



Purchase of low emission CNG minibuses for city transport

Zagreb Holding, Croatia

- CO₂ savings through purchase/leasing of low emission vehicles
- Less tax payment for eco-friendly vehicles
- Improvement of company's social responsible profile



Benchmark: Diesel engine vehicles technology

- 1 102 t of CO_{2e}/lifetime
- 344 toe/lifetime

GPP 2020 tender: CNG engines – new technology

- 764 CO_{2e}/lifetime
- 263 toe/lifetime

Results

- 31 % reduction CO_{2e} emissions
- 338 t CO_{2e}/lifetime

Contract tendered

- The effort of the Zagreb Holding was to reduce CO_{2e} emissions and to provide to the citizens a cleaner way of transport. Instead of diesel buses as in its previous tender, the city decided to purchase CNG vehicles.
- Zagreb Holding tendered 16 CNG minibuses.
- 12 month valid Framework agreement
- Total cost: 1 825 000 € (excluding VAT)

Procurement approach

Tendering followed the open procedure.

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Low emission CNG buses – 16 pcs

Technical specifications

- Min. 14 seats for passengers + 16 standing seats
- Euro VI on CNG engine drive
- Engine power: min 100 kW
- Range with tank: min 250 km
- Tank for CNG located on the roof for more passenger space
- Single charge reach: min 120 km

Verification: Manufacturer technical dossier as proof.

Award criteria

- The only award criterion was lowest price: Bidder must prove in explicitly state that the products that will be delivered are going to fulfil the public authority's requirements as listed in the technical specifications

Contract clauses (applied to all lots)

Repair and maintenance: warrantee of compliance for following environmental aspects:

- Upon delivery, the chosen tenderer must organize specialized training on the use of vehicles.

Criteria development

The ambition of the public tender was to renew the public transport fleet with CNG vehicles as alternative technology and to improve sustainable consumption of energy in government owned companies and to raise social responsibility as well.

Results

Energy savings and CO_{2e} emission reductions were calculated based on GPP2020 methodology for a lifetime of 5 years. The results are as follows.

	CO ₂ emissions (t CO ₂ e/lifetime)	Energy consumption (toe/lifetime)
Low Carbon Solution	764	263
Benchmark: Last Tender	1,102	344
Savings	338 t CO ₂ e/lifetime	81 toe/lifetime

Calculation basis

- The new vehicles consume around 7.6 m³ compressed natural gas per 100 km.
- The previous vehicles (last tender) consumed an average of 10 l per 100 km.
- Each vehicle will travel 250,000 km per lifetime

Lessons learned

By choosing an alternative fuel for the public transport Zagreb holding made it possible to reduce significant CO₂ emissions. Lowering the CO₂ emission of public transport will further be the goal of Zagreb holding by buying eco friendly vehicles.

As the competitiveness was not compromised, in future, more ambitious criteria on the energy efficiency could be considered as an award criterion and also more ambitious technical specifications set with higher EE weight in the award criteria.

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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.

To this end, GPP 2020 will implement more than 100 low-carbon tenders, which will directly result in substantial CO₂ savings. Moreover, GPP 2020 is running a capacity building programme that includes trainings and exchange. – www.gpp2020.eu

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About PRIMES

**PRIMES**
Green Public Procurement

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 CO₂ reductions. – www.primes-eu.net



Co-funded by the Intelligent Energy Europe
Programme of the European Union

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