EUROPEAN COMMISSION
Executive Agency for Small and Medium-sized Enterprises
Department B - LIFE and H2020 Energy, Environment & Resources
Unit B3 - LIFE and CIP Eco-Innovation

LIFE16 Kick-off meeting
Climate Change Mitigation (CCM)

19-20 October 2017
Venue: *MCE Conference & Business Centre, Rue de l'Aqueduc 118, 1050 Brussels*

Project Summaries

Group I - Industry, F-gases, renewables

LIFE16 CCM/BE/000054 – LIFE FRONT
Flammable Refrigerant Options for Natural Technologies – Improved standards & product design for their safe use
A rising number of refrigeration, air conditioning and heat pump (RACHP) units and their negative contribution to direct GHG emissions from refrigerant leakage and illegal venting will endanger the EU's 2030 climate targets on GHG reductions, and more concretely that of the EU F-Gas Regulation 517/2014. It moreover has a negative impact on reaching energy efficiency targets. Hydrocarbons (R600a, R290 or R1270), with a GWP of 4, are a direct solution to reduce GHG emissions at high energy efficiency levels. However, they face strong barriers through standards, legislation, capacity and market barriers. The main objective of the LIFE FRONT project is to reduce some of these barriers. The project also aims at increasing the availability of suitable alternatives by improving system design to address flammability risks to encourage the use of climate-friendly alternatives to fluorinated gases.
Coordinating beneficiary: Shecco Sprl
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LIFE16 CCM/BE/000120 - LIFE BIPV
Demonstration of an innovative Building Integrated PhotoVoltaic (BIPV) system toward net-zero-energy buildings
Buildings use large amounts of energy for their operations (i.e. heating/cooling). They are responsible for 36% of CO_2 emissions and 40% of energy consumption in EU. Energy production on-site is a sustainable strategy that will enable existing and new buildings decreasing their climate change impact. More specifically, building integrated photovoltaic (BIPV) approaches have an important role to play in increasing the renewables' share in the EU grid and the buildings' efficiency throughout EU. In line with this statement, the LIFE BIPV project aims to demonstrate the technical and economic validity of a new BIPV façade. A direct CO_2 emission decrease of 34 % per building and a decrease of the carbon footprint of the solar harvesting technology > 50 % (c-Si PV vs thin films) are expected.
Coordinating beneficiary: AGC Glass Europe SA (AGC)
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LIFE16 CCM/DE/000059 – CLEANOX

Cleanest oxy-fuel combustion technology with radiation based waste heat recovery for glass melting furnaces

The glass manufacturing industry belongs to Energy-Intensive industry (EII) and group is considered as exposed to a significant risk of carbon leakage. The LIFE CleanOx project aims to demonstrate the validity of a new oxy-fuel combustion technology to reduce the CO_2 emissions of the glass sector by 30 % (compared to air combustion technologies) and NOx emissions by up to 90 %.

Coordinating beneficiary: Pasabahce Bulgaria EAD (PB)

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LIFE16 CCM/DE/000085 – GREEN POWER

Demonstration of an innovative energy conversion technology for waste heat recovery in the glass industry and other EIIs

Industry accounts for about one-third of global final energy use and almost 40% of total energy-related CO_2 emissions. Despite great efforts made in recent decades to increase energy efficiency and decrease CO_2 intensity, this progress has been offset by growing industrial production worldwide. Making substantial cuts in industrial CO_2 emissions will require the adoption of best available technologies (BAT) and the development and deployment of new technologies. The LIFE GREEN POWER aims at implementing a Waste Heat Recovery (WHR) technology at the pilot scale in the container glass industry. The demonstration aims at proving the economic/technical validity (efficiency > 15 %) of the Green Power technology as an easy-to-use and low-risk technology with a pay-back time < 3 years.

