



## Real-Time ERCOT Grid Intelligence for Energy-Intensive Facilities

Powered by GridBrain — Real-Time ERCOT Signal Engine

[lumenicgrid.com](http://lumenicgrid.com) · [getgridbrain.com](http://getgridbrain.com)



**5 min**

LMP refresh rate



**4CP**

Peak season protection



**5 Tiers**

Action signal levels



**SaaS**

No hardware required

### The Problem

#### Real-time price volatility

ERCOT LMP prices fluctuate every 5 minutes. During peak demand, prices spike from \$25/MWh to over \$5,000/MWh in minutes. Facilities running at full load during these spikes pay dramatically more for the same energy.

#### 4CP transmission charges

ERCOT determines your transmission costs for the entire following year based on your load during just four 15-minute intervals each summer (June–September). A single missed peak adds tens of thousands to annual costs.

Energy efficiency reduces **how much** you consume. LumenicGrid optimizes **when** you consume it.

### How LumenicGrid Works

LumenicGrid is powered by GridBrain, a real-time ERCOT intelligence engine that reads live grid data every 5 minutes and translates it into simple, actionable power management signals.

Signal	LMP Range	Operational Response
<b>RUN ALL</b>	Below \$20/MWh	Prices low — run full load. Negative prices mean you earn while consuming.
<b>DEFER NON-ESSENTIAL</b>	\$20–\$50/MWh	Prices normal — standard operations, defer low-priority workloads.
<b>DEFER ALL SHIFTABLE</b>	\$50–\$100/MWh	Prices elevated — pause all shiftable loads immediately.
<b>EMERGENCY CURTAIL</b>	\$100–\$200/MWh	High prices — shed all non-critical loads now.

**EMERGENCY**

Above \$200/MWh

Critical spike — maximum curtailment, all deferrable loads off.

**Real-time 4CP alerts**

Notify facility operators during the June–September peak season so they can curtail at exactly the right moment. LumenicGrid signals when to act — your team or BMS executes the response.

**Automated savings logging**

Every curtailment decision is logged with timestamps, price data, and estimated dollar savings — giving operations teams concrete ROI data to report to leadership.

**BMS integration ready**

For facilities with a centralized building management system, LumenicGrid signals pass directly via API for automatic execution — no manual intervention required.

**Who Benefits****Bitcoin Mining Operations**

Designed to power down and restart quickly. LumenicGrid tells operators exactly when curtailment is more profitable than running. When ERCOT prices go negative, the RUN ALL signal means you are being paid to consume electricity while mining.

**Data Centers & Colocation**

GPU training jobs, batch inference, and non-critical workloads can be deferred during price spikes. LumenicGrid signals tier changes in under 60 seconds — fast enough to respond before ERCOT's 5-minute SCED cycle closes.

**Retail Chains & Multi-Site Portfolios**

Hundreds of Texas locations with HVAC, lighting, and refrigeration loads. For chains with a centralized BMS, signals pass via API for automatic execution across all locations simultaneously. Per-store savings multiply across the portfolio.

**Commercial & Industrial Facilities**

Office buildings, warehouses, distribution centers, and campuses with shiftable HVAC, lighting, and conveyor loads that can be staged during peak pricing windows.

**Healthcare & Institutional Campuses**

Non-critical loads — parking structures, administrative buildings, exterior lighting — curtailed without impacting patient care or core operations.

**The Value**



### Avoid Price Spikes

Stop paying 200x normal rates during demand surges by curtailing non-essential loads before prices peak.



### Dodge 4CP Charges

Reduce transmission costs for the entire following year by curtailing during four critical 15-minute windows each summer.



### Quantify Savings

Automated logging provides dollar-value ROI reporting for every curtailment event — no manual tracking required.



### No Hardware Required

Cloud-based SaaS. No sensors, no hardware installs, no integration projects. Works alongside your existing energy systems.

## See It Live

Dashboard: [lumenicgrid.com](https://lumenicgrid.com) Grid Intelligence Engine: [getgridbrain.com](https://getgridbrain.com)

*Pilot partnerships available — contact us through the website to schedule a walkthrough.*