MICROGRID FLEET MANAGEMENT

NEW SUN ROAD

Mission Control for Distributed Energy

NEW SUN ROAD is a mission-driven, clean energy focused, Public Benefit Corporation based in the San Francisco Bay Area.

OUR MISSION is to accelerate the deployment of renewable energy systems with technology, and to enable energy and access for remote communities

ENERGY OPPORTUNITIES

CLEAN ELECTRIFICATION

US investments in renewable energy and grid-enabling technologies are expected to increase from $60B in 2021 to $100B annually by 2030.

DISTRIBUTED ALTERNATIVES & RESILIENCE

With transmission upgrades expensive to install and safely maintain, climate-driven hazards such as wildfires have made traditional power networks increasingly unstable.

ONE SOLUTION - CLEAN, LOCAL ENERGY

RENEWABLES-BASED MICROGRIDS AND DISTRIBUTED ENERGY RESOURCES (DERS)

NEW SUN ROAD ACCELERATES REMOTE OPERATIONS AT SCALE

- Fleet management technology for distributed power systems (utility, home, commercial, telecom)
- Optimizes with data analytics and machine learning
- Reduces costly truck rolls with remote troubleshooting
- Technology agnostic, with a unified user experience, allowing customers to chose, expand and update equipment as needed.

PG&E begins implementation of remote grids for fire mitigation, resiliency and customer service

By Jennifer Runyon · 3.19.2021

Credit: BoxPower

The first operational remote grid for California's largest investor-owned utility will be made up of an integrated solar, battery, and generator system. If it works, the plan will be to roll out several hundred more across the state.

- COMPLETE SOLUTION -
REMOTE POWER MANAGEMENT

STELLAR MICROGRID OS™

CLOUD SOFTWARE PLATFORM

- Remotely operate fleets from a single dashboard
- Real-time data and remote control
- Automated notifications and reporting
- Universal control

STELLAR EDGE™ CONTROLLER

- Works with any smart device
- Robust IoT technology

ENGINEERING SERVICES

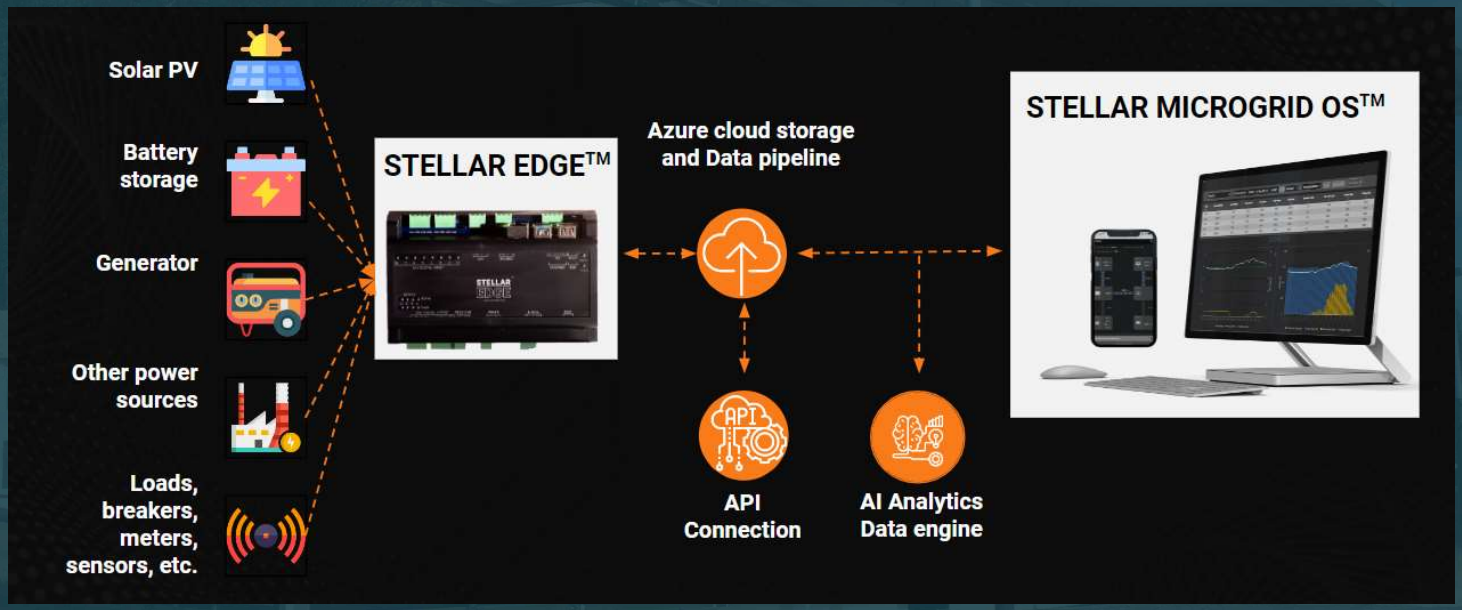
- Product development paid by customers
- Consulting and data analysis

