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Brief biographies of all resource persons (Draft 1)

Mr. Peter S. Adler (Accord3.0, United States of America)

Mr. Peter Adler is a planner, mediator, facilitator and a principal of Accord3.0, a professional network of people specializing in foresight, strategy and cooperative trouble-shooting. Adler has worked in government, business and non-governmental organizations and teaches advanced negotiation courses in the Department of Urban and Regional Planning at the University of Hawaii. Prior executive experience includes nine years as President and Chief Executive Officer of Keystone Policy Center (www.keystone.org), Executive Director of the Hawaii Justice Foundation and founding Director of the Hawaii Supreme Court's Center for Alternative Dispute Resolution. He is the author of three books and numerous academic and popular articles and lives and works in Hawaii.
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Mr. Saleem H. Ali (University of Queensland, Australia)

Mr. Saleem H. Ali is Director of the Centre for Social Responsibility in Mining and Professor of Sustainable Science, Politics and International Studies at the University of Queensland in Brisbane, Australia. He is also Adjunct Professor of Environmental Planning at the University of Vermont in the United States. Mr. Ali's research focuses on environmental conflicts in the extractive industries and how ecological cooperation can promote peace in international relations. He is the author of three sole authored books, including "Treasures of the Earth: Need, Greed and a Sustainable Future," published by Yale University Press, and Environmental Diplomacy (with Mr. Lawrence Susskind, published by Oxford University Press). Mr. Ali was chosen as a Young Global Leader by the World Economic Forum in 2011 and received an Emerging Explorer Award from the National Geographic Society in 2010. Since then he has also been a member of the World Commission on Protected Areas of the International Union for Conservation of Nature and Natural Resources. He received his doctorate in Environmental Planning from the Massachusetts Institute of Technology, a Master's degree in Environmental Studies from Yale University and a Bachelor's degree in Chemistry from Tufts University. Mr. Ali can be followed on Twitter: @saleem_ali.

Mr. Richard Abrokwa-Ampadu

Mr. Paulo Altoe (Dow Chemical, Brazil)

Mr. Paulo Altoe graduated in Chemistry and got his M.Sc degree from IME - Instituto Militar de Engenharia – Rio de Janeiro - Brazil. He has been working with thermosets since 1980, and at Dow Chemical for 25 years in polyurethane technology. He is currently part of the global team for product development and applications of rigid foams for thermal insulation. He has been responsible for leveraging zero ODP and zero GWP blowing agents in Dow Latin America for domestic and commercial appliances, as well as construction markets. He is also member of GT-HCFC "Brazilian Program of HCFC141b Elimination" in cooperation with the United Nations Development Programme (UNDP).

Mr. Samir Arora (Industrial Foams, India)

Mr. Manuel Azucena (Refrigeration and Air conditioning Technicians for Development Association of the Philippines, Philippines)

Mr. Manuel Azucena is the Director Refrigeration and Air conditioning Technicians for Development Association of the Philippines (RACTAP) from January 13, 2013 to the present. He holds a Master of Education (M.Ed) from the Marikina Institute of Science & Technology, Shoe Ave., Sta. Elena, Marikina City.

Mr. Jitendra Bhambure (Blue Star, India)

Mr. Jitendra Bhambure is presently the Executive Vice President - R & D and Technology at Blue Star, graduated in Engineering in 1979 from Bombay University and Diploma in Management Studies from Mumbai University in 1983. He joined Rallis India Ltd. in 1979 and when he left, he was head of and R & D. He joined Blue Star in 1992 and worked in various operations before taking charge of R & D in 2000. He has been trained in the US, London Business School, IIM-A'bad and in Tel Aviv University. He was the founder President of ISHRAE Thane sub chapter which in course of three years has become an independent chapter. He is a member of the ISHRAE Technical Committee and an active member of RAMA to represent Industry on Energy Efficiency and new refrigerants with BEE, BIS and Ozone Cell. He is also the Chairperson of ODS committee of RAMA. He is a member of the International Expert Panel, to study the performance of new Refrigerants under high ambient conditions.

Mr. Chandra Bhushan (Centre for Science and Environment, India)

Mr. Chandra Bhushan is the Deputy Director of the Centre for Science and Environment (CSE). CSE is one of India's premier public interest research institutions. He has researched and written about issues ranging from industrial pollution to energy and climate change and from water crisis in Indian sub-continent to political economy of natural resource extraction. Mr. Bhushan has been part of many national and international groups and committees. He was the co-chair of the technical working group of Global Reporting Initiative. He is member of many committees of the Bureau of Indian Standards and is also a member of the board of the National Accreditation Board for Education and Training in India. He has also severed on various government committees including member of a number of working groups/sub-group for preparing India's 12th Five Year Plan. Mr. Bhushan's current research assignments include HFCs, energy efficiency and low carbon development in industries.

Mr. Marco Buoni (AREA, ATF, Galileo)

Mr. Marco Buoni, a European Expert in Refrigeration and Air Conditioning, has been the Vice President of AREA (Air conditioning and Refrigeration European Association) since 2010. AREA voices the interests of 20 national associations from 17 European countries, representing more than 13,000 companies, employing some 110,000 people with an annual turnover approaching € 23 billion. As the Chairman of the European Task Force within AREA concerning Low GWP refrigerants, ing. Buoni presented the position papers on LOW GWP Refrigerants which were issued in June 2011 – "Guidance on use and basic competence requirements for contractors" – and November 2014 (2nd edition) – "Guidance on minimum requirements for contractors' training & certification". Ing. Buoni is also an expert on capacity building in Refrigeration and Air Conditioning, leading the training activities related to certification and best practices. He is highly active as technical director of Centro Studi Galileo in the organisation of training and conferences in refrigeration technologies worldwide. Every year he leads over 300 training courses for up to 3000 participants.

Ms. Achara Bowornprasirtkul (BASF)

Mr. Marc Chasserot (Shecco)

Mr. Jianping Chen (Shanghai Jiao Tong University, China)

Mr. Jiangping Chen, was born in December 1970. He attained his Ph.D of Refrigeration Engineering from Shanghai Jiaotong University in April 1998. He has been a professor in Shanghai Jiaotong University from 2004. He is also a Committee director of China Automotive Air-conditioning Association. Director of Shanghai Automotive AC Engineering Center. He is an author of IPCC and contributed for the Nobel Peace Prize in 2007, and also a member of UNEP's Refrigeration Technical Options Committee (RTOC).

