

# Minutes of Meeting

Document No CO-1456-18

Subject	<b>CO Sub Group</b>	Circulation	All members
Date	5 <sup>th</sup> June 2018	Circulation Date	16 <sup>th</sup> July 2018
Location	CoGDEM offices Hitchin	Circulation by	Website & email

## Attendees

Leigh Greenham - CoGDEM  
John Saffell - Alphasense  
Richard King - Honeywell Analytics  
Mike Byrne - Ei Electronics  
Colin Mitchell - Ei Electronics  
Michael Wright - Aico  
Andy Speake - Aico  
Doug Longstaff - Draeger  
Kevin Mileson - GES  
Joe Prince – CSA Sira  
Theresa Berry - City Tech  
Paul Rennie - Kidde Safety  
Gary Fairhurst - Kane International  
Ian Ballinger - Sprue Safety  
Damian Cairns - Anton  
Jason Perrins - FireBlitz  
Peter Philpott - TPI  
Kevin Brown - DD Scientific  
Jonathan Gilby - HH60 Consultants  
Jon Bawden - Testo  
Masahiro Uehara - New Cosmos  
Kazuaki Watanabe - Figaro Engineering  
John Darby - City Tech

## Apologies

Andrew Yardley - City Tech  
Tony Banfield - EXL/31/1 etc Chair  
Brendan Simpson - FireBlitz  
Graham McKay - BSI  
Gavin Boorman - Blackline Safety  
Andrew Keenan - CSA Sira  
Steve Cork - CSA Sira  
Rob Lyon - Playfair Marketing  
Tim Jack - Honeywell Analytics  
Adrian Keats - Honeywell Analytics  
Arthur Burnley - Alphasense  
Julian Butler - GfG

## Agenda:

- 1) Apologies and member introductions
- 2) Approval of previous minutes and matters arising
- 3) Lobbying activities (inc. All Party Parliamentary CO Group, Building Regs & PRS)
- 4) Publicity update (inc. Europe, Holland, France and UK PR project)
- 5) CO alarms standards review (inc. EN 50291-1 publication, -2 progress)
- 6) Flue Gas Analysis (inc. CO<sub>2</sub> concerns, update to EN 50379 to include gas pressure)
- 7) Electrochemical toxic gas sensor lifetime testing
- 8) AOB (inc. updates from HSE [new CO workplace exposure limit from Aug], boat project)
- 9) Date of next meeting – Tues 23<sup>rd</sup> Oct 2018

### 1 Apologies and member introductions

Dr Mike Byrne (Ei Electronics) chaired the meeting and welcomed a few new faces. Members introduced themselves around the table and the above list of apologies was displayed and read out.

### 2 Approval of previous minutes and matters arising

The Minutes of the previous meeting (20<sup>th</sup> Feb 2017, CO1455-18) were read and accepted. Matters arising were covered during the rest of the agenda. New attendees were reminded that CoGDEM meetings would not contain discussions of a commercial nature.

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### 3 Lobbying (inc. All Party Parliamentary CO Group)

#### **All Party Parliamentary Carbon Monoxide Group (APPCOG):**

To enable commercial organisations to be involved with relevant Parliamentary affairs, we are members of the APPCOG Stakeholder Forum funded by industry (including certain CoGDEM members who choose to do so) and overseen by an Advisory Board that LG is a member of.

APPCOG has been quite active over the last few months, particularly ensuring that the Parliamentary community had a large response to the DCLG (now renamed MHCLG) consultation on the review of the 2015 English CO and smoke alarm regulations that apply to properties in the Private Rented Sector. It was encouraging that the Minister with responsibility for MHCLG has put in writing that they have reviewed all the evidence provided in APPCOG reports and other communications and recognise that improvements to all the relevant regulations can indeed be made. This is taken to mean that not only the landlord regs but also the Building Regs may be changed to require a wider use of domestic CO alarms in properties containing any kind of fossil-fuel burning appliance, not just solid fuels as at present.

APPCOG is today hosting a Parliamentary reception for the organisers of the major festivals to encourage activities related to CO safety at music festivals (being attended by Rob Lyon to represent CoGDEM). Banners and posters should be on show at the key festivals warning of the CO risk from barbecues inside tents.

APPCOG is just completing a review into the training and competence of workers in the gas industry, and it is hoped that their 'GETSI' report will be published soon, mentioning the increased risk of CO incidents from appliances that have been worked on by inexperienced heating engineers.

Some of the CoGDEM members who support APPCOG attended a joint Parliamentary event to launch ICORN, the International CO Research Network, see item 4 'Global' below.

