Manage Energy as an Ingredient – Daily Management of Energy Usage

In this example, this system is looking at over 200 energy meters in 1 plant across 4 production systems. The top left summarizes how the plant is performing, and the top right summarizes how each system is performing. The bottom left highlights utility generation performance and the bottom right summarizes individual unit operations performance. Each $ target is calculated based on the plant's actual product produced compared to baseline energy usage for those products for each unit operation. "$ overuse" is energy used above baseline target, and not total dollars.

Without this system, the plant would have to manage energy by analyzing 200 meter trends individually without the context of the production, so the concept of "overuse" was impossible. However, this system allows the plant to quickly see the top energy losses that they need to focus on for the day. For example in the below screenshot the key takeaways are the plant overused $1,300 in energy, driven by the System 1, and Unit Op 1 and 2. Boiler 3's efficiency needs to be investigated.

These top priorities will be assigned to an operations person, who will use a troubleshooting guide (developed for each of the significant energy users) to eliminate the loss. The energy engineer will only assist if it is not one of the common losses listed in the guide, allowing the energy engineer to focus his/her time on the next innovative solution, while operations sustains past gains utilizing processes already in place to manage manufacturing losses.