Topics

• Industrial Energy Management:
  Industrial GreenPrint™
    – Business Drivers
    – Enabling Solutions
Rockwell Automation Today

• Fiscal 2010 Sales: ~$4.8B
  - ~50% outside the US

• Two Operating Segments
  - Architecture & Software
  - Control Products & Solutions

• Employees: ~19,000

• Serving customers in 80+ countries

• Trading Symbol: ROK

Leading global provider of industrial power, control and information solutions
Global Presence

2008

Future

Growth

North America
- 300 sales & support
- 9,000+ employees

Latin America
- 30 sales & support
- 15+ countries
- 3,000+ employees

Asia Pacific
- 60+ sales & support
- 20+ countries
- 3,000+ employees

Europe, Middle East & Africa
- 90+ sales & support
- 50+ countries
- 4,000+ employees

Goal: 60% of revenue outside the U.S.
Manufacturers face increasing pressure to reach productivity objectives, use resources more efficiently and protect workers and the environment.
Industrial Energy Management: Industrial GreenPrint™

- **Centralizes data collection and analysis**
  - Connects to *disparate* systems across enterprise
  - Provides a business intelligence *toolset* for analyzing energy, control system, financial and other pertinent data

- **Monitor industrial facilities for correct behavior**
  - **Models** predicted demand using weather and calendar variables
  - Compares *Predicted to Actual* consumption to proactively diagnose problematic behavior

- **Aids plant optimization**
  - Produces current and *predicted energy costs*
  - Facilitates *optimization* based on equipment availability

- **Web-based analytics and reporting**
  - Graphical dashboard for *data visualization*
  - Engineering data converted to *financial metrics*

The Industrial GreenPrint provides a roadmap to transform manufacturers into strategic managers of energy
Industrial GreenPrint™

Become a Strategic Manager of your Energy Resources

- Awareness
  - Measurement & Verification
- Efficiency
  - Enterprise Energy Management
- Optimization
  - Economic Energy Optimization
- Aggregation
  - Energy Supply Chain Management

Chart Your Success and Increase Profitability
Industrial GreenPrint ™ Awareness
Measurement & Verification

Understand your Energy Usage with Facility and Plant floor Energy Monitoring

• Leverage the automation devices and systems currently installed to gather data for WAGES
• Reduce energy costs and set targets through increased data analysis
• Reduce GHG emissions through lower energy consumption
• Getting Started:
  • Power monitoring
  • Energy dashboards

Creating a WAGES baseline is crucial to increasing energy efficiency
Industrial GreenPrint™ Efficiency
Enterprise Energy Management

**Monitor + Measure:**
- Right Sources
- Right Granularity
- Right Measurements

**Real-Time, Role-based, Multi-Platform**

**Visualize:**
- Energy usage against production output
- Compare performance across multiple facilities

**Calculate:**
- Production vs. Non-Production WAGES and Emissions.
- Actual cost of WAGES and GHG.

**Predict:**
- Baselines
- Production Output
- Energy and Carbon cost

**Analyze + Report:**
- Against Baselines, Production Output, Corporate Targets, and Regulatory limits.
- Actionable KPIs and Benchmarks

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Enterprise Energy Management:
Dashboards and Reports

Production line Performance

Plant wide dashboards

Global Reporting

Resource usage reporting

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Industrial GreenPrint™ Optimization
Economic Energy Optimization

Predictive.
Advanced algorithms:
- Multiple Constraints.
- Globally Optimal.
- Performance in real time.

Adaptive.
- Adapt to any production environment.
- Adjust to forecast and real time changes.

Energy By Demand.
Match production with optimal allocation of energy assets ...
Just-in-time, Just enough.

Economic Optimization.
Highly accurate methods of quantifying costs of options.

Increased profitability by modeling assets with energy data
Enhance business tracking systems with energy and GHG consumption information

Expand supply chain data model to include energy genealogy

View energy and GHG on Bill of Material

Enhance plant-wide optimization with energy as a raw material
• The Industrial GreenPrint, by design, results in Optimization of Energy Usage (OEU). It is:
  – Comprehensive – with a total view of energy including all energy sources and resources (WAGES)
  – Scalable – one point, one asset, one line, one plant, one enterprise... Awareness through Aggregation
  – Open – embracing a common data model and open network technologies to enable the transformation of energy data to actionable information
  – Inclusive – leveraging existing infrastructure and installed base while providing excellent opportunities to extend the architecture with innovation
Rockwell Automation’s Industrial GreenPrint™

• **Holistic View**
  - All information is centralized
  - Energy information against production output
  - Data becomes Actionable Intelligence

• **Carbon Reduction**
  - Reduce GHG emissions
  - Lower carbon footprint
  - Support your Climate Action Plan

• **Focus**
  - Profitability
  - Prioritize investments

• **ROI**
  - Months, not years
  
  www.rockwellenergyevaluator.com
Benchmark your energy usage

- The Rockwell Automation Energy Evaluator tool allows manufacturers to identify and compare current energy management behavior and identify opportunities for improvements.

- Compare with your peers your plant's readiness to make meaningful reductions in energy consumption.

- Complete the short Energy Evaluator tool, get immediate results, the opportunity to do it again, and personalize your reports.

www.rockwellenergyevaluator.com
Thank you