



Electric vehicles

HEP Ltd., Croatian Energy Company, Croatia

- CO₂ savings through purchase of innovative electric vehicles
- Less tax payment for eco-friendly vehicles
- Improvement of company's social responsible profile



Standard product =
benchmark

- Petrol engine
vehicles technology
- 379 t of
CO₂/lifetime
- 142 toe/lifetime

GPP 2020 tender

- Electric engines –
new technology
- Zero direct
CO₂/lifetime
- 43 toe/lifetime

Results

- 379 t CO₂ reduction
- 99 toe/lifetime
energy reduction
- 70% reduction of
energy

Contract tendered

- Tender for purchasing of electric vehicles tendered by the Croatian Energy Company Ltd.
- 20 vehicles purchased to renew own car fleet and other two companies' owned by the Croatian Energy Company Ltd.
- 3 Lots tendered – Lot 1: Low class electric vehicles – 11 pcs; Lot 2: Lower middle class electric vehicles – 5 pcs; Lot 3: Cargo electric vehicles – 4 pcs
- 12 month valid Framework agreement
- Total cost: 625.000,00 € (excluding VAT)
- This tender forms part of the GPP implementation policy of the Croatian energy company HEP Ltd. and contributes directly to the Government's National Energy Action plan (NEAP).



Procurement approach

Tendering followed the open procedure, and was divided into three lots:

Lot 1: Low class electric vehicles – 11 pcs	
<p>Technical specifications</p> <ul style="list-style-type: none"> - Electrical drive motor - Engine power: 35 kW - Battery capacity: min 15 KWh - Electrical energy consumption: max 160 Wh/km - Single charge reach: min 120 km <p>Verification: Manufacturer technical dossier as proof.</p>	<p>Award criteria</p> <ul style="list-style-type: none"> - The only award criterion was lowest price: Bidder must prove in explicitly state that products which will be delivered are meeting the public authority's requirements as listed in technical specifications
Lot 2: Lower middle class electric vehicles – 5 pcs	
<p>Technical specifications</p> <ul style="list-style-type: none"> - Electrical drive motor - Engine power: 80 kW - Battery capacity: min 23 KWh - Electrical energy consumption: max 180 Wh/km - Single charge reach: min 180 km <p>Verification: Manufacturer technical dossier as proof.</p>	<p>Award criteria</p> <ul style="list-style-type: none"> - The only award criterion was lowest price: Bidder must prove in explicitly state that products which will be delivered are meeting the public authority's requirements as listed in technical specifications

Lot 3: Cargo electric vehicles – 4 pcs**Technical specifications**

- Electrical drive motor
- Engine power: 35 kW
- Battery capacity: min 20 kWh
- Electrical energy consumption: max 160 Wh/km
- Single charge reach: min 160 km

Verification: Manufacturer technical dossier as proof.

Award criteria

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



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Contract clauses (applied to all lots)

Repair and maintenance: warranty of compliance for the following environmental aspect:

- Upon delivery, the chosen suppliers must organise specialised training on the use of vehicles.

Criteria development

The ambition of the public tender was to introduce electric 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 CO₂ emission reductions were calculated based on GPP 2020 methodology for a lifetime of five years. The results are as follows.

	CO ₂ emissions (t CO ₂ /lifetime)	Energy consumption (toe/lifetime)
(Low Carbon Solution)	zero t CO ₂ /lifetime <i>(direct emissions)</i>	43 toe/lifetime
(Standard solution (benchmark))	379 t CO ₂ /lifetime	142 toe/lifetime

Savings

379 t CO₂/lifetime

99 toe/lifetime

Calculation basis

- New vehicles consumes 0 l/km, and between 24.000 and 27.000 kWh and emit zero gram CO₂/km during lifetime (only the direct emissions are included)
- Worst case vehicles consume between 5,0-7,1 l/km and emit between 108-149 g CO₂/km
- Each vehicle will travel 150.000 km per lifetime

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Lessons learned

By redefining the characteristics to electric vehicles, it has been possible to achieve a significant reduction of engine power. This has made it possible to obtain vehicles with significant reductions in consumption and emissions compared to the previous vehicles in use.

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 energy efficiency weight, for instance 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



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 organizations in order to overcome barriers and implement Green Public Purchasing. This will consequently result in energy savings and CO₂ reductions. – www.primes-eu.net



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