

FLUX COMM POWERING TELECOM. BUILT FOR RELIABILITY.

A 3kW continuous power generator delivering clean, uninterrupted power to telecom sites — even where the grid can't reach.

Fuel cell technology · No combustion · Remote monitoring · Off-grid ready



FLUX COMM 3kW SYSTEM

FLUX COMM

3 kW TELECOM TOWER POWER UNIT

Reliable. Efficient. Remote. Renewable Ready.

SOFC-based power for cell towers, small cells, microwave and remote telecom sites.

CONCEPT

This is a conceptual design based on Green Technology Global's FLUX platform. Not an existing certified product.

Above-ground fuel tank

(NG / CNG / LP / Bio-CNG / PNG)

FLUX Power Cabinet

(SOFC + power electronics)
3 kW continuous

Battery / DC Cabinet

(LiFePO₄ +48 VDC distribution)

Cell tower / radio
equipment (48 VDC)



OFF-GRID SITES, ON-GRID DEMANDS

Growing telecom networks are colliding with the limits of grid power



GRID CONSTRAINTS LIMIT GROWTH

Many sites lack grid access or have insufficient capacity to support new telecom equipment.



HIGH COSTS & LONG LEAD TIMES

Extending power infrastructure is expensive and slow, delaying site activation.



DOWNTIME IS NOT AN OPTION

Power interruptions impact network performance, customer experience and revenue.



HARSH ENVIRONMENTS

Extreme weather and remote locations demand rugged, reliable power solutions.

THE FLUX COMM ADVANTAGE

Purpose-built power that keeps pace with network growth



ENABLES MORE SITES, FASTER

Deploy power where the grid can't go and activate sites in days — not months.



LOWER TOTAL COST OF OWNERSHIP

Avoid grid extension costs and reduce complexity with an all-in-one solution.



MISSION-CRITICAL RELIABILITY

Fuel cell technology provides continuous power with fewer moving parts and less maintenance.



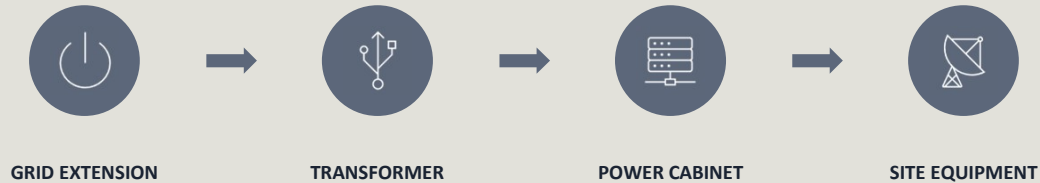
BUILT FOR TELECOM

Engineered for 24/7 operation with remote monitoring and carrier-grade performance.

A SIMPLER PATH TO POWER

Traditional grid extension vs. the Flux Comm solution

TRADITIONAL APPROACH



High capital cost · Long permitting & construction timelines · Ongoing maintenance & reliability risks

FLUX COMM SOLUTION



FLUX COMM SYSTEM



SITE EQUIPMENT

Rapid deployment · Lower total cost · Reliable, clean and always on

POWERING OFF-GRID TELECOM SITES

Right-sized fuel capacity for any deployment



New Tower Deployments

Primary power for new cell sites in remote areas where grid power isn't available.



COLT & Temporary Sites

Power for rapidly deployed sites supporting events, emergencies or capacity needs.



Backhaul & Edge Sites

Reliable power for backhaul radios, microwave sites and edge network infrastructure.



Disaster Response

Restore and maintain connectivity when the grid goes down and communication matters most.

RUNTIME OPTIONS*



TANK SIZE	FUEL (GAL)	DIMENSIONS	RUNTIME (DAYS)
120 Gal	96.0	24" dia x 56" lng	14.1
250 Gal	200.0	30" dia x 76" lng	29.4
500 Gal	400.0	37" dia x 97" lng	58.7
1000 Gal	800.0	41" dia x 167" lng	117.4

**Runtime depends on site load and configuration.*

3kW

CONTINUOUS OUTPUT

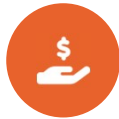
Deploy indoors or outdoors, at the base of the tower — fully pre-integrated and factory tested, ready for fast installation.

DELIVERING VALUE FOR TELECOM OPERATORS



FASTER TIME TO MARKET

Turn up new sites quickly and stay ahead of demand.



REDUCE CAPEX

Eliminate grid extension costs and infrastructure upgrades.



OPERATIONAL EFFICIENCY

Autonomous operation reduces site visits and maintenance.



CLEAN & QUIET POWER

Low emissions and quiet operation for any environment.



SCALABLE GROWTH

Add capacity as needed with modular, flexible deployment.

BUILT TO POWER YOUR TELECOM MISSION

Engineered for the realities of remote, unmanned sites



RELIABLE & CONTINUOUS

Fuel cell technology delivers clean, uninterrupted power for critical telecom systems.



RUGGED & DURABLE

Engineered for harsh environments, extreme temperatures, dust and humidity.



