



USER EXPERIENCES:

Driving from Oslo
to Gothenburg



PREVIEW:

International
conferences



Editorial



Prof. Walter Leal

FUTURE OF EVS IN DENMARK

What will it take to make local citizens choose an EV rather than a conventional vehicle, this was the main topic of a major international e-mobility conference at the Danish Technological Institute situated in Høje-Taastrup in the outskirts of Copenhagen.



On March 7, 2013, the Danish E-Mobility NSR partner Høje-Taastrup organised a major public event free of charge on "E-Mobility in the North Sea Region – experience and recommendations for development from current and future EV users" at the Danish Technological Institute in Høje-Taastrup, Denmark. The municipality of Høje-Taastrup in the following HTK is in its role as a municipal workplace the front runner in terms of changing HTKs municipal car fleet into EVs. However, only a few private citizens have adapted to e-mobility. Denmark is not the only country experiencing difficulties when it comes to advising local citizens to go electric. Six other countries within the Interreg IVB North Sea project face the same challenges. The e-mobility conference focused on EV barriers and how to overcome these barriers in the future.

A number of speakers shared their views and experience with EVs amongst others:

- Private EV owner Eric Witzgall, who presented why he chose to buy an EV.
- Frank Ten Wolde, shared Dutch experiences within a public sector which is in the lead in terms of EVs.
- The company G. Tscherning told us why they have not one single EV in the company car fleet yet.

This e-mobility conference came into being in cooperation with the Danish Technological Institute. This institute is in many ways working with e-mobility. The presentations of the conference are available on the e-mobility NSR website:

<http://e-mobility-nsr.eu/events/>

Hamburg University of Applied Sciences
Faculty of Life Sciences
Research and Transfer Centre
'Applications of Life Sciences'

Prof. Dr. (mult.) Dr. h.c. (mult.) Walter Leal
Franziska Mannke
Johanna Vogt

Lohbrügger Kirchstrasse 65
21033 Hamburg, Germany

Tel.: 0049 (0)40 42875-6324
Fax: 0049 (0)40 42875-6079
E-mail: e-mobility@ls.haw-hamburg.de
Website: www.haw-hamburg.de/ftz-als.html

DEAR READER,

In this third newsletter of the INTERREG IVB project E-Mobility NSR, we review some of our past international events, showcase a first set of E-Mobility NSR publications and introduce another of our Electric Mobility Information Centres (EMIC), this time the Centre from the Netherlands. Also you will find out what our Norwegian colleagues experienced in the cold Scandinavian climate as they went on an 'EV expedition' from Oslo to Gothenburg. Moreover, E-Mobility NSR gets interactive – join our new e-mobility nsr forum at www.forum.e-mobility-nsr.eu. Our next large international platforms for transnational learning, exchange of experiences and presentation of new developments in the North Sea Region are the upcoming E-Mobility NSR conferences "Policy, Practice and Profitability", held on 10 October 2013 in the Haarlem Philharmonie, NL, and the final E-Mobility NSR conference, to be held on 11 April 2013 in London, UK.

If you would like to become involved or wish to learn more about our pool of experts and partners involved in the project, please visit our website at www.e-mobility-nsr.eu where we publish project outputs, upcoming events and much more.

