



Global Forum on Electric Mobility: Greening Transport for Sustainable Development

Eletrobras Furnas, Botafogo, Rio de Janeiro, 18 June 2012

[Draft] Summary of Conclusions and Recommendations

The United Nations Conference on Sustainable Development, also known as Rio+20, was held in Rio de Janeiro, Brazil, 20-22 June 2012. In association with the Conference, a Global Forum on Electric Mobility was co-organized by a group of Brazilian and international organizations, including Eletrobras Furnas, Brazilian Electric Vehicle Association (ABVE), COPPE Institute of the Federal University of Rio de Janeiro (UFRJ), United Nations Office for Partnerships (UNOP), United Nations Department for Economic and Social Affairs (UN DESA) and the Global Forum on Human Settlements (GFHS). The Forum was attended by more than 190 participants from 15 countries. The programme of the Forum included sixteen technical presentations by relevant experts, company representatives and senior officials. This summary highlights the main conclusions and recommendations of the Forum.

Overall background and context

- By 2030, the majority of the world's population will live in cities and other urban areas.
- Cities aim to enhance sustainable urban development, but many of them face growing challenges, including increasing traffic congestion, urban air pollution, insufficient financing for transport infrastructure, and inadequate urban public transport services.
- Options to improve urban transport include, among others:
 - (i) public and private investments to turn public transport services more efficient, affordable, safe, and environmentally friendly;
 - (ii) measures to turn non-motorized transport more attractive, convenient and safe;
 - (iii) measures to enhance fuel quality and fuel efficiency of motor vehicles;
 - (iv) greater use of modern information technologies to make transport more sustainable.

Role of electric mobility in sustainable urban transport

- Electric mobility and zero emission vehicles can make significant contributions to sustainable urban transport, in particular by reducing potentially harmful air pollutants.
- If compared with conventional motor vehicles powered by regular gasoline or diesel engines, hybrid vehicles offer generally better fuel efficiency, lower operational cost, as well as environmental benefits.
- Plug-in hybrid and battery powered electric vehicles are generally operationally suitable for inner city passenger transport or goods delivery.
- Electric bicycles and electric scooters provide new mobility options for many social groups, including youth, women, and the elderly.

Battery technology development and consumer expectations on electric vehicles

- Researchers are working on improved battery technologies to increase driving range and decrease recharging time, weight, and cost. These factors will ultimately determine the future of electric vehicles.
- Durability, affordability and safety remain priority consumer concerns. The performance of electric vehicles and their acceptance by consumers significantly depend on the operational range of the vehicle and on the time needed to re-charge the battery.
- Electric mobility is not only an option for industrialized countries. The Forum noted the various projects and initiatives that have been undertaken in developing countries, notably Brazil, China and India.

Electric mobility in public transport

- Electric vehicles can offer significant economic advantages in particular if used in urban delivery or taxi fleets.
- The successful introduction of hybrid and full electric buses and taxis in a number of Latin American cities suggests that there is significant potential of electric mobility technologies in the region.
- Electric vehicles have also proven economical in short term car rental and car sharing schemes.

Electric mobility as option for sustainable urban transport in Brazil

- Brazil is well endowed with renewable energy sources for power generation. In Brazil, electric mobility is an attractive and still underutilized low-carbon transport option.
- Electric propulsion can make the use of biofuels more efficient and environmentally benign.
- High import duties for manufactured products and parts can protect local manufacturers and infant industries, but can also make it difficult for local electric mobility pioneers to start-up new businesses.
- Possibilities for greater international cooperation, partnerships, and joint ventures should be explored to generate new products, income opportunities, and meet local demand.

Efficiency of power generation, distribution, and smart grid

- Adequate and accessible charging infrastructure plays an important role in achieving higher acceptance of electric mobility.
- Electric vehicles can be used and recharged more easily by users who own their own vehicle garages or parking lots; conversely, electric vehicles are less useful for owners who park their vehicles in public streets.
- Electric vehicles can serve as mobile storage cells of electricity and improve the efficiency of current grids.
- Policies to expand the use of electric mobility should be combined with efficiency improvements and upgrades of the electricity grids.

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