



A CLARITY OF PURPOSE

The journey toward “clean industry” can take a number of forms—but what does it mean for electrical distribution? **by Susan Bloom**

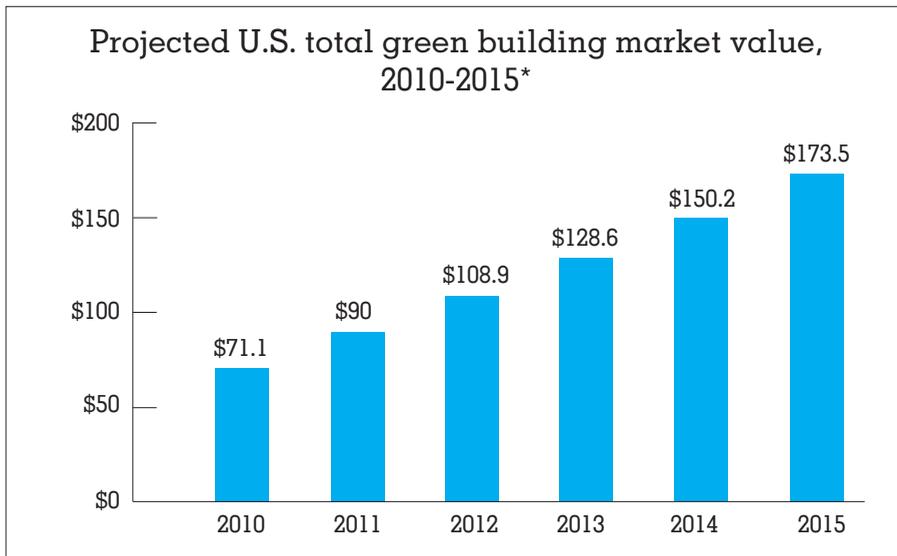
HOW WOULD WE DEFINE “CLEAN INDUSTRY”? At the very heart of the electrical distribution industry is the element on which all distributor product and service offerings eventually rely: electricity. In 2009, America’s electricity consumption totaled nearly 3,700 billion kWh, roughly 12 times more than the level consumed by our nation in 1950. While conservation measures by residential and professional users have successfully offset some of the nation’s total electricity requirements over the past few decades, electricity demand has nonetheless grown by leaps and bounds over time, the result of both steady increases in population and the mass adoption of new electrical technologies.

Despite an increasing demand, electricity remains a somewhat perishable commodity because much of the electric generation process still relies on finite natural resources such as coal. This reality, combined with the prohibitive costs associated with constructing more generating capacity, has justified the imperative for energy conservation in order to reduce costs, support the environment, minimize our carbon footprint, and boost our degree of global competitiveness. Within this delicate balancing act between electricity consumption and conservation lies some of the greatest value that electrical distributors can offer to the market.

With their access to the nation's body of professional users and in their role as conduits for products that consume electricity, distributors are in an ideal position to help promote conservation and guide the nation's commercial, industrial, and institutional energy customers toward the adoption of more energy-efficient products and practices.

In our definition, this journey toward a clean industry can take a number of forms. It can, for example, involve the use of more renewable resources (often defined as any type of energy that both reduces the amount of pollutants emitted into the environment and comes from a source that won't compromise the ability of future generations to meet their energy needs). These types of energy sources—which currently account for about 10% of our nation's electricity generation and 8% of our energy consumption—include biomass, hydro-power, geothermal, and wind and solar energy, and their increasing use will be associated with a range of products and components for which electrical distributors can be conduits.

Clean industry can also involve a community's promotion and installation of more high-efficiency motors, lighting, drives, and other building envelope products readily available in the marketplace and already accessible to a distrib-



*In billions of dollars; compound annual growth rate = 19.5%. Source: Department of Energy, 2010

utor or present in its arsenal of tools.

The potential impact of this market conversion to clean industry is astounding: According to the Energy Information Administration's (eia.doe.gov) *Energy Outlook 2010*, renewables are the fastest-growing source of world energy, with consumption increasing by 2.6% per year (see chart above).

Relative to the increased use of higher-efficiency electrical products already available, a recent McKinsey (mckinsey.com) study found that a global effort to boost efficiency with existing technologies could have "spectacular results," eliminating more than 20% of world energy demand by 2020. In the United States alone, a DOE analysis estimated that up to one-third of the nation's electricity requirements could be met through activities that reduce energy consumption or modify patterns of usage.

The market has definitely been responding and helping to drive this transformation. Based on current activity, the DOE projects that the value of the U.S. green building market will increase from \$71.1 billion in 2010 to \$173.5 billion in 2015, representing a compounded annual growth rate of

nearly 20%. Commercial green building in particular is projected to grow by 18.1% annually during this time, escalating from \$35.6 billion in 2010 to \$81.8 billion by 2015.

Overall, clean industry refers to an industry's broader promotion of more efficient uses of energy and other resources, as well as protection of occupant health, improvement of employee productivity, and reduction of waste, pollution, and environmental erosion.

Distributors are urged to take seriously the positive influence they can have on the transformation to more energy-efficient products and clean energy sources. Through their understanding of new technologies and market opportunities, broad access to both energy users and the energy-efficient products that would benefit them, and ability to connect all of the critical players in this playing field, distributors can advance both the nation's objectives and their own prosperity and position themselves for future success. ■

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"Clean Industry" is a new monthly column in *tED* dedicated to keeping distributors up to date on the latest trends, technologies, legislation, and practices surrounding energy efficiency, environmental concerns, upgrade opportunities, and other energy-related topics. Look for it in *tED* throughout 2011; please send any thoughts, comments, or suggestions to Editor Misty Byers at mbyers@naed.org.