Snapshot Report

AMPC
AUSTRALIAN MEAT PROCESSOR CORPORATION

Service Insights, Reduction and Optimisation

Project code
2021-1042

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Project description

This project aims to conduct full site mapping of core services across the JBS business. The initiative focuses on identifying critical usage points and assessing equipment performance to inform improvement strategies. Its objectives include reducing water and energy intensity, enhancing greenhouse gas performance, and embedding best practices across all processing facilities.

Project content

The first phase of the project involved each site conducting assessments of their current water, energy and GHG emissions to identify critical use points and reviewing high use systems and resource intensive processes. These assessments were used to help set baselines and identify gaps in the sites monitoring systems and understand current metering locations and deficiencies.

Following this assessment phase, each site began the sub-metering process as part of phase 2 of the project. Meters have been installed across all 10 processing sites, with a total of 463 meters installed across the business. These include 272 Water meters, 187 Electrical meters and 4 Gas meters.

The sites have reviewed their usage and set baseline measurements, established committees to monitor and review progress. They have continued to better understand the savings opportunity and have been able to continue to target key savings areas by implementing new sub-meters.

The project also facilitated a system update to the SCADA screens to collect relevant data from all sites to allow direct comparison of KPI's related to sustainability. As well as collecting, aggregating and providing data on utility use of water, coal, electricity, biogas and GHG emissions, it allows JBS to monitor and report operational influences that affect the consumption of these resources such as sectional downtime, render process and production throughputs in # of head and HSCW.

The site working committees and scorecard process has allowed the business to discuss the savings opportunities and review new technologies and process improvements that support the business. Some examples of process improvements and projects that have been conducted:

- Implemented **pressure reduction trials** using PRVs and VSDs.
- Boiler blowdown automation and condensate recovery projects initiated.
- Refrigeration efficiency improvements with VSDs and motor upgrades.
- Condensate recovery project for rendering and cooker systems.
- Roadmap developed for **net-zero energy and water goals**.
- Biogas capture project initiated for wastewater treatment.
- Steam metering at feedlot boilers for energy efficiency.
- Pinch analysis completed for water and energy savings.
- Cooker condensate recovery project scoped.
- VSD installed on handwash water pump.
- Focus on refrigeration audits and boiler blowdown automation.

- Installed water meters and mapped water usage.
- PRV trial for mains pressure reduction (partial success due to supply issues).
- Refrigeration efficiency project with VSDs.

Project outcomes

The following table outlined the objectives of the project and how the outcomes delivered

Objective	Outcomes
Identify and implement new technologies, process improvements and operating systems across the JBS business to meet JBS sustainability targets, reduce their environmental impact, reduce costs to operate and increase global competitiveness.	**Achieved** – This project has allowed the business to better understand their usage of key services through benchmarking, analysis of data and site committees reviewing site performance. This has supported the business to implement better monitoring and reporting systems (supported by the SCADA reporting screens upgrade).
To identify each site's energy and water consumption, usage patterns and performance of major equipment and critical points across the production process.	**Achieved** – The first phase of the project involved each site conducting assessments of their current water, energy and GHG emissions. The sites were able to identify critical use points and review high use systems and resource intensive processes. These assessments were used to help set baselines and identify gaps in the sites monitoring systems and understand current metering locations and deficiencies.
Allocate suitable internal resources across the business to support the project oversite at each site, manage external contractor engagement and support the implementation of metering.	**Achieved** - Each site has used this project to implement site level committees focused on monitoring and addressing water and energy use. The teams have driven a culture of savings using the metering data to drive awareness and change.
Implement a digital sub metering system to collect, collate and analysis critical data points across the business.	**Achieved** – Through the review process key metering points were identified and metered. SCADA screens have been updated to track KIP's and identify issues in real time.

Benefit for industry

The project has demonstrated with improved analysis of water, energy and gas inputs, improved sub-metering and site team focus on addressing savings there are significant opportunities to improve the usage of key service inputs. These learnings can be applied all business in the industry.