

Green station moBiel (Bielefeld)

CONCEPT

moBiel has developed the 'green station' concept at the terminus of tram line 2, near its tram depot. The goal is to offer various mobility services such as a charging station supplied by photovoltaic panels for electric cars and electric bikes, a LPG station and a station for electric carsharing.

OBJECTIVES

- Offer attractive opportunity to recharge electric cars or electric bikes while using public transport;
- Implement photovoltaic panels to produce energy locally to supply the charging stations;
- Evaluate the added value of a green station for the customers before a deployment at a larger scale.

INVESTMENT DESCRIPTION

The green station consists of:

- Station for e-bikes
- Station for electric car-sharing
- Public charging station for electrical cars
- Public charging station for LPG-cars
- Park and ride facility
- Interchange between bus and tram
- Covered parking place for bikes
- Car-sharing
- Taxi stand.

Photovoltaic panels have been placed on the roof of a nearby building to produce green electricity for recharging electric cars and bikes.

SUPPLIER

- Steel construction: **Oberjohann**
- Photovoltaic cells: **Bielefelder Solartechnik; Schüco; Blome Elektrotechnik Bielefeld**
- Charge column for e-cars: **Stadtwerke Lemgo (Ladefox)**
- Charge column for LPG cars: **LNT Gastechnik GmbH, Porta Westfalica**
- EC machine for LPG column: **Hectronic Deutschland GmbH**
- Boxes for bikes: **Ziegler**
- Charge elements in bike boxes: **bike energy, Austria**
- Price pylon: **Infographik, Bielefeld**
- Graffiti: **Farbelhaft; Tim Methfessel, Bielefeld**



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Technical Data

Performance	22.5 kWp
Feed-in	22.5 kW x 850 h = 18,675 kW/a
Annual CO ₂ savings	68 TCO ₂

COST AND FUNDING

The total cost of the green station was around €300,000.

RESULTS

Due to the fact that the Green Station will be ready in spring 2014, results can only be provided next year. If the concept is successful, moBiel intends to implement further green stations along its public transport network to promote multimodality.

LESSONS LEARNED

The initial budget was too narrow and the tender process has to be adapted. The problem was especially the coordination between the different building steps and the suppliers as well as the planning of the internal resources. It is important to permanently monitor and control the construction progress at the building site and to keep in mind the potential risk of cost increase.



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