

# Grid Modernization at the Edge



# Laying the Foundation for the Energy Transition

Electrification of everything from household appliances to passenger and commercial vehicles is increasing demand for power and complicating planning decisions across the utility landscape. Proposals for new generation secure major headlines, however industry insiders understand the difficult and important work is related to decisions on new transmission and distribution infrastructure required to bring all this new electricity to where it is used, at the grid edge. The traditional approach involves large project investments with long lead times against big bets on an uncertain future. The 21st century approach leverages manufacturing and trades, enabled by advanced software tools and electronics to build flexible capacity incrementally as it is needed.

Eguana has spent the past two decades commercializing these technologies to support the transition that is happening now. Our energy storage solutions have been designed from the ground up to deliver grid services to utilities at the grid edge and our fleet management tools enable clear and detailed visibility into grid conditions and fast, secure and accurate response to dispatch commands. Our products are preferred by contractors for their ease of installation and long, reliable service-life. Our platform is state-of-the-art and future-ready now, having been proven with the full range of energy storage technologies from hydrogen to redox, liquid metal and all of today's advanced lithium chemistries.

Join us in our efforts to modernize distribution systems operations and planning as we work through the energy transition together. Whatever challenges your distribution faces now or in the future, Eguana has fast, flexible and scalable solution to meet and support your growth.

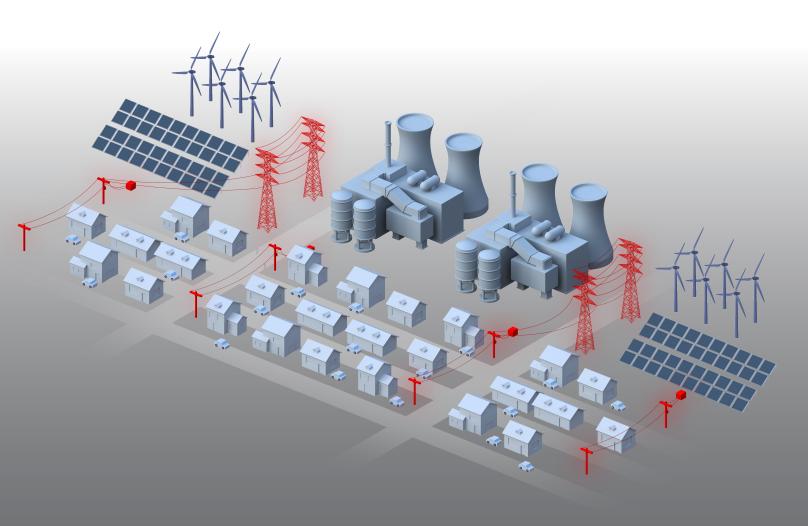
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Chief Executive Officer / Director

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Founder and Chief Commercial Officer

### The Grid of Today

Tried and true, the grid has been planned, operated, maintained, updated, and expanded using the same fundamental techniques for over a hundred years. The focus on central generation followed by transmission and distribution has been effective in bringing electricity to every home, but is it up to the challenge of electrification in the 21st century?



#### RISING CONSUMPTION

The end of energy efficiency gains, rising populations, and the electrification of everything, especially transportation, are driving an urgent need for grid capacity expansion.

#### RISING CHALLENGES

Higher and higher costs for each successive infrastructure project increasing difficulty in securing or expanding rights of way, and NIMBY pressures impede expansion using the old model.

### The Grid of Tomorrow

The transition to tomorrow's grid begins with rethinking its operation from the edge-in. Leveraging advanced communication networks and manufacturing with skilled trades enables flexible, scalable, distributed energy systems to expand grid capacity to match demand in real time. Existing bulk generation will support the distributed grid, enhancing overall stability.



#### THE EGUANA SOLUTION

Eguana has the industry's only fully integrated technology stack that delivers energy storage at the grid edge with complete centralized monitoring and control.

