

Topic 1: 100% GHG-Emission-Free Cooling: The Solar Ice Maker Technology Cooperation

Abstract:

How to expand cold chain access for coastal communities in the world's largest island nation?

This question initiated a multi-year, multi-stakeholder technology cooperation involving applied research and leading technology providers in green cooling and solar energy that would eventually produce a new technology adapted for Indonesia's island context – a solar-powered ice maker.

The presentation will provide insights in the technical background of the innovation (100% solar powered dynamic off-grid ice production of 1 ton per day without a main battery) and show how the project managed to bring together 9 international partners that would each contribute not only to funding and bringing an cutting-edge prototype into operation in a fishery village, but also establish manufacturing know-how in Indonesia and win the UNDP Ocean Innovation Challenge 2021.



Speaker: Frank Stegmueller

Frank has an engineering degree in Energy and Environmental Management and will soon be closing in on 15 years of experiences in the power sector. Coming from Germany, he witnessed the country's energy transition first-hand while working with its 3rd largest energy utility EnBW AG for 7 years. Building on this, Frank completed an intercultural engineering degree at the Europe University of Flensburg, leading him to work with Germany's state-owned agency for international cooperation, GIZ, in Jakarta, Indonesia. Since 2017 he is supporting the energy transition of ASEAN's largest economy, focusing on renewable energy based electrification, private sector support, innovation and international technology cooperation. As of 2023, Frank is the commission manager for the "Solar Cold Chains for a Green Economy" Project aiming to rollout green cooling as a means of CO₂ mitigation.

Topic 2: Unlocking investments in energy efficiency through innovative business models: "Servitisation"

Abstract:

Energy efficiency investment is hindered by several barriers, such as competing investments with higher priority, lack of access to capital and lack of knowledge of efficiency improvement opportunities, which are impacting most significantly smaller businesses.

The implementation of innovative business models, such as the servitisation, or pay-per-use model, can enable stakeholders to access high-efficient solutions, relieving the burden of investment and operation of such systems. Examples will be given such as the Cooling-as-a-Service (CaaS) model, the program combining cold storage to prevent post-harvest food loss with machine learning (Your Virtual Cold Chain Assistant project) and the general tools and changes in mindset required from clients to solution providers to financiers for the adoption of such a business model.



Speaker: Livia Miethke Morais

Livia is a Chemical Engineering with the MEng EEM degree earned in 2015 after her MBA of the Bristol Business School (UK) in 2014. Originally from Brazil and currently based in Basel, Switzerland, Livia is Sustainable Finance Team Lead at Stiftung BASE. Since 2018, she has been leading the implementation of innovative business models across Europe and, more recently, consulting banks in Latin America on their strategy for reaching a Net Zero emission portfolio, working closely with UNEP-FI and the IDB. Since 2023 Livia has been Chairperson of the IEEFP (International Energy Efficiency Financing Protocol) Committee of the EVO (Efficiency Valuation Organisation), bridging the dialogue gap between financiers and energy efficiency solution providers. Livia has gathered 15 years of international experience in the field, having previously worked for 5 in environmental consultancy in Brazil and at the World Bank Environment and Natural Resources Department in Washington DC.