



PORTABLE TURBINE
— E N E R G Y —

Portable Turbine Energy (PTE) LLC

**Turnkey Data Center Construction with
Autonomous PTE Green Turbines Energy**

THE NEW ERA OF DATA CENTERS

FUTURE OF INFRASTRUCTURE. SUSTAINABLE. SCALABLE. CONNECTED.



HYPER-SCALABLE CLOUD

On-demand capacity for
massive data volumes.



SUSTAINABLE GREEN TECH

Eco-friendly operations
with renewable energy.



GLOBAL EDGE CONNECTIVITY

Low-latency access
worldwide.



What We Do



DESIGN

ENGINEERING

CONSTRUCTION

ENERGY

OPERATION

Integrated Solutions

Digital Twin Technology

Automated Processes

Automated Processes

Sustainable Power

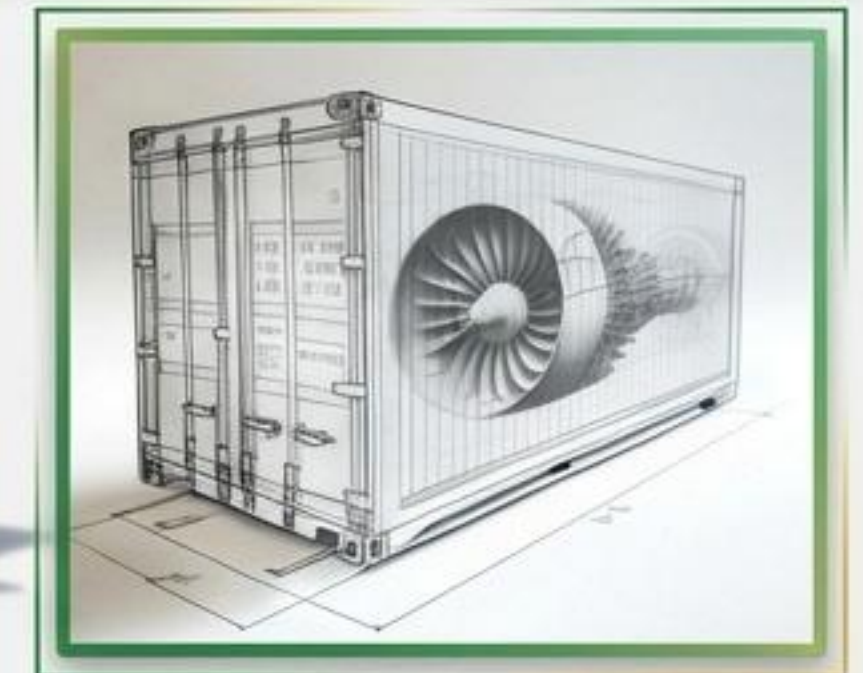
Smart Management
& Optimization



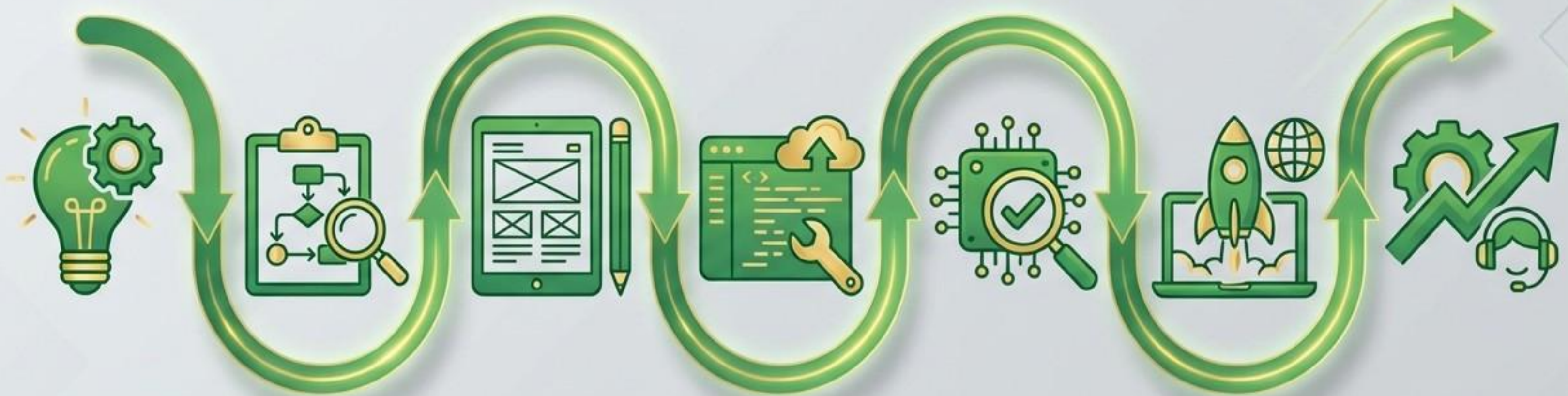
Portable Power Generation



Our portable turbine energy systems provide flexible power solutions. Designed for easy transportation and deployment, these units combine industrial turbine performance with container-based portability. Ideal for remote locations and temporary power needs.



EXPERTISE



IDEATION & CONCEPT

Visionary solutions and feasibility.

PLANNING & STRATEGY

Comprehensive roadmapping.

DESIGN & PROTOTYPING

User-centric blueprints.

DEVELOPMENT & ENGINEERING

Scalable, robust code.

QA & TESTING

Rigorous validation and quality.

DEPLOYMENT & LAUNCH

Seamless go-to-market.

MAINTENANCE & GROWTH

Continuous optimization.

