

Newton-Evans Research Company's

## **Market Trends Digest**



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# Hubbell, Inc. Becoming a Stronger Participant in the Market for Grid Modernization

by Charles Newton

Hubbell Incorporated was founded as a proprietorship in 1888, and was incorporated in Connecticut in 1905. Hubbell designs, manufactures and sells quality electrical and electronic products for a broad range of non-residential and residential construction, industrial and utility applications. Products are either sourced complete, manufactured or assembled by subsidiaries in the United States, Canada, Switzerland, Puerto Rico, China, Mexico, Italy, the UK, Brazil, Australia and Ireland.

Hubbell also participates in joint ventures in Taiwan and Hong Kong, and maintains offices in Singapore, China, India, Mexico, South Korea and countries in the Middle East.

(Excerpted from United States SEC Form 10-K, "Hubbell Incorporated")

The Company's reporting segments consist of the Electrical segment and the Power segment (known as HPS), as described below.

The Electrical segment is comprised of three business groups, which have been aggregated as they have similar economic characteristics, customers and distribution channels, among other factors. The thee business groups within the Electrical segment are: (1) Construction and Energy; (2) Commercial and Industrial; and (3) Lighting. Together these groups were responsible for \$2.5 Billion of the company's total of \$3.5 Billion in sales during 2016.

The Electrical segment businesses sell stock and custom products including standard and special application wiring device products, rough-in electrical products, connector and grounding products, lighting fixtures and controls, components and assemblies for the natural gas distribution market and other electrical equipment. The products are typically used in and around industrial, commercial and institutional facilities by electrical contractors, maintenance personnel, electricians, utilities, and telecommunications companies. In addition, certain businesses design and manufacture a variety of high voltage test and measurement equipment, industrial controls and communication systems used in the non-residential and industrial markets.

Many of these products are designed for use in in harsh and hazardous locations where a potential for fire and explosion exists due to the presence of flammable gases and vapors. Harsh and hazardous products are primarily used in the oil and gas (onshore and offshore) and mining industries. Lighting fixtures, wiring devices and electrical products have both residential and utility applications. These products are primarily sold through electrical and industrial distributors, home centers, some retail and residential product oriented internet sites. Special application products are sold primarily through wholesale distributors to contractors, industrial customers and OEMs. High voltage products are also sold directly to customers through Hubbell's internal sales engineering staffs.

The Power segment consists of operations that design and manufacture various distribution, transmission, substation and telecommunications products primarily used by the electrical utility industry. In addition, certain of these products are used in the civil construction and transportation industries. Products are sold to distributors and directly to users such as electric utilities, telecommunication companies, mining operations, industrial firms, construction and engineering firms.

Source: https://www.sec.gov/Archives/edgar/data/48898/000162828017001423/hubb-20161231x10k.htm

Hubbell's Power segment business operations (HPS) crossed the \$1 Billion threshold in 2015 and is proceeding to the \$1.1 Billion level at a good pace (4-8% per year) on its organic growth alone. The Aclara acquisition, once approved, will likely bring the company on a course to reap an additional \$475-500 Million in 2018 sales (Newton-Evans estimate) to the Hubbell Power segment.

Here is a graph showing the 2014-2016 revenue trends and the revenue outlook for 2017 and 2018 for Hubbell's two operating segments. 2018 outlook includes potential revenues from the Aclara acquisition.

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#### Revenue by Segment for Hubbell, Inc. (\$MUSD)

Here are the reasons for our viewpoint that the Power segment will lead Hubbell's growth over the coming years. HPS will be a stronger participant In the Energy Automation business with its recent acquisition of RFL and now, of Aclara. Aclara has been a double digit market share participant in the crowded field for smart meters, and

for data communications in the three utility areas (electric, water, gas). This will also expand interest among water and gas utilities for more HPS-related offerings and will also be likely to benefit each of the three key business units within the company's Electrical segment.

HPS is a double-digit market share participant in several medium voltage product/market segments and is a market leader in the manufacture and sale of transformer bushings for both HV and MV applications. HPS is also a major participant in the market for surge arrestors for – especially lower voltage elbow arrestors connected to Padmount switchgear units. Reclosers, Overhead MV switchgear, fused cutouts and Padmount switchgear are additional product segments in which HPS holds important shares of the U.S. market. HPS' development of a combined line post sensor offering for monitoring voltage and current, also serves as an insulating device.

The recent acquisition of RFL has enabled the company to expand its basic communications infrastructure support products to include Teleprotection and power line carrier offerings. In the services side of the T&D market space, HPS maintains a reasonable share (5%-10%) of several segments including equipment repair, training and replacement parts. Aclara will bring along more energy automation capabilities as a leading provider of smart meters and three important communications offerings (TWACS, METRUM LTE and the Aclara STAR<sup>®</sup> Series 3400 Series Water meter transmission unit.

