



ENGINEERING-LED ENERGY SYSTEMS

Reliable Energy. Engineered Around Your Operations.

Technical capabilities portfolio

EXPONENT NRG helps industrial, commercial, institutional, infrastructure and government customers in Bangladesh assess, engineer and deliver energy systems around operating requirements.

ASSESS / ENGINEER / VALIDATE / DELIVER / OPTIMIZE / SUPPORT

Solar | Storage | Backup | EV Charging | Smart Infrastructure



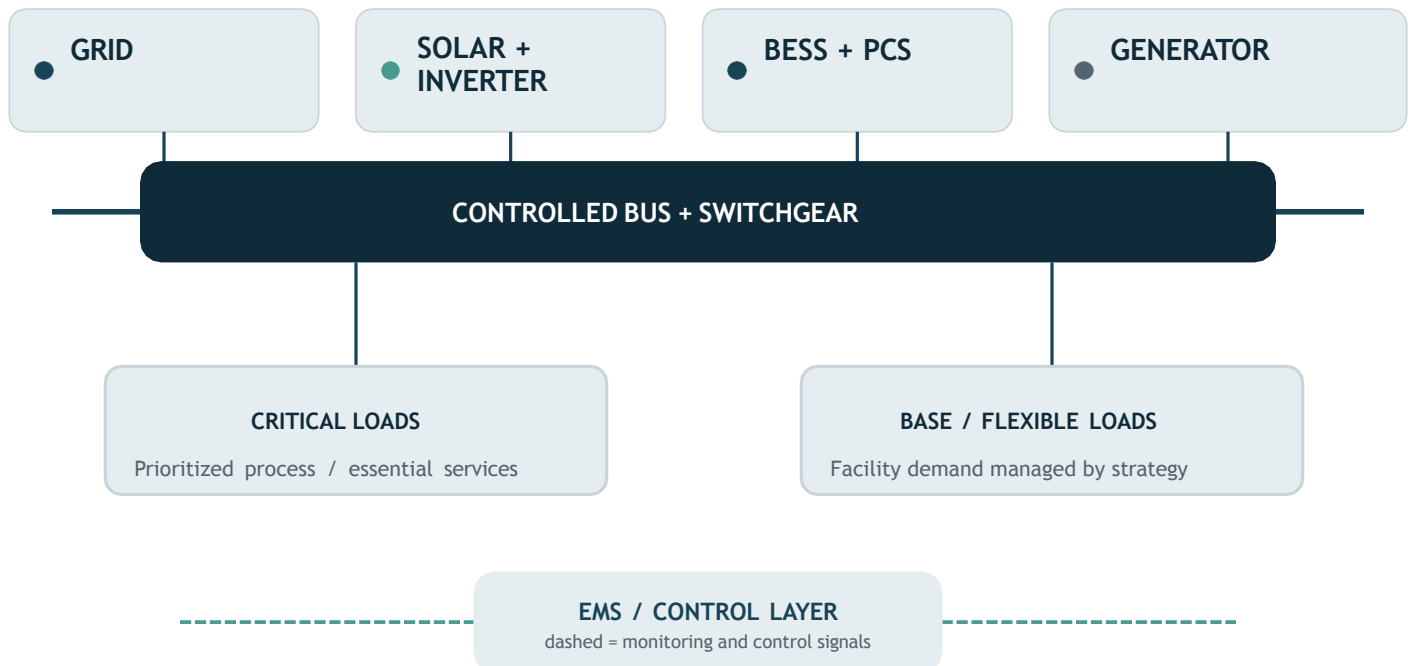
Illustrative concept imagery; not completed project photography.

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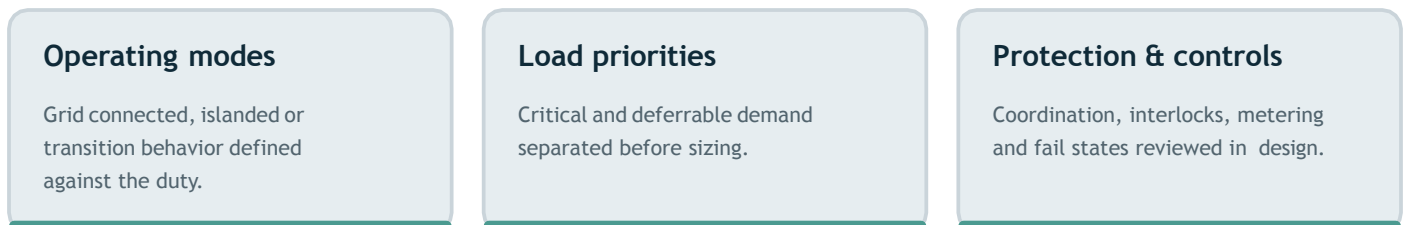
SYSTEM THINKING

One operation. Multiple energy sources.

