

**Workshop:** The Role of Renewable Energy in Sustainable Energy Pathways

**Organizers:** Fraunhofer, IIASA, PNNL, UNECE, IRENA

**Target group:** Open to all participants; “Pathways to Sustainable Energy” Project community; UNECE Group of Experts on Renewable Energy (GERE)

UNECE together with IIASA, Fraunhofer, PNNL is implementing the “Pathways to Sustainable Energy” Project. The project seeks to provide answers on how countries can attain sustainable energy. It combines modelling of energy scenarios with policy dialogue, technology research and the development of an early-warning system.<sup>1</sup>

Renewable energy (RE) will play a crucial role in achieving sustainable energy, no matter in which scenario. The technologies applied, concepts and business models used, and the degree of regional cooperation will differ depending on how the world evolves. To explore different scenario quadrants, the project has chosen to explore scenarios in a world with either low or high cooperation, and low or high innovation.

In this session, the Pathways project team will showcase the different roles RE can play in various scenarios. Underlying cost assumptions as well as RE enabling technologies such as electric vehicles and storage options will be discussed. IRENA will complement this discussion by providing insights on the policy framework that supports uptake of RE, and an overview to cross-cutting and holistic policies. The discussion will further be complemented by the presentations of two studies showcasing the potential and implications of an energy system based on a high share of RE.

Participants are invited to contribute to the discussion, provide feedback to the underlying cost and benefit as well as development assumptions of various RE technologies, and the role RE can play in various sub-regions and under varying scenarios.

**Guiding questions:**

- Which holistic and cross-cutting policies can help to boost RE in various scenarios?
- How will RE uptake be realized – what are the technology options and business models driving the transition?
- How to mitigate possible policy, regulatory, technological and financial risks to boost RE in the scenarios?
- What are sub-regional differences in RE potential realization?

Time	Content	Resource person
14.00-14.05	Welcome / Introduction	Moderator: Nazir Ramazanov, Chair, UNECE Group of Experts on Renewable Energy (GERE)
14.05-14.30	<b>The Role of Renewable Energy in Pathways to Sustainable Energy Scenarios</b> <ul style="list-style-type: none"> <li>• Technology portfolio: assumptions</li> <li>• Policy scenarios</li> <li>• Sub-regional results</li> </ul>	Holger Rogner, Senior Research Scholar and Behnam Zakeri, Researcher, International Institute for Applied System Analysis (IIASA), <i>also on behalf of the Pacific-Northwest (PNNL)</i>
14.30-14.40	<b>Global Energy System based on 100% Renewable Energy – Power Sector</b> <ul style="list-style-type: none"> <li>• Implications for the Pathways project</li> <li>• Suggestions for policy makers</li> </ul>	Hans-Josef Fell, President, Energy Watch Group
14.40-15.00	<b>Renewable Energy Policies and Roadmap to 2050</b> <ul style="list-style-type: none"> <li>• Policy options to accelerate the uptake of renewables in power and other end-use sectors</li> <li>• Scaling up renewable energy in line with the 2 °C target: a Roadmap to 2050</li> </ul>	Anuar Tassymov, Associate Programme Officer, International Renewable Energy Agency (IRENA) Luis Janeiro, Programme Officer, Renewable Energy Roadmaps, IRENA
15.00-15.25	<b>Discussion</b>	All participants
15.25-15.30	Wrap-Up / Conclusion	Moderator

<sup>1</sup> See more details about the project approach here: <https://www.unece.org/energy/pathwaystose.html>