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Oracle Utilities Live Energy **Connect Provides Turnkey ICCP Connectivity**



Energy market participants use Oracle Utilities LEC ICCP services to meet real-time reporting and control requirements.

Participants in today's power markets need precise, real-time connectivity to facilitate and profit from buying and selling power. Oracle Utilities Live Energy Connect (LEC) provides a turnkey ICCP solution to manage transactional data flows and meet your Independent Service Operator/Regional Transmission Organization (ISO/RTO) markets' real-time reporting and control needs. This offthe-shelf solution was born from Oracle Utilities' deep operational technology (OT) protocol expertise. We literally wrote the book on ICCP and have decades of experience helping customers integrate to and work with all North American ISOs.

WHAT IS ICCP?

ICCP is an international standard — International Electrotechnical Commission (IEC) Telecontrol Application Service Element 2 (TASE.2). Because of their experience developing Manufacturing Message Specifications solutions, our engineers played a significant role in the development of ICCP per IEC60870-6 TASE.2. ICCP became the de facto standard worldwide for control-center communication in the electric power sector, enabling data exchange inside utility systems as well as between utilities and power pools, regional regulators, and nonutility generators.

WHY USE ICCP

Operating across LANs and WANs, the ICCP protocol enables the exchange of real-time and historical power system monitoring and control data, including measured values, scheduling data, energy accounting data, and operator messages. Data exchange can occur between and among:

- Multiple control center SCADA systems
- Power plant DCS systems
- Renewables site controllers
- EMS and other utility systems
- EMS/SCADA and substations

Oracle Utilities Live Energy Connect ICCP is built on Oracle Utilities LEC OTcentric middleware server. It is the first ICCP protocol solution that uses an object configuration-driven approach to minimize the cost of developing and maintaining ICCP. As a result, it enables the creation of the most highly maintainable and flexible ICCP system possible.

Use Oracle Utilities Live Energy Connect to

- · Deploy the fastest time to value, lowest risk solution of any OT integration platform
- Ensure consistent transactions with operational and trading
- Establish a reliable ISO/RTO integration
- Participate in ISO/RTO coordination meetings
- · Apply unsurpassed industry knowledge and ISO/RTO experience to every implementation
- Safeguard stable communications and reduce the risk of any transmission downtime
- Be confident with a proven track record of providing on-time delivery and long-term support for ISO/RTO integrations





HOW IT WORKS

Oracle Utilities LEC provides a turnkey ICCP solution that runs on your cost-effective hardware platform to provide an ICCP communications processor for new or existing SCADA/EMS/DCS systems. It is very easy to manage and administer.

Generation Asset Manager Live Energy Connect DNP, Modbus, OPC, or other DCS / SCADA / EMS Generation Assets ICCP SOAP XML

A Typical Connection to an ISO Using Oracle Utilities Live Energy Connect

With Oracle Utilities Live Energy Connect, customers benefit from a proven robust application server that is part of our Oracle Utilities Live Energy Connect OT-centric middleware. This is the leading technical framework for bidirectional data between power generation assets and power markets and alternative to building a custom C++ program from a set of function libraries. Critical features required for reliable communications, such as connection management, fault tolerance, redundant network support, and on-line configuration are built into the Oracle Utilities LEC application and are proven in mission-critical applications at a large number of customer sites.

BE ASSURED WITH PROVEN RELIABILITY

Oracle Utilities Live Energy Connect allows power generators to manage real-time ICCP connection to ISO/RTO power markets as a turnkey offering. Oracle Utilities engineers will configure, deploy, and help you manage your real-time connectivity. We sweat the details, so you don't have to.

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