The Smart Grid Will Offer Exceptional Investing Opportunities

With the likely passage of the "Cap and trade" bill, many people are excited that renewable energy is set for further growth.

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Investments in wind turbines, solar panels, biomass, and capturing the power of ocean waves continue to interest investors. All of these technologies generate electrical power with minimal carbon emissions. Other investors are looking for ways to benefit from a cap and trade system.

The design of the U.S. transmission and distribution system is a century old. This old grid system is designed to distribute electrical power from consistent generation facilities that are close by. Building large wind farms in West Texas still require ways to move that power to urban areas that need it. Moreover, what happens when the wind stops blowing during the hottest days of the summer? Our current electrical grid system is ill suited to handle the variability of new sources of electrical power.

Solving the transition to new power sources is half the battle. After generating the power, you need to distribute it to where it is needed at the right time, in the right amounts and at a lower cost. The Smart Grid is the conceptual answer to the vast changes to adapt our current electrical system to one that is more efficient, adaptable, etc.

An interesting comparison can be made between our electrical grid and our communications network. If Alexander Graham Bell, the inventor of the telephone, were to come back today, he would not recognize the modern day communication system with its cell phones, internet, YouTube, twitter, and wireless communication. On the other hand, if Thomas Edison were to return, he would readily recognize our electrical transmission and distribution arrangement. For Thomas Edison was one of the grid's earliest architects. While it has grown significantly, the basic design remains the same.

According to Cisco, the Smart Grid offers major investment opportunities that are bigger than the. Jeff Immelt, CEO of GE believes the Smart Grid will be the biggest investment of the first half of the 21st century. President Obama is counting on investments in the Smart Grid to help the United States release it from its dependence on foreign oil.

According to a 2009 report by the American Society of Civil Engineers, $2 trillion will need to be invested in our electric infrastructure by 2030. The Brattle Group estimates that it will take $1.5 trillion to between 2010 and 2030 to pay for the upgrades necessary for the additional infrastructure for tomorrow's electrical system.

These investments will take place throughout the electrical grid, in the home, in buildings, on campuses, neighborhoods in cities and across continents. Already we are seeing a few of these improvements. Some homes are being fitted with smart meters that track electricity use in detail.

This data is sent to the utilities to help them manage electricity demand and supply. Eventually, homeowners will be able to access this data so they can make adjustments in their power consumption. The cost of these meters is quite high and is passed on to consumers. The hope is that once consumers have access to the information on their electricity usage, they will take steps to cut their consumption of electricity offsetting the cost. At a cost of $250 to $500 per meter when all costs are included, it is not clear if the meters are worth the expense as reported recently by the WSJ on APRIL 27, 2009.

This raises the question whether there is a cost-benefit trade off from the incremental investments to achieve the goal of a smart grid. Many people equate the smart grid to the growth of the internet. Investments in the internet provided valuable benefits. Others never paid off. I suspect we will see many smart grid investments experience the same fate.

The parallel to investing in the internet is an interesting analogy. The big winners were able to attach themselves to the “killer application” that drove business to them. However, many losers failed to achieve their promise. Those who sold the network components and installed the infrastructure did well. Many invested in ideas looking for the killer app. Unfortunately most never succeeded, leading to significant losses.

What is the killer application of the smart grid? The best definition I found for a killer app comes from www.netreturn.com. “A new product or service that establishes an entirely new category and by being first dominates it creating an enormous return on the initial investment”. Some people believe the smart grid killer app will be the electric plug in car. Not sure, that meets the definition very well.

Anyone remember the smart home? It has been trying to get off the ground for a number of years. The payoff of the smart home was difficult to realize, despite numerous attempts to promote the concept.

So far. There are a number of start-up companies creating products for the smart grid market. Smart grid pure plays such as Comverge (COMV), RuggedCom (RCM.TO) and EnerNOC (ENOC) all became public in the second quarter of 2007. Some very large companies like GE, Honeywell, Cisco and Google have smart grid offerings. Unfortunately, the size of their smart grid services is relatively small when compared to their total sales.

The smart grid will offer exceptional investing opportunities. It will also create substantial losses for those who do not tread carefully. While it is tempting to bet on what will be the killer app for the smart grid, a more conservative strategy is to focus on the companies that can show real cost benefit from their products or services and who generate positive cash flow.