

Ozone2Climate Technology Roadshow and Industry Roundtable 2017

2017 臭氧气候技术路演和工业圆桌会议

12-14 April 2017
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Shanghai New International Expo Center, China
中国·上海新国际博览中心

Concept Note

Background

背景

HCFCs have Ozone Depleting Potential (ODP) up to 15% of that of CFCs and are controlled under the Montreal Protocol as substances of Annex-C, Group-I. The Asia Pacific region is the largest producer and consumer of HCFCs. This region accounts for over 70% of these chemicals' global production and consumption. In addition, the region manufactures most of the Refrigeration, Heating, Ventilation and Air Conditioning (HVAC&R) equipment and is the fastest growing market in the world.

HCFCs 的臭氧消耗潜能 (ODP) 相当于 CFCs 的 15%，也属于《蒙特利尔议定书》附件 C 组 I 中列明的需淘汰物质。目前亚太地区是全球最大的 HCFCs 生产和消费地区，其生产量和消费量均超过全球的 70%。而且，世界上大部分的制冷暖通空调设备产自亚太地区，该地区的市场增长率最高。

In the XIXth Meeting of Parties to the Montreal Protocol in September 2007, through its Decision XIX/6, the Parties adopted an accelerated phase-out schedule for HCFCs. The first control is the freeze on production and consumption of HCFCs from 1 January 2013, at the Baseline Level (average of 2009 and 2010 production and consumption levels). The following control steps are: reduction of 10% by 2015, reduction of 35% by 2020, reduction of 67.5% by 2025, reduction of 100% by 2030, allowance of 2.5% of baseline (annual equivalent) for the period 2030-2040 and completed phase out by 2040. The Meeting of Parties also has called for efforts "To minimize environmental impacts, in particular impacts on climate" while phasing out HCFCs as per the accelerated phase-out schedule, which will be posing a challenge for industries and policy makers of this region. Even though there are many available alternatives to HCFCs in the market, many are only short- to medium-term solutions given a growing international pressure to move away from refrigerants with high-GWP. As Article 5 Parties are in the process on HCFCs phase-out, there are excellent opportunities for the refrigeration and air conditioning (R/AC) industry to introduce zero-ODP, energy-efficient, zero- or lower- GWP greener technologies to achieve more socio-economic and environmental benefits and fulfill the spirit of the MOP Decision XIX/6.

2007年9月，《蒙特利尔议定书》第19次缔约方会议上，根据第19/6号决议，缔约方达成了HCFCs加速淘汰计划。即从2013年1月1日起，将HCFCs的生产量和消费量冻结在基线水平（2009和2010年生产量和消费量的平均值），在2015年削减10%，2020年削减35%，2025年削减67.5%，到2030年削减100%，在2030-2040年，可保留

基准线 2.5%，到 2040 年完全淘汰。根据加速时间表来淘汰 HCFCs 的进程中，各缔约方还呼吁“使对环境尤其是气候的影响减到最低”，这将成为行业和区域决策者的挑战。尽管，市场上已经有许多 HCFCs 的替代制冷剂，面对国际社会淘汰高 GWP 值制冷剂日益增长的压力，采用这些替代制冷剂大都只是短期或中期的解决办法。目前第五条款国家正在进行 HCFCs 的淘汰工作，这对制冷空调行业是一个绝佳的机会，引进零 ODP 值，高效，零或更低 GWP 的绿色技术，实现更好的社会经济环境效益，践行缔约方第 19/6 号决议的精神。

HFCs are one of the main substitutes for HCFCs now, in particular in Article 5 countries. The HFCs consumption has increased so rapidly that it causes highly concern globally. EU., U.S., Japan and other developed countries and regions have developed more strict policies and measures for limiting the usage of high GWP HFCs and promoting its phase-down gradually. In the past 5 years, the political momentum has been accumulating to amend the Montreal Protocol to include HFCs through many political statements at various occasions: the UN General Assembly, the Climate and Clean Air Coalition (CCAC), the G-20 Summit, the BASIC countries, Small Island Developing States, the North American Leaders, the Arctic Council countries, the African Ministerial Conference on the Environment, and statements following bilateral summits between China-US, India-US, and EU- Japan, US-Pakistan. Finally, following the agreement of Dubai Pathway on hydrofluorocarbons (HFCs) as decided at the twenty-seventh Meeting of Parties to the Montreal Protocol, held in Dubai, UAE in October 2015, the Parties has been in the negotiation on a new amendment. Currently, the negotiation is going on, and it is expected that at the Twenty-eighth Meeting of the Parties to the Montreal Protocol in Kigali, Rwanda during 8-14 October 2016 will make some breakthrough.

