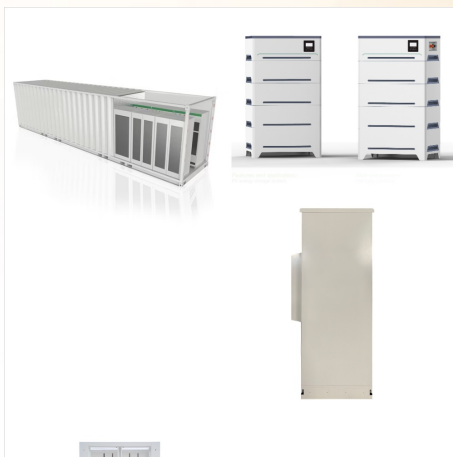




The need for renewable energy innovation has never been greater. In its 2023 report, *Fostering Effective Energy Transition*, the World Economic Forum says that 95% of countries have improved their total Energy Transition Index score over the past decade, but there has been only "marginal growth" in the past three years. Discover.



Pumped hydro energy storage. Hydropower is by far the world's biggest source of renewable electricity generation. Hydropower accounts for more than 60% of global renewable energy generation. Image: Our World in Data. Pumped hydroelectric storage operates according to similar principles to gravity-based energy storage.



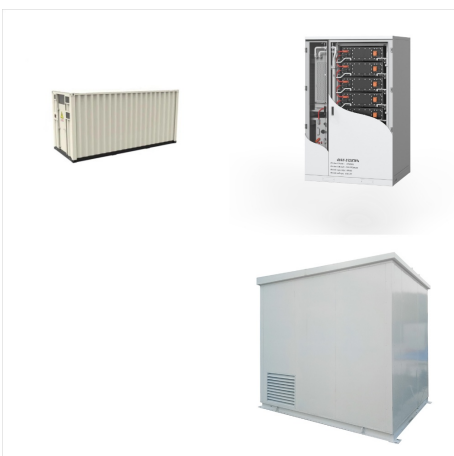
Clean energy boomed in 2023, with 50% more renewables capacity added to energy systems around the world compared to the previous year. Additional renewable electricity capacity reached 507 gigawatts (GW) in 2023, with solar PV making up three-quarters of global additions, according to the International Energy Agency's (IEA) *Renewables 2023*



Reducing energy consumption was an intrinsic part of the building design, resulting in a low-impact mechanically assisted natural ventilation and cooling system; The Excellence in Design for Greater Efficiencies (EDGE) model estimated that the building would be 44% more energy efficient than a similar traditional building.



Approximately 71% of Nigeria's population does not have access to energy. The Nigerian government plans to achieve universal energy access by 2030. The energy sector faces major financial and technical challenges. According to the International Energy Agency, over 140 million people do not have access to energy in Nigeria, about 71% of the



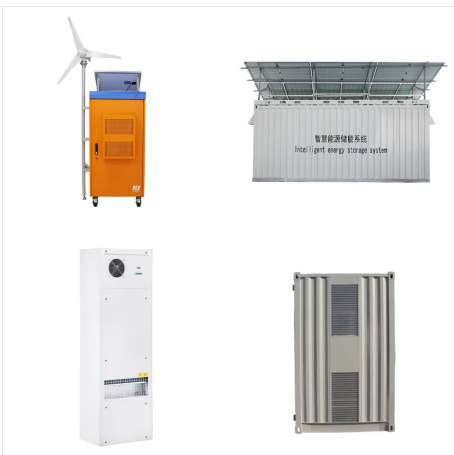
Nevertheless, the looming challenge of evolving from fossil fuels to renewable energy faces the immutable laws of physics and chemistry ??? and, ironically enough, environmental hurdles ??? that may be overlooked by today's energy experts and policy-makers. The pursuit of discovering cleaner ways to power the globe while reducing emissions



3. Thermal energy storage. Thermal energy storage is used particularly in buildings and industrial processes. It involves storing excess energy ??? typically surplus energy from renewable sources, or waste heat ??? to be used later for heating, cooling or power generation. Liquids ??? such as water ??? or solid material - such as sand or rocks



Clean energy in emerging economies: We are advancing country-specific renewable energy finance solutions for four of the biggest emerging and developing economies: India, Brazil, Nigeria and Indonesia. In the latter, a new solar and battery initiative is bringing 15MW of clean energy to the East Sumba region ??? enough to power 4,000 homes and



Here are some examples of how renewable energy solutions are changing lives all over the world. Renewable energy solutions mitigate climate change and promote a healthier environment and they often serve as catalysts for broader social change. From fostering innovation and job creation to promoting gender equality or making civic participation

# ALTERNATIVE ENERGY SOLUTIONS



Achieving a path to net-zero emissions by 2030 will need carbon capture and storage (CCS) to scale to 20 times the current capacity, energy storage to 35 times, clean hydrogen production 70 times and SAF 190 times. Additionally, mass deployment of new advanced modular nuclear reactors will be needed. However, while progress is being made, it ???