

## Course Description

The **Green Fuels Summer School** is a hands-on program focused on the emerging field of **green fuels** and **renewable energy technologies**. Organized by the **CarbonNeutralLNG** project, this course offers in-depth knowledge of green fuels, including the synthesis of methane from green H<sub>2</sub> and biogenic CO<sub>2</sub>, and the innovative processes used to convert biomass residues into bioLNG. Through a combination of expert-led lectures and interactive workshops participants will explore the role of green fuels in supporting the **EU decarbonisation goals**. The program will focus not only on **process development** but also on the application of **LCA** and **LCC** to assess the sustainability of green fuels and energy solutions. This summer school is ideal for **students in advanced semesters, researchers** and **professionals** eager to gain practical experience in **cutting-edge renewable energy technologies**.

## Participation and Registration

The amount of €230 per day is required for participating in the Summer School, covering: hotel accommodation, lunches, dinners, coffees-beverages and technical tours. Attendance is limited & subject to selection by Program Chairs.

Deadline for applications: July 20, 2025.

## Program Chair

- Sotirios Karellas (NTUA), Chairman
- Jürgen Karl (FAU), Co-Chairman

For more details:  
[www.carbonneutralng.eu/-summer-school/](http://www.carbonneutralng.eu/-summer-school/)

Click here to access  
the **Registration Form**

## Venue and Directions

The Summer School will take place in the “**Royal & Imperial Belvedere Resort**”. Nestled in an elevated position on the out-skirts of Hersonissos, the resort enjoys a prime location, offering easy access to the best this beautiful region has to offer. The center of Hersonissos is just a 10-minute walk away, while the picturesque old Hersonissos is a pleasant 20-minute stroll from the resort. Built in a unique location, the hotel gives the chance to experience the breathtaking beauty of the sunset over Hersonissos Bay.

The Belvedere Resort, recently renovated, nowadays hosts multiple activities and events. The excellently trained personnel, the equipped conference rooms with new audiovisual equipment, are only two of the reasons that the Belvedere Resort is considered an ideal part of a successful event, combined with dream holidays with high quality of services.



Discover more:  
<https://www.belvedereresort.com>

The hotel is near Heraklion airport, 20 minutes driving distance.



# Summer School on Green Fuels

Preliminary Announcement for the  
**CarbonNeutralLNG Summer School**



August 27th– 29th, 2025  
Hersonissos, Crete  
Greece

“**Royal & Imperial Belvedere Resort**”



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## About CarbonNeutralLNG

The **CarbonNeutralLNG** project is an EU-funded initiative, coordinated by FAU, aiming to develop truly carbon-neutral bioLNG by utilizing low-cost renewable electricity in an innovative hybrid catalytic process. The project targets **electricity-enhanced conversion of biomass** into CO and CO<sub>2</sub>, and subsequently synthesizing methane by combining green H<sub>2</sub> with biogenic CO<sub>2</sub>, optimizing the use of renewable energy and biomass resources.

A key innovation of the project is its new **hybrid process chain** for the synthesis of methane, which integrates **chemical methanation, biological methanation, and electromethanogenesis**. This approach enhances carbon efficiency, simplifies the production process, and maximizes methane yield compared to conventional biomass-based methods. By harnessing low-cost renewable electricity, **CarbonNeutralLNG** improves energy recovery while minimizing environmental impact.

The project's impact lies in **securing affordable and sustainable renewable energies**. GreenLNG, as a liquid energy carrier with particularly high energy density, will not only provide carbon-neutral fuel for the transportation sector but also enable the import of renewable energies from regions abundant in wind, photovoltaic (PV), hydro power, and biomass resources. This contributes to the broader **transition toward a sustainable, low-carbon energy system**.

## Preliminary

## Programme

Time / Date	Tuesday 26/8	Wednesday 27/8	Thursday 28/8	Friday 29/8
07:30-08:00				Breakfast
08:00-08:30		Breakfast	Breakfast	
08:30-09:00				Introduction  Concept of the Summer School  Presentation pitches of the participant's projects (3min each)
09:00-09:30				
09:30-10:00				
10:00-10:30				
10:30-11:00				
11:00-11:30		Presentation pitches of the participant's projects (3min each)	Green Fuels in the Vision of the Gas Industry	LCA Researcher's group work (Part 2)
11:30-12:00				
12:00-12:30		Presentation pitches of the participant's projects (3min each)	Introduction on the LCA-LCC group work	
12:30-13:00				
13:00-13:30				
13:30-14:00		Lunch	Lunch	Lunch
14:00-14:30				
14:30-15:00				
15:00-15:30		Presentation pitches of the participant's projects (3min each)	LCA Researcher's group work (Part 1)	Presentations of the Group work
15:30-16:00				
16:00-16:30				
16:30-17:00	Coffee Break			
17:00-17:30		LCA advanced methodology		
17:30-18:00				
18:00-18:30				
18:30-19:00	Get together		Dinner & Group activity	
19:00-19:30				
19:30-20:00				
20:00-20:30				
20:30-21:00				