The Electric Mobility Programme

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UN Environment Programme
My Presentation

1. The Need to Switch to Low- and No-Emissions Mobility
2. UNEP’s Electric Mobility Programme
3. The New GEF7 Global Electric Mobility Programme
4. Next Steps
1. Switching to Low- and No-Emissions Mobility
Global Growth Light Duty Vehicles

almost all growth in developing countries

2050: ~ 3 x 2005

OECD Non-OECD

(IEA ETP 2015)
The African continent will see almost a tripling of passenger cars and a doubling of oil demand for transport between now and 2040.
• Transport sector contributes ~one quarter to all energy related green house gases, going to one-third by 2050
“High growth rates are now appearing in electric vehicles, electric bikes and electric transit, which would need to displace fossil-fuel powered passenger vehicles by 2035-2050 to remain in line with 1.5 °C consistent pathway.”
Air Quality a Global Challenge

WHO reports (2014/16/17)

7 to 8 million premature deaths annually due to air pollution

Half due to indoor and half due to outdoor air pollution

Urban air pollution increased 8% in last 5 years

91% of people in cities breath air outside WHO guidelines
More Reasons

- Expensive oil imports
- Energy security (reliance oil)
- Linked with renewables introduction - Home grown energy
- Green jobs
2. UNEP’s Electric Mobility Programme
UNEP’s Current Portfolio

- Support global shift to electric mobility
- As part as a wider shift to zero emissions transport sector (Electrify – Share – Automate)
- Supporting Members States in developing roadmaps, targets and policies and demonstration projects
- National and city projects:
  - Electric 2 & 3 wheelers
  - Electric busses
  - National policies for electric cars
- ~40 country projects, adding ~20 more in 2019
1- Electric 2&3 Wheelers

- Country and city projects to shift from petrol to electric motorcycles
- Projects ongoing in 8 countries
- “low hanging fruit” of electric mobility

- Morocco (Marrakech)
- Uganda (Kampala)
- Kenya (Nairobi)
- Rwanda (Kigali)
- Ethiopia (Addis Ababa)
- Vietnam (Hanoi)
- Thailand (Bangkok)
- Philippines (Pasig)
Rationale:
• Electric scooters and motorbikes are already a competitive alternative
• Recharging infrastructure is much less of an issue

Focus:
• Asia and Africa – both regions account for 95% of motorcycle sales
• Scooters and motorcycles between up to 250 ccm – make up 90% of the market

Target: Phase out sales of conventional 2&3 wheelers up to 250 ccm

2- Electric Buses

• Currently 4 projects
• Adding 5 additional projects in 2019
• Soot free busses projects in 20 cities
• Interest from cities in all regions
Electric buses

• UN Environments work on electric buses is closely linked to the CCAC Soot-Free Bus Fleet Project (http://www.ccacoalition.org/en/content/soot-free-urban-bus-fleets)

• Rationale:
  – Urban buses account for approximately 25% of the black carbon emitted by the transportation sector
  – Urban bus activity is predicted to increase by nearly 50% by 2030
  – In 2030 this will translate into an estimated additional 26,000 tons of black carbon

• Electric buses are a logical step to curb pollutant emissions and are close to being cost effective on high capacity lines
Integrating electric vehicles in fuel economy baseline development and in review of policies

Including favorable taxation policies for electric vehicles and providing other incentives

3- National Policies for Electric Light-Duty Vehicles

- Nepal
- El Salvador
- Chile
- Botswana
- Zambia
- Togo
- Malawi
- Colombia
- Rwanda
- Panama
- Malaysia
- Moldova
- Guatemala
- Macedonia
- Belize
- Ghana
- Brazil
- Mozambique
- Paraguay
- Ivory Coast
- Uruguay
- Mauritius
- Peru
- Ukraine
- Jamaica
- Sri Lanka
- Costa Rica
- Philippines
- Dominican Republic
- Uganda
- Honduras
- India
- Argentina
- Bangladesh
- Paraguay
- Kazakhstan
Spotlight: Used imported EVs

- Uptake of EVs in developing countries will follow the pattern of conventional cars – import of used vehicles
- First used EVs from Japan and Europe are on sale now
- Policies need to be in place to make the import of used EVs

→ There are plenty of opportunities to incentivise the purchase of used EVs through tax breaks
Where we work

Electric bus city projects
National electric vehicle projects
Electric 2 & 3 wheelers
3. The New GEF7 Global Electric Mobility Programme
Within the climate change portfolio, GEF has identified electric mobility as a key mitigation option.

<table>
<thead>
<tr>
<th>Area</th>
<th>Allocation (USD Millions)</th>
<th>Type of fund</th>
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<tbody>
<tr>
<td>De-Centralized Power with Energy Storage</td>
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<td>STAR</td>
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<td><strong>Electric Drive Technologies and Electric Mobility</strong></td>
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<td>Accelerating Energy Efficiency Adoption</td>
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<td>Impact Programs</td>
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<tr>
<td>Global and Regional Programs</td>
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<td>Global Resources</td>
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</table>
New GEF& Global Electric Mobility Programme

• First ever global EV programme
• Focused on the introduction of electric mobility in low and middle income countries
• UNEP and the International Energy Agency
• The programme includes three groups of countries:
  • Large
  • Leading role in (sub)regions
  • SIDs
• Global and regional partners
Global Component

Regional Component

- Community of practice
- Regional trainings
- Support financing
- Knowledge hub

Regional Component

- Assessment
- Standards
- Regulation
- Fiscal policies

Platform Topics:
- Heavy duty
- Light duty
- Batteries
- Grid issues

Child Project

Child Project

Child Project

Child Project
<table>
<thead>
<tr>
<th>#</th>
<th>Country</th>
<th>LoE</th>
<th>#</th>
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<td>IN PRELIMINARY DISCUSSIONS</td>
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<td>IN ADVANCED DISCUSSIONS (concept notes under development)</td>
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<td>Dominican Republic</td>
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Linking with EC Solutions+

- European Commission Solutions+ electric mobility project of EURO 18 mln, coordinated by Wuppertal Institute
- Supporting electric mobility demonstration projects in 8 cities
- Similar focus and time frame as GEF7 programme
- The two programs will be completely linked in one joint approach

**Demonstration projects:**
- Quito, Ecuador
- Santiago, Chile
- Montevideo, Uruguay
- Hanoi, Vietnam
- Pasig, Philippines
- Kathmandu, Nepal
- Kigali, Rwanda
- Casablanca, Morocco
- Dar es salaam, Tanzania
- Madrid, Spain

**Replication projects:**
- Belo Horizonte, Brazil
- Zhuzhou, China
- Thimpu, Bhutan
- Kochi, India
5. Next Steps
Next steps

• Target: GEF programme of 15-20 countries (+12 EC), GEF budget ~40 mln (~20 mln EC), co-financing ~300 mln (+ EC)

• Project concept (3 pager), followed by endorsement

• UNEA4 meeting

• Timeline: submission to GEF 5 April; GEF Council decision June; full project CEO endorsement end 2019; start activities early 2020