



# Annual Review 2013

# Lead is...



## Providing storage for renewable energy sources

Lead-based batteries provide cost-effective storage for renewable energy, such as solar and wind power, which can be both intermittent and unpredictable.



## Vital in healthcare protection

Lead is unrivalled as a barrier to radiation in medical scanning equipment used in hospitals, dental surgeries and laboratories.



## A safe and reliable component in all vehicles

1 billion vehicles worldwide rely on lead-based batteries to start the engine and power the electrics.



## Reducing carbon emissions in motoring

Advanced lead-based batteries are used in the latest micro-hybrid and hybrid electric vehicles to improve fuel efficiency and reduce carbon emissions.



## Essential for underwater cabling

Lead protects underwater cables used to transmit offshore renewable wind and wave power to users. Underwater lead communications cables also keep the world connected.



## The most recycled metal

Lead has the highest recycling and reuse rates of all metals. Lead-based batteries, the main application for lead, has a recycling rate above 95%.



## A sustainable construction material

Architectural lead sheet will outlast any other roofing material and is 100% recyclable.



## Protecting the world's telecoms and IT infrastructure

Most of the world's fixed and mobile phone networks and IT infrastructure rely on lead-based batteries for emergency power.

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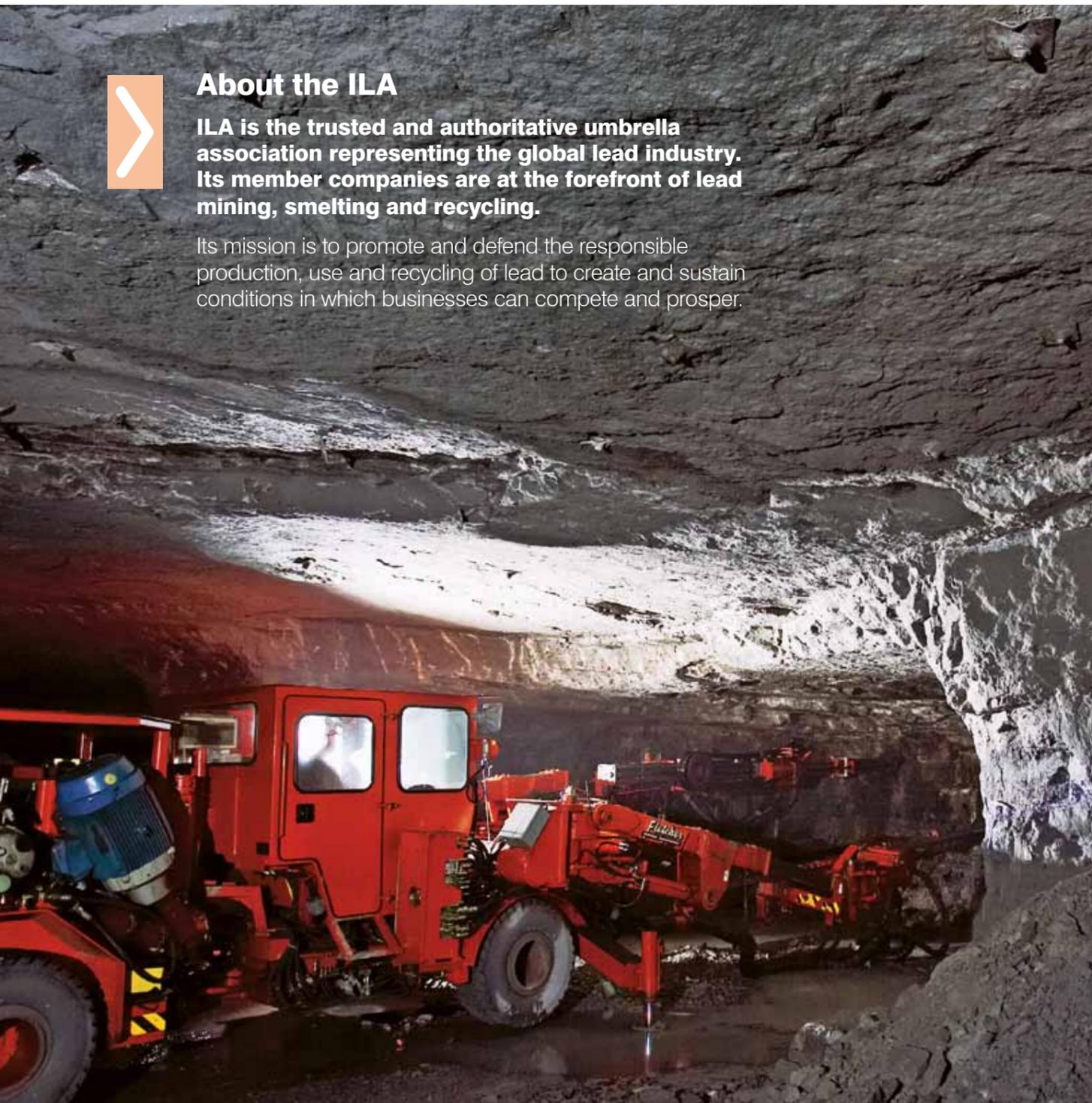
Chairman's message

# Bringing about a better understanding of the value of lead

## About the ILA

**ILA is the trusted and authoritative umbrella association representing the global lead industry. Its member companies are at the forefront of lead mining, smelting and recycling.**

Its mission is to promote and defend the responsible production, use and recycling of lead to create and sustain conditions in which businesses can compete and prosper.



