

# Compressed Gas Energy Storage

Compressed Gas Energy Storage Corp is developing an energy management technology to eliminate energy supply risk during emergencies for at least 10 hours, by utilizing any form of compressed gas as a means of storing energy. CGES Corp integrates a team of engineers and researchers from University of Illinois Urbana-Champaign with background in design, management and stakeholder engagement in projects integrating thermal, energy recovery, renewable energy, long duration energy storage and carbon capture.

- The project will focus on the communities of Danville and Tilton, IL. A 5-mile radius around the project area comprises a total population of close to 42 thousand, a per capita income of \$26,255 and several census tracts identified as disadvantaged, exceeding several burdens and associated socioeconomic thresholds for health, housing, legacy pollution, wastewater discharges, workforce development and energy cost.
- Key energy challenges include: 1) maintaining resiliency and reducing risks during winter emergencies; 2) decarbonizing electricity; 3) reducing energy costs; 4) sustaining current jobs in existing energy resources while training and creating jobs for a clean energy transition.
- A key vulnerability is insufficient capacity for energy storage and natural gas storage to ensure a reliable supply of energy during extreme weather or upstream disruptions, which has caused billions of dollars of penalties to power generators, hours of service interruption to hundreds of customers, and financial burdens to families.
- Potential solutions to be explored: 1) solar/wind capacity additions; 2) short duration energy storage (batteries for peaking); 3) long duration energy storage (CGES for time shift / seasonal / emergency storage); 4) combined cycle with carbon capture.
- Partner organizations: University of Illinois Urbana-Champaign (academic institution), Waste Pressure Corp (small business), Ecotek Engineering USA, LLC (small business).

