

ENCOURAGING TRENDS

2020 was a record year for growth of renewable energy around the globe, as 80% of new power plant additions were renewable. (mostly wind and solar), and 36% of global electricity generation was from all types of renewables (10% from wind and solar). The costs of producing renewable energy continued to decline as solar costs fell 89% and the costs for onshore wind energy fell 70% since 2010. Coal is no longer a cost effective fuel for generating electricity in the U.S. and its use in 2020 decreased to a low of 18% of total global electricity generation. Seventeen states and 46 U.S. utilities have adopted plans to achieve carbon-free electricity generation within 20-30 years. Minnesota's Renewable Energy Standard (2007) and Solar Energy Standard require utilities to provide at least 25% of their generating capacity with renewable sources (including solar, wind, hydroelectric, biomass or hydrogen) by 2025. Despite these efforts to address the climate crisis, greenhouse gas emissions continue to increase, but at a slower rate.

Plastic Rain

Micro-plastics (less than 5 mm micro-particles) are rapidly increasing in number in all environmental compartments, including air, water, land and all living things. These particles result from the disintegration and wear (not decomposition) of plastic/ synthetic products, esp. tires, synthetic clothing and plastic litter. They are being found in increasing numbers in remote locations such as the deepest oceans and highest mountains. Recent studies indicate that the world's oceans are now returning micro-particles to air and land through rain and aerosols. Humans consume these micro-particles in large quantities from our food, water and air, with the average person consuming over 100,000 particles/year. The significance of human exposure to micro-plastics is unclear at this time, but studies are focusing on contaminants in the original plastics/particles that may be toxic, as well as environmental pollutants that the micro-particles adsorb. Source: Proc. National Academy of Sciences 4/12/21; National Geographic 11/20/20.