

MINUTES

2nd project workshop

Introduction

The EMOBICITY 2nd project workshop was organized by EIHP, the Project Partner 2, in 2 July 2020, from 9.30 to 13.30 CET, on the topic "Improvement of Charging/Taxation Models - Energy price for charging". Due to the COVID-19 pandemic, the 2nd project workshop, initially planned to take place in Zagreb, Croatia by EIHP, took place digitally through MS Teams.

Participants

All EMOBICITY project partners attended the workshop along with local stakeholders from ministries, national organizations, academic institutions, chambers, automotive associations, power utilities, regional agencies, cities and provinces, etc., creating a diverse group of policy and decision makers, adding up a total of approximately 50 participants.

Presentations

The workshop presentations and guests were oriented to current and planned charging and taxation models for EVs among participating countries and beyond, in order to examine possibilities and ideas for improved related national schemes, identify barriers and exchange best practices to be adopted in national and regional e-mobility policies.

The workshop started with a welcome session by Mrs. Alenka Kinderman Loncarevic, the Head of Department for Energy System Planning of EIHP. Mrs. Loncarevic gave an outline of EU policy targets for sustainable transport/alternative fuels and especially e-mobility with focus on the necessity for adaptation of appropriate legislative and regulatory schemes, such as effective charging and taxation models, in order to stimulate a clear and fast developing e-mobility market in EU countries. The workshop continued with the following speakers:

Mr. Marius TUDOR, *General Secretary of the Romanian Automotive Manufacturers and Importers Association (APIA)*, presented the current situation of automotive industry in Romania with a special focus on electric vehicles and the future of charging infrastructure deployment. Mr. Tudor also presented the results from the Romanian funding program "Rabla Plus" which provides financial incentives for EVs acquisition along with other initiatives for EVs at national and local level. Moreover, the national targets for private and public EVs promotion, which need to be adopted according to EU Directive 2019/1161, were presented.

Mr. Thanos Zarogiannis, *Advisor on Electro mobility, Secretariat General for Energy & Mineral Resources from the Greek Ministry of Environment & Energy*, presented the new regulatory framework for the development of EV charging infrastructure in Greece. In particular, Mr. Zarogiannis referred to the current national targets according to the Greek National Energy and Climate Plan (1 of 3 new vehicles to be EV by 2030) along with the barriers for the adoption of EVs in the Greek automotive market. He also presented the planned financial subsidies for private EVs from the Greek government (100M Euros in the following 18 months), tax incentives for EVs acquisition for businesses and regulatory measures for charging services and infrastructure, with mandatory provision of recharging points in new buildings and mandatory number of EV parking spots for municipalities and

public services. Finally, he pointed out the importance of the national “Green Deal” between the Greek government and 20 major stakeholders from the private and public sector, as an innovative initiative for the successful implementation of e-mobility in Greece.

Mr. Guido Piccoli, *Province of Brescia-Italy, Technical support to the Lead partner of the e-MOPOLI Interreg Europe project*, shared his experience with the implementation of the e-Mopoli project, presenting some existing e-mobility practices from participating countries and regions. Mr. Piccoli gave examples of the existing charging / tariff and business models of these e-mobility practices and provided conclusions on the barriers and opportunities for the implementation of relevant models in EU. He mentioned that the most critical issue at local/regional level for e-mobility adaptation is low knowledge level and capacity of public administration, leading to insufficient deployment of available funds and low public awareness.

Mr. Tomislav Čop, *Energy Institute Hrvoje Požar EIHP* analyzed the existing situation of fast charging infrastructure and the electricity tariff modeling for EVs in Croatia. The presentation focused on electricity energy costs and regulated costs, such as fees for grid connection and network costs (transmission and distribution costs). The Croatian partners presented a case study of tariffication costs for fast chargers in different scenarios of power and number of charging sessions per month. Same case studies from Greece and Portugal were also analyzed. In addition, Croatian stakeholders expressed the problem of increased costs at electricity bills for the charging point operators and investors, especially during the early stages of charging points operation. They also mentioned the White and the Red Tariff pricing methods, taking place in Croatia, along with their differences. As a general conclusion, it appears that the cost for electricity regulated tariffs and especially the fee connection to the grid, as well as electricity costs charging at peak loads are very high. This is a problem to be tackled for the promotion of e-mobility.