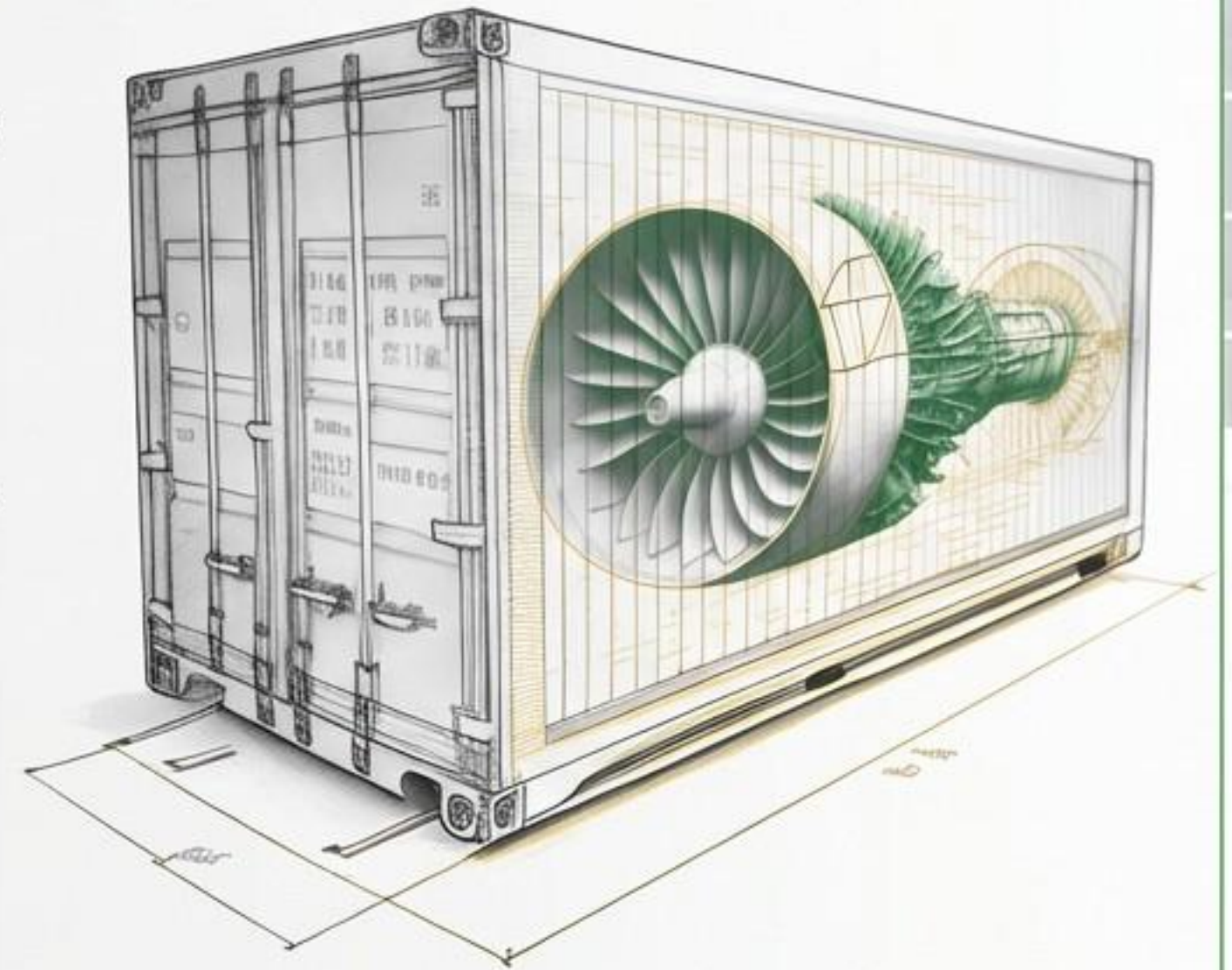


Advanced Turbine Technology

PTE is the energy of the future

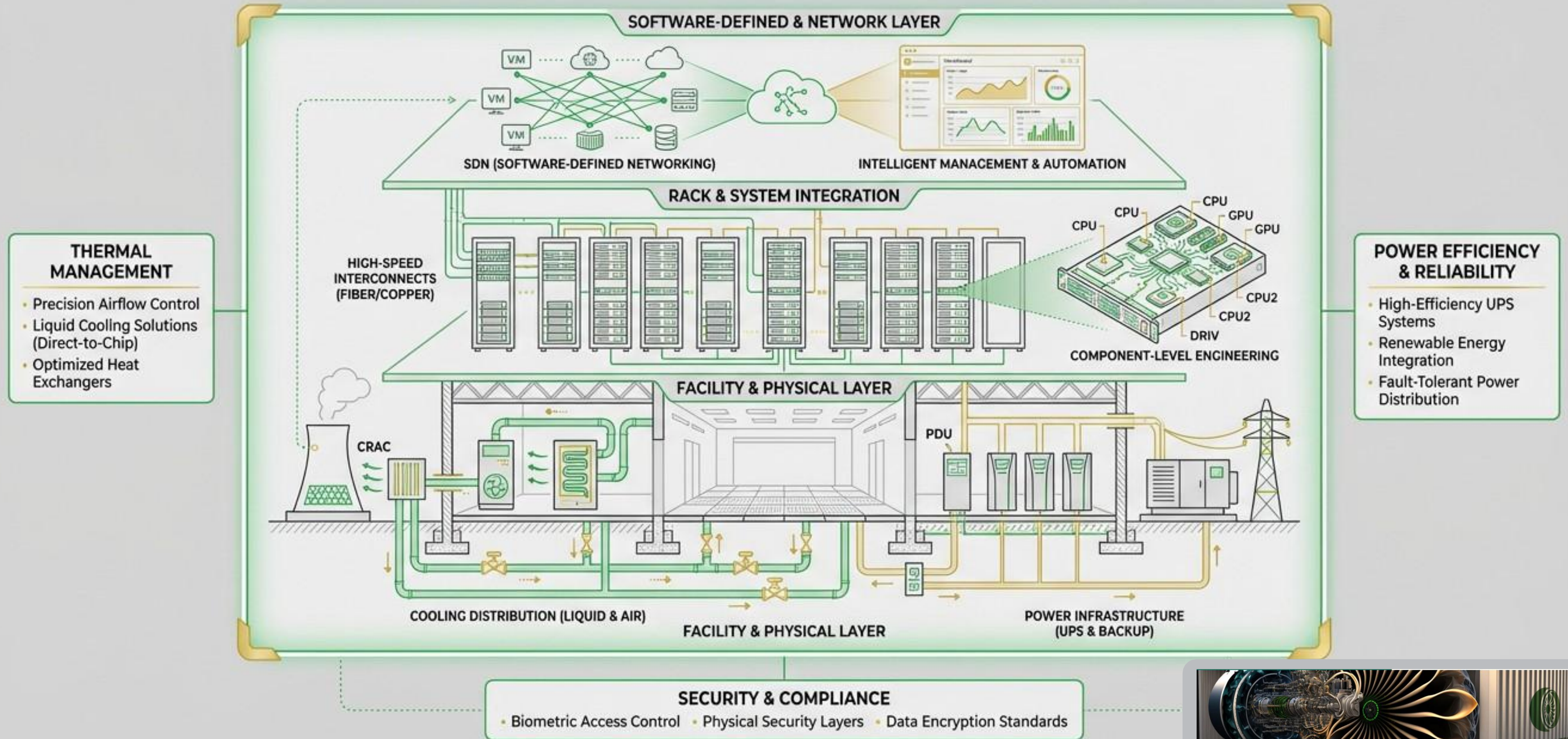


- PTE's advanced industrial turbine