



基加利修正案及可持续制冷倡议

Kigali Amendment and Sustainable Cooling Initiative

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基加利修正案实施进展 (Progress as of April 2024)



- 157个国家签署加入基加利修正案并报告HFC基线年数据
 - 157 countries ratified the Kigali Amendment and reported the baseline data to the Ozone Secretariat
- 多边基金执委会就第一阶段项目资金指南部分达成协议并批准了23个国家提交的第一阶段实施计划（KIP）
 - The Ex.Com of the MLF concluded the funding guideline of servicing sector and most of investment activities. 23 KIPs were approved by the MLF.
- 蒙特利尔议定书缔约方会议以及多边基金执委会就在基加利修正案框架下提高能源效率进行了广泛讨论并开设资金窗口，批准了首批项目建议
 - Extensive discussion on enhancing EE while phasing-down HFCs was conducted by the MP institutions. MLF sets up two funding windows for EE activities and approved project proposals



基加利修正案实施进展- HFC consumption data

tons CO₂-eq

Region	2011	2012	2013	2019	2020	2021	2022	Baseline	2022 vs Baseline
EU	173174858	159417638	163120714	67513937	79428690	58966326	65711431	163576330	40% of its baseline
Japan	65,155,058	55,380,454	58,017,920		41,846,151	35,703,517	31,901,881	71,521,258	45% of its baseline
US	246145757	243012490	288752968					302538289	
China	529799116	580648012	666491379	905144032					73.6% of its baseline
							2022		
							NA5	178272664	This data doesn't include non-Parties and the US
							A5	1285137145	

中国履约行动的全球影响

Global impact of China's action on the Kigali Amendment



Status Analysis

- Air conditioners currently consume 20% of the electricity used in buildings around the world and their use is expanding more rapidly than any other building appliance. IEA estimated that global energy demand for space cooling is expected to triple by 2050 (IEA report, The Future of Cooling, 2018)
- According to FAO, food waste accounts for approximately 8% of global greenhouse emissions. Almost one third of food produced for human consumption goes to waste and the lack of effective and efficient refrigeration systems is a leading contributor to this waste, directly resulting in the loss of 526 million tons of food production (12% of total) in 2017 (Cool Coalition, 2022).

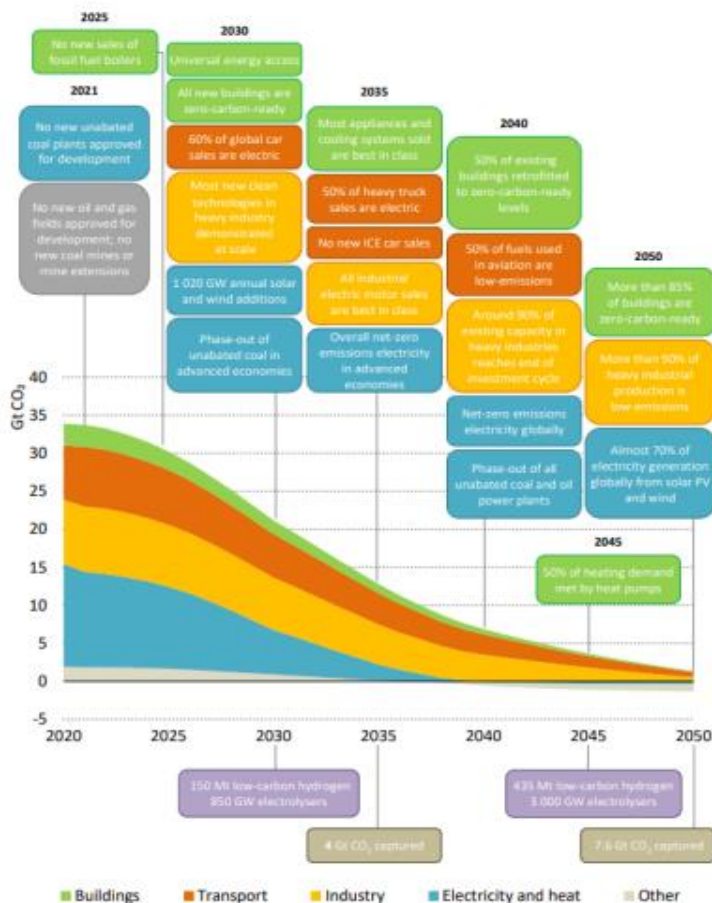
China

- ❑ HFCs production 生产量~80%
- ❑ HFCs consumption 消费量约占全球1/3
- ❑ HFCs emission mitigation and energy efficiency improvement is important for China's NDC HFC减排和提高能效对中国气候变化国家自主贡献有重要影响
- ❑ Largest room AC producer, consumer and export country 最大房间空调器制造国和出口国
- ❑ Largest vehicle producer, consumer and export country 最大汽车制造国和出口国

碳中和与可持续制冷 Net Zero and Sustainable Cooling



IEA Net Zero Scenario – milestones & takeaways



Key takeaways:

