

GreenH2CY Project:

Green Hydrogen Project for Transport in Cyprus

Chryso Sotiriou, Project Consultant, ideopsis ltd



The Project

The **first** and, to date, only project in Cyprus approved under the Innovation Fund of EU.

Scope: To decarbonise the road transport sector through the replacement of conventional fuels with hydrogen.

Funding Rate: 60% of CAPEX [4.5 Million Euros]

Starting date: June 2023

Off-taking agreements: August 2025

Entry into operation: January 2027



01. COORDINATOR

**KETONIS HOLDINGS LTD
(Ketonis H.)**



02. BENEFICIARIES

**MCK. FUTURE FUELS LTD
(Future Fuels)**



An Integrated Road Transport Solution



The **GreenH2CY Project** entails for the installation and operation of a **2 MW Proton Exchange Membrane [PEM]*** electrolyser.

The project includes a **hydrogen storage facility** [2x500 kg] and a **re-fuelling station** in the same location.

The hydrogen production plant is expected to produce **150 tonnes of hydrogen fuel per year.**

* PEM electrolyzers are ideal for small-to-medium scale, high-purity, and flexible applications, especially when paired with **variable renewable energy** sources [benefits: dynamic operation, hydrogen purity, compactness].

Location



The plant and refuelling station is located at
Larnaca District
(Aradippou Municipality Industrial Area).

The architectural floor plan of the 'Krylovo' building is a detailed drawing showing the layout of the structure. The plan includes various rooms and outdoor areas, each labeled with text in Russian. Key features include:

- Rooms and Spaces:**
 - Kuchnia** (Kitchen): Located in the upper right section.
 - Salon** (Living Room): A large central area.
 - Korridor** (Corridor): Multiple corridors connecting different parts of the building.
 - Kabinety** (Offices): Several smaller rooms, some numbered (e.g., 1, 2, 3, 4, 5).
 - Veranda** (Veranda): An outdoor covered area at the bottom.
 - Dvorik** (Courtyard): An outdoor open area at the top.
- Structural Elements:**
 - Windows:** Indicated by lines and symbols along the exterior walls.
 - Doors:** Shown as arcs indicating the swing direction.
 - Furniture:** Basic outlines of furniture like tables, chairs, and sofas are present in the living and dining areas.
 - Structural Grid:** A grid system is used to define the building's footprint and internal divisions.
- Orientation and Scale:**
 - North Arrow:** Located in the bottom right corner, pointing towards the top right.
 - Scale:** A scale bar is provided at the bottom left, indicating dimensions in meters.
- Labels and Annotations:**
 - Many rooms and areas are labeled with text in Russian, such as 'Kuchnia', 'Salon', 'Korridor', 'Kabinety', 'Veranda', 'Dvorik', 'Kuchnia', 'Salon', 'Korridor', 'Kabinety', 'Veranda', 'Dvorik'.
 - Some areas are labeled with numbers (1, 2, 3, 4, 5).
 - There are numerous small annotations and symbols throughout the plan, likely indicating specific construction details or materials.

Inputs



Electricity* from Renewable Energy Sources – Grid connected / use of guarantees of origin (GOs)



Wastewater* from Tertiary treatment (WWTP) from the Water Development Department of Larnaca - contributes to circular economy



Reduction of Greenhouse Gas Emissions

0 greenhouse gas emissions from the operation of the plant*

*Power requirements 54 kWh/kg of H₂

*10 litres of water per kilogram of H₂

*Delegated act of RED II for RFNBO hydrogen (<3.38 kgCO₂/kgH₂)

