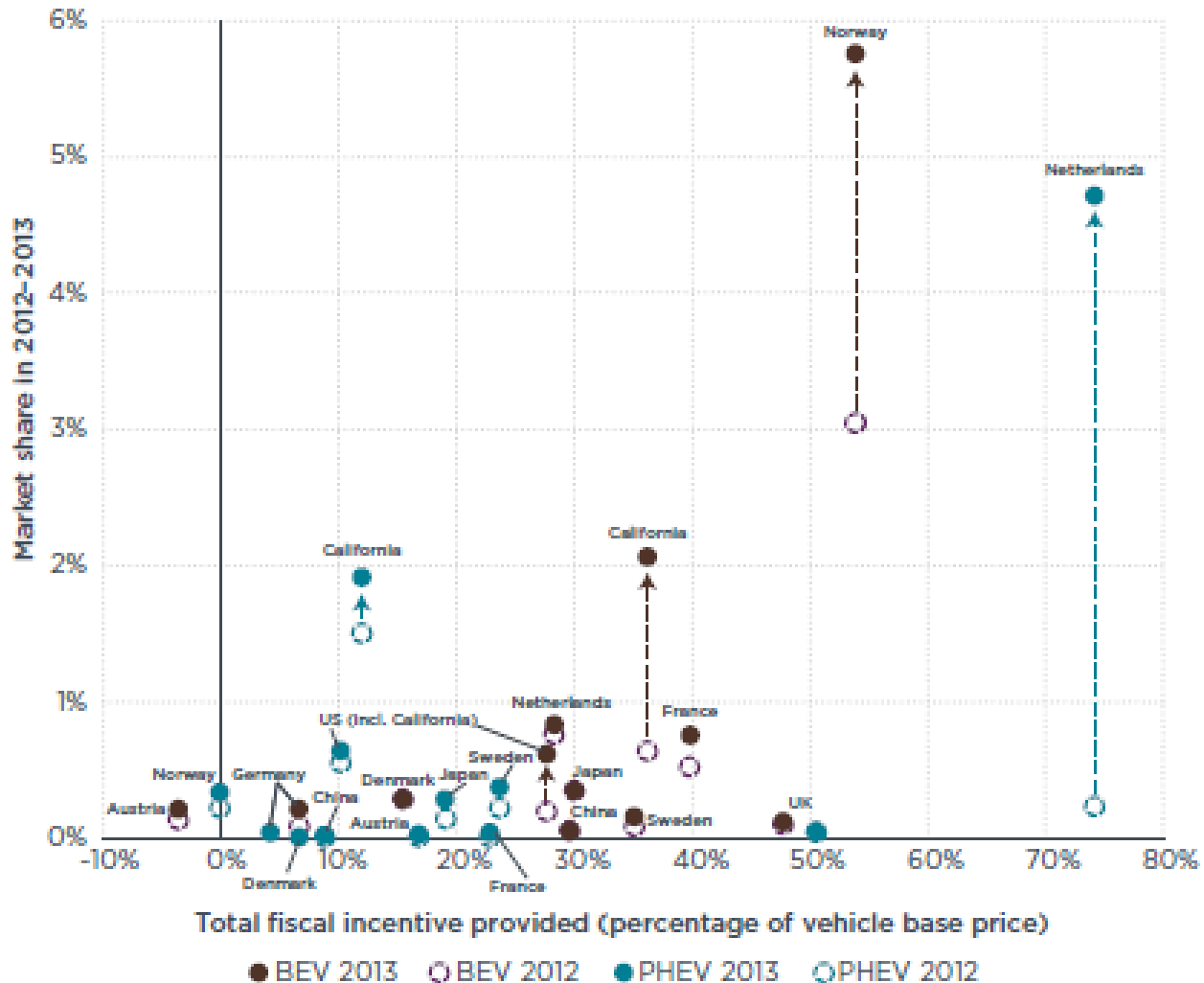
Electric passenger cars per 1000 inhabitants per country by 6/2014