Mr. Daniel Colbourne (Consultant, United Kingdom)

Mr. Daniel Colbourne specialises in environmental, performance and safety aspects of alternative refrigerants and systems. He works on behalf of various system and equipment manufacturers and

implementing agencies, including GIZ Proklima, UNEP and UNDP. He is a member of the UNEP Refrigeration Technical Options Committee, various TEAP task forces and numerous standardisation committees.

Mr. Igor Croiset (Consultant GIZ, Proklima)

Mr. Igor Croiset has worked for more than 20 years in the Foam Industry in different positions and companies from application engineer up to managing director. He started his career in the Aerospace industry and at present works as consultant for project preparation as well in the fields of foams, refrigeration and industrial applications mainly for UN projects. He has done projects in the PU, XPS, refrigeration and air condition sectors from planning up to final production stages.

Ms. Kultida Charoensawad (Polyurethane Group, Federation of Thai Industries, Thailand)

Ms Kultida Charoensawad was born in 1963 in Thailand. She studied Chemistry at Chulalongkorn University, obtaining her Bachelor of Chemical Technology (Fuel) in Bangkok. She began her career in the chemical industry with Thai Petrochemical industry Co, Ltd as a Technical Service Manager. Currently, Ms Charoensawad works with Bayer Thai as BMS Advocacy and Government Relations Manager. Before that she was an Application Development Manager for the ASEAN region. With 26 years of technical experience in the chemical industry, Ms. Charoensawad has expertise in polyolefin polymer ex; polyethylene, polypropylene and polyurethane products. She is also highly experienced in the use of polyurethanes: its chemical properties, features as well as its safe and responsible application in the Construction, Automotive and Appliance industries. She has also undergone training in emergency response systems. With her strong expertise and knowledge, she was recently appointed as Chairman of the Polyurethanes Industry Group, a recently set-up industry sub-group under Chemical Industry Club of the Federation of Thai Industries. In her new role, she aims to lead the promotion and responsible care direction for the PU industry in Thailand.

Mr. Ashok Chotani (Isofoam, Kuwait)

Mr. Ashok Chotani is the General Manager of two Companies - Isofoam Insulating Materials Plants W.L.L. and Gulf Insulating Materials Manufacturing & Trading Co. W.L.L. which are affiliates of M/s. Mohamed Abdul Mohsin Al Kharafi Group, based in Kuwait. The company specializes in the manufacture of a wide range of thermal insulation products for all types of applications in the Construction Industry Sectors. The company's services goes beyond its manufacturing centres in Kuwait, Egypt, South Africa, and all the Gulf Countries and beyond. Mr. Chotani has 35 years of experience in the Extrusion process to manufacture Extruded Polystyrene Rigid Thermal Insulation Foam Panels and have also experience in both Atmospheric Extrusion process and Hydrovac Extrusion process developed by M/s. Owens Corning (U.S.A.). He is an Advisory expert on XPS for Kuwait's - Environment Public Authority (EPA) and training related to the Foam Sector. He conducts lectures/consultations for NGO (Non Government Organization) for the Foam Industry and Technology. He was a Technical Team Leader for (RMP) of Kuwait from 2002 to 2010. He is also a Team Leader for Technology and alternative selection for XPS Factories in Kuwait under the HPMP of Kuwait for the period 2011 to 2018.

Mr. Par Dalin (DEVCO-ISO committee on developing country matters, Sweden)

Mr. Par Dalin has over 25 years of experience in the district energy and engineering industry and has held numerous executive positions. Mr. Dalin was one of the co-founders of Capital Cooling and CEO of the company. He is board member of Euroheat & Power and he is the Swedish representative and chairman of its District Cooling group. Currently, he is the President of DEVCCO – District Energy Venture, Stockholm, Sweden. He holds a Bachelor degree from Thayer School of Engineering, Dartmouth Collage, Hanover, NH USA, and a Master degree from the Royal Institute of Technology, Stockholm.

Mr. Eric Delforge (Mayekawa)

Mr. Eric Delforge joined MAYEKAWA in 2004. Previously he worked for several screw compressor manufacturers managing European activities. At Mayekawa he handled EMEA sales in industrial refrigeration, gas compression, heat pumps and food processing. The main focus of his work consists in the integration of heating and cooling into smart energy and thermal storage solutions. He is the Corporate Business & Policy Officer/MAYEKAWA Europe. He represents Mayekawa in various market sector organizations, actively informing its members on Mayekawa product developments and innovative applications. He also acts as a consultant and business lead with Mayekawa large global accounts. His main advocacy is to promote natural refrigerant based applications across all stakeholders of community and industrial markets. He is also executive board member of

EURAMMON, Chair of the working group industrial and commercial heat pumps at EHPA (European Heat Pump Association) and member of the Belgian IIR steering committee.

Mr. Sukumar Devotta

Mr. Sukumar Devotta was superannuated as the Director, National Environment Engineering Research Institute (NEERI), Nagpur, India in 2008. Since then, he acts as an adviser to various Indian government bodies including Ministry of Environment & Forests and Department of Science & Technology and also as an independent consultant in the broad areas of Chemical & Environmental Engineering, including refrigeration and air conditioning to a few private companies in India. He also act as consultant to organisations dealing with Montreal Protocol and UNFCCC issues including the German International Cooperation (GIZ), United Nations Development Programme (UNDP), World Bank New Ozone Operation Research Group.

Mr. Paul de Larminat (Johnson Controls)

Mr. Paul de Larminat holds a Ph-D in Mechanical engineering from Lehigh University (USA). He has been with YORK/Johnson Controls for almost 40 years, in R&D and engineering for Industrial Refrigeration and Air Conditioning products. He is Director of Advanced Technologies, located in France and part of an international team in charge of new technologies and innovation using all kinds of fluids, natural and synthetic, with high focus on environmental issues. He pioneered the development of magnetic bearing centrifugal chillers within YORK, and other key innovations like Falling Film evaporators, and was an inventor in over a dozen of patents. In recent years, he has been very actively involved in the discussions about the F-gas regulation and Eco-design in Europe, and is now following up the forthcoming issues of global limitations on the use of HFC's.

