Global Trends & Perspectives on Electric Mobility

CARICOM Webinar

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Content

Part 1: GIZ E-mobility Projects

Part 2: Global context and trends

Part 3: Considerations relevant toward the CARICOM context
GIZ Transport Projects – some examples

On behalf of German Federal Ministries and further donors, GIZ transport is active in more than 30 countries.

China: Life cycle analyses, charging infrastructure development, battery recycling, electric car-sharing, standardization.

Thailand: Promotion of electric two-/three-wheelers

Brazil: Promotion & regulation strategy, business models & pilot projects

Costa Rica: Introduction of electric buses in San José
TUMIVolt – a new global project to support e-mobility

**Capacity Development**
- Support the planning skills of decision-makers and favorable conditions for strengthening the role of technical experts and decision-makers in local and national administrations.

**Coalition and Network building**
- Further cooperation between cities, international organizations and networks as well as the private sector in the field of e-mobility. Develop internationally adopted guidelines on e-mobility.

**Pilot projects**
- Work with pilot cities to develop integrated e-mobility plans incorporating public policies, energy provision and public transport strategies.

**E-bus project**
- The TUMI E-bus project will work with cities worldwide to enable and ensure the readiness of 100,000 e-buses by 2025.
The current penetration of EVs is a drop in the ocean, however, it is expected to grow rapidly in the coming years.

Number of electric vehicles:
7 million

Vehicles with internal combustion engine:
1.7 billion

Fuente: from WRI with numbers from IEA, “Global EV Outlook”, 2019
The growth of electric vehicles has been exponential

Global passenger EV sales by region

Electric vans and trucks

Electric buses

Electric two- and three-wheelers

Source: Electric Vehicle Outlook 2020, BNEF
Global forecasts predict further growth*

Million

- RoW
- Australia
- S. Korea
- Japan
- India
- U.S.
- Europe
- China

Source: Electric Vehicle Outlook 2020, BNEF

*Only passenger EVs
Our Approach keep being
Avoid – Shift – Improve

Less polluted and noisy Traffic Jams
shouldn’t be our goal!
Main Challenges

- Sustainability of raw materials
- Upfront cost (CAPEX/OPEX)
- Charging infrastructure
- Renewable energy supply
- Lack of knowledge

Different applications and weight classes will see varying breakeven points for electric vehicle total cost of ownership.

Timing of battery electric vehicle total cost of ownership parity with diesel vehicle, year achieved range

- United States
- Europe
- China

Source: McKinsey Center for Future Mobility
COVID-19 impacts on e-mobility sales

Global passenger EV sales by region

COVID-19 consequences that might influence a growth in e-mobility

Nov 3, 2019  Mar 30, 2020
Increasing climate ambition in the transport sector through electro-mobility
Policy Recommendations based on recent experience in Latin America

from Argentina, Barbados, Brazil, Chile, Costa Rica, Colombia, Panama and Uruguay and regional communities of practice

October 2019 in San José, Costa Rica

✓ Get started!
✓ Secure broad stakeholder participation
✓ Initiate pilot projects
✓ Create a narrative that goes beyond decarbonization
✓ Build political support for e-mobility
✓ Establish an enabling national policy framework
✓ Provide fiscal incentives

Global Trends & Perspectives on Electric Mobility

## Many countries in Latin America incentivize e-mobility

### Table: Incentives and Promotions for Electric Mobility

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<tr>
<th>Categoría</th>
<th>Instrumento</th>
<th>Argentina</th>
<th>Brasil</th>
<th>Colombia</th>
<th>Costa Rica</th>
<th>Ecuador</th>
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- ✔ Incentivo completo para vehículos eléctricos / Instrumento aprobado y en marcha
- ✔ Incentivo parcial para vehículos eléctricos / Instrumento en fase de diseño.

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**Impact of the Law on promotion and incentives for Electric Mobility on electric vehicle sales in Costa Rica**

Source: MINAE 2020
Promoting different vehicle categories E-Mobility

Light Duty vehicles (cars and vans)
- Provide financial incentives for owners/operators of light duty vehicles
- Focus on institutional fleets (public and private), e.g. electricity companies and post or messenger services
- Early adopters have the chance to influence the electric vehicle supply

Deployment of electric buses
- Test electric bus technology under local conditions
- Work in close cooperation with bus operators
- Share risk between actors
- Revise the image of public transport
Lessons learned in Costa Rica

- **Ambitious Climate Agenda and political will**
  - Decarbonization Plan 2018-2050
  - 98% of electric supply from renewable energies

- **Milestones** achieved in e-mobility
  - Law of Incentives and Promotion of Electric Mobility
  - National Network of Fast Charging Stations
  - National Electric Transportation Plan
  - Electrification of Public Transport in 3 steps (1 + 3 +12)
  - Pilot projects of institutional fleets (e.g. Energy Provider, Postal Service)
  - Preferential tariff for e-bus charging

- **Civil society engagement:** association [ASOMOVE, podcast](#)
  - To promote the development of electric mobility, protect and defend the rights and interests of users; serves as an exchange of information and knowledge
Electric mobility as key building block for transport decarbonization

more than just electric cars…

e.g. buses, taxis, delivery vehicles, e-scooters, e-bikes

Promote e-mobility while working on decarbonizing the electricity grid – don´t wait!

Not only relevant for GHG reduction:
local air quality, noise reduction, business opportunities…
Thank you and stay tuned!

TUMIVolt Charging Station
2nd Webinar of the series:
"Future Battery Materials – Will solid state batteries change the game of e-mobility?"
June 17 2020 | 02 - 03 pm CET

Resilience & Transportation
5th Webinar of the series:
“International best practices of funding instruments to support public transit after Covid-19”
June 17 2020 | 04 – 05.30 pm CET

https://twitter.com/TUMInitiative
https://www.facebook.com/transformativemobility