



SAARC Energy Centre
Islamabad

Webinar Agenda

Webinar on “Pumped Storage Hydropower: Opportunities and Challenges in SAARC Region”

Thursday, 17th October 2024 : 1000 – 1200 hrs Pakistan Standard Time (PKT)

Time (PKT)	Program
1000 – 1005	Welcome and Introduction <i>Ahsan Javed, Research Fellow (RE), SAARC Energy Centre</i>
1005 – 1010	Opening Remarks <i>Dr. Nawaz Ahmad, Director, SAARC Energy Centre</i>
1010 – 1050	Potential, Opportunities and Challenges of Pumped Storage Hydropower (PSH) Technology <i>Professor Arun Kumar, Hydro and Renewable Energy Department, Indian Institute of Technology Roorkee, India</i>
1050 – 1110	Market Mechanisms and Investment Risk for PSH Projects <i>Asst. Professor Himanshu Jain, Hydro and Renewable Energy Department, Indian Institute of Technology Roorkee, India</i>
1110 – 1130	PSH Sustainability and Challenges in European Union <i>Dr. Emanuele Quaranta, Scientific officer at the European Commission (DG JRC), and scientific responsible of the Hydropower section of the Clean Energy Technology Observatory</i>
1130 - 1155	Q&A/ Discussion with participants
1155 – 1200	Closing of Webinar

Information for the participants:

1. All times mentioned are according to Pakistan Standard Time (PKT). The participants from other Member States of SAARC may attend Webinar by following their own national time. The time conversion for Member States is given below for reference:

Country	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Sri Lanka
Local time	PKT - 00:30	PKT + 01:00	PKT + 01:00	PKT + 00:30	PKT	PKT + 00:45	PKT + 00:30

2. The participants can ask questions to presenters by typing questions or clicking to the raised hand option into the pane of the main window of Microsoft Teams software. The participants may send in questions at any time during the presentations, we will collect these and address them during the Q&A/Discussion session.



Professor Arun Kumar of Department of Hydro and Renewable Energy, Indian Institute of Technology Roorkee, currently serving as Emeritus fellow, works in the area of hydropower and pumped storage development, environmental management of water bodies, energy economics and policy with civil and hydropower engineering education.

Prof. Kumar has over 4 decades of experience in the field of hydropower and environmental management of river and lakes.

He is Chairman of Hydro Research committee of Ministry of Power, Member of Central Advisory Committee of Central Electricity Regulatory Commission and independent director of KSEBL, state power utility of Kerala. Prof. Kumar is also Vice President of Federation of Indian small hydropower.

Prof Kumar has been a board member of International Hydropower Association (2021 – 23), MNRE Chair Professor (2013 – 18), NEEPCO chair professor (2022-24) and served on Board of NHPC Ltd, Govt. of India PSU for hydropower (2015 – 19) as Govt of India appointed independent director. He served CLA for Hydropower on SRREN for IPCC during 2009-2011. He headed Hydro and Renewable Energy Department, Indian Institute of Technology Roorkee from 1998 to 2011

Prof Kumar is a fellow of ASCE, Institute of Engineers (India), International Hydropower Association, Indian Water Resources Society, Institution of Public Health Engineers, IWWA and member ASME, IEEE, ICID, AWWA, AWWA India and SESI.



Prof. Himanshu Jain is an Assistant Professor in the Department of Hydro and Renewable Energy at IIT Roorkee. He has over 12 years of combined research and industry experience in modelling and analysing the impacts of integrating high levels of renewable energy in power systems. Currently, he is using advanced modelling techniques to explore the role of inverter-based resources, energy storage (particularly pumped storage hydropower) and demand flexibility in clean power grids. Before joining IIT Roorkee, Dr. Jain worked as a Senior Research Engineer and Research Engineer at the National Renewable Energy Laboratory (NREL), Golden, Colorado, USA from February 2017 to February 2021. Dr. Jain holds PhD, MS, and B. Tech degrees in Electrical Engineering from Virginia Tech, the University of Texas at Arlington, and G.B. Pant University of Agriculture & Technology, respectively.



Dr. Emanuele Quaranta is a scientific officer at the Joint Research Center of the European Commission and his main focus is the Water-Energy-Food-Ecosystem (WEFE) nexus, focusing especially on hydropower and its interference with the Earth's spheres, wastewater, nature-based solutions and digitalisation of the water sector. He is the lead author of the hydropower section of the CETO (Clean Energy Technology Observatory) project, and he coordinated to exploratory research SustHydro on sustainable hydropower potential in the EU and novel technologies. From 2014 to 2019 he was researcher at Politecnico di Torino (Italy) where he worked on low head hydropower and fish passages. He achieved the PhD in 2017 (hydraulic engineering) and won both the Quality Award and the prize for the best PhD Italian thesis on Water Engineering. Emanuele was president of the IAHR YPN Italy in 2021 and 2022. In 2021, 2022 and 2023 he was included among the 2% most influential scientists in the world in a study of Stanford University. He is an expert and consultant on the hydraulic design of water wheels, and research project evaluator for governmental institutions and national authorities on hydropower. He is scientific advisor of two EU funded research projects on hydropower, including ETIP Hydropower.