#### **RESILIENCE & CAPACITY**

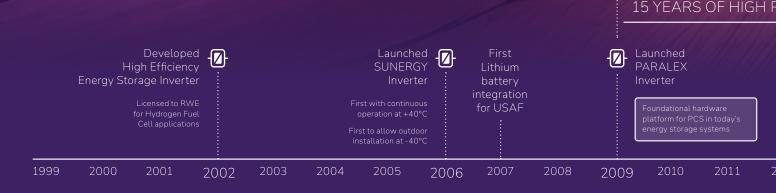
The resilience provided by an Eguana energy storage system creates a YIMBY effect, allowing modular capacity expansion with homeowners protecting themselves from grid outages while expanding grid capacity in their neighborhood and system-wide.

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# The Foundation of the Energy Transition

Eguana's vertically integrated product suite and services provide utilities with visibility and control at the grid edge, while providing customers with resiliency during outages.

Eguana's technology is developed in Canada and all cloudbased monitoring, control, and data is hosted locally in the market where it is deployed.







The Eguana Cloud is a comprehensive software stack that aggregates and delivers value from the energy storage fleet to all stakeholders in the distributed grid chain



#### ENGAGE

ENGAGE is Eguana's consumer facing interface, providing homeowners with visibility into the status and operating history of their system. Homeowners can manage backup reserve and see how their rooftop solar or Time of Use optimization is benefiting them where applicable.

CONSUMERS



#### ENSIGHI

ENSIGHT provides our service and installation teams with access to data and advanced configuration controls to support remote verification during commissioning, and remote diagnostics and analytics to ensure up time and speedy, efficient O&M activities.

FIELD SUPPORT



#### EXCHANGE

EXCHANGE connects the fleet of energy storage systems to DERMS and other utility software to enable delivery of system-level benefits such as Demand Response, Frequency Response, and Spinning Reserve.

MARKETS



Virtual Peaker 📤



Eguana's ESS products have quickly become favoured by our DERMS software partners such as Uplight, Virtual Peaker and EnergyHub due to their advanced control and communication capabilities and ease of integration and configuration to meet any requirement.

#### EXTEND THE REACH OF YOUR CONTROL ROOM

## EGUANAEDGE™

The Eguana Edge™ is a utility feeder load balancer that provides distribution network operators with a fleet of energy storage assets, which are managed in real time, to manage distribution voltage, circuit & feeder loading, balance phases and reduce losses, and provide resiliency services. This fleet is presented as a single asset for DERMS integration, to deliver system level ancillary services through Eguana Exchange.



EGUANA EDGE™ supports expanded rooftop solar installations, electric vehicle adoption, and growth in remote communities at a fraction of the cost associated with traditional infrastructure upgrades.

A REVOLUTION IN DISTRIBUTED GRID TECHNOLOGY

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#### GIVE YOUR CONTROL ROOM THE EDGE™

# Unparalleled visibility and next level functionality for your ESS Fleet

Eguana Edge provides system operators with a host of device-specific and location-based controls that function as intuitively as traditional assets. Operators can deploy ancillary services such as demand response, frequency regulation and spinning reserve, along with industry-leading visibility, available in real time.

#### ENHANCED FLEET MANAGEMENT

Create function-based groups and subgroups of devices with the click of a button. Manage them manually or create operational parameters to automate controls with ease. Role-based permissions and authentication allow for total security and peace of mind.

#### TOOLS TAILORED TO YOU

Customizable quick function menu to create a personalized operational experience.

Control fleet in aggregate and drill down to investigate exceptions.

#### EYES ON WHAT MATTERS MOST

Real-time voltage tracking along the feeder, critical to maintaining voltage stability.

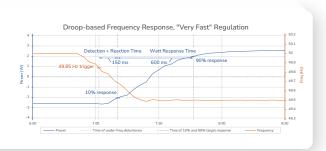


#### BETTER DATA, BETTER

DECISIONS
Historic trend data
to enable precise,
four-quadrant
load balancing
and peak matching
with dependable
response.

#### GRANULAR EVENT REPORTING

High resolution data reporting of 100 ms sampling rate pre and post event, providing detailed performance analysis at the fleet and device level.







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