



Ambasciata d'Italia  
Parigi



**GRIM 2023  
LA RICERCA ITALIANA  
SOSTENIBILITA' ENERGETICA: UNA SFIDA PER IL FUTURO**

**In occasione delle celebrazioni della giornata della Ricerca Italiana del Mondo del 2023 l'Ambasciata d'Italia a Parigi in collaborazione con ENI, EDF, RécIF, ANRT propone un evento volto a mettere in valore il contributo dei ricercatori e degli enti di ricerca Italiani sulle tematiche dell'energia sostenibile e sulle potenzialità delle collaborazioni bilaterali.**

La crisi energetica globale scatenata dalla guerra in Ucraina ha drammaticamente aumentato le preoccupazioni sulla sicurezza, sulla sostenibilità energetica e sull'impatto inflazionistico dell'aumento dei prezzi dell'energia sulle economie mondiali. La crisi climatica, inoltre, sta cambiando la struttura delle rivalità: l'energia è al centro del confronto geopolitico e la conseguente crisi energetica attuale dovrebbe stimolare il nostro Paese e l'Europa a uscire dalla dipendenza dai combustibili fossili, ma la direzione non è sempre condivisa da tutti i Paesi membri. Gli Obiettivi dell'Agenda 2030 su energie rinnovabili e risparmio energetico non sono ancora riconosciuti come l'unica strada percorribile per uno sviluppo sostenibile (Rapporto ASviS 2022), e l'inserimento del gas e dell'energia nucleare nella tassonomia green ha aperto altri fronti di dibattito sul tema della transizione energetica.

Il cambiamento climatico è sempre più identificato come la sfida decisiva del nostro tempo. Se non ben gestito, le sue conseguenze negative rischiano di alterare irreversibilmente le condizioni di vita del pianeta e delle specie che lo abitano, mettendone addirittura in pericolo la sopravvivenza. La lotta ai cambiamenti climatici e il raggiungimento di una transizione energetica pulita ed equa, necessaria a limitarne gli effetti, sono comunemente

La crise énergétique mondiale déclenchée par la guerre en Ukraine a considérablement accru les inquiétudes concernant la sécurité, la durabilité énergétique et l'impact inflationniste de la hausse des prix de l'énergie sur les économies mondiales. En outre, la crise climatique modifie la structure des rivalités : l'énergie est au centre des affrontements géopolitiques et la crise énergétique actuelle qui en résulte devrait inciter notre pays et l'Europe à s'affranchir de la dépendance aux combustibles fossiles. Les objectifs de l'Agenda 2030 en matière d'énergies renouvelables et d'économies d'énergie ne sont pas encore reconnus comme la seule voie à suivre pour le développement durable (Rapport ASviS 2022), et l'inclusion du gaz et de l'énergie nucléaire dans la taxonomie verte a ouvert d'autres fronts de débat sur la transition énergétique.

Le changement climatique est de plus en plus identifié comme le défi décisif de notre époque. Si elles ne sont pas bien gérées, ses conséquences négatives menacent de modifier de manière irréversible les conditions de vie de la planète et des espèces qui l'habitent, voire de mettre en péril leur survie. La lutte contre le changement climatique et la réalisation de la transition énergétique propre et équitable nécessaire pour limiter ses effets sont généralement considérées

considerati tra gli obiettivi più urgenti per il XXI secolo.

La trasformazione del sistema energetico costituisce un aspetto fondamentale per il raggiungimento della neutralità climatica. Essa corre lungo due binari interconnessi: da un lato, lo sviluppo delle fonti rinnovabili e delle reti intelligenti digitalizzate; dall'altro, l'elettrificazione dei consumi energetici. La transizione energetica e ambientale rappresenta inoltre un punto di svolta per la configurazione delle alleanze industriali e commerciali a livello internazionale. Il livello di cambiamento che tale rivoluzione porterà negli equilibri economici internazionali è ancora di difficile definizione ma segnerà, in particolare per i paesi industrializzati, una decisa riduzione della dipendenza da fonti fossili esterne. Tuttavia, la "storica" dipendenza potrebbe essere sostituita da una nuova necessità di approvvigionamento, come sta dimostrando l'aumento della richiesta di terre e metalli rari necessari alla produzione di auto elettriche, turbine eoliche, pannelli fotovoltaici e tutte le nuove applicazioni utili ad assicurare una transizione verde dell'economia e della società. La trasformazione delle economie e delle società verso il paradigma delle emissioni nette-zero è dunque un aspetto fondamentale sul quale si gioca anche una partita geo-politica e geo-economica. Raggiungere tale obiettivo richiede ingenti investimenti per la riconversione delle infrastrutture, dei sistemi industriali e della mobilità, ma permette anche di conseguire un vantaggio industriale e tecnologico sui principali competitor, con benefici sulle prospettive di crescita di lungo termine. Per uno stato investire in ricerca nelle tecnologie a basse emissioni e nei relativi settori industriali, oltre che contribuire alla definizione delle regole e degli standard che regolano il cambiamento climatico, è diventato un aspetto di fondamentale rilevanza strategica per il futuro anche sul piano geo-economico e geopolitico

comme l'un des objectifs les plus urgents du XXIe siècle.

