

International Cooperation on Hybrid & Electric Vehicles in International Energy Agency's Energy Technology Network

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Hybrid & Electric Vehicle Technology Collaboration Program (HEV TCP)

Mission and Scope

- HEV TCP was formed in 1994
- Mission
 - To facilitate international collaboration in pre-competitive research and demonstration projects involving shared resources from multiple countries.
 - To share best practices for deployment of hybrid/electric vehicles to reduce energy consumption, emissions, and improve local and global air quality.
 - To supply objective information to governmental policy makers and industry decision makers.

Participants

- 17 member countries:



- One sponsor: KAPSARC

Current Working Groups (16)

Hybrid/Electric Cars

- Plug-in Hybrid Electric Vehicles (PHEVs)
- Electrified, Connected, and Automated Vehicles (eCAVs)
- Fuel Cell Electric Vehicles (FCEVs)
- Batteries

Infrastructure

- Home Grids and V2X Technologies
- Wireless Charging
- Light Electric Vehicle Infrastructure
- Extreme Fast Charging

Electrification Beyond Automotive

- Hybrid and Electric Trucks
- Electric Buses
- Small Electric Vehicles
- Marine Applications (eShips)

Analysis and Policy

- Environmental Effects of EVs
- Economic Impact of e-Mobility
- Fuels and Energy Carriers for Transport
- Purchase and Use Patterns

Outputs



Observations and Findings

- Hybrid/electric vehicles contribute significantly to energy saving, CO₂ reduction and energy security via high fuel economy and diversity of electricity sources.
- Hybrid and electric vehicles have a major economic impact. Over 13 million hybrid electric vehicles have been sold worldwide. More than 2.5 million plug-in electric vehicles have been sold globally.
- Several countries have taken HEV-TCP results into account for their national energy policy, using information from HEV-TCP to guide the development of their electric vehicle roadmaps.
- Environmental impacts depend strongly on the national mix of electricity generation. Countries are increasingly embracing hybrid and electric vehicles as the electric grid becomes increasingly less carbon intensive.
- Electric bicycles (e-bikes), electric scooters (e-scooters), and pedal/electric bikes (pedelecs) all contribute to reducing traffic congestion in cities and reducing greenhouse gas emissions.
- V2X is a key technology for introducing EVs as distributed energy resource, in home grids and other applications. PEVs are now available with batteries that show less degradation for V2X applications.

Further Information

