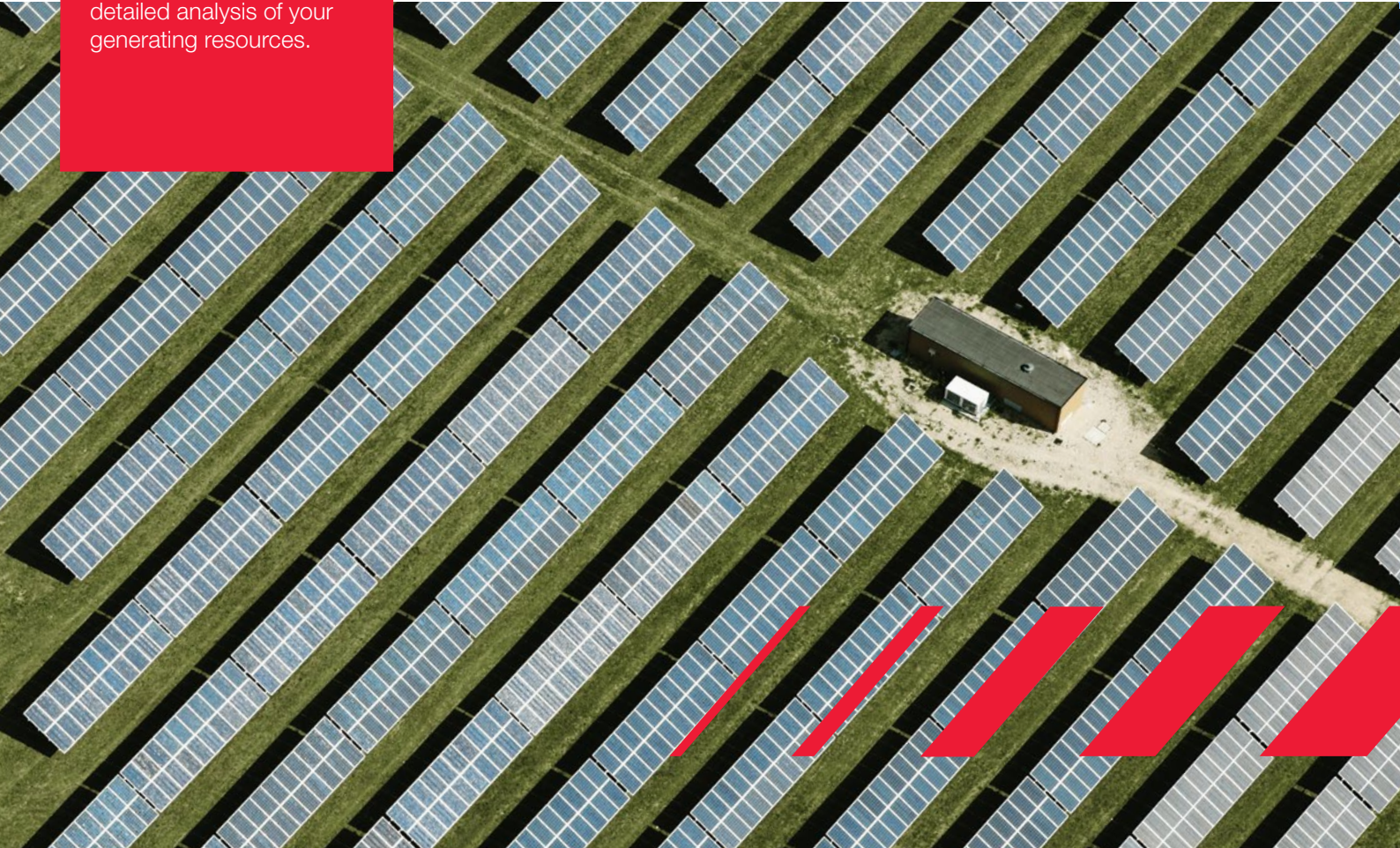




Network Manager enables advanced operation, optimal scheduling, and detailed analysis of your generating resources.



