"UNECE World Forum for Harmonization of Vehicle Regulations (WP. 29)'s activities in the field of energy efficiency of motor vehicles"

(Miquel Gangonells - UNECE Sustainable Transport Division, Secretary of the Working Party on Pollution and Energy under WP.29)
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Why a worldwide regulatory framework for vehicles is needed?

Crucial need to update regulations constantly to cover new technologies and to harmonize internationally the technical requirements.
The World Forum administers 3 Agreements:

‘58 Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions (52 Contracting Parties, 137 UNECE Regulations)

‘98 Agreement concerning the establishing of global technical regulations (gtrs) for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicle (36 Contracting Parties, 16 gtrs)

‘97 Agreement concerning the adoption of uniform conditions for periodical technical inspections of wheeled vehicles and the reciprocal recognition of such inspections (11 Contracting Parties, 17 pending signatories, 1 Rule, 1 draft Rule)

The 58 & 98 should have similar technical provisions (parallel)
WP.29 structure

Committee for Coordination of Work (AC.2)

World Forum for Harmonization of Vehicle Regulations (WP.29)

Committee for the 1958 Agreement (AC.1)
Committee for the 1998 Agreement (AC.3)
Committee for the 1997 Agreement (AC.4)

Active Safety
- Lighting and light-signalling (GRE)
- Brakes and running gear (GRRF)

Passive Safety
- Passive safety (GRSP)
- Pedestrian protection
- Frontal/lateral impact protection
- Child restraint
- Truck cab strength

General Safety
- General Safety (GRSG)
- Safety of wheelchair users in buses & coaches
- Glazing materials
- Rear view mirrors

Environmental protection
- Pollution and Energy (GRPE)
- Noise (GRB)

> 40 non-permanent technical groups
By 2015: 30% increase in energy efficiency for all new advanced vehicle technologies *(Achieved for new vehicles!)*

By 2025: New environmentally friendly vehicles (e.g. plug-in hybrid electric vehicles, hydrogen and fuel-cell vehicles)
WP.29’s achievements and ongoing activities on vehicle Energy Efficiency

GRPE:
• Reduce emissions of local pollutants and greenhouse gases, as well as increase energy efficiency
• Development of legal framework for new powertrain technologies such as gaseous, electric and hybrid vehicle for different vehicle categories
• Worldwide Harmonized Light Vehicle Test Procedures (WLTP, 2014), including a test to determine emissions and fuel consumption

GRSP:
• Hydrogen & Fuel Cell vehicles (HFCV): 2013
• GTR on Electric vehicle safety: 2016 to reduce post crash risks

GRB:

GRE:
LED lighting and light signalling systems: 2008

GRRF:
Tyre pressure monitoring systems (2014) – Improving 5% of energy efficiency

GRSG:
Plastic Glazing and camera monitor systems reducing vehicle weight and improving aerodynamics
The ForFITS model

**Scope:** Model projecting activity, energy consumption and well-to-wheel CO₂ emissions in the transport sector. All transport modes are covered with a focus on inland transport.

**Applicability:** The model is usable worldwide. The model user needs to input data to define the transport characteristics at the base year and the scenarios to be considered over time.

**Policy impact evaluation:** The model enables the user to define different economic scenarios (e.g. evolution of GDP, population, oil price) and different policy interventions (e.g. fuel taxation schemes, road pricing, technology deployment, modal shift from private vehicle to public transport modes, introduction of biofuels) for each of the model runs.

**Availability:** The model is freely available online, together with a user manual and useful training material, at [http://www.unece.org/?id=19273](http://www.unece.org/?id=19273)