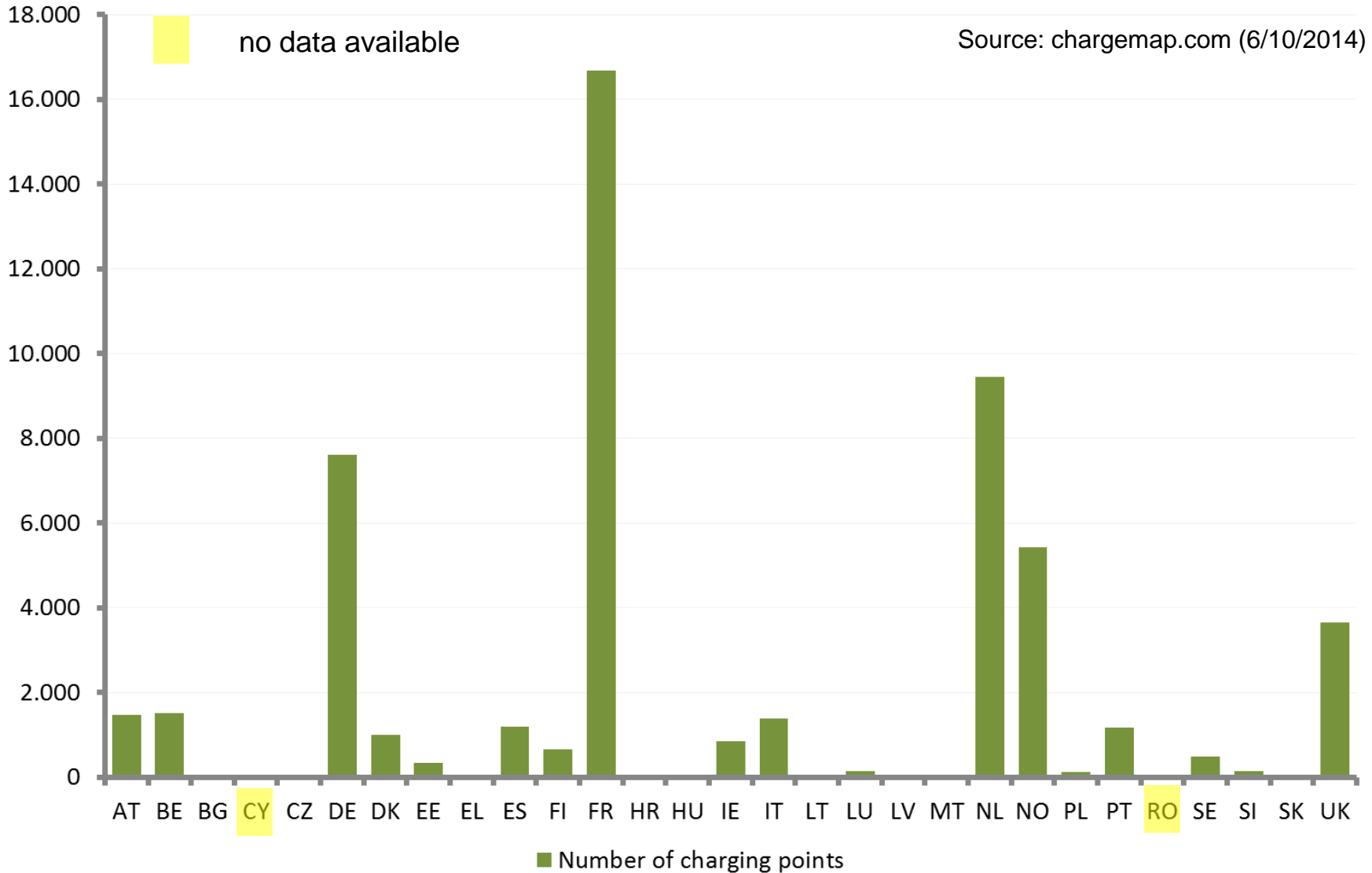
Electric passenger cars as % of the fleet country by 6/2014



