Towards Decarbonisation of the Transport Sector
E-Mobility in Austria

Henriette Spyra, Austrian Ministry of Transport Innovation and Technology

EV sales, vehicle production and battery production through 2017

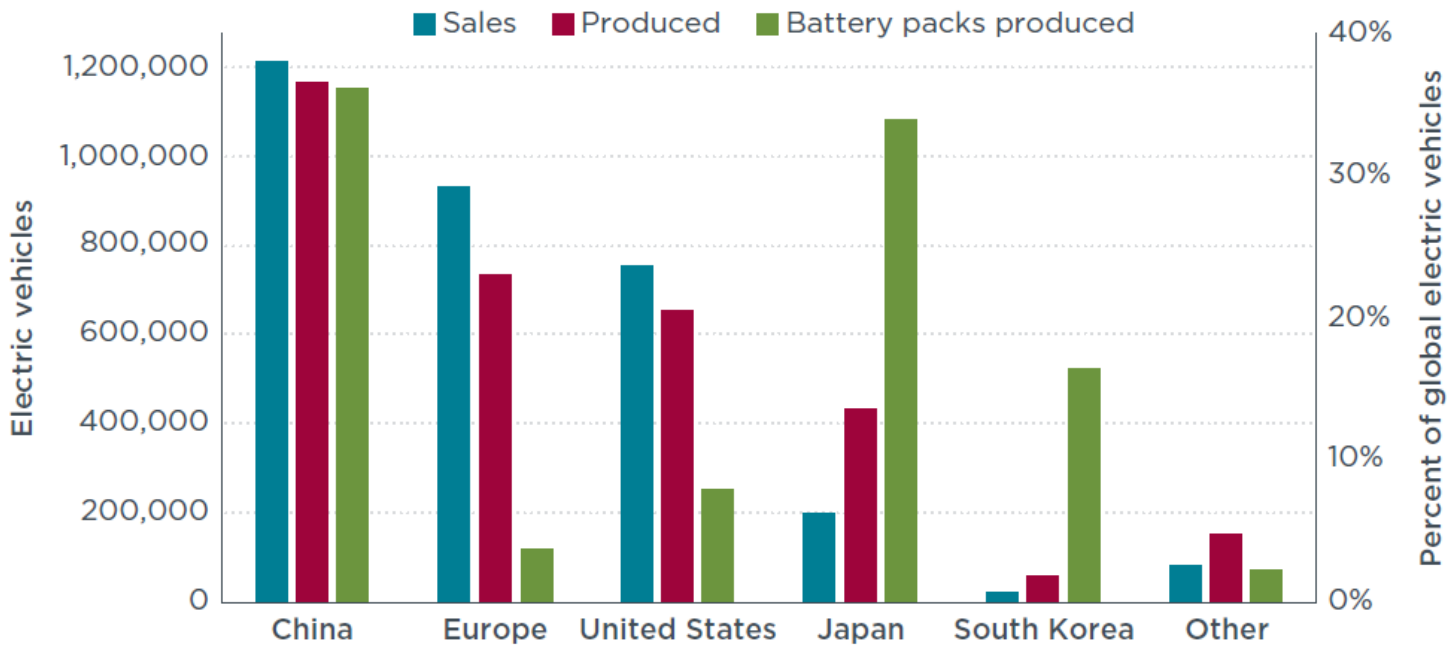


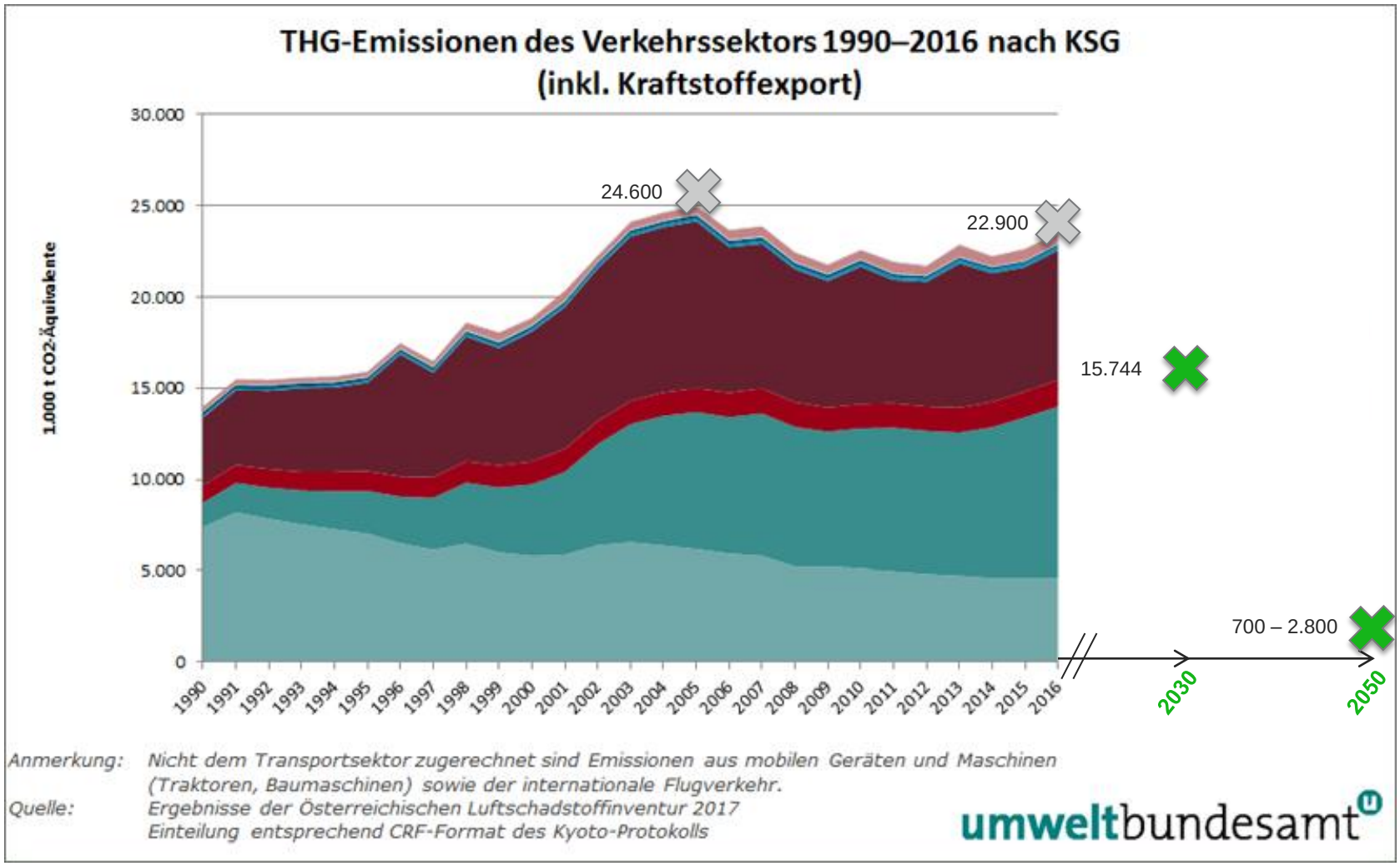
Figure ES-1. Electric vehicle sales, electric vehicle production, and electric vehicle battery production by region through 2017.

Electrification of Road Transport - Overview

- Transport in Austria has a 46% share in GHG emissions (Non-ETS)
- GHG emissions in transport have increased since 1990 by 66% (2016)
- CO_2-emissions increased mainly due to road transport
- Projected further increase in transport performance - passenger and goods

→ Diametrically opposed objectives

(Economic) drivers	Climate targets 2030/50
China	Paris Agreement
Active Member States	Effortsharing Decision
Court Decisions	Energy Union
Growth Perspectives	Clean Vehicles Directive
	AFI-Directive - NPF


THG-Emissionen des Verkehrssektors 1990–2016 nach KSG
(inkl. Kraftstoffexport)
1.000 t CO2-Äquivalente
30.000
25.000
20.000
15.000
10.000
5.000
0
24.600
22.900
15.744
700 – 2.800
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2030
2050
Anmerkung: Nicht dem Transportsektor zugerechnet sind Emissionen aus mobilen Geräten und Maschinen (Traktoren, Baumaschinen) sowie der internationale Flugverkehr.
Quelle: Ergebnisse der Österreichischen Luftschadstoffinventur 2017
Einteilung entsprechend CRF-Format des Kyoto-Protokolls
umweltbundesamt

