International Conference on
Transport and Environment: A global challenge
Technological and Policy Solutions

Milan, Italy
19-21 March 2007

DRAFT AGENDA

Monday 19th March
Plenary Session:
Round table I
Mr Stavros Dimas
Round table II

Tuesday 20th March
Plenary Session:
Round table III
Mr Janez Potočnik
Round table IV

Wednesday 21st March
Round table V
Session I
Session II
Session III

Session I:
Alternative Fuels and Technologies for a Cleaner Environment
Session II:
Real-World Emission Measurements: PEMS
Session III:
Advanced Particle Emission Measurements: PMP
Plenary Session

9:00-9:15  Welcome address by the Local Authorities and the Organisation Committee

9:15-11:00  Round Table I: Air Quality Policy in Europe and the World

S. Dimas, European Commissioner for Environment
H. Krahmer, Member of the European Parliament
A. Pecoraro Scanio, Minister for Environment – Italy
J. Podobnik, Minister for Environment - Slovenia
R. Formigoni, President Lombardy Region
L. Moratti, Mayor of Milan
R. Schenkel, Director General DG JRC, European Commission
M. Oge, Director US-EPA Office for Transport and Air Quality
D. Arturo Gonzalez Azpiri, Viceminister, Ministry of Environment – Spain
A. Fernadez Bremauntz, National Institute of Ecology, Mexico

11:00–11:30  Coffee Break

11:30-13:00  Round Table II: Air Quality Policy measures in Europe and the world
Chair: H. Krahmer (EP), M. Klingbeil (DG ENV)

M. Klingbeil, DG ENV
J. Alejandre, Ministry of Environment - Spain
U. Lahl, Ministry of Environment - Germany
H. Bolscher, Ministry of Environment – The Netherlands
M. Oge, Director US-EPA Office for Transport and Air Quality

Open discussion

13:00-14:00  Lunch
Round Table II: Air Quality Policy measures in Europe and the World (continuation)

Chair: H. Krahmer (EP), B. Paradiz (Ministry of Environment - Slovenia)

N. Hong Khanh, Institute for Environmental technologies – Vietnam
X. Yue, SEPA – China
M. Vezjak, Ministry of Environment – Slovenia
M. Schiess, FOEN – Switzerland
R. Bertollini - WHO
F. Picco, Regione Lombardia
C. M. Marino – ARPA Lombardia
A. Borowiak / J. Jimenez – DG JRC
Regions Piemonte, Emilia Romagna (tbc)

Open discussion
Non-technical Instruments to promote alternative Fuels and Vehicles

Chair: F.X. Soeldner – DG TREN, F. Picco (Lombardy Region)

1. Local initiatives and strategy to diffuse the culture of hydrogen and the acquaintance of hydrogen infrastructures/vehicles among the Mantova community (citizenship and schools). ZERO REGIO PROJECT
   S. Sutti
   CREA - MANTOVA

   P. Boisen
   ENGVA

3. Strategies to reduce greenhouse gas emissions and noxious emissions from transport, on the basis of the trilogy (tria) of transport, technology and energy scenarios.
   D. Fiorello
   TRT Trasporti e Territorio MILANO
   W. Schade (ISI Fraunhofer) P. Christidis (IPTS Sevilla)

Coffee Break

4. The role of Alternative Fuels in meeting GHG and criteria emissions reductions.
   Drew Kodjak

5. BIOGASMAX:Biogas Market Expansion to 2020 Air Quality
   S. Mohr
   ENGVA

6. Type approval procedures based on real driving cycle operating conditions and their potential effects on alternative powertrains diffusion
   A. Alessandrini (Centro di Ricerca de La Sapienza per il Trasporto e la Logistica)
   F. Orecchini (CIRPS - Università di Roma “La Sapienza”)
   F. Ortenzi (Centro di Ricerca de La Sapienza per il Trasporto e la Logistica)
   F. Villatico (CIRPS - Università di Roma “La Sapienza”)

Session II: Real World Emissions Measurements, Monday 19th 14:30-18:00

Legislation developments based on PEMS

Chair: M. Spears (US-EPA), G. Mattinò (EC DG ENTR)

1. Heavy-Duty In-use legislation in Europe: EUROV and elements of future EUROVI standards
   European PEMS Heavy-duty pilot program
   J.P. Laguna-Gomez (EC DG-ENTR), F. Pekár, P. Bonnel (EC DG JRC)