现阶段 HFCs 是 HCFCs 的主要替代品之一，在第五条款国家表现最为明显。HFCs 消费量的迅速增长已经引起国际社会的高度关注。目前，欧盟、美国、日本等发达国家和地区已经开始对高 GWP 的 HFCs 采取更为严格的限制使用和逐步削减的政策和措施；最近 5 年来，将 HFCs 纳入蒙特利尔议定书的修订案的政治声明在各个场合被提及，且势头加剧：联合国大会，气候和清洁空气联盟（CCAC），G20 峰会，基础四国，小岛屿发展中国家，北美领导人峰会，北极理事会国家，非洲部长级环境会议，以及来自双边的声明包括中国与美国、印度与美国、欧盟与日本、美国与巴基斯坦。最终，根据 2015 年 10 月在迪拜召开的第 27 次蒙特利尔议定书缔约方会议上达成的关于 HFCs 的迪拜路径，各缔约方正在协商新的修订案。目前该修订案正在进行过程中，有望在 2016 年 10 月 8-14 日在卢旺达首都基加利召开的第 28 次蒙特利尔议定书缔约方会议上取得突破性进展。

2014 Report of the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee (RTOC-2014) has reviewed the refrigerants application in all different kinds of equipment, and projected the development trends as well. In A5 countries, R22 is still the main refrigerant used in various refrigeration and air conditioning equipment. Some medium and high GWP HFCs technologies have also matured, such as R410A, R134a, R404A etc.. At the same time, many low GWP HFCs and natural refrigerants such as R32, HFO& its blend, HC, CO₂, R717 have been promoted and adopted widely in many regions.

UNEP 技术选择委员会制冷空调热泵技术报告（RTOC-2014）中整理了各类设备中制冷剂的应用和预测情况。目前在 A5 国家中，R22 制冷剂仍是各类制冷空调设备中的主流制冷剂，一些中、高 GWP 值的 HFCs 制冷剂的应用也日渐成熟，如 R410A、R134a、R404A 等，较低 GWP 值的 HFC 和天然制冷剂如 R32、HFO 及其混合物、HC、CO₂、R717 等也正在各地区推广应用和尝试。

In the effort towards uptake of zero ODP and Lower GWP alternatives, it is essential to overcome technological and market barriers of high incremental cost, information asymmetry, economy of scale etc. To help outreach such zero ODP and lower GWP technologies, UNEP OzonAction has successfully organized its first Ozone2Climate Technology Roadshow and Industry Roundtable in Maldives from 8 to 12 May 2011, back-to-back with the Joint Network Meeting of Ozone Officers from South Asia and West Asia. During 21-22 July 2012, UNEP with US Government and other partners organized Advancing Ozone & Climate Protection Technologies: Next Steps in Bangkok. UNEP with Chinese partner FECO and CRAA continuously organized Ozone2Climate Roadshow and Roundtable in China in 2012-2016. UNEP has also partnered with the USEPA on increasing awareness and capacity building in Asia Pacific regions on approaches to maximize ozone and climate benefits in HCFCs phase out programs.

推动零 ODP 和更低 GWP 替代制冷剂，克服高成本、信息不对称、经济规模等技术和市场障碍是非常重要的。为了推广零 ODP、更低 GWP 技术，UNEP 臭氧行动已于 2011 年 5 月 8 日至 12 日在马尔代夫成功举办了第一次臭氧气候技术路演和工业圆桌会议，同期举办了南亚和西亚官员关于臭氧的联合网络会议。2012 年 7 月 21 至 22 日，UNEP 又与美国政府和其他参与方在曼谷举办了发展臭氧和气候保护技术的研讨会。2012-2016 年 UNEP、FECO 和 CRAA 连续五次在中国成功举办了臭氧气候技术路演和工业圆桌会议。UNEP 还与 USEPA 合作推动提高亚太地区的意识和能力，使在 HCFCs 淘汰阶段，达到臭氧和气候效益最大化。

China R&AC sector : A situation analysis

中国制冷空调行业：形势分析

China's R&AC industry currently consumes more than 40% of national HCFCs consumption. With the implementation of the first stage of HPMP, China R&AC sector has successfully realized the target to reduce 10% HCFCs consumption by 2015. The second stage of HPMP has been developed, and submitted to the Executive Committee of the Multilateral Fund for consideration since January 2016.

