Hosted By:

Rising to the Challenge of a Warming World – Financing Net Zero Cooling

November 19th, 2020; 13:00 - 14:15 GMT – Virtual Webinar

Context of the Session

Cooling is a fast-growing industry, with a projected market value of $170bn by 2030. Cooling is central to human health and prosperity; ensuring access to nutritious food, critical medicines, and safe working and living conditions. However, cooling is also a significant contributor to climate change. The cooling sector needs to shift to net-zero emissions by 2050 to provide a climate safe world. This will require improved sustainable cooling policies, incentives, tools, innovations, and approaches with proactively shared knowledge that accelerates the mainstreaming of sustainable cooling.

Finance – both public and private – play an essential role in achieving a net-zero cooling pathway and providing cooling for all. Development Finance Institutions (DFIs) are key providers of catalytic finance, technical assistance, and, as standard setters, can deliver at the scale and speed necessary in achieving sustainable cooling for all whilst contributing to their alignment commitments to the Paris Agreement and the SDGs. Private sector investors, with assets under management representing several trillions of dollars globally, also have a critical role in delivering net zero cooling for all. Aside from the market opportunities created by sustainable cooling, for institutional investors, it would also contribute to their regulatory requirements to stress test and report on climate change risk.

This webinar, co-hosted by the Cool Coalition, Kigali Cooling Efficiency Program, and E3G, which can be viewed in full **here,** examined how finance can support the sustainable cooling agenda in an inclusive manner and how catalytic and institutional finance can work together to achieve net zero by 2050.

Report of the Session

Dan Hamza-Goodacre – Non-Executive Director of the Kigali Cooling Efficiency Program (K- CEP) and Cooling Lead for the COP26 Champions Team – opened the webinar remarking on the importance of public and private finance in achieving net zero cooling for all by 2050. He highlighted the **K-CEP NDC Support Facility for Efficient, Climate-Friendly Cooling**, which provides funding and guidance to organizations to support governments that integrate cooling solutions into their enhanced Nationally Determined Contributions (NDCs), will be supporting 10 countries in this capacity. To reach our target of net zero by 2050, he emphasized the need to

contemplate how we can leverage the work that has been achieved through National Cooling Action Plans (NCAPs) and NDC commitments and ensure that these can attract hybrid finance. He also announced the COP26 Champions Team will be launching the Pathways to Net Zero Cooling in December 2020 and underscored that, as we are now grappling with both climate change and a global pandemic, the importance of cooling has become ever more evident. For a vaccine to be delivered and administered, cold chains will be critical to maintaining the vaccines viability. This will need to be distributed equitably, efficiently, and cost-effectively to billions. Cooling is thus both an urgent solution to current challenges and a longer-term strategic priority for DFIs and private investors

Jonathan Birdwell – Regional Director for Public Policy in Europe, Middle East, and Africa, Economic Intelligence Unit (EIU) – set out the landscape of the cooling market and how it is projected to grow in the next decade, as well as presenting the findings from the EIU's new report on the **'Power of Efficient Cooling'**. The report shows how rising demand for electricity for cooling puts pressure on the power sector to deliver reliable, affordable and net zero power, outlining the cost savings and the environmental impact that can be made from switching to more efficient cooling whilst meeting net zero goals.

The EIU estimates that 4.8 billion new units of cooling equipment will be sold globally between 2019 and 2030, forecasting a total market value of $170 billion by 2030. Electricity demand for space cooling is expected to grow at an annual rate of 6.1% up to 2030. Under BAU, this would see an increase in the number of power outages, causing major disruptions to daily life, productivity, and health. The report emphasises that we need to invest in alternative ways to meet our cooling needs without placing additional burden on power infrastructure and global emissions. This includes reducing the need for air conditioning (AC) through passive design principles, improving AC unit efficiency with updated and improved internal components, and enacting standards and regulations. The report shows improving the efficiency of AC units could save $0.9trn and 2.0 GtCO2 by 2030 whilst measures to reduce the need for AC units could increase those savings to $3.5trn and 7.6 GtCO2.

The EIU report identifies ways to minimise the need for cooling and offers recommendations, underscoring the importance of private sector investments in innovative technologies and programs to enhance efficiency as well as multilateral development banks and international financial institutions as providers of technical and financial assistance to support investments in efficient equipment. The EIU will also be launching a further report, in conjunction with K- CEP, in December 2020 on the role of efficient cooling in supporting the transport sectors transition to net zero.

Dileimy Orozco – Senior Policy Advisor, E3G – '**Cool Development Banks**' - highlighted cooling as a multisector challenge which can provide significant opportunities for development banks. For MDBs, action on cooling offers an opportunity to deliver across three major international commitments including the Paris Agreement, the Sustainable Development Goals, and the Kigali

Amendment to the Montreal Protocol. The presentation noted that all major MDBs have majority shareholdings that support greater action on cooling having either ratified the Kigali Amendment or through the development of NCAPs. MDBs are well placed to address the sustainable cooling challenge being providers of support to countries to achieve their international commitments and realise future economic ambitions. As market makers and standard setters, they offer the crucial signals to direct investment in sustainable cooling and catalysing the flow of private finance into the direction needed for a net-zero transition.

Challenges to mainstreaming cooling into Bank operations as identified by the brief were introduced – these include: a lack of appetite with cooling perceived as niche and a subset of energy efficiency rather than as a cross-cutting issue; significant data gaps; small perceived project size of cooling specific projects; and a lack of standards. The presentation concluded with recommendations at the Institutional level, in relation to financial and technical assistance and the level of country engagement.