Mr. Nuno Bonneville, *Network Development Director at Mobielectric, Portuguese OPC (Charging Point Operator) and CEME (Electricity Provider for Electric Mobility)* presented the operation and structure of the Portuguese EV charging model (Mobielectric). The Portuguese electric mobility system, according to Mr. Bonneville, provides a nation-wide, competitive and convenient solution to clients. The system is interoperable to multiple retailers and operators with nation-wide roaming charge with compatible technology and open integration protocols.

Mr. Dominique Sévin, *Programme Manager Recharging Infrastructure from NOW GmbH* analyzed the current situation and the charging model for EVs in Germany along with short terms investments (300M€ for at least 15,000 recharging stations) and long term national targets (1M recharging points by 2030). This ambitious national target is considered to be feasible; however all beneficiaries (operators, infrastructure owners, etc.) will need additional funding until the EV car market in Germany is sufficiently developed. Mr. Sevin also provided an overview of public subsidies for recharging infrastructure, payment solutions for charging EVs at public stations, in terms of contract based versus ad-hoc and pricing/billing methods.

Study Visit 2

Due to COVID-19, the 2nd project study visit, initially planned to take place in Croatia by EIHP, as back-to-back event of the 2nd project workshop, was postponed.

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PRICING AND BILLING SOLUTIONS

Possibilities according to German „Mess- & Eichrecht“

- **Without any compensation**
- **Billing per Kilowatt Hour (kWh)**
 - Normal Charging at home around 30 cent / kWh
 - Normal Charging in public between 30 and 40 cent / kWh
 - Fast Charging in public between 50 and 80 cent / kWh
- **Billing per Kilowatt Hour plus Time Tariff**
 - Same Prices as shown above per Kilowatt
 - Additionally time supplement for Parking Space

- **Time-based Billing → not allowed any more according to „Eichrecht“)**



NOW
NOW-GMBH.DE

04:09:48 Request control

Waldeyer Linda 9 | 02/07/2020 Dominique Sévin

+26 MZ GS PR DA NB BZ WL DS

Guilherme BO. Silva Paul Pantis NW RDA ... Despoina Antypa Nuno Maria Bonneville Bruno Židov Waldeyer Linda Dominique Sévin (Guest)

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Barriers to EV adoption for a new market



The diagram shows a central green circle with the text 'EMOBILITY START' inside. Surrounding this are several barriers to EV adoption, each with a colored background and text:

- Charging Infrastructure** (Dark Blue)
- Range Anxiety** (Red)
- Battery safety concerns** (Blue)
- Network capacity** (Light Blue)
- Vehicle Cost** (Red)
- Choice** (Light Green)
- Off Street parking** (Light Green)
- Regulation** (Orange)
- Interoperability** (Light Blue)
- Vehicle supply** (Green)

01:57:56 Request control

Thanos Zarogiannis (Guest)

MZ HM GS PR AL DA BZ

Paul Pantis NW RDA ... Alenka Kinderman Lo... Despoina Antypa Bruno Židov Thanos Zarogiannis (Guest)

People Invite someone Currently in this meeting (40) Mute all

- Tomislav Čop Organizer
- AL Alenka Kinderman Lončarević
- AC Ana Cardoso Outside your organization
- BR Bernarda Rozman Outside your organization
- BS Bernardo Sampaio Outside your organization
- BŽ Bruno Židov
- C Cristina (Guest) Guest
- DŽ Damir Živković Outside your organization
- DA Despoina Antypa Outside your organization
- DB Diogo Beirão Outside your organization
- DG Diogo Gonçalves Outside your organization
- DR Diogo Ribeiro Outside your organization
- DR Dorin Domuta NW RDA (Gu... Guest
- GZ Grigoris Zoidis Outside your organization

