

MassCEC 2026 Microgrid Convening

August 4th, 2026
10:30am to 12pm

WHO IS MASSCEC?

MassCEC is a quasi-state economic development agency dedicated to accelerating the growth of the clean energy and climatetech sector across Massachusetts.

- MassCEC aims to make Massachusetts the climate innovation lab for the world while driving an equitable clean energy transformation.
- We do this to create good jobs, increase affordability, accelerate economic growth, and improve quality of life for Massachusetts residents.
- Created in 2008 as part of “An Act Relative to Green Jobs in the Commonwealth” (Chapter 307, §1)
- Locations in Boston, Charlestown, and New Bedford
- Board Chair: Rebecca Tepper, Energy & Environmental Affairs Secretary

KEY ATTRIBUTES



Innovative



Collaborative



**Results-Oriented
& Data Driven**



Statewide Approach

MASSCEC MICROGRID CONVENING

Goals of the event:

- **Learn more about MassCEC's open resilience funding program**
 - MassCEC is accepting applications for the Enhancing MA Grid Resilience and Reliability program until the EOD on **September 21st, 2026**.
- **Hear from microgrid developers about their products and services**
 - Learn about microgrid technology, project examples, and pathways for project development.
- **Facilitate potential partnerships for applications**
 - Connect with developers in breakout rooms to ask questions and learn more about potential partnership opportunities.

MASSCEC MICROGRID CONVENING

Agenda:

- **10:30 – 10:45: MassCEC Kickoff and Welcome**
 - Introduce resilience grant program and event goals.
- **10:45 – 11:30: Developer Presentations**
 - Hear directly from microgrid developers and learn about their offerings, technology, and partnership opportunities.
- **11:30 – 11:55: Breakout Room Networking**
 - Each developer will have their own breakout room to answer questions and discuss their offerings with attendees. Attendees will be able to move between breakout rooms.
- **11:55 – 12:00: Closeout**
 - Wrap-up and next steps.

GRID RESILIENCE AND RELIABILITY PROGRAM BACKGROUND

Federal Program

- Section 40101(d) of the Bipartisan Infrastructure Law -“Preventing Outages and Enhancing the Resilience of the Electric Grid”
- Formula funding opportunity
- The funding aims to:
 - ⚡ Enhance the resilience of the electric grid
 - 🏠 Prevent outages
 - ⊗ Mitigate the impact of disruptive events

MA Program

- MassCEC has approximately \$3 million to distribute under this RFP.
- MassCEC and DOER developed the program to:
 - ♻️ Improve energy resilience and reliability
 - 🔌 Support state decarbonization efforts
 - ⚖️ Create good-paying jobs
- This round includes a focus on microgrid development.
- **Applications are due on September 21st, 2026.**

PROGRAM ELIGIBILITY

Eligible Subrecipients:

- Electric grid operators;
- Electricity storage operators;
- Electricity generators;
- Transmission owners or operators;
- Distribution providers;
- Fuel suppliers; and
- Any other relevant entity, as determined by the Secretary of DOE



MASSCEC PROGRAM PRIORITIES

Microgrid Development

- MassCEC has a preference for projects that enable or support microgrid development, with a focus on those located at critical facilities. Some examples of potential projects:
 - Installation of automatic transfer switches
 - Installation of switchgear or other microgrid controls
 - Upgrades to the local distribution system that are needed to enable microgrid
 - Battery Energy Storage Systems that provide support during disruptive events (must comply with Build America, Buy America requirements without the use of a waiver)

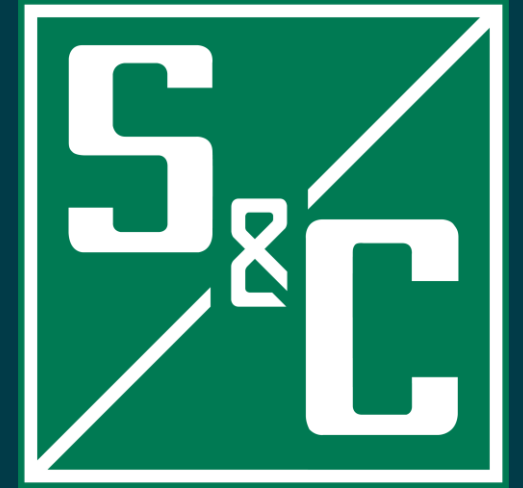
ROUND 1 MICROGRID PROJECTS

UMass Amherst – \$1.6 million in funding for campus microgrid upgrades, including ATS and undergrounding of equipment.

Wakefield MGLD - \$2.8 million in funding for upgrades to Energy Park microgrid, which supports two local high schools and provides cost savings to town ratepayers.



DEVELOPER PRESENTATIONS



AMERICAN MICROGRID
SOLUTIONS

Please note that MassCEC does not endorse any of the companies presenting at this event.



Distributed Energy Solutions

Integrated utility-grade software, productized modular hardware, and turnkey delivery services for the 50 kW to 20+ MW tier

August 2026

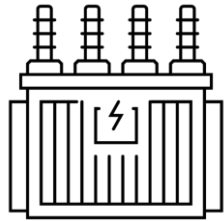


BoxPower Solves Grid Constraints

Responding to real-time grid signals for multiple key applications



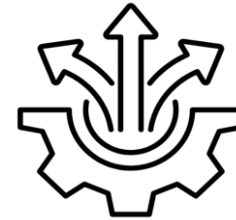
**Remote Power and
Grid Hardening**



**Distribution
Capacity NWA**



**Bridging Power
(Load Before Grid)**



**Flexible Grid
Connection**



**Resilience for
Critical Operations**

One system can move between roles across its life — same hardware, same operating platform

BoxPower Microgrids are Utility-Owned Distribution Assets



SOUTHERN CALIFORNIA
EDISON®



Liberty®



NV Energy



PACIFICORP®



BoxPower provides a trusted platform to solve grid problems. We integrate utility-grade software, productized modular hardware + controls, and turnkey delivery services to design, deploy, and operate safe, reliable, clean and scalable distributed energy systems.



50+

deployed since 2016



100+

in development

The Fastest and Most Cost-Effective Way to Design, Procure, Deploy, and Operate Distributed Energy Systems



THE PROBLEM



Custom, slow, and costly development and deployment



Multiple stakeholders = coordination chaos



Unpredictable system performance and O&M burdens



BOXPOWER SOLUTIONS



Standardized system architecture that accelerates deployment



One seamless platform for design, procurement, deployment & operation



99.99% reliability guaranteed

50+

Systems deployed since 2016

50%

Lower project engineering costs

6+ months

Shorter project timelines

99.99%+

Managed off-grid fleet reliability since 2021

Trusted by 40+ utilities, project developers, and EPCs across the U.S.

EASI Matches Your Grid Constraint to a Field-Proven Hardware Kit



Select Optimized Hardware Configurations

Ranging from 50kW to 20MW+

Wide Application: Off-grid, grid-tied, and flexible interconnection solutions

Flexible Power: Solar, storage, controller, generator options

Modular Kits: Scalable and customizable for diverse energy needs, consistent base kit

Utility Control Integrations: SEL RTAC, DERMS, ADMS, SCADA interface

FEOC and BABA-Ready: Compliance built in from day one



Turnkey Services: Site Feasibility Through Operations



Feasibility: System and site feasibility assessment



Design: System and site full electrical, mechanical, civil design



EPC: Engineering, procurement & construction complete services (A General, C10, CCL)



O&M: O&M services over system lifetime

We perform all system integrations & testing to ensure the microgrid functions as designed upon deployment.