Enjoy the reading,
your E-Mobility Newsletter Team



Johanna Vogt



Franziska Mannke

Benjamin Myklebust (ZERO): DRIVING FROM OSLO TO GOTHENBURG

Driving from Oslo to Gothenburg with an EV can be challenging. Fast chargers can help spur e-mobility in the region, by allowing people and businesses to gain confidence and experience. In the streets of Oslo, EVs are becoming an increasingly more common sight. The Nissan Leaf and Mitsubishi i-MiEV have sold well, and though other parts of Norway are increasing their share, the Oslo region is the most EV dense by far. Norwegian EV owners enjoy benefits, such as free toll roads, and access to the bus lane. EVs are exempt from Norway's high car taxes, and pay no VAT. These incentives have made EVs desirable and available to about 10 000 owners. At ZERO we've been promoting fast charging as a way to make EVs more useful, and to create a sense of security, not least for the many who are yet to choose an EV over a fossil vehicle. With support from the Norwegian public agency Transnova, about 50 CHAdeMO fast chargers have been installed in Norway. When I set out to drive the almost 300 kilometers from Oslo to Gothenburg in late October, I knew it would be challenging. From the Norwegian-Swedish border, to Gothenburg, the distance is about 200 km, and to an EV driver, it's uncharted territory. I got to borrow one of ABB's Nissan Leafs in Oslo, and set out from the ZERO office in the afternoon. Not starting with a full battery didn't worry me that much, because I could stop at a roadside cafeteria to fast charge and have a cup of coffee. However, in order to be fully charged before I entered the terra incognita, that is Sweden, I had to fast charge at a Nissan dealer in the town of Sarpsborg close to the border. Charging up to 100 % with fast charging, doesn't really work, so to top up, I "normal charged" at a public charging spot while I had dinner. So, venturing out into the early, but pitch black October evening, I had Håby Motel as my goal, about 110 km away. 110 km is well within the rated range of a Leaf, but throw in temperatures dropping to freezing, high speed limits, and winter tires, and the Leaf manages the



trip with only a slight margin. Getting there was manageable, but not without getting closer with range anxiety. I had arranged with Håby Motel that I would be able to charge there, overnight, as there are no public charging stations. An extension cord in their back yard would have to do. The next morning I drove to Lindholmen Science Park, to join the E-Mobility meeting there, and meet up with the Renault Fluence Z.E. that the Danes had driven from Høje-Taastrup. Everyone would probably agree that it would have been easier for me to just take the train, I would have saved time, and money, and I could have worked or read a book. Even with a well-established fast charging network along the whole way, I would have had to fast charge several times along the way. Fast charging stations aren't there to allow EV owners to take spontaneous trips to the south of Spain. However, fast charging makes it possible for a person or a business, to purchase an EV and feel more comfortable that they will be able to use it for their purpose. A business in Sarpsborg can use an EV every day, and charge overnight, but also be able to drive to Oslo with more confidence when needed. The same is currently not the case for a person in Håby, wanting to travel to Gothenburg. By creating an e-mobility axis from Oslo to Gothenburg we can create a region where e-mobility can become a natural choice, and where people and businesses can learn from each other.



NEW REPORTS PUBLISHED:

The E-Mobility NSR project partners have been busy publishing the outcomes of the project activities.

All reports listed below can be downloaded on the E-Mobility NSR project website.

ELECTRIC VEHICLE CHARGE POINT MAP WEBSITES IN THE NORTH SEA REGION

This interim report is a review of the EV charge point map websites in the North Sea Region (NSR) with the aim to identify if there are any patterns, or any noticeable gaps on the information presented by the interactive EV charge point tools. For each example of the charge point map website, a review has been undertaken by visiting the charge point map website and recording if the site contains the information, which is of key importance from an EV user perspective, for example an interactive map; any information on the charger power of the charge points; the type of connection of the charge points; the addresses of the charge points and further helpful details.

MAINSTREAM MARKET ACCEPTANCE OF ELECTRIC VEHICLES (EVs) – A MICRO TO MACRO POLICY LEVEL INVESTIGATION

Written by E-Mobility NSR partners Dr Richard Kotter (Northumbria University) and Dr Stephen Shaw (London Metropolitan University, Cities Institute), the report considers how the step change to mainstream market acceptance of Electric Vehicles (EVs) is being supported by macro-level policy to secure economic as well as environmental benefits. Particular reference is made to the UK, where interventions include grants to purchase new plug-in cars and vans, tax exemptions, and match-funding from the government for 'Plugged-In Places': pilot schemes designed to stimulate innovation and development of EV infrastructure at the meso-level of areas within the country.

There are also examples of local authorities outside the Plugged-In Places areas that have found other thematic and enabling ways to invest into E-mobility. This is supplemented by private sector commercial investment additional to and outside of the eight Plugged-In Places areas in the UK.