Mr. Bassam Elassaad (consultant, Lebanon)

Mr. Bassam Elassaad is a consultant in the field of Heating, Ventilation, Air Conditioning and Refrigeration (HVAC&R) focusing on environmental and regulatory affairs. He is a member of the Refrigeration Technical Options Committee of UNEP, and most recently was the ASHRAE Sub-Region Chair for Europe. He holds a Master's degree in Mechanical Engineering and is a Professional Engineer (P.Eng.) by the Canadian Professional Engineers Association of Ontario.

Mr. Julio Esteban (Smart Refrigerants, Panama)

Mr. Julio Esteban has been working in the private sector for 23 years up to September 2013 at the company TST STAG in Spain as an International Business Manager, collaborating closely with UN implementing agencies as UNIDO and UNDP. He has supplied refrigeration and A/C tools and equipment for TPMP and HPMP projects worldwide, mainly in the servicing sectors, and have completed trainings including Train the Trainers courses in many countries. He has established the company Smart Refrigerant in Panama. Smart Refrigerant supplies Hydrocarbon refrigerants and tools mainly in the Latin American and Caribbean countries, but not limited to this region only. The company also offers training services on the safe use and practices with flammable refrigerants.

Mr. Kevin Fay (Alliance for Responsible Atmospheric Policy, United States of America)

Mr. Kevin Fay is recognized as a successful businessman, community leader, and as one of the foremost global environmental policy advocates over the last three decades. As Executive Director of the Alliance for Responsible Atmospheric Policy, he provides critical industry leadership and perspective on the negotiation and implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer and the United States Clean Air Act. Also, as Executive Director of the International Climate Change Partnership (ICCP), he serves as one of the most visible policy voices in the global effort to address the climate change issue. An advisor to significant Fortune 100 industries, he is frequently consulted by governments, industry, nongovernmental organizations, and media representatives on the global climate change policy process. Mr. Fay currently serves as a member of the University of Virginia Board of Visitors, the University's governing Board. A lawyer by training, he has is an honors graduate of the University of Virginia (1977), and received his J.D. from the American University Washington College of Law (1981). He currently serves as the Vice Chair and Chief Executive Officer of Alcalde & Fay, in Arlington, Virginia, a public and government affairs firms in the Washington, D.C. area.

Mr. Bruno Fierro (Bono, Italy)

Mr. Ray Gluckman (Gluckman Consulting, United Kingdom)

Mr. Ray Gluckman is the Managing Director of Gluckman Consulting – a technical consultancy specialising in refrigeration and climate change. He has an engineering degree from Cambridge University and has worked as a consultant since 1978 for major consultancies including W. S. Atkins, Enviros, SKM and Jacobs. His work relates to energy efficiency and climate change issues and has been responsible for numerous studies for both energy users and policy makers. This has included practical energy saving projects in most industrial and commercial sectors. His area of special expertise relates to refrigeration, air-conditioning and heat pumps. He has carried out many projects to help end users improve the energy efficiency of their refrigeration systems. As well as being an expert in CO2 emission reductions through energy efficiency, Ray is also an authority on reducing emissions of the powerful "F-Gases" (HFCs, PFCs and SF6). He has worked on F-Gas emissions inventories and assessment of emission reduction opportunities since 1995. He has led many important studies related to reducing the use and emissions of F Gases for a wide range of clients including various national governments and the European Commission. He was closely involved in the development of both the 2006 and 2014 EU F-Gas Regulations.Ray was President of the Institute of Refrigeration in 1995 and 1996. He received the Cooling Industry Awards Gold Award in 2011.

Mr. Samir Hamed (Petra Engineering Industries Company, Jordan)

Mr. Samir Hamed has been a member of the Refrigeration Technical Options Committee (RTOC) since 2012. He is also member of XXVI/9 Task Force - High Ambient. He is currently the Research and Development Manager of Petra engineering Industries Company in Jordan. He joined Petra in 1994 working in different positions starting from refrigeration engineer then as Heat exchanger design and production Department Manager. Since 2010, is the General Manager of Petra Sauid Arabia Factory Branch in addition to his position in PETRA ENGINEERING IND.CO. He has carried out many researches to enhance the performance of the A/C equipment using different refrigerant including HCFC, HFC, HC and other refrigerants.

Mr. Christian Heerup (Danish Technological Institute, Denmark)

Mr. Ullrich Hesse (Technische Universität Dresden, Germany)

Mr. Ullrich Hesse is a full professor for Refrigeration, Cryo and Compressor Technologies at the Technische Universitaet Dresden since 2010. He studied mechanical engineering at the Universitaet Hannover and holds a Doctorate degree in mechanical engineering from the Universitaet Hannover. He was technical manager and senior associate of research and development companies in Germany and the USA. For about ten years he worked for BOSCH, Germany and VALEO, France, resp. their joint ventures in leading positions in the areas of energy management, air conditioning and compressors. He was Director Engineering & Consulting at IPETRONIK, Germany and head of the IPETRONIK Technical Center. Since 2010, he is the head of the Bitzer Chair for Refrigeration, Cryo and Compressor Technology at the Technical University of Dresden. He is a board member of the Deutscher Kaelte- und Klimatechnischer Verein e.V. – DKV, the German technical scientific society for refrigeration and air conditioning. His topics of research interest include energy systems, refrigeration and heat pump systems, natural refrigerants, systems with mixed fluids, compressors, waste heat recovery systems, natural refrigerants and mobile refrigeration and air conditioning.

Mr. Predrag Pega Hrnjak (Air Conditioning and Refrigeration Center, United States of America)

Mr. Predrag Pega Hrnjak is Co-Director of the Air Conditioning and Refrigeration Center (ACRC) at the University of Illinois at Urbana Champaign. He is also a founder, owner and president of 50 engineers strong Creative Thermal Solutions (CTS), a vibrant research company that bridges ACRC activities (precompetitive research in function of education) and industry. He is fellow of SAE, ASME, ASHRAE, was on the board of Directors of IIAR and is editor or member of the boards of several professional scientific journals. He is recipient of Gustav Lorentzen, J&E Hall and Rittinger medals among other awards. Pega joined the University of Illinois in 1993. His research focus is on energy conversion systems, microchannel heat exchanges, natural and synthetic refrigerants with applications: space, air, automotive, stationary, unitary, commercial, and industrial. He got formal education from the University of Belgrade where he started academic career from RA to Assistant Professor. He also worked at Technical University of Denmark, University of Missouri Rolla, etc. He has published over 300 technical papers, 100 reports, gave over 100 invited lectures, wrote several chapters in books, graduated over 90 PhD and MS students.

