

Low CVP Activity Report (October 2009 – January 2010)

This paper is provided for information only and summarises the key activities since the last meeting.

Activity Highlights:

- LowCVP holds first elections for Board of Trustees
- LowCVP Technology Challenge Winner announced and successful event held
- LowCVP support for Green Bus Fund produces successful outcome
- Renewed focus on shifting to Low Carbon Heavy Commercial Vehicles
- Major LowCVP study shows strong potential for biomethane in heavy duty vehicles
- LowCVP provides evidence to DECC Select Committee and Carbon Connect Inquiry
- Used-car labelling scheme successfully launched
- LowCVP's online conference programme gathers momentum
- MD and Chairman meet with Transport Minister
- MD chairs international seminar on biofuels sustainability and Economist debate
- MD presents at EU/JRC Event at Copenhagen Climate Change Talks
- LowCVP Membership continuing strong growth

1. LowCVP holds first elections for Board

In December, LowCVP owner-members participated in the first elections for membership of the Board. The elections, conducted through the Electoral Reform Society, appointed one member in each of the partnership's six membership categories. The table below summarises the new appointments and existing members.

Category	Appointed in December	Existing members
Automotive manufacturers	Graham Smith - Toyota	Joe Greenwell – Ford Jonathan Nash - Saab GB Jamie Borwick – Modec
Automotive supplier, consultant or technology provider or after service	Neville Jackson – Ricardo	Brendan Connor – Cenex
Fuel or energy supplier	Darran Messer - Shell	Olivier Macé – BP
Transport operators and consumer organisation	Neil Scales – Merseytravel	John Lewis – BVRLA
Public sector (including trusts, agencies, NDPBs and local government)	Phillip Sellwood - EST	Tom Delay - Carbon Trust Shona Johnstone - Cambs CC
Environmental, academic and other organisations	Antonia Roberts – Carplus	Julia King – TSB / Aston University Abigail Bristow - Loughborough University

The constitution of LowCVP allows up to 19 board members plus the Chairman of the Members Council (Andy Eastlake – Millbrook) with a maximum of four representatives in any membership category. Representatives of DfT and BIS are full observers.

2. LowCVP Technology Challenge Winner announced and successful event held

On the 10th December at an event chaired by Richard Parry-Jones, co-chair of the new Automotive Council, the winners of the LowCVP Technology Challenge were announced as

Axon Automotive, Brunel University, Controlled Power Technologies, EVO-Electric, Libralato Holdings and Oxy-Gen Combustion. Winning the Challenge provided these up-and-coming companies with the unique opportunity to pitch their ideas directly to industry leaders and demonstrating serious interest in sourcing low carbon car solutions were senior executives from Nissan, Jaguar Land Rover, Ford, Tata Motors, General Motors, McLaren Automotive, Modec, Alexander Dennis, SMT UK, Denso, GKN, Kautex-Unipart, Shell International and TRW.

- Axon Automotive has a light-weighting solution for vehicles structures. Usually limited to use as panels, the company has developed a unique process for creating structural components from carbon fibre. They have also designed a 100mpg plug-in hybrid scheduled for production in 2011. Formed in 2006, the company is a spin-out from the Honda Ecotechnology Centre at Cranfield University. It comprises materials experts and vehicle designers as well as body and powertrain engineers.
- Brunel University has a novel regenerative engine braking technology known as 'RegenEBD' which utilises a vehicle's engine under braking to compress air for energy storage, engine stop-start and boost assist. Suitable for cars, buses and commercial vehicles, the technology's development has been led by Professor Hua Zhao, director of the University's Centre for Advanced Powertrain and Fuels at the University's School of Engineering and Design, Uxbridge.
- Controlled Power Technologies' engine boosting and power regeneration system known as 'RegEnBoost' combines three complementary technical developments: VTES (variable torque enhancement system) electric supercharger; SpeedStart belt-driven starter generator; and TIGERS (turbo-generator integrated gas energy recovery system). The technology facilitates radical downsizing of conventional engines without compromising vehicle performance. The company, based at Laindon in Essex was formed in 2007.
- EVO Electric Limited, is a 2007 spin-out from Imperial College London to develop advanced electric machines and drive systems based on its proprietary axial flux technology. Axial Flux motors and generators are characterised by very high torque and power density. Based in Woking their flagship product, the Axial Flux Motor, is designed to meet the requirements of electric and hybrid vehicles with the technology applicable to all vehicle classes.
- Libralato Holdings is commercialising a compact, optimised type of rotary engine, ideally suited to operate in hybrid electric vehicles. Having unique, asymmetrical compression and expansion geometry, the Libralato engine has only four moving parts and is primed to deliver a step change in thermal efficiency.
- Oxy-Gen Combustion delivers a solution to real deployment of Homogeneous Charge Compression Ignition (HCCI) engines and Controlled Auto-Ignition (CAI), technologies which have been widely touted in the future road map of the automotive industry for their low emission and fuel savings characteristics. Unlike hybrids these technologies do not require a change in the vehicle or engine architecture.

