MEETING REPORT: 11th PCFV GLOBAL PARTNERSHIP MEETING  
6 - 7 June 2016, London

The Partnership for Clean Fuels and Vehicles held its 11th Global Partners’ Meeting on 6 - 7 June 2016 in London. The meeting was hosted by IPIECA, a founding PCFV partner, at their London offices. Mr. Brian Sullivan, the Executive Director of IPIECA made the introductory remarks and reiterated the industry’s and IPIECA’s support for PCFV. He welcomed partners to the meeting.

A total of 43 partners attended the meeting which discussed the global progress towards achieving the two main PCFV campaigns; elimination of leaded petrol and introduction of low sulfur fuels in combination with the introduction of vehicles emissions standards. Other emerging issues in the fuels and vehicles industry were also considered. Two working groups were constituted to review some emerging issues and report back to partners. Partners approved the 2016/2017 programme of work for the PCFV and its Secretariat.

Session I - PCFV Progress Reports
Moderator: Jeffrey Guthrie, Environment and Climate Change Canada

i. Report back by the PCFV Secretariat - Rob de Jong, PCFV Secretariat

The PCFV Secretariat presented the 2014-2015 PoW progress. This was followed by discussion around continued supply of TEL to the remaining 3 leaded countries i.e. Algeria, Yemen and Iraq. The Secretariat noted the difficulty of getting information on countries in unstable political situations. The Secretariat also reported on global progress on fuel desulfurization, showing progress was being made in many countries in all regions.

ii. Regional Overviews - Panel Session

(a) Africa - Wanjiku Manyara, Petroleum Institute of East Africa (PIEA)

Much progress has been made in Africa – notably East Africa has introduced low sulfur fuels (50 ppm or less) and other countries have significantly lowered their fuel sulfur levels. However, there continues to be a mismatch between fuel quality and vehicle standards in some countries. The example of Nigeria that imports high sulphur fuels (3000ppm diesel and no clear political direction on refinery upgrades) and has adopted Euro 3/III vehicle emission standards was sited. It was noted that Euro 3 vehicles (petrol and diesel) have catalysts. This mismatch means that vehicles will produce more sulphates with the high sulphur fuels. After treatment technology can actually be a liability in such a case. Partners were informed that diesel is more expensive than petrol in Nigeria – but this is changing because petrol will no longer be subsidized. There is also an 8-year maximum age for vehicles imported into Nigeria and an annual roadworthiness test that will be enforced from 2016. It was noted that in Africa, success on adoption of
cleaner fuels and vehicles has been, in part, due to the PCFV and regional roundtables that involve governments.

(b) Asia - Alvin Mejia, Clean Air Asia (CAA)

There is significant progress in Asia as a whole and in the ASEAN countries in particular (Philippines, Vietnam, Indonesia, Bangladesh, Sri Lanka), where the PCFV is directly involved. One of the key challenges is the distribution of costs and benefits of cleaner fuels and vehicles, fuel quality monitoring, and inspection and maintenance programs. In the Philippines there is a program to upgrade/replace jeepneys. Vietnam has a program to incentivize public transport investments and higher vehicle standards. There are plans to leapfrog to better fuel quality with India moving to Euro 6 equivalent. Indonesia is also planning on moving to Euro 4/IV in 2017 along with Philippines and Thailand to 10ppm. There is also a need for increased assistance to smaller countries in the region like Laos, Myanmar, and Cambodia to implement cleaner fuels and vehicles standards.

(c) LAC - Gianni Lopez, Centro Mario Molina Chile (CMMCh)

The Latin America region is moving toward a 50ppm fuel standard and Euro4/IV vehicle emission standards although the ultimate goal would be 10ppm and Euro 6/VI standards particularly in cities and for public transport. Countries that have adopted low sulphur fuels include Panama (which also has 10ppm fuel), Peru that is producing 50 ppm diesel for urban areas along with 50ppm imports, Colombia’s new refineries are producing 50ppm fuel, Uruguay imports 10ppm, and some urban areas in Chile have 10ppm sulphur levels in diesel, with Santiago implementing Euro VI for buses from January 2017 – a first for Latin America. Bogota is planning to follow suit. CMMCh is promoting a similar approach in other countries in the region. At an April 2016 regional meeting on heavy-duty diesel standards, a working group was created to distinguish between national and city level fuel and vehicle improvements.