2. US Regulatory Overview of In-Use Testing Program
   US Heavy-Duty Pilot program
   M. Spears (US-EPA)

3. Evaluation of Vehicle Emissions Impacts on local roadside pollution in Tokyo by PEMS
   S. Sato, T. Yamamoto, Y. Goto (NTSEL)

4. California ARB Regulatory overview and Experience with PEMS
   A. Ayala (CARB)

Coffee Break
5. European Industry perspective on in-service emission legislation with PEMS  J. Kruithof (ACEA, DAF)
6. US Manufacturer views on Heavy-Duty in-use testing  S. Shimpi, (US-EMA, Cummins)
7. Swedish program for Heavy-Duty in-use testing for in-use  H. Johansson (SRA), L. Erlandsson (AVL MTC)
8. NTE analysis of Germany Heavy-Duty in-use PEMS data  L. Schulte (TÜV Nord)
9. PEMS Research programs in China  Q. Kongjian, F. Maodong (CATARC)
10. Launch of the European Heavy-Duty pilot program

Session III: Advanced Particle Emission Measurements and Abatement, Monday 19th 14:30-18:00

Emission reduction from vehicles in Europe and the world

Chair: A. Ayala, CARB, USA, Y. Goto, NTSEL, Japan

1. An Overview of the UN-ECE Particle Measurement Programme  C. Parkin, DfT, UK
2. An overview of European Emissions Legislation for LD vehicles  P. Good, DG-ENTR
3. The issue of NO2 from cars: Overview of the 2006 Workshop  G. Hoermandinger, DG-ENV
4. The Swiss approach to emission reduction from cars  BAFU, Switzerland (tbc)
5. The Californian approach to emission reduction from cars  A. Ayala, CARB, USA

Coffee Break

6. The Japanese approach to emission reduction from cars  Y. Goto, NTSEL, Japan
7. “Technology Trend for Diesel PM reduction in Korea”  Youngil Jeong, Hongsuk Kim, Gyubeck Cho (KIMM)
8. Diesel Particle Filters (DPFs) and the environment  D. Bosteels, AECC
9. The experiences of the automotive industry with emission reduction  ACEA (tbc)
Tuesday 20th March

Plenary Session

9:00-9:15 Welcome address by the Local Authorities and the Organisation Committee

9:15-11:00 Round Table III: Science and Policy for a Sustainable Transport

- J. Potočnik, European Commissioner for Science and Research
- M. Groote, Member of the European Parliament
- P. Costa, Member of the European Parliament
- S. Gabriel, Minister for Environment – Germany
- F. Mussi, Minister for Research – Italy
- J. Bozic, Minister for Transport – Slovenia
- A. Di Pietro, Minister of Infrastructures – Italy
- R. Formigoni, President Lombardy Region
- L. Moratti, Mayor of Milan
- M. Bresso, President of Piemonte Region

11:00-11:30 Coffee Break

11:30-13:00 Round Table IV: Transport and Environment Integrated Plans in Europe and the World

Chair: M. Groote (EP), G. Lalis (DG ENTR)

- G. Lalis, DG ENTR
- C. Iglesias Pérez, Ministry of Transport – Spain (tbc)
- F. Cerne, Ministry of Transport – Slovenia
- C. Clini, Ministry of Environment – Italy
- P. van Gurp, Ministry of Transport – The Netherlands

Open discussion

13:00-14:30 Lunch
Round Table IV: *Transport and Environment Integrated Plans in Europe and the World (Continuation)*

*Chair: M. Groote (EP), G. De Santi (DG-JRC)*

- M. Zan-Owe, Environmental Protection Agency – USA
- R. de Abrantes – CETESB, Brazil
- A. Krasenbrink / A. Perujo – DG JRC
- M. Rossetti – Regione Lombadia
- J. Monge, Green Fuel Corporation
- XXX, DG TREN

Piemonte, Emilia Romagna, Veneto, Friuli Venezia Giulia (tbc)

Ukraine

*Open discussion*
Hydrogen, Worldwide Progresses overview

**Chair:** Luisa PRISTA  DG RTD, Adolfo Perujo – DG JRC

   A. Shah (Sensors Inc.)
   Roskiide University
   Denmark

2. "Technologies for the development of a new infrastructure for hydrogen and hydrogen-methane blends"  
   S. de Sanctis  
   SAPIO  
   Italy

