

OEWG48 SIDE EVENT

Advancing Energy Efficiency in Refrigeration and Air Conditioning Manufacturing:

Lessons Learned and Pathways for Article 5 Countries

The side event will highlight how projects funded under the Multilateral Fund can be integrated to support a systems approach across the cooling value chain, linking manufacturing, standards, policy implementation, servicing, and market transformation to deliver sustainable long-term outcomes.

These varying stages and stakeholder roles provide a unique opportunity to exchange experiences, identify common barriers, and define practical pathways for scaling up energy efficiency interventions in RAC manufacturing while phasing down HFCs. This side event will showcase how Article 5 countries are integrating energy efficiency into RAC manufacturing in the context of HFC phase-down. It will demonstrate practical approaches including the development and enforcement of minimum energy performance standards (MEPS), the role of institutional coordination, and the use of demonstration projects to validate low-GWP and energy-efficient technologies. Country experiences from Egypt, Bangladesh, Tunisia, and Bosnia and Herzegovina will be presented, alongside private sector insights, highlighting how policy frameworks, data systems, and industrial practices can be aligned to accelerate energy efficiency improvements. The event will also demonstrate how Multilateral Fund (MLF)-funded projects can be integrated to promote a systems approach for transitioning towards sustainable outcomes across the cooling value chain.

Countries supported by UNIDO are at different stages of readiness with their goal of transitioning to low-GWP refrigerants, integrating energy efficiency into manufacturing processes, product standards, and market transformation:

- **Bangladesh** is in the planning phase of integrating energy efficiency into RAC manufacturing, targeting 20 local manufacturing companies;
- **Ecuador** is exploring and implementing approaches to strengthen policy frameworks, industrial practices, and market readiness for energy-efficient RAC technologies.
- **Egypt** is advancing implementation, including the development and enforcement of energy efficiency standards and MEPS, supported by national institutions such as the Egyptian Organization for Standardization. The project covers domestic refrigeration and residential air conditioning manufacturing sub-sectors and targets 19 enterprises in the two sub-sectors with a total of 28 manufacturing facilities. In parallel, given the importance of engaging with the private sector for market uptake and sustainability of energy-efficient technologies, companies such as Fresh are actively adapting manufacturing practices to comply with emerging standards and improve product efficiency;
- **Tunisia**, under its Kigali Implementation Plan, is converting seven manufacturing companies to low-GWP technologies. Following conversion, these enterprises are also expected to start manufacturing products with higher energy efficiency;

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Proposed Agenda

TIME	SESSION	LEAD
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13:00 - 13:30	Lunch and networking	All participants
13:30 - 13:40	Lessons learned from project reviews in supporting energy efficiency in RAC manufacturing <i>Focus: Financial opportunities under Decision 94/60 and future support pathways.</i>	Mr. Balaji Natarajan, MLF Secretariat
13:40 - 13:55	Policy implementation, MEPS enforcement and monitoring in Egypt's RAC sector	Mr. Amir Nakhla, UNIDO
13:55 - 14:10	Private sector perspective: Transitioning to energy-efficient RAC manufacturing	Ms. Maro Nagy, Fresh
14:10 - 14:40	Strategic country dialogue: from planning to scalable energy-efficient RAC manufacturing <i>Panellists:</i> • Bangladesh • Ecuador • Egypt • Tunisia	Facilitator: Liazzat Rabbiosi, UNIDO
14:40 - 14:55	Q&A and interactive discussion	All participants
14:55 - 15:00	Closing Remarks	Mr Yunrui Zhou, UNIDO

Format

The session will combine technical presentations and a moderated panel discussion, with interactive engagement through Q&A.

Expected Outcomes

- Improved understanding of energy efficiency integration in RAC manufacturing;
- Shared lessons across countries at different implementation stages;
- Identification of data gaps and technical needs;
- Strengthened collaboration between countries and stakeholders;
- Inputs for future project design under the Multilateral Fund.