The School on Energy “Giacomo Ciamician”, founded in 2010 under the leadership of the University of Trieste, is a meeting place where participants learn the fundamentals of the main energy technologies, and become aware of the complex technological, economical, and social issues that make energy such a formidable challenge, but also a source of many new opportunities.

We look for dynamic people, willing to take on the upcoming challenges and opportunities at the global scale. The main target of the school are students nearing the end of their educational path, in particular master and doctoral students, as well as young professionals or young entrepreneurs. However, diversity is a value for the School, and applicants at all career stages are encouraged to apply.

The School is a five-day residential course, and covers the following topics:

### Energy as a global issue
In a series of lectures, we introduce the current state of the energy supply chain, its relationship with other global systems, the key trends and indicators, and its role in carbon emissions and climate change. We provide a snapshot of current energy production, transformation, and distribution processes. We then identify the weak points from the technical, economical, and social perspective, and outline some of the potential innovative solutions and future scenarios, including the potentially disruptive role of artificial intelligence and big data technologies.

### Renewable energy sources
We discuss the main renewable energy sources from both the technical and economical standpoint: wind energy, geothermal energy, biofuels, and solar energy technologies.

### Special focus: solar photovoltaics
One of the main technologies playing a pivotal role in the evolution of the power sector.

### Energy efficiency
We discuss energy efficiency approaches at various stages of the energy supply chain, showing how efficiency and reduction at the end user level have the largest potential, among the possible energy strategies, for reducing carbon emissions and mitigating climate change.

### Electrification of energy
As the energy balance shifts towards an increase in the use of electricity as major long-term trend, the recent and foreseen evolution of the electricity dispatching and distribution systems is described, and the corresponding enabling technologies are presented. Specifically, smart grid technologies including the role of ICT and of the rapidly evolving energy storage technologies, will be discussed, as well as the key role of the upcoming electrification of the transport and the automotive systems and the potentially disruptive synergies with the electrical system.