O&M Services – 99.99% Reliability *Guaranteed*



Proven in Remote Environments

Decades of experience operating in the most challenging locations



Centralized Monitoring

Real-time system performance tracking with our integrated platform



Collaborative Approach

Partnering with local contractors for seamless, on-the-ground support



Comprehensive Support

Warranty administration and expert troubleshooting for long-term system reliability





Partnership Outcomes



Accelerate microgrid deployments with turnkey solutions



Unlock long-term revenue opportunities including VPP participation



Achieve high system uptime with integrated portfolio monitoring



Reduce risk with standardized, pre-engineered system designs



Diversify project types while simplifying operations



Integrate clean energy within your energy portfolio



Appendix

Critical Facilities Backup

Mendocino Community Health Clinic – Ukiah, CA

Problem

- ★ Severely impacted by unreliable power due to PSPS and other interruptions
- ★ Traditional fossil fuel backup generators was prohibitively expensive (costs for transportation, installation, ongoing maintenance, fuel delivery, and the fuel itself can add up quickly)

Resiliency for Health Center

- ✓ **247kW** carport solar array and **464 kWh** of battery storage on-site installed in four months
- ✓ Saving MCHC over **\$85k in utility costs** and offsetting **285,000 pounds** of CO2 annually
- ✓ Project funded through CA's Self-Generation Incentive Program, which BoxPower applied for on behalf of MCHC
- ✓ *BoxPower identified and selected the appropriate technology equipment for the load centers, switchgear, conductors, and conduits **using EASI***



Distributed Capacity and Demand Response

Utility-owned DER and Capacity Asset

Problem

- ✱ Utility-scale capacity needs
- ✱ Opportunity for monetization through participation in local utility demand response and capacity markets

Solution

- ✓ BoxPower will design and construct a microgrid with 8 MW PV + 6 MW / 12 MWh BESS
- ✓ System will participate in utility demand response and capacity markets while providing islanding resilience capability to a large portion of the tribal reservation.





Flexible Interconnection

Avoided Utility Upgrade Costs + Speed to Power +
Community Resilience & Reliability + Utility Capacity

Problem

- ✱ A voltage-constrained feeder on a tribal reservation in California prevents construction of a new housing development.
- ✱ Site is frequently impacted by grid outages.
- ✱ Traditional interconnection would require a feeder upgrade.

Solution

Microgrid controller built for PG&E's Flex Connect protocol (protocol-agnostic design)

- ✓ Development proceeds under a flexible interconnection agreement allowing for the utility to send dynamic, daily capacity limits based on real-time grid load monitoring. This increases grid capacity by creating known curtailment on certain customers.
- ✓ 500 kW PV + 963 kW / 1927 kWh BESS for load shifting, islanding, and onsite generation

Ongoing Tribal Grid Upgrades

Turquoise Trail Municipal Complex – Hopi Nation, AZ

Problem

- ✱ The Hopi Tribe's government complex at Turquoise Trail relied solely on diesel generators and often experienced outages until recently when BoxPower constructed a distribution network and grid connection to the NTUA grid
- ✱ Even still, the connection to one transmission line and power generated by another entity constrains the Hopi tribe's economic growth and energy security.
- ✱ Limited local workforce and training opportunities hinder energy independence.

Solution: Hopi Utility Commission–Owned Hybrid Community Microgrid

- ✓ BoxPower has started designing and will construct a hybrid microgrid with 1.25 MW solar, 979 kW / 3916 kWh battery storage, and backup diesel.
- ✓ Provide clean, reliable power to essential services and government operations.
- ✓ Develop local workforce programs to sustain operations and foster energy sovereignty.



Critical Infrastructure EOL Rebuild

Southern California Edison – Sierra Paloma Mountains, CA

Problem

- ✱ Malfunctioning end-of-life underground line to mountaintop site with **multiple telecom, EMS, communications, and antenna towers**
- ✱ Frequent outages, inconsistent power quality and growth limited by temporary diesel generators
- ✱ Sensitive Wildlife Urban Interface area

Reduced Environmental Impact

- ✓ Remote Grid Standalone Power System
75% Renewable System – 160kW PV + 780kWh Li-ion BESS + backup propane generation
- ✓ Energy supply decarbonized to meet GHG goals while avoiding environmental impacts of undergrounding



Rural Primary Service Rebuild

PG&E's First Remote Grid – Briceburg, CA

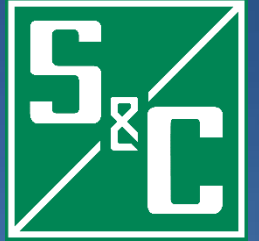


Problem

- ✱ Briceburg fire burned 5,200 acres in the Sierra foothills, destroying several miles of PG&E's distribution lines
- ✱ **Projected rebuild cost between \$2 to \$5 million per line mile**
- ✱ Long-term generator use prohibited

99.99999 Uptime Since 2021

- ✓ Remote Grid Standalone Power System
90% renewable system – 32.5kW PV + 69kWh Li-ion BESS + backup propane generation
- ✓ Improved reliability and resiliency – *increased power quality and near elimination of outages to 5 residents*



Company microgrid experience and GridMaster[®] Controller



S&C Electric Company

S&C was founded almost 120 years ago and is a global presence in switchgear and protection equipment for the distribution grid.

- The Power Systems Solutions group helps keep systems safe through modeling and analysis.
- The Cybersecurity and Communications team keep grids safe and reliable.
- The **Grid Enablement** team develops innovative solutions for a more intelligent and resilient electrical grid, including microgrids.

Power System Study/Design services

Generator and Load Interconnection Studies

- Site screening studies
- Feasibility studies
- System impact studies

Power Flow Studies

- Power flow and contingency analysis
- Conservation voltage reduction (CVR)
- Volt VAR optimization (VVO)
- Voltage profile/regulation assessment
- Flicker analysis and mitigation
- Optimum transformer tap calculation

Stability Studies

- Transient stability analysis
- Voltage stability analysis
- Small signal stability analysis

Short Circuit Studies

- Symmetric and asymmetric fault studies
- Equipment withstand capability and sizing
- Short circuit reduction design
- Voltage sag analysis

Protection Studies

- Protection scheme review and design
- Over-current protection co-ordination
- Fuse sizing
- Communication based coordination.

Substation Studies

- Equipment sizing
- Voltage drop analysis
- Switching transient studies
- Grounding studies

Arc Flash Studies

- Arc flash hazard modelling
- Incident energy calculations
- Arc flash boundary calculation
- Incident energy reduction and mitigation

Power Quality Analysis

- Reactive compensation need assessment
- Harmonic analysis, measurement, and mitigation solutions
- Voltage flicker and voltage sag analysis

Grid Enablement

The Grid Enablement team ensures that microgrids will be successful by running **technoeconomic analyses** and **feasibility studies**.

We offer the GridMaster[®] Microgrid Controller used by the DoD, utilities, and industrial and municipal customers.

