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Company Overview



REWARD

13 NOVEMBER 2024 - 1ST INTERREGIONAL POLICY LEARNING EVENT
CARBONIA, SARDINIA

Sotacarbo is a research organisation entirely financed by public capital, established by Law 351/85 to develop the Sulcis coal basin, which started its activities in 1987

The founding partners were **ENEL, ENI and ENEA**, who were joined a year later by the Region of Sardinia (RAS)

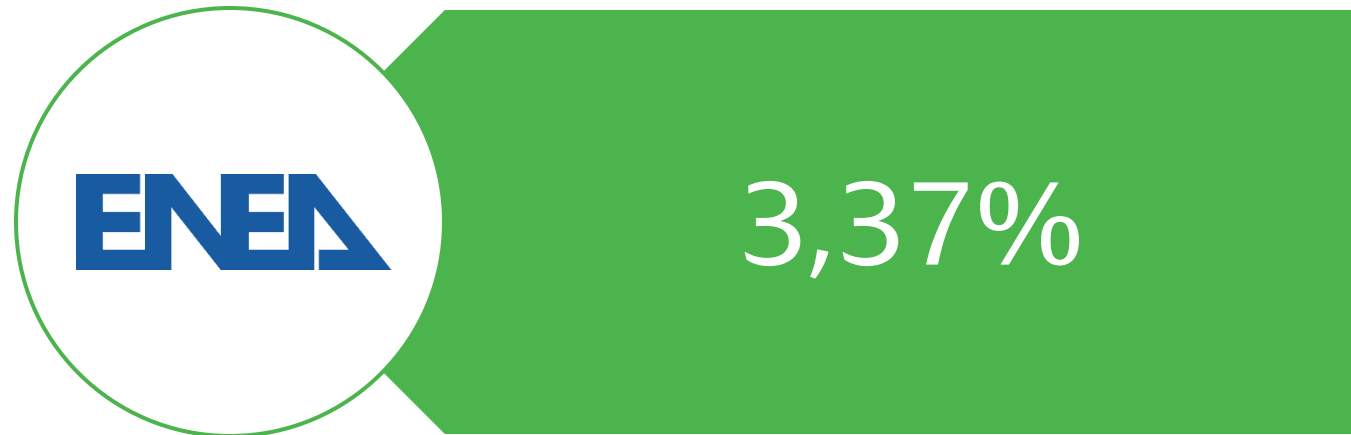
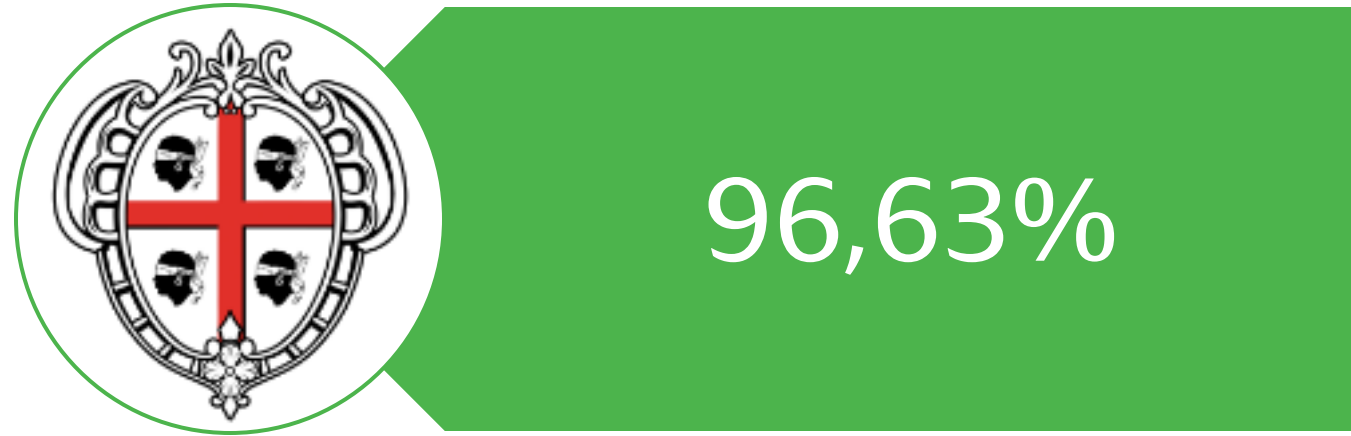
In 1989 the Italian government chose Sotacarbo to represent Italy in the IEA CR

Over time, the corporate purpose evolved in line with technological developments and the different strategic objectives of the members, moving from coal to low-carbon technologies

In 2016 'low carbon' replaced 'coal'

From 2021 **RAS** took control of the company, while **ENEA** retains a minimal stake

Shareholders



Sotacarbo will join the Coordination Group for Regional Energy Policies.