(d) CEE - Ruslan Zhechkov, Regional Environmental Center for Central and Eastern Europe (REC)

REC highlighted fuel adulteration issues and noted that more work needs to be done on heavy duty diesel vehicles emission standards; especially in Central Asia. Russia / NIIAT gave a short update on CIS countries customs union progress and status (including Russia’s transition to Euro V from January 2016, Euro 5 standards from July 2016). From the discussion, it was clear that the problem is not in developing regulation but more on compliance and monitoring. Technical inspection in the customs union is lacking or discouraged by the government. There is a need for resources and improved capacity of standards control bodies.

(e) MEWA - Ahmed EL-Dorghamy, Centre for Environment and Development for the Arab Region & Europe (CEDARE)

CEDARE presented on Middle East and West Asia, with an emphasis on the Arab Sulphur Reduction Roadmap and provided a comparison of Arab and European country refinery capabilities. The roadmap was presented at the Joint Committee on Environment and Development in the Arab Region in November 2015 and recommended for voluntary participation. Next steps include technical assistance and individual country support as a ‘local vocabulary’ on cleaner fuels and vehicles is missing.
iii. Discussion

The following issues were highlighted in the discussions:

a. Morocco introduced 10ppm fuel, which supports Euro 5/VI or 6/VI vehicle standards. 10ppm diesel fuel is also availability in limited quantity in South Africa.

b. On the options available for handling fuel adulteration and quality control, Chile gave the example of portable black carbon meters to monitor compliance. Kenya uses a fuel-marking program undertaken by a regulator who licenses fuels for dispensation at service stations; it is paid for by industry. Fuel is tested at port and there is a huge penalty for non-compliant fuel (closure of fuel stations, shamed in national press for 2 weeks).

c. There exists challenges in India despite the leapfrog decision – specs for ‘Euro 6/VI’ fuel have deviations on octane, density, etc. Entire specifications must be met for a fuel to be truly ‘Euro 6’ quality; otherwise there is no ‘Euro 6 fuel’ in India.

d. Setting age limitations was a first step for countries towards regulating vehicle imports but there is also a need to institute standards to control vehicle import technologies. Fuel standards are equally important to guide plausible emission control technology.

e. Areas for long-term work consideration:
   i. Include new developments of 2 wheelers in Asia and new standards that will close the gap between cars and 2 wheelers.
   ii. Address mismatches between fuel quality and vehicle regulations. There is also need to address barriers to the adoption of vehicle emission standards in regions where there seems to be little progress.
   iii. How the PCFV can support countries to meet cleaner fuel targets with the example of Algeria leaded petrol phase out highlighted.
   iv. The PCFV was requested to consider incorporating some measurement targets on compliance/enforcement for new vehicles and I/M for in-use vehicles.
   v. It was noted that China’s National Clean Diesel Action Plan will start not only for trucks but also for non-road vehicles (marine and diesel engines) and ships. PCFV was requested to also consider non-road transport in the future.
   vi. In light of recent revelations that real life vehicle emissions are much higher than certified emissions, due to non-compliance, it was important for the PCFV to come up with recommendations on the way forward.
   vii. Regional strategic partnerships are encouraged as they have played a critical role in implementing PCFV work.
SESSION II – Global Fuel Trends

Moderator: Wanjiku Manyara, PIEA

i. Fuel Sampling Overview - John Walsh, Afton Chemical

Afton Chemical presented an update on fuel quality data that provides averages but no specific data points on lead and sulphur in fuels. The data allows the PCFV to compare to country progress report and is not meant as verification with statistical certainty. Lead sampling shows detectable lead levels in Algeria, Madagascar, Morocco, Tunisia, possibly due to cross-border smuggling in the case of Morocco and Tunisia.

