



- BESS -
(BATTERY ENERGY STORAGE SYSTEMS)

**THE
PACKAGED
INNOVATION
EXPERTS**

www.gemcontainers.co



UTILITY SHORTCOMINGS



Many areas in the US are known to suffer disabling rolling black-outs and regular brown-outs due to the age and overstress of the existing transmission & distribution (T&D) infrastructure, extreme weather conditions, and many other critical failure factors.

To combat these T&D issues, more and more utilities, independent power producers, battery OEM's, and end-users of electrical energy are considering the implementation of battery energy storage system (or BESS) technology. When the BESS is placed within a specially modified ISO Shipping Container (normally done to increase its total payload capacity and/or to improve accessibility), it becomes known as a CBESS.



CUSTOM BUILT INTEGRATED EQUIPMENT



ENERGY ASSET MANAGEMENT



CBESS installations are becoming a very useful tool to manage energy assets as the deep-cycle batteries store power from the utility grid (most optimally during off-peak times), from fossil fuel-fired power generators, and/or directly from renewable energy sources such as solar arrays and/or wind turbines. When needed, this stored energy is then released and utilized for many functions, such as a non-utility T&D alternative, voltage regulation, deferral of capital improvements, and many others.

GEM has participated in a number of these CBESS design & build projects to directly address the needs of a growing energy storage market. We we will continue working with partners and end-users to develop new technologies and effectual ways of integrating & packaging stored energy with the aim of helping maintain

the performance and reliability of the local electrical power grid while repurposing existing technology and combining it with new technology to make a new product that will benefit everyone.



CBESS SYSTEM DESIGN FEATURES

GEM'S CBESS units can be designed to be location-specific with the required voltage and amperage inputs & outputs and are normally provided as complete, factory built, turn-key systems including:

- BATTERIES
- BATTERY MANAGEMENT SYSTEM (BMS)
- RACKING (SEISMIC-QUALIFIED IF APPLICABLE)
- ENVIRONMENTAL CONTROLS (HVAC/R)
- FIRE DETECTION & SUPPRESSION SYSTEMS
- DC COMBINERS
- AC/DC CABLING
- DC X AC INVERTER TECHNOLOGY



OPTIONAL EQUIPMENT



When a client comes in with a special request, we have the ability to engineer, design and manufacture a container specific to their needs. Electrical, mechanical and structural modifications are all performed on-site for quality assurance and accuracy to ensure we deliver a top notch product each and every time!

LIFE SAFETY EQUIPMENT
POWER DISTRIBUTION & CONTROL
DATA ACQUISITION & MGMT
AUXILIARY ELECTRICAL
& MORE



OUR CASE STUDY



GEM recently completed a customized BESS unit for Enervenue out of California. The scope of the project was to provide a packaged unit to showcase the company's new and innovative battery architecture. Below are a group of photos that highlight the project during the fabrication process.



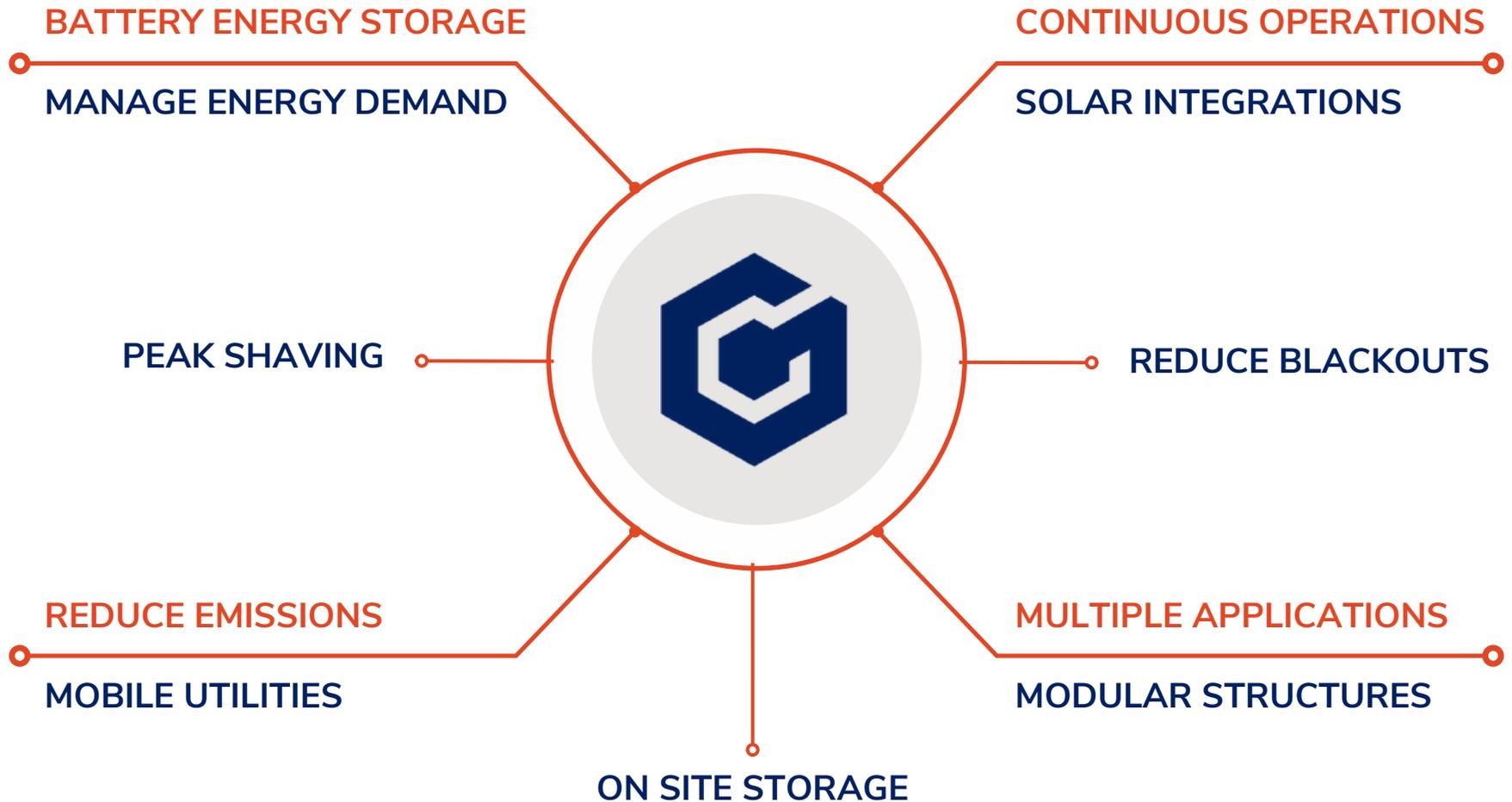
A GLOBAL FOOTPRINT



Our worldwide client base includes end users, manufacturers, EPCs, distributors, and general/subcontractors with interests in all levels of public, private, civilian, military and government market segments.



THE ADVANTAGES OF BESS CONTAINERS



THANK YOU



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