



# Case Study for a Juice & Vegetable Processing Factory

- Daily production of 80 to 100 tones of juice, cut vegetables and fruits.
- Monthly consumption of electric energy is up to 30,000 units.
- Unidentified energy consumption for the production
- Lack of metering data to identify the individual equipment consumption pattern and maintenance issues
- No handle on power factor and other major electrical parameters
- Energy consumption break up per product line and shift unknown
- No measures for energy conservation and equipment safety
- Excessive energy usage identified during energy audits.

## Situation



- Mandate to reduce energy consumption
- Provide better insight for the energy consumption per product line and shift.
- Provide better insight for the energy consumption for the refrigeration plant.
- Improve maintainability
- Ensure better SLA adherence
- To detect and alert any failures of cooling equipment, which are critical for the industry.
- Justify the monthly energy bill paid to the power utility company

## Task



- Provided a clear road map for better energy utilization and savings.
- Qualified for industry specific energy conservation references
- Ensured better equipment and operator safety by alerts on threshold breaches
- Provided better clarity of installed plant capacity and current utilization.  
This helped to have a clear vision for future expansion of facility and production line.
- Helped to reduce carbon footprint and overall production cost by 5-6% per year
- After tasting the benefits of the implementation and understanding the features of SEnergy, customer is now planning to expand the implementation to Phase 2 and 3, which also includes the monitoring of the temperature of different process.

## Result



- Site survey done and identified the major production and ancillary cooling equipment which are to be targeted for energy monitoring.
- Installed smart energy meters and monitoring hardware and connected to SEnergy cloud.
- Provided real time visibility of the energy consumed, through SEnergy platform
- Analysed and isolated usage/consumption/wastage pattern
- Quantified duty cycles, peak and off-peak consumption
- Defined and quantified efficiency and conservation metrics
- Analysed the complete power quality with time stamps
- Analysed the extreme of power deviation for the targeted equipment
- Isolated and alerted O&M team on breaches, wastage and loading pattern

## Action