ii. Global Fuel Quality Developments - Huiming Li, Stratas Advisors

Stratas presented their information on fuel quality and vehicle emission standards, including a map on gaps for vehicle emissions in countries where vehicle emissions could be tighter. It was agreed that the PCFV should have a chart that shows the multiple dimensions of vehicle emission standards (in addition to Euro standards – for example age import limits, etc.). Stratas is now tracking auto fuel economy and has research on fuel quality monitoring; only 56 countries have mandatory programs to check on quality and even those may not check across the value chain. Only a handful of countries (Kenya, Kazakhstan, EU) make results available online to consumers.

iii. New Lubricant Specifications – Terry Thiele, Lubrizol

Lubrizol emphasized that vehicles and fuels are a system, and lubricants are part of that system. Lubricants reduce HDV CO2 emissions and fuel consumption. NRDC noted that the lubricant issues are somewhat analogous to sulphur levels and PCFV doesn’t track lubricants even though lubricants are part of the fuel/vehicle systems approach and are not legislated. EU is moving into a new generation of industry specifications that will trickle down to the rest of the world as we move to Euro 6. What role can the PCFV play in stakeholder outreach to help end-users use the right lubricant? When fleets realize they can save money by using the right lubricant, they do. Lubrizol highlighted that a classification of lubricants by energy performance could be developed to give customers greater knowledge on types and efficiency of lubricants. MECA noted that the quality of the lubricant affects filter and emission control technologies. Lubrizol concluded that we need to think in terms of systems and add lubricants to the fuel + vehicle system and the way we discuss it. It was proposed that the partnership put together a working group to look at the lubricant issue and advice on it.


The African Refiners Association provided a presentation on the AFRI Roadmap, with a target to meet AFRI 5 by 2030; despite foreseeing difficulties for the AFRI 4 2020 target. Key challenges to refiners in Africa were highlighted and include funding, environmental standards, and safety upgrades. Future opportunities and challenges include the need for key decisions on regulatory issues.
v. Fuels Standards: Implementation and Enforcement – Jeffrey Guthrie, Environment and Climate Change Canada

ECCC presented the specifics of Canada’s system for fuel quality monitoring and enforcement, lessons learnt and close cooperation with the USEPA.

Session III – Cooperation with Other Programs
Moderator: Saul Billingsley, FIA Foundation

i. Global Fuel Economy Initiative (GFEI) - Sheila Watson, FIA Foundation

FIA Foundation presented on links with the GFEI and new areas of work including on Electric Vehicles, EU action, Heavy Duty Vehicles, better enforcement (Green NCAP/Dieselgate) and the upcoming GFEI Network Meeting in Paris on 9-10 June 2016.

ii. CCAC Global Strategy: Cleaning up the Global On-road Diesel Fleet - Rob de Jong, UNEP

UNEP presented on linkages with the Climate and Clean Air Coalition (CCAC) and SLCP’s (including black carbon/small particulates) and its similarities to PCFV in global components, outreach and research. The CCAC Secretariat is based with UNEP in Paris. The PCFV and CCAC overlap in the work on low sulphur diesel fuel. It was highlighted that Euro VI vehicle technology has NOX, PM2.5 and fuel economy benefits. For buses a Euro VI/10ppm strategy makes sense, while such a strategy may not make sense for the entire auto fleet. This distinction for buses can make a huge difference at urban level where traffic and vehicle emissions are concentrated. Countries that do not have labs to check vehicle standards conformity and ensure compliance of imports could use portable real-type testing.