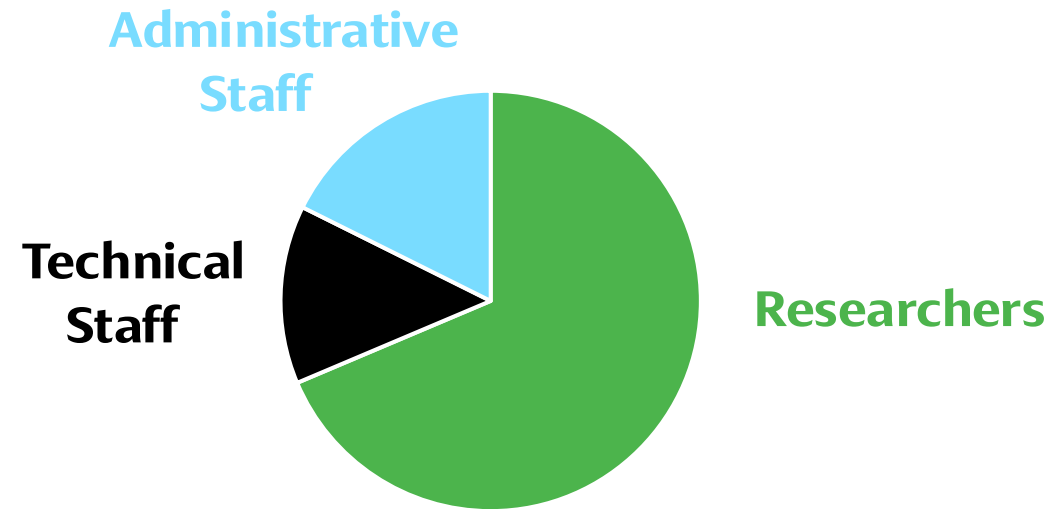
The Sardinian Regional Government, with Resolution G.R. 39/39 of 10.10.2024, has established the **'Technical Coordination Group'** to draft the Regional Energy and Environmental Plan of Sardinia (PEARS).



50 employees



35 Researchers
including 9 Ph.D.



International Cooperation

Italian Government representative at **IEA - International Centre for Sustainable Carbon TCP**

Member of **IEA – Greenhouse Gas** R&D Programme TCP

Italian Government contact at **CCUS SET Plan** (working group on CCUS technologies)

Member of the European network **ECCSEL-ERIC** (European consortium of CCUS research infrastructures)

