



# Hybrid cars for city administration

#### CITY OF LJUBLJANA, SLOVENIA

### **Procurement objectives**

In 2009 the decision was taken in Ljubljana to completely change the entire city fleet in order to rationalise its management. The idea was to sell all cars belonging to the current fleet and take 60 cars on operational leasing for five years instead. A target was set for at least 10% of these vehicles to be hybrids.

## **Background**

Ljubljana is a participant in the <u>Civitas Elan</u> project, which focuses on developing clean mobility solutions with a maximum of citizen participation. The need to rationalise Ljubljana's fleet coincided with the measures undertaken in that project to promote the procurement of green public fleets – prompting the inclusion of the 10% hybrid electric vehicle (HEV) requirement.



#### Criteria used

- Subject matter of the contract: Operational leasing of cars, with service provider to purchase existing fleet
- **Technical specifications**: Leasing of 9 different classes of cars, of which 6 shall be middle class hybrid vehicles. The hybrid vehicles should have the following features and environmental characteristics:
  - ♦ Engine 1600 ccm3
  - ♦ Maximum fuel consumption of 5.5 l/100 km (urban)
  - ♦ Maximum CO<sub>2</sub> emissions of 110 g/km

Expected quantity: 6 vehicles, of which:

- ♦ 5 vehicles to be driven up to 15,000 km/year
- ♦ A vehicle to be driven up to 30,000 km/year

Used vehicles are acceptable with less than 10,000 km of previous mileage.

• Award criteria: Most economically advantageous tender in terms of monthly leasing cost (85%) and offered price for the purchase of the vehicles (15%)

### Results

Due to the very specific tender conditions involving the purchase and lease of vehicles, only two suppliers met the specified demands. At that time only two hybrid vehicles of the type required were available on the market. The choice of Toyota Prius was based on compliance with the specification and the award criteria. The tendering process was concluded successfully by a contract with Porsche leasing SLO d.o.o. for operational leasing of the cars for five years, with a total contract value of  $\in$ 1,242,886.80. The supplier purchased the old fleet for  $\in$ 227,714.60.

## **Environmental impacts**

Hybrid electric vehicles operate by using a conventional engine to generate electricity on-board – and this electricity powers the vehicle at low speeds. Above these speeds, the conventional engine kicks in, allowing the engine to stay in its most efficient load and speed range most of the time. HEVs can offer fuel consumption savings of between 30 and 50% over comparable gasoline-only vehicles for city driving. This reduces the environmental impact associated with fossil fuel consumption. There is a corresponding reduction in  $\mathrm{CO}_2$  and particulate matter emissions. While battery toxicity can be a concern with hybrid vehicles, the nickel metal hydride batteries included in newer models, including the Prius, can be fully recycled.

### Lessons learned

The monitoring of fuel consumption and related costs has been established for the entire fleet of cars and the results will be calculated at the end of the project. From the technical point of view, the improvements in fuel consumption have been tangible and represent a more immediate green solution than electric vehicles in Ljubljana's case. However the most important aspect of introducing the hybrid vehicles has been in spreading knowledge about the clean car technology amongst drivers and users. Changing the perception of users as to what makes a good car is also vital – and this contract has helped establish hybrids as a viable alternative.

For more information, please see European GPP criteria for transport, including passenger and public transport vehicles.

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