• Drastic energy sector transformation

- 3X renewable installs by 2030
- No need for new fossil fuel supply

• Significant co-benefits

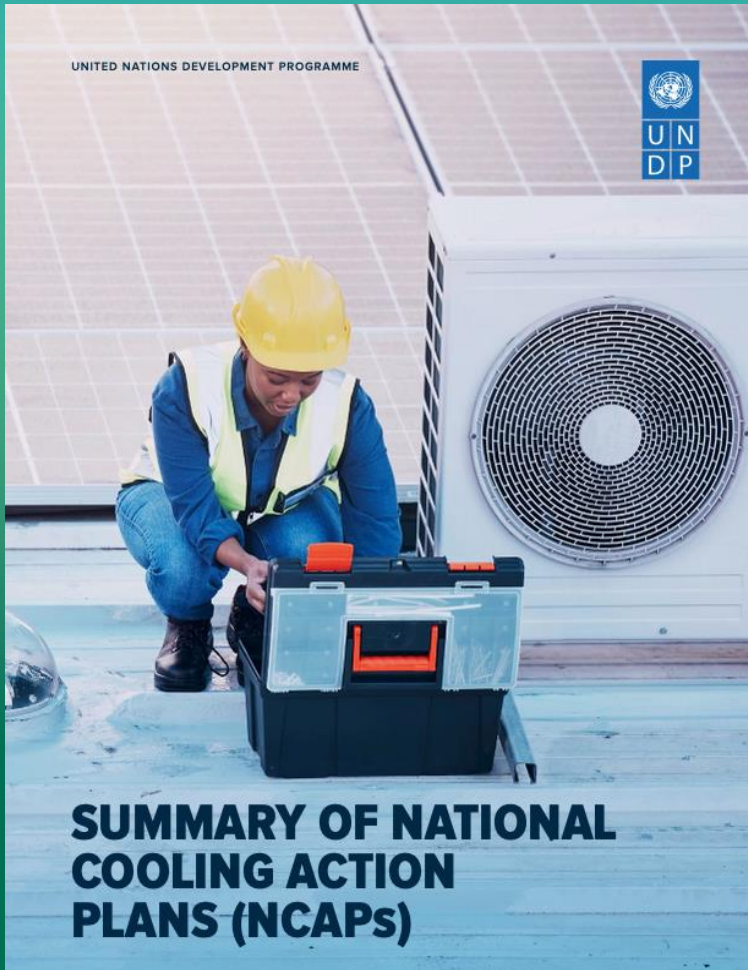
- Universal electricity access by 2030
- Add 0.4%/year to global GDP growth
- 14 million new jobs by 2030
- 2 million fewer premature deaths from air pollution

• Critical assumptions:

- International co-operation is pivotal
- Heavy reliance on bioenergy – is this feasible?
- Heavy reliance on carbon capture and storage (CCS) – is this feasible? What other solutions are possible?

- ❑ 制冷剂良好管理，减少具有温室效应的制冷剂的使用和排放
- ❑ 提高空调和热泵的能源效率
- ❑ 支持电动车制冷和制热解决方案
- ❑ 提高冷链的能源效率
- ❑ 与可再生能源相结合的制冷制热和能源综合利用
- ❑ 推动循环经济：生命周期管理
- ❑ 碳捕获CCUS

可持续制冷倡议 Sustainable Cooling Offer



UNDP MLF portfolio

- US\$ 1,017,664,342 grant approvals by the MLF since 1991 for 2646 projects for 111 Countries. Currently, UNDP is supporting 39 countries on the KIPs, and 43 countries for HPMPs.

UNDP GEF Cooling portfolio

- US\$ 45 million grant approvals for 32 projects for 10 countries.
- Project concept of the KIP for Tajikistan was approved by GEF in Feb 2024

Other Partnerships

- More than US\$ 25 million from CCAC, K-CEP, Australia, Canada, France (FFEM), Italy, New Zealand, IKI, EU for 35 countries

Flagship integrated programmes

- Cool-Up (funded by IKI, Turkey, Lebanon, Egypt, Jordan)
- AGORA (funded by FFEM, Nigeria, Ghana)
- District Cooling (funded by CCAC, MLF and EU, focusing on SIDS)
- National Cooling Action Plan (12 countries)
- Digital tools (UNDP funding window)
- Secondary Metal Project for China (GEF)
- SWAP (GEF Global, Shifting to Zero Waste Against Pollution)
- Life cycle management of Plastics for China (GEF)

STRUCTURAL
INTERVENTIONS

Supported by Cross-Cutting Enablers



1

**Sustainable (Green)
Finance**
绿色金融

2

**Strategic
Innovation**
关键创新

3

Digitalization
数字化转型

- ✓ 投资组合（顶层设计和总体战略指导下的项目规划）： Portfolio Approach
- ✓ 推动政策的协同增效（制冷剂/能效/循环经济/智慧城市/无废城市）： Policy coherence
- ✓ 开发实施系统性的综合项目实现公共利益最大化： Integrated programme
- ✓ 南南合作： South-south cooperation

谢谢

