**NAME OF CASE**

Delivery to a C&A store in Berlin with low-noise electric trucks operated by Meyer&Meyer

**KeyWords:**

Implementation of low emission technologies, Innovative vehicles, vessels and equipment, Business to business (B2B) solutions, cooperation, Communication between businesses and authorities: coordination, consultation (concerning night delivery), Innovative operational solutions, Access rules and restrictions of urban areas, Data collection and statistics

**Description:**

Meyer&Meyer is a third-party logistics provider from Osnabrück in Germany that supplies primarily retailers in the textile industry. Meyer&Meyer started a pilot scheme in which the C&A store (Kurfürstendamm) is delivered to by an electric vehicle. The pilot was carried out to enhance their corporate image, test the usage of electro mobility and develop concepts to increase the profitability of electro trucks. For this pilot, a vehicle concept based on 12t-trucks was developed in cooperation with the Dutch vehicle builder, in which existing diesel-powered vehicles are modified with an electric engine.

**Benefits:**

- Corporate image
- Testing the profitability of the usage of electric vehicles
- Experience in the usage of electric vehicles
- Seen as pioneer - good for reputation
- Reduction in noise and pollution in the inner city
- Reduction of total amount of goods delivery during daytime
- Reduction of respective traffic load

**Success Factors:**

Total Costs of Ownership are reduced compared to diesel operation. For a profitable use of e-trucks a mileage of 250km per day is needed. The actual range of one battery is 170km. To increase the vehicle range, swap-batteries must be used which increase the acquisition costs. Also it is necessary to find suitable clients for 3-shift-operation that allows night delivery and charging station at the depot.

**Supported Strategic Targets:**

- Reduced emissions
- Reduced congestions (night delivery)
- Reduced noise pollution
- Increased competitiveness
- Image

**Starting Point/Objectives/Motivation:**

*What was the main problem, idea or motivation that led to the development and introduction of the new practice?*

Meyer&Meyer wanted to make a first step towards the usage of electro mobility and test ways to reach their corporate target of a reduction of CO₂-emissions of approximately 20% by 2020.

*What was the common practice before the implementation?*

Before the project, Meyer&Meyer used standard diesel-powered trucks.

*What was the purpose and the sustainability objective of the case?*

This case demonstrates the technical feasibility of full-electric technology for inner city deliveries if the average distance travelled increases from 170km to 250km per truck. This calculation will improve when the production costs of the vehicle decrease.
The solution has been supported by the research project “E-City-Logistik”, coordinated by the Fraunhofer IPK. A second phase of the project called “NaNu” has commenced, which is currently in its main implementation phase. This second phase involves Meyer & Meyer piloting the use of a 12t-truck, configured with a swap battery system developed by Fraunhofer, which allows continuous 3-shift operation without the need for a charging-break.

The trucks that are used in this solution are MAN TGL diesel trucks that are converted into electro trucks by a company called All Green Vehicles (AGV) near Groningen in the Netherlands. AGV switched the diesel engine, transmission and cooling system for a battery and the technology of the electric drive with 120kW. The vehicle range is between 165 and 200km. The weight of the truck increases by 700kg.

In Berlin, the trucks need to be charged every 170km for 12 hours. The captive electric charging station makes use exclusively of green electricity.

A similar truck is currently being used by a Dutch bank.

All information about the usage of the trucks has been analysed by the Fraunhofer IPK during the test.

Project “NaNu!”:
A new 12t-truck is being build on a MAN TGL chassis with a battery swap system, comprising of 8 battery modules with 20kwh each. The truck is able to operate with a minimum of 2 battery modules loaded – the truck can be loaded with the amount of batteries that are actually needed for a particular tour.

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More information:

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Large city centre store delivered with a full-electric truck of Meyer&Meyer in Berlin
Battery range is between 165 and 200 km per day in urban traffic conditions