



## Purchase of low emission bus Municipality of Alcobaça, Portugal

- 15% reduction of energy and greenhouse gas emissions (CO<sub>2</sub>e)
- During the lifetime of the bus savings of 252 t of CO<sub>2</sub>e
- During the lifetime of the bus savings of 79 toe energy



### Benchmark: Bus to be replaced (last tender)

- 1663 t CO<sub>2</sub>e-emissions (lifetime)
- 519 toe energy consumption (lifetime)

### GPP 2020 tender: New bus emission standard EURO VI

- 1411 t CO<sub>2</sub>e-emissions (lifetime)
- 441 toe energy consumption (lifetime)

### Results

- 79 toe energy savings,
- 252 t CO<sub>2</sub>e-savings in lifetime (12 years)

## Contract tendered

- Public tender for purchase of one bus by Municipality of Alcobaça.
- One diesel bus EURO VI emission standard purchased in substitution of one old diesel bus.
- Total cost: 225 000€ (excluding VAT)

## Procurement approach

The tender was done via open procedure. Minimum technical specifications were set, including engine, passenger's capacity, etc. Apart from these, the following low carbon criteria were defined.

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Low carbon criteria	
Technical specifications	
Energy consumption/ CO <sub>2</sub> and other emissions	Compliance with EURO VI standard Tyres class D (rolling resistance) Verification: technical documentation providing the requirements of EURO VI standard; fuel consumption per 100 km; type of tyres.
Award criteria	
Lowest price	
Contract Clauses	
All drivers must be trained in efficient and safe driving techniques.	

## Criteria development

Criteria were developed through consultation of EU GPP criteria for Public Transport Vehicles (Bus Procurement) available at

<http://ec.europa.eu/environment/gpp/pdf/criteria/transport.pdf>.

## Results

	Energy consumption (toe/lifetime)	CO <sub>2</sub> e emissions (t CO <sub>2</sub> e/lifetime)
Benchmark	519	1663
Low carbon solution	441	1411
Savings	79 toe/lifetime	252 t CO <sub>2</sub> e/lifetime

### Calculation basis

Estimations were made using the GPP 2020 Vehicles calculator. The data used for calculations is as followed:

- One new diesel bus was purchased to substitute one diesel bus (Benchmark);
- Benchmark: average fuel consumption is 33 l/100Km; average distance per vehicle during lifetime is 1 830 000Km.
- Low carbon tender: average fuel consumption is 28 l/100Km; average distance per vehicle during lifetime is 1 830 000Km.

## Lessons learned

This procurement procedure was developed in cooperation with LNEG, which resulted in an added value for the organisation.

The main lesson from this procurement procedure is that the Portuguese market is ready to respond to low carbon criteria at competitive prices.

This procurement process has shown that local authorities should not start from the assumption that low carbon procurement is more costly.

## Contact

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## About GPP 2020

GPP 2020 aims to mainstream low-carbon procurement across Europe in support of the EU's goals to achieve a 20% reduction in greenhouse gas emissions, a 20% increase in the share of renewable energy and a 20% increase in energy efficiency by 2020.

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To this end, GPP 2020 will implement more than 100 low-carbon tenders, which will directly result in substantial CO<sub>2</sub> savings. Moreover, GPP 2020 is running a capacity building programme that includes trainings and exchange. – [www.gpp2020.eu](http://www.gpp2020.eu)

## About PRIMES



Across six countries in Europe; Denmark, Sweden, Latvia, Croatia, France and Italy, PRIMES project seeks to help municipalities overcome barriers in GPP processes, many of which lack capacity and knowledge.

PRIMES aims to develop basic skills and provide hands-on support for public purchasing organisations in order to overcome barriers and implement Green Public Purchasing. This will consequently result in energy savings and CO<sub>2</sub> reductions. – [www.primes-eu.net](http://www.primes-eu.net)



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