

## Workshop Concept Note SDSN – FEEM Event

# Sector Roadmap toward Total Decarbonization in 2050

2-3 April 2019, Milan, Italy

### Background

Global dialogue on decarbonization has recently reached a new stage, moving from agreement to implementation. Since the signing of the Paris Agreement in 2015, countries have declared national determined contributions (NDCs) for decarbonization and outlined a climate rulebook to account for and report on those contributions. Scientists and experts now call on global leaders and key stakeholders for the rapid adoption and implementation of strong and efficient measures to shift toward a zero-emissions world by 2050. To this end, commitment and action from business and subnational actors will be key elements in order to undertake the rapid transition to meet the 2.0 C goal and beyond articulated by the United Nations Intergovernmental Panel on Climate Change (IPCC). In fact, in line with the IPCC'S special report on Global Warming of 1.5C, participation by all major stakeholders is needed to kickstart the societal transition needed in the next 11 years. **Engineers and scientists have the technical knowledge, skills, and expertise needed to methodically plan and implement a sustainable pathway forward towards total decarbonization.**

The Energy sector represents the largest opportunity for accelerating the path toward “zero-emissions”, as the activities linked to electricity production and consumption are responsible for the largest share of CO<sub>2</sub> and CH<sub>4</sub> emissions. For this reason, we must outline and pursue **pathways for the decarbonization of energy use worldwide**. A unified and adaptable framework that can be applied to a variety of emissions sources will create a robust and allied low-carbon scenario that will not only be of tremendous support in terms of policy guidance, but will also embody a strong political statement, influencing public opinion, and encouraging national authorities to take immediate actions for confronting our shared future.

While the decarbonization of our energy systems coupled with the electrification of our society is a necessary course of action, pathways for decarbonization require great efforts and changes from many facets of society and from virtually all of the modern industrial sectors, specifically energy intensive sectors. To realize a carbon neutral future, buildings, transport, and energy intensive industrial processes (steel, cement, aluminium, and plastics) must be analysed together to identify key decarbonization mechanisms. While progress has been made in identifying the challenges and solutions to reducing emissions from these sectors, there is currently a major opportunity to bring together leading stakeholders and industry experts to articulate a **2050 Roadmap to move forward faster**.

While more than half of the global population lives in cities, the demand on building materials and energy intensive inputs continues to grow. It is important that we collaborate with world leading experts in these sectors to chart a way forward that is complimentary to the Paris Agreement. De-risking these processes and minimizing negative externalities' remains a key objective for energy sector analysts and practitioners.

The UN Sustainable Development Solutions Network (SDSN) and the Fondazione Eni Enrico Mattei (FEEM) each bring experience and an extensive network to explore these important topics. SDSN and FEEM

strongly believe that **engineers and technical experts are key figures for the configuration of a calibrated path for decarbonization**. Combining this shared commitment, the two institutions have started a critical review of the tools, policies, and scenarios outlined by international agencies and institutions with the joint aim of fostering international dialogue around these plans of action and on the urgency of defining clear and unified strategies for the impending energy transition. The urgency for a massive shift towards decarbonization will

be examined alongside the **need of harmonizing risks at various socioeconomic levels, avoiding shocks for citizens, institutions, and companies**.

As mentioned, while the adoption of incisive measures at the global level is crucial, the design of strategies must be able to consider the possible economic and social repercussions of such a drastic transition. **Key elements** for analysis are surely represented by **transition trade-offs** for citizens and private business, i.e. the **role of natural gas** within the energy transition process especially in emerging and developing regions; the technical **feasibility of holding the increase in the global average temperature to 1.5°C** above pre-industrial levels; the timeframe for its accomplishment; and the **costs of affordable energy as well as renewable sources** in the short, medium, and long term.

**For answering these and other key questions on global energy transition and to identify key focal points for decarbonization strategies, FEEM and SDSN are launching a High-level Workshop on 2<sup>nd</sup> – 3<sup>rd</sup> April, 2019 at FEEM headquarter offices in Milan, Italy.**

The workshop has a specific technical-scientific scope and is **aimed at defining the technological roadmap toward total decarbonization in 2050**. In order to foster an inclusive and well-balanced dialogue on this theme, invitations will be administered to actors operating in energy-intensive industries, **including academia and scientific Institutions** (at national, continental and global level); international and global agencies and initiatives; and targeted representatives of the following industries: oil sector; automobile manufacturers, shipping, aviation, power sector (generation, transmission and distribution).

The programme will be organized around two key **plenary meetings** with keynote speeches addressed by apical figures of the promoting institutions and **four technical parallel sessions in Chatham House Rules** covering crosscutting themes strictly related to the main scope of the event. Technical panel sessions will identify a list of focal points – to be unanimously approved – for the design of a Sector Roadmap toward total decarbonization. Every panel session will be co-chaired by two moderators (nominated by FEEM and SDSN). Participants of each panel will count on specific documents set to define battery limits and containing key questions for fostering discussion. A **final press release** for the presentation of the outcomes will be delivered.

This high-level Workshop will culminate with the identification of key elements and implementation plans for the **design of a global strategy, which will be collected in an official document containing the Guiding Principles for Global Decarbonization Roadmap**. The document will **represent** an unanimously shared **starting point** for concrete planning, and will be presented at the next **Global Climate Summit in New York** (September 2019). FEEM and SDSN are confident that this document will also be a **reference point for discussions at the next COP25 in Chile** (November 2019).