目前中国制冷空调行业的 HCFCs 消费量超过全国总消费量的 40%。随着中国第一阶段 HPMP 的实施，到 2015 年底，中国制冷空调行业已成功实现淘汰 10% HCFCs 消费量的目标；HPMP 第二阶段的工作也已开展，于 2016 年 1 月提交《蒙特利尔议定书》多边基金执委会，目前正在审议之中。

Under the first stage of HPMP, China has already carried out various activities, in which two demonstration lines completed: ammonia/CO₂ cascaded refrigeration system developed by Yantai Moon, and R32 small size commercial water chiller (heat pump) developed by Tsinghua Tongfang. Several training workshops on implementing the conversion projects for beneficiary enterprises have also been conducted leading to 18 conversion contracts comprising of 30 refrigeration production lines and 4 compressor lines towards alternative technologies which are ozone friendly. China has been undertaking a lot of research oriented activities related to safety standards and products standards using alternative technologies. The draft version of GB 9237 modified in relation to ISO5149 was completed and submitted to the Standardization Administration of China for endorsement in July 2016.

在 HPMP 第一阶段实施过程中，中国制冷空调行业开展了各种活动，包括完成了两条示范生产线：烟台冰轮集团承担的氨/CO₂ 复叠系统项目和清华同方承担的 R32 小型商用冷水（热泵）机组项目；行业内组织了多次转换项目实施培训会议，第一阶段行业共

签署了 18 个替代转换合同，其中包括 30 条制冷设备生产线和 4 条压缩机生产线，使用的替代技术都是臭氧环保的。除此之外，还开展了许多替代技术相关的安全和设备标准的修订和制订工作，修改采用 ISO 5149 的中国国家标准 GB 9237 完成了报批稿，并于 2016 年 7 月上报了国家标准化管理委员会。

The global development trends in policies and technologies will affect the adoption of the ozone and climate friendly technologies in the R&AC sector in China; At the same time, one of the biggest manufacturing hubs for the global R&AC equipment, the move of China R&AC industry would play a significant role in shaping the trends of alternative developments direction.

全球的政策和技术趋势将会对中国制冷空调行业臭氧和气候友好技术的选择和应用产生影响。同时，作为全球制冷空调行业最大的制造中心，中国制冷空调行业的行动对替代技术的发展方向趋势也起着重要作用。

UNEP, FECO and CRAA collaboration

UNEP、FECO 与 CRAA 的合作

China Refrigeration and Air-Conditioning Industry Association (CRAA) is manufacturers' liaison with the government and has been devoting itself to provide members and whole industry with multifaceted and valuable services. CRAA are the co-organizers of the International Exhibition for Refrigeration, Air Conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage which is held annually known as CRH. UNEP has been collaborated with CRAA in the organization of "Ozone2Climate" technology roadshow and industry roundtable held yearly as a part of CRH since 2012 in Beijing and Shanghai in turn. In 2015, FECO also joined hand as a co-organizer as well. The objective of the partnership is to promote and exhibit advancements in ozone and climate friendly technologies. Along with the technology roadshow, an industry roundtable was also organized as a part of the event to discuss practical issues surrounding R&AC technology and policy selection that will benefit both the ozone layer and climate.

中国制冷空调工业协会（CRAA）是连接企业与政府的纽带，致力于为会员和全行业提供全方位、高价值的服务。CRAA 是国际制冷、空调、供暖、通风及食品冷冻加工展览会（即中国制冷展）的主办方之一。UNEP 和 CRAA 合作，自 2012 年开始在制冷展期间组织臭氧气候技术路演和工业圆桌会议，并作为制冷展的一部分，以后每年在北京和上海轮流举办。自 2015 年开始，环境保护部环境保护对外合作中心也参与到联合主办，合作宣传和展示臭氧气候友好制冷剂技术的进展。路演的同时，一个工业圆桌会议也作为活动的一部分同期召开，会上围绕臭氧和气候友好的制冷空调技术和政策选择等问题展开讨论。

The Beijing 2016 (CRH) event was joined by 1053 enterprises/organizations from more than 30 countries with exhibition area of 106,800 sq. meter. In total, more than 50,000 professional visitors from more than 100 countries visited the Expo. One separate exhibition hall was specially constructed with area of 500 sq. meter for the Ozone2Climate Roadshow for the first time, and more than 50 enterprise and organizations joined this Roadshow. The Industry Roundtable was hosted more than 200 participants from China as well as other countries including India, Thailand, Philippines, South Korea, Japan, Brazil, and US. The Beijing Roundtable focused on the policy update to promote Ozone2Climate alternative technologies, challenge and opportunity for industry, application and development trend of Ozone2Climate alternative technologies. In addition, a Roundtable focusing on the Good

servicing practice was also organized in the meeting area of the roadshow. Most of the participants are industry decision makers along with researchers in industry, university as well as NGOs.

