WORKSHOP: UP-SCALE GREEN VEHICLES

Solutions for Northern Europe

PLEASE SCHEDULE FOR **21st – 22nd of January 2016**

DEAR CNCA CITIES AND EXCLUSIVELY INVITED

We are proud to present the program for the 2-day workshop in Copenhagen in January 21st and 22nd 2016: Up-scaling Green Vehicles in Northern Europe.

The project-oriented program

The workshop program has been developed from interviewing enthusiastic experts in CNCA cities in Northern Europe. From the interviews a program has been developed with project ideas to involve CNCA cities and other stakeholders in real projects regarding up-scaling of green vehicles in Northern Europe. Some of the projects are supported by potential Horizon 2020 calls. The ambition at the workshop is to be a project incubator that helps cities and businesses to develop new projects by facilitated networking boost, creative workshop tools and inspirational presentations from visionary speakers. This will hopefully give the participants the best possibilities for discussions and development of new collaborative up-scaling projects.

Open for registration and your choice of project(s)

With this invitation we hereby want you to attend the workshop. We already got positive feedback from several CNCA cities and we are now also involving car industry, energy companies, interest groups and mobility operators with a clear interest in up-scaling green vehicles in Northern Europe.

There is set a maximum of 30 participants in the workshop so please give your feedback latest **11th January 2016** to Kenneth Jørgensen at Gate 21 for your registration: **Kenneth.joergensen@gate21.dk.**

When you contact Kenneth, please make a prioritized selection (1-4) among the following projects:

- Project 1: How can new disruptive business models like car sharing support up-scaling of green vehicles?
- Project 2: How is interoperability between charging systems in cities and across borders possible?
- Project 3: How can we develop existing environmental zones in cities into Ultra-Low Emission Zones (ULEZ) or Zero-emission Emission Zones (ZEZ) for future up-scaling of green vehicles?
- Project 4: How can purchasing cooperatives between cities and companies create market demand for green vehicles?

Furthermore give us a notice if you want to join the Social Dining at Bio Mio on the first workshop day. In case your agenda does not allow you to attend this workshop we would appreciate if you can appoint one of your colleagues to represent your city or business in the workshop.

Get your mandate!

We will encourage you to get a clear mandate from home regarding involvement in one or several projects. This way you can get engaged from the beginning of the workshop in projects and decide on which projects is the best to remain with. Please be advised that participating in a project at the workshop in non-binding but will be an expression of interest that could lead to new projects.

We eagerly await you participation in the workshop. Please contact us if you have any questions.

Sincerely,

Jørgen Abildgaard
Executive Climate Project Director · City of Copenhagen · Z33R@tmf.kk.dk

Our definition of a green vehicle

A green vehicle is a road motor vehicle that can be a car, truck or bus that produces less harmful impacts to the environment than comparable conventional internal combustion engine vehicles running on gasoline or diesel. Green vehicles are powered by alternative fuels and advanced vehicle technologies and include hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV), battery electric vehicles (BEV), range extended electric vehicles (REEV), hydrogen and fuel-cell vehicles (FCEV). We also consider gas vehicles (LNG/CNG) based on either natural gas or biogas for green vehicles.

Workshop location

The workshop will take place in the former meatpacking district in Copenhagen's vibrant Vesterbro neighborhood. Once this area was exclusive to butchers and wholesalers, but it has undergone a remarkable transition in recent years into creative clusters with trendy restaurants. The location of the workshop signals "change" because, as the world is changing so is transportation.

Address: Flæsketorvet 68, 1711 Copenhagen V

The workshop is organized as a project under the CNCA Innovation Fund, aiming at exploring new collaborative possibilities between stakeholders to up-scale green vehicles. The workshop is held in Copenhagen and all participants are further invited to a joint dinner on the first day. All CNCA city members and next wave cities will get accommodation expenditures covered. For a limited number of non-EU CNCA city members, both accommodation and flights will be covered.
For more information, please visit: http://usdn.org/public/page/13/CNCA

CITY OF COPENHAGEN

WORKSHOP DAY 1

21st January 2016

08:30 - 09:00 **Registration and Breakfast**

09:00 – 09:15 **1st day opening and introduction to workshop**

Executive Climate Director Jørgen Abildgaard will give an introduction to the workshop and introduce to the CNCA network and what we are here to achieve together in Copenhagen.

