# ITALIAN TCP DAY 2023: FOSTERING NET ZERO ENERGY SYSTEMS

13 June 2023
GSE Headquarters, Rome

"*A new global energy economy is emerging, with the rapid growth of solar, wind, electric vehicles, and a range of other technologies such as electrolysers for hydrogen. This transition is in turn changing the industries that supply the materials and products heralding the dawn of a new industrial age – the age of clean energy technology manufacturing*".

In his foreword to the ETP-2023 Fatih Birol, the Executive Director of the IEA, raises the bar of the discussion on pathways towards Net Zero Emissions energy systems well beyond the development of technologies and solutions, addressing the capabilities of industries to manufacture and supply the needed pieces of equipment to populate, operate and control PV fields, wind parks and EV fleets, that will be the main characters in our energy future.

Critical materials, supply chains, logistics, field installation and commissioning are new keywords to be carefully considered in energy and industrial strategies and policies, to avoid new dependences and bottlenecks.

Starting from the presentation of the IEA flagship publication **Energy Technologies Perspectives 2023**, specifically dedicated to obstacles and opportunities for Net Zero Emissions energy systems towards 2050, the TCP Day 2023 aims at gathering national experts to discuss around these challenges and debate about the solutions envisaged in the different TCPs, highlighting the outstanding contribution of Italian research on questions around critical materials and clean energy and technology supply chains: **Where are the key bottlenecks to sustainably scale up supply chains at the pace needed? Which clean technology areas are at greatest risk of failing to develop secure and resilient supply chains? What is the role of circularity to mitigate those risks?**

The second part of the meeting will be dedicated to the new **Mid-term research strategy for energy research and technology 2023-2027 of the IEA**, to the implications and opportunities for the facilitation of the work of the TCPs and the enhancement of the impact of their outstanding results and publications.

| FOSTERING NET ZERO ENERGY SYSTEMS - ITALIAN TCP DAY 2023 | |
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| **Time** | Title |
| **09:30 - 10:00** | **Welcome coffee** |
| **10: 00– 10:15** | **Welcome speech:**<br>• P. Arrigoni President GSE<br>• G. Graditi – DG ENEA<br>• F. Cotana – RSE Member of the Board |
| **10:15-10:45** | **Introduction and policy**:<br>• G. Cutillo – Italian Member GB IEA – MAECI<br>• S. Raimondi – MASE<br>• G. Consoli – MUR* |
| **10:45 – 11:45** | **Keynote speech:**<br>• Energy Technologies Perspectives 2023 – T. Güel – Head of Division Energy Technology Policies – IEA<br>• Moderated Q&A (M. de Nigris – CERT Vice Chair) |
| **11:45 - 13:15** | **Contribution from TCPs:**<br>Guided discussion around the conclusions and messages of ETP2023.<br>National representatives will discuss the recent outcomes of the research in their TCPs, highlighting the achievements and challenges along the pathway towards a Net-Zero energy system, value the national contribution and the impact of their research for the Italian industrial system also in the frame of international collaboration.<br>Moderators: S. De Iuliis (CERT Delegate); E. Costanzo (EUWP Vice Chair); L. Benedetti (REWP Vice Chair) |
| **13:15 - 14:30** | **Lunch** |
| **14:30 - 16:15** | **Discussion around IEA mid-term strategy:**<br>• Presentation of the IEA mid-term strategy (M. de Nigris – CERT Vice Chair)<br>• Guided discussion around the TCP enhancement strategy (S. De Iuliis – CERT Delegate)<br>TCP representatives will discuss the impact of the strategy on their respective research work: TCP-IEA collaboration; Engagement with emerging economies and private sector; Interaction with multilateral initiatives; Awareness, communication and visibility; Governance and transparency |
| **16:15 – 16:30** | **Conclusions and takeaways** |

**Participants from TCPs:**

PVPS TCP- Photovoltaic Power Systems (Salvatore Guastella, Ezio Terzini)
ES TCP - Energy Storage (Raffaele Liberatore, Margherita Moreno)
HEV TCP - Hybrid and Electric Vehicles (Federico Karagulian, Francesco Vellucci)
IETS TCP - Industrial Energy Related Technologies and Systems (Stefano Stendardo, Simone Maggiore)
H2 TCP – Hydrogen (Alberto Giaconia, Massimiliano Della Pietra)
Wind TCP (Laura Serri, Luca Greco)
ISGAN TCP (Luciano Martini, Antonio Iliceto)
Bioenergy TCP (Luca Benedetti)
Geothermal TCP (S. Montomoli, M. Paci)*
SolarPACES TCP - Solar Power and Chemical Energy Systems (Luca Turchetti)
EBC TCP – Energy in Buildings and Communities (Michele Zinzi)
HPT TCP - Heat Pumping Technology (Maurizio Pieve, Raniero Trinchieri)
User-Centered Energy System TCP (Simone Maggiore)
HTS TCP - High-Temperature Superconductivity (Laura Serri)
AFC TCP - Advanced Fuel Cells (Viviana Cigolotti)
OES TCP - Ocean Energy Systems (Luca Benedetti)
SHC TCP - Solar Heating and Cooling (MA. Segreto)
ICSC TCP - International Centre for Sustainable Carbon (G. Serra)
GHG TCP - Greenhouse Gases (G. Serra)
FBC TCP - Fluidized Bed Conversion (F. Scala, M. Miccio)
The Equality in Energy Transitions TCP – (MR. Nocera, VM. Peri)
ETSAP TCP - Energy Technology Systems Analysis Program (tbd)*

*to be confirmed.