

Birmingham Science City Innovative Low Carbon Working Group (ILCWG)
Notes from 7 June 2017

In attendance:

Name	Initials	Organisation
Alan Carr	AC	Birmingham Science City / Sustainability West Midlands
Andrew MacKenzie	AM	Open Data Research Institute
George Constantinou	GC	Coventry University Enterprises
Ian Madley	IM	Keele University
Jamal Lea	JL	Coventry City Council
Jas Kaur	JK	Benham Wolverhampton Ltd.
Jenni McDonnell	JM	Knowledge Transfer Network
Mark Smith	MS	D2N2 LEP
Matthew Rhodes	MR	Encraft Ltd.
Michael Ahearne	MA	University of Warwick
Mike Woollacott (Chair)	MW	Greenwatt Technology
Oliver Thomas	OT	City of Wolverhampton Council
Pam Waddell	PW	Birmingham Science City
Peter Dirken	PD	Innovate UK
Richard Baines	RB	MEBC
Richard Tandy	RT	DONG Energy
Ruth Corral	RC	Worcestershire County Council
Sarah Bassett	SB	Benham Wolverhampton Ltd.
Susan Lee	SL	University of Birmingham

1. Chair's Welcome and Introductions

MW, Chair, opened the meeting and introductions were made. The chair emphasised that it was good to see some new faces and a strong diversity of sectors present especially in challenging times for sustainability and the environment. It is important for this Group to keep the agenda on the table.

2. Sector growth and current funding opportunities through Innovate UK and the Knowledge Transfer Network

PD provided an update on Innovate UK's work related to the low carbon agenda. There is no specific low carbon programme run by Innovate UK but many of their themes cover aspects of low carbon; the [Infrastructure Systems](#) theme fits most closely. There are currently two competitions per year and often Innovate UK works with the [Advanced Propulsion Centre](#) (ILCWG member) and the aerospace market. Low emission technologies drive these sectors.

Innovate UK also funds the catapults, many of which are relevant to the low carbon agenda, including the [Energy Systems](#), [Offshore Renewable Energy](#), [Transport Systems](#), [High Value Manufacturing](#) (includes light weighting) and [Future Cities](#) (includes sustainable cities) Catapults.



Current competitions relevant to the low carbon agenda include round five of the [Energy Catalyst](#) and the [Shanghai-UK](#) and [Jiangsu-UK](#) Industrial Challenge Programme, where in both cases low carbon is a strong theme. Innovate UK also runs an [open programme](#) which organisations can bid into at any time.

PD provided an overview of the key areas included within the £4.2bn [Industrial Strategy Challenge Fund](#) (ISCF); *please see [accompanying slides](#) for more information*. A discussion followed the presentation, the key points from which were the following:

- A big focus of the ISCF at present is producing batteries for clean storage and electric vehicles. A comment was made that the bigger challenge is around heat storage which has yet to be considered.
- Regarding aerospace, there are a considerable number of supply chain companies operating in the West Midlands, in particular in the Black Country, and the competition is also open to start-ups too. This means that applications are unlikely to be dominated by bids from the largest aerospace organisation.
- The boxes given in slide five onwards represent first round challenges only; a second wave of challenges will open in due course (likely to be late June, depending on election outcome). The scope of the challenges for round two are being considered at present.
- [UK Research and Innovation](#) has now been set up which brings together all seven of the research councils. There is new money associated with this in addition to the existing budgets of the research councils and there is no European link.

PD also outlined Innovate UK's forthcoming £4.7bn Place Based Fund. This is partly in response to the findings of studies that promote regional strengths, such as the Science and Innovation Audits (SIAs), launchpads, catapults and devolved administrations. The fund supports clusters of strengths and aims to fund 'the best' technologies and ideas in a given area. At present, it is not certain how the fund will be delivered; it could be through LEPs, SIA consortia or other means. A comment was made that it is important that funds like this avoid hard boundaries where possible, to make it easier to work across these boundaries and with organisations located in other areas.

Critically, the ILCWG is in a strong position to be at the forefront of accessing these funds and members of the Group can work together to develop strong consortia and high-quality bids.

3. Energy Capital initiative

Please see [accompanying slides](#) for more information on Energy Capital, launched in February 2017. A discussion followed the presentation, the key points from which were the following:

- [Energy Capital](#) is being used to stimulate and encourage projects and initiatives across the three-LEP area, for example projects in the Black Country LEP's Local Growth Fund pipeline.
- An Energy Capital Annual Conference will be convened along with challenge events that will include a Dragon's Den style approach with prizes for businesses that pitch the best ideas leading to energy resilience especially for industrial users.
- There is an Energy Capital Board which includes key players in this space, including the universities that are part of the [Energy Research Accelerator](#).