09:15 – 09:45 **Networking Boost**

The introduction will be followed by a networking boost that will keep CNCA cities and other participants connected from the beginning.

09:45 – 10:15 **Potential strength and weaknesses of green vehicles**

Kim Winther, Danish Technological Institute, Transport and Electrical systems

Questions being addressed:

– What are today's green powertrain technologies and how will it look like in the future?
– Strength and weaknesses of green transport technologies compared to today's conventional ICE?
– How will the future transport technology be mixed in an optimal way?

10:15 – 10:45 **Status of Green Vehicles in Europe and globally – is up-scaling near?**

Jacob Teter, Energy Analyst at International Energy Agency

Questions being addressed:

– What is the status of recent developments in green vehicles in (Northern) Europe and Globally?
– How far are green vehicles from a massive up-scaling?
– What factors will affect the rate of adoption of green vehicles?
– What does the research say about the effectiveness of local/regional/national policies in promoting green vehicles?
– What scale-up of EVs would be needed to achieve a two-degree scenario?
– How can the cities stand stronger together to up-scale green vehicles and what is the potential "next step"?

10:45 – 11:05 **EU and Urban Mobility**

Dorothée Coucharrière, Policy Officer, DG mobility and Transport, European Commission

Questions being addressed:

– What projects are already supported by DG MOVE?
– How can DG MOVE support future urban mobility projects and up-scaling of green vehicles?

11:05 – 12:00 **Plenum discussion of challenges and opportunities**

We will follow-up on the presentations and discuss the opportunities and possibilities in relation to the participating CNCA cities. It will involve the interactive Dilemma Game.

12:00 – 13:00 **Lunch**

13:00 – 15:30

Project 2
Interoperable Charging Systems.

Project 4
Purchasing Cooperatives across borders.

15:30 – 16:15 **Green City walk through central Copenhagen to House of Green**

16:15 – 17:30 **House of Green**

Situated 1.5 km/0.9 mile from SOHO you'll find HoG. House of Green (HoG) is an interactive showroom and visitors' center funded by the Danish Industry Foundation. HoG will introduce us to Denmark's decision to become independent of fossil fuels by 2050. Carbon neutral transportation is essential in achieving that goal. Read more at: **www.houseofgreen.dk**.
Address: Vesterbrogade 1E, DK-1620 København.

17:30 – 19:30 **Social Dinning at Bio Mio**

Bio Mio is located in the new hot spot The Meatpacking District, in Vesterbro. The eatery is 100% organic and named CLIMATE+ restaurant and green café. You'll have an opportunity to have your lap-top etc. stored in a safe place. Read more at: **www.biomio.dk**
Address: Halmtorvet 19, 1700 København V.

Tentative program as of January 2016 - program topics and times subject to change.

CITY OF COPENHAGEN

WORKSHOP DAY 2

22nd January 2016

08:00 – 08:20 Transport for participants staying at WakeUp Hotel either using DriveNow or having a pleasant walk.

08:20 – 09:00 **Breakfast + networking**

09:00 – 09:30 **Kick-start the day with the up-scaling barometer**

Follow-up on the project workshops from day 1 and work with the up-scaling barometer to make the projects even better and discuss partners.

09:30 – 10:00 **Public incentives as a driver for increasing market share of green vehicles – The Norwegian experience of up-scaling green vehicles**

Guri Tajet, Project Manager Climate and Energy, City of Oslo

The government's policy involving financial incentives in Norway has influenced consumer's choice. There is also evidence that other than fiscal benefits can be effective in increasing the popularity of electric vehicles. Such as use of bus lanes and access to restricted areas, preferential parking spaces and/or free or reduced parking rates.

10:00 – 10:30 **Public incentives as a driver for increasing market share of green vehicles – The Californian experience of up-scaling green vehicles**

Joshua Cunningham, Branch Chief, Advanced Clean Cars Branch, California Air Resources Board

The Californian experience of electric vehicles suggests that the use of fiscal incentives, coupled with automaker mandates, is the best approach to increase market share of low emission vehicles.

10:30- 11:00 **The presentation will be followed by a discussion evolving around the following questions:**

– What is the experience from using policy initiatives for supporting the development of green vehicles? What will happen when the incentives end?
– How crucial are political incentives to succeed with a successful up-scaling of green vehicles?
– Are there any drawbacks concerning political incentives for up-scaling green vehicles?
– How can the experiences from frontrunners in EV uptake like Norway and California be adopted in other countries?

