

Global Partnership for Improving the Food Cold Chain in the Philippines

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| Activity | Energizing the Cold Chain Round Table Discussion |
| Date/Time | September 15, 2022 |
| Venue | Makati Sports Club |
| Topic/Agenda | Highlights |
| Welcome Remarks | <ul style="list-style-type: none"> • CCAP President Mr. Anthony Dizon welcomed the participants. He discussed the objectives of the round-table discussion including the questions that are expected to be answered by the end of the session. He gave an overview of the topics to be discussed within the afternoon. |
| Solar NRG Philippines | <ul style="list-style-type: none"> • SolarNRG Philippines discussed their operations which include design and engineering, procurement and installation, importation, construction and installation as well as operation and maintenance of solar photovoltaic (PV) systems. • Benefits of choosing SolarNRG including performance monitoring for all commercial clients, very competitive prices and high component warranties, among others. • It has 11 cold storage warehouse clients with a total of 7,754 kWp installed capacity which generates 10 gWh per year. This is equal to approximately 3.8 M CO2 saved annually. • Department of Energy (DOE) Department Circular (DC) 2020-12-0026 requires new and existing buildings to use PV and other renewable energy technologies according to the guidelines on the energy conserving design of buildings • Financial benefits of installing solar panels includes reduction of electricity bill by at least 30-50%, return on investment achievable as early as the 4th year; flexible payment options (no CAPEX required); , and, energy savings for at least 30 years • There are also solutions presented for concerns such as roof maintenance, structural integrity, tapping electrical system, power supply stability and warranty among others. Case studies were also presented. |
| De-risking Instruments for Green Energy and Cold Chain Projects | <ul style="list-style-type: none"> • Philippine Guarantee Corporation Senior Vice President Mr. Celso Gutierrez started his presentation by explaining the mandate of his organization. He also discussed the measures undertaken in providing key assistance during the initial phase of the pandemic. He also explained the outlook in a post pandemic world including challenges, opportunities and impact, • He discussed their facilities which include MSME Credit Guarantee Facility, Medium and Large Enterprises Credit Guarantee and Sustainable Energy Credit Guarantee Facility • Moving forward, PhilGuarantee shall continue to pave the way for its mandate as the Principal Agency for State Guarantee in the Philippines for the private sector by continuing to promote, encourage and facilitate trade and investment guided by the Investment Priority Program of Government; introducing other credit guarantee programs to support growth of enterprises, renewable energy and energy-efficiency projects, logistics and supply value chain; achieving business resilience in line with the strategic |

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| | <p>direction of sustainability with better portfolio management, process enhancements and people development for our stakeholders and supporting development finance objectives, given its stability and reliability as a bigger, better and stronger state credit guarantor.</p> |
| <p>Georg Fischer Piping Systems: The Revolution for Efficient Cooling</p> | <ul style="list-style-type: none"> • Engr. Junior Rasay starting his presentation by giving an overview of their company which was founded in 1902. Currently they are serving the following markets: building technology, chemical process, data centers, energy, food and beverage, marine, microelectronics, water and gas distribution and water treatment • He explained challenges on the cooling lines which includes corrosion, condensation, damaged insulation and incrustations • Benefits of pre-insulated piping systems are: 30% more energy efficient, 50% faster to install, 60% lighter than steel, 100% corrosion free and 25 years service life. |
| <p>Green Archipelago: The Future of Renewable Energy in the Philippines</p> | <ul style="list-style-type: none"> • Atty. Jose Layug Jr., Senior Associate at Puno Law and President of Developers of Renewable Energy for AdvanceMent, Inc. (DREAM) started his presentation by providing an overview of the energy landscape through a comparative list of our generated and installed capacity, and the percentage coming from renewable sources. He noted that the percentage of RE generated capacity have decreased. He also pointed out aging power plants, which will become a serious problem in the coming years. • He also discussed an energy demand and supply outlook which projects that the country will need an additional 43.765 MW additional capacity by 2040. • He discussed Biofuels Act of 2006 (Republic Act No. 9367) which provides fiscal incentives and mandates the use of biofuel-blended gasoline and diesel fuels and the Renewable Energy Act of 2008 (Republic Act No. 9513) which provides fiscal and non-fiscal incentives to private sector developers and manufacturers. RE Act aims to accelerate the development of the country's renewable energy resources by providing fiscal and non-fiscal incentives to private sector investors and equipment manufacturers/ suppliers. • Fiscal incentives include 7-Year Income Tax Holiday; Duty-free Importation; VAT-free Importation; Special Realty Tax Rate = 1.5 %; Net Operating Loss Carryover; 10% Corporate Tax Rate after ITH; Accelerated Depreciation; Zero Percent VAT on RE Sales & Purchases; Cash Incentive = 50% of UC for Missionary Electrification; Tax Exemption on Carbon Credits; and, Tax Credit on Domestic Capital Equipment & Services |

