

## Bus fleet renewal process in Bologna

Monitoring and evaluation

Italy – Bologna

### → Context, objectives and target group

Bologna began its bus fleet renewal process to achieve an improvement in local air quality, as part of the guidelines contained in its SUMP.

### → Description of the activities

Seven CNG (compressed natural gas) articulated buses of 18m length were purchased for the Bologna local public transport fleet. This took place within the context of a strategic renewal and conversion of the fleet, which already counted over 100 CNG buses, to reduce its environmental impact as stated in Bologna's PGU (General Plan of Urban Traffic), assisted by the presence of two CNG refueling stations inside two bus depots. Along with this measure, particulate traps on existing diesel buses were adopted. Bologna's fleet of trolley buses is also now being upgraded.



### → Communication

The message was “CNG – a solution to reduce the impact on air quality in the city.” The new vehicles have been put on exposition and presented during European Mobility Week. Bologna citizens were the target group in this awareness campaign.

### → Costs and who paid them

The total cost of the measure was €2,573,200. The amount of €710,000 was financed by the City of Bologna and €1,863,200 was financed by the Ministry of Environment, as part of a national program which aims to improve air quality in cities by enhancing the public transport service.

### → Project objectives, indicators, data and impact/results

OBJECTIVE	INDICATOR	DATA USED	IMPACT / RESULTS
Purchase of CNG buses	Cost of each bus (value in €)	Mileage traveled by the new CNG buses (value in km/year)	Reduction of emissions per year (value in €)
7	367,600	370,000	140,000

Despite the economic crisis and a change in the administration of the city, there hasn't been a particular effect on the bus fleet renewal process. Considering purchase costs, fuel costs and reduced emissions benefits, the benefit-cost ratio is 1.15, which is set to increase as more and more people choose public transport over private car.

### → Barriers

There were no real barriers, since it was an enhancement of the already existing CNG fleet and the technology has been extensively tested over the years. As such, maintenance costs do not impact in benefit-cost analysis in a relevant way.

### → Drivers

The availability of two refueling stations already within the depots of the local public transport company (TPER) was a key driver, along with the Ministry of Environment's co-funding.

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<http://www.gimsambiente.anci.it/?p=dettagliIntervento&id=95&tab=1> (in Italian)



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