



## **Concept Note: Global Renewable Energy Forum (GREF) 2021 Showing Ways to Net Zero Emissions**

### **Background:**

In 2016, 2017, 2019, and [2020](#), the Embassy of the Republic of Korea, Bonn Office in cooperation with IRENA, the UN Climate Change secretariat, and German Federal and State Ministries successfully co-organized four conferences on renewable energy, the Global Renewable Energy Forum (GREF). While the first three conferences were convened in Bonn, GREF 2020 was organized as an online conference due to the coronavirus pandemic.

2021 must be a critical year for the response to climate change and renewable energy expansion. New or updated NDCs must be submitted in time for the UN Climate Change Conference COP 26 in November. Building a global coalition for achieving carbon neutrality by 2050 constitutes a key objective for the UN this year. More and more countries and companies commit to net zero-emission strategies. Roughly 73% of global CO<sub>2</sub> emissions are subject to specific net zero targets by mid-century,<sup>1</sup> pointing toward the right direction. These targets must now be met with immediate implementation.

Renewables continue to increase and reported a record year in 2020, while renewable energy sources produced more electricity than fossil fuels in the EU for the first time.<sup>2</sup> Yet, to move toward a net zero-emission pathway, annual additions of wind and solar capacity must increase four-fold by 2030,<sup>3</sup> making the 2020s a decisive decade. The plan by the Republic of Korea to develop the world's largest offshore wind farm by 2030 is an important step in this regard. Limiting temperature increase to 1.5°C by mid-century requires an energy transition based on renewable energy sources and energy-efficient technologies.<sup>4</sup>

Cities play a crucial role in achieving the energy transition not only in the power sector, but also in end-use sectors lagging in the uptake of renewables, namely transport, heating, and cooling, which constitute serious obstacles to attaining net zero-emission targets and the Paris Agreement. Particularly heating and cooling, which are responsible for 40% of global energy-related CO<sub>2</sub> emissions, have not seen much addition of renewables in recent years.<sup>5</sup>

### **Overview:**

GREF 2021 will be co-organized by the Embassy of the Republic of Korea, Bonn Office, the International Renewable Energy Agency (IRENA), and REN21 – the Renewable Energy Network for the 21st Century. It will be supported by the Korean-German Energy Partnership of the Ministry of Trade, Industry and Energy, Republic of Korea, and the Federal Ministry for

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<sup>1</sup> UN Climate Change, [Annual Report 2020](#), p. 7.

<sup>2</sup> Agora and Ember, [The European Power Sector in 2020](#), pp. 4-5.

<sup>3</sup> IEA, [Net Zero by 2050 – A Roadmap for the Global Energy Sector](#), p. 14.

<sup>4</sup> IRENA, [World Energy Transitions Outlook: 1.5°C Pathway](#), p. 17.

<sup>5</sup> IRENA, IEA, REN21, [Renewable Energy Policies in a Time of Transition: Heating and Cooling](#), p. 11.

Economic Affairs and Energy, Federal Republic of Germany. Partners of the event are ICLEI, the International Geothermal Association (IGA), Eurosolar, UNIDO ITPO Germany, the World Wind Energy Association (WWEA), Germanwatch, the EnergyAgency.NRW, and the German Technical and Scientific Association for Gas and Water (DVGW).

**Structure:**

GRES 2021 will consist of a keynotes session and two substantial sessions focusing on 'net zero-emission pathways' (session 1) and 'the role of cities in the energy transition' (session 2). The substantial sessions will feature one overview presentation followed by two 45-minute panel discussions.

Session 1 will focus on net-zero emission strategies in Korea, Germany, and the European Union in one panel discussion, while the second discussion deals with initiatives of hard-to-decarbonize sectors (i.e., cement, chemicals, and steel) to achieve carbon neutrality. The focus will be particularly on the short- and mid-term measures that must be implemented by the public and private sectors in the 2020s to ensure that achieving net zero emissions by mid-century remains in reach.

Session 2 discusses the role of cities in the energy transition and how they can increase their climate ambition and actions, contribute to local and national decarbonization goals, and move toward a net zero emission pathway in the first discussion. The second discussion focuses on how cities can increase renewables in buildings, in particular, decarbonizing heating and contributing to a system-wide energy transition with renewables. Both discussions will address key barriers and opportunities to scale up renewables, including the need for investment, building adequate policy frameworks, and multi-level frameworks, which are embedded in larger national strategies needed to help transform cities with renewables.

**Format:**

The conference will be convened on September 16, 2021, at Hotel Maritim in Bonn. It will be a hybrid conference from 09:00 to 13:15 hrs (CEST) with onsite and online participation. It will take place in the morning to facilitate online participation from the Republic of Korea.

**Participants:**

GRES 2021 aims to attract participants from the public and private sectors, international organizations, NGOs, and institutions with a renewable energy and/or climate policy focus.

**Expected results:**

GRES 2021 specifically addresses the role of cities in the energy transition, sectors critical for attaining net zero-emission targets, as well as net zero-emission pathways, which demonstrate ways to achieve net zero emissions by mid-century and particularly focus on how to implement ambitious 2030 targets. It can provide valuable input to this year's global focus on net zero-emission targets and enhanced climate ambition ahead of COP 26 in November.

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For more information, please visit [twitter.com/GRES2021](https://twitter.com/GRES2021)



## 5<sup>TH</sup> ANNIVERSARY EDITION

### Draft Program: Global Renewable Energy Forum 2021 Showing Ways to Net Zero Emissions

Sep 16, 2021 (Thur) 9:00-13:15 (CEST), hybrid conference, Maritim Hotel Bonn

#### 9:00-9:30: Opening and Keynote Speeches

- Welcome Address:
  - **Seung-jae Huh**, Consul General, Embassy of the Republic of Korea, Bonn Office.
- Congratulatory Remarks:
  - **Dr. Ursula Sautter**, Mayor, City of Bonn.
- Keynote Speeches:
  - **Francesco La Camera**, Director-General, International Renewable Energy Agency (IRENA) (tbc).
  - **James Grabert**, Director, Mitigation Division, UN Climate Change secretariat (UNFCCC).
  - **Dr. Vera Rodenhoff**, Head of Division “International Cooperation on Environment, Energy and Cities, Cooperation with OECD”, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

#### 9:30-11:15: SESSION 1: NET ZERO-EMISSION PATHWAYS

**Chair: Dr. Dolf Gielen**, Director, IRENA Innovation and Technology Center

- 9:30-9:40: ‘Setting the scene’ presentation by **Dr. Dolf Gielen**.
- 9:40-10:25: Panel discussion 1 – Net Zero Strategies and Policies in line with 1.5°C.
- 10:25-11:10: Panel discussion 2 – Industry Initiatives toward Net Zero Emissions.
- 11:10-11:15: Summary of the session by **Dr. Dolf Gielen**.

#### 11:15-11:30: COFFEE BREAK

#### 11:30-13:15: SESSION 2: THE ROLE OF CITIES IN THE ENERGY TRANSITION

**Moderator: Rana Adib**, Executive Director, REN21

- 11:30-11:40: ‘Setting the scene’ presentation by **Rana Adib**.
- 11:40-12:25: Panel discussion 1 – The Role of Cities in the Energy Transition and the Need for Multi-Level Collaboration.
- 12:25-13:10: Panel discussion 2 – The Role of Buildings: Decarbonizing Heat to Advance the Urban Energy Transition.
- 13:10-13:15: Summary of the session by **Rana Adib**.

**End of the conference**

**Lunch**

**Panelists will be announced soon.**