3. "European experience: Hydrogen and Fuel cell technology platform"  
   S. Petheves  
   JRC IE – Petten  
   Netherlands

**Coffee Break**

4. 'European Commission: Development of an EU Regulation for the type-approval of hydrogen vehicles'  
   F. Pekár  
   DG ENTR

5. "EU activities on Hydrogen and fuel cells"  
   M. Maggiore  
   DG RTD

6. The project Hyapproval on the European handbook of hydrogen refueling stations  
   M. Reijalt  
   H2IT

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Session II: Real World Emissions Measurements, Tue 20th 14:30-18:00

**Test methods based on PEMS**

**Chair:** D. Chernich (CARB), L.E. Schulte (TÜV Nord)

1. PEMS: Challenges and opportunities  
   A. Shah (Sensors Inc.)

   H. Nakamura and al. (Horiba)

3. Measurement Allowance: Approach and Modelling  
   M. Spears (US-EPA)

4. Measurement Allowance: Test Results  
   C. Sharp (SWRI)

5. Issues for the development of an on-board PM Test protocol  
   L. Rubino, P. Bonnel (EC DG JRC)

6. Development of MPS and QCM for on-board PM testing  
   D. Booker (Sensors Inc.)

**Coffee Break**
7. Locomotive and Marine In-Use Testing  
S. Fritz (SWRI)

8. On board aircraft emission measurements  
T. Rindlisbacher (Swiss Federal Office of Civil Aviation)

9. Heavy-duty diesel fuel economy Measurement using PEMS  
C. Ensfield (Sensors Inc.)

10. CARB Experience with PEMS  
D. Chernich (CARB)

**Session III: Advanced Particle Emission Measurements and Abatement, Tue 20th 14:30-18:00**

**PM emission measurements**

**Chair:** Z. Samaras, LAT, Greece, A. Mayer, TTM, Switzerland

1. **KEYNOTE SPEECH:** Advances in PM measurements  
   Prof. D. Kittelson, USA

2. "Coagulation as a feasible method for a number concentration standard in exhaust gas measuring systems?"  
   G. Pohlmann, K. Schwarz, W. Koch, Fraunhofer Institut Toxikologie und Experimentelle Medizin, Hannover, Germany

3. "Electrical Tailpipe PM Sensor (ETaPS) for On-Board and Inspection type PM measurements"  
   V. Niemelä, DEKATI

4. "Design concepts for the measurement of particulate number"  
   A. Bergmann, W. Schindler, AVL List GmbH, Austria

5. "Verification and Traceable Calibration of Condensation Particle Counters"  
   H. Horn, TSI Germany

**Coffee Break**

6. "Reference systems for calibration / validation of particle number concentrations and size distributions".  
   C. Gerhart, GRIMM

7. "Design Study of a Particle Number Counting System for Field Use"  
   M. Kasper, MATTER Eng.

8. "Particle and particulate measurements and HORIBA's solution"  
   M. Rahman, HORIBA

9. Contribution from Sensors
Wednesday 21st March

Round Table V:

The international project TRAENVIA on sustainable transport along Corridor V

Kick off meeting of the project for the final definition of the work packages

WP0: Project Management and leadership.
Moderators: G. De Santi and A. Perujo
Participants:
   I. Elorrieta  G. Plassat
   A. Critóbal   
   F. Duprez
   M. Fernández

WP 1: Real world emissions of transport modes.
Moderator: P. Bonnel
Participants:
   M. André      P. Dilara
   E. Angelino   O. Franken
   C. Barberio   P. Greening
   J. Casanova   G. Plassat
   S. Caserini   M. Pregl
   J. De la Fuente  L. Rubino

WP 2: PM source apportionment.
Moderator: B. Larsen
Participants:
   E. Angelino
   R. Borge
   A. Cristóbal
   J. De la Fuente
   P. Dilara
   G. Lanzani
   J. Lumbreras
   M. Fernández
   B. Paradiz
   X. Querol
   P. Rairoux
   C. Vaghi
   M. Viana

WP 3: Emissions & Air Quality Modelling.
Moderator: P. Dilara
Participants:
   E. Angelino
   R. Borge
   S. Caserini
   J. De la Fuente
   A. Giudici
   J.L. Jaffrezo
   G. Lanzani
   J. Lumbreras
   C. Marino
   B. Paradiz
   X. Querol

