

Monetising emissions for a lease contract in Bremen

Clean Fleets case study

- Low emission vehicles available for all city staff
- CO₂ emissions between 96 & 139 gCO₂/km
- CVD operational lifetime cost methodology used to monetise emissions



Stadt Bremen

Contract tendered

- 2 year framework contract for the lease of approx. 80 vehicles for everyday use in Bremen
- Contract tendered in 2011

Targets and planning considerations

The Free Hanseatic City of Bremen has set its own climate and energy goals. Since 2009 the strategic objective has been to reduce Bremen's CO₂ emissions by 40% compared to the 1990 levels. One of the sectoral actions is to reduce transport related CO₂ emissions. To meet its targets, the Senate wishes the city administration's vehicle fleet to be as clean and efficient as possible. In addition for business trips undertaken by administration staff there is a rule which prioritises more sustainable modes of transport. The order of priority is: walking, cycling, public transport – a car may only be used if these modes are not appropriate for their work.

The Clean Vehicles Directive (2009/33/EC) was transposed into German law in 2011, and to help meet the above objectives the administration wished to apply the new approach in the Directive for monetising environmental impacts of vehicles – the operational lifetime costing (OLC) methodology.

Procurement approach

Each Bremen Senate department must determine their own demand for vehicles and pay for the car/van or car-sharing service themselves. The Umweltbetrieb Bremen (environment agency) acts as the central purchasing body for vehicles, and published a call for tender in 2011 for a passenger car framework contract.

Prior to tendering, market research was carried out in order to establish additional minimum specifications for CO₂ emissions and harmful local emissions, which would still allow sufficient competition. Levels were set to enable approx. 50% of vehicles on the market to comply, with the OLC methodology awarding better performance during the evaluation.

The tender was separated into lots. There were 5 lots in total – 1 for each of the vehicle



categories in the table below.

1) Specifications

- CO₂ emission limits were set as follows:

Passenger Car Category	CO ₂ emission limit (g/km)
Small car	120
Compact car	130
Medium class	150
Minivan	140
Van	150

- Vehicles must at least achieve Euro 5 standard
- The supplier could offer diesel, petrol, and/or alternative fuel options for the different lots.
- Each supplier could bid for as many lots as they wanted, with no minimum or maximum requirement

2) Award criteria

Tenders were evaluated on the basis of most economically advantageous price, determined by adding:

- Leasing costs, and
- Operational lifetime costs (OLC), calculated according to the methodology of the Clean Vehicles Directive

The OLC methodology allows emissions of CO₂, NO_x, particulates, NMHC and energy consumption to be monetised for use directly in a cost calculation in tendering. For this purpose Bremen used a tool developed by the Berlin Energy Agency. *A full description of the OLC methodology can be found in a separate [Clean Fleets factsheet](#).*

Results and environmental impacts

- Only one supplier responded to the tender. The administration believes this is likely due to the complexity of the information relating to a separate tender requirement on demonstrating compliance with the ILO¹ conventions, rather than the OLC methodology.
- Only diesel and CNG vehicles were offered. However the results in environmental

¹ International Labour Organization



terms still exceeded expectations (see table below). Overall, therefore all Bremen administrations which lease through this contract will be replacing their old cars with more efficient ones. The mean CO₂ emissions value of all 531 cars in 2013 was 141.2 g/km.

Passenger Car Category	CO ₂ emission limit (g/km)	CO ₂ emission of best offer (g/km)
Small car	120	96
Compact car	130	119
Medium class	150	119
Minivan	140	124
Van	150	139

Costs

The price impact of adding environmental criteria appears to have been limited. This will be further examined following the next framework call for tender in 2014/2015, when a performance comparison will be conducted.

Lessons learned

- The availability of low CO₂ emission vehicles is already high, and this will be likely reflected in future tenders by using more ambitious minimum specifications.
- Most trips take place within the city centre leading to higher pollutant emissions from diesel vehicles. In future tenders urban consumption figures may therefore be requested in tendering, rather than the combined figure.
- The more suppliers are requested to provide emissions data for the OLC calculation (as well as ILO verification) the more used to this they will become, and more offers can be expected.
- To better understand the user needs, a short survey will be carried out prior to the next tender. This might lead to only one van class and a lot for 2-seaters as an addition to the small car category.
- There will be lots for all categories asking for petrol, diesel, CNG and electric vehicles.

Contact information

Hendrik Koch

Freie Hansestadt Bremen
Senator für Umwelt, Bau und Verkehr
Projekt-Koordination Nachhaltige Mobilität
Ansgaritorstr. 2, 28195 Bremen, Germany



Tel.: +49 421 361- 10455

E-Mail: hendrik.koch@umwelt.bremen.de

Internet: www.umwelt.bremen.de



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