

MARKET TRENDS DIGEST

for the Computer, Communications, and Controls Industries

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WEB SITE: <http://www.newton-evans.com>

First Quarter 2006



Review of 2005 and Research Plans at Newton-Evans for 2006

At the conclusion of the year 2005, Newton-Evans Research Company completed its 27th year as a company committed to serving the technical marketing and product research needs of the global community of electric, gas, and water utilities, and energy pipe lines and their equipment suppliers. During the past year, the company provided several client-exclusive and multiclient marketing research studies, focusing on examining the use of protection and control systems, information systems, data communications, and infrastructure equipment and products. As the company begins the new year, it

will continue to serve leading equipment suppliers, IT and automation systems providers and end-users active in the energy industry.

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Published Reports

In 2005, Newton-Evans Research published several multiclient reports including:

- o Four volume series of reports entitled “**The Worldwide Study of the Market for SCADA, Energy Management Systems and Distribution Management Systems in Electric Utilities: 2005 – 2007.**” The four volumes cover: the North American electric utilities, the international electric utilities, EMS/SCADA/DMS supplier profiles, and market assessment and forecast.

- o Four volume series of reports on substations titled “**Worldwide Market for Substation Automation and Integration Programs in Electric Utilities: 2005-2007.**” The four volumes consist of: the North American substation market, the international substation market, market assessment and forecast, and substation automation and integration supplier profiles.

Proprietary Studies

During this same time frame, Newton-Evans conducted domestic and international proprietary studies for several major suppliers/manufacturers, for which multiples studies were conducted for clients in Europe and Asia, as well as in North America.

Research topics were varied and encompassed the following:

- o international study of cyber security practices and trends in the electric power industry
- o customer satisfaction with distribution voltage (15kv-38kv) switchgear products (including outdoor padmount switchgear, vault/subsurface switchgear, and 3-phase automatic overhead circuit reclosers) customer satisfaction
- o gas insulated switchgear use in substations (utilities and manufacturers were surveyed)
- o purchase plans of generator step-up transformers, autotransformers, and substation transformers

- o study of specialty transformers including mobile transformers, phase shifters, 1 and 3 phase shunt reactors, and furnace transformers.

Published Articles/Partnerships

Feature articles were published in trade and professional journals in 2005, and several of these are posted and available for viewing on our company web site. Articles or excerpts appeared in REMOTE, Energy Biz, and T&D World.

A strategic partnership was formed in November 2005, between Energy Central Research & Analysis Division and Newton-Evans Research. The two firms announced a joint initiative to serve the energy industry with technology trends information and market planning services. Energy Central's Research & Analysis Division, now called Sierra Energy Group, provides market intelligence and analysis solutions covering the spectrum of utility IT and automation markets.

On January 26, 2006, the companies, along with representatives from BGE and SCE, hosted a one-hour long webcast titled “The New World of T&D Automation.” Attendees from across the U.S. and more than a dozen other countries learned about the latest technical issues and market drivers, along with insights from these two major US utilities.

The webcast reviewed the current and future state of transmission and distribution automation, including:

- o facts and figures on the current and future state of the market

- o where systems integration having an impact
- o where utilities need to direct their efforts in the future
- o regulatory, financial, and customer issues
- o insights into how two major American utilities are successfully managing their T&D infrastructure by leveraging automation.

Market Briefing

On February 7th, Energy Central and Newton-Evans will hold a Market Briefing in Tampa, FL. The briefing will include presentations by Warren Causey, Vice President of the Energy Control Research & Analysis Division and Chuck Newton,

President of Newton-Evans Research, in addition to a presentation by Marty Rosenberg, Editor-in-Chief of Energy Biz magazine.

Both organizations also have on-going complementary market research reports covering the T & D Automation and Enterprise Solutions markets that present additional opportunities for partnership. During 2006, these may be leveraged to provide more powerful, insightful solutions for members of the utility IT and automation markets.