Moderator: A. Miola
Participants:
   F. Cardenas
   S. Caserini
   Y. Crozet
   P. Dilara
   A. Giudici
   G. Lanzani
   M. Fernández
   G. Plassat
   A. Sanchez
   L. Senn
   C. Vaghi
Renewable and Alternative fuels: BTL, GTL, Oxygenates, Blends, Synthetic Fuels

Chair: J.F. Larivé – CONCAWE, V. Mahieu – DG JRC

1. The JEC WTW study (JRC-EUCAR-CONCAWE)  
   Jean-François Larivé  
   CONCAWE

2. Waste based substitution potentials for different biomethane pathways  
   Stephan Ramesohl  
   Wuppertal Institute  
   Samuel Stucki  
   Paul Scherrer Institute

3. WTW study of BTL-, GTL- and CTL- based chains using various configurations/supply paths.  
   Oscar van Vliet  
   Copernicus Institute for Sustainable Development and Innovation  
   Utrecht University

Coffee Break

4. European Biofuels/Biodiesel environmental perspectives  
   Raffaello Garofalo  
   EBB European Biodiesel Board

5. Ethanol Perspectives  
   Carmen Millán  
   Abengoa

6. Biofuels availability  
   R. Edwards (DG JRC-IES-REU)

7. "Biofuels: Global and European Potentials and Sustainability Issues".  
   Uwe R. Fritsche  
   Oeko-Institut  
   (Institute for applied Ecology)  
   Darmstadt – Germany

12:30-14:00  
Lunch

Session I: Alternative Fuels and Technologies for Engines, Powertrains, and Vehicles

Low Environment Impact Technologies for Engines, Powertrains, and Vehicles

Chair: Paul GREENING - ACEA (tbc), Helmut LIST (AVL)

1. Comparisons of fuel efficiencies and CO2 emissions when burning methane gas and diesel oil respectively, and when achieving the same emission standards.  
   Nils Olov Nylund  
   TEC Finland

2. EU funded and technology oriented programs (FP6/FP7)  
   L. Prista  
   DG RTD
3. The Brazilian experience with flex-fuel vehicles
   Rui de Abrantes (tbc)
   Cetesb
   Environmental Sanitation Agency Vehicle Emission Laboratory - Brazil

   Coffee Break

4. On-board Hybrid Vehicle emissions assessment
   F. Villatico (CIRPS - Università di Roma “La Sapienza”),
   E. Rossi (ENEA). Alessandrini (Centro di Ricerca de La Sapienza per il Trasporto e la Logistica)
   F. Orecchini (CIRPS - Università di Roma “La Sapienza”)
   F. Ortenzi (Centro di Ricerca de La Sapienza per il Trasporto e la Logistica)

   G. Plassat (ADEME)
   B. Guiot (CRMT)
   F. Lefevre (CRMT)

6. The project Procura on joint procurement models for alternative vehicles
   Silvia Vivarelli
   ETA Florence

Session II: Real World Emissions Measurements, Wed 21st 9:00-12:30

Title: Round Table – The status of PEMS in legislation, International co-operation for on-board PM

Participants: Giovanni De Santi (EC DG JRC), Ferenc Pekár (EC DG ENTR), Merylin Zaw-Mon, Matt Spears (US-EPA), ACEA, EMA, Instrument providers

Round Table:
- Co-ordination with its US equivalent and launch of an international work program regarding on-board PM

11.00-12.15 Coffee Break

Application of Portable Emissions Measurements Systems: Case studies

Chair: A. Krasenbrink (DG JRC), A. Ekermo (VOLVO POWERTRAIN)

1. PEMS based studies in China
   C. Chen
   Shanghai Academy of Environmental Sciences

2. Inter-Comparison Of Semtech-D PEMS And Conventional Dynamometer Instrumentation For The Analysis Of Medium Duty Diesel Exhaust
   C. Gierczack (Ford)

3. Kansas City project
   M. Sabish, S. Keeshan (ERG)

4. Testing NRMM with PEMS: Case Studies
   P. Scherm (EUROMOT)
**Session II: Real World Emissions Measurements, Wed 21st 14:00-17:30**