Coordinating beneficiary: Glashütte Freital GmbH (GHF)

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LIFE16 CCM/FR/000104 – LIFE WHIN

Waste Heat recovery in silicon Industry

Energy-intensive industries (EII) in Europe are characterized by high levels of energy consumption and CO2 emissions. Energy production costs effectively account for up to 40% of total production costs in some EII, while EII emissions represent a quarter of total EU CO_2 emissions. The EU silicon sector (23 companies, 50 plants in 14 countries, 8000 employees) has been recognized by the Commission as an energy-intensive sector exposed to a high risk of carbon leakage. The LIFE WHIN project aims at implementing a first full-scale pilot demonstration of a new cost-effective solution based on a Waste Heat Recovery (WHR) system and an Organic Rankine Cycle (ORC) for the silicon industry. The system is expected to lead to a 26 % reduction of $C0_2$ emissions.

Coordinating beneficiary: DALKIA

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LIFE16 CCM/IT/000027 – LIFE I-REPRO

An innovative industrial process for production of low-GWP refrigerants for industrial regeneration and air conditioning

Industrial Refrigerants, mainly hydrofluorocarbons (HFCs), are an integral part of industrial society, being main chemical components for systems such air conditioning and food processing. The EU industrial refrigeration is a pivotal sector for the EU area (market size of about €5 billions) with a growth rate expected at 6% between 2015 and 2020. However, HFCs are considered harmful to the environment, being source of substantial GHG emissions (> 50 $MtCO_2$-eq/year) and thus global warming. The LIFE I-REPRO project intends to demonstrate the sustainability and efficiency of an innovative batch process to produce novel climate-friendly low-GWP gases constituted by

hydrocarbons mixes for industrial refrigeration applications. The new process aims to overcome strong technological barriers that have limited the uptake of hydrocarbons climate-friendly alternatives, notably process cost and poor versatility, presence of unwanted by-products and safety treatment and manipulation of highly flammable gases. The new process will bring as well to a consistent reduction of water (~100%) and energy consumption (~66%).
Coordinating beneficiary: Tazzetti S.P.A. (TAZ)
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LIFE16 GIC/UK/000007 – REAL Alternatives 4 LIFE
Refrigerant Emissions Alternatives and Leakage - blended learning for low GWP refrigerants
It is a critical environmental objective for the refrigeration, air conditioning sector that it moves rapidly to low-GWP refrigerants to replace high-GWP fluorinated refrigerants to reduce the projected 70 million tonnes of CO_2 emissions from the sector by 2030. The REAL Alternatives 4 LIFE project addresses knowledge, awareness and skills barriers to the rapid and widespread adoption of low GWP alternative refrigerants throughout Europe by providing reliable, unbiased, consistent and up-to-date training materials linked to an extensive train the trainer programme.
Coordinating beneficiary: Institute of Refrigeration (IOR)
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Group II – Land use, agriculture, forestry, climate finance

LIFE16 CCM/ES/000065- LIFE CLIMARK
Forest management promotion for climate change mitigation through the design of a local market of climatic credits
European forests play a crucial role in carbon balance, with a climate change mitigation potential of around 13% of total EU emissions. The project aims to promote multifunctional forest management for climate change mitigation through the design of a local market of 'climatic credits'. The project will demonstrate the approach in 85 ha of Mediterranean forests, improving their mitigation capacity whilst also promoting their socio-economic benefits; develop the knowledge, capacity and tools necessary to allow valuation; influence local and regional policy; and replicate the project in new regions.
Coordinating beneficiary: The Centre de la Propietat Forestal (CPF)
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LIFE16 CCM/ES/000088 - LIFE LowCarbon Feed
Climate Change Mitigation trough an innovative goat feed based on agricultural waste recycling
Agriculture contributes to 10% of total EU greenhouse gas emissions, and the European Commission estimates that by 2050, the sector could account for a third of such emissions. The project aims to implement innovative practices in agriculture and farming in order to recover agricultural waste from citrus and rice, and to convert them into a new animal feed to reduce the methane emissions from ruminants. The project will recover 95 tonnes of citrus and straw waste for conversion to an economically-viable feed; produce plans for farming waste management and influence regional policy; and replicate and scale-up the production through agreements with producers and distributors across Europe.
Coordinating beneficiary: La Unió de Llauradors i Ramaders del País Valencià
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LIFE16 GIC/FI/000072 - LIFE EconomisE