Mr. Holger Koenig (consultant, Germany)

Mr. Holger König is an independent consultant and founder of ref-tech engineering. He works with a team of experts on various refrigeration technology projects. He is a member of the UNEP's Refrigeration and Technical Options Committee (RTOC) since 1998. Within RTOC his current responsibility is chapter-lead author for "Sustainable Refrigeration", he is also a member of chapter "Transport Refrigeration". He was chairman of German VDMA task force "Energy-Efficient Refrigeration" and speaker of the advisory board of the German research council refrigeration (FKT). He worked in national and international standardization committees from 1998-2005, supporting the development of safety standards for refrigeration, such as ISO 5149 and EN 378. Since 2012 he is member in refrigeration committees "Safety of Refrigeration Systems" and "Transport Refrigeration". He started his professional career in 1990, worked four years as project engineer at the Research Center for Refrigeration (Hanover, Germany), from 1994 to 2000 he was head of application department for Solvay (Hanover, Germany) on CFC and HCFC replacement technologies, until 2005 he was head of development and research with company Sulzer, (today Cofely Refrigeration) in Lindau, Germany. From 2005 to 2011, he worked as CTO at the heat exchanger manufacturer a-heat AG, Güntner Group in Trimbach, Switzerland and Vienna, Austria. One of his responsibilities was the development of Aluminum brazed heat exchangers. Since 2012, he has been the responsible owner of ref-tech engineering, the company is based in Kressbronn – Lake Constance, Germany. He has published more than 50 technical papers dealing with new refrigeration technologies.

Mr. Sangeet Kapoor (Tata Motors, India)

Mr. Sangeet Hari Kapoor is the Technical Chief, Climate Control at TATA Motors Ltd. He is responsible for delivery of the thermal comfort attribute in TATA passenger cars and commercial vehicles. With more than 26 years of work experience in the automotive product development field, his current role in the Engineering Research Centre is about driving engineering excellence and quality to build energy efficient and environmentally friendly mobile air conditioning systems. As an innovation leader in the Research Centre he is responsible for generating creative and novel features into the product that continuously surprise and delight the end customer - he has several patents registered in the mobile air conditioning domain which include work on waste heat recovery, environment friendly refrigerants and direct indirect evaporative air cooling systems. He holds the additional charge of Factory Safety Head at the Research Centre and is an active member of the Society of Automotive Engineers. Prior to TATA Motors he worked with global multinational automobile companies in North America, Indonesia and Oman. He received a Master's degree in Management Studies from Poona University and Bachelor's degree in Mechanical Engineer from Delhi University, India.

Mr. Lambert Kuijpers (Technical University Eindhoven, Netherlands)

Mr. Lambert Kuijper's significant amount of working time is spent on TEAP, RTOC and TSB issues. As a senior research scientist, he also provides certain services for technical institutes (such as universities) on a part time basis, if these fit in certain annual teaching and research programs. He also acts as an independent consultant for organisations involved in technical refrigeration and air conditioning issues, as well as organisations dealing with Montreal Protocol issues and those focusing on UNFCCC related climate issues. Organisations involved in Montreal Protocol issues include the United Nations Environment Programme (UNEP) and the World Bank (WB). Since 1992, he has been a member of the World Bank's OORG advisory group in the area of refrigeration and air conditioning.

Mr. Saurabh Kumar (Energy Efficiency Services Limited, India)

Mr. Saurabh Kumar is an Electrical Engineer from Indian Institute of Technology (IIT) Kanpur and Masters in Public Policy from National Graduate Institute of Policy Studies, Tokyo, Japan. He has worked in various capacities in Income Tax Department, Ministry of Power, and Bureau of Energy Efficiency (BEE). He was Secretary, BEE during 2007-2010. He proceeded on a UN Deputation to Bangkok for the last 2 years and was handling environmental issues in Asia – Pacific region. Mr. Kumar has been appointed as the Managing Director, Energy Efficiency Services Limited by the Ministry of Power and he took over as the Managing Director of EESL on 6th of May 2013.

Mr. Marc-Andre Lesmerises (Carnot, Canada)

Since graduating from Mechanical Engineering in 2003, Mr. Marc-André Lesmerises has founded his own company, Carnot Refrigeration, and has designed several industrial and commercial cooling systems. Carnot Refrigeration and its President, Mr. Lesmerises received many awards, nominations and certifications. Among its achievements, it is to mention that two of its projects were rewarded with "The Best of the Best" ASHRAE in 2010 and 2015. His company have been rapidly known and internationally recognized in the field of eco-efficient refrigeration. He has given several international

presentations, mainly focusing on natural refrigerants. Mr. Lesmerises is the owner of a Patent for his CO2 cooling system. Since its founding, Carnot Refrigeration has emerged as a key player in the deployment of CO2 as a refrigerant in North America.

Mr. Ting Xun Li (Midea and Sun Yat-sen University, China)

Mr. Ting Xun Li is an associate professor of Sun Yat-sen University China. He is also an expert of the Refrigeration Technical Options Committee (RTOC) of UNEP and Member of IEC 60335-2-40. He has being worked on alternatives since 1990 and is responsible for R&D of low GWP refrigerants RAC in MIDEA (China).

Ms. Wang Lei (China Household Electric Appliances Association, China)

Ms. Wang Lei is the Vice President, Senior Engineer of China Household Electrical Appliances Association. She has more than 30 years work experience in home appliances sector and is familiar with the development of the home appliance industry. She has done a lot of works on dealing with the global environmental issues in home appliances industry and promoting the energy efficiency of the appliance to reduce CO2 emission. From 1992, she has devoted herself to phase out ODS in Chinese domestic refrigeration and refrigerator compressor industry. Since year 2009, she was in charge of the preparation of HPMP for room air conditioner sector and joined in implementing the HPMP for China room air conditioner.

Mr. Pradit Mahasaksiri (Denso)

Ms. Bella Maranion, Co-chair of Technology and Economic Assessment Panel (TEAP)

Ms. Bella Maranion is a full-time sector analyst in the United States Environmental Protection Agency's (USEPA) Stratospheric Protection Division, Washington, DC. Her responsibilities include working as a sector analyst in a program that reviews alternatives for various sectors of use in support of the U.S. transition away from ozone-depleting substances (ODS). In this capacity, she works primarily with the fire suppression sector to review the human health and environmental effects of alternatives to ozone-depleting halons, once widely used in many specialty industrial, military, marine, and aviation applications. She serves as member on a number of technical committees under the International Organization for Standardization (ISO) and the National Fire Protection Association (NFPA). She also works on issues such as recovery/recycling and destruction of ODS with related government and nongovernmental organizations and stakeholders in the U.S. She is also a Co-chair of the Technology and Economic Assessment Panel (TEAP).