- Quantico Marine Base
- Knoxville Utility Board
- Fort Bliss
- Vandenburg Space Port
- Fort Campbell
- Trinity Bluff Microgrid
- ESG Marine Corps Quantico Microgrid
- Kadena Air Force Base Microgrid
- Meck Island Microgrid
- North Bay Hydro
- Ameren TAC Microgrid
- Camp Smith Microgrid
- Elgin Community College Microgrid
- Oncor (SOSF) Microgrid
- Catalina Island Energy Storage System
- City of Field Microgrid - BC Hydro
- Fort Carson Microgrid
- Tucson Medical Center HSFC
- Duke Energy Coalition of the Willing
- Duke Energy Distribution Circuits
- Eastern New Mexico University
- Pearl Harbor WWTP Microgrid
- Borrego Springs Microgrid
- NEDO Energy Storage System
- Santa Rita Jail Microgrid
- Illinois Institute of Technology
- Dyess Air Force Base
- Ft. McNair Army Post
- Cyber Innovation Center
- Presidio Energy Storage System
- Balls Gap Energy Storage System
- International Dr. - Orlando Utilities
- Xcel Energy
- Federal research
 - Flow batteries
 - Use of OpenADR

GridMaster[®] hardware

Standard 2U Rack mount



Years of work and development with the DoD has led to significant cybersecurity features

- Operating System Hardening
- Firmware Updating
- Encrypted Data
- Host Intrusion Detection
- Auditing
- Firewalls
- Intrusion Detection
- Hardened switches
- Secure remote monitoring
- Support for Internet Protocol Versions 4 and 6
- Encryption
- Peer-to-peer authentication
- Whitelisting
- Enclaving

GridMaster® allows easy modification of topology

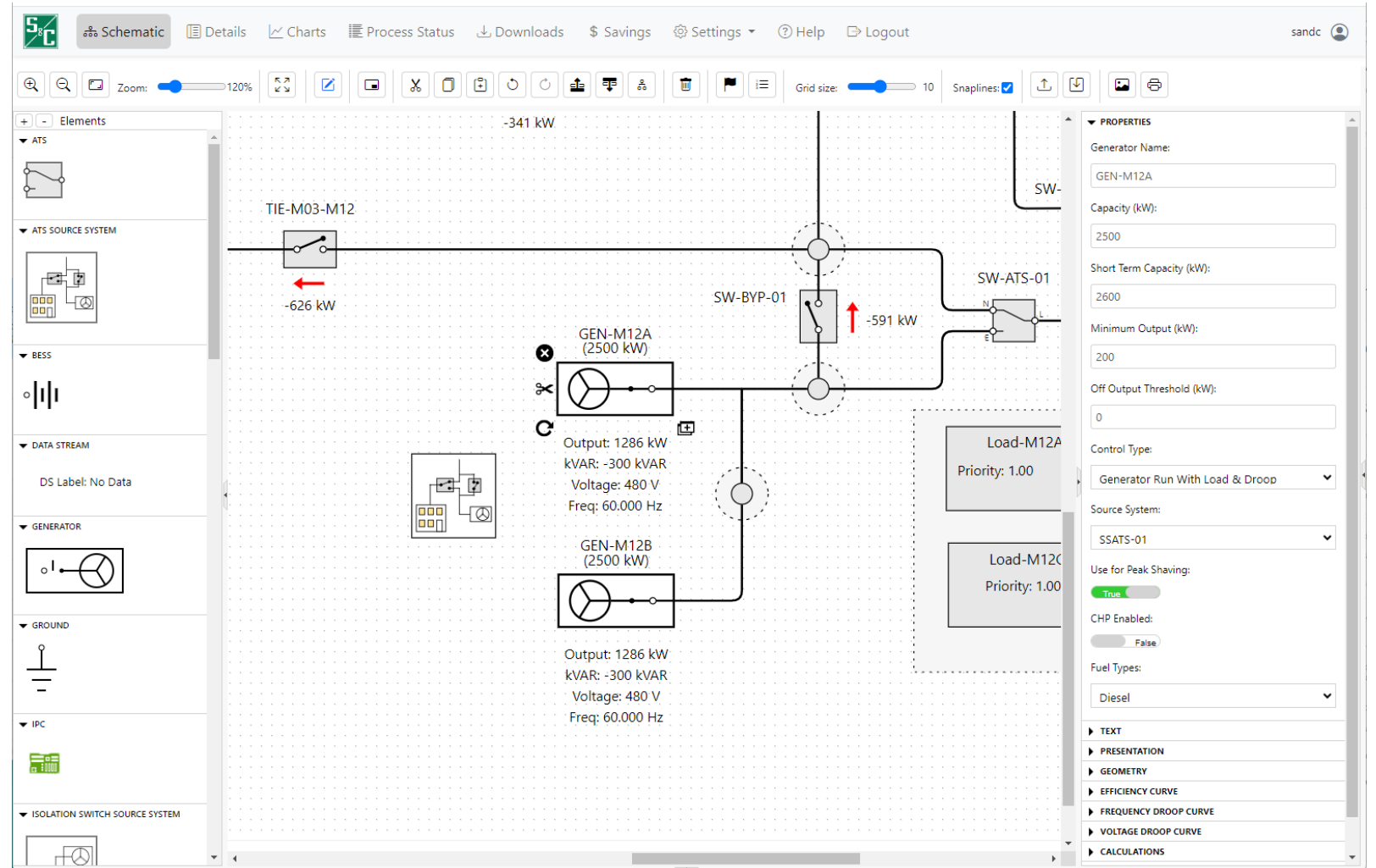
- User-definable schematic and equipment attributes

Supported equipment

- ATS
- BESS
- Conductor
- Generator
- Grounding point
- Inverter
- Load
- PV
- Switch / Breaker
- Thermal load
- Wind turbine
- UPS
- Utility

Equipment groupings

- ATS source system
- Isolation switch source system
- Switch system



User-configurable device connections

Device Connection [SWITCHES]

Device Connection Info

Connection Settings

Modbus Block Readers

Data Streams

GridMaster® IPC Priority

Validation Error

New

Edit

Duplicate

Delete

Show Errors Only

Column visibility

Import CSV

Export CSV

	Data Stream Name	Device Type	Equipment Name	Mode	Sensor	Units
1	SW-ATS-01 State	ATS	SW-ATS-01	Read Only	State	normal/emergency
2	SW-BYP-01 is in error	Switch	SW-BYP-01	Read Only	Is In Error	true/false
3	SW-BYP-01 OpenClose command	Switch	SW-BYP-01	Write Only	Open/Closed Command	open/closed
4	SW-BYP-01 OpenClose state	Switch	SW-BYP-01	Read Only	Open/Closed State	open/closed
5	SW-BYP-01 Power	Switch	SW-BYP-01	Read Only	Power	kW
6	SW-BYP-01 voltage	Switch	SW-BYP-01	Read Only	Voltage Side X	V
7	SW-GEN-01 is in error	Switch	SW-GEN-01	Read Only	Is In Error	true/false
8	SW-GEN-01 OpenClose command	Switch	SW-GEN-01	Write Only	Open/Closed Command	open/closed
9	SW-GEN-01 OpenClose state	Switch	SW-GEN-01	Read Only	Open/Closed State	open/closed
10	SW-GEN-01 Power	Switch	SW-GEN-01	Read Only	Power	kW
11	SW-GEN-01 voltage	Switch	SW-GEN-01	Read Only	Voltage Side X	V
12	SW-GND is in error	Switch	SW-GND	Read Only	Is In Error	true/false
13	SW-GND OpenClose command	Switch	SW-GND	Write Only	Open/Closed Command	open/closed
14	SW-GND OpenClose state	Switch	SW-GND	Read Only	Open/Closed State	open/closed
15	SW-GND Power	Switch	SW-GND	Read Only	Power	kW
16	SW-GND voltage	Switch	SW-GND	Read Only	Voltage Side X	V
17	SW-M0 is in error	Switch	SW-M0	Read Only	Is In Error	true/false
18	SW-M0 OpenClose command	Switch	SW-M0	Write Only	Open/Closed Command	open/closed

