We make Hamburg electrically mobile

Hamburg continues to expand its pioneering role in the field of electric mobility. The master plan agreed by the Senate in August 2014 to extend the publicly accessible charging infrastructure is being implemented intensively. Stromnetz Hamburg GmbH (SNH) plays a decisive role here as municipal coordinator. Around 600 charging points are to be put into operation for users of electric vehicles in Hamburg in the course of the project.

Background and goals of the master plan
Hamburg already holds a leading position nationwide in Germany both for the number of battery electric vehicles used and also for the density of the charging infrastructure in public areas. In order to give this development a further boost, Hamburg’s Senate decided to continue to extend the charging infrastructure appropriately on the basis of the number of vehicles expected in Hamburg. The master plan forms the basis of a quantitative and qualitative high-grade public charging infrastructure in the Hanseatic city.

Essential cornerstones and goals
- Setting up and expansion of 592 charging points (number at the beginning of the master plan: around 140).
- Up to 70 charging points with powerful DC (direct current) rapid charging devices to charge within 30 to 40 minutes.
- Only certified green current is provided at all charging points.
- All charging points are integrated technically in a comprehensive IT backend.
- A charging process can be started at all charging stations either with RFID card of a contractual partner of the user (their power supplier/service provider) or without a contract via Direct Pay (Spontaneous charging via SMS or app).

Role of Stromnetz Hamburg GmbH
The master plan envisages the installation and operation of at least 50 percent of the public charging infrastructure under municipal management. SNH acts as the central municipal actor of the city here and is responsible as the city’s contractor for the coordination, procurement, installation, operation and maintenance of the charging devices installed by the city – manufacturer-neutral and free of discrimination.

Open for all electric mobility providers and charging station operators
In order to make the charging of electric vehicles user-friendly, SNH ensures the easiest possible access to the charging stations. The goal is therefore among other things that the RFID cards of as many users as possible and their electric mobility providers (EMP) can be used at the charging stations. At the moment seven EMP are connected to the IT backend. These EMP have concluded a charging infrastructure access contract with SNH for this. This possibility is available for all interested EMPs. In addition, all other charging station operators in Hamburg can also implement their concepts (in the case of compliance with the minimum standards of the city and an interface to the central IT backend). In this way uniform monitoring of all charging stations and comprehensive location finding on mobile devices is to be achieved.

All information on this topic can be found under www.stromnetz-hamburg.de/elektromobilitaet
**Power supply at the charging stations**

SNH is not an electricity supplier. The end customer gets the electricity from his/her individually selected supplier (EMP), who invoices the amounts consumed by his respective customer to him directly. The certified green electricity for the charging stations is made available by Hamburg Energie at the moment. The individually selected suppliers therefore settle the accumulated consumed amounts for their part with Hamburg Energie.

**Spontaneous charging via Direct Pay**

The charging infrastructure should also be able to be used explicitly without prior contractual necessity according to the master plan for the electric vehicle user. This is guaranteed in Hamburg via the Direct Pay system: End customers can start the charging process either using a smart phone app ("E-Charging Hamburg") or per SMS. In the case of charging per SMS the settlement is made either via the mobile phone invoice or the prepaid credit. In the case of charging per app alternatively other means of payment are also possible such as e.g. credit card, SEPA direct debit procedure among others. The costs for this are recorded for the exact amount consumed: 27 ct/kWh + Direct Pay extra charge of 1.73 EUR + 19 % on the total amount (transfer of the fee resulting from the Direct Pay system).

**Milestones and current status**

- **Beginning of 2015:** Introduction of Direct Pay, gradual conversion of all public charging stations to the SMS payment system.
- **Mid 2015:** The "E-Charging Hamburg" app is available for android and iOS smart phones, including availability display of all charging station in real-time.
- **September 2015:** Complete takeover of the previous existing charging infrastructure in Hamburg by SNH, transfer to SNH’s central IT platform, presentation of the columns in uniform design
- **Expansion of capacities advances:** Up to now 79 additional locations (158 charging points) with AC (alternating current) charging stations and 4 with DC (direct current) charging stations in the city area have been implemented by SNH, i.e. structurally realized and put in operation and planned and elaborated and approved to such an extent that the implementation of the construction work can be carried out immediately.
- **Currently around 77,000 RFID cards are already registered in the SNH backend.**
- **Around 250 charging processes per month are regularly initiated via Direct Pay at the moment.**

Further information on charging stations, among other things, location, equipping and occupation can be found on the websites of Stromnetz Hamburg (www.stromnetz-hamburg.de/elektromobilitaet) and under www.hamburg.de/bwvi/elektromobilitaet'l.