#### Summary and Outlook:

The Hubbell Corporation employs about 17,400 personnel across the world. Employment will rise substantially (+850-900 or so) with the acquisition of Aclara to be accounted for in 2018 filings.

Most (about 90%) of the company's HPS business has been focused on the U.S. market. This is likely to change as Aclara will bring expanded international market awareness to HPS.

Some Thoughts on Aclara:

- On the "iffy" side of the Aclara acquisition, that firm has undergone several ownership changes during the past decade. Senior executives, managers, staff and production workers have had to cope with sudden ownership changes and keep a focus on short-term sales objectives rather than developing innovative solutions in a highly-competitive marketplace.
- There are nearly 64 million smart meters in the U. S. Many millions of these units were installed with the help of federal stimulus grants. In 2016, only about 5 million meters were deployed, the lowest level since before stimulus dollars began flowing. 2017 has not seen a rebound in large-scale smart metering projects.

- It's unclear when such a rebound will happen, although some large metering deployments are expected to pick up speed later this decade with some key states, such as New York and Massachusetts, likely to make regulatory changes that would encourage advanced metering.
- Aclara is also looking to shift beyond just metering infrastructure. It is trying to transform itself into a "smart infrastructure company" that offers value-add services for utilities, whether that's customer engagement for electric utilities or methane detection for gas utilities or strong communications infrastructure for water utilities.
- Although Aclara has continued to focus on value-add services in the North American market, the GE meter acquisition also has provided the company with a stronger foothold in Europe.

When all is said and done, Newton-Evans believes Hubbell is making the necessary adjustments to expand its product and services offerings via acquisitions of "grid modernization" firms like RFL and Aclara and others. For Hubbell, acquisitions of successful, privately-held companies have been a multi-decade component of its business strategy. A very interesting feature of the company's strategy is that at least 22 brands within the Hubbell family have retained their identity in the marketplace. Well-known trade names such as A.B. Chance, Ohio Brass, Anderson, Fargo, Turner Electric, Haefely, USCO and others have continued to be successful and to grow under their own brand names.

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## **Substation Automation Market**

The Newton-Evans Research Company has released additional findings from its newly published four volume research series entitled: The World Market for Substation Automation and Integration Programs in Electric Utilities: 2017-2020.

This report series has observed four major types of professional third-party service providers that assist electric utilities with substation modernization. These firms range from (1) smaller local or regional engineering consultancies with substation engineering resources to (2) major global participants in EPC work, to (3) the engineering services units of manufacturers of substation devices and platforms, to (4) substation integration specialist firms that source and integrate devices from multiple manufacturers for utility and industrial clients. The role of such service providers is growing in importance each year. Global spending for external substation engineering and automation services provided to electric utilities over the 2017-2020 years will likely exceed \$4.1 Billion according to the study findings. This is an important segment of the total world market potential for substation modernization that exceeds \$45 billion.

![](_page_5_Figure_3.jpeg)

2016 Global Market Share Estimates for Professional Services Providers of Electric Power Substation Integration and Automation Activities

The North American market report (Volume One) includes survey participation from 65 large and midsize US and Canadian electric utilities while the international market report (Volume Two) includes survey participation from 32 unique utilities in 20 countries around the world. In addition to the baseline survey questions, the report includes 2017 substation survey findings on four additional specific topics:

communications issues; protective relaying trends; security topics and the CAPEX/OPEX outlook for substation modernization.

Volume Three is the detailed market synopsis and global outlook for substation automation and integration:

- Section One of the report provides top-level views of substation modernization, automation & integration, and a narrative market synopsis.
- Section Two provides mid-year 2017 estimates of population, electric power generation capacity, transmission substations and primary MV distribution substations for more than 120 countries in eight world regions. Information on substation related expenditures and spending for protection and control for each major world region and several major countries is also provided.
- Section Three provides information on NGO funding resources for substation modernization among developing nations.
- Section Four of this report volume includes North American market share estimates for 2016 shipments of many substation automation-related devices and equipment.

The Supplier Profiles report (Volume Four) provides descriptive information on the substation modernization offerings of more than 90 product and services companies.

Additional topics being covered in the four-volume series of substation automation studies include in-depth coverage of several communications topics, vendor security certification requirements, external systems linkages to the substation, and preferred equipment suppliers.

More information on this study, *The Worldwide Market for Substation Automation and Integration Programs in Electric Utilities: 2017-2020* is available from Newton-Evans Research Company, 10176 Baltimore National Pike, Suite 204, Ellicott City, Maryland 21042. Phone +1-410-465-7316, email: info@newton-evans.com.

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## **Electric Power T&D Control Systems**

The Newton-Evans Research Company continues to assess its findings from the firm's comprehensive 2017 study of EMS, SCADA, DMS and OMS usage patterns among utilities from more than 30 countries.

#### Current status of Advanced DMS (ADMS)

The Newton-Evans' survey asked respondents to indicate whether their DMS installation provided SCADA, DMS and OMS functionality together in one user interface and this served as our definition of ADMS for this study.