Show 100 entries

Showing 1 to 100 of 108 entries

Previous

1

2

Next

Generator

GEN-01

Read Only

On/Off State

on/off

Generator

GEN-01

Read Only

Power

kW

Generator

GEN-01

Read Only

-- not selected --

on/off

Generator

GEN-01

Read Only

ATS Run Signal Detected

V

Generator

GEN-02

Read Only

Frequency

true/false

Generator

GEN-02

Read Only

Frequency Offset Adjustment

Hz

Generator

GEN-02

Read Only

Fuel Level

Hz

Generator

GEN-02

Read Only

Ignored

percent

Generator

GEN-02

Read Write

Is Able to Provide Power and Available

open/closed

Generator

GEN-02

Read Only

Is GCB Closed

kVAR

Generator

GEN-02

Read Only

Is In Auto

kW

Generator

GEN-02

Read Only

Is In Error

kW

Generator

GEN-02

Read Only

Is Spinning

on/off

Generator

GEN-02

Read Only

Is Transitioning To Generator Test Mode From Grid-Tied Mode

on/off

Generator

GEN-02

Read Only

Is Transitioning To Grid-Tied Mode From Generator Test Mode

on/off

Generator

GEN-02

Write Only

kVAR

on/off

Generator

GEN-02

Read Only

Manual Output Command

on/off

Generator

GEN-02

Read Only

Manual Output State

on/off

Generator

GEN-02

Write Only

Mode IPC Control Cmd

on/off

Generator

GEN-02

Read Only

Mode IPC Control State

on/off

Generator

GEN-02

Read Only

On/Off State

on/off

Generator

GEN-02

Write Only

Run With Load Command

on/off

GridMaster[®] built-in functionality

- Transition from grid-tied to island mode
 - Closed / open transition
 - Automatic / manual
- Transition from island to grid-tied mode
 - Closed / open transition
 - Automatic / manual
- Generator / BESS dispatch and curtailment
- Maintenance of BESS state of charge
- Load shed and restoration
- Economic dispatch
- Contingency handling

Economic dispatch

User can define electricity, natural gas, and diesel rates

- Supports time-of-use and block rates
- Can define rates for multiple seasons
- When grid-tied, GridMaster® attempts demand reduction, energy arbitrage, and spark-spread comparison

The 'Update Utility Rate' dialog box is shown with the 'Energy Charges' tab selected. The 'Rate Info' tab is also visible. The 'Name' field is 'Gas rate', 'Service Type' is 'Natural Gas', 'Rate Unit' is 'therms', 'Energy Content Multiplier' is '1', and 'Day of Month For Rate Reset' is '7'. The 'therms/ccf' dropdown is also visible.

Field	Value
Name	Gas rate
Service Type	Natural Gas
Rate Unit	therms
Energy Content Multiplier	1
therms/ccf	therms/ccf
Day of Month For Rate Reset	7

The 'Update Utility Rate' dialog box is shown with the 'Time Of Use Periods' tab selected. The 'Has Time Of Use Periods' dropdown is set to 'Yes, one set of time of use periods for both energy and demand.' The 'Season' dropdown is set to 'Summer'. The 'Weekdays' and 'Weekends / Holidays' grids are displayed, showing time-of-use periods for On Peak, Mid Peak 1, Mid Peak 2, Mid Peak 3, and Off Peak.

Period	Weekdays	Weekends / Holidays
On Peak	Midnight to 6 AM (Green), 6 AM to Noon (Red), Noon to 6 PM (Red), 6 PM to Midnight (Green)	Midnight to 6 AM (Green), 6 AM to Noon (Green), Noon to 6 PM (Green), 6 PM to Midnight (Green)
Mid Peak 1	Midnight to 6 AM (Green), 6 AM to Noon (Yellow), Noon to 6 PM (Yellow), 6 PM to Midnight (Green)	Midnight to 6 AM (Green), 6 AM to Noon (Green), Noon to 6 PM (Green), 6 PM to Midnight (Green)
Mid Peak 2	Midnight to 6 AM (Green), 6 AM to Noon (Yellow), Noon to 6 PM (Yellow), 6 PM to Midnight (Green)	Midnight to 6 AM (Green), 6 AM to Noon (Green), Noon to 6 PM (Green), 6 PM to Midnight (Green)
Mid Peak 3	Midnight to 6 AM (Green), 6 AM to Noon (Yellow), Noon to 6 PM (Yellow), 6 PM to Midnight (Green)	Midnight to 6 AM (Green), 6 AM to Noon (Green), Noon to 6 PM (Green), 6 PM to Midnight (Green)
Off Peak	Midnight to 6 AM (Green), 6 AM to Noon (Green), Noon to 6 PM (Green), 6 PM to Midnight (Green)	Midnight to 6 AM (Green), 6 AM to Noon (Green), Noon to 6 PM (Green), 6 PM to Midnight (Green)

The 'Update Utility Rate' dialog box is shown with the 'Block Rates' tab selected. The 'Block Rates' dropdown is set to 'Yes, this rate uses block rates for consumption.' The 'Season' dropdown is set to 'Summer'. The 'Block Size (therms)' and '\$/therms' table is displayed.

Block Size (therms)	\$/therms
1st 5	1.2
next 500	1
next 0	0
next 0	0
over 505	0.9

User-configurable logic

Update Equation

Name

SystemBESSPowerRequest

Description

Determine the BESS power request subject to the constraints of the BESS capabilities. This does not allow the BESS to charge if any of the feeder head breakers are open so that system faults can be satisfied

Equation

Validate

Format

Auto-Size

Live Values

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

[SW-1-LCD4].ISCLOSED()

)

)

,

max(

[Customer BESS Power Request]

-[BESS Charging Request Contingency Adjustment],

-[Customer BESS Charge Limit]

),

-1

),

ifElse(

ge([BESS state of charge], [Customer BESS Minimum Allowed SOC]),

min(

[Customer BESS Power Request],

[Customer BESS Discharge Limit]

)

)