Network Manager

Generation Management System for Renewables



How do you tackle today's challenges and deliver consistently superior services to your customers?

Network Manager GMS can help.

Network Manager

Generation Management System

Renewables are rapidly changing the global generation mix, offering new opportunities for operators and asset owners to more effectively manage their portfolios to ensure reliability and maximise revenues.

Industry challenges

The power industry is facing regulatory and market pressures to move to low-carbon generation. Modern consumers are no longer satisfied with just getting reliable electricity at low rates, they demand cleaner energy and more choices. Power generation companies need to optimize a more sophisticated array of generating assets to meet regulatory standards and contractual requirements. At the same time, they need to minimize operation and production costs while maximizing revenue opportunities.



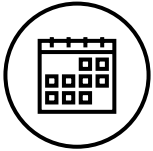
Solution

Network Manager enables advanced operation, optimal scheduling, and detailed analysis of your generating resources. The solution is built on a high-performance, cybersecure SCADA platform designed to meet the requirements of mission-critical control systems. It supports a wide variety of markets and operating constraints.

Benefits

- Real-time control and dispatch of conventional and renewable generation assets
- Optimal scheduling of generation resources for intra-day, day-ahead and long-term planning
- Closed-loop monitoring and control to meet regulation, economic and environmental constraints on a system, plant and unit basis
- Minimize operating expenses and increase operations and maintenance efficiency

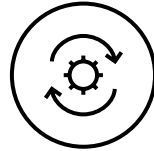
Advanced generation applications



Production scheduling

Network Manager production scheduling applications allow optimal scheduling of all types of generation resources and interchange transactions to minimize total operating costs. It seamlessly interfaces Hitachi Energy's nMarket and Portfolio Optimization, and with external bidding and settlement systems such as ISOs and RTOs in deregulated markets.

- Interchange scheduling
- Short-term load forecasting
- Thermal unit commitment and economic dispatch
- Portfolio trading decision support



Generation control

Network Manager provides a complete set of applications for real-time generation control in multiple markets and control areas, across multiple time zones, in hierarchical configurations.

- Generation control
- Reserve and power monitoring
- Economic dispatch
- Imbalance calculations
- Advanced hydro scheduling



Additional features



nMarket Suite for market participation

Seamlessly integrated bid-to-bill transaction management platform for bidding, position management, nomination/scheduling, dispatch, settlement and reporting.

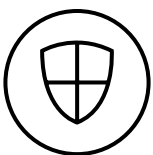
- Flexibility to evolve as the markets evolve
- Multi-market coverage
- Bid-to-bill process management
- Multiple technical configurations
- Front,- mid- and back-office productivity enhancements



Portfolio Optimization for advanced bid strategies

Modeling of bid strategies for a defined market and market products to facilitate the creation of generation offers by market participants.

