

# Go Electric resilient power solutions for microgrids

Go Electric's microgrid solution uniquely combines robust and resilient uninterruptible power with automated energy efficiency functions as well as demand response capability in a turnkey system.

With Go Electric's «microgrid in a box» solution, the customer has the energy resiliency to operate business "as-is" during power outages, brown outs, and off-grid scenarios.

## What makes Go Electric different:

Go Electric's ability to seamlessly transfer from the power grid to the microgrid without an interruption in milliseconds is unique. Furthermore, the Go Electric system can run concurrently with a generator, solar PV array, wind turbines or any other source of electricity. Go Electric makes mobile systems for the military as small as 10 kW and can make large stationary systems for commercial applications up to 3 MW.



### UNIQUE TECHNICAL CAPABILITIES

- ✓ Grid Catch – ability to ride through any three phase grid faults
- ✓ kVAR control allowing BESS to run against a generator
- ✓ Ability to grid form and charge simultaneously



### EASY DEPLOYMENT

- ✓ Compact and streamlined footprint for ease of installation - days vs weeks
- ✓ Streamlined cyber security approach
- ✓ Open protocol is able to integrate with any DER and BESS

## Seamless operation under any grid fault condition:

Go Electric's patented ride through capability produces uninterruptible power through any grid fault condition.

The National Renewable Energy Laboratory (NREL) tested one of Go Electric's microgrid systems and found that it created stable grid voltage in island mode within 80 milliseconds (ms) after a grid fault.

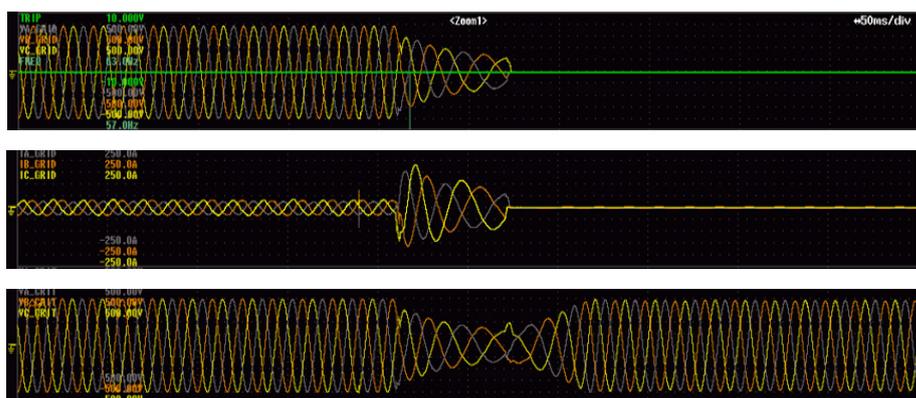


Figure 1: Result of NREL test showing the Go Electric system in «Grid Catch» mode within 80 (ms) after a grid fault. Why is this important? Because it prevents backfeeding onto the grid.

# Product and service offer

Go Electric's integrated solutions – LYNC® 75/250,/500 LYNC® HUB and LYNC® NOMAD, are highly flexible, modular, and scalable, which allow customers to customize their microgrid to best meet their needs from a tested and validated platform.



**LYNC® 75/250/500** is Go Electric's patented power conversion system (PCS) that provides uninterruptible power to critical loads. Embedded in the system is the AutoLYNC® Microgrid Controller that, combined with local microprocessors to control DER assets in real-time, maintains power stability and prevents any load or generation runaway. AutoLYNC® optimizes the DER's to operate in specific use-case scenarios that deliver maximum economic value stacking to the customer– such as generator optimization, power factor correction, and economic dispatch.

**LYNC® HUB** (Portable microgrid all-in-one), is a compact and quickly installed microgrid that can be customized for your needs. It has multiple configuration capabilities utilizing various storage technologies and our LYNC® technology as the brains of the system.