Conceptual system architecture showing how generation, storage, backup and controls can be coordinated around facility demand.



ENGINEERING INPUTS



Illustrative concept only. Final topology, equipment ratings, protection, transfer behavior and control logic require project-specific engineering and validation.

CAPABILITY PLATFORM

From assessment through implementation

Integrated energy capabilities can be combined around the operating outcome, site constraints and commercial case.

Energy assessment

Load profile, operating priorities, site conditions, infrastructure constraints and project objectives.

Renewable generation

Solar, site-specific wind and hybrid systems evaluated against resource, demand, area and economics.

Battery storage + resilience

BESS architectures for selected critical loads, renewable utilization, backup strategy and generator coordination.

Backup power integration

Grid, generator, storage and controls considered as one operating system; load segregation and transition needs defined.

EV charging infrastructure

Charging demand matched to fleet use, schedules, electrical headroom, simultaneous demand and growth.

Smart infrastructure

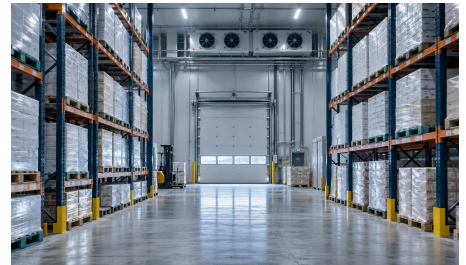
Solar street lighting, hybrid lighting, CCTV and distributed systems assessed for duty, autonomy and maintainability.



GARMENT OPERATIONS



BATTERY STORAGE



COLD-CHAIN OPERATIONS

Illustrative concept imagery; not completed project photography.

OPERATING CONTEXTS

Engineering shaped around how a site runs

Sector examples below describe assessment context. Each project scope follows site data and verified requirements.



GARMENTS / TEXTILES | CONCEPT IMAGE

● Manufacturing & industrial

Production shifts, motor loads, compressed air, process continuity and expansion.

● Cold storage & food

Refrigeration duty, thermal exposure, product risk and outage duration.

● Healthcare & institutions

Essential services, load criticality, power quality and continuity transitions.

● Commercial & infrastructure

Occupancy profiles, outdoor assets, transport demand and distributed systems.

THE EXPONENT NRG METHOD



Delivery scope is agreed project by project and may include engineering, procurement, installation, integration, testing, commissioning and project management as required.

ENGINEERING ASSURANCE

Make assumptions visible before commitment

Project-specific requirements are identified, assigned and verified through design, procurement and acceptance planning.

SYSTEM DESIGN

- Load definition and priority schedule Operating
- modes and source dispatch strategy Electrical single-
- line and interface boundaries
- Protection, isolation, earthing and switching requirements
- Power quality, motor starting and transfer behavior

EQUIPMENT & SITE

- Equipment ratings, site environment and maintainability
- Battery duty, thermal controls and replacement assumptions
- Fire detection, separation and emergency response coordination
- Wind resource, structural loads and access where applicable
- Installation, commissioning and acceptance
-

INTEGRATION & CONTROL

- Controls philosophy, permissives and interlocks
- Metering, alarms, data ownership and communications interfaces
- Protocol compatibility tested at the required equipment boundary
- Fail-safe state, manual operation and recovery conditions
- Cybersecurity and remote-access responsibilities

COMMERCIAL & OPERATIONS

- Scope split, exclusions and interface responsibility
- Schedule, access, outages and operational constraints
- Lifecycle cost inputs, service assumptions and warranties
- Training, documentation, spares and handover expectations
- Performance measurement basis and agreed remedies, if any
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Verification criteria, not compliance claims. Applicable quality, fire, wind, grid, electrical and communications requirements must be confirmed for each site and procurement package. UPS-specific zero-break requirements must be defined and verified separately.

A PRACTICAL FIRST STEP

Bring the operating question. We will help define the next technical step.

An initial review is more useful when it starts with real operating information and a clear view of what the system must do.

- 1 Utility & interval data**
Bills, interval demand and tariff structure.
- 2 Operating profile**
Shifts, critical processes, outages and planned expansion.
- 3 Existing infrastructure**
Grid connection, switchgear, generator, UPS, solar or storage.
- 4 Site information**
Roof / land, equipment rooms, routes, access and constraints.
- 5 Continuity requirements**
Critical kW, required duration and acceptable transition behavior.
- 6 Project objectives**
Cost, resilience, renewable use, diesel reduction or charging.

NEXT STEP

Request an On-Site Energy Assessment

Start with the requirement. Understand the options.
Validate the economics. Invest with clarity.

[REQUEST AN ON-SITE ASSESSMENT](#)

CONTACT

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Bangladesh

Initial assessment scope, site verification needs and any subsequent engineering or delivery scope are agreed with the customer.