technology delivers reliable power generation.
- Our turbines are designed for maximum efficiency, incorporating cutting-edge engineering and materials.
- Each unit is optimized for portable deployment and rapid installation.



DATA CENTER ENGINEERING

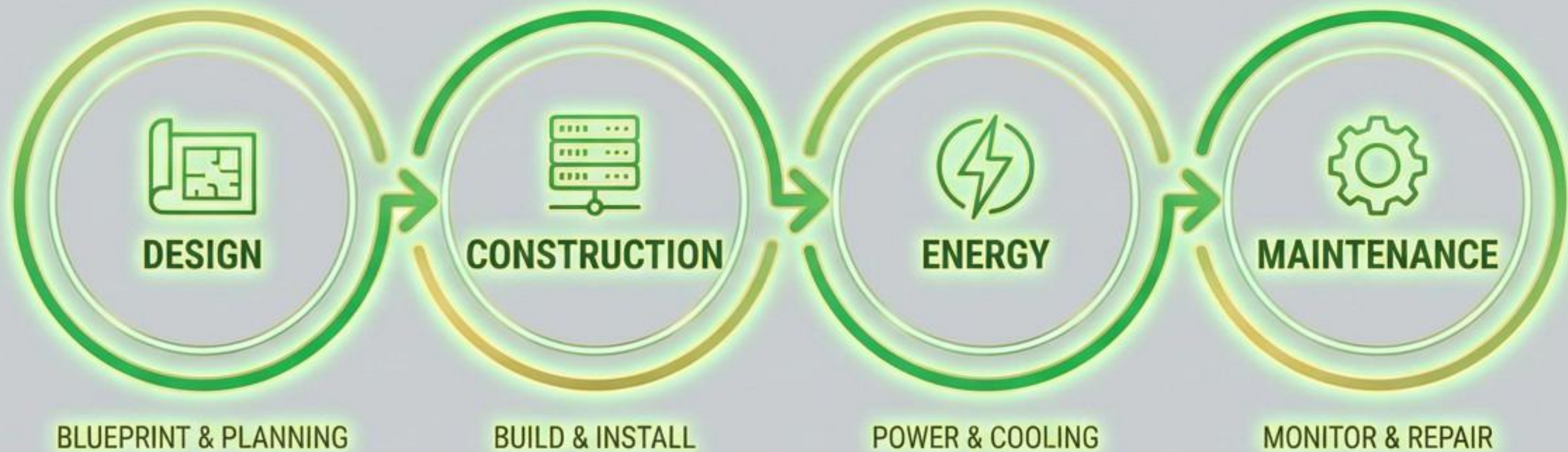
Advanced Infrastructure & Systems Integration: From Chip to Facility