Electrification of road transport

AFID Implementation: National Policy Framework „Clean Power for Transport“ I

bmvit, in cooperation with BMNT, BMWD, nine federal states, cities and municipalities

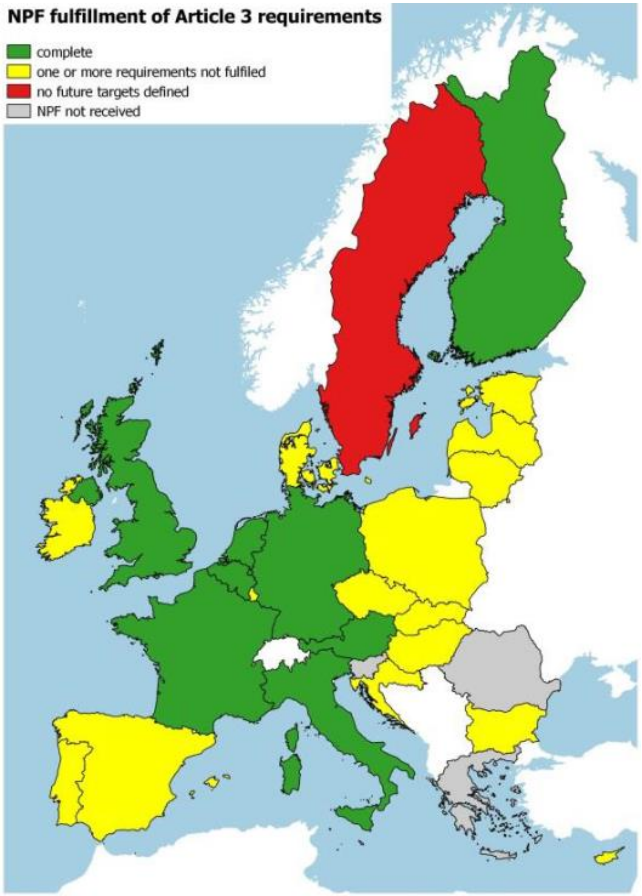
Austria needs a mobility transformation – commitment to:

…CO2-neutral transport sector in 2050.

… transition to low and zero emission road transport on the basis of renewable energy.

…clear focus on electrification as the means to achieve clean transport.

National Policy Framework Austria (2014/94) – EC comments



NPF fulfils requirements of Art. 3. **Main focus on EVs.** General strategic objective: **CO_2-neutral transport sector by 2050** and transition to zero and low emission vehicles in road transport.

All alternative fuels are covered and infrastructure objectives are stated. **Currently** the available infrastructure is seen as **adequate** by EC.

For many EV targeted support measures, the eligibility is linked to the use **of 100% renewable electricity**, a useful provision for ensuring zero WtW emissions

The consideration of the interests of regional and local authorities, as well as stakeholders during the drafting of the Austrian NPF can be considered exemplary.

The Austrian NPF contains a very comprehensive list of measures, most already in place and their prolongation foreseen. Most of them can be considered having a **medium impact** on market actor's decisions. Longer periods for their validity could provide **certainty for market actors** and hence increase the likelihood that the national targets and objectives of the NPF can be reached.

E-Mobility Package 2017-2018 – 72m €

E-Initiative of bmvit & BMNT & Industry

1. **Purchase support for BEV, FCEV, PHEV, REEV, REX**
   - **New:** Private purchase premium (M1, N1≤2,5t): €4.000 for BEV, €1.500 for PHEV, REEV, REX
   - Continued purchase support for companies, associations, municipalities (M1, N1≤2,5t): €3.000 for BEV, €1.500 for PHEV, REEV, REX
2. **Purchase support for 2-wheelers (incl. private), E-Busses, E-Utility vehicles (only municipalities, associations, companies)**
3. **Increased build-up of charging infrastructure**
   - Direct support for publicly accessible charging infrastructure (e.g. €10.000 for quick charger)
   - Direct support for private wall-box or intelligent charging cable (€200)
   - ÖBB & ASFINAG initiative

