H2020 INCOVER PROJECT

Innovative Eco-Technologies for Resource Recovery from Wastewater

Project Description

The aim of the project is to transform wastewater into a range of added value products, mainly biomethane, bioplastics, biofertilizers and water of a reusable quality. The project will entail using DSS technology (decision support system) to select the most efficient treatment solution from a technical, social and financial perspective, and to monitor it using optical and virtual software sensors.

The project will be carried out in three case studies on a demonstrative scale (TRL 7-8), located in Barcelona (UPC), Almería/Chiclana (Aqualia) and Germany (UFZ). Aqualia is in charge of case study 2.

The main technologies to be used are:

1. Extraction of bioplastics from algae/bacteria cultivated in HRAP ponds: Institute of Experimental and Technological Biology (iBET) and Biotrend.
2. Optimised raceways measuring 1500 m² to treat wastewater: Aqualia
3. Pre-treatment and anaerobic Co-digestion of algae: Aqualia
4. Biogas upgrading to produce biomethane, based on washing columns with microalgae: University of Valladolid
5. N and P recovery from digestate using an evaporation plant system: Center for Recirculering and Aarhus University
6. Tertiary treatment of treated water by way of absorption through plant filters and disinfection by solar oxidation. Filters: Center for Recirkulering and Aarhus University Disinfection: Autarcon GmbH
7. Intelligent irrigation system: Future Intelligence

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**PROJECT PARTICIPANTS**

- Asociación de Investigación Metalúrgica del Noroeste (AIMEN) (Coordinator),
- FCC Aqualia S.A.
- Aarhus Universitet
- Universitat Politècnica de Catalunya
- Helmholtz-Zentrum fuer Umweltforschung gmbh - UFZ
- Future intelligence erva tilepikiniakon ke pliroforiakon systimaton epe
- Gregersen Peder
- Simbiente, Engenharia e Gestao Ambiental lda
- Universidad de Valladolid
- Solarspring gmbh
- Teknologisk Institut
- Autarcon gmbh
- Instituto de Bio logía Experimental e Tecnológica
- Renergie Systeme gmbh & Co kg
- Biotrend – Inovacao e Engenharia em Biotecnologia S.A.
- Office International de l’Eau
- Isle Utilities Limited
- Iclei European Secretariat gmbh (iclei europasekretariat gmbh)

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**Aqualia:** 615,037.50 €