EASY TO DEPLOY

Pre-integrated, factory tested and ready for fast installation with minimal site work.



REMOTE MONITORING

Real-time visibility and alerts to optimize uptime and simplify operations.



LOW EMISSIONS

Clean, quiet operation that meets environmental requirements and community standards.



SCALE WITH YOU

Right-size power today with the flexibility to expand as your network grows.

COMPETITIVE ADVANTAGES

How Flux Comm compares to hydrogen fuel cell power systems

	HYDROGEN FUEL CELL SYSTEMS	FLUX COMM
Fuel source	Dedicated hydrogen production or delivery	Runs on widely available natural gas or propane
Infrastructure	High-pressure (350–700 bar) or cryogenic storage	Simple low-pressure LP/NG tank and regulator
Refueling logistics	Limited H ₂ refueling network, especially remote	Standard LP/NG delivery, nationwide supply chain
Safety & handling	Wide flammability range; added leak monitoring	Mature codes and established handling practices
Footprint for runtime	Low energy density drives larger tank volumes	Compact tank options across the full runtime range
Total cost of ownership	Higher fuel, storage and specialized-component cost	Lower capital and fuel cost over the site's life

OFF-GRID SITES, ON-GRID EXPECTATIONS

Remote telecom towers still run on decades-old diesel power strategy



NOISY, INTRUSIVE OPERATION

Diesel generators run loud around the clock, limiting where towers can be sited near communities.



HEAVY MAINTENANCE BURDEN

Moving parts, oil changes and frequent servicing drive up truck rolls to hard-to-reach sites.



FRAGILE FUEL LOGISTICS

Diesel resupply depends on trucking to remote locations — costly, weather-dependent and prone to delay.



THE FLUX COMM SOLUTION



Flux Comm is a solid oxide fuel cell that electrochemically converts natural gas into clean DC power — with no combustion, no flame, and none of the mechanical wear of a diesel genset.



One compact indoor/outdoor-rated unit — sited directly at the tower, dispatched and monitored remotely.

BUILT FOR THE FIELD

Compact, quiet and fast to deploy at even the most remote tower sites



<45

dBA at 10 ft



~1

day installation



2'x2'x5'

footprint (WxDxH)



~0.35

m³/hr fuel use

120 VAC

NOMINAL VOLTAGE

Up to 40 A

CURRENT

~600 lbs

WEIGHT

**Indoor / outdoor
rated**

LOCATION RATING

Output and fuel consumption vary with site conditions, gas quality and system configuration.

BEYOND THE DIESEL GENSET

How Flux Comm compares to conventional off-grid backup power

	DIESEL GENERATOR	FLUX COMM
Power generation	Combustion + moving parts	Electrochemical, no combustion
Noise	70–85 dBA typical	< 45 dBA at 10 ft
Maintenance	Frequent oil changes, servicing	Minimal moving parts
Fuel logistics	Scheduled diesel truck delivery	Runs on existing natural gas supply
Monitoring	Manual site checks	Remote telemetry & diagnostics

RELIABLE, VISIBLE, IN CONTROL

A dispatchable, standards-compliant asset built for critical infrastructure



Remote telemetry

Wi-Fi-based monitoring keeps operators connected to every unit in the field.



Real-time diagnostics

Continuous performance monitoring flags issues before they cause downtime.



Dispatchable operation

Operators retain visibility and control of every deployed unit.

CERTIFICATIONS & COMPLIANCE



UL 1741

Inverter safety for grid support



UL 9540B

Battery safety compliance



EN 50465

Electrical compatibility standard

SITED WHERE THE NETWORK NEEDS IT

Fast, low-disruption deployment at any tower site



**ONE COMPACT UNIT.
NO NEW INFRASTRUCTURE.**

Deployed directly at the base of the tower — indoor or outdoor rated, ready to run on day one.



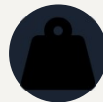
Compact footprint

2' x 2' x 5' (WxDxH) — fits within existing tower compounds without new civil works.



~1 day installation

Minimal site disruption compared to genset pads, fuel tanks and enclosures.



~600 lbs

Light enough for standard site logistics and crane-free placement at most locations.