Trade Shows/Conferences

Newton-Evans staff was present at several trade shows in 2005 including:

Charley Lidard attended the IEEE Substation Committee meeting held in April in Tampa, Florida.

In 2005, the company participated in the following conferences:

Remote 2005: Chuck Newton provided the keynote address on the SCADA market in electric power and pipeline industries at this conference on October 6. (Please note: this presentation is available via request from our website).

Interop Conference: Covered Web and Wi-Fi issues for the CIGRE B5WG22 charter, held in New York City in December.

Entelec: Newton-Evans exhibited at this conference in mid April. A presentation of the company's oil/gas SCADA study was well received.

Distributech: Charley Lidard attended the 2005 conference to meet with a number of clients.

Infragard: Chuck Newton gave a presentation on control center security initiatives at this FBI and DHS sponsored conference on August 9 in Washington, DC.

Process Control Systems Forum: Dallas, Texas in May, which began new initiatives to study cyber security practices.

What's New for 2006

Newton-Evans Research enters 2006 on a high note. We will begin the year with plans to undertake three of our key studies: water and wastewater utility SCADA, protective relay usage and plans, and power transformer usage and plans. Research will continue on our multiclient study of SCADA Systems in the Global Oil/Gas Pipeline Industry. Client inputs for topics to be included in the research are welcomed the first quarter of 2006.

During the first half of 2006, one or more Newton-Evans staff or affiliates will be participating in several North American and international energy related conferences. The conferences will begin with DistribuTECH 2006 from February 7-9 in Tampa, Florida; Electric Power 2006 from March 28 – 30; IEEE Power Engineering Society T&D Conference (May 21-26) in Dallas, Texas; UTC conference in May; AGA Operations conference (April 30 – May 2) in Boston, Massachusetts; AWWA/WED Joint Management Conference (February 19-22) in Salt Lake City, Utah.

Our research associates located around the world continue to assist in the data collection aspects of our field work, with multiple languages used to conduct surveys and gather research information in many world regions.

As usual, Newton-Evans has renewed its memberships in several vital professional groups serving the world's energy community directly or indirectly. Among these organizations are: IEEE PES; AWWA, ENTELEC, CIGRE, UTC, and GITA. Newton-Evans also is a long-term member of the Council of American Survey Research Organizations and Chuck Newton is an executive member of the American Marketing Association.

In 2005, as in previous years, our company's noted survey incentive donation program has contributed thousands of dollars to US charities such as The American Red Cross. International charities receiving contributions during 2005 included UNICEF and the International Red Cross, with much of the totals designated by utilities and respondents participating in our survey programs.

Profile of Substation Automation and Integration Suppliers

Areva T&D's Automation & Information Systems Business

Volume III of Newton-Evans Research Company's series of reports is comprised of profiles of substation automation and integration suppliers. A total of 47 profiles are included in this volume. Following are the profiles of Areva T&D's Automation and Information Systems Business and NxtPhase Corporation.

Areva T&D's Automation & Information Systems Business

11120 NE 33rd Place

Bellevue, WA 98004

Phone: (425) 822-6800

Website: www.areva-td.com

Key Contacts:

Laurent Demortier – Executive VP Automation & Information Systems Business

J.D. Hammerly - VP, Automation & Info Systems Business, N America

Larry Cochrane - VP, Systems R&D, Automation & Info Systems Business

Thierry Godart - Marketing Director EMS/DMS, Automation & Information Systems Business

Brent Brobak - Marketing Director, Security & SCADA Integration

Rick Schaal - Site Director (for SSA), Automation & Info Systems Business, Bethlehem, PA

Company Overview: (Areva T&D)

Founded: Over 100 years ago

Employees: 25,000

Sales: \$3.5 Billion (USD)

Operations

Areva T&D, a subsidiary of Areva

The company has over 100 years of expertise and dedication in bringing power to people worldwide. From rural electrification to turning the wheels of industry and facilitating the trading of energy, Areva T&D brings power to its customers' projects. Areva T&D Inc. is headquartered in Philadelphia, PA. Key operating units are located at Bellevue WA (ESCA Systems), Bethlehem, PA (power meters), and Charleroi, PA (transformers).

