

Eleventh session of the Assembly  
Abu Dhabi, 18 – 21 January 2021

**Background Note**  
**Ministerial Plenary Meeting**  
**Renewables and Pathway to Carbon Neutrality - Innovation, Green**  
**Hydrogen and Socioeconomic Policies**

1. The Paris Agreement commits countries to actions to hold temperature rises to well-below 2-degrees. In the past few years the policy context has changed and as the consequences of 2-degree rise are now better understood a growing number of countries are supporting the more ambitious goal of holding temperature rises to 1.5-degrees. Achieving that goal will require a concerted effort to reach carbon neutrality (i.e. net-zero global CO<sub>2</sub> emissions) across all sectors of the economy, by mid this century.
2. The momentum behind that goal is growing and notable pledges have been made in the last few months by China, Japan and the Republic of Korea. There are now over 30 countries and the European Union with a political commitment to a net-zero goal, some of which have already been incorporated into their legislative system. A range of other countries are reviewing their objectives and in addition a growing number of sub-national regions, cities and companies are committing to achieving net-zero emissions.
3. A goal of net-zero requires a different mindset and different choices compared to a goal of partial emission reductions. Countries are at different stages of their transitions, but most are still in the early stages of developing plans consistent with that net-zero goal. For some sectors the choices are relatively clear, including the value of using high shares of renewables in power systems. For other sectors, such as transport and industry, however there remain many uncertainties around the optimum pathways, the options and the actions needed. There is much still to be considered but collectively key actors are acquiring an understanding of the key building blocks. It is clear that renewables will play a critical role. Electrification with renewables will be the principle route. But it is now time to understand what is feasible with renewable fuels, including the production and optimal use of green hydrogen and the sustainable use of biomass.
4. Sectors such as aviation and shipping will require solutions that work across borders. Industrial sectors such as iron, steel and cement or petrochemicals are traded regionally and globally and fuels such as hydrogen, synthetic fuels or biofuels will increasingly be traded between countries. It is clear therefore that reaching zero emission in end-use sectors will require a high degree of international collaboration.
5. At the request of its Membership, IRENA has been exploring how to address gaps in our collective knowledge and capability, and seeks to foster closer collaboration between countries and between government and industry in a common pathway to carbon neutrality.

### *Objective of the session*

6. The Ministerial meeting aims to both inspire and inform decision makers by showcasing examples of leadership on strategies for net-zero, by sharing plans and experience to date, exploring the topics in most need of urgent action and discussing how to strengthen international collaboration.
7. The meeting will bring together a range of perspectives on the net-zero goal, including from countries that have already identified their strategies for a pathway to carbon neutrality and those who are still considering how to accelerate their energy transition.
8. Speakers will be invited to share their perspectives and plans on pathways to net-zero goal with a particular focus on the potential of renewable electricity and fuels (green hydrogen, green synthetic fuels and feedstocks, and sustainable biomass and biofuels) in the end-use sectors of buildings, industry and transport.
9. This Ministerial meeting will broaden awareness and knowledge of what is needed for a successful rapid transition to net-zero and how renewables can contribute to this goal, by sharing good practice from around the world and highlighting the importance of international collaboration and the opportunities for closer multilateral working.
10. The outcomes of the meeting will inform the Agency's further analytical work on areas where uncertainties remain and on enabling conditions, potentially including: the role of renewables in specific applications and national contexts; the production and supply of green hydrogen; standards and certification of renewable fuels; and the facilitation of trade in green commodities such as steel, chemicals and fuels; and deepening international collaboration in IRENA's platforms such as IRENA's Collaborative Framework on Green Hydrogen.

### *Guiding questions*

- What commitments or plans towards net zero pathway has your country/organisation already made or is considering developing?
- What are the key enabling conditions for successful transition to net zero and what specific actions need to be taken in the next few years to begin to address those enabling conditions?
- What aspects of the pathways to net-zero particularly require multilateral action and how can closer international collaboration be fostered?
- How can IRENA better support national efforts towards net zero pathway, including through its Collaborative Frameworks, and what should be the initial priorities for IRENA's Collaborative Framework on Green Hydrogen?

### *Associated Publications*

- [Global Renewables Outlook: Energy transformation 2050](#) (2020)
- [Reaching Zero with Renewables: Eliminating CO<sub>2</sub> emissions from industry and transport in line with the 1.5<sup>0</sup>C climate goal](#) (2020)
- [Green hydrogen: A guide to policy making](#) (2020)
- [Green Hydrogen Cost Reduction: Scaling up Electrolysers to Meet the 1.5<sup>0</sup>C Climate Goal](#) (2020)