As reported before, APPCOG has formed a Communications Working Group, attended by Rob Lyon. Several meetings have been held and Rob keeps relevant companies informed of the Group's activities. LG continues to support the APPCOG secretariat (provided by 'Policy Connect') and has trained new members of their staff. He has recently asked them to investigate the GO-BBQ being promoted for indoor use by Scotts of Stow – such a device appeared a few years ago, disappeared but has resurfaced.

#### **Others:**

Safer Tourism Foundation (Thomas Cook funded) STF received good coverage in the Daily Telegraph alongside an interview with the trustee Sharon Wood (mother of the Corfu children). They have appointed a PR expert who has been in contact with LG and RL, and today's CoGDEM meeting was shown a draft video clip that RL had put together for them.

Gas Safe Charity In March and April LG and RL attended the first few 'Think CO' events which train 'trusted intermediaries' such as health visitors and other social care providers, to be more aware of CO so they can look out for hazards or symptoms when visiting peoples' homes. It was felt that the events were worthwhile, and hopefully some of the attendees will be cascading the messages down to other colleagues and members of their work teams. A key message is the need for EN 50291-compliant CO alarms to be present.

IGEM (Institution of Gas Engineers & Managers) As the November 2017 IGEM CO conference entitled 'Research into Action' was well received, they have decided to hold another at the end of 2018 (date TBA, probably November), and this will capture the results of the research projects at Cranfield and LJMU as well as other Gas Safety Trust funded projects. There may be opportunities for manufacturers to present innovative products launched since the previous conference, interested parties can contact LG.

GISG (Gas Industry Safety Group) LG arranged for Martin Brown of DNV/GL to present to the GISG Board the draft scope of a research project to investigate the build-up of CO in typical domestic kitchen environments. This was well-received and funding should be forthcoming, so a fuller proposal will now be created.

Which? More contact between Which? magazine and LG preceded their latest articles on poor quality CO alarms available on the internet, such as the 'Topelek' model that was recently removed from Amazon and Ebay. We try to ensure that the Which? articles always stress the importance of EN 50291 approval by an accredited 3<sup>rd</sup> party, and the availability of Which? 'Best Buys', but the headline writers seem to often miss this detail when talking about failed CO alarms purchased via the usual internet market places.

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### 4 Publicity update (inc. Europe, Holland, France and new UK group)

#### Europe:

The European monitoring and lobbying activity group run by ADS Insight in Brussels met in London to discuss 2018 strategies and activities, including how to maximise the use of the media data from each individual European nation. It was proposed that another Round Table event should be held in Brussels towards the end of 2018, and ideas for this event are now being discussed.

#### Netherlands:

The Dutch government undertook a consultation exercise on its plan to introduce more regulation to the domestic gas industry, such as competency requirements for heating engineers, and COGDEM's NL group responded with positive feedback about the plan, and its willingness to participate in any relevant industry initiatives to help set up the regulatory frameworks. Patrick Voornhuit of Kane (ex-Honeywell) keeps the relevant Dutch group members informed of developments.

#### France:

'OPRIM' has now started its CO publicity activities in France. Shane Lyons of Ei Electronics led the formation of the group of alarm manufacturers, distributors, energy bodies and health organisations, who have agreed to continue to work together to raise awareness of CO issues in France, and to fund these activities.

#### Global:

The International CO Research Network (ICORN) that was triggered by the Toronto conference in Nov 2016 (attended by LG) was formally launched at an event in the UK Parliament in May 2018, attended by ICORN members from around the world, and several CoGDEM member companies sent representatives. The funding of ICORN will be shared by the UK's Gas Safety Trust, the Ontario safety authorities and some US organisations. After this launch, the first main ICORN event will be an international two-day conference in Minnesota in September 2018 to investigate, share and publicise best practice between the emergency services on how they respond to CO incidents. Three CoGDEM member companies have already expressed an interest in supporting this US event, and LG has been formally invited to make a presentation.

#### UK:

Rob Lyon could not attend today's meeting as he was representing CoGDEM at two APPCOG events in Parliament, so LG gave a brief report on Rob's activities to support the CO alarm and FGA manufacturers who are part of a separate PR working group run by him via his independent company Playfair Marketing.

He mentioned the London Borough of Redbridge project to protect residents living above restaurants using solid-fuel cooking appliances, where the manufacturers have donated CO alarms. As well as 'Think CO' mentioned in 3) above, Rob is attending meetings of the APPCOG Comms Group, and is talking to all the members of the Group about a consolidated campaigning approach called 'United Against CO'. This is being well received by all who he has spoken to so far. Rob is working with STF (see above) and the Boat Safety Scheme for whom he has created a glossy brochure with details of the all the suitably certified CO alarms that comply with BS EN 50291-2. Rob also has a good relationship with the Katie Haines Memorial Trust, who want to have a major campaign in 2019 to commemorate what would have been Katie's 40<sup>th</sup> birthday, so we may be helping them with this. Katie's mother Avril Samuels asks all members of the CO community to 'opt-in' to their newsletter via their website.