La transformation du système énergétique est un aspect essentiel pour atteindre la neutralité climatique. Elle suit deux voies interconnectées : d'une part, le développement des sources d'énergies renouvelables et des réseaux intelligents numérisés ; d'autre part, l'électrification de la consommation d'énergie. La transition énergétique et environnementale représente également un tournant pour la formation d'alliances industrielles et commerciales au niveau international. Le niveau de changement que cette révolution entraînera dans les équilibres économiques internationaux est encore difficile à définir, mais elle marquera, en particulier pour les pays industrialisés, une réduction décisive de la dépendance vis-à-vis des sources fossiles extérieures. Toutefois, la dépendance "historique" pourrait être remplacée par un nouveau besoin d'approvisionnement, comme le montre la demande accrue de terres et de métaux rares nécessaires à la production de voitures électriques, d'éoliennes, de panneaux photovoltaïques et de toutes les nouvelles applications destinées à assurer une transition écologique de l'économie et de la société. La transformation des économies et des sociétés vers le paradigme des émissions nettes nulles est donc une question clé qui devient également un enjeu géopolitique et géoéconomique. Atteindre cet objectif nécessite d'énormes investissements dans la reconversion des infrastructures, des systèmes industriels et de la mobilité, mais cela permet également de bénéficier d'un avantage industriel et technologique sur les principaux concurrents, avec des avantages pour les perspectives de croissance à long terme. Pour un État, investir dans la recherche sur les technologies à faible taux d'émission et les secteurs industriels connexes, ainsi que contribuer à la définition de règles et de normes régissant le changement climatique, est devenu aussi une question d'importance stratégique fondamentale pour l'avenir.



## Ambasciata d'Italia a Parigi

13 aprile 2023

51 rue de Varenne, 75007 Paris

### Agenda

	Description:
17:00 - 17:30	Registration
	Chairman Marco Borra, Scientific attaché, Ambasciata d'Italia a Parigi
	Welcome
17:30 - 17:40	<ul style="list-style-type: none"><li><b>Emanuela D'Alessandro</b>, Ambasciatrice d'Italia a Parigi</li></ul>
	Opening remark
17:40 - 17:45	<ul style="list-style-type: none"><li><b>Rossana de Angelis</b>, Presidente, Réseau des Chercheurs Italiens en France</li></ul>
	Introductory talk
17:45 - 18:00	<ul style="list-style-type: none"><li><b>Paolo Frankl</b>, IEA Energy sustainability, international perspective.</li></ul>
	Keynote speakers
18:00 - 18:15	<ul style="list-style-type: none"><li><b>Francesca Zarri</b> ENI. Energy sustainability, Italian perspective</li></ul>
18:15 - 18:30	<ul style="list-style-type: none"><li><b>Jaques Sacreste</b> EDF. Carbon neutrality 2050 in France: challenges and levers to achieve it from EDF's perspective</li></ul>
18:30 - 18:45	<ul style="list-style-type: none"><li><b>Fabio Miletto Granozio</b>, National Research Council-SPIN. Applications of superconductivity in an energetically sustainable society</li></ul>
18:45 - 19:00	<ul style="list-style-type: none"><li><b>Francesco Volpe</b>, Renaissance Fusion: International team and vision to realize nuclear fusion in time to contribute to energy sustainability</li></ul>
19:00 - 19:15	<ul style="list-style-type: none"><li><b>Elisabeth Rizzotti</b>, NEWCLEO. Fourth generation nuclear fission for energy sustainability and Small Modular Reactors</li></ul>
19:15 - 19:30	<ul style="list-style-type: none"><li><b>Silvia Lasala</b>, University of Lorraine. A still unexploited solution to boost efficiency of power plants and heat pumps (?)</li></ul>
	Closing remarks
19:30 - 19:45	<ul style="list-style-type: none"><li><b>Marco Borra</b>, Scientific attaché, Ambasciata d'Italia a Parigi</li></ul>
19:45 - 21:30	Buffet dinner
21:45	End of the meeting