Valid

Device Type

System

Sensor

Ignored

Equipment Name

CustomerBESS

Units

kW

RBX Threshold

1

Timer

Module

-- not selected --

Enabled

☒

Request Actions

New

Edit

Delete

Request Action

Device Type

Mode

Min

Max

Errors

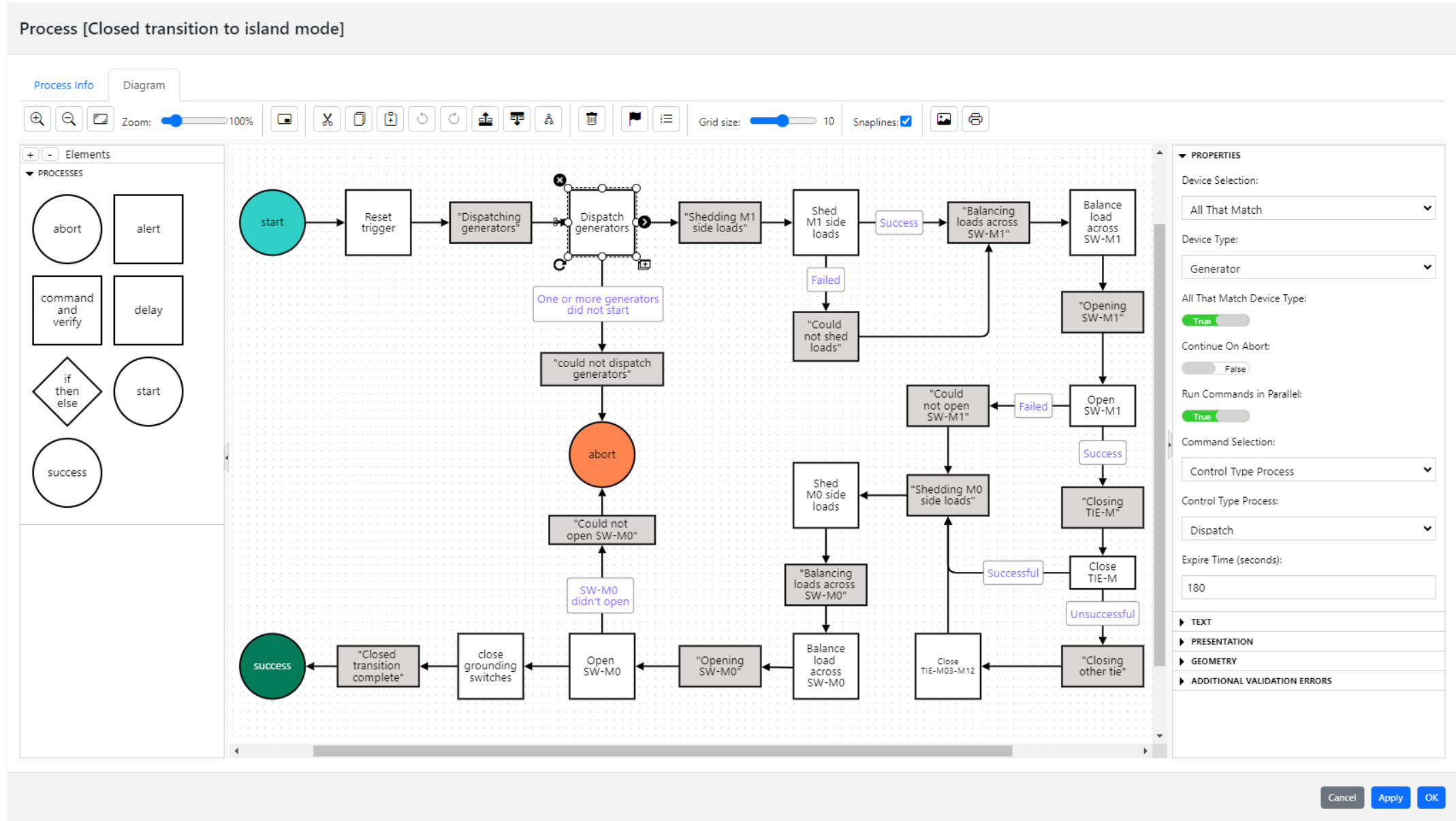
No data available in table

OK

Cancel

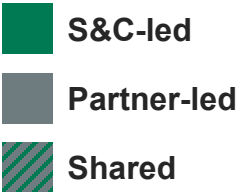
- () - Used for precedence. The internals are sub-equations and parsed on their own.
- [] - Used to bracket variable names. The opening brace indicates a variable name that continues until the end ']'. The bracketed internals are not further parsed.
- abs - absolute value, exactly 1 parameter
- and - N parameters that are comma separated
- band - bitwise and, exactly 2 parameters
- choose - uses the first argument as the index of the subsequent arguments to return, for example, choose(3, 14, 28, 19, 2) would return 19
- dataStreamByDeviceAndSensor - this retrieves a data stream value by device and sensor. The first parameter is the device name and the second is the sensor. e.g. dataStreamByDeviceAndSensor(Generator01, power).
- dayOfWeek - returns the day of week as 1 to 7 for Monday to Sunday
- dayOfWeekUTC - returns the day of week at UTC
- dayOfYear - returns the decimal day of the year (e.g., 141.75 is 6 PM on May 20)
- dayOfYearUTC - returns the decimal UTC day of the year
- eq - equals, exactly 2 parameters
- equals - exactly 2 parameters
- false - constant for 0.
- gt - greater than, exactly 2 parameters
- ge - greater than or equals, exactly 2 parameters
- hourOfDay - returns the decimal local time (e.g., 2:45 PM = 14.75)
- hourOfDayUTC - returns the decimal UTC time
- ifElse - exactly 3 parameters. 1st condition to test, 2nd value (eq) if true, 3rd value (eq) if false
- ifValidElse - exactly 2 parameters. If the first parameter is valid that value is used. Otherwise, the 2nd parameter is used.
- int - returns the integer equivalent of a number
- isValid - exactly 1 parameter. Returns True (1) if the parameter is valid, otherwise returns False (0)
- isWeekendOrHoliday - returns 0 if a non-holiday weekday, 1 otherwise
- le - less than or equals, exactly 2 parameters
- lt - less than, exactly 2 parameters
- min - N parameters
- minValid - N parameters. Like min, but if one or more parameters are invalid this will return the minimum of the remaining, valid, parameters.
- max - N parameters
- maxValid - N parameters. Like max, but if one or more parameters are invalid this will return the maximum of the remaining, valid, parameters.
- ne - not equals, exactly 2 parameters
- not - exactly 1 parameter.
- or - N parameters
- positiveMin - N parameters. Returns the smallest positive parameter
- true - constant for 1.

User-configurable logic

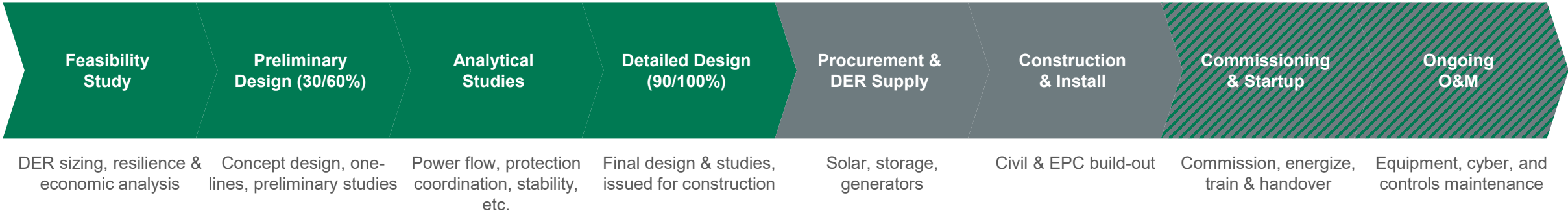


Partner with S&C to Deliver Your Microgrid

S&C leads the **electrical engineering, feasibility, controls, and cybersecurity** — and partners with best-in-class firms for procurement, construction, and DER supply.



MICROGRID PROJECT TIMELINE →



GridMaster® Microgrid Controls — S&C designs, integrates, and commissions the controls across every phase

Developers & EPCs

Partner with S&C and stay in control of your project. We’re flexible on scope—bring us in for the engineering, controls, feasibility, or cybersecurity, and keep the rest of the work where it fits you best.

Communities & Site Owners

Looking for a turnkey microgrid? S&C brings its vetted, experienced partners to design, build, and commission the complete system—so you get one accountable team from start to finish.