2016 年北京制冷展有来自 30 多个国家的 1053 个企业和组织参加展出，展出面积逾 106,800 平方米。共有来自 100 多个国家的 50,000 多名专业观众参观了展会。臭氧气候路演设置一个单独的 500 多平米的展区，并首次以特装形式亮相，有 50 多家企业和组织在路演上做了展出。工业圆桌会议吸引了来自中国、印度、泰国、菲律宾、韩国、日本、巴西，美国等国家的 200 多名观众参加，本次会议主要关注了推动 HCFCs 的臭氧气候替代技术的最新政策；行业面临的机遇和挑战；臭氧气候友好替代技术发展的趋势；臭氧气候替代技术的应用和发展。除主会场外，还在路演展区设置圆桌会议技术论坛和维修良好操作论坛。大部分参会人员是行业决策者，行业、大学和非政府组织的研究人员。

Following the previous events in 2012-2016 UNEP, FECO and CRAA would be co-organizing the 6th Ozone2Climate Technology Roadshow and Industry Roundtable as a part of the CRH 2017. The aim of the events is to continue the engagement of industry and policy makers to discuss on approaches and strategies for overcoming the challenges in adopting Ozone2Climate alternatives. UNEP and CRAA welcome prominent international, regional and national organizations to be partners of these two events as joint organizers and/or supporting organizers.

继 2012-2016 年前五届活动之后，主办方将继续在 2017 年制冷展上组织第六届臭氧气候技术路演和工业圆桌会议。活动的目的是继续推动行业和决策者讨论克服臭氧气候替代技术挑战的措施和策略。主办方欢迎更多有影响力的国家、地区和国内组织参与和支持举办这两项活动。

Ozone2Climate Technology Roadshow and Roundtable **臭氧气候技术路演和圆桌会议**

The 2017 Roadshow will be organized in an exhibition hall measuring up to 700 m². The products/technology to be exhibited in the Roadshow will include those relating to zero-ODP, lower-GWP alternatives, and with improved energy efficiency of final products as compared to HCFCs-based technology. All manufacturers, research institutions, universities, NGOs from countries that manufacture and/or own these technologies will be invited to display their products/technology either through sample products, or display boards.

2017 年的路演将在中国制冷展展厅内进行，设置一个 700 余平方米的独立展台。在路演上展示的产品和技术将包括零 ODP、更低 GWP 替代制冷剂相关的且能效改善的产品和技术。来自不同国家的生产这些产品或拥有相关技术的制造商、研究机构、院校和非政府组织都将被邀请来参加，通过样品或展板来展示他们的成果。

UNEP, FECO and CRAA believe that the next generation of refrigerants should be more environmental friendly, i.e. zero ODP, lower GWP and better Life Cycle Climate Performance (LCCP). Therefore, for those alternatives to HCFCs with high GWP will not be included in this Roadshow. Also the roadshow would like to showcase innovative technologies such as solar cooling which is not only ozone friendly but also has climate and energy benefits. The Industry Roundtable will complement the Roadshow by providing a forum for an open discussion on performance of R/AC equipment, refrigerant technology development trends,

industry standards and regulatory requirements that constrain the application of alternatives. The objective of the Roadshow is therefore to help industry to take an informed decision in selecting ozone- and climate-friendly alternatives for the phase-out of HCFCs. However, the Roadshow and the roundtable will not endorse any specific alternative technology.

主办方一致认为未来的替代制冷剂将是更加环保：零 ODP、更低 GWP、寿命期气候性能（LCCP）更友好。因此，高 GWP 的 HCFCs 替代物质将不会出现在本次路演上。本次路演还希望展出创新技术，例如采用天然制冷剂的太阳能制冷等，这种技术不仅是臭氧环保的，而且也是对气候和能源有益。工业圆桌会议将作为路演的补充，提供一个公开讨论平台，探讨怎样评估制冷空调设备对气候的影响；制冷剂技术的发展趋势以及约束替代制冷剂使用的行业标准和政策需求。因此路演的目的是希望帮助行业在淘汰 HCFCs 选取臭氧和气候友好替代制冷剂时做出明智的决定。但是路演和圆桌会议将不涉及对任何替代技术的认同与支持。

UNEP, FECO and CRAA, cooperating with Organizing Committee of China Refrigeration Expo, will provide opportunities for invited exhibitors to exhibit their products or display boards. The invited exhibitors will be responsible for the products transporting, and displaying the sample products/display board, or brochures.