Mr. Gursaran Mathur (CalsonicKansei, United States of America)

Mr. Gursaran D. Mathur is working as a Technical Specialist, Climate Control & Sr. Manager in Development Engineering at CalsonicKansei North America, Farmington Hills, MI. His responsibilities at Calsonic Kansei include product design, development and research in the area of automotive thermal systems. Mr. Mathur's specialization is in the areas of heating ventilating and air conditioning of automotive, residential, and commercial AC systems; Indoor Air Quality and Cabin Comfort; Heat Exchangers including internally and externally enhanced surfaces; Two-phase fluid-flow and heat transfer (boiling and condensation); Alternate Refrigerants; Heat recovery systems including two-phase thermosiphon loops and heat pipe heat exchangers; System and component modeling of thermal systems; Experimentation in the HVAC/Thermal systems; and Solar Heating and Cooling. He has published 100 technical papers in the area of thermal systems. He is listed as a significant contributor for the ASHRAE Handbooks for 1992, 1996, 2000; 2004; 2007; 2008; 2011; 2012 and has edited 6 books. He is a fellow of SAE, ASHRAE and ASME. He is the past chairman of SAE's technical committee on Thermal Systems Management and has received SAE's Forest R. McFarland and Lloyd L.Withthrow Distinguished Speaker Awards. He is also a recipient of ASME's best paper award on the "Performance Enhancement of Residential AC systems" and ASHRAE's 'Distinguished Service" and "George B. Hightower" awards. He is serving on many ASHRAE technical committees and is the current chairman on TC 9.3 on Automobile Air Conditioning. He is a registered professional engineer and is a member.

Mr. Mack McFarland (Global Fluorochemical Producers' Forum)

Mr. Mack McFarland is a DuPont Environmental Fellow. He received a BS in chemistry from the University of Texas at Austin in 1970 and a Ph.D in Chemical Physics from the University of Colorado in 1973. From 1974 through1983, first as a Post-Doctoral Fellow at York University and then a research scientist at the NOAA Aeronomy Laboratory, he planned, and interpreted field experiments designed to probe the cycles that control atmospheric ozone concentrations. These studies

included measurements of gases and processes important to the global climate change issue. In late 1983, he joined the DuPont Company. He has participated in most of the major international scientific assessments of stratospheric ozone (under the Montreal Protocol) and global climate change (IPCC) as author, review or review editor. During 1995 and 1996, he was on loan to the Atmosphere Unit of the UNEP and in 1997 he was on loan to the Intergovernmental Panel on Climate Change (IPCC) Working Group II Technical Support Unit. He has served on three US National Research Council committees involved with assessing and communicating information on global environmental issues including the America's Climate Choices Panel on Limiting the Magnitude of Future Climate Change. The value of his contributions to DuPont has been recognized through a 2007 Pedersen Award, a C&P Flagship Award, Environmental Respect Awards, and Environmental Excellence Awards. In 1999, he was awarded an individual Climate Protection Award by the US Environmental Protection Agency for his contribution in providing understandable, reliable information to decision makers. In 2007, he shared with co-authors the Best New Paper award on the 20th Anniversary of the Montreal Protocol. He has contributed to the IPCC in various roles since 1990 and was recognized by the IPCC for contributing to the award of the Nobel Peace Prize for 2007.

Mr. Alistair McGlone (consultant, United Kingdom)

Mr. Alistair McGlone is an independent international environmental law consultant who has worked with the Montreal Protocol for many years, most recently as a Member of the Technology and Economic Assessment Panel (TEAP), a co-Chair of the Decision XXIV/8 task force (terms of reference, code of conduct, etc.) and a member of the replenishment task force; he is working on the relationship between intellectual property rights and the availability of substitutes for f gases. His practice includes advising international organisations and national governments, teaching, journalism and work with compliance committees. He was formerly a director in the UK civil service.

Mr. Maher H. Mousa (Saudi Arabia HVAC industry consultant, UTC BIS and Juffali JV, Saudi Arabia)

Mr. Maher Mousa is the Director of Product Development and Regulations for UTC BIS, Carrier Middle East since May 2013. He also has the lead role in managing the laboratories and testing services at Carrier, Middle East with the objective of complying with international quality standards and laboratories accreditations. He is currently based in Jeddah, Saudi Arabia. Mr. Mousa started his career with Carrier Corporation in 2002. In 2011 he was working as the Product Development Manager. He led the technology transfer and development of high efficiency products with alternative refrigerants for high ambient applications in the Middle East. Prior to that, he has held several positions of increasing responsibility related to engineering and marketing. He is also serving as the governmental relations liaison for energy and environmental regulations. He has contributed to the development of minimum energy efficiency regulations in Saudi Arabia and UAE. In 2013, he was an industry representative providing technical advisory to the regulatory authorities in KSA on Montreal Protocol implementation and impact on local HVAC industry. He has a Bachelor's degree and higher diploma in Mechanical Engineering from King Abdul Aziz University, Saudi Arabia, and is in the process of completing his MBA from Leicester University, UK.

Mr. Ravinder Mehta (Refrigeration and Air-conditioning Manufacturers Association, India)

Mr. R. K Mehta, Executive Secretary of RAMA (Refrigeration and Air-conditioning Manufacturers Association), India has held senior Management positions in leading Companies in the Indian AC&R industry for over three decades. He is a mechanical engineer & his last assignment was as Vice – President at Tecumseh. He joined RAMA in 2005 and was assigned the responsibility of rejuvenating, the association, founded in 1991,given his impeccable credentials, deep insights of the industry and his excellent rapport with key decision makers and stakeholders including MNCs. He has since been involved in proactively presenting the industry viewpoint in matters of public policy on important issues on Environment and Energy Efficiency with the Ministry of Environment, Government of India and on the Energy Labeling Program initiated by Ministry of Power, government of India. As part of the wide ranging consultations on this issue he represented RAMA at the UNEP meetings in Istanbul (April 2010) and the UNEP round table at Bangkok (November 2010). He was also a part of the industry delegation to Japan in 2012 on developments of new refrigerants and team member of RAMA delegation to Montreal and Paris . He is also a member of Indian-US task force on HFCs. In addition to RAMAs active role in preparation of fiscal policies by the Government to serve the best interests of the Industry, Consumers and the Society, RAMA continues to contribute to development of Harmonized standards for testing of HVAC equipment for Indian Conditions and also presenting the views of the Indian Industry in international forums.