**I am pleased to have become the Chairman of the ILA Executive Committee at the end of 2013, and I thank former ILA Chairman, Martin Boddy for his past service.**

The reputation of our industry is at a critical juncture. We must take a more proactive approach in communicating effectively with various stakeholders including regulators, legislators and non-government organisations, to bring a better understanding about the value of lead, its role in modern society and its responsible use.

Recent efforts by the association in its strategic planning have established a solid foundation and it will now take a co-ordinated and continuous effort by all the related ILA groups – Advanced Lead Acid Battery Consortium (ALABC), ILA-Europe, International Lead Management Center (ILMC) and International Lead Zinc Research Organization (ILZRO) to help sustain our industry.

For those of us who recognise the advantages of our products, such as affordability, reliability and recyclability, the future for our industry seems bright. However, many regulators, non-government groups and citizens do not share that viewpoint. This past year ILA and its membership took positive steps to address this and other challenges:

- Establishing a workforce voluntary blood lead reduction programme
- Efforts to reduce the incidence of fires at secondary lead smelters related to lithium-ion batteries
- Secondary smelter upgrades to comply with the Secondary Lead MACT in the U.S.
- Successful demonstration and promotion of advanced lead-based batteries in vehicles such as the LC Super Hybrid
- ILMC visit to India to help improve processes and reduce occupational exposure
- The signing of a Memorandum of Understanding (MOU) between the ILA and the China Nonferrous Metals Industry Association (CNIA) to support and improve the health of workers, communities and the environment in China
- Lead Action 21 efforts to inform, support and further develop continuous improvement in the industry.

While we are making good progress, we must not reduce our efforts. We are facing new transportation rules that impact bulk concentrate shipping, tightening standards for water releases and policies that do not properly utilise a science-based approach. We must continue to be vigilant and seize every effort to educate, inform and promote the valuable products we provide.

I look forward to working with our members toward a sustainable future.

**Aaron Miller**  
ILA Chairman  
V.P. & Chief Operating Officer, The Doe Run Company



## From the Chairman of ILA-Europe

Today, International Lead Association-Europe is ideally placed to represent the European lead industry's interests in an environment which is changing at a pace we have never seen before. I would like to thank Martin Boddy, from whom I took over as chairman in 2013, for the role he has played in achieving this.

In 2013, regulatory affairs continued to be a top priority – advocacy related to the REACH Authorisation Candidate List, the continued exemption of lead-based batteries from the ELV Directive and the work related to the proposed EU classification of lead metal demonstrated the importance of ILA-Europe and its role in managing the Lead REACH Consortium.

As the pressure on our industry will not ease in 2014, member companies can continue to rely on ILA-Europe's experience in identifying, anticipating and assessing legislative trends and coordinating an industry response to engage effectively with regulatory and political stakeholders.

I thank all member companies for their continued support.

**Florian von Steinkeller**  
ILA-Europe Chairman  
Executive General Manager, Britannia Refined Metal



Managing Director's report

# Supporting a sustainable global lead industry



## ILA core business areas

Regulatory Affairs

Product Development

Sustainability

Science

Communications



**As well as delivering on our existing commitment to our members, 2013 was a year in which we developed further goals for the association. A new ILA strategic plan was formulated that encompasses the work of all the international organisations managed via ILA (ALABC, ILMC, ILZRO) plus ILA-Europe.**

The key themes and future focus of this plan are reflected in the Annual Review, together with a look at last year's progress and achievements in each of our core business areas (see opposite page).

Fundamental to the new strategy is an improved alignment in the efforts of all these organisations to support the new strategic vision of a sustainable global lead industry that is recognised for the positive contribution it makes to society.

**Ensuring that legislation which affects the lead industry is proportionate, science-based and supports the sustainable management of lead remains at the heart of our work today and for the foreseeable future.**

In particular, 2014 will see a substantial effort to meet the challenge of setting scientifically robust Occupational Exposure Limits in several jurisdictions, including the expected launch of a major occupational health study.

As well as promoting the vital contribution that the lead industry makes to society through applications such as automotive batteries and renewable energy storage, there will be a greater emphasis on supporting continuous improvement in the sustainable performance of the lead industry worldwide. This is reflected in a broader range of communications activities as well as initiatives to generate the core data required to tell the modern story of lead. This will include work on sustainability performance indicators and a global blood lead reduction programme which demonstrates the commitment of our member companies to continuous improvement.

Of course a sustainable industry requires sustainable markets, and a key part of our strategy involves capitalising on the many opportunities that exist for the further development of markets for lead. One example is ALABC's three-year programme which will see the further development of lead-carbon batteries and other technologies for an increasing range of applications.

We believe this approach provides an effective and efficient basis for the lead industry to survive and thrive. That success requires the collective will and engagement of the industry worldwide, and we thank our member companies for their continued support as we put these measures in to place.

**Dr Andy Bush**  
Managing Director, ILA & ILA-Europe

Dr Andy Bush



# Regulatory Affairs

## ILA-Europe

Regulatory Affairs is a high priority for ILA and has the strategic aim of ensuring that legislation affecting the lead industry is both proportionate and supports the sustainable management of lead as a critical commodity for society. ILA-Europe is separately funded by ILA's European members and its regulatory team manages the Lead REACH Consortium which provides co-ordination and technical support to lead manufacturers, importers and downstream users for the EU Registration, Authorisation and Restriction of Chemicals (REACH) Regulation. ILA-Europe also works in partnership with other key associations, such as Eurometaux, which represents the EU non-ferrous metals industry and EUROBAT, representing the automotive, industrial and special batteries industry.



The **critical functions** include:



**Identifying and anticipating** legislative developments at an early stage

**Assessing and understanding** the potential impacts of legislation on the industry

**Communicating key information** to members

**Co-ordinating** the views and responses of the industry

**Engaging** with the regulatory community and political stakeholders

**Providing technical support** to members on regulatory compliance issues



### Advocating on REACH Authorisation

Many of the lead compounds under the management of the Lead REACH Consortium, including those critical to the manufacture of lead-based batteries, are included in the REACH Authorisation Candidate list – the first step towards a potential ban in the European Union (EU).

In partnership with EUROBAT, ILA-Europe met with key EU Commission staff and the European Chemicals Agency (ECHA) to advocate that existing and extensive lead-specific legislation should be taken into consideration in any decision on the inclusion of these lead compounds in the 2014 Priority List of substances for authorisation. A toolkit was also prepared for battery manufacturing companies with the key advocacy messages that need to be delivered to the Member States.

### Protecting the EU market for lead-based batteries

A working group of ILA-Europe, EUROBAT and the car manufacturing associations of Europe, Japan and South Korea completed draft documents on material resource availability, future battery trends and a life cycle analysis of lead-based batteries. A study on the battery closed loop will be completed in 2014. ILA-Europe has played a significant role in work to support a request to the European Commission for an extension in 2015 to the exemption of lead-based batteries from the ban on lead in vehicles contained in the EU End of Vehicle Life Directive (ELV).

### Supporting the lead industry's case on industrial emissions

In 2013, ILA-Europe continued to co-ordinate the collection of data that supports the lead industry's position on abatement techniques which should be considered as the best available to control releases to water and air for inclusion in the non-ferrous metals reference documents (BREFs). Under the EU Industrial Emissions Directive, the BREF will be used in future by EU Member States for the regulation of lead manufacturing facilities, including the issuing of environmental permits. ILA-Europe will represent the industry at the European Integrated Pollution Prevention and Control Bureau Technical Working Group charged with finalising the BREF in 2014.

### Defending the proposed EU classification of lead metal

ILA-Europe and ILZRO staff provided substantive arguments during the EU public consultation and technical meetings on the proposal that all forms of lead be classified as a proven human reproductive toxicant (Repro 1A). Although a robust defence was made to differentiate the hazard classification of lead metal in massive form from lead powder, ECHA's Risk Assessment Committee supported the proposal.



## Other 2013 highlights

**ECHA Committees delivered opinions that lead should be restricted in consumer articles** that can be mouthed by children if concentrations exceed 0.05% by weight. The case had the potential to set important precedents for other lead products so ILA-Europe, along with ILZRO, co-ordinated the industry response. This led to a reduction in the scope of the restriction and successful challenges to some inappropriate methodologies.

**Lead REACH Consortium registration dossiers were updated** with new information. This included data to support complex intermediate upgrades to Article 10 registrations, new occupational exposure data and significant new information on health and environmental hazards.

Member comments were collated and submitted to support the **European Commission fitness check report**, due in 2014. The report will assess the effectiveness, efficiency, coherence and relevance of a number of waste stream directives including the ELV and Batteries Directives.

ILA-Europe provided extensive data to the rapporteur of the EU Scientific Committee on Occupational Exposure Limits (SCOEL) which has been asked to conduct a **review of the EU OEL for lead**. ILA and ILZRO also provided technical support to WVM (the German non-ferrous metals association) as Germany also considers a revised OEL for lead.

ILA-Europe started preparations to defend a future proposal by Denmark for a **harmonised EU classification of all forms of lead metal as hazardous to the aquatic environment (category 1)**.

# Regulatory Affairs

## North America & International

In partnership with organisations such as the Association of Battery Recyclers (ABR) and Battery Council International (BCI) the ILA-funded International Lead Zinc Research Organization (ILZRO), based in North Carolina, provides technical support for ILA's North American members on regulatory issues. With the growth of lead markets in the Asia-Pacific region, our regulatory team is also bringing a greater focus to monitoring developments in health and safety legislation in this area. Meanwhile ILA continues to be the voice of the lead industry at the United Nations (UN) and in the development of chemicals policy such as the Globally Harmonised System of Classification and Labelling (GHS).



### NORTH AMERICA

#### Defending air quality standards for lead

ILZRO was among the bodies that provided comments in 2013 on the Integrated Science Assessment for Lead. This document is used by the US Environmental Protection Agency to support any changes to air quality standards for lead (NAAQS). As a result of the public consultation a decision was made that the NAAQS should remain unchanged at 0.15  $\mu\text{g}/\text{m}^3$ .

#### Research feeds into Canada's environmental guidelines

In 2013, Environment Canada completed a draft version of its revised Environmental Quality Guidelines (EQGs) for the protection of aquatic life from the effects of lead. The revision used much of the recently completed ILZRO-funded research which allows for a more accurate prediction of the real risks from lead. As a result, conventional hardness-based EQGs are likely to be replaced in 2014 with guidelines that better reflect new developments in science.

#### Support for the industry on workplace air lead legislation

The State of California is currently reviewing worker blood lead targets for lead and Permissible Exposure Limits (PELs). A cornerstone of this review is to establish a relationship between airborne lead and employee blood lead levels. To assist in this process, ILZRO supported the US industry by providing input into a scientific review of the bioavailability model used by California's Department of Public Health (CDPH) to estimate workplace air lead levels corresponding to blood lead levels for various health effects. This review will then support health-based air lead recommendations to California's Occupational Safety and Health Administration (OSHA).

### INTERNATIONAL

#### Practical guidance on shipping lead concentrates

ILA continues to chair a working group focused on the International Maritime Organisation (IMO) shipping rules for hazardous substances. The group helps member companies understand the practical consequences of shipping lead-containing ores and concentrates around the world. ILA also provides lead-specific input into wider commodity advocacy that is being conducted by the International Council on Mining and Metals (ICMM).

#### Addressing lithium battery safety concerns in lead recycling

In 2013, ILA worked with ABR and the battery industry to set up an initiative to address the increasing safety risks experienced by lead recyclers caused by lithium-ion battery contaminated feedstock. This included planning for an ILA global survey of incidents and mitigating measures in 2014.

#### Input to UN on future environmental classification rules for metals

To support the appropriate environmental classification of lead metal under the UN's GHS classification system, ILA together with other metals industries, submitted detailed guidance on methodologies for the assessment of chronic aquatic effects of metals to the GHS Technical Correspondence Group. This addresses omissions in the current GHS guidance and aims to cement metal-specific concepts such as the Unit World Model and transformation/dissolution testing into the global regulatory framework.

### Other 2013 highlights

ILA provided **technical support to BCI on lead-acid battery labelling** from the experience gained in the GHS classification and labelling initiatives in the EU. This helped support updates to the BCI label manual, lead-acid battery safety data sheet template and its member training exercises ahead of US OSHA's implementation of labelling and safety data sheet elements of the UN GHS in 2015.

In the US, ILZRO gave scientific support to ILA member The Doe Run Company as it petitioned for **a revision to the existing water quality criteria for lead in the state of Missouri**. The case made extensive use of freshwater toxicity data generated under ILZRO's biotic ligand model programme (a method to predict more accurately the toxicity of lead to freshwater species under different environmental conditions) and will help in the development of robust discharge permits and other regulations for lead in the state.



# Science

Through the International Lead Zinc Research Organization (ILZRO), ILA aims to support the use of sound science in managing the health and environmental risks of lead throughout its life cycle. Much of ILZRO's work is guided by the demands of regulators for an improved understanding of the complex science related to the potential impacts of lead. This knowledge is essential in the development of legislation that is in proportion to any risks identified.



The **critical functions** include:



**Monitoring and anticipating** scientific and regulatory trends

**Assessing and communicating** emerging scientific issues to the membership

**Identifying and implementing** the most effective science-based strategies to contend with emerging issues, including the sponsorship of research

**Effective dissemination of research results** to deliver maximum benefit

**Expert representation for the industry** to ensure the balanced and objective scientific evaluation of the impact of lead on human health and the environment

**Providing technical support** to member companies on regulatory compliance and the management of lead health, safety and environmental risks

**Serving as a global resource** for technical information on lead

## Environmental research and its impact on the regulatory process

ILZRO successfully completed several long-term projects in 2013 to address gaps in the regulatory understanding of environmental risks. ILZRO research programmes have added significant new data and risk assessment tools for use in freshwater, marine and terrestrial ecosystems. These include the development of bioavailability correction models for site-specific predictions of lead toxicity in freshwater lakes and rivers – bioavailability is a measure of how much of the metal in a body of water is available to cause a toxic effect. The bioavailability of dietary and marine lead has also been characterised, and factors that impact lead toxicity in soil have been quantified.

This research has been used for a number of regulatory purposes including:

- Derivation of lead environmental quality standards for the US, Canada, and Europe
- Developing lead bioavailability tools for regulators and industry
- Determining the hazard classification of lead and lead substances under international and regional regulatory frameworks (UN GHS, EU CLP, and IMO).

## ILZRO occupational health study moves forward

A Medical Surveillance Study, which is designed to better determine the relationships between worker lead exposures and the potential effects on renal, cardiovascular, and neurological functions, made great strides in 2013. A study investigator and host sites were identified and study protocols developed. This study is anticipated to begin in 2014 and will be used to support the anticipated revisions of occupational exposure standards for lead worldwide.

## Dr Craig Boreiko retirement

Dr Craig Boreiko ILZRO Scientific Programs Director retired after 25 years of service as the global lead industry's leading human health expert. Craig will continue to support ILZRO's activities in a consulting role. Dr Jessica Ryman, ILZRO Manager of Human Health Research will, over time, assume full responsibility for ILZRO's human health program, while Dr Jasim Chowdhury, ILZRO Environment Manager, will continue to be the point of contact on environmental issues.



## Other 2013 highlights

ILZRO participated in the **development of a metal industry approach to life cycle assessment methodology**. This will give the sector a 'common voice' when engaging with regulators worldwide and will allow the industry to accurately portray its environmental impacts.

**An ILZRO-sponsored reanalysis of key data on the low-level health effects of lead on IQ in children** was completed in 2013. The study provided additional useful information on the levels of reliability of the existing data at very low exposure levels. This will prove important for the industry as the debate on the effects of lead on children's IQ develops further.

Dr Craig Boreiko



# Sustainability

ILA and its member companies are working towards a sustainable future for the global industry by effectively managing the issues associated with the safe production, handling and use of lead. Under the banner of the Lead Action 21 programme (LA21) ILA strives to enhance the lead industry's reputation for responsibility and sustainability.



The **critical functions** include:

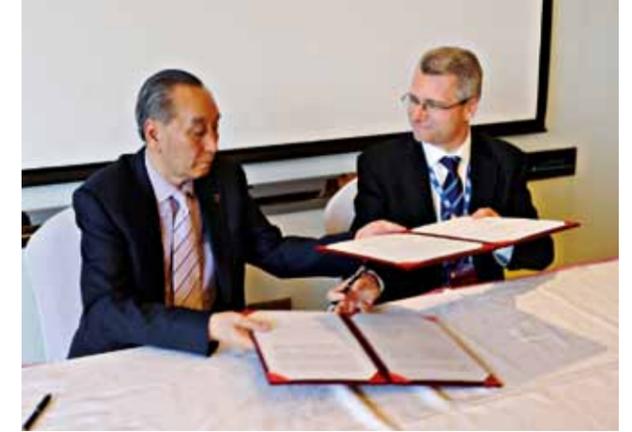


**Sharing and promoting best practice** on the safe production, use and recycling of lead to ensure the highest levels of protection for human health and the environment

**Providing practical help and guidance** to countries in the developing world and those in transition through the work of the International Lead Management Center (ILMC)

**Collecting and publishing data** to demonstrate the sustainability of lead and the lead industry

**Communicating** with ILA members and external stakeholders on the sustainability success story of lead



## Other 2013 highlights

An **International Occupational Exposure Workshop** was held in Prague, in June 2013 (see Events section, page 15).

The **Working Safely with Lead series of Guidance Notes** has now been published and is freely available on the ILA website. These documents offer guidance to managers and workers in developing countries and those in transition on risk management and responsible care, and include 10 Golden Rules for the protection of lead industry workers.

**Plans for a collection and service centre in Dakar, Senegal**, for the safe handling of used lead-acid batteries have been approved. ILMC has worked alongside the Senegal Government to advise on this project for a number of years.

**Brian Wilson** ILMC Program Manager was presented with the International Lead Award at the 15th Asian Battery Conference in Singapore in recognition of his contribution to environmental stewardship through his work with the ILMC.

Brian Wilson



## Promoting good practice in India and China

ILMC completed successful training missions to China and India where it worked alongside the domestic lead industry to promote good environmental and occupational health performance. In both countries, ILMC Program Manager Brian Wilson demonstrated the use and application of its Benchmarking Assessment Tool to Environmental, Health & Safety inspectors and industry.

The tool compares, on a qualitative basis, the recovery and recycling procedures and processes in a plant with the industry's well-established good practices. It identifies key areas of used lead-acid battery recovery and recycling operations that should be improved to minimise environmental emissions and occupational exposure to lead.

Projects in India were conducted in partnership with State Pollution Control Boards, the not-for-profit Blacksmith Institute and the India Lead Zinc Development Association. In China ILMC worked with the China Non-Ferrous Metals Industry Association (CNIA) and Basel Convention Regional Centre for Asia and the Pacific.

## Lead industry performance indicators

Significant steps have been made to demonstrate the continuous improvement in environmental, health and safety measures employed by ILA members with the development of global lead industry performance indicators. In 2013, draft indicators underwent a successful trial with the membership and a roll out of the full project is planned in 2014.

This initiative is expected to generate key data in support of ILA's messages on sustainability and allow companies to benchmark their performance against the sector.

## Chinese agreement

A Memorandum of Understanding (MOU) was signed in Beijing between ILA and CNIA, which represents the country's lead industry (see picture above). The MOU aims to support and improve the health of workers, communities and the environment in China and the rest of the world.

# Product Development

Lead-based batteries are the dominant market for lead (around 85-90% of all lead use) and ILA is active in supporting the development of lead-based battery technologies through its management role in the Advanced Lead Acid Battery Consortium (ALABC). While the development of specific products is normally undertaken by individual battery manufacturers, at the pre-competitive stage there is an important role for co-operative work to overcome technical limitations and establish commonly-agreed foundations for the industry. ALABC manages the research, development and promotion of lead-based batteries for sustainable markets such as hybrid electric vehicles (HEV), start-stop automotive systems and grid-scale energy storage applications.



The **critical functions** include:



**Commissioning fundamental and applied research** to improve the performance of lead-based batteries

**Showcasing the capabilities** of lead-based batteries in new applications

**Raising awareness** with end-users of the opportunities presented by lead-based batteries

**Identifying** new market opportunities

**Addressing the threats** to existing markets from competing technologies



ALABC™

## Demonstrating the benefits of lead-carbon batteries

For more than a decade ALABC and its members have been researching the effect of adding carbon to the negative plate of the battery. Carbon's life-extending properties and enhancement of the battery's dynamic charge acceptance have been demonstrated in a new generation of energy storage devices (lead-carbon batteries) that have started to emerge in the industrial marketplace. These batteries will eventually factor into several automotive applications from micro- and mild-HEV power to 48-volt systems.

In 2013, in a project co-funded by the US Department of Energy (DOE) and managed by Ecotality North America, ALABC demonstrated the durability of a market-ready lead-carbon design, the UltraBattery.

A Honda Civic HEV retrofitted with lead-carbon UltraBattery modules, provided by ILA Member East Penn Manufacturing, recorded more than 130,000 miles of courier duty in Phoenix, Arizona, without any significant loss in battery capacity. In the process, the vehicle also achieved comparable miles-per-gallon performance with that of the same model powered by nickel-metal hydride batteries, but at a significantly lower cost. Similar results are being demonstrated in energy storage projects around the globe conducted by East Penn Manufacturing subsidiary Ecocult.

## Significant developments for the automotive market

Building on the success of the 12-volt LC SuperHybrid vehicle, the Consortium and its partners have developed a 48-volt version of the micro/mild-hybrid to offer an anticipated 25% enhanced fuel economy and reduced carbon emissions comparable to most mild and full hybrid electric vehicles, but at a fraction of the cost and without any loss of driving performance.

The success of the LC SuperHybrid and other ALABC-related demonstration projects has drawn the attention of several major automakers. Ford Motor Company is already participating with ALABC and Ricardo in the Advanced Diesel Electric Powertrain project (ADEPT). The project will apply the low-voltage concept of 'intelligent electrification' for the first time in a diesel car, as well as develop several next generation technologies in a 48V architecture.

## Projects win recognition

The LC SuperHybrid project (12V and 48V) and ADEPT projects have already garnered awards from several organisations including the UK's Low Carbon Vehicle Partnership (Low Carbon Champion), Environmental Data Services (Green Economy Awards), and the Institution of Mechanical Engineers (Prize for the Environment), and helped ALABC earn the Green Hero distinction from The Green Car Website (UK).



## Other 2013 highlights

**Both the 12V and 48V versions of the LC SuperHybrid have been on display at several automotive events in Europe** including the Geneva Motor Show, and more exhibition opportunities are planned for 2014.

In 2013, as well as its ongoing research programme, ALABC received 14 proposals for further studies and registered its **highest membership of 75 companies from 20 different countries**. The programme operates within an \$11 million budget over three years with co-funding by the industry, the US DOE and the UK Technology Strategy Board.

**ALABC member BAE has been working with Amer-Sil and France's National Solar Energy Institute (CEA-INES)** on a project that has demonstrated a valve-regulated tubular lead-based battery capable of achieving 4,400 cycles in photovoltaic (solar power) applications at 40°C, which is equivalent to 16 years of service life.

Long-time ALABC member Narada Power Source has initiated **the Consortium's first Chinese project** aimed at developing lead-carbon batteries to increase the efficiency of port cranes. If successful, this project could significantly expand market opportunities for this application as well as for electric lifts/elevators.



UltraBattery

# Events & Communications

ILA's events and communications work supports the Association in its aim to be the global information source for lead, to establish ILA as the foremost thought leader in the lead industry, and to disseminate key messages on lead to stakeholders worldwide. Communications support is divided between internal communication to member companies and external communication to inform and influence those stakeholders who can affect the competitiveness and success of the lead industry.



The **critical functions** include:



**Monitoring media reporting** on lead-related issues and communicate responses to relevant stakeholders on the positive contribution that the lead industry makes to society.

**Providing a forum for the lead industry** to exchange information and best practice

**Providing timely communications** to ILA members on developments affecting the lead industry and the work of the association

**Developing and communicating** consensus public positions on issues critical to the lead industry

**Acting as a global source of information** on lead

**Assisting in the growth of ILA's membership**



## Other 2013 highlights

As part of the programme to promote messages and information on ILA and the benefits of lead to society, publications in 2013 included press releases, newsletters and case studies, plus regular updates to the ILA website and Twitter (@ILA\_lead).

Preparations began for the **14th European Lead Battery Conference**, the leading event of its kind, which will be held in Edinburgh, Scotland, from 9-12 September 2014.

ILA participated with **Eurometaux** in the development of a new leaflet, *Metals: Fundamental to Creating Sustainable Societies*, to promote the role of lead and other non-ferrous metals in sustainable products.

## 18th International Lead Conference

**The Future of Lead:  
Meeting the Challenges and Seizing the Opportunities**  
Prague, 20 June

The success of Pb2013 confirmed it as the leading global forum for the lead industry and its users to discuss key issues of the day. A record number of delegates heard about the lead industry's commitment to a sustainable future and the continuous improvement made by companies to reduce worker exposures and minimise environmental emissions.

As well as understanding global market trends the delegates heard how industry is meeting the regulatory challenges by adopting a culture of continuous improvement in environment, health and safety controls. Co-operation between International Lead Zinc Organization (ILMZ) and organisations such as the Blacksmith Institute, who presented on legacy pollution challenges in developing countries, also demonstrated the lead industry's recognition of its wider responsibilities.

## Occupational Exposure Workshop

**Prague, 19 June**

The workshop, the first of its kind organised by the ILA, provided companies with the opportunity to exchange information on the latest developments in global regulations and science as well as industry initiatives to manage worker exposure to lead.

The international audience heard speakers from companies such as East Penn Manufacturing, Exide Technologies and RSR Corporation, who gave examples of how developments in health and safety practices had led to significant reductions in employee blood lead levels. Examples of successful company safety practices and improvements to plant design and engineering controls were also illustrated.

## Position statements and media responses developed

To ensure the industry's position was clearly understood on key topics, position statements on issues such as the restriction of lead in consumer articles and the US Centers for Disease Control's Reference Value for blood lead levels in children were made available on the ILA website.

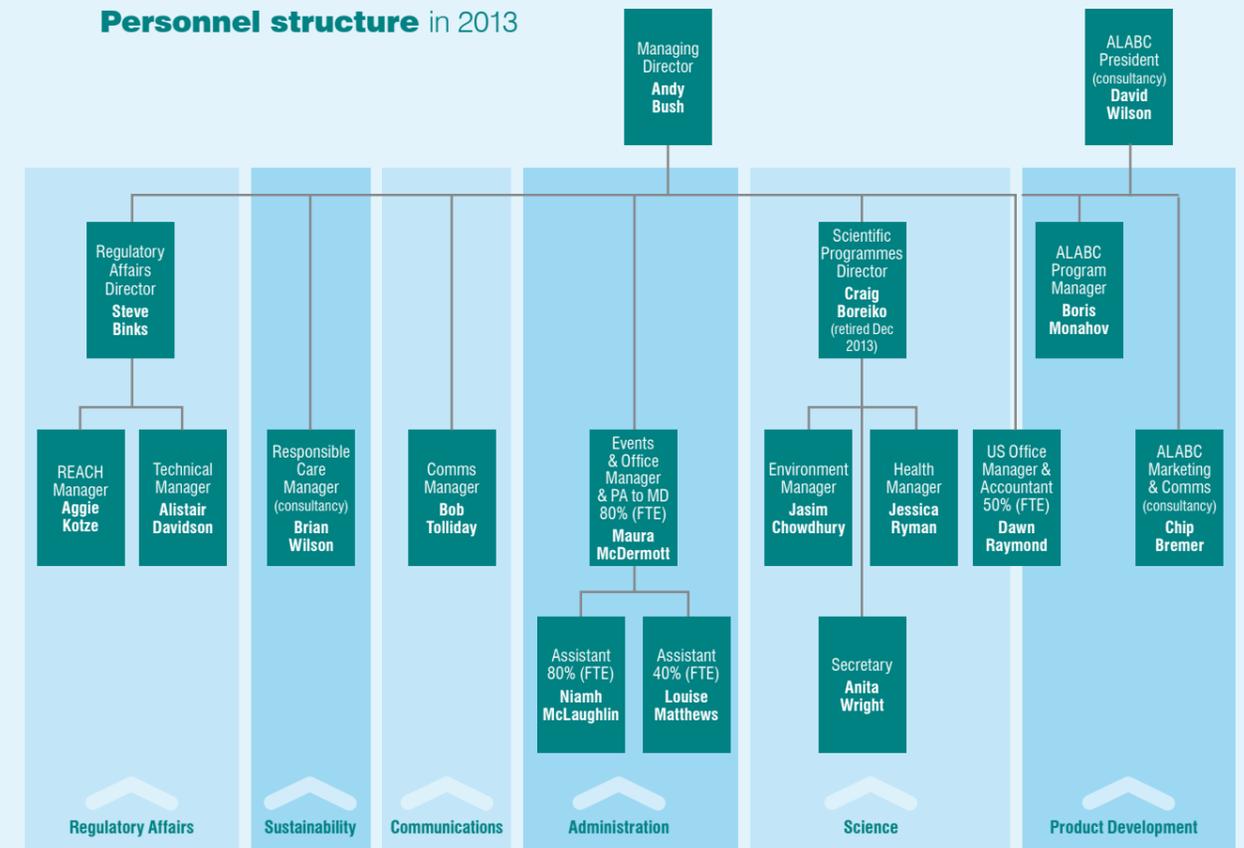


# Governance

The Executive Committees of ILA and ILA-Europe both meet twice a year to set and review the Associations' strategies and finances. Other groups meet regularly to guide individual work programmes.