E-Mobility Package 2017-2018 – 72m €

E-Initiative of bmvit & BMNT & Industry

4. **Regulatory changes**
   - New number plate (started April 1, 2017)
   - Road law and driving license adaptations as well as consumer information
5. **Research, development and demonstration**
   - E-Mobility light house projects and urban e-mobility programme as well as continued research support at bmvit (mobility & energy research)
   - E-Mobility model regions

Additionally - Changes in company car taxation and tax exemptions

Funding for R&D and roll-out

klima+ energie fonds

Austrian Electric Mobility Flagship Projects

9th Call

Submission deadline: 04 October, 2017, 12:00

A funding initiative of the Climate and Energy Fund of the Austrian Federal Government within the framework of the action package for the promotion of electric mobility launched by the Ministry for Transport, Innovation and Technology (bmvit) and the Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) in cooperation with the car and bike import sector.

Vienna, May 2017

R&D funding for large scale projects since 2009

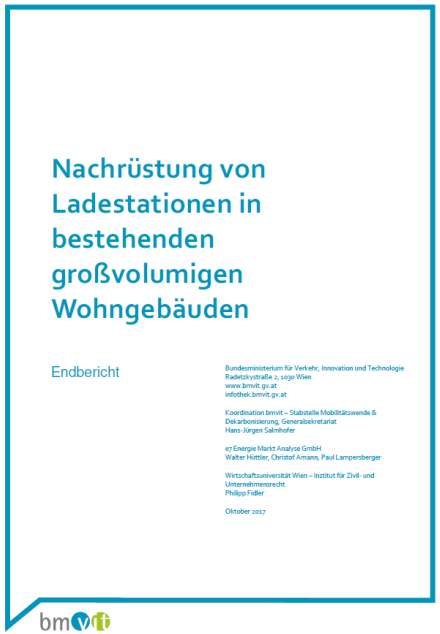
Funding for roll-out of e-car sharing and e-taxi services – focus 2018: role out of multimodal nodes

Enabling e-mobility: Efforts on various levels necessary, e.g. home charging infrastructure