Mr. Hisham Mikhi (Millennium Energy Technologies, Jordan)

Mr. Hisham Mikhi is a highly technical and commercial senior executive with 26 years of proven track record in wide range of business lines that include, Solar Energy, Electromechanical Contracting & Services, and Real Estate Development. He is a Mechanical Engineer by qualification with very professional managerial and leadership skills as well as solid technical experience in many locations including Dubai, MENA region and Canada. From 2008 – To Date –Millennium Energy Industries, Amman, Jordan www.meisolar.com; Joined Millennium Energy Industries (MEI) in January 2008 as Director of Operations then one year later became the Regional General Manager responsible for all day to day company activities as well as company growth and development. From July 2014 to date, due to MEI global growth and focus on large scale solar heating & cooling projects became the GM of Large Scale Special Projects Unit. He has successfully developed and implemented many solar heating and cooling projects located internationally from Chile to Europe and MENA region. Project Director leading the design, engineering and execution team for the Princess Noura University (PNUW) Solar Project, the world's largest roof mounted solar heating system, a 25 MW thermal solar district heating plant in Riyadh –Saudi Arabia. From 2003 – 2007 - Canam Global Enterprises Inc, Vancouver, Canada. From 1995 – 2003 - Sahara Engineering Co. LLC, Dubai, UAE. The General Manager and founder of Sahara, which is an electromechanical contracting company specializes in the design, installation and commissioning of HVAC, Plumbing, and Electrical systems for various types of building in Dubai –UAE. From 1988 – 1995 - General Mechanical & Electrical Co. (MAS) – Dubai. Mr. Mikhi has a Bachelor of Science degree in Mechanical Engineering in June 1988 from Swansea University, Wales, United Kingdom.

Mr. Petter Neksa (SINTEF, Sweden)

Mr. Petter Neksa is a Chief Research Scientist, SINTEF Energy Research, Department of Gas Technology and also an adjunct Professor at NTNU, Department of Energy and process engineering. He has more than 30 years of professional experience within refrigeration and process technology. He is active internationally, especially within Int. Inst. of Refrigeration (IIR), IPCC/TEAP and UNEP/TEAP (Technology and Economic Assessment Panel). Visiting professor at Doshisha University in Kyoto, Japan. He has project manager experience from numerous medium to large projects, also EU projects. In addition, he is the scientific coordinator, quality assurance responsible and member of Steering Committees for several projects.

Mr. Tetsuji Okada (Japanese Refrigeration and Air Conditioning Industry Association, Japan)

Mr. Tetsuji Okada is the President of the Japanese Refrigeration and Air Conditioning Industry Association (JRAIA). JRAIA represents all of the major manufacturers of refrigeration and air conditioning equipment in Japan. The Association has a long and proud history, initially established in 1949 and with well over 100 members today it plays a leading role in technical and policy development in both home and abroad. Prior to being President of the JRAIA, he worked on technical design of air conditioning equipment at Mitsubishi where he had a distinguished career, including responsibility for Mitsubishi in Europe.

Mr. Alaa Olama (consultant, Egypt)

Mr. Alaa Olama is a holder of a Ph.D. in Absorption Refrigeration and a M.Sc. in refrigeration & air conditioning and from King's College, University of London, England. He is the head of the sub-committee for writing the first District Cooling code for Egypt. He holds various positions - Member of the committee for writing the Egyptian code of Air Conditions, Refrigeration & Automatic Control, and the Arab Refrigeration and Air Conditioning Code; Member of the Board of Directors of ASHRAE Cairo Chapter, 1999 – 2004; President of the Board of Directors of ASHRAE Cairo Chapter 2002-2003; General Chair, ASHRAE of the Second Regional Conference of Refrigeration (ARC) Region-At-Large, Cairo, Sept. 2003. He was the past Vice Chairman and Board of Directors member of the First Egyptian Company for Refrigeration by Natural Gas and the first District Cooling provider, GasCool, from 2005 to 2013. In addition, he is a member of the Refrigeration and Air Conditioning Technical Options Committee (RTOC).

Mr. Enrique Peral-Antunez (Renault, France)

Mr. Enrique Peral Antunez is a Climate Control Innovation Senior Manager within the French car manufacturer Renault, dealing with issues such as the research of alternative refrigerants for mobile air conditioning and efficiency improvements. Mr. Peral-Antunez chaired the four-years international cooperative research program SAE MRB CRP for the development and validation of the new air conditioning refrigerant R445A (AC6), leading a team of 100+ experts formed by 11 car manufacturers, 9 tier one suppliers, 1 chemical manufacturer and 8 independent labs worldwide. He

cooperates with the European Commission, the French Government, the United States Environmental Protection Agency and the United Nations Environmental Commission for Europe on the development of new climate control policy making, and represents Renault in all the international working groups on climate control issues.

Mr. Bruno Pussoli (Metalfrio, Brazil)

Mr. Bruno Pussoli was born in 1985 in Brazil. He is a mechanical engineer graduated by State University of Sao Paulo with emphasis in thermodynamics, Mastery in refrigeration and heat transfer by Federal University of Santa Catarina and current is studying MBA in business. His career started in 2008 with a partnership with Embraco on his mastery, developing and testing an alternative configuration of evaporator fins designed to provide greater robustness with respect to the formation of condensation and frost. This work provided him an award of best dissertation on Brazil (Brazilian Society of Mechanical Sciences/Embraer 2011) and four important papers published on International Journals around the world. In 2010 joined Metalfrio Solutions S.A. on it's headquarter in Sao Paulo, Brazil. During this time was responsible for research, development, tests, performance and safety certifications, laboratory coordination and technical support to other plants. One of his important projects was to implement CO2 as refrigerant gas on many equipment to Coca-Cola Company and R290 for beer´s company. Currently is responsible for R,D&I area in Brazil, intellectual property management and coordination of global standardization projects for the corporation.

