Renewable Energy and Sustainability

Solar Power Technology  
Solar energy is one of the fastest-growing renewable energy sources. Photovoltaic cells convert sunlight directly into electricity, while solar thermal systems use sunlight to heat water or other fluids for power generation.

Wind Energy Development  
Wind turbines harness the kinetic energy of wind to generate electricity. Offshore wind farms can produce more energy than onshore installations due to stronger and more consistent winds over the ocean.

Energy Storage Solutions  
Battery technology is crucial for renewable energy integration. Lithium-ion batteries dominate the market, but new technologies like solid-state batteries and flow batteries are emerging for grid-scale storage.