Clean Vehicles Procurement and Air Quality in Catalonia

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About us

Catalonia is an autonomous region of Spain with its own regional government (the Generalitat de Catalunya)

The Catalan Government is competent for Environmental Policy, deployed by the Department of Territory and Sustainability and its agencies.

The environmental competences include:

- Waste management
- Quality
- Evaluation
- Water and air management
- Natural Parks
- Green Public Procurement
What are our Green Public Procurement (GPP) objectives?

GPP is an instrument used to support several strategic policies of the Catalan Government.

The main objectives pursued with GPP are:

- To reduce the negative impacts of production and consumption
- To ensure the environmental performance of government’s actions
- To promote ecoinnovation and market transformation to transition towards a circular, green and competitive economy
- To support other policies and instruments pursuing these objectives
How do we do GPP?

**Centralized procurement:**
- Framework agreements
- Central purchasing

**Decentralized procurement:**
- Guides
- Training and advisory

**REGIONAL LEVEL**
- Catalan Government

**Networking Benchmarking**

**LOCAL LEVEL**
- Municipalities: Barcelona City Council, Barcelona Provincial Council, Metropolitan Area of Barcelona
- Catalan Association of Municipalities

**Central Purchasing Body**
Highly industrialized area:
140 IED activities (2010/75/EU)
1,000 significant sources in Air Pollutant Activities.

Densely populated area
725 Km² (2.3% CAT surface)
4,0 M inhab. (53% CAT population)

Important logistic area
Several Highways to BCN
Port
Airport

Territorial delimitation of the special protected area Air Quality Plan:
40 municipalities of the Barcelona Area
Main problems: NO$_2$ annual mean limit value exceedances and PM$_{10}$ daily limit value exceedances.

Main challenges: Road transport (51% NO$_x$ emissions; 53% PM$_{10}$ emissions), maritime transport (14% NO$_x$; 23% PM$_{10}$), industry (14% NO$_x$; 23% PM$_{10}$).
Barcelona special protected area
Air Quality Plan
Sources of emissions: NO$_x$ & PM$_{10}$

2011 NO$_x$ Emissions (t/y)
- Maritime Transport 14%
- Aerial Transport 6%
- Domestic 5%
- Energy 3%
- Industry 21%

2011 PM$_{10}$ Emissions (t/y)
- Road Transport 53%
- Maritime Transport 23%
- Industry 19%
- Energy 2%

51% NO$_x$ emissions from Road Transport

53% PM$_{10}$ emissions from Road Transport
1. Guide for green public procurement of vehicles

2. Government Agreements on GPP

3. Ecolabelling
   • Catalan Ecolabel for vehicle fleets
   • Labelling of vehicles

4. LIVE platform
Green Vehicle Procurement Guide

The Guide gives public procurers clear and simple criteria (tables) to buy low emissions vehicles (cars, vans and motorbikes) and to contract services with more environmentally friendly fleets.

Updated 2015
Guide for green public procurement of vehicles

Examples of environmental criteria to include as technical specifications and/or award criteria:

• Minimum European Emission Standard EURO (include NOx, NMHC and particulate matter)
• Maximum gCO$_2$/km
• Maximum energy consumption
• Minimum energy consumption class
• Prioritization of technologies, split in lots
Clean vehicles procurement

TOOLS 2

Government Agreement of 11th October 2005 to promote GPP
Creation of the Commission to Monitor the Green Public Procurement.

Government Agreement of 9th October 2009 with measures to green public procurement

Government Agreement about public procurement of lower emission vehicles (in development)
Priorization of purchasing of lower emissions vehicles (electric, hybrid and gas) by Departments and Agencies of the Government of Catalonia.
Instruction to include environmental clauses in all the tenders of purchasing or leasing vehicles, and services with the use of vehicles, according to the Guide for green public procurement of vehicles.
Ecolabelling systems and GPP

When contracting authorities intend to purchase supplies or services with specific environmental characteristics it is very useful to have an environmental ecolabelling system that can proof easily the fulfilment.

This option is included in Directive 2014/24/EU, on public procurement.
ECOLABELLING

CATALAN ECOLABEL: The Emblem of Guarantee of Environmental Quality

What is it?

- It is a regional voluntary ecolabel that recognizes products and services that fulfill certain environmental quality requirements beyond those established as compulsory under current regulations. It is verified by an independent organization (third party).
- It is awarded by the Government of Catalonia managed by the Directorate-General for Environmental Quality of the Ministry of Territory and Sustainability.

Who can apply the Catalan Ecolabel

Currently there are defined 30 product-groups.

