

Industry Offerings

Combining TIAC and TES systems increases Efficiency and Lowers Cost

Providing efficiency gains and cost savings for waste heat applications through the implementation of solutions.

CES + TES Peak Shaving

Combining CES and TES systems delivers cost effective on peak performance with off peak generation

TIAC + TES

Reversible and Seasonal Capacity and Control options for Heating and Cooling Energy Storage

Current Endeavors

Ideal temperature range for most HVAC applications

Change storage mode seasonally (Cold TES-Summer vs. Hot TES-Winter)

Modular | coupled with other LoCap units for custom tailored solutions

E.G. Additional Controls and cooling units for TIAC applications

Scalable | Scale storage capacity up or down by adding/removing units

Standardized design allows for competitive pricing for small and large scaled Storage solutions

Turbine Inlet Air Cooling (TIAC)

Inlet Air Temperature is reduced ~ 40F (110% output vs. ISO conditions)

Combustion turbine performance can be improved 30% on average annually (10% over ISO + ~20% avoided losses during warmer season)

TIAC paired with Thermal Energy Storage (TES)

Smaller chillers are required which result in lower equipment costs and higher ROI

Chillers operate at higher efficiency during off-peak hours

No Parasitic loads are caused by the chillers during on-peak hours, which result in the maximum possible turbine production

Cryogenic Energy Storage (CES)

Low grade heat is introduced during on-peak hours to expand the medium and spin a turbine (~50% Efficiency)

CES Paired with Thermal Energy Storage (TES)

Low grade waste heat is captured and stored with TES for peak shaving purposes

The waste heat is then converted into peak demand power at much higher efficiencies with CES technology vs. other ORC or other low temperature heat engines

Waste Heat Engine Efficiency Improvements for Off-Grid applications

Reducing Size of onsite diesel generators by incorporating LoCap TES

Improving Generator Efficiency by including LoCap TES

Waste heat Engine Efficiency Improvements for On-Grid Applications