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| | <ul style="list-style-type: none"> • Non-fiscal incentives include the Renewable Portfolio Standard (RPS); Feed-in Tariff Scheme; Net-metering and Green Energy Option (GEOP) |
| <p>Creating an Enabling Policy Environment for Sustainable and Climate-friendly Cold Chains in the Philippines</p> | <ul style="list-style-type: none"> • Global Partnership for improving the Food Cold Chain in the Philippines (FCC) Project’s National Policy and Regulations Coordinator Mae Valdez started her presentation by providing a context for the project. • To address the ‘hole’ in the ozone layer, UN convened nations to agree on the Montreal Protocol. The Philippines signed the Montreal Protocol in 1988 and ratified it on March 21, 1993. The country’s commitment is to phase out its consumption of all ozone depleting substances (ODS) which include CFCs and HCFCs used in refrigeration. Since ODS are not produced in the Philippines, government regulation is focused on the import, processing, sale and disposal of such chemicals. DENR issued a ban on the importation of CFCs in 2012, and freeze on the baseline consumption of HCFCs 2013. CFCs are considered phased out in the Philippines. • ODS substances were replaced by HFCs, however, these were found to have high global warming potential (GWP). The Kigali Amendment aims to phase down the use of HFCs. Without the Kigali Amendment, HFC emissions would add the equivalent of an additional 78 to 90 GtCO₂e for all cooling sectors by 2050 which could undermine the goals set by the Paris Agreement. • The government has ratified the Kigali Amendment in June 2022. As an Article 5 country, the Philippines’ schedule for the Kigali Phasedown will start in 2024 by freezing baseline consumption of HFCs, then gradually reducing consumption/importation by 10% in 2029, 30% in 2035, 50% in 2040 and 80% in 2045. • The “Global Partnership for improving the Food Cold Chain in the Philippines” project is implemented by the United Nations Industrial Development Organization (UNIDO) together with the Department of Environment and Natural Resources of the Philippines (DENR), Technical Education and Skills Development Authority (TESDA) and shecco with the Global Environmental Facility (GEF) as the funding partner. It seeks to 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. The project promotes the use of natural refrigerants CO₂ and hydrocarbons. • In terms of policies, the project has: facilitated the updating of PNS IEC 60335-2-89 increasing the charge limit for flammable |

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| | <p>refrigerants; conducts an assessment on the MEP for Cold Chain as basis for a Department Order to be issued by EUMB, as well as data collection to propagate the DeliverE 2.0 platform to be used as basis for investment prospectus of the BOI, and is exploring the adoption of updated standards with other regulatory bodies (EMB, NMIS, etc.).</p> |
| <p>Overview of RA 11285 and Energy Efficiency in the Cold Chain Industry</p> | <ul style="list-style-type: none"> • Dr. Aldrin Calderon started his presentation by defining the RA 11285. The EE & C Act institutionalizes energy efficiency and conservation, enhance the efficient use of energy, and grant incentives to energy efficiency and conservation projects • RA 11285 covers Designated Establishments (DEs) with more than 500,000 kWh energy consumption per year both for electricity and fuel use. They are encouraged but not mandated to integrate an energy management system into their business operation. • Des that are classified as Type 1 and Type 2 are required to engage an Energy Conservation Officer and Energy Managers, respectively. • DEs are obligated to conduct an energy audit every 3 years by engaging either a certified energy auditor or an accredited ESCO and submit the report to DOE • EE & C projects that can be implemented in the main/head office and measures that can be cascaded to the stores or remote facilities • DEs should also integrate an Energy Management System Policy into the business operation based on ISO 5001 framework or any similar framework |

PHOTO DOCUMENTATION



