



CLOUD PLATFORM

Cloud Platform

See it. Simulate it. Save more.

ARQ CONTROLS · INDUSTRIAL ENERGY CONTROL

MODBUS

The challenge

Where teams are today

Data scattered across meters, EMS, spreadsheets, and portals. Tariffs and demand charges change, and manual analysis is slow. Decision-makers need answers, not raw data.

How ARQ Controls solves it

One unified cloud platform consolidates all your energy data, meters, EMS, PV, and batteries, with 5-minute refresh, AI-powered summaries, and automated reports, so decision-makers get answers, not spreadsheets.

The platform in one glance

Real-time dashboards

5-minute refresh for every site.

What-If analysis

Test scenarios before you act.

Automated reports

TOU optimization and demand analysis.

AI summaries

AI-powered recommendations per site.

Multi-site scale

Scales from 1 to 1,000+ sites.

Role-based access

Viewer, operator, and admin roles.

Inside the platform

Three core views drive daily operation: the fleet grid, the per-site power flow, and one-click report creation.

FIGURE: FLEET DASHBOARD, GRID VIEW

Multi-site overview with SOC bars, alerts, and status. Toggle AI summary, AI optimizations, and What-If analysis. Screenshot to be supplied.

FIGURE: SITE DASHBOARD, POWER FLOW & KPIS

Per-site power-flow view with custom widgets, trends, and weather overlays. Screenshot to be supplied.

FIGURE: REPORT CREATION

Report builder with toggles for AI summary, AI optimizations, and What-If analysis. Screenshot to be supplied.

Reporting that actually saves money

TOU optimization

Classify kWh by peak, standard, and off-peak, and quantify costs and **savings**.

What-If & scenario planning

Model battery and PV size changes, export rules, and tariff swaps. Run scenarios on historical data for ROI forecasts, and export results for board packs and proposals.

Demand (kVA) analysis

15-minute rolling maxima versus limits, with shaving suggestions.

Automated reports & AI summaries

Weekly and monthly auto-emailed PDF / DOCX, plus custom one-offs, with executive-ready highlights and anomalies.

Key features

5-min refresh

Near real-time KPIs across all sites.

Role-based access

SSO (Auth0) with viewer, operator, and admin roles.

Alerting & notifications

Email, Telegram, webhooks.

TimescaleDB backend

Optimized for fast time-series queries.

Multi-tenant

Multi-site management in one platform.

GraphQL API

BI tool integration and custom data pulls.

Security & reliability

- Secure authentication (Auth0), HTTPS-only connections.
- Encrypted in transit and at rest.
- Redundant ingestion pipelines and regular backups.
- Audit logs and role-based permissions.

Pricing & access

Pricing available via ARQ Controls direct or enterprise quote. Contact info@arqcontrols.com for details.

EMS module overview

The ARQ Controls EMS module sits at the core of the cloud platform, providing real-time control and optimization of all connected energy assets. See the ARQ Controls EMS brochure for full specifications.

Peak mode

Use battery first, shave grid peaks, no grid charging.

Valley mode

Charge battery from cheap grid plus PV. Battery export disabled.

Flat mode

Battery only for peak shaving. PV covers loads, no grid charging.

The EMS runs Peak, Valley, and Flat modes with up to 10 daily time slots, automating PV, battery, grid, and generator control to cut peak costs and stay compliant with export limits and demand-charge rules.

Technical appendix

Data model & refresh

- Ingest 1–5 s from EMS. Dashboards refresh every 5 minutes.
- Demand calc: 15-minute rolling windows (configurable).
- Retention: Standard 12 months, Pro indefinite (purged 90 days post-cancel), Enterprise bespoke.

TOU & tariffs

- Season-aware TOU classification (municipal and utility tariffs).
- Multiple tariff tables per site, versioned over time.
- Cost engine: grid import, PV self-consumption, battery charge / discharge cost, export revenue / penalty.

What-If engine

- Parameterized scenarios: battery and PV size, limits, tariffs, demand caps.
- Outputs: change in kWh / kVA, cost delta, payback estimates.
- Narrative explanation included in the AI summary (optional).

Integration, APIs & AI layer

- GraphQL endpoint (Apollo) for dashboards and custom pulls. Webhooks for alarms and events.
- Optional ingest via DNP3 / IEC 104 through the EMS gateway.
- AI-powered summaries of weekly and monthly reports, with recommendation blocks (peak shaving, SOC tweaks, tariff alerts, anomaly flags) and optional per-client "no AI" mode.

FOR FURTHER ENQUIRIES

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