STELLAR IS™

- Plug-and-play microgrid
- Corp/gov impact projects
- 2-8kW solar + battery + Internet
- Leverages core technology

INTEGRATED OPERATING SYSTEM

- Manages 1000s of power systems with optimizations and machine learning
- Normalized data across all sites for reporting and asset management
- Integration with other software to streamline business processes
- Simple, intuitive user interfaces



KEY CUSTOMERS & PARTNERS

US UTILITIES

Selected Stellar Microgrid OS to control all of their standalone power systems

Stellar Microgrid OS to control first three pilot microgrid sites

PARTNERS IN OTHER SEGMENTS

Microgrid developers	O&M, C&I and community projects
Equipment manufacturers	Stellar embedded
Telecom power	Controlling 100s of systems
Integrated systems (IS)	Energy and Internet access

Diversity and Gender Equity Focus

DIVERSITY

- Woman led company
- Founder and Board Chair is a person of color
- 50 / 50 gender split for senior management
- 40% women, > 50% people of color

GENDER EQUITY IMPACT PROJECTS

- 20 women-led Digital Community Centers in Guatemala
- Powered by Stellar IS, energy + Internet + digital transformation
- Entrepreneurship, telehealth, e-banking, education applications
- Community classes on positive masculinity

new sun ROAD

MICROGRID FLEET MANAGEMENT

CASE STUDIES

Mission Control for Distributed Energy

ENERGY ACCESS MINI-GRIDS

PowerGen
HAVENHILL SYNERGY LIMITED
nuru
USAID FROM THE AMERICAN PEOPLE

KEY FEATURES

- High cost for field-service
- Unreliable connectivity
- Low-margin business / cost-sensitive

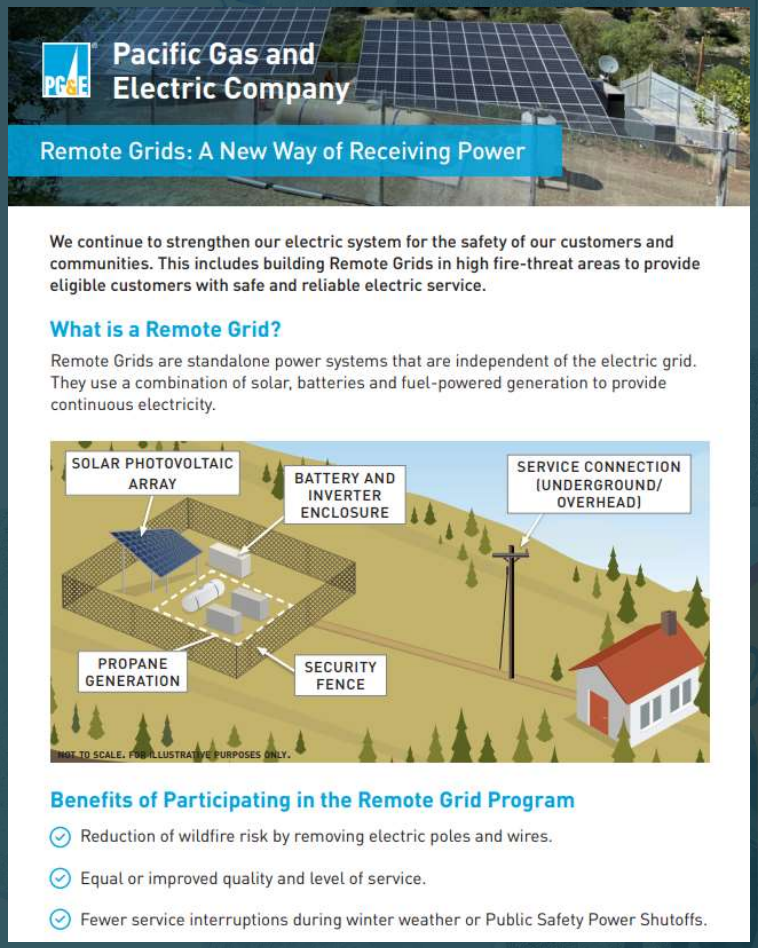
NSR ROLE

- Robust data acquisition and communication
- Incident management and customer service module
- Optimize backup gensets