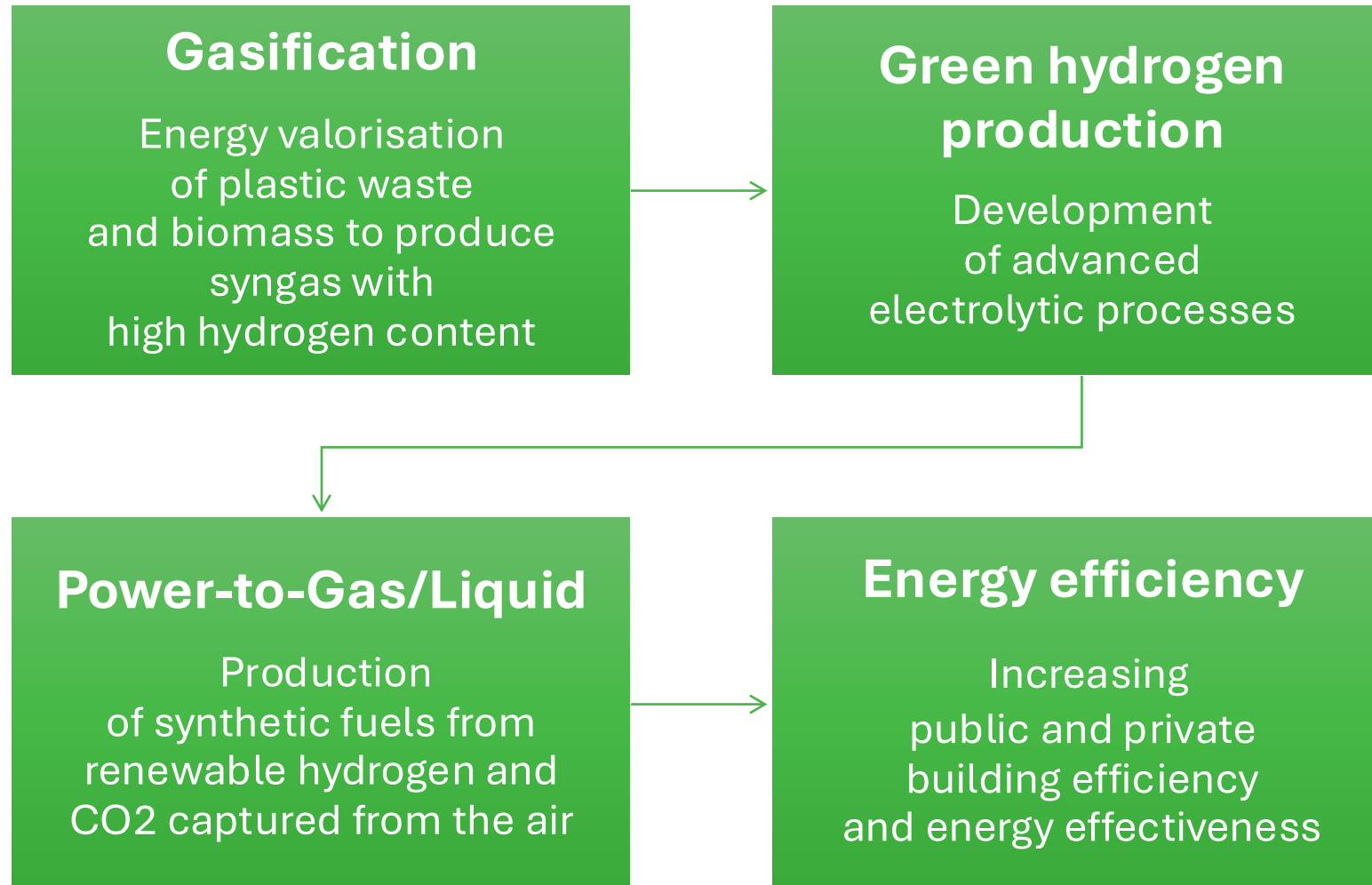
Founding member of the **CO₂ Value Europe**

Participant to the **bilateral Italy-US agreement** on Earth Sciences

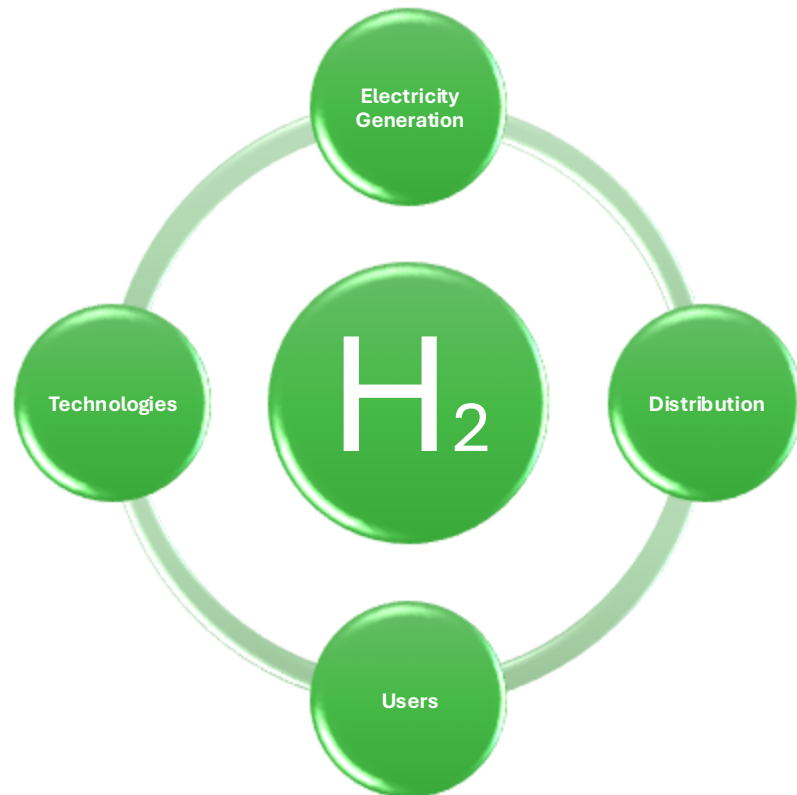
Participant in the **EU Working Group on Green Hydrogen in Argentina**

Member of **World Hydrogen Leaders**

Main lines of Research



The Green Hydrogen value chain



Electricity Generation

- Growing demand for renewable energy installations
- Limited connections to the continental grid
- Need for grid stabilization of the electricity net