11:00 – 12:00 **Lunch**

12:00 – 14:30

Project 1
Car sharing in the context of Mobility as a Service.

Project 3
Environmental Zones in Cities.

14.30 - 15.30 **Project kick-off**

The new projects will be presented and we will use the up-scaling barometer to give the projects the best possible start. There will be evaluation and last comments. Executive Climate Director Jørgen Abildgaard will give some closing remarks. Final, we will invite you for a glass of sparkles to hopefully celebrate the coming of new projects.

Tentative program as of January 2016 - program topics and times subject to change.

CITY OF COPENHAGEN

"In London, we implemented the world's first Congestion Charge back in 2003 which was quite a bold political move. We have been able to build on that going forward, and so we are proud of the ULEZ and excited for what it can achieve for improving air quality and the health of Londoners".

Jo Boyd-Wallis,
Principal Strategy Planner,
TfL, City of London.

"Our strongest position in Oslo is electric vehicles when it comes to percentage of on the street, about 30% of new cars sold in 2015 are electric /hybrid and that is because of the incentives. There are free toll roads, free bus lanes, no parking fees, free usage of power units owned by the City of Oslo in the city and more as lower tax when buying new cars. In December 2015 it is 30 000 EV's driving in the Oslo region."

Øystein Ihler,
Project Director,
Climate & Energy Program,
City of Oslo.

"The City of Berlin have an alternative way [compared to roaming]. We have installed an identification platform developed by the municipality. It's non-discriminatory and it's open for all operators. We exchange only a customer ID. For example when Vattenfall have customers they send nothing else then the customers ID to our platform and we urge every company to use our whitelist on daily basis."

Hermann Bluemel,
Principle Affairs of Transport Policy,
Department for Urban Development
and Environmental Protection,
City of Berlin.

Project 1

How can a city set a framework to support up-scaling of green vehicles?

Case presentation: Christoph Steinkamp, City of Hamburg
Support: Filip Kjellgren, Programme Manager, Vinnova

Case: Cities are tackled with major challenges regarding air quality. Green vehicles can be a part to improve air quality in cities. To overcome the restrictions green vehicles have to deal with cities are challenged to set a framework to support up-scaling of green vehicles. Christoph Steinkamp will present which measures the City of Hamburg has set up to promote green vehicles and disruptive business models in the field of green mobility like mobility-as-a-service project "switchh Hamburg".
Support: New business models, especially those centered on car sharing or full mobility, can maybe already in the short term remove barriers for adoption of green vehicles. On the user side, these models eliminate range anxiety, high initial purchase price and new technology questions. Furthermore it can give a better usage of the car fleet, share the costs between more people, reduce local traffic congestion and improve the level of mobility in the city. There are many perspectives on car sharing also as part of a mobility package, hereby the UbiGo project in Sweden.
Scope of the project: To the degree that mobility as a service, and specifically car sharing as a new important disruptive business model, can integrate market up-take of green vehicles, this will be the scope of the project. The relevance of the project is supported by data from the industry estimating that the number of car sharing customers in Europe is increasing from 1 million today to 15 million by 2020 making this an interesting opportunity for up-scaling green vehicles.
Central questions: How can we get more car sharing concepts based on green vehicles? How can car sharing be promoted through new concepts like mobility-as-a-service? What is the cities role in promoting car sharing?

Focus: HEV, BEV, PHEV, REEV, FCEV.

Project 2

How is interoperability between charging systems in cities and across borders possible?

Case presentation: Hermann Bluemel, Principle Affairs of Transport Policy, Department for Urban Development and Environmental Protection, City of Berlin.
Support: Dorothée Coucharrière, Policy Officer, DG mobility and Transport, European Commission.

Case: The case focuses on interoperability between charging systems in Berlin making it possible to pay regardless of system and operator. Berlin has developed an inte¬grated system making this possible for electric vehicles. The system consists of an identification platform run by the city offering the end user an overall view of chargers and a simple payment system ensuring privacy. Hermann Bluemel will present the example from Berlin but other systems based on roaming also exist.
Support: In order to maximize the scope of the project, Dorothée Coucharrière clarifies how it can be supported by a Horizon 2020 call titled MG-4.2-2017: Supporting "smart electric mobility" in cities. The Horizon 2020 call focuses on deploying integrated solutions and business models for electric recharging.
Scope of the project: The scope of the project is to support "smart mobility" in cities by identifying possible barriers for interoperability and ways to overcome barriers to deploy integrated approaches and testing of business models for electric recharging. The intention is to support up-scaling of green vehicles by having a simple, interoperable, convenient and intelligent billing system in Northern Europe with one entrance for the end users making it possible to locate rechargers and recharge your electric vehicle using one system. There is a huge need for interoperability between electric mobility operators as the number of chargers in cities is increasing rapidly and no interoperable system exists on the market.
Central questions: How can a business model for an integrated interoperable recharging system look like? What barriers exist for deploying an interoperable recharging system for electric vehicles in cities and across borders?

