

Proposal to develop a new Regulation or Recommendation on
**Determination of Powertrain Performance
of Hybrid Electric Vehicles**

Dr. Hans Holdik

Federal Ministry
of Transport and
Digital Infrastructure
GERMANY

Dongseok CHOI / Ph.D.

KATRI –
Korean Automobile Testing and
Research Institute
KOREA

Current Status

- ✓ **Focus on light duty vehicles (M1, N1)**
- ✓ **Clear demand from WLTP-SG-EV**
Applications: P-t-M ratio, Downscaling Method, Gear Shift Model

Current Status

Project idea and concept have been presented and discussed at following events:

EVE, during 12th Meeting 28./29.10.14

Documentation: EVE-12-04e, EVE-12-13e

- **Supportive**
- JP does not require power determination in their regulation system
- No decision whether or not the work should be carried out under the 98' or 58' Agreement.

WLTP, during 8th Meeting 17./20.11.14

Documentation: WLTP-SG-EV-06-08, WLTP-08-48e

- SG-EV has no sufficient resources to develop a procedure for the determination of combined power of HEVs within Phase 1b, therefore **initiative of EVE is supported**
- **Proposal to extend the scope** from HEV to PEV and conv. Veh.
- **Input** from WLTP SG EV to EVE will be provided, esp. **on which performance criteria** are needed for WLTP.

Open Questions – to be discussed & clarified within Part A

1. **Besides the demand from WLTP SG-EV, need for further performance criteria for further technical information?**
2. **Which concept to follow for LD HEVs (M1, N1)?**
 - a. **KATRI**
 - b. **JARI / HEV power WG**
 - c. **SAE /J2908 WG**
 - d. **A new method to be developed from scratch**
3. **If d.), who takes action and what kind of resources will be needed?**
4. **New GTR (98' Agreement) or amendment of UN R85 (58' Agreement)?**
5. **If GTR, would it be feasible to use relevant parts from UN R85 that covers for conventional vehicles and PEV?**
6. **Organizational issues – work plan on the basis of which GRPE is able to identify, whether the future working group for part B acts as subgroup under the umbrella of EVE-IWG or will be organized in a separate IWG under GRPE?**

Proposed tentative work plan for Part A

Part A, Step i

- Fundamental discussion and decisions on:
- **strategic political questions:** need for technical information on best/worst case or representative case?
- **technical questions:** to be answered in detail including information, which resources will be needed therefor

Deliverables

- Status Report, recommendations
- Informal Document for GRPE

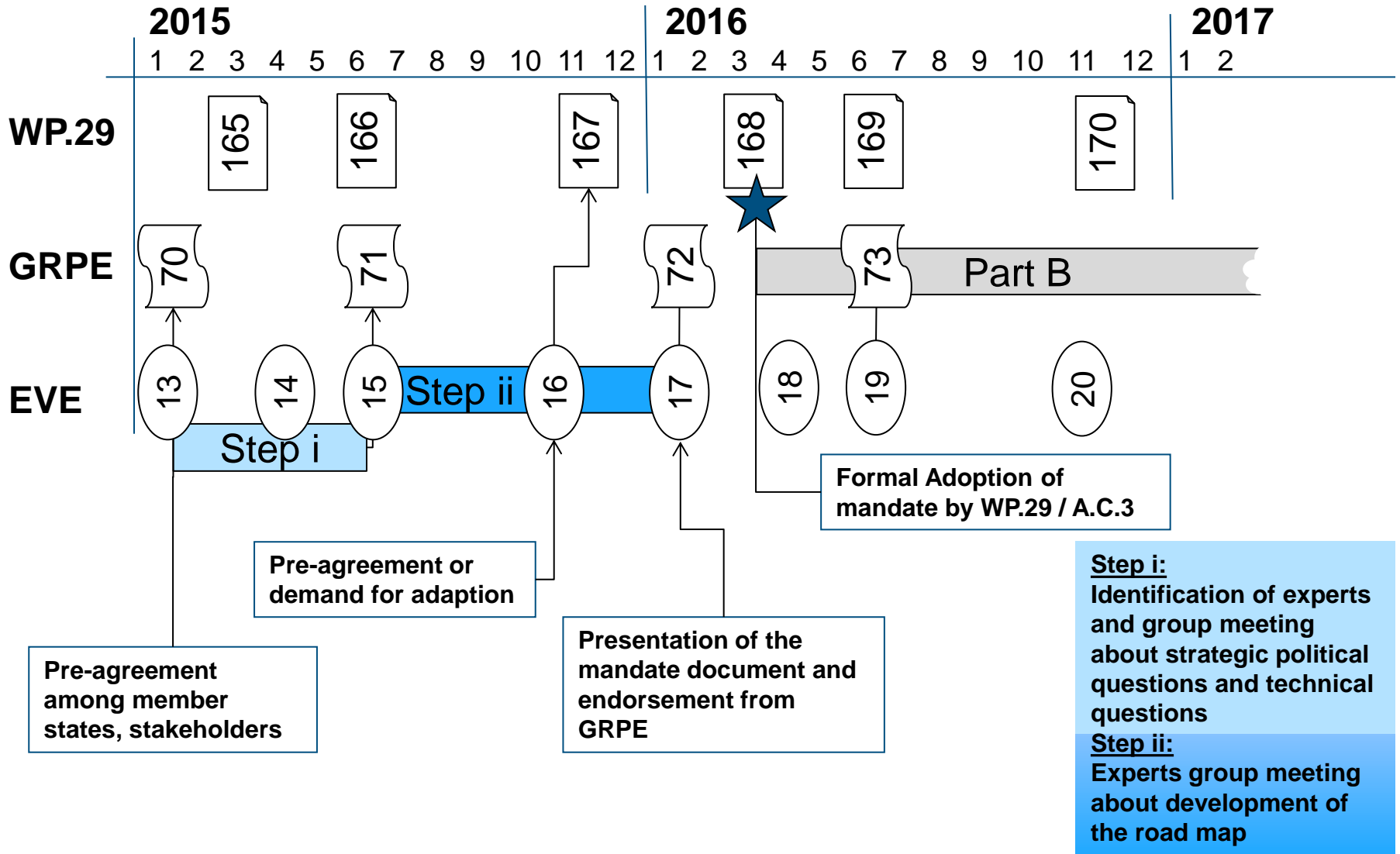
Part A, Step ii

- Development of the Road Map
- **What? Where? When?**
- Development of the Road Map by delegates from the Contracting Parties and stakeholders

Deliverables

- Agreement of the content of the road map
- Determination of Technical Sponsor,
- Chair and Secretary of the IWG,
- Mandate document for endorsement by AC.3 **(Milestone)**

Draft Timeline Part A (updated version)



Thank you for your attention!

Federal Ministry of Transport
and Digital Infrastructure

Robert-Schuman-Platz 1
D-53175 Bonn

www.bmvi.de