COLD CHAIN INNOVATION HUB PHILIPPINES

Global Partnership for Improving the Food Cold Chain Project: Energy Efficiency and Safety Standards

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Project Context

- Nationally Determined Contribution (NDC) was submitted to UNFCCC in 2021 with a goal of reducing the country's GHG emission by 75% by 2030 (72.29% conditional, 2.71% non-conditional)
- Availability of incentives for energy efficient and low-carbon cold chain technologies through the RA 9513 Renewable Energy Act of 2008 and RA 11285 – Energy Efficiency and Conservation Act
- The Philippine Cold Chain Industry Roadmap and the National Cold Chain Committee (NC3) was launched to introduce reforms in the commercial/industrial refrigeration sector
- Kigali Amendment was ratified by PH in June 2022; freeze on the baseline consumption, and eventual phase down of HFCs will start in 2024

Article 5 Parties – HFC phase-down (Kigali Amendment)

	Article 5 Parties: Group 1 *Philippines and other A5 Parties		Article 5 Parties: Group 2 (10 Parties)	
Baseline Years	2020, 2021 & 2022		2024, 2025 & 2026	
Baseline Calculation	Average production/consumption of HFCs in 2020, 2021 & 2022 Plus 65% of HCFC baseline production/consumption		Average production/consumption of HFCs in 2024, 2025 & 2026 Plus 25% of HCFC baseline production/consumption	
Reduction steps Freeze	2024		2028	
Step 1	2029	10%	2032	10%
Step 2	2035	30%	2037	20%
Step 3	2040	50%	2042	30%
Step 4	2045	80%	2047	85%

Global Partnership for Improving the Food Cold Chain in the Philippines

- **Funding:** Global Environment Facility (GEF)
- **Funding amount:** 2M USD + Co-financing (around 25M USD)
- **Government partner:** Department of Environment and Natural Resources of the Philippines (DENR)
- **Implementing agency:** United Nations Industrial Development Organization (UNIDO)
- **Key executing partners:** TESDA, shecco (others: Cold Chain Innovation Hub, Financial Institutions)

Global Partnership for Improving the Food Cold Chain in the Philippines

Goal:

Identify, develop and stimulate the development of **low-carbon, energy efficient refrigeration innovation technologies and business practices** in the Philippines for use throughout the food cold chain whilst increasing food safety and security.

Aim to establish a global partnership between the public sector, the private sector and financing institutions for promotion of investment and support of best available energy-efficient design technologies and practices transfer.

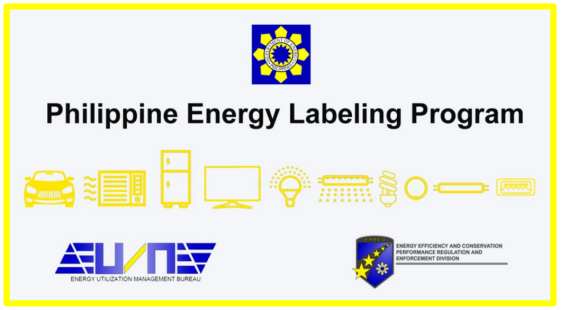
To address

- Impacts of refrigeration to the global warming through the emission of refrigerants and through energy consumption resulting to green house gas emission
- Food losses due to inadequate cold chain equipment which is affecting both the farmers and consumers.

Global Partnership for Improving the Food Cold Chain in the Philippines

Component 1. Policy and Regulatory Assessment

Regulatory, legal and voluntary measures are adopted to support the use of low GWP and energy efficient technology within CC



- PNS IEC 60335-2-89 – Safety standard for commercial refrigerating appliances
- Support for the development of minimum energy performance policies for cold storage warehouses and commercial refrigeration
- Support for the development of a **Cold Chain Integrated Supply Chain Solution (DeliverE 2.0)** for Evidence-based Policy Making and Investment Programming