PORTABLE TURBINE

PTE Provides the Following Service

DATA CENTER SERVICES



Our Partners

Building Collaborative Energy Solutions





Global Management Partners (GMP)

GMP Partnership

Capable of managing multi billion-dollar projects

ABOUT GMP

- ▶ GMP is a leading project management and construction management firm specializing in complex infrastructure projects.
- ▶ We deliver comprehensive solutions from planning to execution, ensuring on-time, on-budget delivery with exceptional quality.
- ▶ Our expertise spans across energy, industrial, and infrastructure sectors.

KEY EXPERTISE



ENERGY
SECTOR



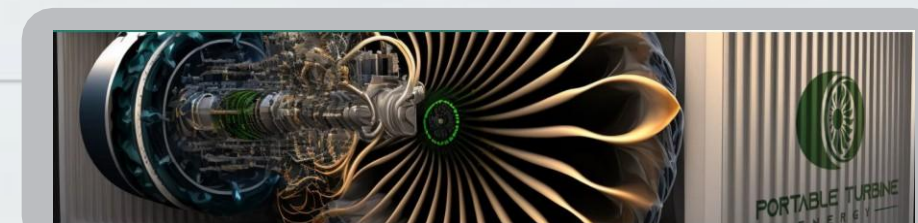
INDUSTRIAL
SECTOR



INFRASTRUCTURE
SECTOR

GMP & PTE STRATEGIC PARTNERSHIP

GMP's strategic partnership with PTE brings world-class project execution and management capabilities to every energy infrastructure project.



THE SHAW GROUP

THE SHAW GROUP PARTNERSHIP



LEGACY & SERVICES

The Shaw Group has built a legacy as a global leader in pipe and module fabrication, known for delivering innovative solutions and unmatched expertise.

Our journey is rooted in providing a comprehensive range of services, including

-  Pipe fabrication, induction,
-  Induction bending, module fabrication,
-  Project services, and full engineering,
-  Procurement, and fabrication (EPF) services.



Industry Leading Fabrication and Project Services

With 1.6 million square feet of fabrication capacity worldwide, Shaw is a premier provider of pipe fabrication, module fabrication, induction bending, and full project execution services - including in-house engineering, design, and procurement. We proudly serve a diverse range of industries and industrial clients across the globe, delivering high-quality solutions tailored to meet the most complex project requirements.

[Learn More →](#)



Shaw Group: Global Experience



Global Experience



Shaw Group

Shaw Group: Key Differentiators

Key Differentiators

-  Global Capacity
-  Multiple Product Offering
-  Pre-Contract / Early Engagement
-  High-Value Engineering Center
-  Strategic Partners
-  Integrated EPF Offering



How can we help?

