Emerging electric public transit and community transport

New bus, car sharing and monorail technologies for a brighter future

Given the great challenges in front of us with respect to human health, climate change and peak oil, it is essential that public transit and community transport become much more important and electrified in the coming decades.

A brief review of the use of electricity in public transit at the beginning of the 20th century will lead people favour that technology and to discover ideas that are very applicable again today.

Two technologies will play an important role: long life batteries with ultra fast charging and electric wheel-motors. They will offer new possibilities and enhanced performances for buses, automobiles and monorails.

The confined and fixed routes of transit buses lend themselves particularly well to electrification. Fast on-route charging at bus stops and at route ends offers the greatest potential. A review of the various pilot projects in the world will be presented in support for this important trend. Adding these technologies to Bus Rapid Transit will provide fast, green and affordable urban transport systems.

Automated driving and wheel-motors will allow vehicles used in car sharing to take much less parking space. Foldable electric city cars are already on the streets, parking at right angle to the sidewalks. And pilot projects show how community cars with automated parking ability can be packed like sardines.

High speed electric interurban transport will become more and more appealing in the coming decades, when oil price will inevitably climb. High speed rail already exists but is very expensive and not suitable to serve smaller cities. A new concept of high speed monorail will be presented that is intrinsically cheaper and more flexible. It features fast accereration of single autonomous shuttles, allowing the technology to serve much more people between main cities.

A technological saga to be discovered as we embark on the transport of the 21th century.