Areva Inc.

As a leading U.S. nuclear vendor and a key player in the electricity transmission and distribution sector, Areva's 6500 American employees are committed to serve the nation and pave the way for the future of the electricity market. With 40 locations across the nation and more than \$2B in revenues in 2004, Areva, through its subsidiaries, combines homegrown leadership, access to worldwide expertise and a proven track record of performance. In the U.S. and in over 100 countries around the world, Areva is engaged in the 21st century's

greatest challenges: making energy available to all, protecting the planet, and acting responsibly towards future generations. Areva Inc. is headquartered in Bethesda, Maryland.

Products & Description: Substation-Related

Areva T&D's fields of expertise include:

- Turnkey energy automation and information projects
- SCADA, EMS and DMS solutions – *considered as market leaders and technology innovators around the world*
- Distribution and substation automation solutions
- Protection relays for industrial and T&D networks

- Measurement instruments and telecom equipment
- Associated application and support services
- Well-known product ranges, such as **e-terra** global energy solutions, **MiCOM** protection and control equipment, and **BiTRONICS** power measurement instruments.
- MiCOM protective relays for monitoring, control and protection of motors, generators, feeders, transformers, bus systems and transmissions lines.
- BiTRONICS real-time monitoring and event recording to preempt catastrophic events, lower investigative expenses, improve security, lower life-cycle costs and protect investments.

Mission-Critical Power Equipment and Substation Automation Systems:

Today's power plants and substations are built for high-demand operations and for protecting critical infrastructure. These systems need to protect themselves against faults as well as detect and alert operators to any abnormal conditions. Areva T&D's Protection and Control solutions provide a greater level of communication within the substation and beyond, without sacrificing reliability or quality.

Products offered include the following:

- PACiS is the latest generation of Power Automation Systems. It can be tailored to a single substation, as usually found within utilities, or it may bring a unified and optimal scheme for the various substations together with generation sources and possible load shedding as encountered in industrial or infrastructure applications. PACiS provides the power to re-think the design, operation and maintenance of electrical installations.

WORLD MARKET ASSESSMENT AND FORECAST OF EMS/SCADA/DMS

Table 1
Forecast Range – Value of Awards for EMS/SCADA/DMS
and Energy Trading Systems and Software
Global Summary

		Y E A R				
		2003	2004	2005	2006	2007
H i g h	A m o u n t i n \$ M i l l i o n					
	E M S	\$ 338	\$ 325	\$ 389	\$ 449	\$ 512
	SCADA	150	150	161	182	194
	DMS	84	90	108	139	169
	PX/ISO/RTO	174	181	182	213	233
M e d i u m	E M S	305	295	353	402	454
	SCADA	131	131	135	154	165
	DMS	72	71	87	115	141
	PX/ISO/RTO	148	148	140	165	183
L o w	E M S	275	269	323	355	390
	SCADA	114	109	115	130	141
	DMS	59	56	68	90	110
	PX/ISO/RTO	114	121	116	138	148

Newton-Evans 10/05

See page 6 for narrative information.

Volume Three of the EMS, SCADA and DMS world research program series of reports has been prepared to enable suppliers to gauge the relative size and shape of the current and near-term market for EMS, SCADA and DMS systems, applications and related services during the 2005-2007 period.. Approximately 200 North American surveys, and more than 50 international surveys from nearly 40 countries had been received and tabulated for use in preparing the final editions of Volumes One and Two of this series. These surveys, together with supplier viewpoints, and Newton-Evans' own estimates and projections, serve as the basis for the World Market Assessment and Forecast. Volume Three is separated into sections based on the major world regions. Each section provides summary information for the world market.

The group of North American utilities represented in this study provides electricity services to approximately 50% of the served North American electricity market.

