

Energy Control System



In today's fast-moving energy market, prices and grid signals change by the minute. Without smart, automated guidance, managing energy becomes costly and complex. Orise Energy Control System acts as a real-time decision-making layer that dynamically manages energy flows across complex environments.

It shifts operations from a reactive posture, responding to issues as they arise, to a proactive and predictive mode, where decisions are continuously optimized based on forecasted demand, market signals, and operational constraints.

Main benefits



Lower Energy Costs

Run assets in the most cost-effective mode, automatically optimized against live market prices.



Maximize Responsiveness

Instantly adapt to intraday price movements. No delays, no missed opportunities.



Avoid Penalties

Match forecasts with actual consumption through accurate predictions and real-time adjustments.



Support Grid Stability

Prevent demand spikes and unnecessary fluctuations, reducing stress on infrastructure.



Tailored & Fast Deployment

100% customized to your site with proven templates for faster rollout and value realization.



Enable Sustainable Transition

Leverage consumption flexibility to utilize volatile renewable supply. Turn variability into a cost advantage while supporting adoption of cleaner energy.

Our technology

Energy Control System scales with your business. As operations grow, markets shift, and rules tighten, Energy Control System adapts, integrating with your existing systems and optimizing in real time without touching safety-critical controls.

It flexes with intraday and day-ahead market prices, evolving forecasts, production needs and maintenance windows. Furthermore, as new opportunities arise, the Energy Control System is ready to scale even further.

With the Energy Control System, you're not just managing today's energy challenges. You're investing in a platform that scales to meet tomorrow's demands, ensuring resilience, safety, and long-term competitiveness.



How that works

By combining live market data, asset availability, and demand forecasts, Energy Control System automatically determines the most cost-effective operating strategy across the entire fleet of assets, whether they run on electricity, renewables, gas, or coal. No delays from manual intervention, no missed opportunities, and no costly imbalances. The result is a site that runs smarter, leaner, and more profitably—hour after hour.



Case study: Umicore

A leading non-ferrous metal producer, turned energy challenges into profit opportunities through optimization with Orise's energy control system.



Challenges

- Two gas turbines, one auxiliary burner, and one gas boiler supplied the site's steam demand.
- Steam pressure had to be maintained at a constant level.
- Electricity demand varied.
- Excess electricity generation often required curtailment.
- Surplus generation sometimes resulted in wasted energy.

Solution

- The Energy Control System optimized setpoints for all steam-generating assets in real time.
- It factored in electricity needs.
- It considered steam pressure limits.
- It responded to market signals.

Outcomes

- The site operates more flexibly.
- It reacts instantly to electricity market changes.
- It maintains steam reliability.
- It lowers exposure to volatile energy costs.

Orise Digital is the digital innovation arm of Orise, built to connect and optimize the entire digital process and system landscape. With deep expertise in automation, system integration, and process optimization, we deliver industry-proven tools that enhance connectivity, streamline operations, and turn data into actionable insights. Orise Digital helps enterprises integrate technologies seamlessly, boost efficiency, and stay compliant. As the final link in the digital chain, we turn digitalization from vision into reality—empowering smarter, faster, and more informed decision-making through structured, visualized data.