- The West Midlands does have a genuine USP, which includes its devolution angle, markets, narrative, investment and presence of the Energy Systems Catapult. Other parts of the country are developing several exciting projects, for example storage in Cornwall, but often they are very technology specific. The West Midlands has diversity and flexibility.
- Energy Capital is also part of the political process and can influence the powers of the new West Midlands Mayor.

4. WMCA, innovation and sustainability

PW provided an overview of the progress being made at WMCA level around innovation:

- Innovation is a cross-cutting theme in the [WMCA Strategic Economic Plan](#) (SEP) and the Mayor is supportive of the agenda. He will be providing the opening keynote speech at [Venturefest](#) on 27 June on Innovation in the West Midlands.
- The [Midlands Engine SIA](#) was published in November 2016 and was part of a national wave of audits taking place, backed by BEIS. A WMCA level audit has been developed following this to provide a more detailed overview and understanding of innovation strengths and opportunities across the WMCA geography, with its purpose to help make investment decisions. It is now complete, was launched on 21 June can be [viewed now](#). BSC has also [published a blog](#) on what happens next. The WM SIA has been well received by the three-LEP chairs. The WMCA SIA focuses more on the ecosystem aspect and can be used as a call to action for all partners.
- The two underlying themes of the WMCA SEP are 1) to drive up productivity and 2) reform public services. The SIA can help to identify how innovation can be used to deliver these aims.
- The WMCA is likely to establish an innovation sub-board later in the year to drive forward innovative activity, but this is on hold until the new Chief Executive is in post.
- The WMCA has formed a WM [Growth Company](#) which effectively replaces Marketing Birmingham and its initial priority will be inward investment. However, there is also likely to be scope to develop more focused and seamless business support programmes which is where innovation could fit.
- There are also some large programmes related to innovation that are being submitted to the WMCA, including the [Consortium for Demonstration of Intelligent Systems](#) (CDIS) project, which looks at how systems impact on three key themes; energy, transport and health. A presentation was given on CDIS at a [previous ILCWG meeting](#).
- Investment in skills was also raised as a key issue in the WM SIA. The WMCA has launched a [productivity and skills commission](#) which looks at the key drivers that inform productivity; skills and innovation are two of these. A significant barrier is a lack of skills in the digital sector and it was recommended that there is a focus on skills in a future ILCWG meeting, either from those organisations in demand of skills or that can supply skills (**ACTION – AC to investigate**). There is also activity around skills at LEP level.

AC provided an overview of the progress being made at WMCA level around sustainability. The WMCA is duly obliged to monitor and report on several targets as given in the SEP, including economic productivity, healthy life expectancy, business premises and housing and transport targets. Sustainability West Midlands (SWM) has worked with the WMCA to also include environmental related targets, the headline one being that by 2030 carbon



emissions will be 40% less than in 2010. SWM has recently been reporting on the main environmental targets, as follows:

- **Carbon emissions:** 40% reduction by 2030 from 2010 baseline. This equates to a required 9,255 ktCO₂ reduction by 2030 (23,138 ktCO₂ in 2010 to 13,883 in 2030). Emissions reduced 0.8% in the WMCA area between 2013 and 2014 (latest available data from BEIS).
- **Health inequality:** This is the life expectancy between the richest and poorest areas. SWM has suggested a WMCA target of a 40% reduction in the health inequalities gap by 2030 from 2010 baseline, which would close the gap to 6.9 years for men (reduction in 2.3 years) and 4.4 years for women (reduction in 3.6 years). The gap is currently increasing by 2% (males) and 8% (females) between 2013 and 2014 (latest available data from Public Health England) and as such is a big concern.
- **Air quality:** The Defra Daily Air Quality Index measures the levels of pollution across several areas each day on a 0-10 scale, where anything four or higher is deemed as being a breach of expected standards. In 2016, there were 40 breached days in the West Midlands. The target is to reduce this by 40 days to 0 days by 2030. The UK average number of days breached is 31.

Other targets include GVA per head and per employee (a £4,064 and £19,832 increase required by 2030 respectively); an increase in 'business births' by 1,468 per year (currently 22,430); an increase in 194,400 jobs in the 'transformational sector' and an increase in 400k jobs overall; reduce the mode of transport share for cars down from the current figure of 64% to 35% by 2030.

SWM is now looking at comparing WMCA with eight other combined authorities in terms of their progress against the three environmental metrics above.

5. New partnerships and funding opportunities

MW and AC reminded the Group that there is a pipeline of projects that sits alongside this Group that AC manages. It was most recently sent to ILCWG members to allow them to provide updates about two weeks ago. The pipeline is designed to show what projects are happening and upcoming related to low carbon innovation and, critically, where partners and collaborations are sought. The success of this pipeline will result from members of the ILCWG proactively updating it and asking to be connected to other members who are leading on specific projects. Any feedback from the Group on its effectiveness and use will be welcome; contact AC (**ACTION – all members to contribute when appropriate**).