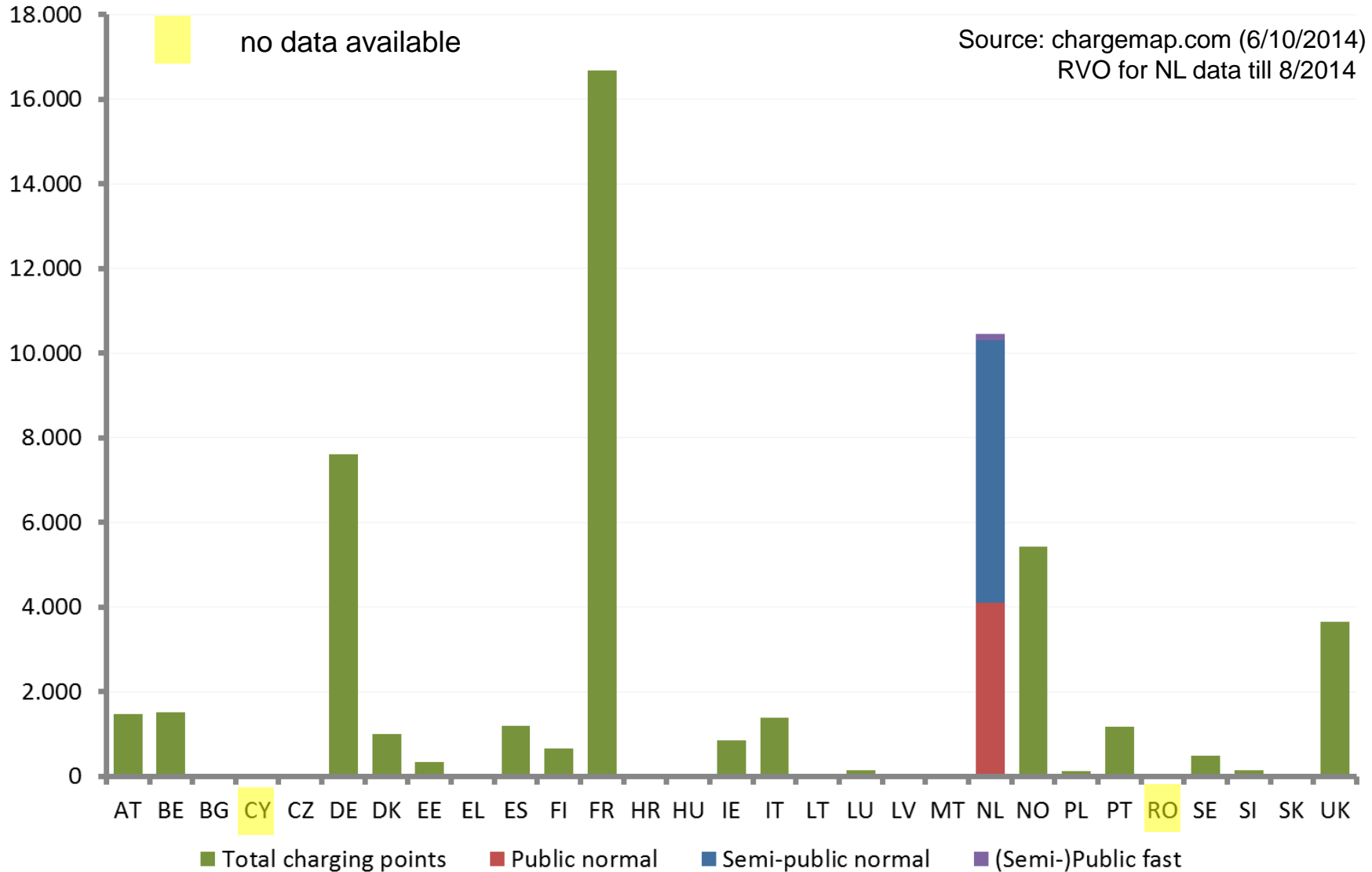
Fiscal incentives matter ... but there is probably more



