

Transmitted by the  
GRPE informal group on EFV

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Agenda item 8)

**“Conclusion Paper”  
of the 4<sup>th</sup> International Conference on  
Environmentally friendly Vehicles (EFV Conference),  
23<sup>rd</sup> and 24<sup>th</sup> November 2009, New Delhi, India.**

**BACKGROUND**

Development of an “Environmentally Friendly Vehicle” concept took its roots from the desire and the need of the world community to reduce the emission of pollutants and noise from vehicles and to improve energy efficiency of road transport, while simultaneously aiming to reduce use of fossil fuels and to develop alternate sources of energy.

With these and related aspects in view, the UN World Forum WP.29 set up an informal group under its working party on Pollution and Energy (GRPE) and Noise (GRB) to deliberate on the EFV Concept and to take a holistic approach to analyse and assess the wide ranging facets of the concept and to evaluate the possibility of defining an EFV.

From the discussions of the informal group and taking into consideration the conclusions of the conferences in the past years, it has emerged that the current challenges of addressing the issues of local pollution and energy efficiency can not be met by just focusing on the vehicle alone, but needs to be addressed through joint and concurrent action by all stakeholders.

The Informal Group on EFV after extensive deliberations has come to the conclusion that, from a technical and scientific point of view, it was not feasible to develop an entire holistic EFV concept, because there are differences and multiple specifications, weightings, factors subject to regional or temporal circumstances and data availability concerning environmental aspects. A possible way out was to avoid the misleading term EFV concept but instead to create specific names fitting to the concept (e.g. LNV-Low Noise Vehicle, LCEV-Low Carbon dioxide Emission Vehicle). ISO has also prescribed that single scores for defining EFVs shall not be used for comparative assertions as well as the term 'environmentally friendly' shall be avoided according to ISO 14021. The reason for this ISO standard is that 'environmentally friendly' is a very comprehensive and bold statement that is not likely to be justifiable looking at all the indicators involved. While emissions may go down, it touches only one segment of the all encompassing term 'Environment'.

The EFV group had changed at its meeting held in April 2009 the name of the Feasibility Statement to: “Background document regarding the Feasibility

Statement for the development of a methodology to evaluate Environmentally Friendly Vehicles (EFV)”.

The EFV group also proposed a schedule for the continuation of work on EFV issue:

- 1st step:** To send the Feasibility Statement to WP.29 and to 4th EFV Conference in India (Nov 2009) for deliberation and discussion.
- 2nd step:** Based on the outcome of the 4<sup>th</sup> EFV, the development of a detailed concept and a proposal for an EFV evaluation method to WP.29 and to the 5th EFV conference (2011 / 2012).
- 3rd step:** Based on step 2, development of a document (Special Resolution or Consolidated Resolution), and adoption by WP.29.

The Delhi conference had therefore identified the key inputs that go to make a vehicle Environmentally Friendly in a holistic manner. With the “Background document regarding the Feasibility Statement for the development of a methodology to evaluate Environmentally Friendly Vehicles (EFV)”, as the base for discussion, the conference deliberated on the following:

1. Mobility and Environment- Role of EFV.
2. Alternative fuels and Drives.
3. Gaseous fuel Technology-The technology of the future.
4. Electric Vehicles- Future
5. Regulatory and Legislative Framework for EFVs.
6. Industry and Government Collaboration.-Perspectives of Developed and Developing Nations.

The 4<sup>th</sup> EFV conference concluded that:

1. Multiple environmental aspects including noise levels, alternative fuels, drive train efficiency, electric power sourcing and manufacturing efficiency all contribute to developing a vehicle that could be termed as truly environmentally friendly. While many different concepts and fuels are being considered to develop EFVs, there is no single solution that emerges as the definitive solution, and therefore efforts along multiple lines have to continue. In addition there will continue to be a need to improve internal combustion engines to move towards a more environmentally friendly vehicle.
2. While many concepts of cleaner vehicles were presented, the clear outcome was that “clean vehicles” was only a relative term as an overall “well to wheel” approach showed that in all cases there was energy consumption, emission of green house gases and emission of pollutants. In some cases at the point where the vehicles were operating and in others where energy was generated.

The ultimate objective would aim at cleaner and sustainable energy generation.

3. While the definition is being deliberated upon, simultaneous attention also needs to be given to the Regulatory and Legislative framework to nurture development of EFVs. A view was expressed that harmonized regulation and the development of EFVs need to go hand in hand.

In this context, it was important to look at the individual regulations covering existing concepts of EFV and look at developing a road map for further improving these prescriptions by giving targets that are achievable. At the same time, it needs to be recognized that the industry is passing through difficult times and, therefore, the regulations need to be scientific and, evidence based, cost effective and if possible, harmonised.

4. While individual efforts are underway to develop and produce more energy efficient vehicles there was a recognized need for continuing collaboration across industry and between countries including in the development of standards and consumer education.

Government, Industry, consumer organizations, and research institutes should continue to collaborate to put into place appropriate policies for promotion of EFVs. There is a need for coordination to ensure that such policies do not lead to a non homogenous and fragmented market. These policies have to address both short term and long term measures for promoting Research & Development, design, manufacture, operation of EFVs as well as consumer information.

5. EFVs are only a part of the total solution. It was reiterated that there is a need for an integrated approach to address the impact of vehicles on the environment as an important part of transport. Many of the new types of EFVs need additional infrastructure for energy distribution that is critical to the deployment of such vehicles, and it was important to provide a policy road map for this.
6. While it was difficult from a technical and scientific point of view to arrive at a holistic definition of an EFV, efforts should continue to arrive at the best possible solution.

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