Summary of Panel Discussion

Discussion and Q&A with panellists moderated by **Sonia Medina, Executive Director, Children's Investment Fund Foundation (CIFF).**

World Bank Group (WBG) – Marcene Mitchell, Global Head of Climate Business, International Finance Corporation (IFC) – emphasized the need to meet growing cooling demand without increase negative impacts. The WBG has established a group wide approach and a global roadmap for sustainable cooling by 2050. She highlighted two IFC programs which align with the roadmap, and thanked the UK Government for their support. These include:

1. Supporting and accelerating innovation in cooling technologies through **TechEmerge**. TechEmerge is a matchmaking program connecting innovative companies worldwide with leading companies, energy service providers, and municipalities in emerging markets to pilot climate-smart, energy-efficient cooling technologies, products, and services to build commercial partnerships. The **TechEmerge Cooling Latin America and Caribbean Innovation Summit** is being held from November 30th through to December 12th 2020 and offers an opportunity to learn more about the program.
2. Reducing the need for cooling through better building design through the **EDGE Program** which looks to reduce the need for cooling in the first place through better building design. EDGE is a certification program noting that green buildings represent a significant investment opportunity amounting to over $24 trillion by 2030.

Offering lessons learnt in accelerating green efforts she signalled that innovation is still in its infancy with IFC mapping revealing ~300 companies innovating in the space with estimates of only 1000 globally. She noted that access to and awareness of new technologies is perhaps

lacking in emerging markets and underscored that the need to mainstream cooling and scaling financing of new technologies are important areas of action for MDBs.

African Development Bank (AfDB) – Gareth Phillips, Manager, Climate and Environment Finance. Climate Change and Green Growth Division – highlighted, within the AfDB, sustainable cooling is situated in the Renewable Energy and Energy Efficiency Division where it must compete for space amongst big-ticket issues such as energy access. In the African context, cooling is still perceived as a luxury however framing cooling as an adaptation technology can change the narrative, enabling cooling to be viewed through its impact on productivity and on human lives. AfDB has explored novel financing methods such as through Internationally Determined Mitigation Outcomes under Article 6 of the Paris Agreement. However, monitoring, reporting, and verification of emission reductions activities is judged to be more challenging than measuring adaptation benefits of cooling. The use of adaptation finance to support cooling technologies through the AfDB's novel **Adaptation Benefit Mechanism (ABM)** was introduced. The ABM relies on public finance to leverage private sector investment. AfDB is requesting developed country governments create an adaptation levy to support adaptation resilience. The ABM would enable off takers to negotiate a price to pay adaptation project developers on delivery of certified adaptation benefits which parties would then report as their contribution to the global goal on adaptation under Article 7 and 13 of the Paris Agreement. The off-take agreement can be used by project developers as collateral for raising debt and equity for adaptation projects. AfDB has also recently launched the **Pan-African Urban and Municipal Development Trust Fund**, which is producing sustainable urban design guidance.

European Bank for Reconstruction and Development (EBRD) – Matthew Jordan-Tank, Director, Sustainable Infrastructure Policy & Project Preparation – noted a long history in district energy with cooling becoming a focus in some geographies. EBRD has a healthy project space on clean cooling including **Abdali District Heating and Cooling** and via the new Green Energy Transition (GET) approach which mandates the Bank to lend no less than 50% to green projects. The EBRD's flagship **Green Cities** framework was also highlighted. The programme's objective, which now includes 43 municipalities and EBRD commitments of EUR 2 billion, is to build sustainable cities by identifying, prioritising, and connecting cities' environmental challenges with sustainable infrastructure investments and policy measures. EBRD will work alongside financial intermediaries under their GET approach to extend financing for SMEs to access sustainable cooling. It was also announced that EBRD has joined the Cool Coalition.

Closing Remarks

Claudia Canevari - Head of Unit, Energy Efficiency: Policy and Finance, Directorate General Energy, European Commission – acknowledged that cooling is an increasing area of importance for the EU. A key action is the revision of **the energy efficiency directive** which Ms. Canevari invited all those attending to share their insights and input via the consultation closing in

February 2021. The EU is also finalizing discussions in relation to the adoption of the Budget for the 2021-2027 period, an important component of which is the recovery and resilience facility. This facility is linked to recovery from the crisis, with 30% of financing to be directed to green investments in which cooling and heating are expected to feature. To conclude the session, two questions were posed to the audience:

1. What approaches should we take to tackle the increase in energy consumption associated with cooling and how could these be reflected in the upcoming revision of the energy efficiency directive, as far as the EU is concerned?
2. How could we use waste heat from cooling in buildings and industry in a cost-effective way?

Key Takeaways and Next Steps

- Innovative instruments are being developed by MDBs to leverage private sector finance but more needs to be done to accelerate and scale progress, with innovation around sustainable cooling remaining in its infancy.
- All panellists noted the importance of passive measures and efficient building design. It was also underscored that there is no panacea. A solution in one location will not be applicable in every situation.
- There was a consensus that Africa is an underserved region. One concept highlighted in the panel discussion was on affordable buildings with passive cooling design being funded through a results-based payment.
- It was stressed that we need to think for the future. What we build today cannot lock- in emissions for coming decades including retrofitting and building new with technologies that are not Paris Aligned.
- The moderator closed the panel emphasizing that mainstreaming sustainable cooling is possible and advantageous to the agendas of financial institutions with technology and financing innovation rising to meet the challenge.
- The European Commission representative called for input to the EU **Energy Efficiency Directive** consultation closing in February 2021.
- The K-CEP representative flagged for attendees the upcoming launch of the COP26 Champions Team's Pathways to Net Zero Cooling in December 2020.