SUSTAINABILITY

Energy at Kimberly-Clark: less is better!

Dick Marklein, the Global Energy Solutions Director at Kimberly-Clark, talks about what K-C is doing on the energy front and how it relates both to sustainability goals as well as business targets.

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HOW DOES KIMBERLY-CLARK MANAGE ENERGY TODAY? Organizationally, we are somewhat unique as our Global Energy Solutions team leads both the demand side and the supply side of energy within K-C. We have benchmarked and networked with some of the world's best corporations and believe we are one of the few companies that manage both the energy demand and supply components under one team. Essentially, our group acts as a funnel with energy-related ideas and initiatives flowing through the team for analysis and solutions. In one way or another, we are a one-stop shop for energy management.
With sustainability an enterprise priority at Kimberly-Clark, we have transitioned from a more traditional energy management focus to more of a sustainable energy group. Our supply role requires us to not only ensure K-C has reliable, competitive energy sources but these sources should be sustainable at lower carbon levels whenever possible.With the growing importance of sustainability, greenhouse gas (GHG) emission reduction is an integral part of our expanding efforts.
At K-C, our GHG emissions reduction strategy is essentially threefold. First is conservation; second is fuel switching and third is renewable and alternative energies. The biggest contributor, by far, is energy conservation.
As a global company, we have the opportunity to be on the leading edge of trends in energy technology solutions. We know through our experiences that somewhere, some part of the company is developing and implementing solutions to remain competitive and our team serves as the communications link to share these energy successes with other sites.

HOW ARE THESE SUCCESS STORIES AND BEST PRACTICES SHARED? As a global team, we serve as a catalyst to share "knowledge in energy" with other sites. Through the use of modern technology such as webinars (web seminars) and videoconfe-rencing, our team can quickly link in with mill energy champions to share energy best practices and conservation ideas. We have an internal SharePoint site, as well as our own dedicated website for energy best practices and informational presentations.
We have created self-assessment surveys allowing each mill to evaluate their conformance to specific energy use practices. Examples of best practice parameters include: Lighting, HVAC, boiler operations, compressed air, motors, etc. For instance, for compressed air, we have set a 90 PSI mill operating standard and quantified what each PSI is worth (e.g.; 1 PSI reduction could be worth $10,000 a year). By valuing "energy waste," it immediately drives cost awareness for the employees – they know it's just good business to eliminate waste.
When it comes to energy best practices, every mill, regardless of age or equipment or process type, can bene-fit from their implementation. Better yet, in many cases you don't have to spend significant $$$ or capital to realize their benefits. You simply need to change behavior and I am always reminded that the "greenest energy" is the energy you don't use!!

HOW MOTIVATED ARE THE MILL TEAMS TO USE THESE TOOLS? Energy conservation motivation can vary by region and continent, depending on the source and cost of energy. Not surprisingly, the regions most impacted by high energy prices and/or carbon tax implications usually operate our most energy efficient assets. For them to be competitive for the long term, they MUST reduce their energy costs and consumption. As an example, our mills in Germany have been faced with this challenge for decades and continue to be one of our global leaders in driving energy conservation.

The tissue industry is very competitive, with extremely high cost pressure. The best way to present a very clear message about the benefits of saving energy is to start out with the $$$ signs. In fact, the most successful energy leaders I have worked with are even better at Sales and Marketing!!

DO YOU SEE ANY DRAMATIC INNOVATIONS ON THE HORIZON FOR REDUCING ENERGY DEMAND IN PAPERMAKING? The Chinese were pretty creative in inventing a way to make paper with water and then drying it but that was nearly 2,000 years ago. And to-date, nobody has commercialized a lower cost, more energy-efficient process without using water. You still have to remove lots of water and you need energy to complete that process. Collaborative process technology development between tissue companies and equipment manufacturers has yielded notable improvements. But ultimately the consumer makes the final choice, balancing cost in use with product design attributes.

