

***WORLDWIDE STUDY  
OF THE  
PROTECTIVE RELAY MARKETPLACE  
IN ELECTRIC UTILITIES: 2006-2008***

***VOLUME I***

**NORTH AMERICAN MARKET**

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**NEWTON-EVANS RESEARCH COMPANY**

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## Section 1

### Introduction to the Report

The number of North American utility protection and control engineers and engineering managers participating in the Newton-Evans protective relay study series continues to increase from a total of 64 utilities in 1999, to 79 utilities in the 2002 study, to 102 utilities in the 2004 study and this year, up to 112 utilities.

North American utilities participating in the 2006 study of protective relay usage and trends account for more than 30% of all North American electricity customers and industry revenues, far exceeding the participation levels in earlier studies conducted in 1996, 1999 and 2002. American and Canadian utilities participating in the earlier 2002 survey represented approximately 17% of the estimated total of North American customers, and 15.6% of North American-wide electric utility revenues.

The participating utilities in this current study have relay purchase plans that indicate as many as 13,350 relays will be purchased over the 2006-2008 time frame. It appears that investor-owned utilities will dominate purchases of relays in somewhat lower rates (60%-70% of utility industry totals) than one would expect, given that this group dominates the power supply industry generally (73-77% of total utility customers, revenues, production capacity, transmission lines, etc.)

The Executive Summary report to this series (Volume Four) will provide readers with detailed market information for the North American region as well as an international overview. Newton-Evans Research Company estimates from its earlier 1996 relay market study indicate that the North American relay market stood at about \$180 million, and even with decreasing prices, increasing functionality, and stiff price-based competition eroding profits in some selling situations, the domestic market by 1999 remained fairly stable because of increased digital relaying applications, and the integration of relay devices within other larger devices and sub-systems.

Between 1999 and 2002, a few events had occurred to reshape the demand curve. First to contribute to this was the continuing pervasiveness of digital relays for new unit purchase consideration. Nearly 90% of all new relay unit purchases at that time were for digital units. The second event concerned ongoing utility restructuring in spite of a slowdown in deregulation activities. Third was the need for increased grid operational and informational security.

However, by mid-2004, there continued to be a viable opportunity for established suppliers of electromechanical relay products. For domestic North American producers such as GE, ABB and a few other smaller suppliers, there was still a viable \$30-\$40 million market niche for electromechanical relays in the North American market. Worldwide, with foreign producers based in several countries around the world included, the market for electromechanical relays continued to exceed \$100 million in commercial shipment values.

In 2006, the electro-mechanical segment of the market continues to be “flat” at about \$35-40 million for North America, and about \$100 million worldwide. In North America, ABB and GE share the bulk of this market segment.

Keep in mind that the electric power utility market for protective relaying products forms only about 60% of the total protective relay market, with additional unit shipments going to OEMs for integration into panel—based systems and to independent power producers (IPPs) - including co-generation facilities and merchant power plants - as well as to industrial and commercial power generators, and commercial and industrial end-users of electricity.

Throughout this report, information will be presented in tabular and graphic forms. Tables include summary level overviews, as well as detailed tables to better assess the findings, based on 1) type of utility and 2) ranges of number of customers.

## Section 2

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