Thank you

Gregory DiAntonio

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Michael Geocarlis

Michael.Geocarlis@sandc.com

Peter Curtiss

Peter.Curtiss@sandc.com



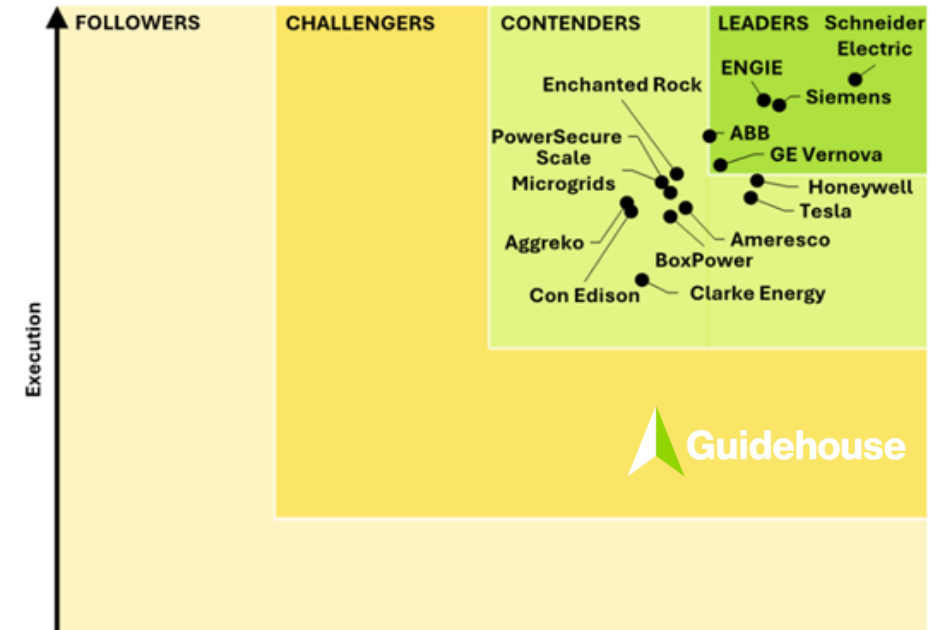
Schneider Electric Microgrids

Advancing energy technology for a resilient & sustainable future

Presented by:
Samantha Childress
Christine Weydig

Who we are

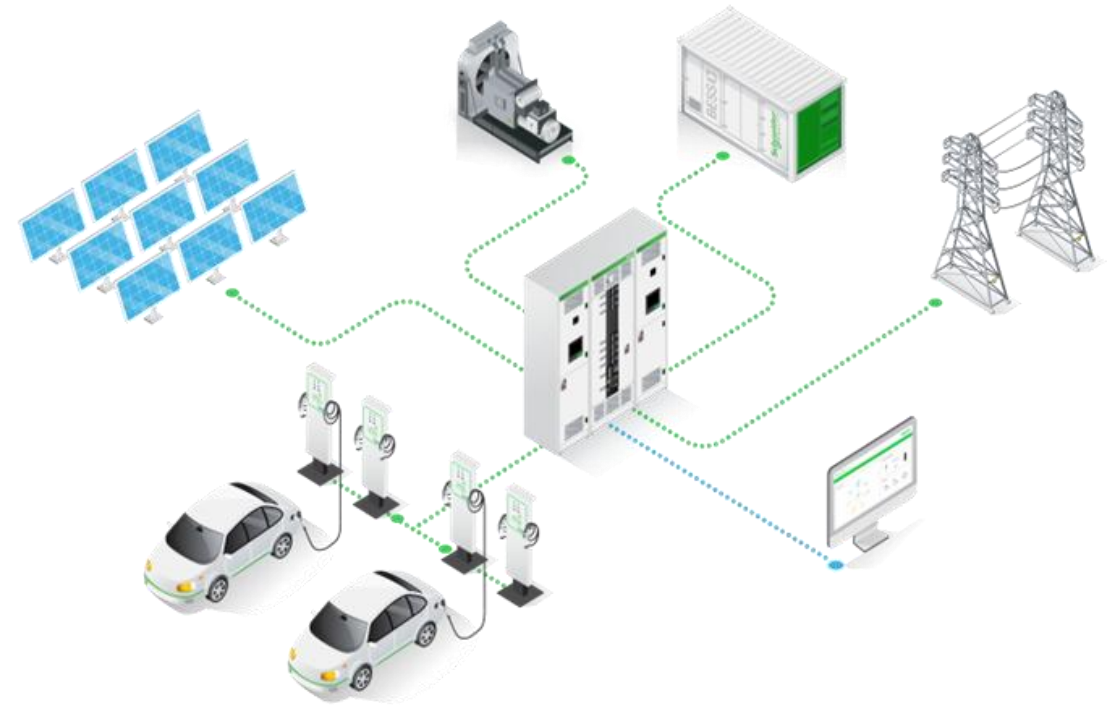
1. Energy Technology Partner
2. TIME Most Sustainable company
3. #1 Microgrid Integrator – 2025 Guidehouse
4. HQ in Massachusetts – Winthrop Center, Boston
5. SE Microgrids in MA – Andover, MA Microgrid Lab
6. Accelerating Resilient Infrastructure (ARI) Ecosystem – unlocking capital for critical community infrastructure



Standardization for Scalability

Microgrid Flex: Schneider Electric's Pre-Integrated Microgrid Solution

- Standardized designs, use cases, & services
- smart & future-proofed electrical distribution
- tested and validated 3rd party integrations
- cybersecure network
- Trained & certified network of partners to design, deliver, & maintain Schneider Electric microgrid solutions
- Case Studies: 911 Call Centers, Multi-Family Housing, Regional Airports, EV Charging Integration, Manufacturing, K-12 Schools, Libraries





Keep Lights On

MASSACHUSETTS

Community Energy Infrastructure

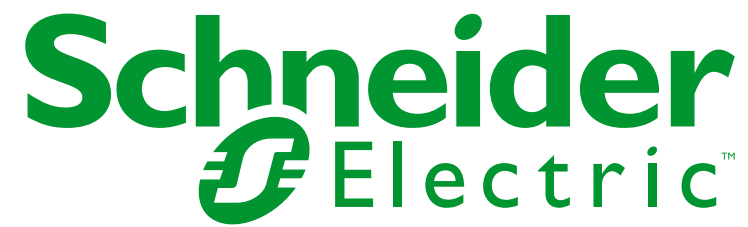
A growing consortium of MA cities, towns and critical sites are changing the traditional community microgrid conversation in three ways that matter:

- **Ownership** — participating municipalities have a defined path to owning their own clean energy facility, not just hosting one.
- **Revenue** — towns can generate new revenue by selling excess electricity into the marketplace.
- **Resilience** — communities can keep critical facilities powered during unplanned power outages.

[Enroll here: www.keeplightsonma.org](http://www.keeplightsonma.org)



Advancing Energy Tech



se.com

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Keep Lights On

MASSACHUSETTS

Community Energy Infrastructure

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WHAT IS A HERO™ HUB¹?

A patented microgrid that delivers up to 10MW of local, carbon-free generation (solar mostly here in MA), battery energy storage systems (BESS), smart microgrid controls and integration into emergency systems.



HOW IT KEEPS LIGHTS ON

During an outage, your hub "islands" — disconnects from the main grid and runs completely independently. Critical services stay on.



WHERE IT SITS

School campus, DPW yard, water treatment facility or pump station, public safety complex — on sites you already control.



HOW IT OPTIMIZES SOLAR + STORAGE

Continuously balances solar generation and battery storage to match your demand (charging during peak production, dispatching during peak need), monetizing extra electricity value, and holding reserves for outages.



Enroll here: www.keeplightsonma.org

¹Hubs for Resilient Operations (HERO) is a NextGen Energy product, recognized and backed as a first of a kind technology by D.O.E.



Keep Lights On

MASSACHUSETTS

Community Energy Infrastructure

Meet The Team Making It Possible

One integrated team with a defined role at each phase.

NextGen Energy

Initiative Creator & Fund Manager

- Experienced capital structure and financing, commercial agreements team
- Leads the consortium
- Inter-municipal governance, community engagement & municipal partnership
- Utility coordination, grid compliance & market participation
- VPP development, emergency operations and resilience planning
- Leads grant applications and philanthropic funding support

American Microgrid Solutions

Design & Development Manager

- Proven microgrid experience nationwide
- Your technical and project management partner from concept to commissioning
- Handles design optimization, engineering, permitting, procurement, installation and operations

Schneider Electric

Hardware & Software Backbone

- Global technology leader manufacturing the essential physical infrastructure for clean energy microgrids
- EcoStruxure™ controls & monitoring platform
- Battery Energy Storage Systems (BESS)
- Distribution architecture for every HERO™ Hub

Enroll here: www.keeplightsonma.org

Municipal & Community Projects Across the U.S.

- 10+ years of microgrid development experience
- Projects in 37 states
- Work with 50+ municipal & county facilities
- Serves critical sites in government, health care, advanced manufacturing and more



Frederick County, MD

County Government · Under Construction

1,922 kW solar + 1 MW / 2 MWh battery at a county resilience hub. Full building support for 5+ days. Projected annual savings: \$496,000.



City of Detroit, MI

Municipal Resilience Hub · Complete 2023

69 kW solar + 125 kW / 220 kWh battery + 150 kW natural gas generator. 8-hour minimum backup + 21 hours typical without the generator, indefinite resilience with the generator. Projected annual savings: \$10,900.