25 September 2024

Planning Permit

20 June 2025

Building Permit

Project Licensing Status

Target

Light & Heavy-Duty Vehicles

Hydrogen Production

150 tonnes of hydrogen per year

Fuel Substitution

~627 tonnes of diesel fuel per year

Distance Equivalent

~1,800,000 km per year

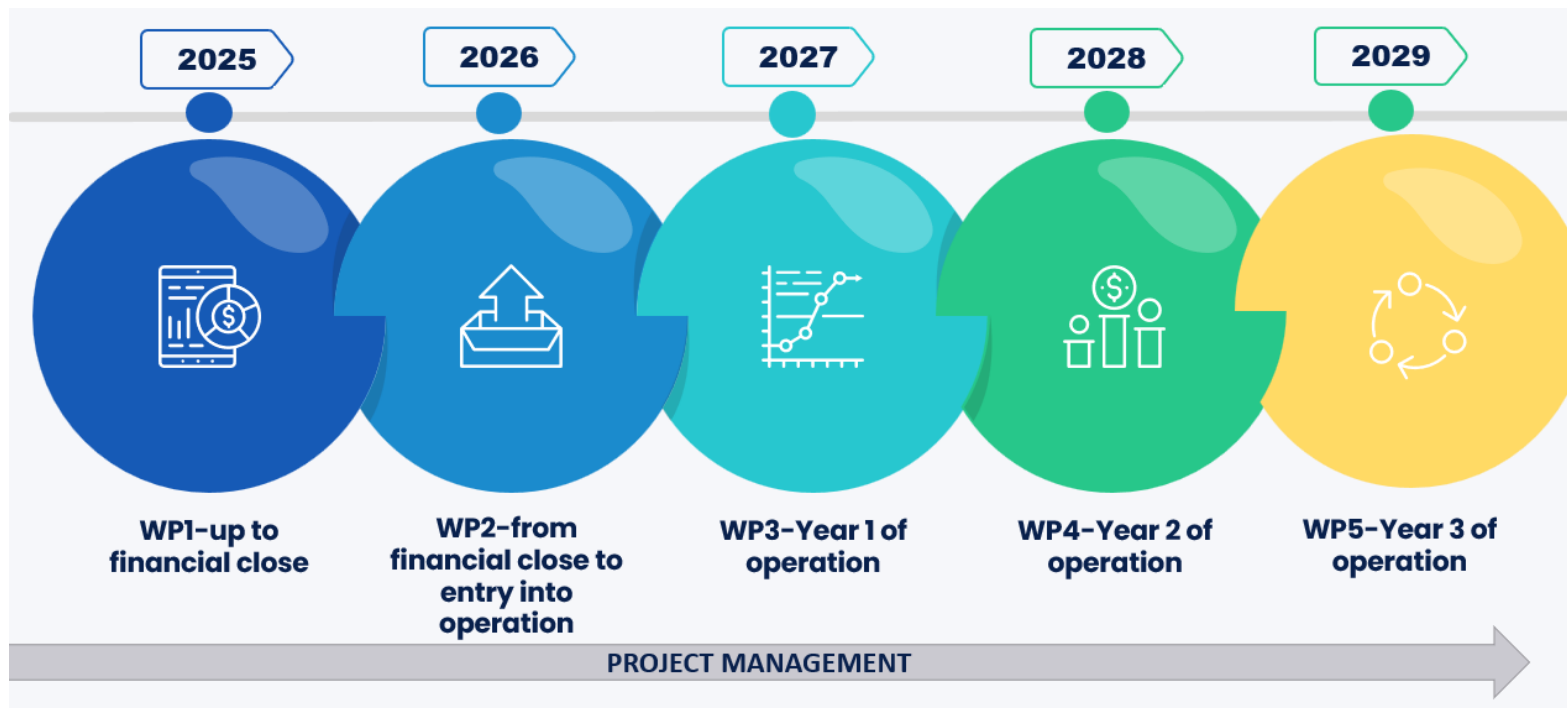
GHG Reduction

~2,168 tons per year



Off-taking

Work plan



Period

3 years of operations
| 2027 – 2030

Verified GHG reduction

Verified consumption for
road transport

Monitoring

71, Larnakos Ave., Centre Court, Office 301, 2101 Aglantzia, Cyprus
(+357) 22876699
info@greenh2cy.futurefuels-cy.com

THANK YOU