TECHNOLOGY FOUNDATION

- Very low-cost remote management
- Resilience to poor connectivity
- Remote diagnostics and asset management

REMOTE GRIDS (PG&E)



KEY FEATURES

- Cost-effective wildfire mitigation and resilience
- 100% solar in some deployments
- Diversified equipment / deployments / EPCs

NSR ROLE

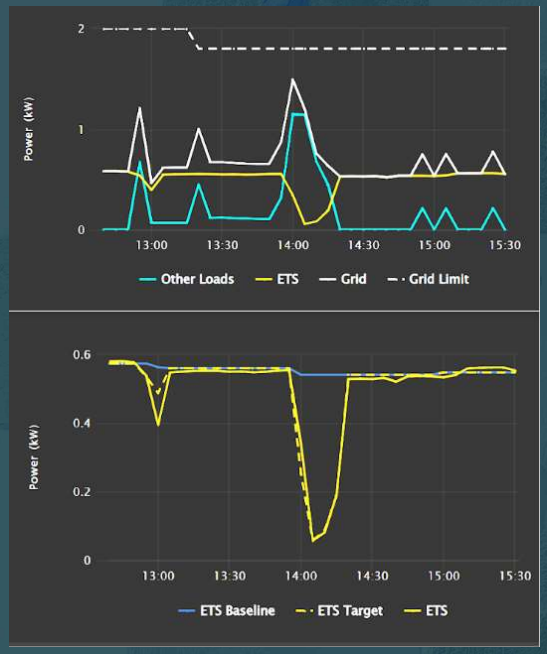
- Single platform across EPCs and hardware vendors
- Supervisory control: PCC relays, device management, generator dispatch
- Analytics and predictive control

TECHNOLOGY EVOLUTION

- Cybersecurity and reliability
  - Single-tenancy, redundancy, SSO, encryption in transit and at rest
  - ISO 27001
- Reserve management in 100% renewable systems

CONNECTED COMMUNITIES (BLOCPOWER)

BLOC POWER
powered by STELLAR MICROGRID OS™



Peak Demand Reduction

KEY FEATURES

- Heat pumps and electro-thermal storage (ETS) in apartment buildings
- NYSERDA pilot
- Optimize time-of-use-rates, demand charge, demand response

NSR ROLE

- Cloud-based power management control
- API integration: LEAP, CoolAutomation, Steffes

NEW SEGMENT

- Demand-side management
- Urban microgrids

DIGITAL COMMUNITY CENTERS (DCC)

To increase **economic opportunities for indigenous women** in Guatemala's rural areas by providing access to electricity, Internet connectivity, and digital skills training programs through the Digital Community Centers Stellar Ixq-Saq'e (SIS).

ELECTRICITY AND INTERNET

To establish solar energy and Internet connectivity in rural, isolated communities through the SIS Centers.

BUSINESS MODELS

To co-develop sustainable business models with women in the community to run the SIS Centers while providing useful commercial services to the community.

DIGITAL SKILLS

To increase the digital skills of 1,000 rural women through a digital literacy program in the SIS Centers.

Key partners:

Microsoft
USAID
USTDA
Mercy Corps
Plan Internacional
United Nations

new sun ROAD

PARTICIPANTS REACHED

2350

DCC BY THE NUMBERS

- 10 Focus groups
- 10 Design thinking workshop
- 30 Community "Asambleas" Meetings
- >100 in person local trainings
- 1,375 women and girls Q´eqchi´ trained in the digital literacy program (93% of the participants)
- 99% increased their digital skills
- 187 indigenous women organized and recognized as leaders in their communities.
- 7 indigenous women from the communities hired as part of the NSR team for the project extension

Stellar IS Power and Internet Systems (10 systems installed in 10 days)

