In order to stay below a 4-degree rise in average global temperatures, the electrical generation sector must be taken to zero carbon by 2040. However, given current approaches, there is a limit to the percentage of energy that can come from renewable, carbon-free sources of power. To wit, production of CO2/kWh is increasing, despite a rise in renewable sources. Seasonal variables impact the viability of renewables year-round. Energy storage could, in theory, solve this problem, but all existing storage solutions are uneconomic to do so. However, there are promising and unexplored pathways for chemical energy storage, specifically re-useable primary batteries using earth-abundant and renewably processed materials.

Form energy is developing a new class of cost-effective, multi-day energy storage systems that will enable a reliable and fully-renewable electric grid year-round. They are pioneering battery technology that will reform the global electricity system to run on 100% low-cost renewable energy, every day of the year. Form Energy is a founding member of the Long Duration Energy Storage Council launched at COP26, which provides fact-based guidance to governments, grid operators and major electricity users on the deployment of long-duration energy storage.