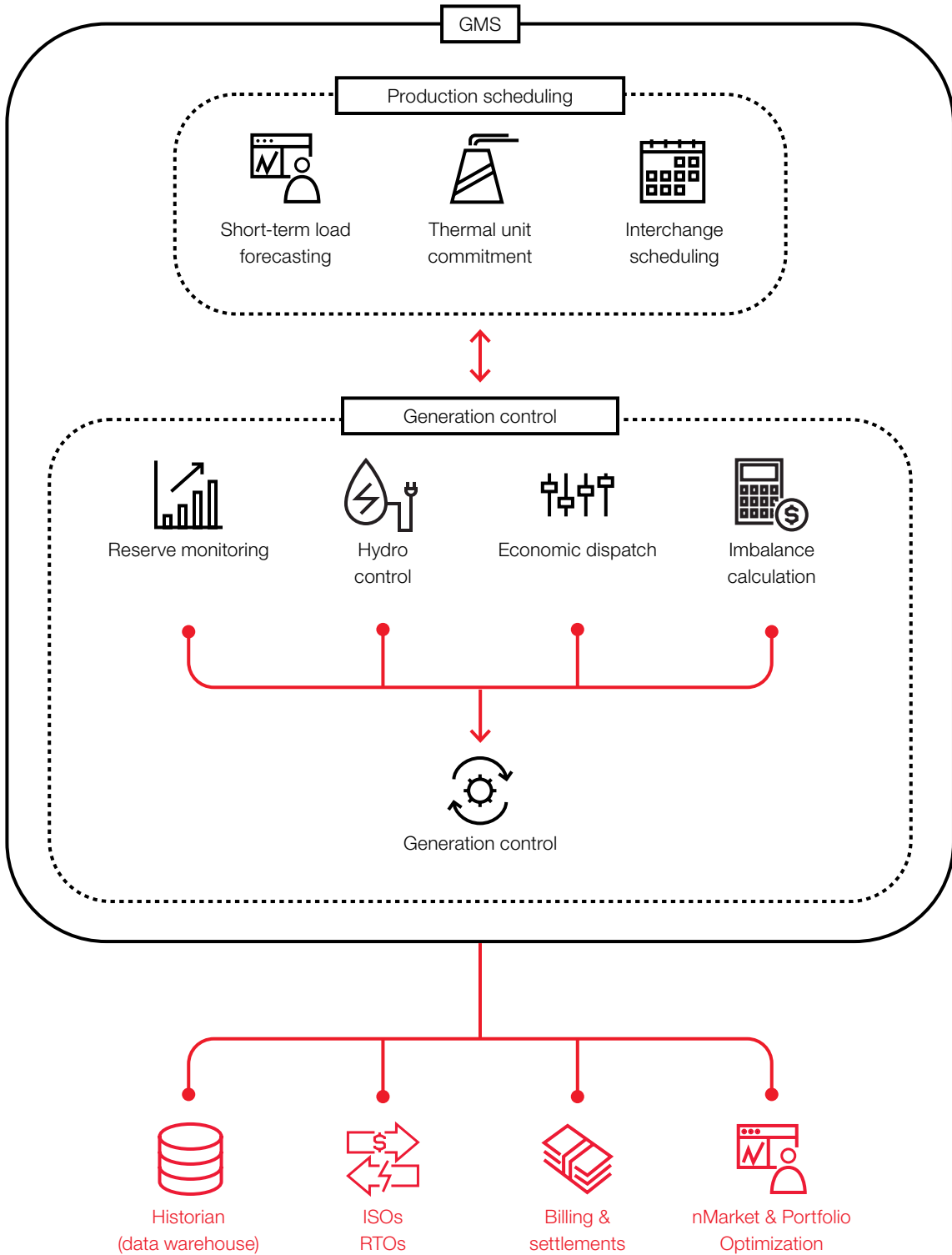
- Create and define a market
- Update key bid calculation inputs
- Create, submit and maintain day ahead and real-time bids for ISOs, RTOs and power exchanges
- Adjust created bids to fit user's objectives and expected market conditions
- Bid Evaluation studies using the Portfolio Optimization engine



Cybersecurity

- Network Manager conforms to security standards CIP 002-011, ISO 27001/2, and the NIST Cybersecurity Framework
- Internal and external penetration testing performed by the Idaho National Lab
- Advanced security and compliance services available through Hitachi Energy Cybersecurity Care offerings

Network Manager



Solutions for wind and solar power

Network Manager provides a scalable, configurable and high-performing solution for centralized wind and solar farm management. Our vendor neutral solution allows you to remotely monitor and control your entire fleet, wind farm or at an individual turbine level, all within a single system and user interface.



Out-of-the-box support

for wind turbines from all major manufacturers such as Vestas, Siemens Gamesa, GE, Enercon and Nordex

Fully extendable –

add new turbine models, wind farms, other renewable resources and custom calculations

Support maintenance

and investment decisions using built-in availability and performance calculations

Advanced event and alarming capabilities

to distinguish high priority alarms from nuisance events

Facilitate planning

and optimise operation and maintenance costs with the integrated forecasting tools

Integrated reporting and analytics –

wind models and historical data automatically transferred to Lumada APM

Accurate, weather-adaptive load forecasting

using data from a variety of sources

Co-optimization

of generation reserves and curtailment events

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