

## Collision is Imminent

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According to the **U.S. Green Building Council**; June 12, 2001: "Existing commercial buildings in North America consume over 40 percent of all energy created, 60 percent of all electricity, 30 percent of all raw materials and create 25 percent of all solid waste mass." There's a perception that driving a fuel-efficient vehicle is our saving grace- well that's wrong. Business consumes most energy resources and driving fuel-efficient cars or alternative energy vehicles is only part of the solution.



In an **article by Mogens Smed**, CEO of former SMED International, writes "...companies continue to use building techniques developed in the 19th century: fixed-in-place, wood-frame drywall, non-sustainable, location-specific homerun cabling is installed as the technology-base." He also cites that buildings or the interior renovations of buildings are in fact the biggest users or "fillers" of landfills creating a third of all landfill waste.

But note also what Smed says about cabling: "location-specific homerun cabling is installed as the technology-base." No question about how many times we've wired the same space in the same building over and over. Out with the old, in with the new. In Montgomery County Maryland, office renovation takes a toll in that the ceiling grid must be cleaned out and then new work begins.

Now the past and current information about oil which is a sticky subject for some continues in two venues- one is **we will run out of oil in 25 or so years** and the other is **no we won't- we won't run out ever**.

Who to believe?

The real issue is how we can be better stewards of what we have. Continuous improvement has a cost and as in most energy conservation efforts we are simply saying we want to use the least amount of energy without giving up what we have or are doing to run our businesses. The same is true for individuals -- "we don't want to negatively affect the quality of our lives."

Given the course that we are on now environmentally speaking -- this planet is suffering and in a big way. All the persuasive marketing dollars won't put ice back on extinct glaciers and new government policies to lift the burden of cleaning up toxic wastes won't relieve health threats and ailments. **Put it into perspective** and soil without adequate moisture means we end up depending upon other nations for food. Then there's hope that we will retain just a miniscule layer of topsoil of which now is only very thin. The green house effect creates new experiences that we are only beginning to see as in extreme weather events along with global warming.

I spoke with the outside maintenance manager of our power company and told him what we are doing and sought his advice about our reduction of power usage. Now the reality of energy conservation is you will spend money, time, energy -- your own and others including other resources to do a better job at using energy. The harsh reality for individual consumers is the same and for those that cannot afford to take the measures unless they are forced by equipment obsolescence or a complete failure -- that's another story.

My experience on the homeowner side was an expensive journey and it's ongoing. The good news is that all our replacement efforts were well timed -- everything replaced was in the 12-16 year age. The end result is our power consumption -- not bill, is over 25% less of what it was previously. We use less electricity, oil, water, and detergent. We've monitored our usage diligently and the newer appliances and systems are more energy efficient. Again, this is the beginning process -- I don't think it will end until we cut our consumption in half and we are planning that now and I need to add saving -- cash to implement the plan. Soon enough we will be on a fixed income and I'm not in favor of handing over chunks of my savings to pay for energy.

In the space of business, energy conservation isn't just about changing the type of lighting you use to save on consumption. It's a social responsibility better taken now than later if and when things heat up to the tune of new government regulations, which you can look forward to.

My suggestion is to look into your closets and converge away. We did and cut electrical consumption by nearly 5 barrels of oil (equivalency) annually and our closet is small and we only have one. Our payback is about three years and the good news is the gear we implemented has a five-year warranty. Thanks to **Sprint** for putting **ADTRAN** in front of me repeatedly- the converged appliance reduced our electrical consumption. **It did much more** but this track is about energy costs.

When we renovated our building we incorporated the latest technology in high efficiency heating, cooling and lighting. Those ideas and technologies are now 4-5 years old. Our total cost per square foot for all energy is less than \$2.00 and we expect it to drop from our efforts in the closet. We won't know the total positive effect until we see our numbers in the next 10 months. We

are now looking at cutting our natural gas consumption and reducing electrical consumption by half.

These efforts won't come cheap but they will add value to the property. Buildings that employ energy savings and prove to cost less to operate **carry a higher value in resale**. We have also targeted the desktop computer displays, server and our legacy IP-PBX (7+ years old). We continue testing a SIP solution that we expect to replace our power hungry legacy **3Com** IP-PBX.

The IEEE 802.3af PoE states a maximum load power of 16.8 watts for one IP telephone or PoE powered device.

16.8 Watts	403.2 Watt	147,168	147.168
x	Hours x 365	Watt Hours /	kWh (kilo
24 hours =	Days =	1000 =	Watt hours)
			Yearly

Cost?

In your in my neck of the woods it's .07882 per kWh or \$11.60 per year per IP telephone. That's also an equivalent of .0865738 barrels of crude oil used to generate the juice for this one phone, or 3.636 gallons of that sticky stuff. Yesterday, I unplugged one IP telephone that was in our cloak-room. Next year, maybe we will successfully apply some technology solutions now incorporated into our business plan. I also need to point out the plausible efforts of Bank of America- they are setting a great example at **One Bryant Park, NYC**.

What methods are you using in your networks and offices to conserve and reduce energy consumption? Maybe your buildings don't have cloak-rooms but I'll bet you have plenty of phones and opportunities to evaluate in order to reduce energy consumption and to maximize profits.

Here's an opportunity that taken by anyone that can truly make a global difference.

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