Newton-Evans estimates that about 22% of the world's served electric consumer market is served by utilities participating in the international portion of the study. Such large international utilities as ELIA (Belgium), ESB National Grid (Ireland), EDP (Portugal), Iberdrola (Spain), CFE (Mexico), CLLP Power (Hong Kong), Korea Electric Power Corp (Korea), Tenaga Nasional Berhad (Malaysia), Manila Electric Power (Philippines), and Taipower (Taiwan).

The 2005 survey data support the viewpoint that spending for mature or traditional control center technologies such as EMS and SCADA systems is holding "steady" at best, dependent upon the world region being discussed. Real growth for this related group of computer-based control and monitoring systems derives from increased spending on distribution *systems* and intelligent electronic devices and transmission *equipment*.

If the definition of distribution management systems is expanded to encompass distribution

substation integration and automation programs and feeder automation initiatives now taking hold in several countries, then a different and somewhat more positive picture of related investments by utilities emerges.

With the combined effects of new substation construction and load growth in developing nations and the deregulation impact on improving customer services via improved system reliability, there is support for the view of a sustainable six percent or higher annual growth rate in combined worldwide spending for control-center based control and monitoring systems.

On a global basis, Newton-Evans estimates that about \$454 million (range \$390 million - \$512 million) will be spent in 2007 on EMS systems, software licenses for EMS applications, field and control center hardware to support EMS systems, and related engineering, training, and maintenance and support services.

Over the three-year forecast period (2005-2007), low estimates of a little over one billion dollars will likely be spent for EMS systems and related software and services. If all projected procurements were made during this same three-year period, then contracts worth from 1 to 2 billion dollars could be awarded.

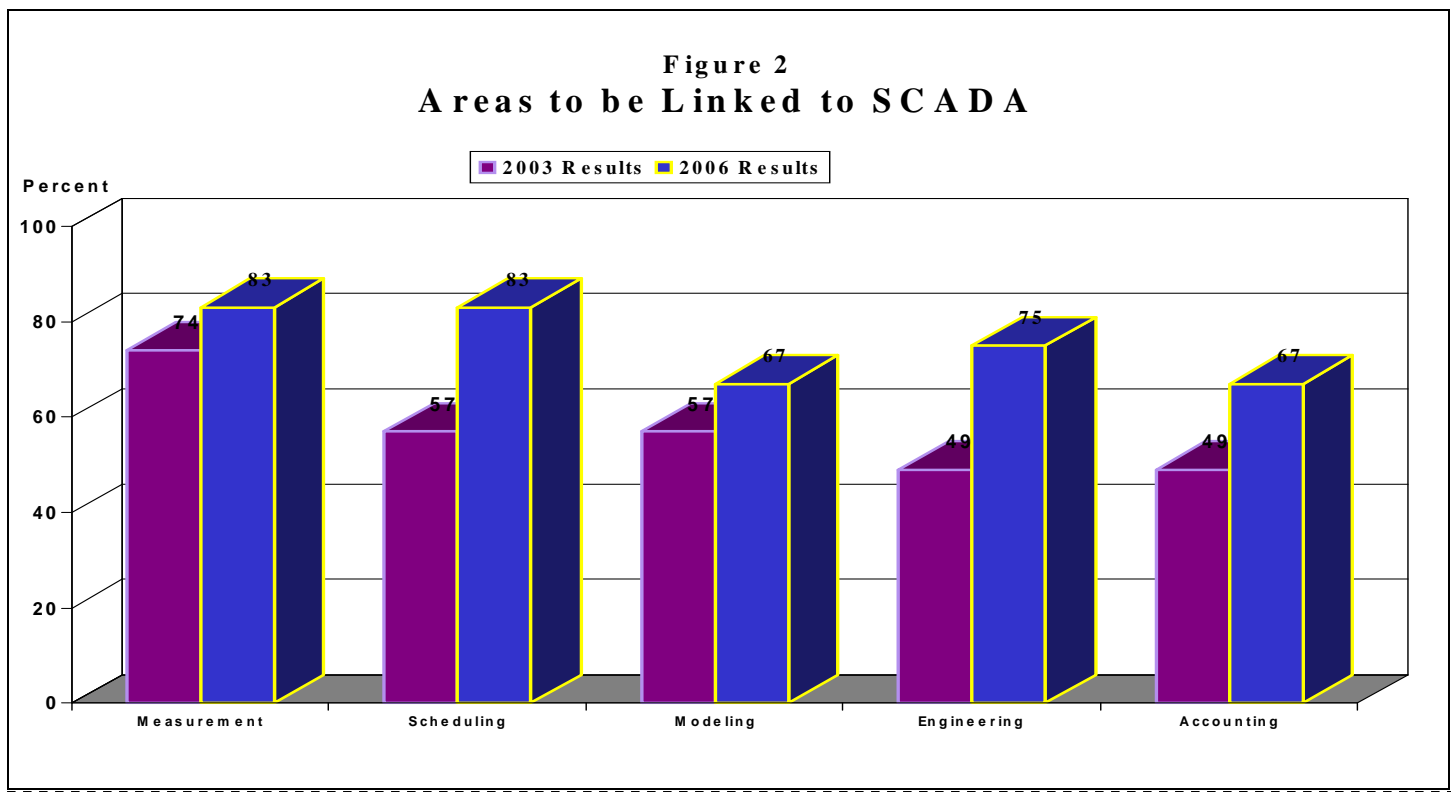
Worldwide spending for SCADA and DMS systems, software licenses, control center hardware and related engineering, training, and maintenance and support services will reach \$269 million, possibly heading as high as \$363 million in 2007. About 45% of this amount will be spent on DMS-related activities (applications licenses, engineering support, training services, etc.). This amount does not include any spending for DA or IEDs. Protective relays alone represent a \$1 billion global business area.

