



# Informal Group on Gaseous Fuelled Vehicles (GFV)

Report 65th GRPE January 2013



# Meetings GFV Group

- 22th GFV meeting
  - **2 October 2012 Geneva (GRSG)**
- 23th GFV workshop (retrofit)
  - **13 December 2012 Brussels**
- 24th GFV meeting
  - **15 January 2013 Geneva**



# GFV items

- Heavy Duty Dual-Fuel Task Force (HDDF-TF)
  - R.49 rev 6 (Euro VI) → completed
  - R.49 rev 5 (Euro V) → in progress
  - R.85 (net power) → completed
  - R.115/? (retrofit LPG/NG) → under consideration



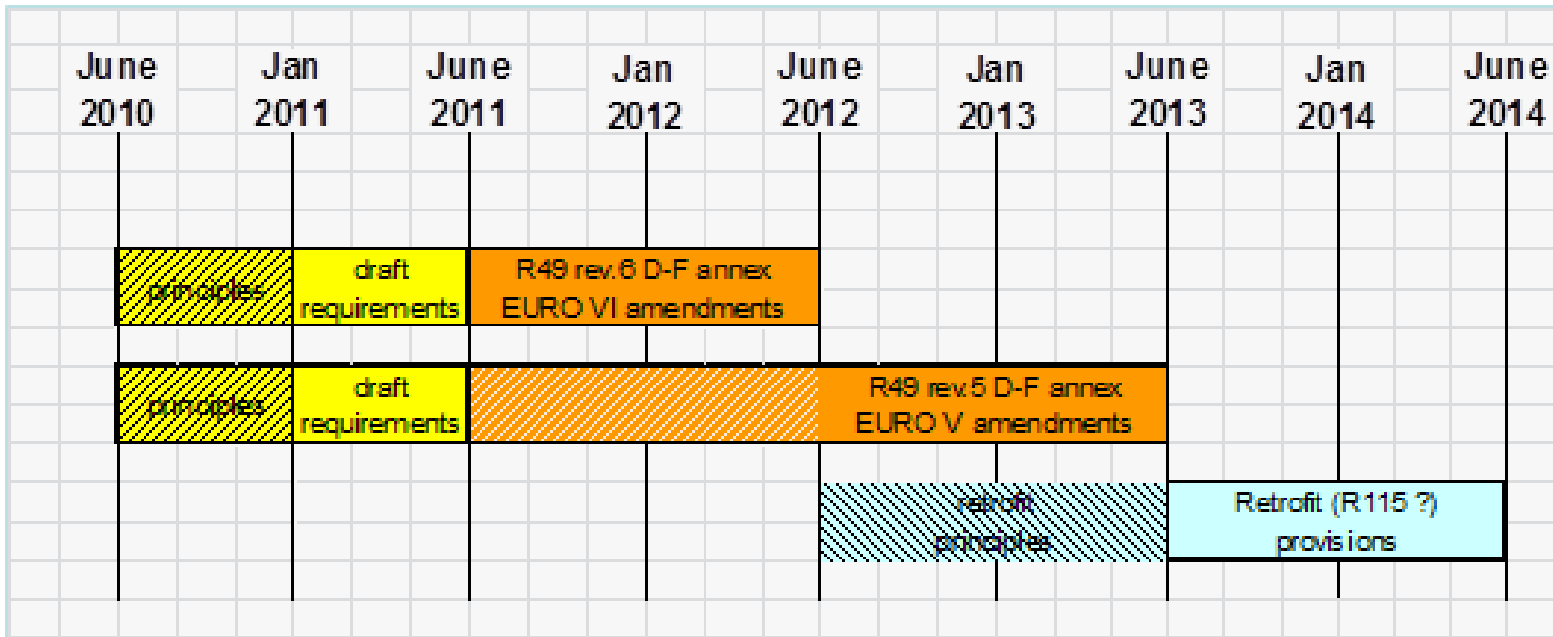
# GFV items

## Heavy Duty Dual-Fuel (HDDF)

### Amendments rev.5 Regulation 49 (EURO V)

- The drafting work in latest stage
- An informal document has been submitted to this 65<sup>th</sup> GRPE for their input
- Formal document to be submitted to the June 2013 GRPE session
- Final amendments to be submitted to November 2013 WP29

# GFV items





# GFV items

## **HDDF retrofitted engines and vehicles**

- 13 December 2012 workshop
  - organized to gather information from various government and private industry stakeholders to learn more about the current approaches dealing with heavy duty dual-fuel (gaseous) retrofit technology and what might be the way forward.
  - 20 participants: Member states (contracting parties), Dual-fuel and retrofit system suppliers for natural gas and LPG, OEM represented by ACEA/OICA and NGOs
    - State of dual fuel retrofit technology
    - Current national-level regulatory (or lack thereof) approaches
    - Regulatory options/strategies



# GFV items

## **HDDF retrofitted engines and vehicles**

Current national-level regulatory (or lack thereof) approaches

- In the absence of international standards or regulations current state-of-play based on national approaches.
- Most countries have no certification criteria, procedures or rules.
- Some countries are highly restrictive (D-F not allowed); some are flexible, others provide exemptions (i.e. also in conjunction with a test program)

Conclusion:

Existing situation is not favorable to facilitate the heavy duty D-F market.

There is a need for an international regulation for dual-fuel retrofit systems



# GFV items

## HDDF retrofitted engines and vehicles

### Regulatory options/strategies

- Three possible regulatory approaches
  - REC (retrofit emissions control devices)
  - Regulation 115 (expanding to HDVs would be time-consuming)
  - Completely new regulation (new structure; not limited to gas)

Some concerns about competitive advantages between OEMs and retrofit system suppliers -> to be considered.

- Support among retrofit system manufacturers to amend R.115
- OEMs prefer developing a completely new regulation





# GFV items

## HDDF retrofitted engines and vehicles

- GFV 15 January 2013

Discussion on the legal framework (the 3 options)

- Presentation AEGPL with arguments for retrofit HD Dual Fuel in R115

There are several possible regulatory pathways all of which have pros and cons.

The most preferred option to implement DF retrofit within GFV seems to be amending R115 but a final proposal to GRPE will follow later.

- January 2013 – June 2013

- Draft of the principles to be considered for setting retrofit rules (taking advantage of the experience of the REC group)

- June 2013

- Validation by GRPE of the principles



# GFV items

- **Definitions for Gaseous Fuelled vehicles**
- The GFV will be involved in the activity of the Vehicle Propulsion System Definition (VPSD)



# GFV items

## o **Task Force on Liquefied Natural Gas (LNG)**

- This LNG TF will submit a formal document amending R.110 for LNG vehicles to GRSG on 18 January 2013
- LNG TF hopes to receive approval by GRSG in April 2013; followed by WP29 November 2013.

## o **Special GFV item**

- a European proposal for amendments to M1 and N1 vehicles emission regulation (Euro 5/6) concerning THC / CH<sub>4</sub> (methane) discussed and commented by the GFV group.



# Next steps GFV

## o Next meetings

- GFV meeting 14-15 March 2013 (Rome)
- GFV meeting in Geneva in June 2013
  - GFV request GRPE for a ½ day meeting during the 66th GRPE
- HDDF TF meetings scheduled by the Task Force
- LNG TF meeting scheduled by the Task Force

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