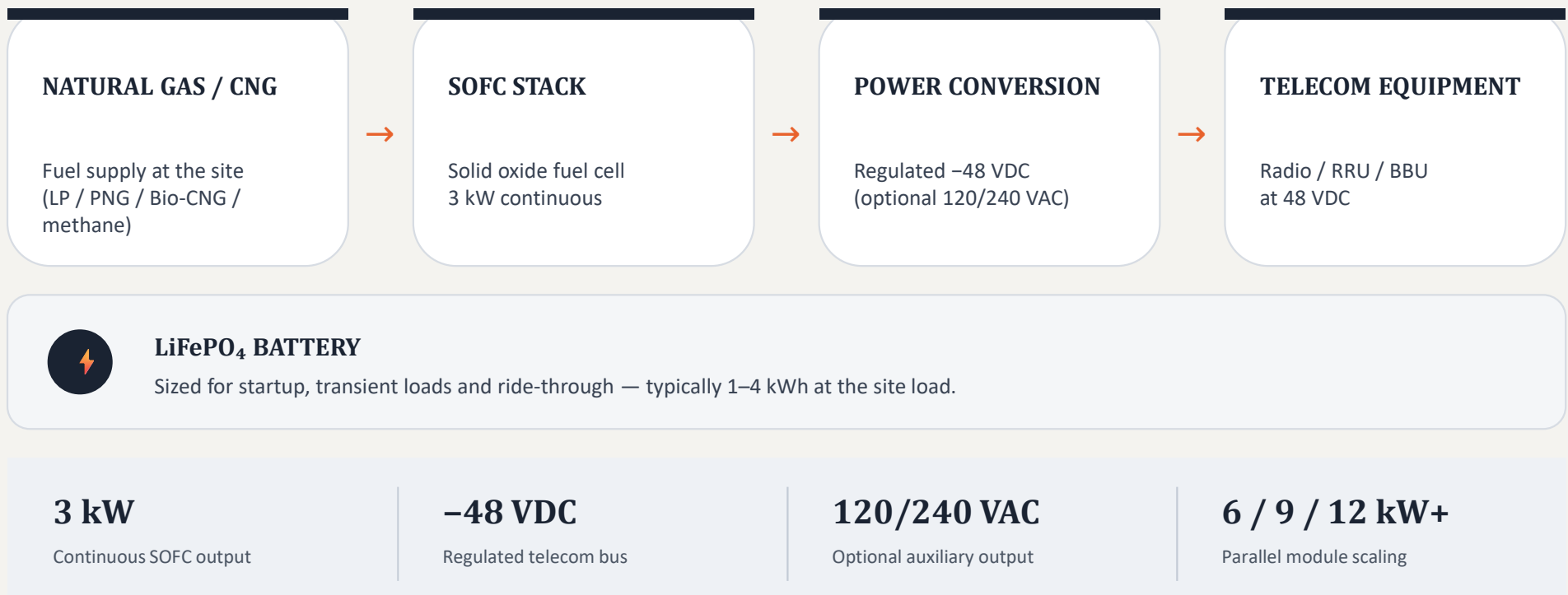


Indoor / outdoor rated

Built to withstand the conditions of remote, unmanned tower sites.

FLUX COMM — PROPOSED ARCHITECTURE

Two-cabinet SOFC system delivering regulated –48 VDC directly to tower equipment



Conceptual engineering design based on Green Technology Global's FLUX platform — not a currently certified product.

KEY SPECIFICATIONS (CONCEPT)

Proposed engineering targets for the FLUX COMM 3 kW telecom configuration

Parameter	FLUX COMM concept
Continuous output	3 kW — 48 VDC telecom bus, optional 120/240 VAC
Fuel options	NG / CNG / LP / PNG / Bio-CNG / methane
Fuel tank options	120 / 250 / 500 / 1,000 gal (typical)
Fuel runtime (approx)	14.1 / 29.4 / 58.7 / 117.4 days per tank size
Battery	LiFePO ₄ , sized for site load — typically 1–4 kWh
Noise target	< 45–50 dBA at 7 m
Enclosure	Outdoor-rated, NEMA 3R/4X style
Dimensions (per cabinet)	~2 ft (W) x 2 ft (D) x 5 ft (H)
Weight (per cabinet)	~400–700 lb, varies by configuration
Monitoring	Cellular + Ethernet remote telemetry
Expansion	6 / 9 / 12 kW+ via parallel modules

Published Flux Comm figures (2 x 2 x 5 ft, ~600 lb, <45 dBA at 10 ft) informed these targets; they are not validated specifications for the telecom configuration.

PHYSICAL CONCEPT — TWO CABINETS

A SOFC power cabinet, a 48 VDC battery cabinet, external fuel and a direct tower interface

CABINET A FLUX POWER	CABINET B TELECOM ENERGY	EXTERNAL FUEL TANK	SITE TOWER INTERFACE
SOFC stack Fuel processing DC power electronics Controls & HMI Cooling / thermal management	48 VDC distribution LiFePO ₄ battery Rectifiers / DC-DC converters Surge protection & disconnects Remote monitoring	NG / CNG / LP PNG / Bio-CNG / methane 120 / 250 / 500 / 1,000 gal Sized to required autonomy Above-ground siting	Direct connection to tower radios Radio / RRU / BBU at 48 VDC Outdoor weather-resistant enclosure Cellular / Ethernet monitoring ~1 day installation

Outdoor NEMA 3R/4X enclosure · ~2 x 2 x 5 ft per cabinet · ~400–700 lb per cabinet · < 45–50 dBA at 7 m · Cellular / Ethernet telemetry

Conceptual engineering design based on Green Technology Global's FLUX platform — not a currently certified product.



CONTINUOUS POWER.

ANYWHERE THE NETWORK REACHES.

Let's scope a Flux Comm deployment for your tower network — contact the Flux team to discuss siting, fuel access and remote monitoring.