

## Remote Intelligent Gateway

Our **RT|RIG** family of solutions is the easy answer for power generators seeking to provide energy through the California Independent System Operator (CAISO) market. The family includes the SecureRIG solution, which combines industry-leading **RT|RIG** software with a ruggedized hardware platform designed for highreliability in harsh industrial environments. Our turnkey RIG solutions include design, installation, and full certification.

**APPLICATIONS: All types of power sources**

- Renewables (wind, solar, hydro, geothermal, biomass)
- Traditional (gas turbine)

**All types of projects**

- New power generation sites
- Upgrades to existing Hathaway or other legacy RIG systems
- Qualifying facility (QF) cogeneration site conversions
- Proxy Demand Response (PDR)
- Participating Intermittent Resource Program (PIRP)



### Choose Your Options

**In addition to our complete, turnkey RIG and metering solutions, we offer a wide range of service and product options:**

- Revenue meters, including programming, testing, and certification
- Advanced, on-site training
- System redundancy
- Certificate management
- Installation
- Configuration
- Testing
- E-mail/pager alerting system
- Secure 24/7 RIGsystem monitoring, diagnosis, and response
- Remote administration
- Maintenance
- Technical support

	Turnkey Solution	RIG	Metering	Full CAISO Certification	Installation
<b>RT RIG Solutions</b>	✓	✓	✓	✓	✓

## Dc Systems **RT|RIG** Product Family Features

### Telemetry data acquisition and concentration

**RT|RIG** solutions can acquire data from remote terminal units, PLCs, meters, generation controllers, plant control systems, and other sources. The systems can communicate directly with intelligent relays and controllers, using many different protocols. The systems support both serial and TCP/IP connections and industry-standard protocols such as Distributed Network Protocol (DNP) and Modbus. Real-time data and commands can pass between the power generator, CAISO, or other external system using the secure DNP connection.

### Ruggedized hardware

DC Systems' SecureRIG solution combines the company's industry-leading **RT|RIG** software with a ruggedized hardware platform designed to tolerate temperature extremes, wind, dirt, vibration, and other stressors. This system has no fans, spinning disk drives, or other moving parts—resulting in significantly improved reliability. It is designed to IEC 61850-3 specifications, has a temperature range of -20 to 70 degrees (C), and is suitable for rack-mount or standalone installations.

### Metering

DC Systems can provide complete metering solutions, with full-scale deployment, programming, calibration and testing, CAISO certification, plant inspection, and maintenance.

### Constant monitoring

RTRIG solutions support remote monitoring by the power generator or by DC Systems. Alerts are sent via e-mail or pager.

### Automatic generation control (AGC) and security

Our systems include advanced functions for AGC, such as bumpless transfer for smooth transitioning between a generation site and CAISO.

### CAISO security certificates

DC Systems can provide security certificate management for RIG per CAISO specifications. Our optional annual certificate renewal service eliminates worry over expired certificates, with automatic scheduling of updates.

## WHAT IS CAISO?

**CAISO is a nonprofit corporation charged with operating**

the majority of California's high-voltage wholesale power grid. The organization is the impartial link between power plants and the utilities that serve millions of California customers. Renewable and traditional power generators wishing to participate in California's wholesale energy market must communicate with CAISO using fully certified systems—such as the RTRIG solutions from DC Systems—that conform with all CAISO requirements for data processing, communication, and security.

## What is a RIG? What is a DPG?

RIGs and DPGs enable power generation sites to communicate with CAISO. With both RIGs and DPGs, power generators can securely pass telemetry data—such as circuit breaker status, bus voltage, weather conditions, and power-delivery data—from meters at the generation site to CAISO in real-time. A RIG—as opposed to a DPG—also enables CAISO to use automated generation control (AGC) to manage output from the generating unit. CAISO works to develop the specific DPG or RIG requirements for each generation site. DC Systems' RTRIG solutions are fully certified by CAISO for both RIG and DPG functions.

## Dc Systems: An Experienced California Leader

DC Systems is a world-class developer of Smart Grid solutions for utilities and large energy users, and a leading provider of CAISO-certified RIG systems. Founded in 1990, the company has pioneered solutions that provide powerful architectural advantages by combining distributed intelligence SCADA computing with centralized data management. Our installation and service professionals provide personalized technical support throughout California. Some of the largest utility companies in the world use DC Systems' RT applications to put intelligence where it is needed—in substations, control centers, and power generation sites—while centralizing configuration, administration, and monitoring at the enterprise level. Our products enable utility companies and energy providers to operate more efficiently, reduce costs, and provide higher levels of reliability to their customers.

DC Systems' complete family of RT Real-time Smart Grid Platform™ applications power the Smart Grid, from field device to substation to control center, and integrate seamlessly with enterprise systems.



### The Complete RT Real-time Smart Grid Platform™

RT|RIG software is a member of the RT Real-time Smart Grid Platform™ applications from DC Systems, a leading developer of smart grid software for utilities and large energy users.

Our products combine the power of distributed intelligence with centralized data management—putting intelligence where you need it, while centralizing configuration, administration, and monitoring at the enterprise level. RT applications interoperate throughout the Smart Grid—from field devices, to substations, to control centers, to the enterprise—giving you greater flexibility, control, and responsiveness.

Let Us Turn Your Data Into Smart Data.

## DCSystems

1600 Seaport Blvd, Suite 150  
Redwood City, CA 94063  
Phone 650.425.7700  
sales@dcsystems.com  
www.dcsystems.com