HOW HAS YOUR VIEW OF ENERGY CHANGED IN RECENT YEARS? Energy in Kimberly-Clark is now viewed as a critical strategic cost component, considering that it directly or indirectly impacts our raw material, manufacturing and distribution costs. In fact our internal discussions are not whether energy prices are going up, but by how much they are going up. We now value energy investment projects not only for their near-term payback potential but also their strategic value and implications – i.e., carbon cap/trade1 implications and energy price forecasts. These additional cost sensitivities can better quantify the full return on investment potential. Rarely is an investment in energy conservation or efficiency not a good long-term investment. This underscores how sustainability can be good for the planet and for the business.

We've also been fortunate to get senior leadership support for energy asset investment such as Combined Heat and Power (CHP) facilities. These investments are a good example of strategic investments in regions where more energy efficient solutions are critical to remaining competitive. CHP is an energy-efficient process for tissue production, where you need both electric power and thermal energy. As our team does energy forecasting, we are able to identify potential CHP sites and then work with the mills and businesses to build support earlier in the decision process.

HOW INVOLVED IS YOUR TEAM WITH INDIVIDUAL MILLS? We rely on a "gap analysis" process which identifies the top 10 – 15 mills with greatest savings potential and my team focuses principally on these sites. Additionally, we include sites that have the highest Greenhouse Gas (GHG) reduction potential on the focus list. These target sites will have specific energy plans to achieve our defined energy targets. Our group has both regional and mill site responsibility and tracks energy plans and efficiency progress on a quarterly basis. All mills are expected to implement the energy best practices which are foundational in driving energy conservation awareness and behavior.

At the feasibility or idea level, we might identify a landfill gas or solar energy opportunity based on the availability and economics. Once the opportunity is determined to be feasible, we would then serve as the facilitator in pulling together the key parties (i.e., landfill operator, developers, K-C mill personnel) to develop the business proposition prior to gaining approval. We want to actively participate in the changing energy supply landscape, so wherever renewable energy creates business value and is good for the environment and the communities, we will support it.

Currently, solar investment does not compete well with energy conservation projects, with solar project paybacks 3 to 5 times higher (less attractive). Generally, it is also better to lower the energy use with efficiency and conservation measures, rather than simply switching the fuel source. And that's the way it should be. The single biggest contribution we can make is to conserve energy. It lowers costs and reduces greenhouse gas emissions. So that is our mission and our mantra. Less is better! •

1. "CAP AND TRADE" IS ONE METHOD FOR REGULATING AND ULTIMATELY REDUCING THE AMOUNT OF POLLUTION EMITTED INTO THE ATMOSPHERE. IT IS VIEWED AS A MORE DEMOCRATIC SOLUTION TO REGULATING POLLUTION THAN A CARBON TAX AS IT CREATES A COMMODITY OUT OF THE RIGHT TO EMIT CARBON AND ALLOWS THE COMMODITY TO BE TRADED ON THE FREE MARKET.

ROMAGNANO MILL SUPPORTING RENEWABLE ENERGY EFFORTS.

Increasing use of renewable energy is a key part of K-C's strategy to reduce GHG emissions. At the Romagnano, Italy, tissue mill a solar panel system rated at nearly one megawatt capacity was recently installed.

"The Romagnano Mill and K-C's European leadership team," says Marklein, "is clearly looking at the investment in solar from a long-term perspective and that's great. The Romagnano team opportunistically coordinated a roof replacement project with the solar system construction to generate positive returns for K-C while also reducing greenhouse gas emissions. It also made very good sense as the existing gas-fired turbine is less efficient during the hotter summer months so the lost generation capacity can be offset by increased solar energy generation during the peak daylight summer period – a very complementary solution."

Other K-C renewable energy projects have included:

- Solar thermal panels installed on LEED-certified building in Roswell, Georgia, USA
- Landfill gas generating steam for Beech Island Mill, South Carolina, USA
- A new boiler that uses wood waste at a K-C Safeskin facility in Thailand.
- Purchasing power generated from a geothermal system for K-C facility in El Salvador.