Global Partnership for Improving the Food Cold Chain in the Philippines

Component 2. Awareness and Capacity Building

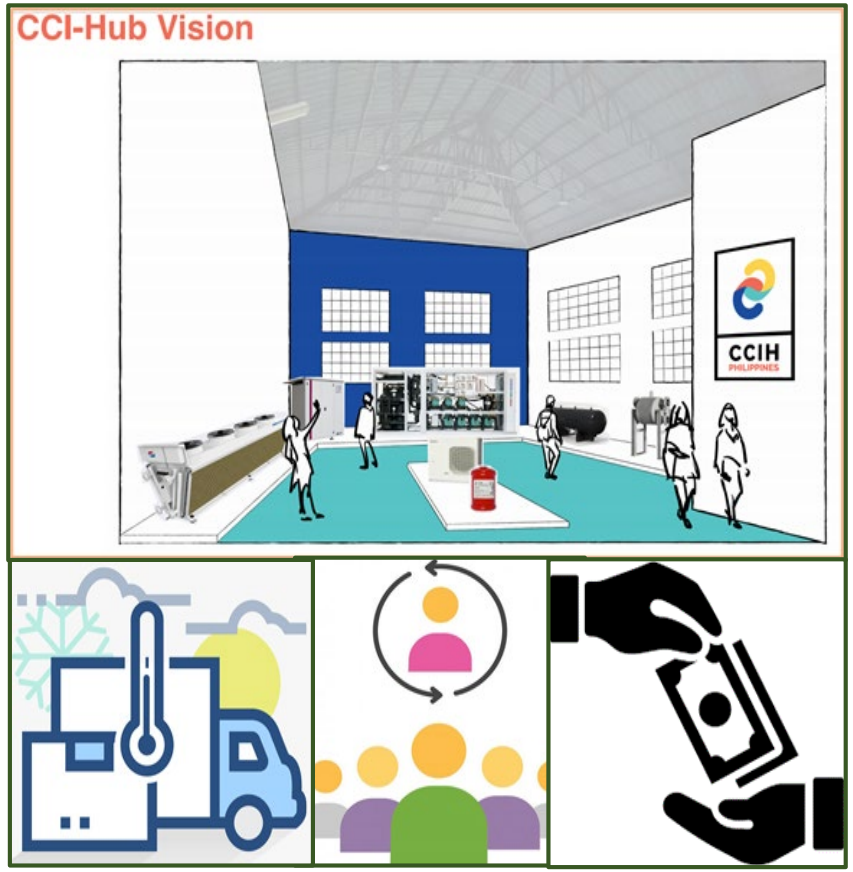
Awareness, knowledge and capacity in the use of energy-efficient, climate-friendly and safe alternatives in the food cold chain industry is improved and demand has increased.

- Methodology to monitor and analyze efficiency and carbon impact of each part of the CC
- Recommendations to optimize system operation
- Education of key stakeholders on energy-efficient and climate-friendly cold chain technologies and practices
- Education & high level training for local engineers, system suppliers and end-users on the availability and use of global innovative CC technology

Global Partnership for Improving the Food Cold Chain in the Philippines

Component 3. Technology Transfer

New technologies made available in the country and partnerships between key stakeholders established; financing scheme to develop bankable investment projects put into practice



- "Cold Chain Innovation Hub (CCI Hub)" as ecosystem of technical resources technology promotion, knowledge sharing and stakeholder collaboration
- Technology showcase for education and training for local engineers and technicians

- Demonstration of innovative systems and improvements, as well as other projects adopting low-carbon refrigeration technologies.

- Capacitate businesses to develop bankable projects: Provide technical assistance and feasibility study support for CC projects to ensure investment-readiness
- Facilitate project-to-finance match-making

Future and Innovative Cold Chain Industry Technologies thru the Cold Chain Innovation Hub

Promoting Energy Efficient and Low-GWP Cold Chain Technologies

Energy Efficiency and Safety Standards

Challenges and opportunities

Challenges	Opportunities
• Unless adopted by regulatory agencies, standards remain voluntary • Once standards are adopted as regulation, entities subject to it have difficulty in complying with the requirements • Lack of staffing on the side of the regulator • Harmonization and alignment of regulatory agencies (cold chain being a broad sector) to improve compliance processes/"ease of doing business" • On implementing EE standards in the cold chain: need to improve testing capacity	• For EE, there is an existing law, policy framework and instruments implemented by EUMB • For standards, updates by BPS are timely • E-governance - Online registration; availability of information on compliance processes • Creation of inter-agency technical working groups with a clear mandate, roles, outputs and timelines • Integrated labeling standards for energy efficiency and refrigerant GWP

Thank you for listening

CCIH
PHILIPPINES

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