3. LowCVP support for Green Bus Fund produces successful outcome

The Department for Transport has announced the winners of the Green Bus Fund which aims to encourage bus operators and local authorities to buy new low carbon buses. The Fund will support the purchase of 349 vehicles which will operate in most of England's main cities and some rural areas by March 2012.

Low carbon buses are defined as using at least 30 per cent less fuel and emitting nearly a third less CO₂ than an equivalent conventional bus. Funded buses will also be required to meet stringent air quality standards.

Buses supported under the Green Bus Fund will operate in London, Manchester, Stockport, Oxford, Bristol, Bath, Leeds, Birmingham, Reading, Taunton, Coventry, Liverpool, Milton Keynes, Sunderland, Nottingham, Stratford, Durham, Ipswich, Ormskirk and rural Cumbria.

The fund will enable bus operators and councils in every region across England to fund the up-front cost of buying low carbon buses. As more low carbon buses are produced and sold, costs are expected to fall. This will encourage the introduction of new bus technology and stimulate the market for low carbon buses, an industry in which the UK is a world leader.

The Government says that the bus industry estimates that up to 1000 jobs will be safeguarded as a result of this investment.

4. Major LowCVP study shows strong potential for biomethane in heavy duty vehicles

The study into opportunities for high blend liquid and gaseous biofuels has been completed. This study was scoped and commissioned by LowCVP and undertaken by TTR in association with Fleetsolve. The purpose was to investigate: the opportunities for liquid and gaseous biofuels with blends greater than 10% by volume; their potential for penetration into the UK fuel mix; the associated commercial and environmental benefits as well as barriers, and; recommend the most appropriate mechanisms to stimulate take-up.

Seventy two vehicle-fuel combinations have been assessed. For each type of vehicle considered the impact of different vehicle/fuel options was based on estimated numbers of vehicles in each class switching to high-blend biofuel operation. Duty derogations necessary to compensate for additional capital and operational costs for each fuel with each vehicles class have also been evaluated.

UK domestic road transport emissions in 2007 were 123 MtCO₂e p.a. Some high blends biofuels assessed have the potential to achieve savings of over 5 MtCO₂ equivalent if successfully deployed into the market, this representing 4% of total domestic emissions. Large articulated HGVs present the most significant opportunity for carbon saving, with GHG savings of up to 2.4 MtCO₂e p.a. if biomethane is deployed successfully in 20% of vehicles. Savings in fuel costs already compensate additional capital costs and duty derogation does not appear necessary however other barriers to market deployment do need to be addressed.

The study makes a number of recommendations which LowCVP is presently considering. The full, final report has been issued and a LowCVP position paper is pending. The study has received considerable interest from Government Departments and others and LowCVP has been asked to develop a proposed work programme to tackle market barriers for biomethane in consultation with DfT Biofuels and Freight divisions.

5. Renewed focus on shifting to Low Carbon Heavy Commercial Vehicles

The DfT has requested that LowCVP reform its Commercial Vehicle Working Group for the purposes of assisting DfT in the development of a strategy to reduce carbon dioxide emissions from road freight through technology. The Board has agreed as an initial step to establish a Commercial Vehicle Steering Group to develop the work programme during the spring of 2010. It is then intended that the full working group be established to deliver an agreed work programme with DfT during the forthcoming financial year.

The DfT envisages a three phase work programme focused on low carbon HGV technology, these are: Firstly, to review and confirm the technologies which should be prioritised for further work by government. This has been informed by a Review of Low Carbon Technologies for Heavy Goods Vehicles, commissioned by DfT and undertaken by Ricardo. The second phase will determine whether it is possible to develop a performance measure or

target for HGV operations which could be used as well as or instead of incentivising one or more particular technologies. The final phase would be to develop and evaluate options to incentivise selected technologies. These options will be assessed based on the outputs of phases 1 to 2 of the project. Options may be technology specific or technology neutral. The objective is to report to DfT by the autumn of 2010 in time for the Pre-Budget Report.