The National Caravan Council (NCC): Since our last CoGDEM meeting, we have spent (and continue to spend) an excessive amount of time dealing with the NCC's decision to impose mandatory gas-testing of CO alarms in the caravan and motorhome industry's Approved Workshop Scheme, using only the NCC's 'verified' 'calibrated' test-gas. There have been some very inappropriate actions and communications from the NCC to CoGDEM and its members as a result of the NCC's relationship with the company supplying the test gas. However, it now seems that the NCC is seriously doubting the supplier's claims, as they have not found a single CO alarm that failed to respond to gas when tested in a chamber, even when re-testing alarms that had apparently failed the flawed test procedure that uses a shower-cap. Dialogue is ongoing.

Energy UK will be running some summer PR as part of its CO-Be Alarmed! campaign with a focus on barbecue safety, particularly when camping at festivals.

Cranfield University As mentioned before, the ongoing PhD project has to remain confidential until its completion, but the latest update from Roland Wessling has stated that that his student has started a new piece of work in an effort to get CO to 'smell'. This may be described at the IGEM conference in November.

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### 5 CO alarms Standards Review (including EN 50291-1 update)

The 2018 edition of the CO alarm performance standard EN 50291-1 was published in May 2018, despite ANEC (the European consumer organisation) complaining that their criticisms and recommendations had not been acted on by the Working Group. Suitable responses had been compiled and submitted to ANEC via CENELEC. It is hoped that the revised -2 standard (for recreational vehicles) will appear later in 2018 if the Spanish-convened Working Group are diligent.

It was previously mentioned that the EU is conducting a consultation exercise into the scope of the Construction Product Regulations, although as previously reported, EN 50291 is not yet in an appropriate format for it to be harmonised under these regulations. However, Poland has seemingly jumped the gun and placed CO alarms into its national version of the CPR, with manufacturers needing to show that the products comply with the standard in a set of tests done specifically for the Polish authority's benefit.

It was suggested that the guidance standard EN 50292 could be widened to include interlinked alarms, as these have a potentially large role to play in keeping domestic premises safe. We also discussed the lack of consistency with how CO alarm manufacturers show the 'replace by' date, as although the standard requires the date should be able to be 'clearly seen', this is interpreted differently by manufacturers. It was suggested that we should be following the techniques used in the smoke alarm world. Similarly, the information given in this standard about the correct location for CO alarms is not always followed by all manufacturers, so it was felt that this section of EN 50292 could be strengthened.

### 6 Flue Gas Analysis (inc CO<sub>2</sub> concerns, update to EN 50379 to include gas pressure)

CoGDEM has Peter Philpott of TPI and Gary Fairhurst of Kane as representatives on the CENELEC TC216 Working Group (WG13) established to revise the FGA performance standard EN 50379 to allow for 'smart' devices such as those that don't have built-in displays but use the engineer's smartphone's display. This will be convened by the Germans, and it has been decided that this same WG will also work on a new section of the EN 50379 standard (part 4) to allow for standalone gas pressure meters ('tightness testers').

Peter mentioned a potential BEIS-funded project to further develop a valve that can help reduce CO<sub>2</sub> emissions from boilers, he has been in contact with the inventor Robert Harris. As he hears more, he will keep CoGDEM members informed.

Post meeting note: at the AGM immediately following today's meeting, Peter was elected as Vice Chair of the CO Sub Group, to assist the Chair (Mike Byrne) with items related to FGAs and combustion).

Damian Cairns of Anton had previously raised the issue of a gas industry proposal to widen the allowable range of the CO<sub>2</sub> content of piped natural gas in the UK. Graham McKay of BSI has agreed to undertake some basic exploratory tests at his Loughborough labs in July with Kevin Milesen (GES) taking various models of FGA. Damian also asked the question whether others had heard of NO<sub>x</sub> measurements of flue gases becoming mandatory from April 2019.

Kevin Milesen of GES reminded us that the CMDDA1 assessment for the investigation of domestic CO leaks has a section on 'optional' testing for CO<sub>2</sub> in ambient atmospheres, but this does not include any thresholds where action needs to be taken.

