

Summary

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Renewables have been deploying faster than any other energy technologies and have shown spectacular cost reductions in recent years. However, progress has been uneven across technologies, countries and sectors. Several key barriers still hamper renewable energy deployment, ranging from technology risks for less mature options, financial risks in new markets and developing countries, to system integration challenges in markets with high shares of solar PV and wind. Most importantly, while growth has been strong in renewable electricity, progress has been much slower in the use of renewables in buildings, industry and transport. Deployment of renewables in end-uses needs to be significantly accelerated, be it through use of direct renewable heat, renewable electricity or production of hydrogen from renewable sources. More in general, the world will need a much larger portfolio of renewable and other low-carbon technologies in order to achieve ambitious climate change mitigation and sustainability targets in line with the UN Sustainable Development Goals and the Paris Agreement.

In his presentation, Dr. Paolo Frankl will present the outlook of renewable energy technologies in the IEA Sustainable Development Scenario (SDS), that illustrates a pathway to reach the Paris Agreement well below 2°C climate goal, deliver universal energy access and significantly lower air pollution, while ensuring security of supply at all times. He will then present a five-year market forecast for renewables based on current market trends, policy developments and expected technology progress, and will finally provide an assessment of whether renewables are on track or not to achieve SDS targets. His presentation will cover a large set of renewable technologies, including innovative options with large long-term potential in all sectors, ranging from wind offshore to sustainable advanced biofuels and renewable hydrogen-based chemicals and fuels.