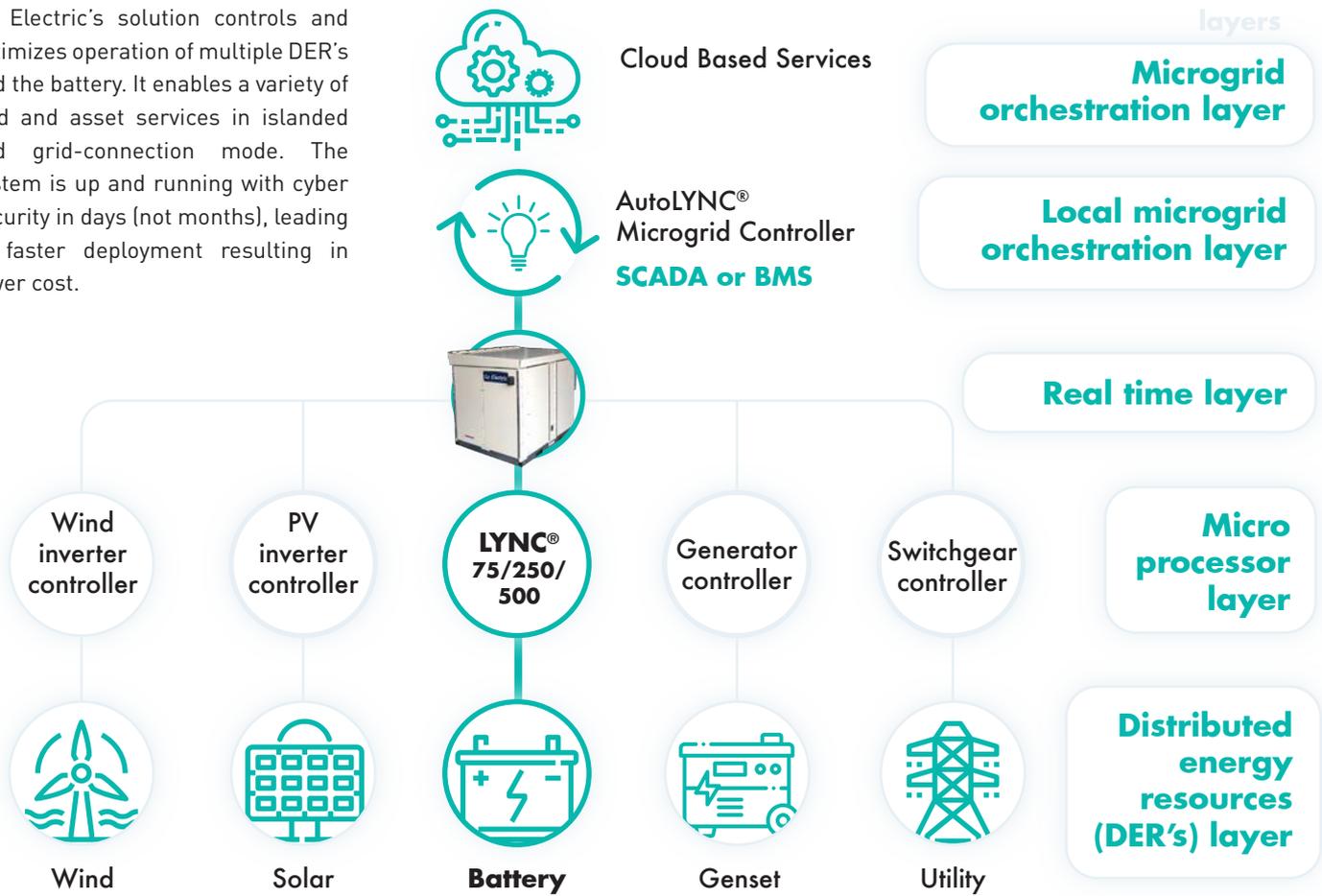
**LYNC® NOMAD** is a ruggedized, mobile, hybrid power system that is built for forward operating bases and other frontline deployments. The system delivers clean and reliable power no matter the input and delivers tremendous fuel savings that simplify logistics and reduces cost.

## Engineering Services / Cyber Security

as a microgrid technology provider, Go Electric works with different vendors and partners to execute a fully functional microgrid. Our highly trained and qualified engineering team can support start-up and commissioning of the microgrid with the capability of meeting a customer's cyber security requirements.



Go Electric's solution controls and optimizes operation of multiple DER's and the battery. It enables a variety of grid and asset services in islanded and grid-connection mode. The system is up and running with cyber security in days (not months), leading to faster deployment resulting in lower cost.



### What LYNC® 75/250/500 systems can do

#### LYNC® 75/250/500

- Blinkless transition from grid-connection to islanding in less than 4ms with no interruption in inverter output
- Plug-and-Play: pre-programmed and pre-assembled with fused disconnects, breakers and transformer

#### AutoLYNC® Microgrid controller

- Automated energy management functions such as peak shaving and power factor correction
- Keeps renewables safely functioning when islanded / during grid outages
- Enables demand response services

### What CUSTOMERS can achieve with LYNC®



#### Reduce electricity Bills

- ✓ Automated energy efficiency functions
- ✓ Maximized use of renewable generation
- ✓ Reduce fuel consumption



#### Rely on uninterrupted power at all times

- ✓ From any distributed energy resource, including renewables
- ✓ Ensures critical loads stay operating when the grid goes down



#### Monetize Energy Assets

- ✓ Earn revenue with demand response



FT. Custer



Tooele Army Depot



29 Palms off-grid Microgrid



## THEY TRUST US

	FT. Custer	29 Palms off-grid Microgrid	Tooele Army Depot Microgrid	HECO Demand Response Pilot
Locations	Ft Custer, MI	Marine Corps Air Ground Combat Center, Twentynine Palms, California	Tooele Army Depot, Utah	Oahu Island
Application	Military base microgrid	Off-grid microgrid	Army depot microgrid	Utility microgrid
Go Electric Solution	400 kW / 160 kWh LYNC Secure® system	150kW/690kWh LYNC Secure® system A Hive™ switchgear	1000 kW / 1000 kWh LYNC DR® system	125 kW / 115 kWh LYNC DR® system
DER components	Two Intensium® Mini P Li-ion batteries Two solar PV arrays totalling 603kW	A 690kWh Saft battery, 175 kVA solar array, and two 150kW diesel genset	1MWh Intensium® Max Li-ion battery, two 750kW natural gas generators, an existing 1.5MVA stirling solar array, an existing 1.5MVA wind turbine, and a recently constructed 1.8 MVA wind turbine	115 kWh Intensium® Mini Li-ion battery Upgrades with PV and diesel genset are planned
Challenge	Integrating with a third party site controller	Remote site not connected to a standard utility grid and relying on diesel generation to operate	Provide UPS to the military base, combined with peak shaving, PF correction, DER optimization services	Combine energy security & efficiency for EMA HQ building with fast frequency and demand response services to Hawaiian Electric
Status	Operational since 2018	Operational since late 2019	Operational since 2018	Operational since 2017
Customer benefit	Enhanced system reliability and resilience during grid fault condition and islanding during grid outages.	24/7 operation and full reliance on renewable resources with reduced cost and emissions	KVar control for power quality improvements and resilience	Enhanced operation and islanding during grid interruption and reduced costs through demand response participation.

Go Electric is a wholly owned brand by Saft, completing Saft's Energy Storage Solutions business with advanced microgrid power systems solutions.

### Saft

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