**Rossana De Angelis** is a Lecturer in Language Sciences at Paris-Est Créteil University where she teaches the theories and practices of written text and writing. Member of the Center for the Study of Discourses, Images, Texts, Writings, Communications (Céditec), her research focuses on linguistic and semiological approaches in the analysis of writings, on the relationship between supports, formats and texts, on traditional and digital writing and publishing practices. She is also interested in the history and epistemology of language science, as shown in the entry “Textuality” written for the Oxford Research Encyclopedia of Literature, (2020). Winner of the Vittorio Sainati Prize awarded by Editions ETS, with the support of the President of the Italian Republic, for her doctoral thesis work, her first book, *Il testo conteso. Semiotiche ed ermeneutiche nella seconda metà del Novecento* (ETS, Pisa, 2014), offers an overview of the main contemporary written text theories. Recently, she co-edited the book *Les Écritures confinées* (Hermann, 2022) which offers both an overview and a reflection on the writings produced during the global lockdown in 2020

**Paolo Frankl (IEA)** is Head of the Renewable Energy Division at the International Energy Agency (IEA), which he joined in 2007. Dr. Frankl leads the IEA's work on renewable energy, providing policy advice in the areas of technology, markets and systems integration. He is a member of several international advisory committees, including the EU PVSEC International Scientific Advisory Board and the Helmholtz Association of German Research Centres. A physicist by training, Dr. Frankl holds a Ph.D in energy and environmental technologies from the University of Rome. He was also Marie Curie post-doc research fellow at INSEAD in Fontainebleau, France. Dr. Frankl has over twenty years of experience working on renewable energy systems and markets, life cycle assessment and eco-labeling. Prior to joining the IEA, he worked as Senior Researcher for the Italian Research Institute, Ambiente Italia, and was Scientific Head of the Italian environmental research and consulting firm, Ecobilancio. From 2000 to 2002 he served as Advisor to the Director-General of the Italian Ministry for the Environment. Dr. Frankl also spent many years in Assistant Professor positions in environmental technologies at the University of Rome, University of Florence, and l'Ecole des Mines de Paris

**Francesca Zarri (ENI)** Director Technology, R&D & Digital Born on June 22, 1969 in Bologna, she was appointed Director of Technology, R&D & Digital of Eni on July 1, 2020. Experience In 1997, she joined Agip S.p.A to work in the Reservoir Department as reservoir modeler and petroleum engineer and in 2000, she worked on Eni operated assets in Scotland (North Sea). In 2004, after moving to the Engineering and Projects Department, she became the head of the Adriatic Off-shore Projects department, based in Ravenna District. In 2006, she was back to work on in-field production monitoring and optimization as the Head of the Production Optimization Technology Department, which at that time, also included most of the Eni's Laboratories in Bolgiano. From 2007 to 2010, she worked for West Africa as Project and Development Director of Eni Congo, completing new and demanding project activities in the country (oil, gas and power). In 2011, she further expanded her experience by diversifying in the procurement function where she became the Head of American Region then the Head of Procurement Services, as well as the Professional Family. During the same period she was Eni's representative for Commercial Committee in the South Stream Project. In 2013, she was back to follow the development of upstream projects as the Vice President for West Africa Projects Monitoring and Technical Coordination and later in Eni Congo as Development Projects Director, where she also became the President of Enrico Mattei School in Pointe Noire. In 2017, she was called to join the role of Head of the Italian Southern District until november 2019, when she was appointed as Senior Vice President Italian Activities Coordination. Since April 2020, she is the President of Eniservizi, the President and CEO of SPI and the Eni representative in Assomineraria. Since 2014, she has been the member of boards of directors of several Eni subsidiaries in Italy and abroad. She earned MS degree in Mining Engineering (100/100) from the University of Bologna; she also attended, in 1995, the Eni Master MEDEA (Master in Energy and Environmental Management) with Economics specialization

**Jaques Sacreste (EDF)** has occupied from 1982 to 1994 various management positions within the EDF Nuclear Operation Division. Among other positions he served as Head of Controlling in Cattenom