A roundtable update was convened:

- GC referred to Coventry University Enterprises' relevant projects showcased in the [December 2016 meeting](#). A reference was also made to the Coventry and Warwickshire Green Business Programme; this is a university and Coventry City Council joint initiative. JL co-manages this programme for the City Council and referred to an official programme launch taking place on 5 July open to SMEs (**ACTION – JL to circulate details**).
- PD referred to the company Lontra who are up for a prestigious award of inventor of the year and [they need votes to win](#) (**ACTION – please vote for Lontra**). The deadline for votes is 15 June.



- RT outlined that DONG Energy has recently divested its oil and natural gas aspect of its business but it is keeping the name DONG given the recognised branding. DONG is looking to invest heavily and work with partners (public or private sector) to develop innovative projects (**ACTION – members to contact RT if this opportunity is of interest**).
- IM discussed the HyDeploy project which focuses on injecting hydrogen into the gas network; Keele University has a private gas network to test this on and there is a long-term plan to decarbonise. BEIS has a gas transformation programme which focuses in part on hydrogen.
- IM also gave an update on the [Smart Energy Network Demonstrator](#) (SEND) project for delegates not present at the last meeting.
- MA outlined that the University of Warwick is currently undergoing a refurbishment of its thermal research laboratories which will include heat pumps and solar. The university is also a partner with the [National Low Carbon Centre](#) (NLCC).
- The University of Warwick is also putting a bid together with Accord for Innovate UK money looking at converting heating systems in fuel poor homes and integrating heat storage.
- JM gave an overview of opportunities that the Knowledge Transfer Network is involved in, including:
 - [Energy Catalyst](#);
 - The decarbonisation of energy in industry (especially ceramics in the West Midlands; more details to be provided at the next meeting);
 - The next round of the [Infrastructure Systems](#) strand of funding, which will cover energy and transport systems, the built environment and urban living, is open in July, when there will also be nationwide events taking place (the nearest to the West Midlands is taking place in London on [11 July](#); see update from JM in the email sent alongside these notes for more information);
 - [Future Fuels for Flight and Freight](#) programme, which involves using feedstocks for freight fuels including waste/residues (such as hydrogen and biomass). All projects must demonstrate a 70% reduction in emissions. There are two phases to the programme.
- AC promoted the [Low Carbon Growth Support Project](#), led by Groundwork West Midlands and supported by SWM. It supports SMEs in GBS and Black Country LEPs with a free energy efficiency audit and grants towards energy efficient equipment and specialist consultancy. Please signpost to any SMEs in the relevant geography (**ACTION for all members to support**).
- SL pointed to a new EPSRC-funded scoping study, being led by the University of Birmingham, which is investing whole energy systems modelling to ascertain its effectiveness and potential for incorporating other sectors: transport, housing, water and waste; to widen its use. Partners from all sectors are sought (**ACTION – contact SL if any ILCWG member is interested**) and a workshop is [taking place on 26 June](#).
- RB emphasised that [Midlands Environmental Business Company](#) (MEBC) is continuously promoting the business case for sustainable development and supporting (usually) small businesses to diversify into new areas.
- RC outlined the [Low Carbon Opportunities Programme](#) which is looking at renewables but also cleantech innovations and connecting companies with new products and





processes in the Worcestershire area (**ACTION – ILCWG members to signpost Worcestershire SMEs to this initiative**).

- SB outlined that low carbon and hybrid vehicles are becoming more common in the automotive sector, along with plug-in technologies. A comment was made that infrastructure provision is becoming an increasing issue; the markets are ready but infrastructure is not necessarily catching up.
- MW outlined that Greenwatt Technology has worked with Coventry City Council to review the council's electric vehicle charge point infrastructure provision and is now developing a similar EV charge point infrastructure strategy project with Warwickshire County Council and its districts. Local authorities are often not sure what their roles are in this space and as such Greenwatt is keen to engage with other local authorities that may want to discuss in more detail and implement appropriate infrastructure (**ACTION – local authorities to liaise with MW if interested**).
- MW also mentioned that approval for the refurbishment of a building at Stoneleigh Park to use for the [National Low Carbon Centre](#) (NLCC) project has been given on the back of the March ILCWG meeting being held at the site, showing the impact the Group can have. It will provide low carbon business incubation facilities, training and exhibition space and hopes to attract a cluster of start-ups as well as companies operating in cleantech and energy sectors. It will open in January 2018.

6. Dates of Future Meetings

Thursday 21 September 2017, 14:00 – 17:00 – **note change of date**

Wednesday 6 December 2017, 14:00 – 17:00

