



AMERICAN DEVELOPMENT
INSTITUTE

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SUMMARY

Cargill Meat Solutions hired ADI Energy to design and implement a cost effective and energy efficient condensate improvements at Cargill Meat Solutions' Beardstown, IL facility.

Energy Efficiency Food Industry

Investment: \$663,000

Net Cap Payback: 1.55 years

SERVICES

- Industrial energy services
- Energy design build services
- Energy engineering
- Energy financial analysis
- