



SIXTH ALUMINIUM TASK FORCE MEETING

22 & 24 MARCH 2010, VANCOUVER, CANADA

MEETING RECORD

Agenda Item 1 – Welcome and Introductions

The Chair of the Aluminium Task Force, Ms Sue Kruse, welcomed participants to the meeting. Ms Kruse advised participants that Mr Stephen Woolcott from the Aluminium Task Force Secretariat had recently changed jobs and was no longer involved in the Task Force.

Ms Kruse congratulated the Canadian APP Secretariat and thanked them for hosting the Task Force meeting. Ms Kruse noted that the practice of the Task Force of linking meetings to other events, such as with three other Task Forces and GLOBE 2010, had proved a successful approach in reaching out to the broader aluminium sector.

Meeting participants introduced themselves and a list of participants is at the end of this record.

Agenda Item 1.2 – Aluminium Task Force Meeting Report – Sanya, 4 December 2008

The Task Force Secretariat reported on the fifth Task Force meeting held in Sanya, China on 4 December 2008. The report highlighted project updates by proponents, the endorsement of a new project and discussion on the future for the Task Force including possible future activities and cross Task Force activities as invited by the Policy and Implementation Committee (PIC). The draft Meeting Record was approved by members and the minutes have been posted on the official APP website.

Agenda Item 1.3 – PIC Meeting Debrief – Gold Coast, Australia, 19–20 May 2009 and Beijing, China, 26 October 2009

The APP Administrative Support Group (ASG) provided the Task Force with a debrief on the two PIC meetings and the Ministerial meeting held since the last ATF meeting. The Australian PIC meeting (May 2009) covered the composition of Task Forces, priorities and the possibility of combining Task Forces, cross Task Force activities and funding mechanisms. Consequently, Canada prepared and distributed a ‘non-paper’¹ on financing which will be discussed at the Joint Task Force meeting being held on 23 March 2010. Also at the May 2009 PIC meeting, Australia proposed that a review be undertaken of all APP Flagship projects. The results of the review were provided at the October 2009 PIC and Ministerial meetings. It was reported in the Flagship Review that the APP was performing well, but could do more. It was also reported that the APP needs to maintain industry involvement through the public-private partnership and look at how to go forward. The PIC Secretariat sought feedback and comments from each Task Force on the Flagship Review.

¹ In international relations, a non-paper, or aide-mémoire, is a proposed agreement or negotiating text circulated informally among delegations for discussion without committing the originating delegation's country to the contents.

At the eighth PIC meeting (October 2009), the PIC endorsed the 175th project and Japan proposed a new Task Force – Road Transport. A communiqué from Ministers following their third Ministerial meeting (October 2009) in China encouraged: increased cooperation within the partnership; the APP's interaction with other initiatives; and enhanced cooperation on finance, technology development and transfer, exchange of information on policy, experience and best practices, capacity building, and public-private partnerships.

Agenda Item 1.4 – Statement by each member country

Each member country provided a brief statement and all thanked Environment Canada and the Task Force Secretariat for organising the meeting. Key points from each statement are outlined below:

Canada: Ms Terri Cundy indicated that the Government of Canada was providing funding of C\$475,000 for capacity building including the preparation of a training manual and the donation of equipment to reduce greenhouse gas emissions in China. Canada held a second round of funding of C\$18 million of which C\$12 million was allocated for 28 projects in addition to a project on the recovery of gas from landfill. Ms Cundy noted that the Canadian Government considers that engagement is crucial and would like to encourage collaborative projects within the ATF. Mr Jean Simard, President of the Aluminium Association of Canada reported that the AAC had developed a five year strategic plan which covers six key priorities including the training of engineers and architects in the use of aluminium such as for roofing for arenas and large construction, transport and rolling stock. Mr Simard also informed participants that a new web site has been established to allow dialogue and information on how aluminium can play a role in a sustainable world.

China: Mr Kang indicated that as a result of the global economic crisis in 2009, China had undergone an economic restructure to assist it in its recovery for future years including for emissions reduction, new and renewable energy development, and smarter power grids. A stimulus plan for the aluminium industry to reinvigorate technology upgrading was implemented which includes mergers in key companies which resulted in a restriction of capacity and the closure of small uneconomic smelters. China's aim for 2020 is to have a total 40-45% reduction in greenhouse gas (GHG) emissions from 2005. Mr Kang also explained that this year it was important to deal with achieving its 5 year plan (in its last year). This includes an expanded application of aluminium whilst reducing GHG through more recycling and optimisation of new technologies. Mr Kang thanked everyone for their cooperation under the APP.

India: Dr Jyoti Mukhopadhyay stated that Ministry of Mines (MoM), Government of India, established a Centre for Techno-Economic Mineral Policy Options (C-TEMPO) for non-ferrous metals including aluminium. The Centre will address the technology and management gaps for the non-ferrous and ferrous minerals, undertake international research and suggest policy level intervention to guide and stimulate the growth of the mineral sector including aluminium. The MoM had taken several steps, such as: (A) Jawaharlal Nehru Aluminium Research Development & Design Centre (JNARDDC) was asked to prepare a roadmap for aluminium research activities which was recently submitted; (B) similarly, a Road Map for the Aluminium industry shall be ready by next financial year by DST, Government of India; and (C) the Aluminium Association of India has presented a draft Aluminium Mission Plan: 2010-20 to the Ministry. National policy on aluminium sector will take a concrete shape on the basis of the above initiatives. In order to reduce the power consumption, the current import duty on import of scrap Aluminium continues to be zero. NALCO signed a MoU with the Government of Orissa for setting up an Aluminium Park.

Japan: Mr Kaoru Endo, attending on behalf of Mr Mitsuru Saito of METI and Mr Kunio Ishikawa from the Japan Aluminium Association, advised the meeting that the Japanese Prime Minister has urged industry to reduce emissions by 25% by 2020. He indicated that the demand for aluminium in Japan was increasing, particularly in the transport sector which rose to 7.4 million tonne in 2009. Mr Endo indicated that Japan is aiming for a low carbon society in the future.

USA: Ms Sally Rand informed the Task Force that the new US administration is committed to protecting the climate and is moving forward on short and long-term strategies. The focus will be on global, multinational and multigenerational. Ms Rand advised members that the US EPA had today signed the new regulation on the Mandatory Reporting of Greenhouse Gases Rule. Mr Jinlong (Marshall) Wang, representing the US Aluminum Association, indicated that the US aluminium industry's efforts to reduce PFC emissions had been successful and that levels were now negligible. Mr Wang indicated that the complete elimination of PF emissions from aluminium production was possible, and that industry would continue working towards this goal. The Aluminum Association is working on a lifetime sustainability program with the IAI, EU and Canada on aluminium production, clearer understanding of issues and future improvements. Mr Wang informed the Task Force that the Aluminium Association supports the recycling legislation component, especially considering that globally one tonne of aluminium leakage occurs annually which equates to 9 tonnes of CO2 equivalent. Most of this leakage ends up in landfill and therefore proper mechanisms need to be in place to support end of life. Mr Wang also noted that the Aluminum Association would continue to support international mechanisms such as the APP (including work with CNIA) and any future global collaborative processes.

Australia: Ms Kruse informed the Task Force that the Australian Government had introduced a climate change framework including the \$4.5 billion Clean Energy Initiative and the release of 10 commercial acreage sites offshore specifically for the assessment of their greenhouse gas storage potential. Ms Kruse also indicated that construction would be commencing soon on the Gorgon project with first gas expected in 2015. Ms Kruse informed the Task Force that the Global Carbon Capture and Storage Institute would be holding a meeting in Pittsburgh in April 2010. Mr Ison advised the Task Force that the Australian Aluminium Council was working with the Australian Government to reduce costs of the Renewable Energy Target which has yet to pass through Parliament to ensure competitiveness is maintained. A discussion paper is expected in the next few weeks.

International Aluminium Institute: Mr Chris Bayliss noted that the IAI works closely with associations around the world collecting data, including value chain information as well as quantifying and promoting net positive environmental impacts. The IAI utilises its relationships with municipalities to encourage use of aluminium in, for example, transport, and buildings. Mr Bayliss advised the Task Force that the IAI would be seeking feedback on reporting.

Agenda Item 2.0 –Bauxite Residue Workshop Report

A Bauxite Residue Workshop was held in Nagpur, India on 3–4 December 2009 hosted by India's Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC) in collaboration with Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO). Dr Raj Rajakumar provided a brief overview of the workshop. Over 30 people from industry, academia and industry associations participated in the workshop from India, Australia and the IAI. Dr Rajakumar reported that the key actions that arose from the workshop were collaboration with India on a major trial of bricks and blocks, agricultural reuse and red sand. A steering group had been established with initial priorities being bauxite residue and disposal, improving research using the Bauxite Residue and Disposal Database (BRaDD) and development of a form to allow industry to provide information to be

incorporated into BRaDD. It was also agreed at the workshop to further strengthen links between CSIRO, JNARDDC and other key organisations to reduce duplication of research.

Dr Mukhopadhyay updated the Task Force on the actions that had occurred since the workshop. These included the launch of BRaDD online, testing of stabilised blocks for buildings, and completion of soil amendment studies. The soil amendment studies showed that further work is required in sandy soil. Dr Mukhopadhyay indicated that work would continue on these issues and possible applications of the research results for 3–4 years.

Agenda Item 3.1 – Management of Bauxite Residue (Red Mud) (ATF-06-03)

Dr Raj Rajakumar advised the Task Force that the work being undertaken by CSIRO was broadly on track with talks with industry having commenced, literature reviews completed and studies being undertaken by experts including into using bauxite residue to capture CO₂ and in use as feedstock in cement making. Dr Rajakumar indicated that the literature reviews had helped inform as to what may and may not work. Task Force participants were informed that the next step for CSIRO was to continue to populate BRaDD, identify trial partners, and identify the mechanisms to take the work forward.

Dr Mukhopadhyay also presented to the Task Force on India's efforts on this project which the Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC) was leading in collaboration with Nalco. Dr Mukhopadhyay reiterated that by the end of 2010, red mud generation in India is expected to be around 14mt. As part of the trials, Nalco is making 10,000 bricks and approximately 300 blocks for large scale studies before going into production. Task Force participants were informed that studies into soil amendment were showing promise.

The Task Force:

- noted the significant progress being made in implementing this project;
- agreed that the CNIA would liaise with Dr Mukhopadhyay in relation to participation in the project; and
- agreed that the JNARDDC and CSIRO should continue to coordinate their efforts and collaborate where appropriate.

Agenda Item 3.2 – High Silica Bauxite Processing (ATF-06-04)

Dr Rajakumar provided an outline of the progress achieved on this project including commencement of engagement with potential partners and a roadshow to expand the project to include other companies. Dr Rajakumar indicated that as the processing of high silica bauxites was not standard, techno economic strategies for reducing the cost of energy needed to be developed. The Task Force was informed that four options appeared to be viable and that the Sanya meeting helped to finalise the list of options.

The Task Force discussed the need for greater collaboration and Mr Kang Yi notified Dr Rajakumar and Dr Mukhopadhyay that invitations would be sent to join an international forum in China later in 2010 as there were areas where the three countries could work together. Mr Kang introduced Mr Yu Dehui of China Power Investment Corporation who is very active in the high silica bauxite area and can contribute to collaboration.

The Task Force:

- noted the potential collaborative efforts between Australia, India and China.

Agenda Item 3.3 – Aluminium Recycling (ATF-06-06)

The Task Force Chair reported that the data component would be covered under the Measuring and Benchmarking project and invited participants to share their experiences on recycling. Mr Wang, the US Aluminum Association, raised the need to link recycling to carbon leakage for example the energy savings lost through the lack of recycling. It was identified that this would need to be addressed on a region by region basis and could remain a discussion topic at future meetings.

The Task Force agreed that:

- Reports sharing experiences on recycling would be included on Task Force meeting agendas as appropriate.

Agenda Item 3.4 – Linkages to Technology Providers (ATF-06-07)

The Task Force Secretariat advised that the Technology Providers Directory website had been operating since August 2007 and 82 companies from five countries — Australia, Canada, China, India and the US — had registered since then. In addition, the reporting functionality requested by the Task Force had been added to the website in May 2008. In the period May 2008 to March 2010, the website had been accessed on 18,448 occasions and had been searched 822 times. However, after the initial high interest, the number of companies registering and the number of searches undertaken have fallen considerably from a high of 195 searches in August 2008 to 10 in February 2010.

The Secretariat also reported that there had recently been several technical issues regarding the directory. These issues included the error message when opening that the Security Certificate had expired and recommending not to proceed; the postal code field does not allow for a combination of numbers and letters such as Canada uses; and some of the links to organisation's web sites do not work. The Task Force was informed that the site is being migrated to the Department of Resources, Energy and Tourism's new infrastructure which would allow for the remaining issues to be addressed.

The Task Force:

- noted the project report and decline in directory activity; and
- noted that the technical issues were being addressed.

Agenda Item 3.5 – Aluminium Measuring and Benchmarking (ATF-06-01)

Mr Chris Bayliss, IAI, informed the Task Force that the first report on the APP data set had been released in September 2009 and was now available on the ATF web site. He reported that the IAI was still seeking feedback from participants on the first report. Mr Bayliss indicated that collection of 2009 data was almost complete and the analysis report would be available in the second half of 2010. The metrics for the 2010 data collection are well defined and security systems are in place to ensure that data is not identifiable. Mr Bayliss presented to the Task Force the key outcomes from the 2009 report. The CNIA was thanked for the increase in reporting by Chinese facilities which was attributed directly to the APP participation. However, further reporting is to be encouraged across all APP partner countries for a credible, rigorous and representative database that could also be used for modelling of

the industry such as for recycling and to look at the full lifecycle (production, use and end of life/recycling).

The Task Force:

- agreed that it was important for the credibility and usefulness of the dataset that there be comprehensive participation by facilities in APP member countries and encouraged members to promote the positive nature of the project both for external communication and for driving improvement within the aluminium sector; and
- agreed to discuss the validity of the indices during the workshop with China and India to be consulted out-of-session.

Agenda Item 3.6 – Management of PFC Emissions (ATF-06-02)

Three presentations from participating parties in this project were given to the Task Force covering the main components of the project – demonstration activities, Study Tours; and PFC data measurements for national and IAI inventories.

Ms Sally Rand provided the Task Force with an overview of the project and reinforced the mutual benefit for both industry and government. Ms Rand informed the Task Force that the priorities for the project were training, data collection and reporting, and baseline measurements. The project now includes Canada as a participating country and all participating countries worked together to develop a training manual.

Mr Pierre Chaput, Aluminium Association of Canada, informed the Task Force that some of the training of Chinese plant managers/instructors had not occurred due to a delay in the shipment of equipment. Mr Chaput also informed the Task Force that the training manual had been translated into Chinese Mandarin.

Mr Michael Ison informed the Task Force that the next Study Tour to Australia by pot room managers was expected to be run before June 2010 in Melbourne at an Alcoa smelter. Mr Ison commented that as a study tour planned for 2009 did not occur due to the global financial crisis, a Management Guide had been developed as supplementary material. An overview of the contents of the Guide was provided and Mr Ison informed members that it was now available on the APP web site in both English and Chinese.

The Task Force noted the substantial progress being made on this project.

Agenda Item 3.7 – PFC Computer Automation (ATF-09-08)

Mr Michel Gilbert from the University of Auckland highlighted that the variations in the definition of an anode effect across smelters could be problematical. Mr Gilbert informed the Task Force participants that testing was ongoing at the Light Metals Research Centre and monitoring of individual pots would be undertaken to determine the source of the background PFC emissions. The next stage for the project was for a single pot trial with a demonstration by the end of 2010. Ms Rand commented that this was an ambitious project which required a high level of commitment to bring together the international experts and hopes that it can be progressed to other smelters.

Dr Liang Xuemin, Zhongfu Smelter, reported on the collaborative work undertaken for the project including beam movement tests on how this impacted the occurrence of anode effects; and the anode

effect termination (AET) programme operation and reliability testing. The Task Force was informed that the AET team were expected to complete the testing and conduct a single pot trial in April 2010. It was noted that a group pot trial on reliability testing of the AET technology was scheduled for May 2010 with implementation to whole pot line expected around August 2010.

The Task Force:

- noted both presentations and the progress made; and
- India will investigate the possibility of a bilateral agreement in order to join in the project.

Agenda Item 3.8 – Fluoride Emissions Management (ATF-06-05)

Dr Liang informed the Task Force that an audit of the Gas Treatment Centre (GTC) by the Fluoride Emissions Management (FEM) team had been undertaken and a potroom assessment by the team on work procedures and the provision of training for employees of Zhongfu Industries. The meeting noted that measurements of fluoride emissions by the FEM team were expected to be undertaken in April 2010 with a case study on the implementation expected to be completed in September 2010 for deployment in October 2010.

Mr Ison thanked Mr Liang for his company's commitment to this project and CNIA for their invaluable assistance in getting the project running. Mr Ison provided the Task Force with an overview of the project including the development of the Fluoride Emissions Management Guide (FEMG) that was expected to be launched in its final form to all APP countries at the end of 2010. The Task Force was informed that there are many synergies with the AET project and a smelter case study would be undertaken to take advantage of these. A Fluoride Emissions Audit Survey was conducted in November 2009 and testing of the implementation plan has commenced.

The Task Force:

- noted both presentations and the schedule for developing the FEMG.

Agenda Item 3.9 – New Project Proposals

No new projects were proposed. However, there was discussion on possible work tlooking at the issue of the conservation of mineral wealth.

Agenda Item 4.0 – APP Flagship Review

Ms Kruse provided the Task Force an overview of where the review came from, its impact on the Aluminium Task Force, the measurement of where the Task Force is going (both qualitative and quantitative) and the range of work the Task Force can do and the need to report to the PIC at its next meeting.

Mr Mike Atkinson from WSP, a consultancy firm engaged by the Australian Government to undertake the review of flagship projects in 2009, provided the Task Force with an overview of the review including the methodology, the key findings and recommendations to PIC. Some of the key findings from the review were: positive views held by stakeholders on the public/private partnerships and ability to collaborate on projects, and the need to generate investment in some of the projects. Mr Atkinson informed the Task Force members that the final report was available on the APP web site in English, Chinese, Japanese and Korean.

Ms Kruse sought feedback and comments from the Task Force members on the draft paper prepared in response to the request from PIC for comments from Chairs and Co-Chairs on how the report's recommendations would apply to projects under each Task Force and whether the recommendations would address barriers faced by all Task Force projects. Dr Rajakumar noted that the paper covers the need for funding of projects to progress to the next stage. Ms Rand suggested that an example could be used to clarify PIC's role in facilitating communication between Task Forces. Mr Bayliss provided written comments.

The Task Force:

- noted the results of the Flagship Review; and
- agreed that the Task Force Secretariat would make the suggested changes to the draft paper for PIC and re-circulate to members prior to submitting to PIC for its next meeting.

Agenda Item 5.0 – Future Directions

Ms Kruse reiterated that many of the projects were coming to an end in terms of funding under the APP and Task Force members needed to consider further projects, including joint projects with other Task Forces such as the use of aluminium in projects under the Building and Appliances Task Force.

The Task Force agreed that a future work program should be considered at the next Task Force meeting in 12 months.

Agenda Item 6.0 – Joint APP Task Force Meeting

Ms Kruse provided a brief outline of the Agenda for the Joint Task Force meeting. Following discussion earlier on the Flagship Review paper, it was agreed that Ms Kruse would inform the Joint Task Force participants that the Aluminium Task Force had developed the draft paper in response to the request from the PIC. Ms Kruse encouraged Task Force members to take the opportunity to meet other Task Force participants and to look for synergies with other Task Forces.

Task Force members discussed the benefits of having joint Task Force projects and it was agreed that discussions could start at the Joint Task Force meeting which may develop into something going forward.

Mr Atkinson, WSP, provided the Task Force with an indication of the presentation at the Joint Task Force meeting on the linkages with the Major Economies Forum (MEF) Technology Action Plans. Mr Atkinson informed members that approximately 2/3 of APP projects could fall under the MEF recommended actions including supporting innovation, collaborative activity, facilitating information sharing and government action.

The Task Force:

- agreed that the Chair would mention that the Aluminium Task Force had prepared a draft paper at the Joint Task Force meeting; and
- agreed that there is potential for joint Task Force projects.

Agenda Item 7.0 – Other Business and Next Meeting

Ms Kruse informed members that she would not be attending the Workshop on the Wednesday as she was the Australian Government representative for the Cement Task Force meeting which was also being held on the Wednesday. Mr Dave Cammarota agreed to Chair the Workshop on behalf of Ms Kruse.

A short discussion followed on the Workshop which focussed mainly on the eight indices under the Measuring and Benchmarking project. Mr Cammarota suggested that a metric could be developed to demonstrate the progress on flagship projects. Ms Rand raised with Task Force members the need to have both qualitative and quantitative measures and noted that some are hard to measure such as raising awareness. Mr Cammarota indicated that the Task Force should take the time to reflect on the past two years and to look forward and how the ATF can package itself for the broader community.

Mr Mukhopadhyay raised the need for milestones to show the industry in various countries the work that the Task Force has been undertaking. Mr Rajakumar informed members that the CSIRO had milestones built into the projects which are made available on the APP web site. He suggested that these needed to be more broadly communicated to other countries outside the APP.

The Task Force:

- agreed to look at metrics to tell the story around the Aluminium Task Force going forward; and
- noted that all presentations would be made available on the APP web site.

Next Meeting

The Task Force discussed the timing and location for the next Aluminium Task Force meeting. Dr Mukhopadhyay suggested the meeting be in 12 months with Ms Rand recommending the first quarter of 2011. It was also suggested that the US could host the meeting in conjunction with the TMS conference which is towards the end of February 2011. Mr Cammarota indicated that there was little overlap in participants and the US would also be hosting the APEC meetings. Ms Kruse offered to host the next meeting in Australia and asked members to look at options for holding the meeting in conjunction with a relevant industry event and provide options to the Task Force Secretariat.

The Task Force:

- acknowledged Australia's offer to host the next Task Force meeting in early 2011; and
- agreed to provide the Task Force Secretariat with possible events to hold meeting in conjunction with.

Close of Meeting

*Notes: 1) Items are reported as per the agenda but may have been discussed in a different order
2) Action items are boxed*

PARTICIPANT LIST

APP COUNTRY	ORGANISATION	NAME
Chair	Department of Resources, Energy and Tourism (RET) – Australia	Ms Sue Kruse
Co-Chair	Department of Commerce – USA	Mr David Cammarota
Secretariat	RET – Australia	Ms Donna Sharp
Australia	Australian Aluminium Council	Mr Michael Ison
	CSIRO (Light Metals Flagship)	Dr Raj Rajakumar
	Alumina Limited	Mr Andrew Wood
Canada	Industry Canada	Ms Terri Cundy
	Aluminum Association of Canada	Mr Jean Simard
	Aluminum Association of Canada	Mr Pierre Chaput
	Rio Tinto Alcan	Mr Michel Lalonde
	Environment Canada	Mr Tommy Pilon
	Hatch Ltd	Mr Stephan Broek
	Hatch Ltd	Ms Corinne Boone
China	China Nonferrous Metals Industry Association (CNIA)	Mr Kang Yi
	CNIA	Mr Wen Xianjun
	CNIA	Mr Hu Changping
	CNIA	Mr Bian Gang
	CNIA, Zhongse Hainan Nonferrous Metals Industry Co Ltd	Mr Deng Yu
	CNIA	Mr Lou Yonggang
	Northeast University	Mr Wu Youwei
	Henan Zhongfu Aluminum Co Ltd	Mr Liang Xuemin
	Shenzhen Oukai Industrial Development Co Ltd	Mr Zhang Fengguang
	Henan Yulian Energy Group Co Ltd	Mr Zhang Hongen
	Henan Yulian Energy Group Co Ltd	Mr Xiao Zhixiang
	China Power Investment Corporation	Mr Yu Dehui
	China Power Investment Corporation	Mr Guo Yaode
	CPI International Mineral & Investment Co Ltd	Mr Shi Mingwei
	CPI Ningxia Qingtongxia Energy & Aluminium Co Ltd	Mr Huang He
	China Power Investment Corporation	Mr Zhang Baohua
	China Power Investment Corporation	Ms Xiang Na
	Zhongfu Industrial Co Ltd	Mr Victor Choy
India	Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC)	Dr J Mukhopadhyay
Japan	Ministry of Economy, Trade & Industry (METI)	Mr Kaoru Endo
USA	US Environmental Protection Agency	Ms Sally Rand
	US Department of State (Administrative Support Group (ASG))	Mr John Verdieck
	ASG	Ms Angeleen Cooper
	ASG	Ms Barbara De Rosa-Joynt
	The Aluminum Association	Mr Jinlong Wang
	Institute for Governance & Sustainable Development (IGSD)	Ms Melinda Soffer
Other	International Aluminium Institute (IAI)	Mr Chris Bayliss
	University of Auckland (Light Metals Research Centre)	Mr Michel Gilbert
	WSP Environment and Energy (Flagship Review)	Mike Atkinson