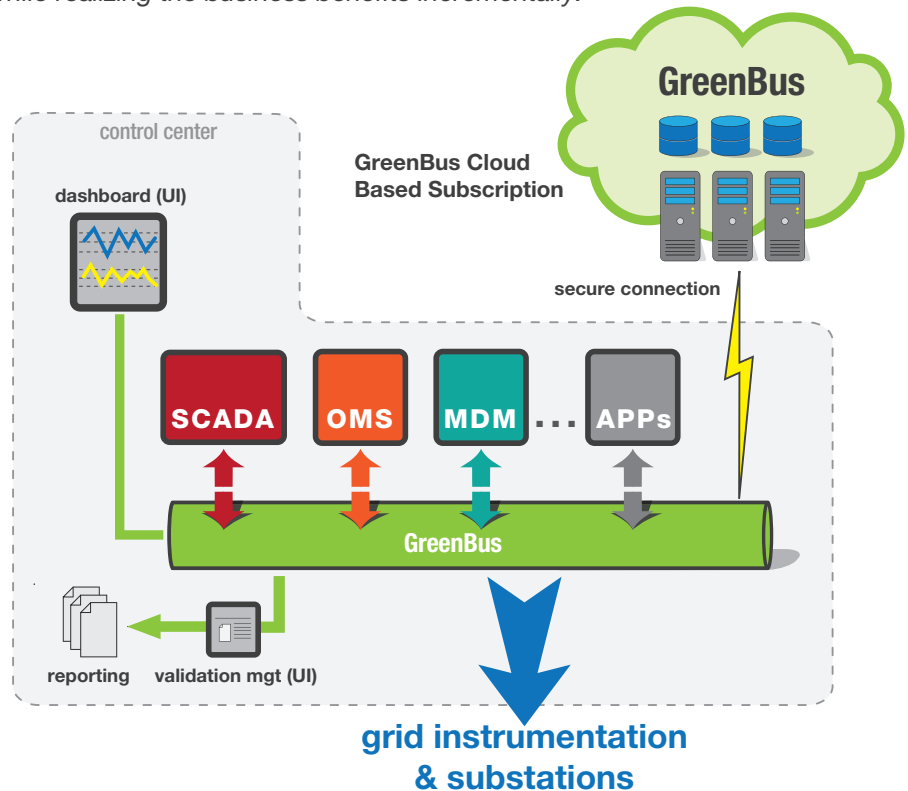


Green Energy Corp's GreenBus software platform enables Utilities to adopt the Smart Grid and integrate legacy technology. Utilities can now design and implement an architecture that supports technology adoption over time, while realizing the business benefits incrementally.



GreenBus

Key Benefits

- Applications can now share data, wide area network (WAN) and field instrumentation
- Eliminates point-to-point interfaces & custom patches
- Capture extremely high volume real-time operational data
- Financial flexibility through cloud or on-site subscription-based service
- Better visibility, metrics and control of grid operations
- Easier integration of renewable energy sources
- Increases data accuracy and precision
- Automates work-flow and reduces error-prone manual processes
- Streamlines regulatory compliance and reporting

Precision & Flexibility

The GreenBus enables packaged applications such as SCADA, AMI/MDM, OMS, CIS, IVR, AVL to share data over a standard API and industry standard interfaces like MultiSpeak®. Each application can access data from other applications using the single GreenBus API instead of developing and configuring multiple custom connectors.

Cost Savings – Utilities can reduce expense and time required for integration. Applications will no longer require a redundant WAN connection or redundant grid instrumentation thereby reducing costs and increasing reliability.

Pay-As-You-Grow, No Capex – GreenBus is delivered by a cloud based, or on-site subscription service, and allows Utilities to add functionality by enabling applications on an as-needed basis.

The GreenBus combines business decision-making with real-time data.

FEATURE	DESCRIPTION	BENEFITS
Subscription Based	Energy Control Center (ECC) delivered by cloud or subscription service. GreenBus runs on redundant servers with secure network connections.	GreenBus offers financial and functional flexibility for a utility through a Software Purchase Agreement (SPA): • 5 to 7 year term • Baseline subscription: › GreenBus <i>Core</i> › GreenBus <i>Functional Services</i> › GreenBus <i>Applications</i> › Substation <i>Automation Provisioning</i> • Special SPA Baseline price point • Pre-negotiated application pricing
Security	• Confidentiality • Authentication • Integrity • Non-Repudiation • Access Control • Java VM (API) Interoperation: • LDAP • Kerberos • Active Directory • RSA	References: NERC Security Guidelines & NISTIR 7628 Green Energy Corp continues to closely track the NERC, FERC, NIST and other security guidelines and mandates.
Data Model / API	• MultiSpeak® 3.0 • MultiSpeak® 4.0 • IEC CIM 61968	By using a dynamic and flexible data model, the GreenBus allows a utility to use current and future (yet-to-be-defined) standards.
Database	Real-time, highly scalable, fault tolerant, decentralized database with 'elasticity' and 'tunable consistency'. Flexible operations with <i>any</i> database.	Used by FaceBook, Cisco WebEx, Twitter and others, the 'Cassandra' database allows utilities to capture real time grid data at high sampling rates.
Messaging	Red Hat Enterprise MRG (messaging, real-time, and grid) – High throughput and high performance computing.	Used throughout the financial industry, where real time, secure transactions are required, MRG supports a wide variety of tasks, ranging from sub-second calculations to long-running, highly parallel jobs.
Bundled Adaptors	Electrical Power Standards • DNP3 • IEC 61850 • ModBus Custom Adaptors (100s included) • ABB • Cooper • GE • Harris • Landis & Gyr • SEL • Schlumberger • Siemens • TRW • Many more	GreenBus comes with 100s of ready-to-use adaptors to communicate to utility substations, RTUs and grid devices. Industry standards DNP3, ModBus and IEC 61850 (substation automation) are included to make the operation and integration as painless as possible.
Bundled Applications	• GUI / Data Viewer & Control • Dynamic Load Reduction Control (DLRC) • Software Development Kit (SDK) • Historian & Trending • Alarming, Reporting & more	Utilities will appreciate that GreenBus comes with ready-to use functionality from day 1. In addition, many of today's top application providers in SCADA, CIS, IVR, Mapping, Stakeout will <i>be certified GreenBus ready</i> .

GreenBus Support

The Green Energy Corp GreenBus subscription is designed to support near real-time utility management systems throughout their development and production lifecycles. Green Energy Corp provides support and services to a range of clients – from partners working in the development environments to live production systems. The subscription model is designed to provide the most value in new technology, formalized quality and assurance programs, security updates, support for industry standards, configuration management and continuous operational support.

For more information please visit greenenergycorp.com or call 303-453-8338 to speak to a Green Energy Corp representative.

AFFILIATIONS

- › NRECA Associate Member
- › MultiSpeak® Initiative
- › National Science Foundation (NSF) FREEDM Smart Grid Center
- › Clinton Global Initiative
- › Global Energy Model (GEM)
- › IEEE
- › IEC
- › CIGRE

Headquarters

12050 North Pecos Street
Suite 210
Denver, Colorado 80234
303.453.8300

Centennial Campus

North Carolina State Offices
Venture IV Building
1730 Varsity Drive
Suite 500
Raleigh, North Carolina 27606
919.836.9916

Durango, Colorado Offices

1150 Main Avenue
Unit C
Durango, Colorado 81301
303.453.8361

info@greenenergycorp.com

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