Value for money: unlocking the investment potential for resilient low-carbon Finnish building stock

Buildings have an important role to play in the EU's strategy to reduce greenhouse gas emissions and energy renovation of existing buildings providing one of the most effective way to save energy in the building sector. The project aims to reduce emissions through a cooperative 'EconomisE Platform', working with institutional investors and municipalities while acting as a catalyst for a low-carbon and resilient economy. Across a range of 30 investable, innovative, and scalable multi-stakeholder projects and 15-20 new business concepts/models, the project will demonstrate 70% alignment of property portfolios with climate goals. In addition, the project will provide widespread dissemination and training to municipalities on low-carbon investment; energy efficiency advice; and facilitate its implementation in 150 new investments.

Coordinating beneficiary: WWF Finland

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LIFE16 GIC/FR/000061 - LIFE PACTA

Paris Agreement Capital Transition Assessment of European financial markets and institutions

A reallocation of private investment is needed into low carbon technology to deliver on the Paris Agreement goals of aligning financial flows with climate goals. Actors and decision-makers such as financial institutions, retail investors, financial regulators, civil society and climate policy-makers, need tools to assist in selecting investments and for calculating the risks relating to the reallocation of capital. The project aims to develop and apply the Paris Agreement Capital Transition Assessment (PACTA) model and will use the tool to assess EU insurance company and pension fund assets. Furthermore, the project seeks to improve coordination between member states climate policy-makers; will disseminate the model to financial regulators; and facilitate the model's adoption by 200 EU financial institutions within 3 years of the project end.

Coordinating beneficiary: 2° Investing Initiative

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LIFE16 CCM/GR/000044 - LIFE Biomass C+

Low-cost, carbon positive bioethanol production with innovative Green Floating Filters in multiple water bodies

Biofuels have measurable greenhouse gas benefits over traditional fossil fuels. However, most biofuels are produced from crops, are currently more expensive and less available than fossil fuel, and are also produced on agricultural lands that could be used for food production. The project aims to produce a sustainable biofuel through an innovative green technology, Green Floating Filters (GFF), where aquatic macrophyte plants can be grown in water bodies. The project will demonstrate: a reduction of around 250 tonnes of CO_2 compared to traditional fuel crops; the economic feasibility on an industrial scale; the efficacy of the GFF in improving water quality; and will replicate the results and uptake within the market within the project's lifetime.

Coordinating beneficiary: Centre for Research & Technology Hellas (CERTH)

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LIFE16 GIC/PL/000031 - LIFE Climate CAKE PL

System of providing and disseminating information in order to support the strategic implementation of climate policy

In order to achieve EU goals of reductions in greenhouse gases, there is a need to develop tools and implement policies that stimulate emission reductions in line with a country's economic situation. It is necessary to acquire qualitative and quantitative climate protection information and to ensure that the information reaches relevant decision-makers. The project aims to develop a sustainable and comprehensive 'toolkit' system for creating and exchanging information, to support the efficient implementation of EU climate and energy policy in order to support decision-making. The project will build the toolkit, based on the computable general equilibrium (CGE) model, for assessing measures proposed at member state and EU level; facilitate its implementation in government departments and its application to at least 3 policy documents; and raise public awareness of climate and energy policy.

Coordinating beneficiary: Institute of Environmental Protection/National Research Institute - National Centre for Emissions Management

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LIFE16 GIC/SI/000043 – LIFE ClimatePath2050

Slovenian Path Towards the Mid-Century Climate Target

Slovenia's main policy framework relating to climate change is its '*Operational programme of GHG reduction measures until 2020'*. The project aims to contribute to climate change mitigation by setting up a decision-support system to help Slovenian national authorities better shape actions by 2030, so as to achieve the 2050 targets for GHG reductions set out in the Paris Agreement. The project will upgrade and complement the existing models and methodologies used in GHG projections and impact assessments; provide a mid-century GHG analysis and decision support system for Slovenian authorities; provide three annual 'climate action mirrors' as a reporting package to support decision making; deliver a series of workshops for stakeholders and engage local communities.

Coordinating beneficiary: Institut Jozef Stefan

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