There was some discussion of the projects looking at injecting hydrogen into UK gas supplies, including HyDeploy at Keele University which was then mentioned at our afternoon meeting by Mike Hemingway of HSE/HSL who will be investigating the safety cases before the project can be signed-off. Members discussed the likely effects on FGA readings (e.g. cross sensitivities on CO sensors) and Smart Meters.

### 7 Electrochemical toxic gas sensor lifetime testing

JS and JG gave a brief overview of the outcome of the third meeting of the sensor group that had been held the day before this CoGDEM meeting. Agreed lists of failure modes and the tests to provoke such modes were discussed and agreed at the meeting. More detail is to be added over the summer months. JG had held a conversation with Graham McKay of BSI about the practicalities of BSI invoking an agreed test procedure to 'pre-authorise' CO sensors that are to be used in BS EN 50291-compliant products, and this was positive.

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### **8 AOB (updates from HSE [proposed new CO workplace exposure limit], boat project)**

#### **a) HSE**

LG reminded the meeting that Workplace Exposure Limits for CO are to be reduced from August 2018. The current time-weighted-average WELs for CO are 30ppm averaged over an 8-hour day and 200ppm averaged over a 15-minute window, but these limits will come down to 20ppm and 100ppm respectively. WELs only apply to workers, not domestic consumers.

#### **b) Boat Safety Scheme**

LG reported that he continues to help with a project to assess the third-party risk of CO exposure to BSS Examiners when they board a boat to conduct various safety inspections. It is now six months since a group of fourteen Examiners were each equipped with a four-gas workplace gas detector (GMI PS500, 'Wheelmarked' under the Marine Equipment Directive) and there have been over two dozen incidents where the instrument has warned the user of CO concentrations greater than 10ppm. Several of the incidents saw concentrations between 80 and 120ppm, caused by insufficient ventilation when using a bottled-gas powered grill in the confined space of a boat cabin, or the ingress of exhaust fumes from uncatalysed petrol engines. These results are being used by the BSS as supporting evidence in their lobbying for mandatory use of CO alarms across the UK boating sector.

#### **c) Helpline**

LG mentioned an interesting call from British Gas where a couple of neighbouring houses had apparent CO-related incidents, where even the professional diagnostic equipment was detecting high concentrations of CO. After detailed discussions and investigations, it was subsequently discovered to have been the presence of rather worrying levels of hydrogen seeping into the houses via pipe-ducts, after a shared driveway had been re-laid. The source of hydrogen was an underground reaction of Incinerator Bottom Ash (IBA), a commonly used reclaimed building material, which has cement powder added and consequently reacts with water and trace aluminium in the ash, creating quite high concentrations of hydrogen sufficient to activate domestic CO alarms.

#### **d) GASG**

The next colloquia of the Gas Analysis and Sensing Group was to be held at the OU in Milton Keynes on 21<sup>st</sup> June, titled 'New Ideas in Gas Sensing'. Following that will be the pre-Christmas event at the IET in London on 6 Dec, prospectively titled 'Detectable Methane'. Details of the group and its activities can be found at [www.gasg.info](http://www.gasg.info).

#### **e) WEEE**

John Darby (City Tech) reminded members that 'control and monitoring' apparatus is now within the scope of both WEEE and RoHS Directives, so manufacturers need to ensure their products do not use materials banned under RoHS, and that they have sufficient processes in place for their products to be safely disposed of when they reach the end of their working lives.

#### **f) Portable power generators in the US**

Kazuaki Watanabe of Figaro updated the meeting on a subject that had been raised before, the CO emissions from portable power generators (petrol-driven) being responsible for multiple fatalities in the US. The Portable Generator Manufacturers' Association has released a 2018 version of its G300 standard which requires a CO sensor to be built into the generator which will shut it down if concentrations greater than 800ppm are detected. This requirement has been approved by ANSI and will take effect from April 2020. An existing standard ANSI/UL 2201 came into effect in January 2018 limiting the CO emissions from generators to below 400ppm, but not all generators comply with this standard.

#### **g) Road Tunnels**

John Saffell mentioned his involvement with the Working Group on part 2 of EN 50545, covering the performance requirements for apparatus detecting CO, NO, NO<sub>2</sub> and 'visibility' in road tunnels. The group is currently discussing whether there is scope to include CO<sub>2</sub> detection, particulate measurement and air flow-rate. He also mentioned separate work he is engaged with, looking into the validation of CO<sub>2</sub> sensors. More detail would be given in the afternoon's Industrial Sub Group meeting.

#### **h) AP Sensing, Germany**

Theresa Berry (City Tech) said members may be interested to know that the fibre optic sensing company AP Sensing in Germany has shown interest in developing products for detecting the presence of CO.

### **9. Date of next meeting – Tues 23<sup>rd</sup> Oct 2018**