EMK Community Health, MA

Community Health · Under Construction

3-facility MA portfolio — 639 kW solar + 310 kW / 502 kWh battery. 72+ hour typical backup. Projected annual savings: \$193,000.

[Learn more: www.keeplightsonma.org](http://www.keeplightsonma.org)

Development Process



Enroll here: www.keeplightsonma.org



Keep Lights On

MASSACHUSETTS

Community Energy Infrastructure

Thank You.

The lights stay on when communities lead the way.

To learn more about bringing a HERO™ Hub to your community — and the ownership, revenue, and resilience it delivers — visit keeplightsonma.org.



MassCEC Microgrid Convening: Scale Microgrids

August 4, 2026

Dana Glubiak, *Senior Business Development Manager*
Todd Gentry, *Senior Business Development Manager*
Emma Marshall-Torres, *Regulatory Affairs Manager*



Scale is a vertically-integrated distributed energy company dedicated to transforming the way energy infrastructure is financed, designed, and built on behalf of our clients.



Scale is an EQT portfolio company.

Streamlined Development

Our **Scale Atlas** software enables us to quickly and accurately identify optimal project designs.

Flexible Financing

Financing innovation across the full capital stack, including as little as \$0 down microgrid service agreements (MSA).

24/7 Asset Management

We use our **Scale Canopy** software to ensure optimal performance and drive results for our customers.

Industry Leadership

We have the best team in the industry, with collective experience delivering more than 2 GW of projects.



Supporting the Full Spectrum of Distributed Energy Technologies

Scale finances, designs, builds, and operates distributed energy projects incorporating a wide range of technologies, including:



Microgrids



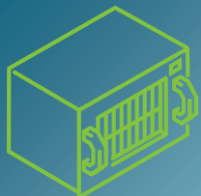
Solar PV +
Community Solar



Battery Energy Storage



Natural Gas Generators



Fuel Cells



Combined Heat
and Power

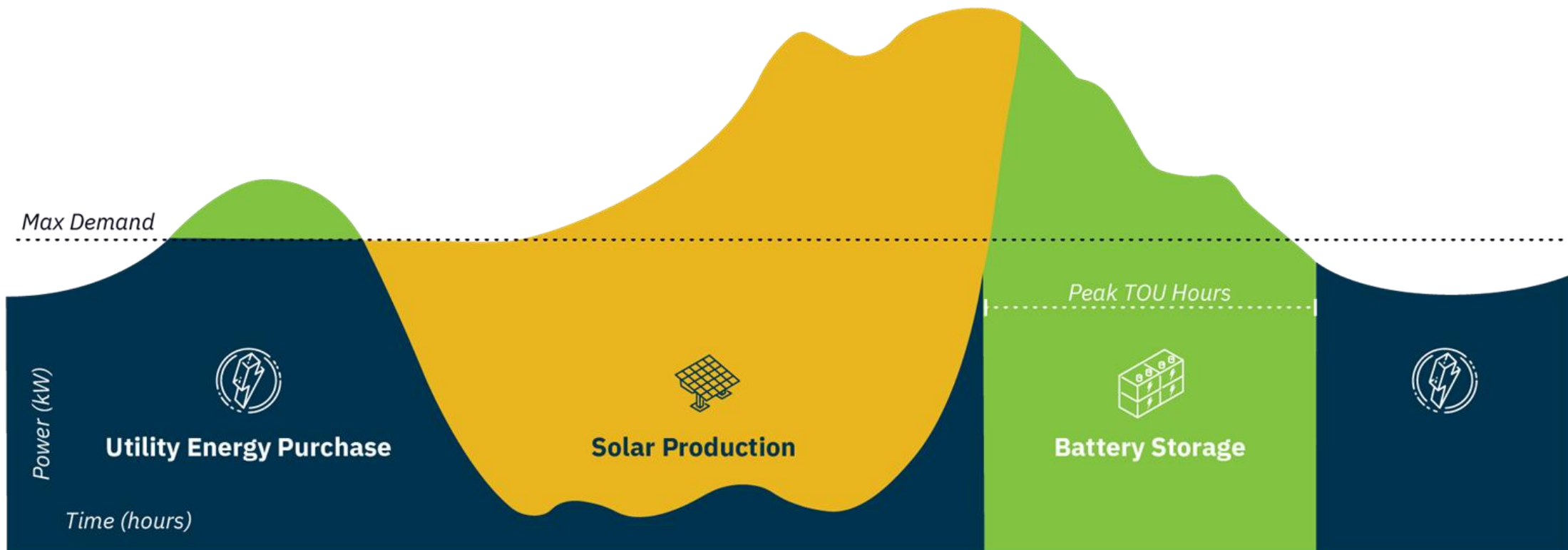


EV Charging



Other Distributed
Energy Assets

When operating alongside the utility grid, Scale's microgrid controls optimize the use of energy from each resource to minimize overall costs – e.g., using battery storage to minimize **demand charges** and **avoid peak hour** rates.



Organizations are increasingly placing monetary value on **energy resilience**

The Value of Resilience

Real Value: Lost power = lost revenue

US Average for Value of Resilience = \$49/kWh

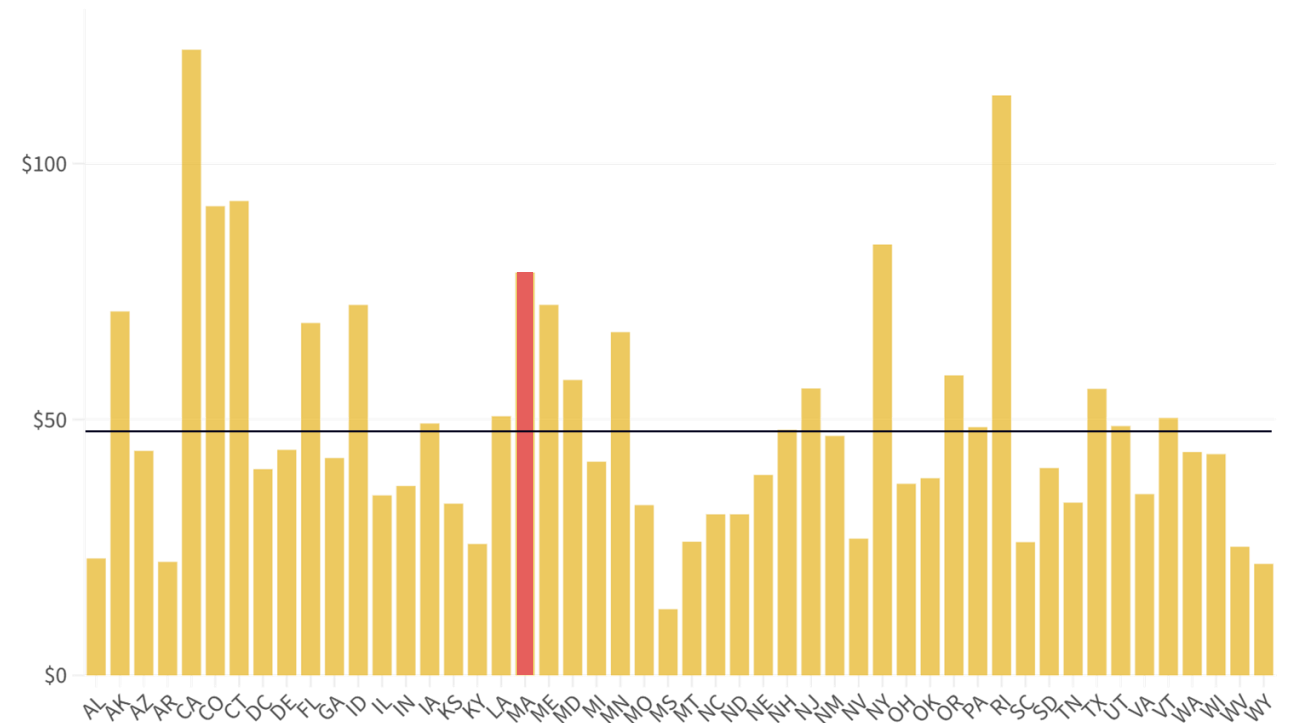
MA Value of Resilience = **nearly \$80/kWh**

Growing Importance: Weather-related outages have *doubled* in past decade.

