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Electromobility in Romania is extending to Cluj Napoca

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Under the Swiss-Romanian Cooperation Programme the European Energy Award is being introduced in four Romanian pilot cities. The European Energy Award is a quality management and certification system for municipalities committed to sustainable municipal energy, climate and transport policies. It is based on the label "Energy City", which has originally been developed in Switzerland. Cluj-Napoca, a city of 305'000 inhabitants located in Transylvania, is one of four selected pilot cities. Based on its Sustainable Energy Action Plan (SEAP) it has identified the replacement of old diesel buses by battery powered autonomous electric buses as a priority infrastructure project.

Sustainable public transportation concept in Cluj Napoca

Objectives:

The goal is to **introduce a more sustainable public transportation concept (innovative battery powered electric buses) on a pilot basis which shall improve passenger comfort, economy and environmental aspects through energy and cost savings, as well as lower emissions (CO2, NOx, noise, etc.).**

The project consists in the **replacement of 10 (out of a fleet of 186) old diesel buses** by battery powered electric buses and the set-up of the related charging infrastructure.

The new electric buses will be used principally on the 17.2 km long line 30 (Aurel Vlaicu street - Grigorescu district) and accessorily on lines 27, 28 and 32, which are shorter lines linked to the Grigorescu district.

2 charging areas each with one fast-charging station and 5 slow charging stations will be set-up at each end of line 30. An additional slow-charging station will be installed at the service depot to assure the possibility of charging the buses after maintenance activities. For the new electric buses an innovative concept will be sought, whereby a pantograph will be used for fast charging buses with a capacity of 70 people, which allows to avoid too heavy batteries and to use existing trolley-bus infrastructure. A similar concept is being tested and implemented in Vienna, although with smaller (40 passenger) buses.

These buses will have autonomy of 50-70 km and will be equipped with amenities to increase passenger comfort, including air-conditioning and access platforms for persons with physical disabilities.

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Expected results:

- Energy savings
- Cost savings related to energy 69'813 RON/year (19.369 CHF/y)
- Reduced local emissions
- Avoided CO2 emissions of 517.8 t/year at the local level
- Avoided CO2 emissions of 206.4 t/year at the national level
- Better air quality in the city center
- Lower noise level in the city center
- Experience gained from the pilot phase for a future replication at a larger scale in Cluj-Napoca. At the impact level the project will contribute to reduce the disparities between Cluj-Napoca and more advanced European cities, notably by improving the air quality and public finances of the city.

Direct reductions of local emissions (for each bus) of:

- CO2: 863 g/km → 0
- NOx: 9.37 g/km → 0
- CO: 2.67 g/km → 0
- Pb: 2.207 g/km → 0
- Noise: 95 db → 40 db

Sources of information
Website: www.eda.admin.ch

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