Focus: HEV, BEV, PHEV, REEV

Project 3

How can we develop existing environmental zones in cities into Ultra-Low emission Zones (ULEZ) or Zero-emission zones (ZEZ) for future up-scaling of green vehicles?

Case presentation: Jo Boyd-Wallis, Principal Strategy Planner, TfL, City of London
Support: Tanja Ballhorn Provstgaard, Project Leader, City of Copenhagen.

Case: London has implemented a Congestion Charge zone in the center of the city since 2003. This scheme already offers a 100% discount for vehicles emitting <75g/km CO2. The same zone is now being developed into an Ultra-Low Emission Zone (ULEZ) defined as an area where access by certain polluting vehicles is deterred with the aim of improving the air quality. From 2020, the scheme will require private vehicles to comply with Euro norm 6 diesel and Euro norm 4 for petrol. Because of the cost of compliance to the industry and the fact that there are not really the green vehicles available, it is yet not possible to propose a zero emission zone for 2020, but the city is already exploring the feasibility of expanding the zone or tightening the requirements to further incentivise vehicles such as PHEV's, or zero-emission vehicles such as HFCV's and BEV's.
Support: Particle pollution is the biggest air pollution problem in Copenhagen and Frederiksberg. Since 2008 the majority of Copenhagen and all of Frederiksberg has therefore been an Environmental Zone which applies for all diesel-powered vehicles above 3½ tons. The vehicle must either meet Euro 4 standard (or newer) or be retrofitted with an effective particle filter. Additional actions are planned but political support among others are needed.
Scope of the project: The scope of the project is to explore new ways to incentivize green vehicles in cities building on already existing environmental zones to reduce air pollutant and CO2 emissions from transport to improve quality of life and public health and which eventually can lead to the introduction of greener private vehicles, buses and taxis.
Central questions: What is the way forward for forming zero emission zones? How can emission zones be a driver in up-scaling green vehicles?

Focus: HEV, BEV, PHEV, REEV, FCEV and gas.

Project 4

How can purchasing cooperatives between cities and companies create market demand for green vehicles?

Case presentation: Eva Sunnerstedt, Project Leader, Clean Vehicles in Stockholm, City of Stockholm.
Support: Kåre Albrechtsen, head of secretariat, Copenhagen Electric – Regional Secretariat, the Capital Region of Denmark.

Case: The City of Stockholm has a lot of experience from introducing clean vehicles through public procurements. Procurement of clean vehicles and fuels for the city's own vehicle fleet along with demands for clean vehicles, when procuring transportation services for the city carried out by private entrepreneurs (ie. Taxi, internal mail distribution, waste collection), has been used far and wide and with quite a success too. Eva Sunnerstedt, head of the Clean Vehicles and fuels program at the City of Stockholm will give a short introduction to this work.
Support: Supporting this set-up is Copenhagen Electric, the regional secretariat for electric cars, who have experiences with up-scaling of green vehicles in public and private fleets in Denmark. The process for preparing the procurements is usually that a fleet analysis is made beforehand involving both public and private organizations. The fleet analysis and procurements have so far resulted in the purchase of more than 900 new electric vehicles. In 2016 a new partnership for electric vehicles purchase is being planned with expected 870 electric vehicles for purchase.
Scope of the project: Purchasing cooperatives can be set-up between cities and regions across borders, to agree to aggregate demand to get lower prices from selected suppliers to reduce costs of procurement. The ambition is to build a purchasing cooperative to be organized between countries and cities focusing on green vehicles procurements for purposes of public and private fleets, hereby buses, taxis, waste collection etc.
Central questions: What does it take to engage cities and regions across borders to finalize collaborative procurements? How can a collaborative procurement between borders look like?

Focus: HEV, BEV, PHEV, REEV, FCEV and gas.