iii. Climate and Clean Air Coalition (CCAC) - Elisa Dumitrescu, UNEP

UNEP presented details of the new Global Strategy to introduce Low-Sulphur Fuels and Cleaner Diesel Vehicles, developed by the Heavy-Duty Diesel Initiative of the CCAC for use and endorsement by all partners. Following a year of intensive research and drafting, the Global Strategy outlines how the world can reduce 85% of PM2.5 and BC emissions from the global on-road heavy-duty diesel fleet by moving to low and ultra-low sulfur fuels and advanced vehicles emission standards. It also quantifies the benefits and costs of a global transition and outlines priorities and strategies by region and country. Partners agreed that the strategy gives a good roadmap to introduce low sulfur fuels and diesel vehicles standards, and that the PCFV could use this where relevant.

iv. Vehicle Standards: Implementation and Enforcement
   a. Jim Blubaugh, USEPA

USEPA presented on the costs and benefits of compliance in the US, assessment of risk and noted that random testing of fleets has a massive deterrent effect. Transparency of data is a powerful tool. The USEPA 3x3 network means testing at different times in a vehicle’s life: preproduction, products coming off
of assembly line, and certification (yearly). Portable emission measurement devices (PEMs) are used, along with prescribed test procedures, and new unpredictable ways of testing. The US compliance and enforcement system has taken 45 years to develop. LDV's are regulated as an entire vehicle; HDVs only go through engine testing. A number of countries have approached the EPA with interest in leveling the playing field on compliance and enforcement.

b. Jeffrey Guthrie, Environment and Climate Change Canada

The discussion was centered on Canada’s vehicle compliance system. Vehicle manufacturers self-certify, test their own vehicles and Canada cooperates with USEPA labs. Environment and Climate Change Canada tests a sample product on testing laboratory, on-road tests using PEMS and also works with private labs. Canada’s vehicle market is about 1/10th of the US market.

v. Discussion

FIA Foundation inquired about the ultimate sanction in Canada on vehicle emission non-compliance. This includes jail time and prohibition on selling vehicles in Canada, up to a million dollars a day per violation. NIIAT inquired about the on-road testing protocol. US Protocol for PEMS. Michael Walsh noted that if the USEPA recalls a given model, Canada will follow suit.

Partners were thereafter hosted by IPIECA to a dinner cruise on the Thames.

Session IV – PCFV PoW 2016/17

*Moderator: Rasto Brezny, MECA*

i. Programme of Work 2016/17 - Rob de Jong, PCFV Secretariat

The Secretariat’s PoW 2016-2017 was presented with the following highlights:

- Lead Phase out: It is foreseen that Algeria will delay in meeting the target date for phase out. On Iraq the Secretariat is awaiting confirmation after a national workshop in fall of 2016. No plans are available for Yemen until the political and security situation changes.
- Low sulphur fuels work: PoW is in line with the Global Strategy to Introduce Low Sulphur Fuels and Cleaner Diesel Vehicles and the national priorities set out in it.

Partners contributed to the 2016/17 PoW by highlighting:

a. The need to closely link the PoW with the CCAC heavy duty diesel vehicle activities and the strategy.

b. The importance of a local champion and promoting awareness on health impacts. PCFV partners play a key role as ambassadors of clean fuels and vehicles in their countries/regions and sphere of influence.

c. Integration of the PCFV work to UNEP’s air quality monitoring work. The issue of air quality is rapidly rising in the global agenda so is the need for data and affordable implementation strategies.
d. Support for information sharing between countries, and national level progress monitoring as being key to further improvements. In general to better communicate PCFV’s work to countries and partners.

e. In some regions like the Middle East/North Africa region, information and awareness raising is key to advancing the clean fuels and vehicles agenda.

f. The need to have regulatory institutions to monitor and enforce compliance.

g. The importance of partners being able to say what part of the solution transport plays, and produce the numbers that will communicate this

h. That refinery upgrading projects are mainly to support environmental/health benefits by improving air quality thus the need for more number-crunching for financial strategies to recover investment costs.

i. There is need to re-direct PCFV resources to where opportunities for cleaner fuels and vehicles are open.

j. It is important to have a distinction between global/regional/local levels support. The PCFV has been successful at local level and this is where it matters most.