## Personnel structure in 2013



FTE = Full-Time Equivalent

### ILA Executive Committee

(Serving members in 2013)

#### Chair:

Martin Boddy Eco-Bat SpA  
 Aaron W Miller The Doe Run Company  
 (from Dec 2013)

#### Members:

Daniel Breidegam East Penn Manufacturing Co Inc  
 Bob Finn RSR Corporation  
 Martin Fischer Berzelius Metall GmbH  
 Daniel Leach Gopher Resources  
 Nils Linneberg BHP Billiton  
 Rob Scott Teck Resources Ltd  
 Andreas Sieverdingbeck Recylex Group  
 Florian von Steinkeller Britannia Refined Metals

### ILA-Europe Executive Committee

(Serving members in 2013)

#### Chair:

Martin Boddy Eco-Bat SpA  
 Florian von Steinkeller Britannia Refined Metals  
 (from Dec 2013)

#### Members:

Stefan Buch Berzelius Metall GmbH  
 Peter Carlsson Boliden Bergsöe AB  
 Geert Krekel Campine Recycling  
 Andy Hampson H J Enthoven & Sons  
 Paul McKeon STCM-APSM  
 Luciano Morelli Eco-Bat Spa  
 Charlie Sherling Envirowales  
 Andreas Sieverdingbeck Recylex Group



### ILA Responsible Care Steering Group

This Committee has a global remit to oversee the implementation of ILA's Lead Action 21 Charter and the communications strategies that promote LA21 (see the Sustainability section on p.12) to external stakeholders. It is a forum to receive feedback on the steps being taken by the ILA membership to put sustainability and responsible care at the heart of their business and to share industry best practice.

### ILA-Europe Environment and Health Committee

The Committee has the remit to anticipate and follow European environment, health and safety (EH&S) regulations. It sets priorities to ensure that member companies' interests are considered when faced with new regulatory demands. The Committee also reviews EH&S research proposals submitted by ILZRO to ensure that ILA-sponsored scientific research addresses current and future industry challenges in Europe.

### European Lead Sheet Industry Association (ELSIA)

As part of its strategy to provide expertise to the lead industry, ILA-Europe provides the secretariat for ELSIA.

In 2013, a number of important projects began to promote lead sheet as a long-term, low maintenance and sustainable construction material.

ELSIA member companies committed to a product stewardship Code of Practice which sets important benchmarks for the industry, including the adoption of a blood lead reduction target for employees.

Work to develop life cycle and socio-economic assessments was completed and this will allow the industry to improve its communication on the sustainability credentials of lead sheet to customers and regulators.

The ELSIA website was also revised to reflect the benefits of lead sheet and position ELSIA as the trusted voice of the lead sheet industry.



# Members

Full ILA membership is available to companies involved in the mining, smelting, refining and recycling of lead.

Members pay an annual subscription based on the quantity of lead they produce.

All European-based member companies support additional regional activities through membership of ILA-Europe.

Lead suppliers and lead users may also join ILA as Associate Members.

## ILA Members in 2013

APSM	Enirgi Group Corporation	MeCa
Aurubis	Envirowales	Metallo-Chimique N.V.
Berzelius Metall	Exide Technologies	MPI Recyklaza
BHP Minerals	Fry's Metals	Muldenhütten Recycling & Umwelttechnik
BMG Metall & Recycling	Glencore Xstrata Zinc Canada	Nyrstar
Boliden AB	Gopher Resources	Recylex
Britannia Refined Metals	Hakurnas Lead Works Ltd	RSR Corporation
BSB Recycling	H J Enthoven & Sons	STCM
Campine Recycling	KCM SA	Teck
The Doe Run Company	Kovohute Příbram	
East Penn Manufacturing	Lundin Mining	
Eco-Bat SpA	MACH Trade	

## Associate Members

5N Plus  
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 European Lead Stabilisers Association  
 European Lead Oxide Association  
 H Folke Sandelin  
 Jamestown Metal Resources  
 Lead Sheet Association

# Abbreviations

<b>ABR</b>	Association of Battery Recyclers
<b>ADEPT</b>	Advanced Diesel Electric Powertrain project
<b>ALABC</b>	Advanced Lead Acid Battery Consortium
<b>BCI</b>	Battery Council International
<b>BREF</b>	Best Available Techniques Reference Document
<b>CLP</b>	Classification, Labelling and Packaging
<b>CNIA</b>	China Non-Ferrous Metals Industry Association
<b>DOE</b>	Department of Energy
<b>ECHA</b>	European Chemicals Agency
<b>ELV</b>	End of Life Vehicles
<b>EU</b>	European Union
<b>Eurometaux</b>	European Association of Metals
<b>EUROBAT</b>	Association of European Automotive and Industrial Battery Manufacturers
<b>GHS</b>	Globally Harmonised System (of classification)
<b>HEV</b>	Hybrid Electric Vehicle
<b>ILMC</b>	International Lead Management Center
<b>ILZRO</b>	International Lead Zinc Research Organization
<b>IMO</b>	International Maritime Organisation
<b>LA21</b>	Lead Action 21
<b>MOU</b>	Memorandum of Understanding
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>OEL</b>	Occupational Exposure Limit
<b>OSHA</b>	Occupational Safety and Health Administration
<b>Pb2013</b>	18th International Lead Conference
<b>REACH</b>	Registration, Authorisation and Restriction of Chemicals Regulation
<b>UN</b>	United Nations

## Photos courtesy of:

Berzelius, Eco-Bat SpA, EUROBAT, Glencore Xstrata  
 Lead Sheet Association, The Doe Run Company



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