- Study focusing on installation of charging infrastructure for private users

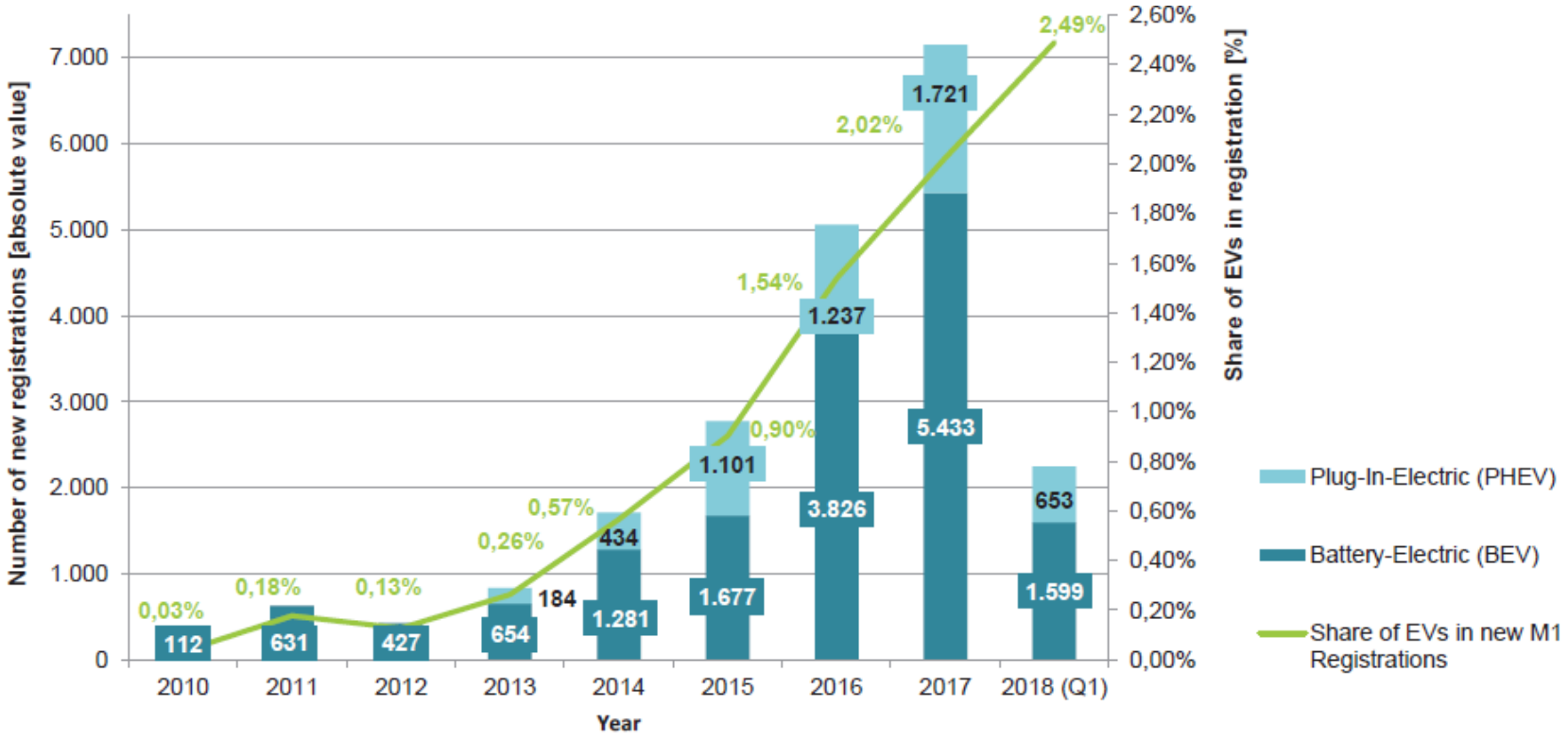
- Only status quo described

- Legal changes necessary to promote easier installation of wall boxes in residential buildings