Mr. Roberto Peixoto (**Instituto Maua de Tecnologia, Brazil)**

Mr. Roberto Peixoto is a Professor of Mechanical Engineering, teaching courses and doing research in the fields of thermal sciences and refrigeration and air conditioning, at the Instituto Maua de Tecnologia, a Technical University in Sao Caetano do Sul, Sao Paulo, Brazil. Occasionally he works as an independent consultant. He consults for various entities, these include organisations dealing with refrigeration and air conditioning issues, and organisations dealing with Montreal Protocol and UNFCCC related climate issues, including the United Nations Development Programme (UNDP).

Mr. Miquel Quintero (consultant, Colombia)

Mr. Miguel W. Quintero, Co-chair of the Foams Technical Options Committee since 2002, currently is an independent consultant in the area of polyurethane technology. He worked over a 21-year period (1980 - 2000) for The Dow Chemical Co. at the Research & Development and Technical Service & Development Departments in the area of rigid polyurethane foam in Latin America, United States and Europe. From 2000 to 2006 he was a professor at the Chemical Engineering Department at Universidad de los Andes in Bogota, Colombia, in the areas of polymer processing and transport phenomena. In the period January 2007- October 2008, he returned to Dow Europe as Development Leader for Polyurethane Product Research, located in Freienbach, Switzerland. As a foam expert, he is a member of the World Bank's OORG advisory group in the area of foams and a UNDP consultant supporting the HPMP preparation and implementation process in Latin America. He is also an advisor of several system houses in Latin America active in the automotive, thermal insulation and polyurethane flexible foam markets. He holds a Chemical Engineer degree from Universidad Nacional de Colombia in Bogota.

Mr. Reinhard Radermacher (**Center for Environmental Energy Engineering, United States of America)**

Mr. Reinhard Radermacher holds a diploma and Ph.D. in physics from the Technical University of Munich and conducts research in heat transfer and working fluids for energy conversion systems — in particular heat pumps, air-conditioners, refrigeration systems, and integrated cooling heating and power systems. His work resulted in nearly 400 publications, as well as numerous invention records and 12 patents. He has co-authored three books on absorption and vapor compression heat pumps. His research includes the development of software for the design and optimization of heat pumps and air-conditioners which is now in use at more than 60 companies worldwide. Mr. Radermacher is Minta Martin professor of Mechanical Engineering and director and co-founder of the Center for Environmental Energy Engineering (CEEE). He represents the U.S. at the International Energy Agency Annexes 13, 34 and 40, is past vice president of Commission B1, and past president of Commission B2 of the International Institute of Refrigeration (IIR). In February 2015 he was awarded the Institute of Refrigeration (IOR) J&E Hall Gold Medal for his contributions in the field of refrigeration. Recently, the International Institute of Refrigeration (IIR) announced that Mr. Radermacher is the 2015 recipient of their Gustav Lorentzen Medal, for his innovation and development in the field of refrigeration. He will receive the award at the IIR International Congress of Refrigeration (ICR2015) August 2015 in Yokohama, Japan. He is Fellow ASHRAE and also holds memberships in ASME, SAE, DKV and IIR and serves as the editor of the ASHRAE HVAC&R

Research Journal. He is co-founder and co-owner of Optimized Thermal Systems, providing custom simulation software services and innovative solutions to energy conversion challenges.

Mr. Rajan Rajendran (Emerson, United States of America)

Mr. Rajan Rajendran holds the position of vice president, System Innovation Center and Sustainability at Emerson Climate Technologies, Inc. In this role, he is responsible for overseeing the new Emerson Innovation Center, also referred to as "The Helix," through its development, construction and launch phases, as well as for leading operations after the Center opens on the University of Dayton campus in late 2015. He serves on several HVACR industry committees, including the Air Conditioning, Heating, and Refrigeration Institute's (AHRI) Low GWP Alternative Refrigerants Evaluation Program Task Force, and participates in Underwriters Laboratories' (UL) Working Groups for A2L Refrigerants. In addition, he is a member of the systems steering committee at AHRI and UNEP's Technical Options Committee on Refrigeration, AC and Heat Pumps (RTOC). Mr. Rajendran has a bachelor's degree in mechanical engineering from the University of Madras India, and earned his master's degree and a doctorate in mechanical engineering from Iowa State University. He also has a master's degree in business administration from Wright State University.

Mr. A.R. Ravishankara (Colorado State University, United States of America)

Mr. A.R. (Ravi) Ravishankara is an Atmospheric Chemist at the Colorado State University, in Fort Collins, CO. He was the Director of the Chemical Sciences Division of the NOAA Earth System Research Laboratory until January of 2014. Mr. Ravishankara has worked over the past three and a half decades on the chemistry of the Earth's atmosphere as it relates to stratospheric ozone depletion, climate change, and regional air quality. His measurements in the laboratory and in the atmosphere have contributed to deciphering the ozone layer depletion, including the ozone hole; to identifying environmentally safe substitutes for ozone depleting substances; to quantifying the role of chemically active species on climate; and to advancing understanding of the formation, removal, and properties of pollutants. He is an author or co-author of more than nearly 350 total publications. He is a co-chair of the Scientific Assessment Panel of the U.N. Montreal Protocol that protects the stratospheric ozone layer. He is a member of the U.S. National Academy of Sciences. His awards include his election as a Fellow of the American Geophysical Union, Fellow of the American Association for the Advancement of Science, Fellow of the United Kingdom Royal Society of Chemistry, recipient of the Polanyi Medal and Centenary lectureship of the Royal Society of Chemistry, the U.S. Environmental Protection Agency's Stratospheric Ozone Protection Award, the Department of Commerce Silver Medal, and the U.S. Presidential Rank Award. He received his Ph.D. in Physical Chemistry from the University of Florida in 1975.