PTE

Reliable, Sustainable, and Economical
Energy Solutions

Scalable Solutions To Meet Your Needs



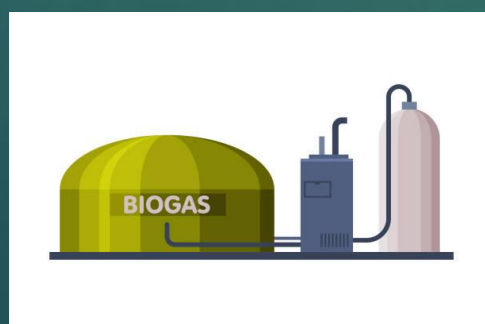
PORTABLE TURBINE
— ENERGY —

MICROGRID SOLUTIONS



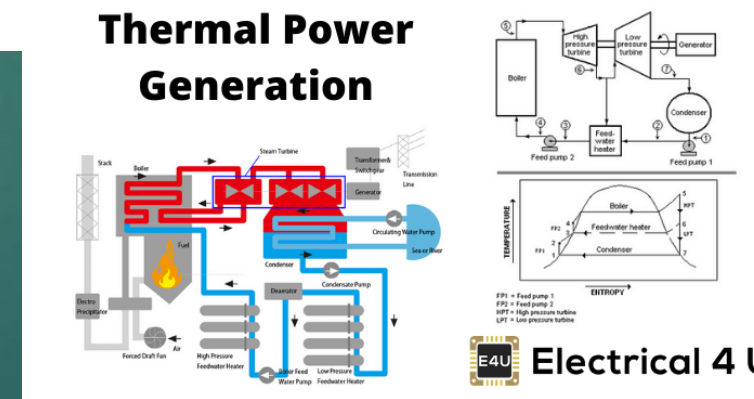
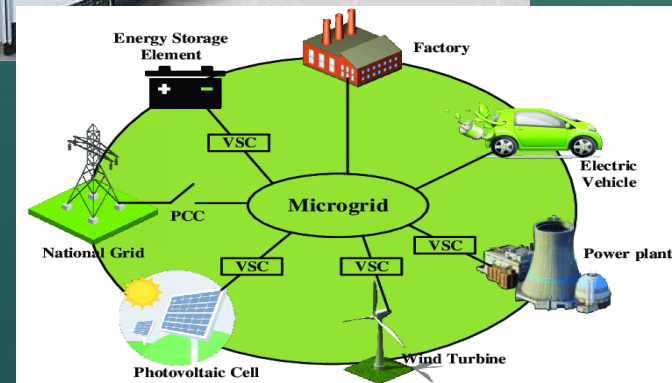
- ▶ Our MicroGrid solutions better sustain energy requirements and reassure reliable power supplies to adhere to your demands.
- ▶ We can provide a turn-key system (design, manufacturing, installation and commissioning) matching your requirements and the current and future demands while providing you a sustainable technology.
- ▶ Can provide from 5 MW to over several hundred of MWs systems.

▶ Potential Fuel Sources



Micro Grid Product Portfolio

- ▶ Our proprietary technologies contribute to higher efficiencies with cleaner emissions.
- ▶ Our technologies have been endorsed as “Green Energy Sources” by the US Patent Office
- ▶ Shipping (Small Footprint): : 6 m (20') Containers



PTE Equipment: switchgear

- ▶ Manufacture Options:
- ▶ Schneider Electric or Siemens
- ▶ Ratings: 1, 5, 10, 15 and 20 MW
- ▶ Types: Fit to customer's needs, for example from Medium voltage 15 kV to Low voltage 480 v, Single Ended, Double Ended, Paralleling



PTE Equipment: Automated PLC's

▶ Manufacturer Options

- ✱ Allen Bradley
- ✱ Siemens
- ✱ Schneider Electric

▶ Essential components in integrating Automatic Controls:

- ✱ Micro Grids
- ✱ Power Management
- ✱ Machine Control
- ✱ Building Automation
- ✱ Engineering, Design, Programming to meet application requirements



Patented process

- ✱ Classified as a “Green Energy Source” by the US Patent Office
- ✱ Can be utilized with heat recovery systems that reclaim heat from Turbofan Generators
- ✱ The combined systems can be up to 20% “Green Energy Sources”

UNITED STATES PATENT AND TRADEMARK OFFICE			
UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: OMBUSSMAN FOR PATENTS P.O. Box 1479 Alexandria, Virginia 22313-1480 www.uspto.gov			
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13/134,343	09/07/2011	Eric William Newcomb	

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CONFIRMATION NO. 4163
PUBLICATION NOTICE



