Jointly Build a Zero-Carbon Energy System to Further Advance the UN 2030 Agenda for Sustainable Development

———An official Side-Event of the 2023 UN HLPF

Date and Time: Thursday 13 July at 18:30PM-20:00PM
Venue: Conference Room 7, UN Headquarters in New York

Concept Note

Co-organized by GEIDCO, SDSN, CEET and OLADE

Background
Energy is the material basis for human survival and development. From the era of firewood to that of coal, oil and gas, and then to the era of electrification, each transition of energy era has brought about great leaps in productivity. In the 21st century, a new round of energy revolution defined by clean energy such as solar, wind, and hydro power is profoundly changing the world.

Energy is crucial in steering a sustainable path. Taking energy as the linchpin to accelerate energy transition, establish a clean, low-carbon, safe and efficient energy system, and promote extensive breakthroughs in economy, society, and environment, will be a golden key to advance sustainable development. Energy is also like a golden link that widely connects the basic elements of sustainable development and profoundly affects the relationship of human-nature, human-human, and human-society.

Currently, promoting energy transition and advancing sustainable development remains a daunting task, especially in the following three aspects: Firstly, there is an urgent need to accelerate the scale and speed of clean energy deployment. Renewable energy currently accounts for approximately 30% of the total global power generation. To tackle climate change, this share must double to over 60% by 2030, and reach 90% by 2050. Secondly, the process of energy electrification needs to be accelerated. Electricity is a clean and economical secondary energy source that can be converted from all primary energy sources, and most energy consumption can be in form of electricity. The proportion of electricity in the final energy consumption continues to rise, but the overall electrification level around the world remains low, with the exception of a
few countries. Coal, oil, and natural gas are still heavily used as final energy sources, hindering the transition towards green and low-carbon energy. Thirdly, energy network connectivity needs to be strengthened. Energy supply is shifting from point-to-point supply to cross-border and cross-regional energy allocation, as a result of economic globalization. Moving forward, the importance of power system in global energy allocation will become more and more significant, thus there is a great need to build an interconnected power system which is capable of delivery large scale clean power over a wide geographic area.

Technological and policy innovations are essential to building a zero-carbon energy system, unlocking the solutions to the three major challenges outlined above, and driving sustainable energy development. Technological innovation can significantly enhance the efficiency of clean energy production, delivery and utilization, reduce energy costs, and accelerate the scaled development of clean energy. Innovation in policy mechanism is crucial to create a favorable policy environment, attract investment and financing in line with clean energy transition, and at the same time coordinate the relationship between clean and traditional energy to achieve a fair, just and inclusive energy transition.

**Topics**
Focusing on the theme of “Jointly Build a Zero-Carbon Energy System to Further Advance the UN 2030 Agenda for Sustainable Development”, the forum will bring together representatives from energy ministries, international organizations, enterprises, universities, and research institutions to share innovative ideas, measures, and specific cases regarding energy and power technology and policy mechanisms. On technology side, innovation includes clean energy, advanced transmission, smart grid, energy storage, and grid operation and control. On policy mechanism, innovation covers the phaseout of coal-fired power generation, clean energy development incentives, power market mechanisms, cross-border power trading mechanisms, and etc.

**Objective**
This side-event will be co-hosted by the Global Energy Interconnection Development and Cooperation Organization (GEIDCO), the United Nations Sustainable Development Solutions Network (UNSDSN), the Council of Engineers for the Energy Transition(CEET), and the Latin American Energy Organization(OLADE). The main objectives are as follows:
1. Research findings on *Towards Sustainable Development* will be released by GEIDCO, outlining a systematic plan to accelerate global energy transition, foster a zero-carbon energy system towards sustainable development, and further consolidate the global consensus.

2. To conduct in-depth discussions on technology innovation, investment and financing model innovation, international cooperation mechanism, and supportive policies necessary for a zero-carbon energy system, and motivate more solid and effective specific actions.

3. To share expertise and case studies of energy transition to further energize sustainable development.


**Participants**
The speakers include energy ministries, energy and power companies, international organizations, industry associations, think tanks, and research institutions. Expected participants will include energy policymakers, industry practitioners, and other stakeholders from different countries.

**Agenda and Confirmed Speakers**
This side-event consists of four parts: welcome and opening, release of research findings, panel discussion, and the presentation of a joint initiative by co-organizers. Confirmed speakers are as follows:

- E. Mr. Li Junhua, the UN Under-Secretary-General for Economic and Social Affairs
- H.E. Ms. Armida Salsiah Alisjahbana, Executive Secretary, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
- H.E. Dr. Rola Dashti, Executive Secretary, United Nations Economic and Social Commission for Western Asia (UNESCWA)
- Prof. Jeffrey Sachs, President of UN Sustainable Development Solutions Network (SDSN)
- H.E. Mr. Andrés Rebolledo, Executive Secretary of Latin American Energy Organization (Olade)
- Ms. Ligia Noronha, UN Assistant Secretary-General and Head of the UNEP New York Office
- H.E. Ms. Sanda Ojihamo, Assistant Secretary-General and CEO, United Nations Global Compact
- Prof. Liu Zehong, Executive Vice Chairman of GEIDCO
Prof. Cheng Zhiqiang, Executive Secretary for Cooperation of GEIDCO
Mr. Mourad Wahba, Officer in Charge, UN Capital Development Fund (UNCDF)
Mr. Nassim Oulmane, Director, Climate Change, and Natural Resource Management Division, United Nations Economic Commission for Africa (UNECA)
Mr. Raf Tuts, Director of the Global Solutions Division, United Nations Human Settlements Programme (UN-Habitat)
Ms. Rabia Ferroukhi, Director Knowledge, Policy And Finance Centre, International Renewable Energy Agency (IRENA)
Mr. Xu Ming, Deputy Director-General, Cooperation Bureau of GEIDCO
Dr. Guan Xiupeng, Deputy Director-General, General Office of GEIDCO