Nuclear Power Plant (4 X 1300 MW) in eastern of France. He has been nominated at Corporate Level in charge of the implementation of the EDF nuclear fleet controlling, benchmarking and performance information system. From 1994 to 1997 he has been assigned to China in the first sino-foreign 3000 MW green field coal power project developed successfully in Shandong province. Within this international project team he was EDF O&M project manager responsible for the negotiation of O&M, Fuel Supply and Power Purchase agreements. Back in France and after 2 years in the Finance Division he has been nominated as member of the EDF Nuclear Generation Division Executive Committee in charge of Economy and Controlling. In 2002 and up to 2005 he was General Manager of EC Krakow in Poland (a 1260 MWth / 460MWe cogeneration plant owned by EDF). From 2005 to 2008 he was the Director of the IPP Department within the International and Services Division. From 2009 to mid-2015 he was in EDF International Development as Director, Projects Development Department, in charge of the business development of international nuclear projects: China: JV company with CGNPC (Taishan Guangdong) for 2 EPR completed with successful sino / international financial close December 2009; US: setting up a JV company between EDF and Constellation Generation Group (Baltimore) to develop a nuclear fleet in USA. Development activities in Poland, South Africa, Saudi Arabia and Brazil in the perspective of potential tenders for nuclear programs. Since June 2015, his position is EDF R&D Vice President International and Finance in charge of:

- EDF international R&D centers (EIFER Germany, UK, Italy, US, China and Singapore with 280 staff) covering whole scope of activities of EDF Group business lines, international subsidiaries or commercial services for external customers.
- EDF R&D international partnerships : Germany KIT, US: EPRI, MIT, Berkeley UK : Manchester University, Imperial College, Singapore (NTU,NUS,SUTD..), Japan (CRIEPI..) China (Qinghua, Xian Jiatong U, Italy: Politecnico Torino, Politecnico Milano...).
- R&D Finance / Purchasing / Audit division

**Fabio Miletto Granozio** Director of the Institute for Superconductors and Innovative Materials and Devices of the National Research Council, CNR-SPIN. CNR-SPIN operates in 9 sites in Italy, distributed in six cities: Genova (headquarters at Corso Perrone 24 and “sede di lavoro” at Università di Genova), Napoli, Salerno, Roma and L’Aquila (“sedi secondarie”), Pozzuoli (“sede di lavoro”) and Chieti (“unità di ricerca presso terzi”).

**Francesco Volpe**, Renaissance Fusion\* CEO CTO. Francesco (PhD 2003) is a physicist who dedicated his studies to heating, diagnosing and stabilizing fusion plasmas and liquid metals. He dedicated his studies to heating, diagnosing and stabilizing fusion plasmas and liquid metals. For his research, he received the 2003 Otto Hahn Medal of the Max Planck Gesellschaft, the 2011 DOE Early Career Award and the 2015 Excellence in Fusion Engineering Award. Having worked on all major magnetic fusion concepts, he came to the conclusion that simplified stellarators are the north star and a start-up is the way to reach it. After earning his Executive MBA at ESCP Europe, he co-founded Renaissance Fusion in 2020. (TBC)

**Elisabeth Rizzotti**. NEWCLEO - Chief Operating Officer / MD Italy After a degree in Physics from Università degli Studi in Turin and a brief spell at CERN, she embraced the world of business, joining Accenture in strategic consulting for financial sector clients. She then spent five years at Banca Lombarda and subsequently moved to UBI Banca, at the time the fifth largest banking group in Italy by number of branches, where she showed her managerial expertise and drive for innovation in various leadership roles. In 2017 she became Head of Communications, a role she held through a crucial period for the bank, leading the incorporation of UBI Banca into Intesa Sanpaolo, Italy's largest international banking group by total assets. In 2021, Elisabeth returned to her first love of physics: combining her scientific background and her strong business and leadership skills, she co-founded newcleo, a company with the goal of disrupting the field of nuclear energy, generating safe, clean and sustainable nuclear energy through the combination of existing technologies at competitive costs. At newcleo Elisabeth is in charge of global operations as Chief Operating Officer, overseeing newcleo’s operations in the UK and France, and she also serves as Managing Director for Italy





**Silvia Lasala** Silvia is associate professor at University of Lorraine, in Nancy, since 2018. In 2016 she got her PhD at Politecnico di Milano in Energy Engineering, with a thesis devoted to the study of the thermophysical properties of fluids involved in CO2 capture and storage technologies. She then pursued her postdoctoral researches in Nancy, at the Laboratoire de Reactions et Génie de Procédés, with a contract funded by Air Liquide and aiming at investigating the behaviour of reactive hydrogen during its liquefaction process. Her research is currently aimed at improving the efficiency of technologies producing electricity, heating and cooling. In the context of her European project REACHER, funded by the European Research Council, she investigates a new scientific concept that could contribute to significantly improve the performance of all these technologies

Note:

- les exposés scientifiques, la table ronde et les commentaires de clôture seront en anglais
- scientific talks, round table and closing remarks will be in English
- gli interventi scientifici, la tavola rotonda e le osservazioni conclusive saranno in inglese