The report concludes that Local Authorities will play a leading role in developing a charging network that is comprehensive, interoperable and easy to use. Working in collaboration with other key stakeholders, they must be equipped for two critical challenges:

- Scaling up to the 'bigger picture': to raise the confidence of EV users who wish to make longer trips.
- Scaling down to 'street level': to ensure that EV users, especially those who are less familiar with the locality, have the confidence to find publicly-accessible points, plug-in, and leave their vehicles charging.



▶▶▶ NEW REPORTS PUBLISHED:

ERAS OF ELECTRIC VEHICLES: ELECTRIC MOBILITY ON THE VERGE. FOCUS ATTENTION SCALE

Northumbria University researchers (PhD researcher E. Y. ElBanhawy, Prof. R. C. Dalton, and Dr. E. M. Thompson) presented on E-mobility at the May 2013 University College London conference of the Urban Data Management Society (UMDS). Arguably, the rate of emergence of new data and new technologies has never been as rapid as it is now. Trends including smart cities, smart phones, social media, 3D modeling, volunteered geographic information, building information modeling and the Internet of Things. All generate information about the urban environment and the people who live there.

INTEGRATING SPACE-SYNTAX AND DISCRETE-EVENT SIMULATION FOR E-MOBILITY ANALYSIS

The Penn State University Department of Architectural Engineering hosted the 2013 Architectural Engineering Institute (AEI) Conference in the United States this April. The conference included a workshop, technical papers presentations, invited technical sessions, and panel discussions, and was geared toward

a balance of academics and practitioners. Researchers from Northumbria University (PhD researcher Eiman Y. ElBanhawy and Prof. Ruth Dalton) and the American University at Cairo (Egypt) (Prof. Khaled Nassar) presented a paper on 'Integrating Space Syntax and Discrete Event Simulation for E-mobility Analysis'.

REPORTS ON GOTHENBURG FAST CHARGING PROJECT FOR ELECTRIC VEHICLES RELEASED

Lindholmen Science Park, the Swedish partner institution, has just released two study reports on its test and demonstration project in Gothenburg. The results provide interesting insights into how fast charging works, from the user's as well as other perspectives. Two testing and demonstration fast charging stations were installed, based on the CHAdeMO standard to explore if this standard is technically mature as a charging station. Lindholmen's results indicate that the technology may not yet be fully mature or operate on a 24/7 basis. From an infrastructure provider perspective, fast charging appears to pose new challenges to planning as well as installation and maintenance. The report concludes that a combined testing and demonstration site, based on national support and coordination, can represent a useful approach to explore the challenges and opportunities of fast charging to enable informed decision-making during a future national roll-out of fast chargers.

SAVE THE DATE E-MOBILITY CONFERENCE

*“ Policy, Practice
and
Profitability ”*

**THURSDAY 10 OCTOBER 2013
9:00 – 18:00
HAARLEM, THE NETHERLANDS
FREE OF CHARGE**

E-mobility is becoming more and more visible in our urban environment. It has only recently left the pioneers phase and there are positive signs e-mobility is developing into a profitable market. Policy and practice generate useful as well as much needed insights and experiences. The Dutch focus on policy and investments in pilot projects and charging infrastructure generates a national and internationally attractive climate for exchanging knowledge and business investors. For instance, Daimler-Benz started the Car2go-project in Amsterdam with her full-electric fleet, Tesla located their first European Distribution Center in Tilburg and recently opened their flag ship store in the center of Amsterdam. On the small island Schiermonnikoog in the north of the Netherlands, all public buses drive fully electric. Also in other countries of the North Sea Region e-mobility innovations take place. Join this conference organized by the Province of Noord-Holland in cooperation with Metropolitan Area Amsterdam Electric, within the Interreg IWB project E-Mobility NSR to share knowledge, insights, experiences and success on EV's policy, practice and profitability of regional, national and international significance.

**Oct 10th
2013
Haarlem, The
Netherlands**

More information can be found on:
www.e-mobility-nsr.eu

EMIC IN AMSTERDAM

The EMIC located in the city of Amsterdam is called Amsterdam Metropolitan Area Electric (MRA-E). It primarily acts as an information centre for the whole of the metropolitan region. In addition to the 39 local and regional authorities in the area, several (non) profit organizations receive information from MRA-E, sent in their questions and share knowledge or best practices.