Over this three-year period, Newton-Evans projects spending will reach 797 million dollars for SCADA and DMS systems and related software and services. The expected range of SCADA and DMS-related spending is from \$654 million-\$953 million for 2005-2007.

Comparison of 2003 and 2006 Studies Conducted by Newton-Evans On Gas/Oil Pipelines and Gas Distribution

When released, Newton-Evans third worldwide study of SCADA systems in gas and oil pipeline operations and gas distribution utilities will have

comparisons on 17 topics from our study in 2003 to the current study. See Figure 2 (areas to be linked to SCADA) below.



Newton-Evans Research Observations on Electric Utility Transmission and Distribution Spending and the Outlook for 2006

Newton-Evans Research Company has researched various sources with regard to electric utility spending activities in general, and more specifically for Transmission and Distribution (T&D).

U.S. Government Information (Energy Information Administration/Electric Power Annual 2004) has published information through 2004 for investor-owned utilities and cooperative borrower owned utilities. Information for publicly owned utilities (with generation and without generation capability) and federally owned utilities is published only through 2003. Therefore, Newton-Evans has prepared its own

company estimates for 2004 (as needed) and for 2005.

Total electric transmission expenses for U.S. electric utilities ranged from \$5.3 billion in 2002, with a slight increase of 4.5 percent to \$5.5 billion in 2003. A large increase of about 18 percent can be noted from 2003 to 2004, and another sizable increase from 2004 to 2005, for total transmission expenses estimated to be about \$7.7 billion in 2004.

Investor-owned utilities represent about two-thirds of total transmission expenses in 2002, and over 70 percent in 2005. See first chart on page 8.

Total electric distribution expenses for U.S. electric utilities range from \$5.8 billion in 2002, with an increase of four percent to \$6 billion in 2003. An increase of only about 3.5 percent can be noted from 2003 to 2004, and a slight increase of five

percent from 2004 to 2005, for total transmission expenses estimated to be about \$6.6 billion in 2004. Investor-owned utilities represented a little over one-half of total transmission expenses in 2002, and stay at this pace through 2005. See second chart.