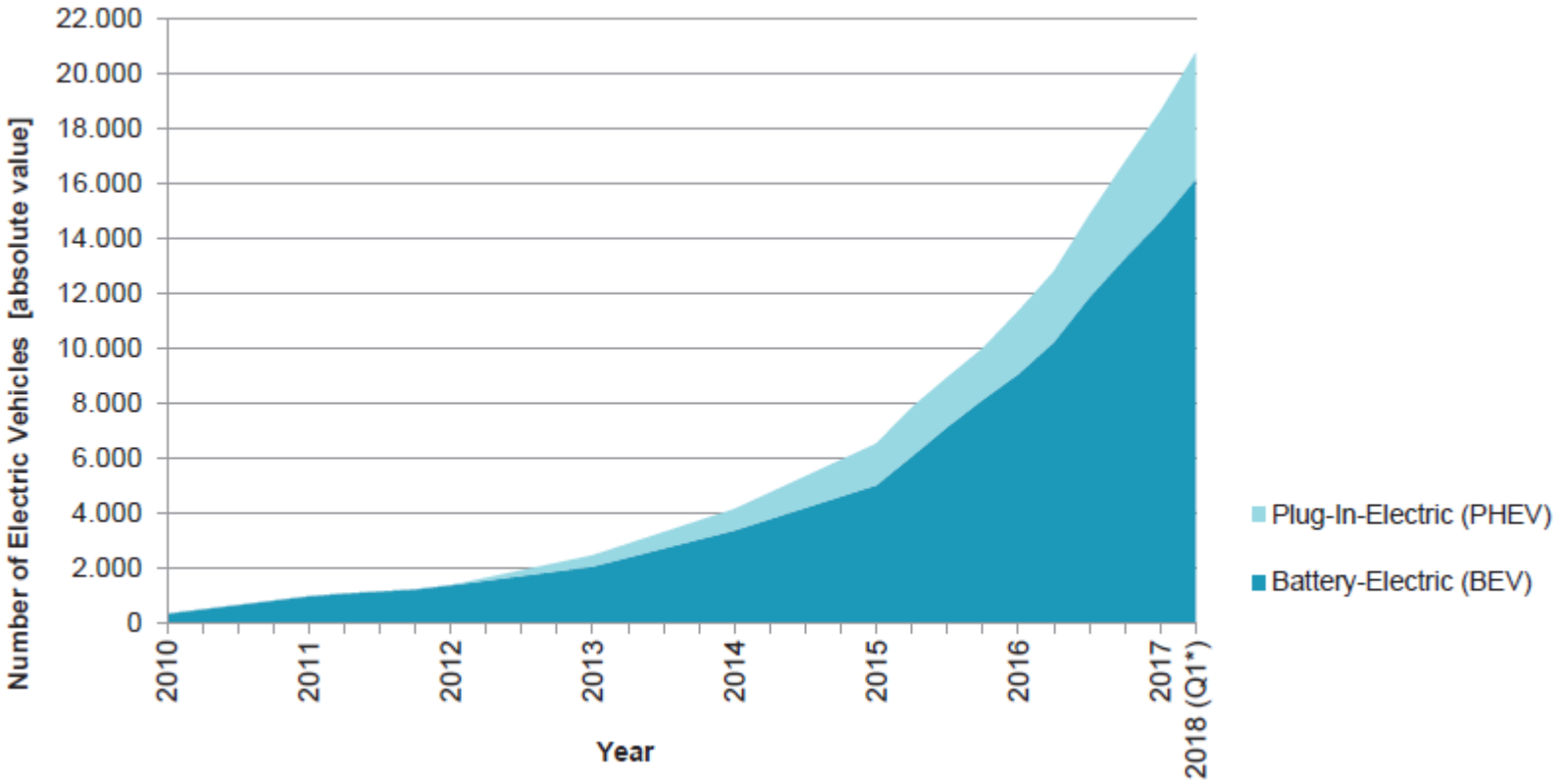


https://www.bmvit.gv.at/service/publikationen/verkehr/elektromobilitaet/downloads/nachruestung_ladestationen.pdf

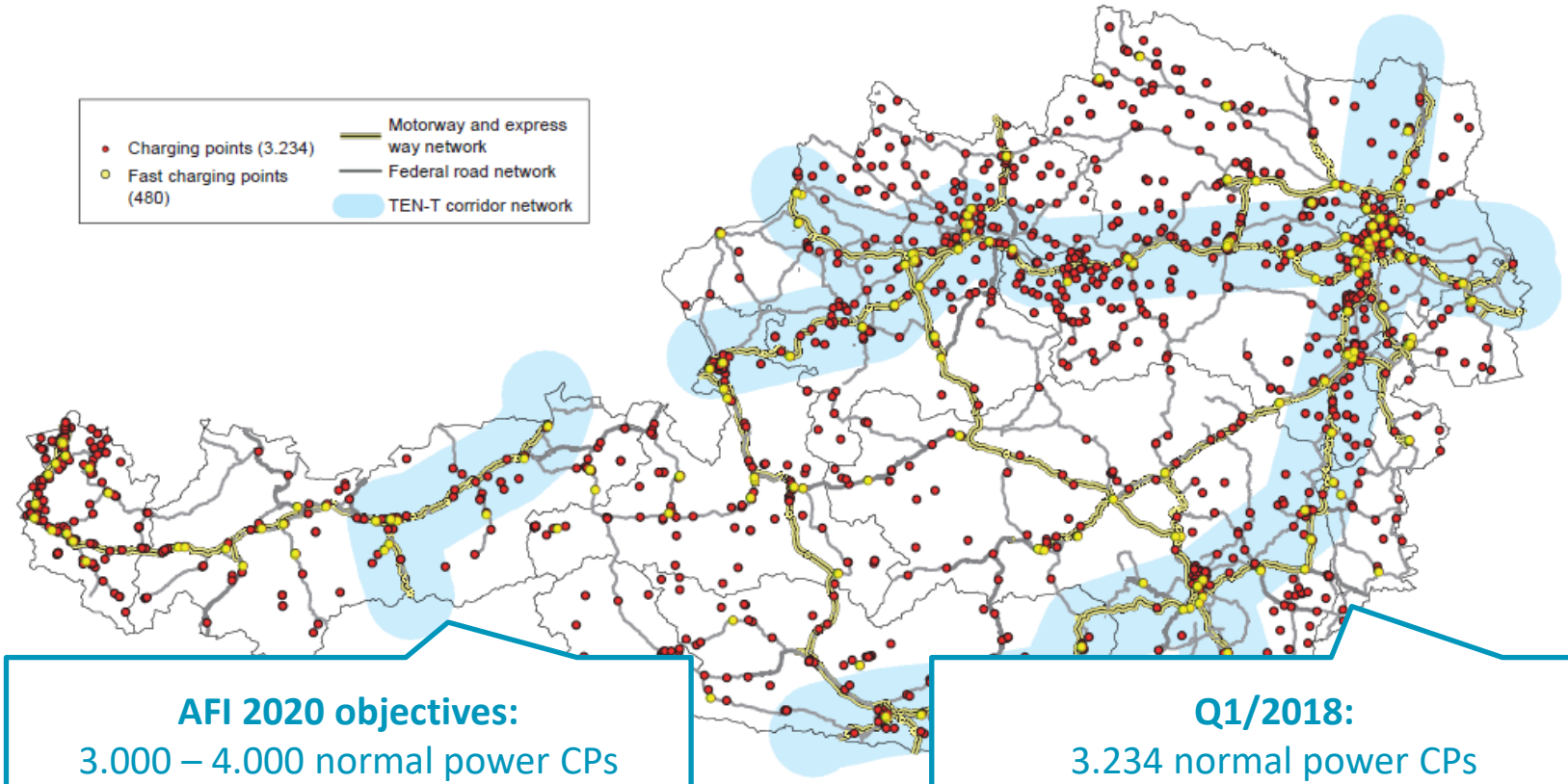
New Electric Vehicles Registrations M1 and their share relative to entire new M1 Registration