CONFIDENTIAL

new sun ROAD

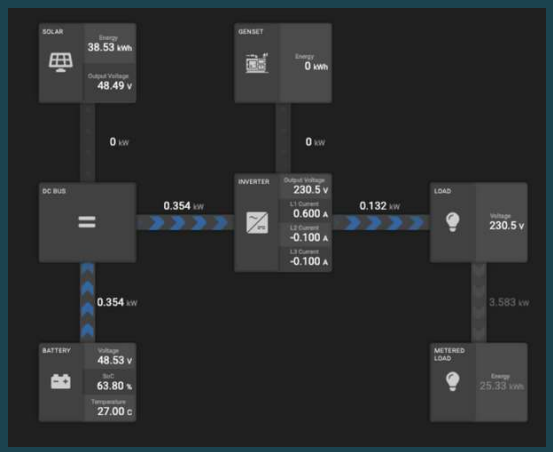
MICROGRID FLEET MANAGEMENT

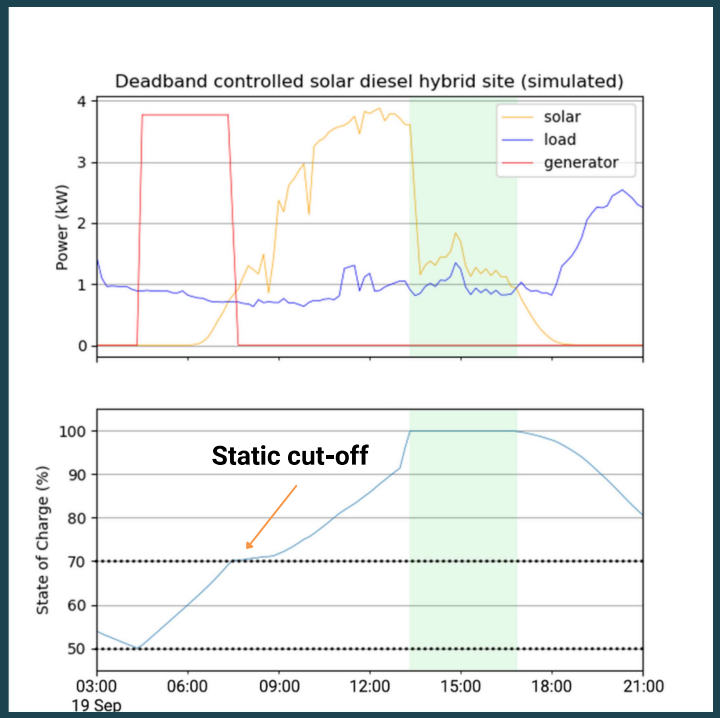
ANALYTICS & OPTIMIZATION

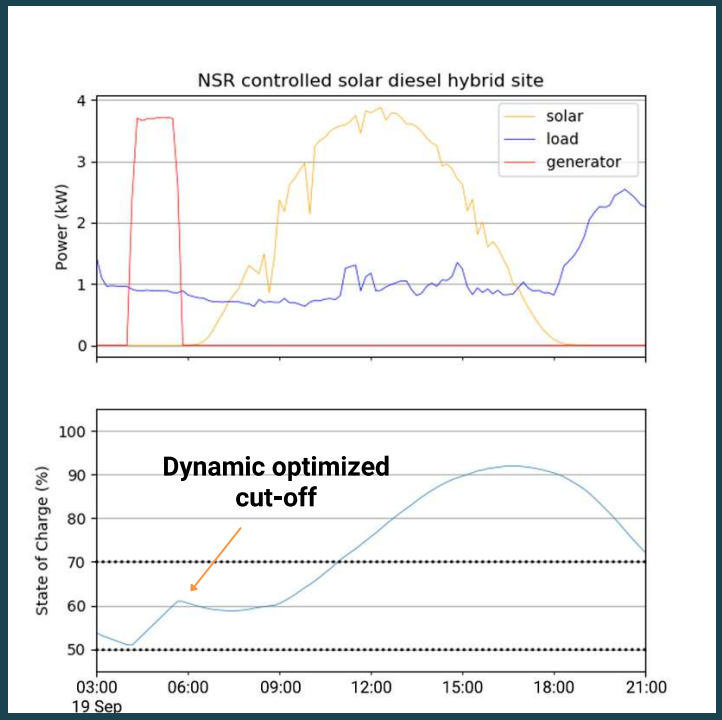
Mission Control for Distributed Energy

Optimized Backup Generator Dispatch

Four month study on three hybrid microgrids in Tanzania







- Increased solar power usage by 10 - 20%
- Diesel fuel savings of 10% annually
- Improved battery and generator lifetime

Source: "Maximizing Hybrid Microgrid Solar Power Usage and Reducing Fuel Costs", New Sun Road, 2021.

STELLAR™

MICROGRID OS

SOLAR FLEET SOFTWARE.

PREDICTIVE REMOTE MANAGEMENT.

UNIVERSAL MICROGRID CONTROL.

new sun ROAD

CONTACT US

ROBIN MILSHTEIN
DIRECTOR OF BUSINESS DEVELOPMENT

RMILSHTEIN@NEWSUNROAD.COM

WWW.NEWSUNROAD.COM