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Publication No. US-2013-0056993-A1
Publication Date: 03/07/2013

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publicly available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

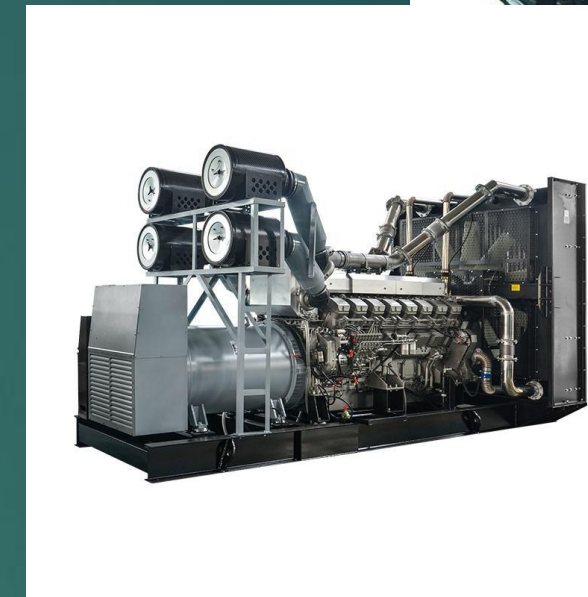
Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTE equipment configuration (An Example)



- ✱ Pratt and Whitney JT8 Turbofan Engine with ceramic coatings applied: ~ 33,000 HP



- ✱ 20 MW Generator, Range 12.47 / 13/8 kV, 50-60 Hz, 1,000 RPM, 3 phase electric

- ✱ 2,000 Amp Main Disconnect Switch, Range 12.47/13.8 kV, 3 phase



- ✱ Automated Digital Control System



Environmental Data

PTE's cost comparisons& Emission rates: 30 MW: Jet fuel as fuel



- * >21% efficient than comparable diesel generators
- * Fuel operating cost: ~ \$0.0048 / kWh
- * ~30 Year equipment life expectancy
- * Initial equipment cost/kW: \$66.67/kW
- * Carbon Monoxide 30.99 lb/hr
- * Total Hydrocarbons 8.92 lb/hr
- * Nitrogen Oxide 3.84 lb/hr
- * Exhaust Gas Temperature (374° C or 705° F)
- * Source: Federal Aviation Administration (FAA)

EXECUTIVE SUMMARY



Pipe Fabrication and Module Assembly

- Including high purity piping
- Ability to perform detailed design and fabrication (at large volumes) of various data center modules, HACs, etc.
- Extensive interaction with many of data center EPCs

Utility Packages - Design, Build, Maintain

- Multidisciplinary full-time engineering and design staff to design, build, install, and maintain utility systems (cooling water, water treatment, chemical injection, chillers, CRAC/CRAH units, pump/valve skids, fuel blending/polishing, boilers, etc.)

Project Management

- Capable of managing multi-billion-dollar projects
- We have several hundred years of combined experience
- Managing many projects in the USA & internationally
- Offices in many countries / continents (Asia, EU, Africa)
- Capable of providing many insurances for various aspects of the project

Site Analysis & Testing

- Have several laboratories in various states
- Have several hundred engineers (PEs) capable of analyzing, designing, conducting feasibility studies, testing materials, etc.

Providing Off-the-Grid Energy and Water

- Capable of providing 20 MW of power in two-20' containers
- Several hundreds of MWs could be provided off the grid
- Many fuel sources could be used (e.g., Bio, Hydrogen, etc.)
- Capable of providing industrial air-to-water systems

PTE Team is Here to Deliver a Global EPC Experience

- Having several hundred professional engineers on hand to handle any civil and other related matters
- Having constructed and managed several billion dollars worth of construction projects all over the world will enable us to manage your project-regardless of its size or complexity
- Having world class project managers will enable us to deliver any project in the safest and environmentally sustainable manner
- Please contact:

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Your project success through our commitment & dedication