6. LowCVP provides evidence to DECC Select Committee and Carbon Connect Inquiry

Managing Director Greg Archer gave evidence to the Department of Energy & Climate Change inquiry *Low Carbon Technologies in a Green Economy* in October. Also giving evidence was Prof. Julia King of Aston University. The wide ranging discussion considered:

- The effectiveness of the green stimulus package in encouraging low carbon vehicle and fuels
- The potential of low carbon technologies
- Adequacy of current policy and support
- How to change consumer attitudes
- The potential role of biofuels
- The need for integrated transport policy and demand management measures.

LowCVP emphasised the importance of utilising a range of technologies and approaches for reducing emissions and need to integrate industrial and low carbon policies to ensure UK businesses benefited from decarbonisation. The hearing was streamed live on the web and is available at: <http://www.parliamentlive.tv/Main/Player.aspx?meetingId=4902>

The MD also gave evidence to a Carbon Connect Inquiry chaired by former LowCVP Board member Jack Frost focused on Barriers to the Commercialisation of Low Carbon Transport. Extremely positive feedback was received on the LowCVP contribution to both sessions.

7. Managing Director and Chairman meet with Transport Minister Sadiq Khan

Chairman Neville Jackson and MD Greg Archer met with Transport Minister Sadiq Khan in October 2009. The meeting provided the Partnership with an opportunity to highlight recent successes including new and used-car labelling, RTFO biofuels sustainability reporting and input on incentivising green buses. The Chairman also stressed the importance of pursuing a diverse portfolio of technologies and approaches to reduce transport emissions and that there were no silver bullets. Several areas of on-going concern were also discussed including:

- Urging the Minister to ensure the Renewable Energy Directive and Fuel Quality Directives are implemented in a manner which encourages the supply of biofuels with better GHG-savings and sustainability characteristics
- That the Act on CO2 campaign relays positive messages regarding how drivers can reduce their emissions and provides a range of practical advice how to do this. Also, the need for Partnership Marketing activities to recommence in order to engage business in the new campaign
- The need to retain the duty incentive for high blend biofuels to maintain the niche vehicle market and ensure high blend biofuel buses can access low carbon bus incentives
- That the UK plays an influential role in ensuring proposed EU car labelling directive is based upon the good evidence compiled by the Partnership and exemplar systems in operation in the UK
- The importance of ensuring UK businesses benefit from electrification of transport plans under development in the Office of Low Emission Vehicles (OLEV)

- That the UK plays an influential role in ensuring proposed EU van-CO2 legislation balances the needs of emissions reductions and cost savings for operators with practical lead times for vehicle manufacturers.

The Minister expressed his appreciation for the excellent work of LowCVP and understanding for the broad issues raised.

8. LowCVP's online conference programme gathers momentum

LowCVP has commenced a series of on-line seminars - 'webinars' - allowing members and others to hear from leading speakers and interact with other organisations without leaving the office. The LowCVP's new webinar technology allows up to 1000 people to take part in on-line conferences where they are able to see and hear presentations, take part in instant opinion surveys and engage in debate and questions.

So far, four webinars have been held:

- Electric Drive: can we really meet the challenges and embrace the electric car? (23 Oct, 63 attendees);
- Applying to the Green Bus Fund (9 Nov, 34 attendees)
- Consumer information - progress and plans (2 December, 41 attendees)
- Cutting carbon emissions from the freight sector (21 December, 29 attendees)

Feedback to date has been positive and the technology has worked well. Other webinars now planned include:

- 14 January 2010: Vans and CO2
- 27 January Internet Survey - How accessible is CO2 information on car manufacturers' websites?

Webinars have also facilitated greater and very cost effective participation for members in Working Groups projects and related discussions.

LowCVP is also exploring the use of live and recorded webinars to assist members in promoting their capabilities, activities and products. The concept has been piloted and live sessions involving several organisations are being planned.

9. MD chairs international seminar on biofuel sustainability and Economist debate

The LowCVP MD has helped steer the programme for an important international seminar in the indirect effects of biofuels organised by the International Petroleum Industry Environmental Conservation Association (IPIECA). Held in Lausanne, the two day seminar assembled over 80 experts from around the world. The LowCVP MD also chaired the key debate on the interaction of science, policy and regulation to conclude the event.