Session V - Emerging Issues

*Moderator Rasto Brezny, MECA*

**i. Electric Vehicles – Rob de Jong, UNEP**

UNEP’s Electric Mobility programme - which is still under development - was presented. Its aim is to provide on the ground support in developing pilots, policies and programs to promote the introduction of EVs; with a focus on developing countries, especially emerging economies.

The programme has four works streams:

- Introducing electric 2&3 wheelers
- Introducing electric bus fleets
- Developing national policies for electric cars
- Regional replication and outreach

The transport sector will make or break the targets on GHG reductions. The Paris Declaration on Electro-Mobility and Climate Change & Call to Action at COP21 was noted. Transport is lagging on integrating renewables, and renewable energy made up 20-30% of energy generated in 2015. It was however noted that only focusing on EVs and overlooking conventional engines that will persist through 2050 would be a mistake. Sri Lanka example shows that fiscal policy can dramatically change vehicle fleet make-up: diesel vehicles taxed 350%, H/EV’s 35% on import. Hybrids are outstripping conventional vehicles now in Sri Lanka.

MECA noted that there is need for honesty about the EV life cycle and electricity production – this analysis needs to be incorporated into the arguments for EVs. Hewlett Foundation noted that electric mobility
makes sense from an energy use/efficiency point of view. The importance of creating a market as the aim and not just incentive structures, but also infrastructure was highlighted.

**ii. Trade in Second-Hand Vehicles - Henry Kamau, Sustainable Transport Africa**
The second-hand vehicle market is estimated at 60-70 billion USD per year. For all of Africa, new vehicle sales are less than 3 million/year. Most used cars are now sold online. Older used vehicles can have significant environmental impacts due to increased emissions.

CEGESTI pointed out that in terms of policy options, finance and credit are key. Roadworthiness certificates from the country of origin should be required. CSE India added that exporting countries must be part of the debate, and scrappage programs need to be well regulated in developed countries. Fiscal solutions should be designed accordingly. PIEA noted that we need a 2-pronged approach on vehicles in East Africa: an age limit and an efficient, safe and reliable public transport system since challenges and interventions are localized. MECA is working with ICCT on a cost-benefit analysis of used vehicle imports.

It was also pointed out that engine imports are unregulated and should be looked at. NRDC pointed out that there is need to tie stringent vehicle emissions standards and age limitations.

### Session VI - PCFV Strategic Focus
*Moderator: Michael Walsh, Consultant*

The following recommendations were made on potential areas of continued and intensified PCFV work:

- Support integration of the systems approach in national/regional activities.
- A focus on compliance mechanisms and support for these at the national level.
- Better communication by incorporating economic, energy and air quality work. Hewlett offered to help the Secretariat on communication efforts.
- Further integrate used vehicles into national level work in close collaboration with automakers on vehicle emission standards.
- Strengthen PCFV’s work in cities, following on the importance of cities at COP21, working closely with the WHO on healthy cities.
- Afton was encouraged to continue to procure and present the fuels data.
- Partners agreed that there is a role for the PCFV in electric mobility particularly for buses.

The following working groups were established to develop concepts that would be presented to the AG for consideration:

- **WG on Lubricants:** NRDC, Michael Walsh, Afton Chemical, MECA and the PCFV Secretariat to look into the role of lubricants and relevance to vehicle emissions at country level.

- **WG on Second Hand Imports:** STA, CSE India, Nigeria, CEGESTI, and the PCFV Secretariat to prepare a technical paper that addresses trade issues, restrictions, cooperation (with possible non
partners that have a keen interest in this topic such as UNECE and G20), and explores options for action.

MECA also offered to compile an information factsheet on PM emissions from gasoline direct injected (GDI) engines.

After the close of the 11th GPM, partners joined the FIA Foundation’s launch of the Global Initiative for Child Health and Mobility at the Overseas Development Institute. (www.childhealthinitiative.org)