Electrifying the fleet: procurement of electric passenger cars in Rotterdam

Clean Fleets case study

- Two-year framework contract for 22 electric passenger cars
- Zero tailpipe emissions leading to improved local air quality
- Zero CO_2 emissions when driving – savings of 33 tonnes/year against a standard passenger car

Source: Roteb lease

Contract tendered

The contract concerns the supply of 22 electric passenger cars for the municipal fleet. The cars were being purchased as a direct replacement for vehicles at the end of the life cycle.

As an award criterion, the most economically advantageous tender was used. The objective is to contract the supplier on the basis of a framework agreement. The effective date of the Framework Agreement is August 1, 2015 for two (2) years, without notice being required by law on July 31, 2017. The agreement can be extended 2 times for a period of 1 year each.

The number of cars expected to be purchased over this period is detailed below:

Year	Numbers
2015	5
2016	4
2017	6
2018	2
2019	5
Total	22

Targets and planning considerations

Technology

The Municipality of Rotterdam has a policy of procuring the cleanest cars possible, with a preference for electric cars if available. A series of electric charging points have been installed to encourage the provision of electric vehicles.

Social Return

In the policy of the municipality of Rotterdam is stated that any purchase agreement over € 15.000 in the performance of the contract 'Social Return' is being implemented. This means that the contractor must spend at least 3% of the contract value in services employing people 'with a distance' to the labor market. These are people with a benefit, candidates with a work limitation, or students of lower secondary professional education, secondary special education and practice schools.

Infrastructure

There are currently over 1,500 charging points in Rotterdam, exceeding the political aim to reach 1,000 in 2014. Facilitating infrastructure and buying electric cars are both municipal policy, so go hand in hand.

Procurement approach

In order to qualify for consideration, all tenders were expected to meet the minimum requirements specified below. A tender that does not meet the minimum requirements is excluded from the further process.

The minimum requirements for electric cars slightly differ from conventional cars. Extra demands are:

- The battery must be sold along with the car, rather than being provided as a separate lease contract.
- The vehicle is prepared for connection of electrical accessories on the electrical circuit of the vehicle.
- The electric motor delivers power of at least 80 kW.
- The electric motor does not emit CO2.
- The vehicle has a theoretical driving range of at least 160 km (according to New European Driving Cycle Norms).

The actual evaluation of tenders takes into account both quality cost. An example of how these work can be found below.

Example of ranking:

	Price points	Quality points (Q1+Q2+Q3)	Total	Ranking
Tenderer A	31	20	51	3
Tenderer B	14	43	57	1
Tenderer C	33	21	54	2

Quality

The assessment of quality is based on the following award criteria. ☒

	Quality	Max. points
Q1	Service and maintenance	10
Q2*	Environment / sustainability	30
Q3	Delivery times of component	10

* Q2

As part of Environment and sustainability criteria, vehicles are assessed on CO_2 emissions. A (positive) deviation (lower CO_2 emissions) relative to the minimum requirements, gives a higher score. This is calculated at 1 point / gram less CO_2 emission. In this case, full electric vehicles will always get the highest score possible (30). This method however, is also being applied for other types of vehicles (e.g. hybrid or conventional), then the outcome will be more diverse.

Financial aspects

The score for cost is based on the deviation between the offer price (P) related to the reference price (or catalogue price), with a multiplication factor of 150. The formula for assessing cost is (1-P/R)*150.

Results

In total there were 3 bidders, all of whom offered electric vehicles. The tender was given to Nissan with Nissan Leaf, as they offered the most economically advantageous price (in a price/quality calculation)

Environmental impacts

- 25% of the municipal fleet is now electrified (taking into account both hybrid and electric cars). This percentage is expected to increase in future years.
- Zero tailpipe emissions leading to improved local air quality
- Zero CO2 emissions when driving leading to savings of 33 tonnes/year for each car

Lessons learned

- The Municipality of Rotterdam is content with the approach used so far to procure electric vehicles. Hopefully, the number of electric vehicles in the fleet will continue to increase as the market develops.

Contact information

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