The LowCVP MD also chaired an entertaining and informative debate organised by *The Economist* with the support of Shell in September. With participants of diverse backgrounds: Julia King, Aston University, Doug Parr, Greenpeace, Ken Keir, Honda, Graeme Sweeney, Shell, Tom Standage, The Economist and Michael Hurwitz, DFT. The event provoked fierce but friendly debate on the respective rolls of biofuels, hydrogen, electric vehicles and hybrids. A summary of proceedings is available at: <http://www.shelldialogues.com/node/122>

10. MD presents at EU/JRC Event at Copenhagen Climate Change Talks

The LowCVP MD participated in an EU sponsored event as part of the recent Copenhagen Climate Change Talks. The lunchtime seminar, run by the EU Joint Research Centre was entitled "Overall GHG-impact of biofuel and bioenergy."

The event attended by around 80 delegates considered both direct and indirect emissions and policy options for encouraging lower carbon intensity fuels and reduced indirect emissions.

11. Used-car labelling scheme successfully launched

The used car label was successfully by Transport Minister Sadiq Khan on 2nd November. The event took place at the SMMT hosted by the LowCVP MD. In addition to the Minister, supportive speeches were delivered by Paul Everitt of SMMT and Steve Latham of the RMI (the dealers' trade body). Five media attendees included the Daily Telegraph and What Car?, while there were over 30 other attendees from car manufacturer, dealers and also Edmund King of the AA. In the two weeks leading up to the event, many car manufacturers had actively encouraged their dealerships to sign-up to the scheme, so that by the day before the event, over 2000 dealers were registered.

Media coverage to date has been extensive both in the trade and consumer-facing media, including piece in The Sun and Daily Telegraph. What Car? Magazine has produced a two minute video about the used car label which is featured on its website. There is a link from the LowCVP site to this (<http://www.lowcvp.org.uk/news/1288/transport-minister-sadiq-khan-launches-used-car-fuel-economy-label/>), and in turn a link from the DfT's Act on CO2 site to the LowCVP's. LowCVP efforts are now focused on encouraging use of the label in registered and unregistered dealers.

By the end of November over 2500 dealers had signed-up on the Vehicle Certification Agency (VCA) website to participate in the used car labelling scheme, with over 43,000 labels downloaded for display on used cars.

12. Membership continues to grow strongly

There are now 358 members of Low Carbon Vehicle Partnership with 135 organisations now signed as Partners (owner-members).

13. Other Activities

The Secretariat has participated in a range of other member / government-led activities, summarised below with full details contained in Annex 1.

- 12 activities (mainly meetings) with Government Departments
- 4 meetings with agencies or local government
- 2 activities with MPs, Ministers or other events with a Parliamentary focus
- 6 meetings or other activities with members
- 19 meetings or other activities with stakeholders
- 3 international meetings / seminars

Annex 1 – Meetings and other activities

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|---|---------------------------------------|
| • 12 /10 – CCC Report Launch | • 26 /10 – Meeting with Sadiq Khan |
| • 15 /10 – Automotive World Conference | • 27 /10 – APPRTFG |
| • 15 /10 – DECC Reception | • 29 /10 – Cleantech Future Event |
| • 21 /10 – DfT OLEV meeting Michael Hurwitz | • 2 /11 – Used car label Launch Event |
| • 22 /10 – REA Report Launch Event | • 3 /11 – Cenex Meeting |
| • 26 /10 – DfT Sustainable Freight | • 5 /11 – Carbon Connect Inquiry |
| | • 9-10 /11 – ILUC Workshop, Lausanne |

- 9 /11 – Arval meeting
- 9 /11 – RED Stakeholder Group
- 9 /11 – Green Bus Fund
- 10 /11 – Arval, EST & Mike Waters
- 11 /11 – DECC one year on Event
- 13 /11 – FWG Webinar
- 13 /11 – DfT Freight Presentation
- 18 /11 – Cenex Board
- 19 /11 – BOC Meeting
- 23 /11 – LowCVP, PACTS & IMechE Safety and CO2 Seminar
- 24 /11 – REA Steering Group
- 26 /11 – PSA Low Carbon Strategy
- 26 /11 – SMMT Meeting
- 30 /11 – EIN; The investors' perspective report launch
- 1 /12 – After the Car Seminar
- 2 /12 – RAC Foundation lunch
- 3 /12 – IAM lunch
- 3 /12 – REA Workshop
- 4 /12 – E-synnergy
- 4 /12 – DfT Buses
- 7 /12 – Friends Of the Earth
- 8 /12 –BASE Meeting
- 9 /12 – PSE Event
- 10 /12 – Greenpeace
- 10 /12 – Technology Challenge
- 12-13 /12 – COP15 ILUC Issues Event
- 14 /12 – Forum for Future
- 15 /12 – DEFRA Alternatives to Consultation
- 16 /12 – Viper, BIS
- 16 /12 – Van CO2 regulation
- 17 /12 – RED Stakeholder
- 22 /12 – EST Meeting
- 08 /01 – Centre for Defence Enterprise