List of participants (2.7.2020.)			
	Participant name	Institution	Country
1	Alenka Kinderman Lončarević	Energy Institute Hrvoje Požar (EIHP)	Croatia
2	Ana Cardoso	Agência para a Energia (ADENE)	Portugal
3	Bernarda Rozman	Ministry of Environmental Protection and Energy	Croatia
4	Bernardo Sampaio		
5	Bruno Židov	Energy Institute Hrvoje Požar (EIHP)	Croatia
6	Cristina David	North-West Regional Development Agency (NWRDA)	Romania
7	Damir Živković	Petrol d.o.o.	Croatia
8	Despoina Antypa	Centre for Renewable Energy Sources and Saving (CRES)	Greece
9	Diogo Beirão	Agência para a Energia (ADENE)	Portugal
10	Diogo Gonçalves	Agência para a Energia (ADENE)	Portugal
11	Domagoj Puzak	HEP d.d. (Croatian Power Utility)	Croatia
12	Dominique Sévin	National Organisation Hydrogen and Fuel Cell Technology (NOW GmbH)	Germany
13	Dorin Domuta	North-West Regional Development Agency (NWRDA)	Romania
14	Grigoris Zoidis	Centre for Renewable Energy Sources and Saving (CRES)	Greece
15	Guido Piccoli	Province of Brescia	Italy
16	Guilherme BO. Silva	Direção Regional da Energia	Azores, Portugal
17	Horatiu Pop	Municipality of Cluj-Napoca, Office for Public energy efficiency	Romania
18	HR-Boris Draženović	Ministry of Environmental Protection and Energy	Croatia
19	Hrvoje Bašić	Faculty of Electrical Engineering and Computing, Zagreb	Croatia
20	Hrvoje Matas	City of Split	Croatia
21	Igor Ban	Piraex	Croatia
22	Igor Grozdanić	Croatian chamber of economy	Croatia
23	Ivan Sudić	Faculty of Electrical Engineering and Computing, Zagreb	Croatia
24	Ivica Jujnović	Ministry of the Sea, Transport and Infrastructure	Croatia
25	Jurica Perko	Faculty of Electrical Engineering, Computer Science and Information Technology Osijek	Croatia
26	Manuel Krieg	Regionalmanagement Nordhessen GmbH	Germany
27	Maria Zarkadoula	Centre for Renewable Energy Sources and Saving (CRES)	Greece
28	Marius Tudor	General Secretary of the Romanian Automotive Manufacturers and Importers Association (APIA)	Romania
29	Martina Komerički	Energy Institute Hrvoje Požar (EIHP)	Croatia
30	Matija Vajdić	Energy Institute Hrvoje Požar (EIHP)	Croatia
31	Nuno Maria Bonneville	Network Development Director @ Mobiletric	Portugal
32	Olga Koutsogianni	Centre for Renewable Energy Sources and Saving (CRES)	
33	Olga Schina	National Technical University of Athens (NTUA)	Greece
34	Paul Pantis	North-West Regional Development Agency (NWRDA)	Romania
35	Paulo Miguel Santos	Agência para a Energia (ADENE)	Portugal
36	Robert Fabek	Energy Institute Hrvoje Požar (EIHP)	Croatia
37	Sara Costa	Agência para a Energia (ADENE)	Portugal
38	Sebastian Dan	Cluj-Napoca Public Transport Company	Romania
39	Sílvia Soares		
40	Simona Tudor	Romanian Automotive Manufacturers and Importers Association (APIA)	Romania
41	Šimun Lončarević	Energy Institute Hrvoje Požar (EIHP)	Croatia
42	Tarcísio Silva (Convidado)		
43	Thanos Zarogiannis	Ministry of Environment & Energy	Greece
44	Tomislav Budić	Ministry of the Sea, Transport and Infrastructure	Croatia
45	Tomislav Čop	Energy Institute Hrvoje Požar (EIHP)	Croatia
46	Tomislav Židov	Ministry of the Sea, Transport and Infrastructure	Croatia
47	Torok Gergely	North-West Regional Development Agency (NWRDA)	Romania
48	Waldeyer Linda	Regionalmanagement Nordhessen GmbH	Germany
49	Zvonimir Perko	Regional Energy Agency North	Croatia