

Carbonia, Sardinia (Italy)
Sotacarbo Research Centre

8th edition

10-14 June 2024



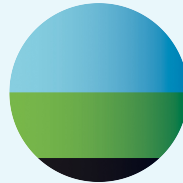
SOTACARBO SUMMER SCHOOL

“renewable fuels towards carbon neutrality”

Organized by

SOTACARBO

SUSTAINABLE ENERGY
RESEARCH CENTRE



in collaboration with



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The International Sotacarbo Summer School on low carbon energy technologies provides students and young researchers and professionals with a wide range of , studiesapproaches and technologies pursuing the global decarbonisation goal. This edition will be specifically focused on renewable fuels (i.e. hydrogen, methanol, sustainable aviation fuels, and many more) for the deep decarbonisation of hard-to-abate sectors.

The 8th edition is open to about 40 Ph.D students and young researchers interested in low carbon energy conversion from different perspectives: technological innovation, environmental effects, economic issues, legal issues, and many more.

The registration is free of charge and includes the full participation in the event: frontal lectures (performed by very eminent international speakers), student’s interactive program, technical and touristic visits, meals and the access to the School material (presentations and other technical documents).



	Monday, 10 th	Tuesday, 11 th	Wednesday, 12 th	Thursday, 13 th	Friday, 14 th
	Strategies and challenges of energy transition	Green fuels from biomass and waste	Power to green hydrogen	Hydrogen derived renewable fuels	Carbon capture and storage
09:00–09:45	Registration and welcome	Hydrogen production by biomass and waste gasification (Massimiliano Materazzi , University College London, United Kingdom)	Green hydrogen production by water electrolysis (Jesús Rodríguez Ruiz , Centro Nacional del Hidrógeno, Spain)	Renewable fuels by means of electrochemical processes (Manuel Alvarez Guerra , University of Cantabria, Spain)	CO ₂ capture technologies for industrial decarbonization: overview and process modelling (Manuele Gatti , Politecnico di Milano, Italy)
09:45–10:30	Opening ceremony (Mario Porcu , Sotacarbo CEO, with the participation of – City Major of Carbonia – Regional Government of Sardinia)	Experimental development of bubbling fluidized-bed gasification: a case study (Francesco Parrillo , University of Campania, Italy)	Hydrogen handling approaches and technologies (Antonio Lucci , Rina Consulting, Italy)	Thermochemical processes for e-fuels (Michele Mascia , University of Cagliari, Italy)	An introduction to CO ₂ Geological storage (Sabina Bigi , Sapienza University of Rome and CO ₂ GeoNet, Italy, and Roman Berenblyum , NORCE and CO ₂ GeoNet, Norway)
10:30–11:15		Biofuels production and use (Aimaro Sanna , Heriot Watt University, UK)	Renewable hydrogen production costs (Cristina Maggi , H2IT, Italy)	Sustainable Aviation Fuels: Prospects for Decarbonizing Air Transport (Mohammed Pourkashanian , University of Sheffield, UK)	
11:15–11:45	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
11:45–12:30	The European and Italian strategies for energy transition (Marcello Capra , Ministry of Environment and Energy Security, Italy)	Towards circular economy: waste biorefinery for carbon neutrality (Muhammad Farooq , University of Engineering and Technology Lahore, Pakistan)	Prospects for hydrogen as clean transport fuel (Carlos Merino , Centro Nacional del Hidrógeno, Spain)	System modelling of power-to-fuels processes (Preeti Aghalayam , IIT Madras, India)	CCUS: economic issues (Matthias Finkenratk , Kempten University of Applied Science, Germany)
12:30–13:15	The European “fit for 55” package and the role of e-fuels (Tudy Bernier , CO ₂ Value Europe, Belgium)	Energy storage technologies for sustainable renewable energy (Giorgio Cau and Mario Petrolese , University of Cagliari, Italy)	Sotacarbo advanced projects on green hydrogen and renewable fuels (Alberto Pettinau , Sotacarbo, Italy)	The Prometheus project (Vittorio Tola , University of Cagliari, Italy)	Intellectual property management (Alessandro Leganza , Venice IP, Italy)
13:15–14:30	Lunch	Lunch	Lunch	Lunch	Lunch
14:30–15:15	The US strategies on energy transition (Bhima Sastri , US Department of Energy, USA)	School Workshop #1 Energy trends in the United States (Bhima Sastri , US Department of Energy, USA)	School Workshop #3 The European international programme on green hydrogen (Griselda Lambertini , University of Buenos Aires, Argentina)	Excursion to the amazing Sulcis coast	Final tests (for students requiring university credits, ECTS)
15:15–16:00	The Australian strategies on energy transition (Noel Simento , Australian National Low Emissions Coal R&D, Australia)				Closing Ceremony
16:00–16:30	Coffee break	Coffee break	Coffee break		
16:30–17:15	Visit of Sotacarbo labs and pilot platform	School Workshop #2 Advanced modelling for the development of novel energy technologies (Mehrdad Shahnam , NETL, USA)	Workshop #4 Production PeM electrolyzers: THE IMI VIVO example (Alberto Pedrini , IMI Critical, Italy)		
17:15–18:00					
20:00	Icebreaking dinner			Informal pizza-based dinner	