

## Nuclear fusion, hydrogen and digitalization for the energy transition: exemplary cases of cooperation between Italy and Japan

24<sup>th</sup> September 2025, 10 a.m. JST | Auditorium, Italian Pavilion - Osaka Expo

The evolution of the energy system will be of paramount importance in achieving the decarbonization targets set for 2030 and 2050. The key factor, in order for the energy system of the future to be characterized by robust levels of resilience, flexibility, and secure infrastructure and supply chains, will be the advancement and widespread adoption of innovative technologies and energy carriers fulfilling standards of sustainability, economic competitiveness, environmental and territorial protection.

Technological innovation measures and actions aimed at increasing generation capacity are essential for the gradual phasing out of fossil fuels, the further increasing of the renewable sources' share, and the integration of the nuclear technologies (next-generation fission in the short term, and nuclear fusion in the medium to long term) into the energy mix. At the same time, it is also necessary to develop solutions for enabling a more integrated and advanced management approach from a smart perspective, which applies IoT, Big Data, and AI to achieving greater system flexibility and increased participation by users and citizens in energy, economic, and social transformation processes.



### ENEA event hosts:

Alessandro Dodaro, *Director of Nuclear Department*

Giulia Monteleone, *Director of Energy Technologies and Renewable Sources Department*



### Languages:

Italian, Japanese and English

10:00

### Opening Remarks and Welcome

Mario Andrea VATTANI, *Commissioner General for Italy at EXPO Osaka 2025*

10:05

### Keynote speeches

#### [Current status and prospects of the Italian energy model](#)

Gilberto PICETTO FRATIN, *Italian Minister for the Environment and Energy Security*

#### [The International dimension of energy security](#)

Giorgio SILLI, *Undersecretary of State at the Ministry of Foreign Affairs and International Cooperation*

10:30

## Institutional Speeches

### The contribution of Italian research to the energy transition and sustainable development

Francesca MARIOTTI, *President of ENEA*

### NEDO's Initiatives for Japan's Energy Transition

Naohiko YOKOSHIMA, *President of NEDO*

10:50

## Panel 1: nuclear fusion as sustainable energy source

### Italian national strategy and projects

Alessandro DODARO, *ENEA, Director of Nuclear Department*

### The broader approach and the JT-60SA experience

Guy PHILLIPS, *F4E, Head of Broader Approach & Roadmap Projects Unit / JT-60SA Project Leader*  
Shunsuke IDE, *QST - Deputy Director General, Naka Institute for Fusion Science and Technology*

### The Divertor Tokamak Test (DTT) Project

Gian Mario POLLI, *DTT Chief Engineer*

11:30

## Panel 2: hydrogen: the energy vector for the decarbonization

### Italian strategy and projects

Giulia MONTELEONE, *ENEA, Director of Energy Technologies and Renewable Sources Department*

### H2IT – JH2A Italy and Japan: a common strategy and synergies to foster the hydrogen economy

Yu KASHIWAGI, *General Manager of JH2A-Japan Hydrogen Association*  
Luigi CREMA, *Vice President of H2IT*

### Hydrogen mobility: history and perspectives

Ryohei UEDA, *Toyota Motor Corporation, Project General Manager H2 Factory*

12:10

## Focus: digital technologies supporting the energy transition

### Digital technologies and solutions supporting the energy transition

Ludovico DIAZ, *CEO of NTT Data Italia*

12:30

## Focus: regional efforts in advancing the energy transition

### The challenge of the energy trilemma: security of supply, affordability of energy costs, and environmental sustainability. The role of Emilia-Romagna in ensuring a just, concrete, and pragmatic transition

Michele DE PASCALE, *President of Emilia-Romagna Region*

12:40

## Conclusions and Closing Remarks

### Exploring New Frontiers and Opportunities in Italy-Japan Energy Cooperation

Gianluigi SERIANNI, *Science and Technology Attaché of the Embassy of Italy in Tokyo*