Mr. Kazuhiro Sato (Mitsubishi Heavy Industries, Japan)

Mr. Enshan Sheng (Huntsman Polyurethanes Asia)

In 1995, Mr. Sheng obtained his PhD on surface and interface science from Loughborough University of Technology in Britain. He continued in the same university with a 3-year post-doctoral research project on interfacial study of multifunctional additives in carbon black reinforced rubber. During the period of his PhD study and post-doctoral research, he published more than 20 papers in internationally recognized journals. He started his industry career in 1995 as a Technical Service Specialist with Huntsman Polyurethanes (Asia Pacific) Pte Ltd in Singapore. He relocated to Shanghai in 1998 as a Technical Development Manager until July 2004. During 2002-2004, Mr.Sheng took a part-time MBA course. In 2004, he was awarded MBA (with distinction) by Maastricht School of Management in Holland. He was appointed as Marketing Manager, Greater China, Huntsman Polyurethanes from 2004 to 2005. During October 2005 – Aug 2006, he was Deputy General Manager, Huntsman Polyurethanes (Shanghai) Ltd. He was appointed Country Manager of Huntsman Polyurethanes (China) Ltd in Sept 2006. Mr. Sheng is currently Director – Huntsman Asia Pacific Technology Centre, and Technical Director – Huntsman Polyurethanes Asia. He is a Fellow of Britain's Royal Society of Chemistry.

Mr. Roy Singh (Arctic King Appliances, South Africa)

Mr. Mike Thompson (Ingersoll Rand/Trane, United States of America)

Mr. Mike Thompson is Global Leader of Refrigerant Strategy for the Ingersoll Rand businesses of Trane, and Thermo King. He has worked for Ingersoll Rand in the heating, ventilation and air conditioning (HVAC) industry for 25 years. In this role, he is responsible for developing and communicating Ingersoll Rand's environmental message to the industry, and working with the sales distribution organization globally to educate customers on the importance of environmental issues when selecting HVAC and refrigeration systems. He also works with Trane's leadership and

technology groups to help navigate the complexity of global refrigerant regulations now, and in the future. He has held numerous positions with Trane including Field Sales and Global Marketing manager for Trane's large tonnage chillers, and Director of Environmental Affairs for Trane. He earned a bachelor's degree from Texas A&M University in mechanical engineering.

Ms. Karin Shepardson (World Bank)

Ms. Karin Shepardson is Program Manager and Executive Coordinator for the Montreal Protocol Program within the World Bank's Climate Change Group. She also coordinates the World Bank's engagement as an Implementing Agency with the Global Environment Facility, and several associated Climate Adaptation Trust Funds. She has worked for the World Bank for over 20 years in progressively responsible positions supporting client work on the Sustainable Development and the Environment, in particular across the Agriculture and Infrastructure sectors globally. She holds a Dual Masters of Science Degree in Civil Engineering, and Urban and Environmental Policy from Tufts University; and a Bachelors Degree with majors in Economics and Business, and Environmental Studies from Macalester College. Prior to her work at the World Bank she worked for 7 years as an Environmental Engineer with Metcalf and Eddy Consulting Engineers, currently AECOM. She has contributed to numerous Bank and client publications as both a peer reviewer and author, and has spent a considerable amount of time on environmental policy, institutional, and capacity building issues in developing countries.

Mr. Stephan Sicars (United Nations Industrial Development Organization UNIDO)

Mr. Paulo Vodianitskaia (consultant, Brazil)

Mr. Paulo Vodianitskaia is founding partner of HAPIterra.com consultancy on sustainable technologies, consultant, researcher, teacher, and speaker. He is a mechanical engineer with M.Sc. on Solar Energy, and MBA on Business Management, and is currently preparing his Ph.D. thesis on Solar Air Conditioning. He is an author of several papers, and appliance industry executive for 25 years, served as director to national Industry associations and as independent consultant to UNDP. He has taken part in UNEP Refrigeration and Technical Options Committee (RTOC) since 1991, and shares the Nobel Peace Prize 2007 as IPCC/UNEP member.

Ms. Andrea Voigt (European Partnership for Energy and the Environment, Europe)

Ms. Andrea Voigt was appointed Director General of EPEE, the voice of the refrigeration, air-conditioning and heat pump industry in Europe, in 2009. She guides EPEE member companies towards strong common positions and represents EPEE towards decision makers at the European Institutions, member states' governments and business leaders in the industry. She is also building up and further strengthening EPEE's network within the European and international association landscape. EPEE, The European Partnership for Energy and the Environment represents the refrigeration, air-conditioning and heat pump industry in Europe. Founded in the year 2000, EPEE's membership is composed of 40 member companies, national and international associations realising a turnover of over 30 billion Euros and employing more than 200,000 people in Europe. Please see the EPEE website (www.epeeglobal.org) for further information. Prior to joining EPEE, she has been working in the refrigeration and air conditioning industry for more than 15 years, holding different functions in the fields of marketing, communication and public relations. A German national, she is fluent in English, French and Italian, holding degrees in public administration (M.P.A), applied linguistic science (M.A.) and marketing.

Mr. Asbjorn Vonsild (Danfoss, Denmark)

Mr. Asbjørn Vonsild has been at Danfoss since 2003 and is currently in the Regulatory Department in Danfoss Refrigeration & Air Conditioning Controls. His roles and responsibilities includes coordination of the strategy on components for new refrigerants, chapter lead author on the general chapter on refrigerant in the RTOC report, member of CEN/TC182/WG1, the standardisation committee behind EN378, member of ISO/TC86/SC6/WG6, the standardisation committee behind ISO5149, chair of the Danish national committee of standardisation for refrigeration (DS/S251), chair of the internal Danfoss refrigerant gatekeeper group, instructor on the internal Danfoss training program on refrigerants. Previously, he has been head of the Refrigerants and Standards Department in Danfoss Automatic Controls and before that head of the Technology Department in Danfoss Automatic Controls, focusing on new technologies for refrigeration components, including new refrigerants. Before that, he worked with technology scouting first at LEGO and then at Danfoss Industrial Automation. Mr. Vonsild has a Master of Computer System Engineering from University of Southern Denmark from 2000.

Mr. Zhang Zhaohui (China Refrigeration and Air-conditioning Industry Association, China)

Mr. Zhang Zhaohui graduated from Xi'an Jiao Tong University (XJTU) and majored in Compressor and Refrigeration Technology. Currently, he is the Secretary General of China Refrigeration and Air-conditioning Industry Association (CRAA). He is also holds other positions such as Director of Expert Committee on HCFCs Substitution Technology in China Industrial and Commercial Refrigeration and Air-conditioning Industry, the Deputy Director of National TC238 on Refrigerating & Air-conditioning Equipment of Standardization of China, the Deputy Director of Expert Committee of China Energy Label and others. He has mainly engaged in industrial management, refrigerant substitution, industry planning, standards drafting, product quality certification, and organizing international exchanges and cooperation.