GEF Global E-Mobility Programme
Working Group 1: Electric Light-Duty Vehicles

Total Cost of Ownership (TCO) Tool

gef.emobility.wg1@iea.org
Welcome and Opening

Jacob Teter
Lead Transport Analyst, Energy Technology Policy Division, IEA
• Supports more than 50 low and middle-income countries with more than USD 70 million in grants and over USD 250 million in loans at the national, regional and global level

• Funded by the GEF, the German Climate Initiative, the EU, the IEA Clean Energy Transitions Programme & EVI members, foundations and bilateral development aid

• Jointly implemented with partners such as ADB, EBRD, IEA, Centro Mario Molina Chile, UNDP, UNIDO and the SOLUTIONSplus project
The GEF-7 E-Mobility Programme

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GEF-7 E-mobility participating countries
## Working group 1: Deliverables and timelines

<table>
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<tr>
<th>1.2.1</th>
<th>Status update on light-duty vehicle deployment across regions and countries (including technical, operational and financial aspects where relevant)</th>
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<td>1.2.2</td>
<td>Market characterization and model availability for different regions</td>
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<td>1.2.3</td>
<td>Best-practice policy briefs for electric light-duty vehicles deployment</td>
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<td>1.2.4</td>
<td>Interactive tool to estimate and compare total cost of ownership</td>
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<td>1.2.5</td>
<td>Interactive tool to estimate well to wheel emissions and/or life-cycle assessment of different electric cars</td>
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Additional tools developed upon request by the Country Child Projects and agreed by the Coordinator

### Year 1 (2021-22)
- Status update, market characterisation and model availability on light-duty vehicles deployment across regions and countries (GEVO2022, April/May 2022)
- Interactive tool comparing total cost of ownership (TCO) for light-duty vehicles (2023-24).

### Years 2-3 (2022-24)
- Interactive tool to estimate life-cycle emissions (2023)
- Best-practice policy briefs for electric light-duty vehicles deployment (2022 and 2023)
- Potential additional tools:
  - Interactive tool to compare total cost of ownership (TCO) for two-wheelers (2023-24).
  - Interactive tool to compare total cost of ownership (TCO) for buses (2023-24).
The Clean Energy Ministerial’s Electric Vehicles Initiative (EVI)

Members (2021-22)

(Co-lead) (Co-lead)
[Flag images of multiple countries]

Activities:
• Analysis
• Commitments
• Collaborative projects

Coordinator

Global EV Outlook 2022
Securing supplies for an electric future

ELECTRIC VEHICLES INITIATIVE
AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

GLOBAL COMMERCIAL VEHICLE DRIVE TO ZERO™
A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL
Each year, we solicit information from EVI member countries focusing on data and EV-relevant policies:

- **Data**: EV sales (incl. 2&3-wheelers, cars, buses, and trucks) and installed chargers
- **Policies**: including fuel economy standards; EV incentives (both for manufacturers and consumers); promoting battery supply chains and production (including mining and processing of raw materials); charging infrastructure; battery end-of-life and recycling

We are making every effort to collect these data also for GEF-7 countries.

We will be holding two webinars for tracking and data collection in the GEF-7 countries on 24 and 25 January.

If you or one of your contacts can provide these data or information on such policies, please feel free to contact: Shane.MCDONAGH@iea.org
Introduction to the TCO tool

Shane McDonagh
Transport Analyst and Co-Ordinator of the GEF E-Mobility Programme’s WG1
The GEF-7 E-Mobility Programme

- 52 highly diverse participating countries
- Promoting electro-mobility across multiple use cases
- Wide variety of projects from policymaking to public buses
- Our current focus is Light-Duty Vehicles (WG1)
- Colleagues focus is grid integration (WG4)
Electro-mobility in emerging economies:

- Applicable to a wide range of users
- Learning opportunities relevant to all regions
- Understand the effect policies might have on costs
- Awareness the technology is improving
Demonstration
Total Cost of Ownership
TCO tool

Learning opportunity for users

- **Understand key concepts** – Various powertrains, cumulative costs…

- **Trade-offs** – Upfront vs. operating costs, annual distance & marginal cost…

- **Policy relevant lessons** - Financing conditions, potential effect of subsidies…

*What changes can increase EV competitiveness?*
Insights from Development

Stakeholder Engagement

*Internal and external webinars and/or sessions for early and sustained feedback*

- Citizens and policy makers can benefit from the same tools
- Beware of assumed knowledge and unfamiliar phrases

Building the tool

*Aim for an iterative process, simplify wherever possible, empathise with users.*

- Sensitivity analysis to reduce complexity and variable
- Avoid false precision, and err on the side of simplicity where possible
Summary

- Policy and cost relevant lessons throughout
- Only variables most important to lessons and costs included
- Caters for both high-level and more detailed comparisons
- Real-time results so users can perform sensitivity analysis

Features of the tool

Recap

Tool is hosted for free and available to anyone from the IEA website.
Please contact us if you have any questions

gef.emobility.wg1@iea.org

Thank you!