

## **Seminario 3 Febbraio 2020**

Aula Capitò del Dipartimento di Ingegneria  
viale delle Scienze, edificio 7, ore 15.30

### **TO DECARBONIZE BY MID-CENTURY: ROADMAP TO 2050**

The urgency for identifying viable technology solutions for decarbonization in the pursuit of limiting global emissions and meeting the 1.5 C goal set by the UNFCCC implies the transition to new paradigms of production and consumption, particularly within four key economic and energy-intensive sectors such as power, industry, transport, and buildings.

In this framework, the advising role of technicians, able to design scenarios and draw paths supported by scientific evidence, is critical in order to embrace accurate strategies.

*Roadmap to 2050: A Manual for Nations to Decarbonize by Mid-Century*, developed by Fondazione Eni Enrico Mattei and the Sustainable Development Solutions Network with the involvement of more than one hundred worldwide technical experts and engineers, is intended as a technical tool aimed to policymakers for the adoption and implementation of feasible and effective pathways for sectoral transition at national and regional level.

The Roadmap to 2050 is conceived on a “systems approach”, aspiring to simultaneously address multiple objectives and promote policy instruments and technological solutions that can be used across sectors. The multiple objectives span decarbonization and environmental sustainability, economic prosperity (including poverty reduction), and social inclusion through the identification of several complementarities for managing the complexity of the energy system (e.g. complementarities of variable renewable energy sources and zero-carbon technologies) and main pillars for cross-sectoral decarbonization (e.g. shift to zero-carbon electricity, electrification of end uses, and deployment of green synthetic fuels). The cross-sectoral policy framework analysis is coupled with specific analysis for each of the four addressed sectors.

#### *Relatore*

#### **PAOLO CARNEVALE**

Paolo Carnevale is FEEM Executive Director since 2018.

His career with Eni started at the Research&Development Division of Tecnomare, Venice in 1998. After an academic experience at the Faculty of Engineering of the University of Bologna, he returned to Tecnomare to work on the Kashagan project. Paolo Carnevale moved to the Eni Exploration&Production Division in Basilicata, Italy in 2010, where he was Health, Security, Environment & Permitting Manager in charge of relations with the stakeholders. He had two different assignments in Nigeria from 2012 to 2016: General Manager of the Upstream Business at Abuja and General Manager, District Management of the Nigerian Agip Oil Company at Port Harcourt. He returned to Italy in 2016 as Vice President of Eni Upstream, Distretto Centro Settentrionale of Ravenna. He then moved to England in 2017 as Senior Vice President, Integrated Gas Project Management to re-organize and enhance the integration of Eni’s upstream and midstream services.

#### *Discussant*

#### **MAURIZIO CELLURA**

Full professor of Building physics and Building Energy Systems since 2011 at the University of Palermo. Member of the national committee Ecolabel – Ecoaudit (2000-2004) and coordinator of several national and International research projects on energy and environmental topics. Since 2000 he has been member and coordinator of several workgroups of the International Energy Agency on the topics of building science and life cycle assessment of energy systems. Appointed representative of the “Sustainable Solutions Development Network for the University of Palermo– a global initiative for the United Nations” in 2014, he was national vice president of the “Italian Life Cycle Assessment Network” since 2012, becoming also president in October 2015 until June 2019. He is member of the Italian consultation board of the Italian Ministry of Education (MIUR) for the challenge “Secure, Cleaner and Efficient Energy” of the EU program Horizon 2020 since October 2013.

Since June 2014 he is head of the PhD courses in “Energy and information technologies” of the University of Palermo. He was vice-director of the Department of Energy, Information Engineering and Mathematical Models from October 2015 until September 2018 and he was designated member of the Scientific board of the University of Palermo for the sector “Industrial and information engineering” from December 2015 to November 2018. He is currently national contact point for the SETPLAN Implementation Working Group 5 (IWG5) “Energy Efficiency Solutions for Buildings” of the European Union.