Distribution

Distribution network development projects for blending with methane (Gaxa, Italgas)

Technologies

- Local production of PEM electrolyzers (IMI Remosa)
- New technologies for the production of hydrogen from waste materials
- New processes and materials for the conversion of hydrogen into other products

Users

- Industry
- Public transport (ARST)
- Private heavy transport
- Commercial and agricultural vehicles
- Interregional transport (air and maritime)

Ongoing research projects

Projects	Funding	Funding Body	Due Date
National Electrical System Research (RdS) «Activities within the Integrated Hydrogen Technology Project»	6,6 M€ 2,2 M€/year	MASE	December 2024
ASSET Project «Development of H2 production technologies from waste materials (biomass and non-recyclable plastic waste) and for the production of synthetic fuels»	12,5 M€ 2,5 M€/anno	RAS-CRP	July 2027
EPRI Project «H2 production from plastic waste, biomass and coal»	0,7 M€	U.S. DoE	December 2025

Project	Funding	Funding Body	Due Date
Recover (PNC) «Renovation of the former technical office building to establish laboratories dedicated to researching renewable hydrogen technologies»	12 M€	Dip. Politiche Coesione	June 2026
SulkHy (PNRR) «Project to develop a hydrogen valley in the Sulcis region»	12,7 M€	MASE	June 2026
Support activities for Recover and SulkHy «Assistance and support activities for the Recover and SulkHy initiatives»	6 M€ 1.5 M€/year from 2025	RAS-CRP	December 2028

Submitted projects	Funding
Development of a demonstration plant for producing renewable fuels from green hydrogen and carbon dioxide (Sotacarbo technology) – Strategic project	26 M€
Construction of a demonstration plant for the production of hydrogen from non-recyclable plastic waste (Sotacarbo technology)	15 M€
Construction of a demonstration plant for harnessing low-enthalpy geothermal energy	4 M€
Innovative energy requalification applied to public buildings	9 M€
Experimental development of CO2 separation processes using advanced catalytic regeneration systems (Sotacarbo technology)	8 M€
Neutralization and valorization of alkaline industrial wastes, and recovery of rare earth elements and strategic raw materials	2,5 M€

Ongoing development

Expand the company's workforce from 15 to 50 researchers, while fostering the development of advanced expertise



Enhance technical and scientific collaborations with leading international research organizations and institutes:

- NETL (USA)
- Indian Institute of Technology Madras (India)
- University of Melbourne (Australia)
- Universidad Nacional de San Martín (Argentina)
- and others.



Initiate scientific collaborations with leading Italian universities:

- Polimi
- Polito
- University of Campania 'Luigi Vanvitelli'
- University of Cagliari
- University of Rome 'La Sapienza'
- Alma Mater University Bologna

Sotacarbo Summer School

International School on Energy Transition Technologies (for PhD students and young researchers).

Main subjects: hydrogen, CCUS, sustainability

Sotacarbo for schools

Information and awareness-raising programme on energy and climate change issues (primary, middle and high schools). Weekly meetings in schools and visits to the Sotacarbo Research Centre

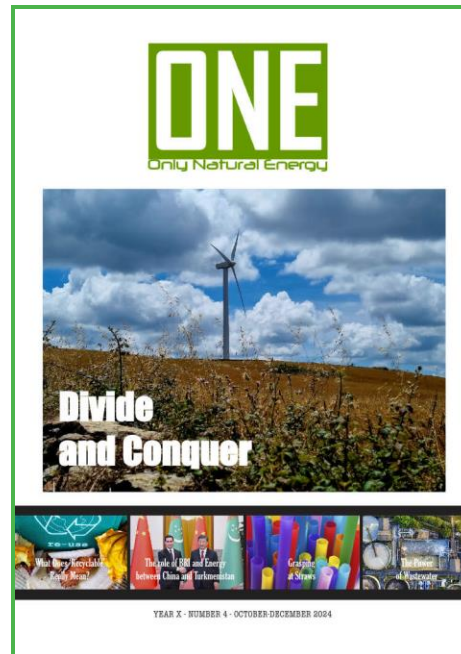


Events

Organisation of conferences ('Energy Transition Workshop'), seminars and participation at the European Researchers' Night, Monumenti Aperti (Open Monuments), ect.

Dissemination

Regular publication of scientific and popular articles and the online publication in English ONE (Only Natural Energy), in cooperation with International Centre for Sustainable Carbon (ICSC)



Thank you