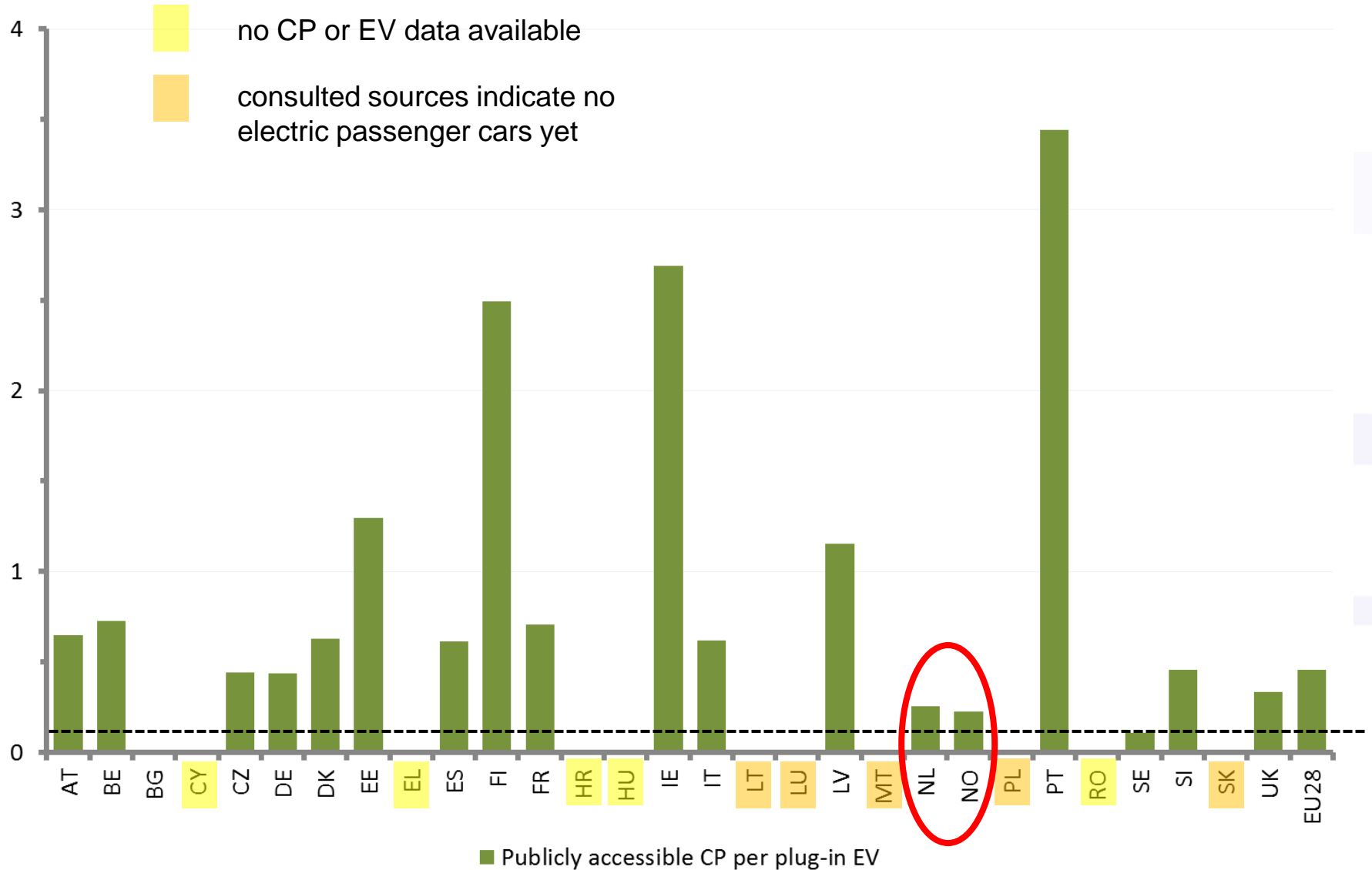
Number of charging points per country; Accuracy? Valid for when?



Number of charging points per country



Number of charging points (with public access) per electric passenger car per country



Models for deployment of charging infrastructure in various member states



- France
 - Infrastructure primarily relies on public authorities and funding
 - First leadership at local level
 - A national strategy has recently been added (August 2014)
 - Relieving financial burden from local authorities and should ensure realisation of a consistent network
- Netherlands
 - Start with national action plan and national infrastructure initiative
 - Base principle: installation and operation of infra is a market activity
 - Investments done by local authorities (4 large cities), but shift to concession model and permit model
 - Interoperability organised right from the start

Models for deployment of charging infrastructure in various member states



- Spain
 - National strategy and plan for Promotion of EV: MOVELE
 - Main focus on cost reduction of EV by direct subsidy
 - Deployment infrastructure in local and urban zones together with purchase of vehicles; little focus on national network development
 - Amendment electric sector law: selling electricity no longer restricted to electricity suppliers
- UK
 - Plugged-in Places program: match-funding to public-private consortia to install EV charging points in selected regions
 - First gain experience and learn about effective future network
 - New national program for 2015-2020 provides at least £ 32 million support for installation of public and private charging points

Preliminary recommendations



To support decision makers in defining realistic roll out strategies:

- Identifying trends, business cases and support schemes is crucial: up-to-date insight into recharging and refuelling deployment is needed. More need to be done to ensure input of quality data sources – appropriate national monitoring structures
- Insight into the landscape of regional variation and the relations between regional and national transport and energy authorities helps to identify common denominators: intensive exchange in workshops and webinars needed to extract detailed information
- A more comprehensive study is needed of the full range of policy actions applied to support the EV market and how this influences customers decisions to select EV as the preferred option; fiscal incentives matter, but there seems to be more ...

The EEO is ready to ensure the input necessary for successful roll-out is at your fingertips: www.ev-observatory.eu



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