Electric Vehicle Population (M1)



Publicly accessible charging infrastructure



AFI 2020 objectives:
3.000 – 4.000 normal power CPs
500 – 700 high power CPs

Q1/2018:
3.234 normal power CPs
480 high power CPs

… further action needed…

- E-mobility & stability of energy grids (e.g. field testing in upper Austria/Seitenstetten)

- E-mobility & Lifecycle analysis, Recycling (e.g university research Montanuniversitaet Leoben/Styria)

- E-mobility & Energy storage, (e.g. CEF Synergy Call projects)

- ….

Austria's new climate and energy strategy

#mission2030

Die Klima- und Energiestrategie
der Österreichischen Bundesregierung

- Reducing transport emissions in Austria by 7.2 Mio t CO2e (2016-2030)

- Strong emphasis on a transition to low and zero emission vehicles

- E-Mobility as one of several lighthouse initiatives

#Mission 2030

"Superstructure" for further concrete Action Plans

Basis for National Climate and Energy plans (Governance – Energy Union)

8 fields of action

- **Legal** framework
- Public **awareness –** joint **responsibility**
- **Technology** for decarbonisation
- Relation of **urban and rural areas**
- **R & D**
- **Infrastructure**
- **Economic framework**
- **Review of incentives & taxes**

12 guiding principles

- Low- and zero emission transport: Avoid-Shift-Improve
- Sector Coupling
- Technology Neutrality on a Decarbonisation Pathway

3 lighthouse projects in transport

- Fostering **e-mobility** – road- and rail-bound
- Investing in **public transport** (e.g. rail-bound transport)
- More efficient transport of **goods**

Cooperation on all levels as key for achieving the energy- and climate targets

Towards an Action Plan „Competitive and Clean Mobility 2030“

Stakeholder Engagement

*Stakeholder engagement within **all** project phases*

*in **close cooperation** with BMNT, BMF, nine federal states, cities and municipalities*

Workshops in nine federal states

Four expert workshops
Logistics, public transport and integr. mobility services, clean vehicles & innovative transport solutions

Engagement of more than 100 stakeholders with respect to design and content

Constant interaction

Progress Report No. 1 on achieving climate goals in transport

- Costs/benefits (budget)
- Jurisdiction
- Timing
- Financing
- Emission savings
- Macroeconomic analysis
- Interdependencies
- Competiveness
- Acceptability

First we imagine the future and then we make it so…

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