It Really Adds Up: Some of our customers estimate annual facility resilience value of **\$100k+/year**, depending on industry.

Value of Unserved Load for Average Medium-to-Large Businesses by State

■ \$/Unserved kWh



Source: LBNL "Interruption Cost Estimate Calculator" and 2023 SAIDI/SAIFI data from EIA, inflation-adjusted to 2024 USD

Origo Cold Storage Microgrid

Faced with delays for a utility grid connection, Origo Investments partnered with Scale to develop an off-grid clean energy microgrid to power their cold storage facility in California's Central Valley. In addition to long waits for interconnection, the Central Valley is prone to wildfire risks and Public Safety Power Shutoffs (PSPS). The microgrid provides 100% reliable power.

Origo

Big Picture Impact

100%Off-Grid
Power**30%**Energy
Cost Savings**40%**Lower CO₂
Emissions**100M**Pounds of
Food Storage

Origo's Microgrid Capacity

**2.4 MW**
Solar PV**2.4 MW/
4.8 MWh**
Battery Storage**4.8 MW**
Low-Emission
Generators

Gallaudet University Microgrid

Gallaudet's unique microgrids will work in parallel with the district's local utility to power the campus in Washington D.C. In the event of a grid outage, the system will provide nearly all the University's electricity needs, allowing campus operations to continue with minimal disruption. In addition, electricity generated by the solar arrays will be available to D.C. residents and businesses through the community solar program.

Big Picture Impact

**24/7
Resilience**

**Lower CO2
Emissions**

**Campus + Community
Cost Savings**

GU's Microgrid Capacity



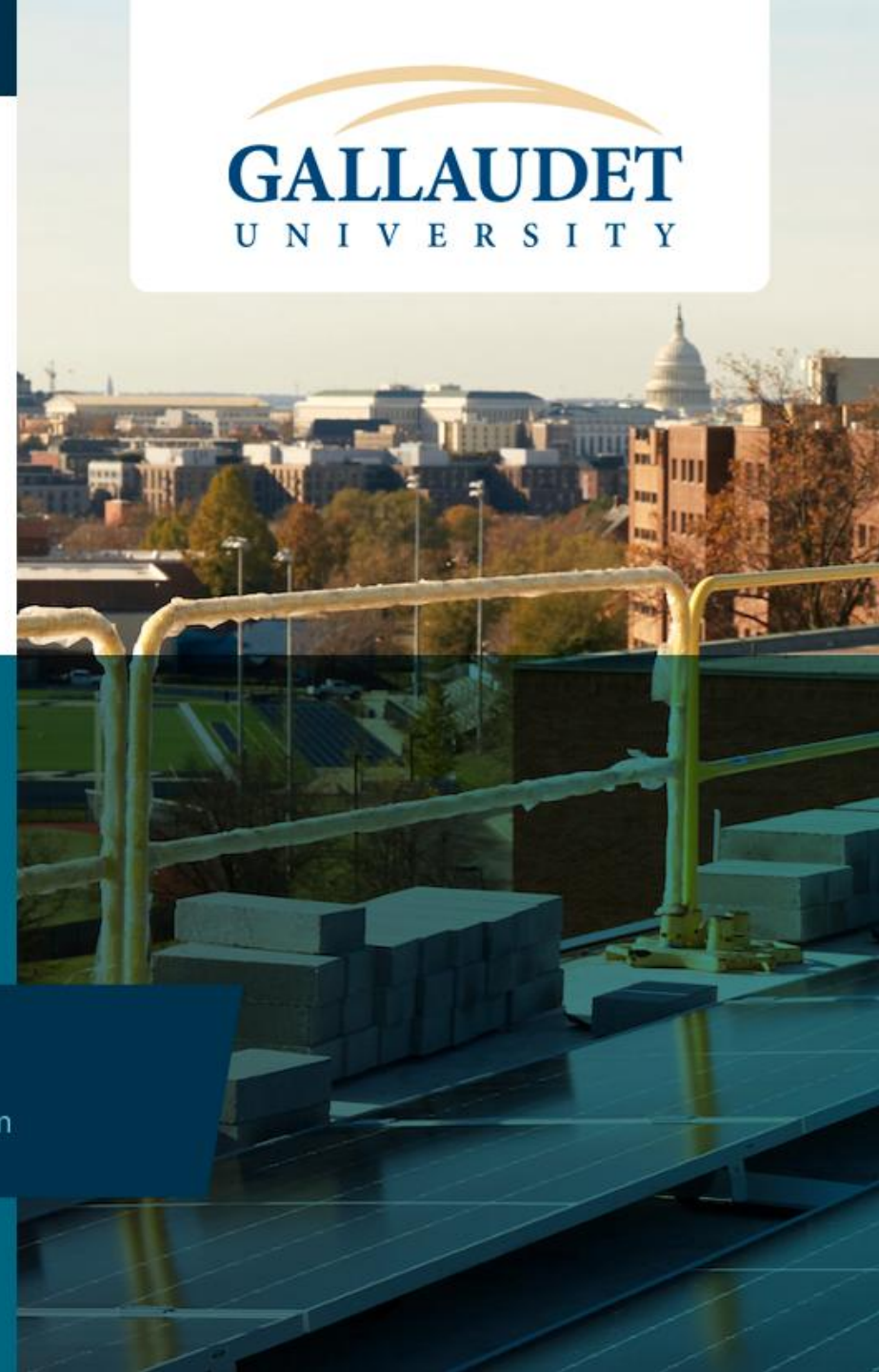
2.5 MW
Solar PV



**1.2 MW/
2.5 MWh**
Battery Storage



4.5 MW
CHP System



We'd love to connect with you!

In partnering with Scale, organizations applying to **MassCEC's 40101(d) funding** will have their projects backed by an **eligible sub-awardee entity** that is well-versed in **innovative financing, sophisticated project design, results-driven asset operation, established supply chain relationship and inventory, and the needs of C&I and critical infrastructure entities.**

Each of our projects is the proud result of ongoing collaboration to meet our clients' operational, financial, and climate goals.

Dana Glubiak

Sr. Business Development Manager
dglubiak@scalemicrogrids.com

Todd Gentry

Sr. Business Development Manager
tgentry@scalemicrogrids.com

MASSCEC MICROGRID CONVENING

Breakout Room Discussions

- **Each developer has a breakout room:**
 - BoxPower
 - S & C Electric
 - Schneider Electric
 - American Microgrid Solutions
 - Scale Microgrids
- **Attendees can move between breakout rooms to connect with developers and ask questions.**
 - Breakout room options should pop up in a moment
 - To switch between rooms: Select “More” and then select “Breakout Room”. All five developer breakout rooms should be listed.
 - MassCEC staff will assist with notetaking in breakout rooms, and staff will remain in the Main room to help if there are any technical difficulties

MASSCEC MICROGRID CONVENING

Next Steps

- **Developer presentations will be posted on MassCEC's website.**
- **Applications are due September 21st, 2026.**
 - Please see the [Grants for MA Grid Resilience and Reliability webpage](#) for the RFP and application materials.
- **We are accepting questions about the grant program until August 28th.**
 - Please submit any questions to grid@masscec.com.