Copyright: Marloes van Doorn

PHYSICAL

1. The EMIC is currently housed at the public science education centre NEMO, with spectacular views over the inner city and old harbour. In NEMO is the "Everyone Electric" exhibition, where the yearly 500.000 visitors can get an impression of a sustainable future with electric cars, smart grids and sustainable energy at home;
2. Groups from all over the world visit this EMIC to get updated upon e-mobility in the Amsterdam metropolitan area. For example, a group of representatives from the Danish Capital Region visited the EMIC last October and apparently were quite inspired by the developments;
3. The thrill of the first time driving an electric car is often an effective means of getting people (preferably decision makers) enthusiastic about e-mobility. Therefore we are working on a road

show where they can make test drives and receive information on costs, charging points etc.

4. Last but not least every 2 months this EMIC organises an informal network- and information meeting.

VIRTUAL

Apart from physical appearance the Amsterdam EMIC provides some virtual information services. The metropolitan website on e-mobility in the Amsterdam area: www.mraelektrisch.nl. For this we have ourselves inspired by the website that is made by the Høje Taastrup partner. Secondly, we actively contribute to the development of a new national portal on e-mobility www.nederlandelektrisch.nl. This because fragmentation of e-mobility websites is a growing issue and therefore we should join forces.

Thirdly the EMIC launched a semiformal blog, which has the advantage that it facilitates easy contribution, informal exchange of ideas and audiovisual inspiration, discussion and 'spreading the word' www.mrae.nl.

In order to satisfy the still noticeable demand for hard copy information, EMIC Amsterdam recently published a brochure on e-mobility in the Amsterdam metropolitan area. This brochure focuses on the different target groups we work with and shows that we are open for new initiatives and collaboration.

MORE INFORMATION:

MRA-E
Christine van 't Hull
E-mail: chull@pmb.amsterdam.nl
Phone: + 31 6 519 141 51



ELECTRIC VEHICLES AND ECO CARS: SOLUTIONS FOR GREEN GROWTH

TRANSNATIONAL CONFERENCE IN LONDON, FRIDAY 11TH APRIL 2014
IN COLLABORATION WITH THE CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT

Throughout Europe, city regions are championing the development and use of electric vehicles (EVs), and Greater London is a notable example. In tandem with decarbonisation of power generation, anticipated benefits of electrifying road transport include significant reductions in CO₂ emissions to mitigate climate change, energy security, and improved air quality. Further, much needed economic growth can be stimulated by producing and exporting 'eco' cars, vans, motorcycles, buses and other vehicles.

The conference will consider the perceptions and concerns that still inhibit mainstream market acceptance. For example, almost all new EV drivers experience 'range anxiety': the understandable fear of being stranded with a flat battery in a bad place at a bad time. The expert panel will assess how these challenges are being addressed. Drawing on the findings of E-mobility NSR, the conference will review opportunities for wider adaptation by mainstream markets in the critical years ahead.

The work of E-mobility NSR has emphasised the need to improve connectivity, not only across Europe and other world regions, but also between complementary green technologies and business solutions. Presentations by panels of experts from Germany, the Netherlands, Belgium, Denmark, Sweden, Norway and the UK will showcase state-of-the-art developments, especially in Electric Mobility Information Centres (EMICs), stakeholder champions and networks, technological innovations in infrastructure and

energy-saving 'smart grids', longer-distance and trans-national routes for EV drivers, and electrification of urban logistics for cleaner cities. The conference will review innovations and

their practical application to real-world scenarios. The emphasis will be on what needs to be improved, what works well and what might be transferrable from a trans-national perspective.

CONFERENCE VENUE:

London Metropolitan University
Tower Building
Graduate Centre

<http://www.londonmet.ac.uk/about/buildings/tower.cfm>

ORGANISATION:

Chair: Steve Shaw (London Metropolitan University)

Co-Chairs: Louise Bunce (London Metropolitan University), Sid Foster/Ian Tough (CLT)

Management: Antje Witting & Angele Cauthery (London Metropolitan University)



Conference Venue: London Metropolitan University; Copyright: London Metropolitan University