UNEP、FECO 和 CRAA 与中国制冷展组委会开展合作，将向每个被邀请参加路演的展商免费提供在路演展台上展示样品或宣传展板的机会。但是参展商需要自己承担包括展品的运输、展品或展板设计、宣传册等活动的费用和工作。

To outreach this event, UNEP will through its OzonAction Newsletter/website to disseminate the Roadshow/Roundtable information, and encourage the National Ozone Units of its network and their industry to join this event as well.

为了推广这个活动，UNEP 会通过臭氧行动时事通讯/网站传递路演和圆桌会议的相关信息，并将邀请国家臭氧机构和其相关行业参加此次展会。

Main Objectives of the Ozone2Climate Technology Roadshow and Industry Roundtable **臭氧气候技术路演和工业圆桌会议的主要目标**

- To outreach the available ozone and climate-friendly technologies to R&AC industry and professionals participating in CRH 2017, to showcase the leading role of industry pioneers that have developed or adopted climate – and ozone-friendly R/AC technology through a technology roadshow/exhibition.
通过技术路演和展会，向参加 2017 制冷展的制冷空调行业和专业观众推广可行的臭氧气候友好技术，展示开发和采用气候臭氧友好的制冷空调技术的行业领军企业。
- To engage industry decision makers in a discussion on the availability, affordability and need for zero-ODP, zero- or lower-GWP and more efficient alternatives in R & AC sector while considering the whole life cycle assessment of the climate impact of the final product.
引导制冷空调行业决策者在考虑最终产品整个生命周期的气候影响时，讨论零 ODP、零或更低 GWP 和更节能的替代品的可能性、经济性和需求。

Theme for Ozone2Climate Industry Roundtable discussions

臭氧气候工业圆桌会议讨论的主题

Taking the opportunity of the presence of leading industry and other stakeholders, the Industry Roundtable will focus on promoting investment, research and development in zero-ODP, lower- GWP and energy efficient technologies for the R/AC sector. Any innovative ideas and technologies that can inspire the Ozone2Climate cause would be welcomed, especially in China. The roundtable can focus on a single theme or an integrated approach which touches across various themes. The theme/multi theme options are as follows:

行业的主要力量以及利益相关方将会出席圆桌会议，借此机会，会议将重点讨论制冷空调行业在推进零 ODP、更低 GWP 和更高能效技术方面的投资、研究和发展的相关问题。任何能够启发臭氧气候保护的创新理念和技术都欢迎。圆桌会议可以关注一个单独的主题，也可以是涉及到多个主题的综合解决办法。议题如下：

- The progress of the negotiation on the Amendment to the Montreal Protocol on HFC phasedown, and the implications to the selection of the alternatives;
《蒙特利尔议定书》关于 HFCs 削减修订案的谈判进展以及对替代技术选择的影响；
- Updates on national and international policies, regulations and standards for alternative refrigerants;
国内外替代制冷剂相关政策、法规和标准的进展；
- Research and promotion progresses of ozone and climate friendly alternative technologies for air conditioner, heat pump and freezing & cold storage equipment at home and abroad;
国内外空调、热泵和冷冻冷藏设备中臭氧气候友好替代技术的研究和推广进展；
- Updates on the development of China HCFCs phase-out management plan stage II and the implementation of stage I;
中国 HCFCs 淘汰管理计划第一阶段的实施和第二阶段的进展；
- Promotion of the capacity building of the servicing technicians for the safe use of Ozone2Climate alternatives.
维修技术人员安全使用臭氧气候友好制冷剂的能力建设。

The roundtable will be a one day program with 6-8 presentations from government, industry, agency and institutions. The agenda will be developed following more consultations to be conducted by UNEP, FECO and CRAA with all stakeholders. UNEP, FECO and CRAA will invite experts to make presentations on the identified topics.

圆桌会议将历时一天，将有来自国内外的政府、行业、机构和科研院所代表的 6-8 个报告。日程将会由主办方以及所有利益相关者共同商讨确认。主办方会邀请行业专家对特定题目进行发言报告。

Target Audience

目标嘉宾

UNEP, FECO and CRAA will send invitation letters to the potential exhibitors to participate in the Roadshow. Finally, UNEP, FECO and CRAA will jointly select at least 40 exhibitors

to participate in the Roadshow. Only the invited exhibitors will be allowed to exhibit their products or displaying board in the Roadshow.

