



## TURNKEY CAISO RIG/DPG AND REVENUE METERING SOLUTIONS

The DC Systems **RT<sup>®</sup>RIG™** family of RIG and DPG 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 DC Systems' industry-leading **RT<sup>®</sup>RIG** software with a ruggedized hardware platform designed for high reliability in harsh industrial environments. Our turnkey RIG/DPG solutions include design, installation, and full certification.

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

...FULLY CERTIFIED  
RIG/DPG AND  
METERING  
SOLUTIONS FOR  
POWER  
GENERATORS

### RT<sup>®</sup>RIG SYSTEMS ARE DESIGNED FOR

- » **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/DPG systems
  - Qualifying facility (QF) cogeneration site conversions
  - Proxy Demand Response (PDR)
  - Participating Intermittent Resource Program (PIRP)



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### 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 RT<sub>RIG</sub> 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' RT<sub>RIG</sub> solutions are fully certified by CAISO for both RIG and DPG functions.

### CHOOSE YOUR OPTIONS

- » In addition to our complete, turnkey RIG/DPG 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 RIG/DPG system monitoring, diagnosis, and response
  - Remote administration
  - Maintenance
  - Technical support



### DC SYSTEMS RT<sub>RIG</sub> PRODUCT FAMILY FEATURES

- » **Telemetry data acquisition and concentration**  
RT<sub>RIG</sub> 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<sub>RIG</sub> 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.



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- » **Metering**  
DC Systems can provide complete metering solutions, with full-scale deployment, programming, calibration and testing, CAISO certification, plant inspection, and maintenance.
- » **Constant monitoring**  
RT<sup>RIG</sup> 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 or DPG systems per CAISO specifications. Our optional annual certificate renewal service eliminates worry over expired certificates, with automatic scheduling of updates.

**DC SYSTEMS RT<sup>RIG</sup> SOLUTION ADVANTAGES**

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

**DC SYSTEMS: AN EXPERIENCED CALIFORNIA LEADER**

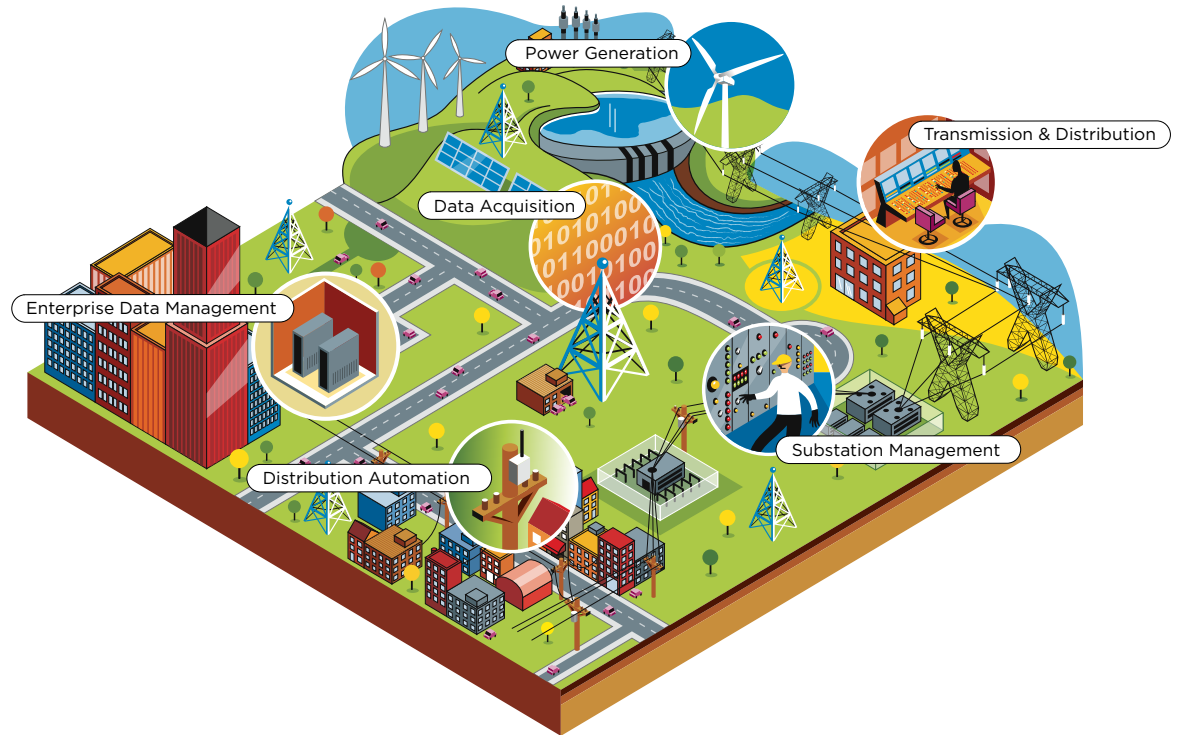
DC Systems is a world-class developer of Smart Grid solutions for utilities and large energy users, and a leading provider of CAISO-certified RIG/DPG systems. Founded in 1990, the company has pioneered solutions that provide powerful architectural advantages by combining distributed intelligence SCADA 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<sup>scada</sup>™ family of products 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**

DC Systems' complete family of **RTscada™** products power the Smart Grid, from field device to substation to control center, and integrate seamlessly with enterprise systems.



## CONTACT US

Our experienced staff members are available to survey your site, assess your needs, and get you connected to CAISO quickly.

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**LET US TURN YOUR DATA INTO SMART DATA.**



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