More information:
http://www.gencat.cat/territori/distintiuambiental/
8 sub-categories of vehicle fleet according to:
1) **Type of vehicle:** Passenger car, Light Duty Vehicle, Heavy Duty Vehicle, collective Transport or Special Services.
2) **Type of applicant:** Freelancer, Company or Institution.

Environmental criteria (mandatory and optional):
1) **Fleet Management** (fuel monthly record...)
2) **Efficient driving** (training, plans...)
3) **Maintenance of vehicles**
4) **Euro standards** (minimum)
5) **Low emissions vehicles** (renewal plans)
6) **Other actions of environmental commitment** (ISO, EMAS)

**Low emissions vehicles:**
- Vehicles using electricity, GLP, natural gas or hydrogen as a source of energy.
- Hybrid vehicles.
- Vehicles using diesel or fuel that complies a minimum Euro technology, a maximum fuel consumption and a maximum $\text{CO}_2$ emissions.
Clean vehicles procurement TOOLS 3

30 companies with a total of 5368 vehicles

- trucks fleets
- waste collection
- taxis
- driving schools
- buses
- public transport
- ambulances
- commercial vehicles
Clean vehicles procurement
TOOLS 3

ECOLABELLING

Labelling of the Spanish vehicles park

The General Traffic Division of the Government of Spain classifies the vehicles park according with their pollution potential:

- Electric vehicles with batteries (BEV)
- Extended-range electric vehicle (REEV)
- Plug-in hybrid electric vehicle (PHEV): ≥ 40 km range or fuel cell vehicles.

- Plug-in hybrid vehicles with range < 40km
- No plug-in hybrid vehicles (HEV): (CNG and LNG) or (LPG) vehicles

- Gasoline Euro 4, 5 and 6
- Diesel Euro 6

- Gasoline Euro 3
- Diesel Euro 4 and 5
LIVE platform
http://w41.bcn.cat/es/

Public-private platform for the promotion of sustainable mobility in Barcelona and Catalonia.

It is organized through working groups and cross-related and constant commissions.

Examples of actions:
• Promotion of the public procurement of alternative powered vehicles, mainly electric and natural gas vehicles, with measures such as the session of vehicles by the manufacturers.
• Dissemination of the Catalan Ecolabel for fleets.
• Training sessions.
Examples

Lease of low-emission vehicles
Roads Directorate General

http://www.gpp2020.eu/
Medical Transport Services
Catalan Health Service

Benchmark vehicles
- Urgent MT: 7,807.2 toe and 27,478.6 t of CO₂
- Non-urgent MT: 5,474.6 toe and 17,537.9 t of CO₂

Vehicles from the awarded companies
- Urgent MT: 6,770.7 toe and 23,105.5 t of CO₂
- Non-urgent MT: 5,249.0 toe and 16,815.2 t of CO₂

Results during contract period (10 years)
- 1,036.3 and 225.6 toe of energy savings respectively
- 4,373.1 and 722.8 t of total CO₂ saved respectively
### Examples

**Purchase of fully electric vehicles**

**Barcelona Metropolitan Area**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>New vehicles</th>
<th>Results</th>
</tr>
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</table>
| - Petrol-powered vehicles  
  - 86.0 t CO₂e throughout the lifespan of the vehicle  
  - 23.6 toe of energy | - Electric vehicles  
  - 23.0 t CO₂e throughout the lifespan of the vehicle  
  - 6.5 toe of energy | - Expected savings over 10 years (estimated lifespan)  
  - 63.1 t CO₂e saved  
  - 17.1 toe of energy saved |
Renting of electric scooters for police
Barcelona City Council

Previous Tender
- 30 heat engine-powered scooters (petrol)
- 20 t direct CO₂ emissions/year
- 25,2 t direct and indirect CO₂ emissions/year
- 6.9 toe energy consumption/year

GPP 2020 Tender
- 30 electric scooters (increasing to 198 in 2018)
- 0 t direct CO₂ emissions/year
- 3.2 t indirect CO₂ emissions/year
- 1 toe energy consumption/year

Results
- 80 t less CO₂ direct emissions
- 88 t CO₂ total emissions savings
- 23.5 toe energy savings
Lessons learned

- To improve the purchasing of clean vehicles, it is necessary to establish new higher environmental mandatory requirements for public administrations.

- Public administrations use to green the procurement of conventional vehicles, and these ones are as efficient as possible within its segment. Now, the challenge is to make the leap towards vehicles with alternative technologies (electric, hybrid or gas).

- It is important that EU, national and regional public policies were aligned to give to the market and citizens a common and clear message about the importance of improving the environmental behavior of fleets to earn air quality in urban areas.
THANK YOU

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