UNEP、FECO 和 CRAA 将会给潜在的路演参展商发送邀请函，并将联合挑选至少 40 家参展商参加路演，只有被邀请的展商可以在路演展台上展示样品或展板。

UNEP, FECO and CRAA will further separately invite the other Multilateral Fund implementing agencies (UNDP, UNIDO and World Bank), as well as government departments from bilateral agencies like GIZ, Japan, US who are interested in setting up their own booths to display their efforts, projects, and policies in promoting zero-ODP, lower-GWP and energy efficient alternatives. UNEP, FECO and CRAA will also invite the industry association from India, Brazil, US, the EU and Japan, Republic of Korea, Australia and Canada for their participation of the Roadshow as well as the roundtable.

UNEP、FECO 和 CRAA 将分别邀请其他的多边基金执行机构（联合国开发计划署、联合国工业发展组织和世界银行）以及来自双边机构（如德国国际合作机构、日本、美国）等有兴趣的政府部门，来展示他们在推广零 ODP 值、更低 GWP 值和高能效替代品方面的成就、工程项目以及政策。主办方还将邀请来自印度、巴西、美国、欧盟、日本、韩国、澳大利亚、加拿大的行业协会参加路演和圆桌会议。

The audience expected for the event is as follows:

活动期待的观众：

- Technical and business managers from chemical and equipment manufacturing industries producing and/or consuming HCFCs;
生产或使用 HCFCs 的化工和设备制造行业的技术经理和业务经理；
- Decision makers from the R&AC industries and companies;
制冷空调行业或企业的决策者；
- Technical experts engaged in technology research and development as well as assessment;
从事技术研究、推广以及评估的技术专家；
- Representatives from key importing and exporting companies and industries in the region.
领域内主要进出口企业和行业代表。

The Roundtable will be organized in a meeting hall near the venue of the Roadshow (to be specified later). One more roundtable on the good practice training would also be organized in the meeting area of the booth for the Roadshow.

圆桌会议会在路演临近的会议厅举办。同期，还将在路演展区的会议区举办维修良好操作论坛。

Expected Outcomes of Roadshow and Roundtable

路演和圆桌会议的预期成果

- Update the progress of the negotiation on the Amendment to the Montreal Protocol on HFC phasedown, and the implications to the selection of the alternatives;

《蒙特利尔议定书》的谈判进展和国际形势发展动态；

- Outreach available ozone- and climate-friendly technologies for HCFCs phase out;
推广已成熟的臭氧气候友好技术以淘汰 HCFCs;
- Well disseminated UNEP and industry's position on the HCFC alternative selection;
充分宣传 UNEP 和行业在 HCFCs 替代品选择上的立场;
- Update on progress of alternatives and their applicability for HCFCs Phase-out;
制冷剂替代进展以及替代制冷剂在 HCFCs 淘汰中的适用性;
- Consensus on the direction for the development and investments in zero ODP, lower- and zero-GWP, energy efficient alternatives to HCFCs;
在零 ODP 值、更低 GWP 值和更高效能 HCFCs 替代品的开发和投资方向上达成共识;
- Share knowledge on HCFCs alternative technologies and discuss potential business opportunities through the HCFCs-phase-out process;
分享 HCFCs 替代技术知识，讨论在 HCFCs 淘汰进程中的潜在商机;
- Identify the present, near-term and long-term need for policies, technologies and services implementing the Montreal Protocol to enable accelerated adoption of lower GWP non- ODS refrigerant based technologies and preventing a large scale phase-in of HFCs;
确认执行《蒙特利尔议定书》目前的、短期和长期的政策、技术和服务方面的需求，加速采用更低 GWP 值、零 ODS 制冷剂技术，避免出现大规模使用高 GWP 值 HFCs 的现象;
- Identify and discuss the emerging best practices case and make the green economy case for accelerated transitioning to environmentally sound financially affordable HCFCs alternatives.
讨论现有最好的实践案例，以及加速转换使用环保的、经济的 HCFCs 替代制冷剂的合理性。

Dates and Venue

路演及圆桌会议的时间和地点

Date: 12-14 April 2017

时间：2017 年 4 月 12 -14 日

Venue: Shanghai New International Expo Center, China

地点：中国·上海新国际博览中心