**Chair:** L. Hill (HORIBA), A Reading (SENSORS INC)

5. Using PEMS for testing vehicles which are not applicable on test beds  
   S. Hausberger and al. (TUG)

6. Emissions of Recreational Boats on Lake Constance - Onboard Measurements and Aftertreatment  
   M. Klaissle (Fachhochschule Konstanz)

    **Coffee break**

7. PEMS measured emissions of two euro 2 buses retrofitted with different combinations of PM traps and SCR  
   G. Lenaers (Vito)

8. An experience with an on-board opacity measurement campaign on buses running in Italian cities and engine test bed correlation of PM emissions  
   M. V. Prati and al. (Istituto Motori CNR)

9. Measurement of unregulated pollutants using on-board FTIR  
   M. Vojtisek (Department of Mechanical Engineering, Technical University Liberec)

**Session III: Advanced Particle Emission Measurements and Abatement, Wed 21st 9:00-12:30**

**The PMP light-duty vehicle intercomparison programme, final results and conclusions**

**Chair:** S. Park, Korea Univ., Korea, P. Dilara, DG-JRC

1. Presentation of final results of PMP light-duty intercomparison exercise from the laboratories (UK, F, D, JRC, S, Japan, Korea)  
   B. Giechaskiel, P. Dilara DG-JRC

2. PMP Light-duty Inter-lab Exercise: Interesting Observations and Lessons Learned  
   J. Andersson, Ricardo, UK

3. Daily and periodic calibrations of the particle number measurement system used in the InterLaboratory Correlation Exercise  
   Dr Ian Marshall, Emma Sandbach, AEA Energy and Environment, UK

4. "PMP Protocol robustness under the prism of alternative sampling system realizations"  
   Z. Samaras, LAT, Aristotle University

    **Coffee break**

5. The influence of vehicle preconditioning on particle number emissions  
   M. Mohr, EMPA

6. The Japanese programme of PMP (light-duty)  
   H. Yamada or T. Kawai, NTSEL, Japan

7. "Evaluation of Particle Emission in Passenger Vehicles for various Fuels"  
   S. Kwon, J. Kim (NIER), J. Lee, Y. Jeong (KIMM), and S. Park (Korea Univ.)

8. Experiences from the CARB PMP-based programme  
   A. Ayala, CARB, USA

**12:30-14:00**  
**Lunch**
Launch of the PMP heavy-duty validation exercises (kick-off meeting)

Chair: Ch. Parkin, DfT, UK, G. Martini, DG-JRC, P. Laguna Gomez DG-ENTR

1. Introduction P. Laguna Gomez, DG-ENTR

2. The design of the HD intercomparison exercise Ch. Parkin, DfT, UK

3. Progress in PMP heavy-duty intercomparison exercise G. Martini, DG-JRC

4. Progress of the PMP parallel Asian intercomparison exercise (heavy-duty) Y. Goto, T. Kawai, H. Yamada, NTSEL, Japan

Coffee break

5. The PMP HD Round Robin OICA / ACEA (tbc)

6. Discussion on further labs preparation, timetable and execution details All participants and JRC manager

7. Discussions on Equivalent programmes (Representatives from Japan, Korea, USA)
The conference will provide a forum for the discussion of the new regulatory approaches to control air pollution with special emphasis in the transport sector. It will focus on the comparison of results from regulatory research programs, the associated scientific findings, the new measurement technologies and the potential of future fuel and power train technologies.

Sessions will focus on:
- Alternative fuels and power train technologies
- Real-world emissions measurements (Portable Emissions Measurement Systems, PEMS)
- Advanced Particle Emission Measurements (PMP)

The conference will bring together experts from the regulatory bodies, industrial stakeholders and scientists in an international background (EU, US, Japan, China, India, Korea).

Objectives of the conference include the promotion of new integrated approaches to address and solve the problems of air quality and one of its major contributors, i.e. transport, as well as to exchange information and experiences on the new ways of measuring emissions from the transport sector.

**SIDE EVENTS**

Day 1 (19 March 2007, 12:00-13:00)  
Day 2 (20 March 2007, 12:00-)

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<td>• A case study: Collaboration JRC – North Italy</td>
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**Venue:**  
fieramilano  
Strada Statale del Sempione, 28 - Rho (Milan), Italy  
tel. 02.4997.1 fax. 02.4997.7379  
http://www.fieramilano.it/

**Web-site:**  
For more information, updated agenda, registration form and news:  
http://transportenv07.jrc.it