Annex 2 – Board, Steering Group and Working Group Meetings

Board of Trustees

LowCVP's Board met on the 27th November. The agenda covered:

- LowCVP strategy to 2013
- Reducing freight emissions
- LowCVP freight activity
- Carbon savings from LowCVP activity
- Trustee responsibilities
- Finance report
- Board Committees Reports
- Audit Committee

The Board next meets on the **4th March 2010**.

Members Council

The Members Council met on 22 October. The following substantive issues were addressed:

- A report was provided on the Board meeting of the 15th September.
- A membership discount of 50% has been approved by the Board for those members who have yet to become owner-members.
- Six posts on the LowCVP will come up for re-election this year. Voting is restricted to owner-members.
- Initial thoughts were set out for the development of the LowCVP Strategy to 2013 along with a timetable for developing the strategy and work programme for 2010-11 with members input.
- Notable work programme items were highlighted including
 - The announcement of the Green Bus Fund by DfT which the BWG has provided close support to DfT
 - The successful trade launch of the Used Car Label in July and registration of more than 800 dealers during the summer.

- Progress with the Technology Challenge, with 17 submissions received and 6 successful entries being selected for the short list.
- Car dealer survey completed showing 94% of car showrooms have now adopted the new car label.
- LowCVP responded to the European Commission on policy options for managing indirect land use change from biofuels
- Biofuels C-linkage initial recommendations have received a positive reaction from the Department which are basing their initial proposal on these.
- Proposed amendments to the work programme were confirmed, including:
 - The establishment of a Local authority Low Carbon Vehicle and Fuel Network to provide a focal point for local government involvement in LowCVP was approved.
 - The commencement of a new project in response to the DfT strategy “Low Carbon Transport: A Greener Future” was reported
 - An amendment to the project evaluation of low carbon programmes was agreed in response to the establishment of the Office for Low Emission Vehicles by Government was agreed.
- At the request of the DfT the LowCVP will reactivate its work in relation to Heavy Commercial Vehicles
- A new Challenge was announced to focus on community activity to encourage the uptake of low carbon vehicle and fuels.
- Membership of 13 organisations were confirmed
- The meeting schedule for the coming year was announced
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The MC meets again on **10th February 2010**.

Bus Working Group

The Bus Working Group met on the 4th November 2009. The meeting discussed:

- DfT update
- An update on the Green Bus Fund
- The longer term direction of BSOG
- Report on the revised documentation for LCEB testing and accreditation
- Low Carbon Emission Bus microsite
- LowCVP activity at the Coach and Bus Live at the NEC
- Update on the EIB, Clean low carbon bus facility
- Report on the high blend biofuel study
- LowCVP Strategy 2013

The next meeting takes place on **2nd February 2010**.

Fuels Working Group

The FWG met on 19th January 2010. The meetings discussed a range of issues including:

- RTFO / RED / FQD implementation and LowCVP input to this
- Indirect land use change (ILUC)
- Future roll out of high blend biofuels and biomethane
- Advanced biofuels pathways

The next meeting takes place on **13th April 2010**.

Passenger Car Working Group

PCWG met on 21st January 2010 covering:

- Membership of LowCVP
- PCWG projects update

- Marketing Best Practice Guide
- Car dealer survey review
- New and Used car label
- PCWG Work programme 2010/11
- Van CO2 Regulation

PCWG next meets on the **15th April 2010**.

Future LowCVP meetings are tabulated below:

	Board	MC	BWG	CVWG	FWG	PCWG	IWG
Jan				20 th	19 th	21 st	12 th
Feb		10 th	2 nd	4 th			
March	4 th						
April		21 st	27 th	29 th	13 th	15 th	28 th
May	12 th						
June		22 nd			29 th		
July	6 th		13 th	15 th		1 st	14 th
Aug							
Sept		9 th					
Oct	20 th				12 th	14 th	
Nov			9 th	11 th			10 th
Dec							