

New energy markets are driving opportunities for increased sales

Back in February, at the ERA 2017 Conference in Austin, Texas, I conducted a presentation about the changes in the energy markets and how these developments may bring new opportunities for sales growth.

Looking at energy markets from the rep opportunity perspective, we focused on three segments:

- Energy generation;
- Energy efficiency; and
- Energy connectivity.

When thinking about energy markets, it is easy to jump to the topical area of renewables, the changing landscape of generation and the impact this has on the grid. While this is important, there are many other areas of sales opportunities that are being created by the developments in energy efficiency and connectivity.

it has largely been offset in the U.S., including significant population growth over this period, by the increased focus on energy efficiency in areas such as electric motors, lighting and appliances.

That said, there are significant opportunities in the growth areas of solar and wind energy because these systems are still being developed and improved and are far from standardized. As a result, there is a need for new product development in the areas of components for inverters, combiner boxes and micro inverters with a focus on more efficient energy conversion.

Energy storage: A related area to generation is energy storage, which is an emerging and growing market. There are component opportunities with battery protection and charging/discharging controls. This segment is in the very early stages of growth at the residential level, but it is projected to have significant growth for some time.

Electric vehicles: Another fast-growing segment is the rollout of charging stations for the emerging electric vehicle (EV) market. The growth of charging stations installed in commercial and retail buildings is expected to accelerate as faster charging protocols are developed and make EV ownership much easier for those without home charging.

Energy efficiency

Solid state lighting: Moving on to the growth area of energy efficiency, the most noticeable change for the consumer in the last few years has been the adoption of solid state lighting using LED technology. See Figure 2.

Solid state lighting is still in the early years of adoption, but as prices come down and control efficiency increases, there are many years of growth ahead. There are component opportunities in the driver and control circuits, sensors, as well as circuit protection. U.S. Department of Energy forecasts show rapid growth over the years ahead, especially in connected and controlled lighting as we see these segments emerge, along with connected thermostats, as a standard app for every smartphone.

There are also many areas of energy efficiency in industries which are much less visible, such as

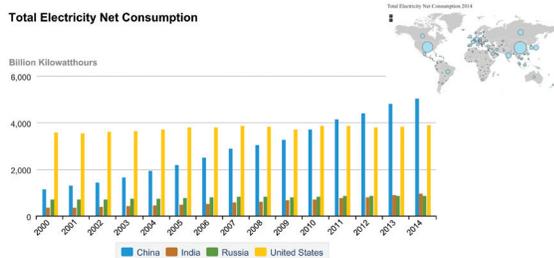
Energy generation

First, let's take a look at energy generation. Figure 1 shows a dramatic contrasting picture of the worlds' two largest economies — USA and China.

Over the past 14 years, there has been very little growth in energy generation in the U.S. while China has seen tremendous growth over the same time period. More and more devices have been invented and connected to the Internet over this period; however,

Figure 1.

Electricity Consumption Growth Slowed in Some Regions – More Generation and Efficiency

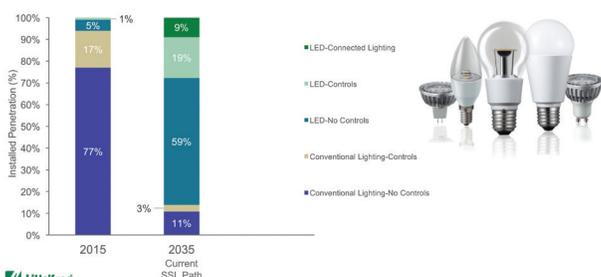


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Figure 2.

DOE Forecasts Energy Saved From LED Lights Will Equal the Consumption of 45M Household by 2035



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electric motors, HVAC units and industrial controls. There are significant developments of more efficient electric motors, inverters and other systems which begin to adopt more software control and new materials such as silicon carbide.

At the consumer level, almost all appliances have undergone significant improvements in energy efficiency as well as improved connectivity.

Smart meters: The growth of smart meters across the world is another indicator of both consumers and utilities continuing to pay increased attention to energy efficiency. In all of the areas of appliances, meters and industrial controls, there are new opportunities for component sales as these areas continue to work toward optimized designs.

Energy connectivity

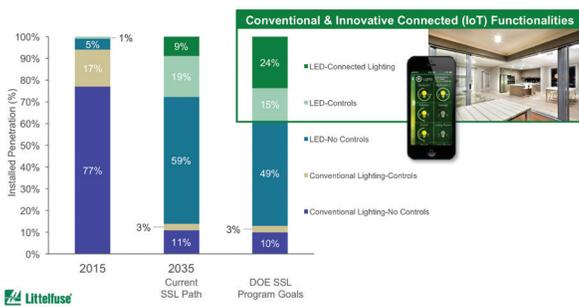
The impact of connected devices in energy markets is expected to increase significantly as Industry 4.0, smart cities and the connected office/home continue to drive the projected increases in IoT connections. See Figure 3.

Machine to machine connections continue on the path to outstrip the number of people and computer connections.

As IoT grows, there are multiple opportunities for new components to be developed in the actual front line devices such as wireless components, smart sensors and power control. Behind all of these devices are the backhaul systems that power, process and store all the data from IoT. As an example, in the area of security and surveillance, the technical progress in cameras, sensors, storage

Figure 3.

Connectivity Important Driver To Reaching Full Potential Energy Savings In Buildings and Homes



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Before joining Littelfuse, Hunter was a vice president at Intel Corporation, the world's largest chip maker and leading manufacturer of computer, networking and communications products, headquartered in Santa Clara, Calif. He also served as general manager of Intel's Optical Products Group and was responsible for managing the access and optical communications business segments. Before that, Hunter served as president of Elo Touch Systems in Fremont, Calif., a worldwide leader in the manufacturing and sales of computer touch screens.

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and increasingly AI, will drive the need for new components in this growth segment.

In all three areas of energy generation, efficiency and connectivity, there have been impressive technical developments in both large companies and in small start-ups. The fact that development is alive and well in many "garages" is evidence that there are plenty of opportunities in many of these segments. Several startup companies have been acquired at very attractive valuations, which is another indicator that the opportunity for continued investment in these areas is attractive.

Finally, the breadth of the areas of opportunities is spread across many technical segments and geographies, which makes the next few years increasingly attractive to so many areas of the country where invention and development are taking place.

The rep network is ideally placed to be in an influential position to capitalize on all of the new opportunities in these areas and to work with manufacturers to develop the components of the future. We can all work together to prosper in this significant opportunity that we face over the next few years.