Overall, 69% of international electric utilities who responded to the survey either currently have or plan to have an Advanced DMS that provides SCADA, DMS and OMS together in one user interface. Thirty-five percent currently have ADMS, and 34% plan to implement ADMS in the near future. This contrasts with only 9% of North American survey respondents who reported having an ADMS as of the first quarter of 2017. Twenty percent of North American respondents indicated they will have an ADMS by the end of 2019, and another 17% indicated plans for implementing an ADMS sometime after 2019. Overall, 46% of the North American sample either currently has or plans to have an ADMS. Some of the North American sample included "transmission-only" utilities/ISOs.

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SCADA functionality and network modeling to include Distributed Energy Resources (DERs) Of the international respondents who said they either currently have or plan to have an Advanced DMS, 40% indicated that the SCADA functionality and network modeling includes DERs. Almost half of this sub-sample said they are planning to include DERs in their ADMS functionality in the future, while only 13% of the sub-sample have no plans to do this. Of the 30 North American respondents who said they either have or will have an Advanced DMS (or ADMS), none indicated that the SCADA functionality and network modeling currently includes DERs. However, most of this sub-sample (82%) said they are

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planning to include DERs in their ADMS's functionality in the future, while only 17% of the sub-sample have no plans to do this.

#### Applications Included as part of today's DMS and ADMS installations

According to the survey results, there appears to be a more aggressive adoption of applications for DMS/DMS among international utilities when compared with the slower pace of adoption being undertaken and planned by North American utilities. Sixty-seven percent of international respondents currently use real-time network visibility, followed by 42% who currently use FLISR. One-fourth currently use either network optimization or optimal feeder configuration. Survey findings indicate the most growth will be for distributed energy resource management systems or DERMS; almost thirty percent indicated that they plan on integrating this into DMS/ADMS by year end 2019 or later.

![](_page_8_Figure_4.jpeg)

Real-time Network Visibility is the DMS application most used by the North American survey sample. Thirty-three percent of responding utilities currently use this application, while 25% plan to have it later on. Nineteen percent said their company currently use FLISR, and thirty-seven percent said they plan on having FLISR as part of their DMS or ADMS.

![](_page_9_Figure_1.jpeg)

*Further information on "The World Market Study of SCADA, EMS, DMS and OMS in Electric Utilities: 2017-2019" is available on our website: https://www.newton-evans.com/product/the-world-market-study-of-scada-ems-dms-and-oms-in-electric-utilities-2017-2019/* 

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### **Protective Relay Market**

April 27, 2017. Ellicott City, Maryland. Newton-Evans Research Company continues to assess findings from its six-month research study and survey of protective relay usage patterns in the world community of electric power utilities. Insights received from 114 large and mid-sized utilities in 28 countries point to some interesting differences in plans for implementation of the "full digital substation" concept and to increased use of condition-based maintenance (CBM) strategies for protective relays.

#### Implementation of the "Full Digital Substation" Concept:

Thirty-four percent of the survey respondents from the U.S. and Canada agreed with the statement, "By year end 2018, we will be well on our way toward implementing the full digital substation concept." Thirty-seven percent disagreed with the statement. Forty percent of small North American utilities (fewer than 100,000 customers) agreed with the statement, but only 18% of large utilities (more than 500,000 customers) concurred.

Forty-three percent of the international respondents agreed with the same statement, which is slightly more than what was observed in North America (34%). Twenty-five percent had no opinion, and another 25% disagreed. Importantly, the typical international utility respondent was somewhat larger (in terms of customers served) than their North American counterpart.

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## "By year end 2018, we will be well on our way toward implementing the full digital substation concept"

#### Increased Use of Condition-Based Maintenance:

Forty-seven percent of North American respondents agreed with the statement "We plan to increase use of condition-based maintenance to reduce maintenance testing time of technicians." Fifty-six percent of IOUs, 43% of public power utilities, and 39% of utility cooperatives agreed with the statement. Fifty-nine percent of large utilities (>500,000 customers) plan to increase in use of CBM while only 37% of small utilities (<100,000 customers) plan to do this.

Seventy-two percent of international respondents agreed with the statement that they plan to increase use of CBM to reduce maintenance testing time. Only 6% disagreed.

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"We plan to increase use of condition-based maintenance to reduce maintenance testing time of technicians"

This Newton-Evans survey of electric utilities included more than 20 questions on product functionality and market-related issues. The 2016-2018 study is a series of four reports published during late-year 2016. These reports are geared to the planning needs of protective relay suppliers, power industry consultants, and utility protection and control departments. The four volumes include the North American Market Study, the International Market Study, Supplier Profiles, and Global Market Assessment and Outlook.

Further information on the research series The World Market for Protective Relays in Electric Utilities: 2016-2018 is available on our website: https://www.newton-evans.com/product/the-worldwide-study-of-the-protective-relay-marketplace-in-electric-utilitie-2016-2018-complete-set/

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