USE OF RENEWABLE ENERGY OUTSIDE ANNEX 1

INNOVATION FUND

Deployment of net-zero and innovative technologies

Solvent2Energy: Solvent2Energy

The Innovation Fund is 100% funded by the EU Emissions Trading System

| Project Factsheet

The Solevent2Energy project aims to demonstrate a novel integrated system that converts solvents released as waste from flexographic printing into green gas through bio-treatment. The patented technology is unique thanks to it having been developed in co-operation with the University of Valencia and supported by two Horizon Europe research and innovation grants in 2010. These patents, jointly owned by Pure Air Solutions and the University, have granted exclusive commercial licensing rights across Europe and the Americas since 2015. The core of this groundbreaking technology lies in its bioreactor (anaerobic bioscrubber), referred to as 'BONCUS', which can be integrated into an existing production process. Notably, this system achieves 100% reduction in greenhouse gas (GHG) emissions in relative terms, marking a significant leap forward in sustainability.

Currently, the flexographic printing industry

COORDINATOR
PURE AIR SOLUTIONS BV

LOCATION
Netherlands

CATEGORY
Renewable Energy (RES)

SECTOR
Use of renewable energy outside Annex I

AMOUNT OF INNOVATION FUND GRANT
EUR 2,331,000

EXPECTED GHG EMISSIONS AVOIDANCE
6,642 tonnes CO2 equivalent

STARTING DATE
01 January, 2024

ENTRY INTO OPERATION DATE
31 December, 2024

FINANCIAL CLOSE DATE
31 May, 2024

Updated on 02 December 2024

operates as an energy-consuming procedure that produces pollutive air waste that comes from solvents released during the printing and ink drying processes. In present circumstances, the solvent waste is disposed of via Regenerative Thermal Oxidation (RTO), which contributes to air pollution due to the absence of alternative solutions, on top of consuming significant amounts of energy.

Thanks to the innovative BONCUS technology, the industry can now capitalize on these solvents, primarily bioethanol, in two ways. First, they can be utilized for printing purposes, and second, they can serve as an energy source for production processes. This approach also eliminates the need for waste air incineration. The commercialization pathway, chosen by the project, is to implement this technology at Trioworld Harlingen facility, generating 700,000 m3 of biogas annually from what is considered 'waste air'. Air incineration no longer being needed is a technological upgrade that would be a direct improvement of air quality for the already sensitive Wadden area.

The project will contribute to the European objectives to reduce GHG emissions and is in line with the RePowerEU Plan. Cleaning of the air before emitting it to the atmosphere is regulated by EU directives 2010/75/EU that prevents photochemical SMOG.

This technological improvement should have a considerable impact on improving air quality in the areas where flexocompanies choose to implement it. The company aims to grow around 5 systems per year between 2025-2030 , and anticipates to increase its personnel-base to 10 more persons. The Company is already commercially present in Germany, the Netherlands, France and Spain.

| Participants

PURE AIR SOLUTIONS BV	Netherlands
FUNS SKJINNE FRYSKE ENERZJY BV	Netherlands
SOLVENT2ENERGY HARLINGEN BV	Netherlands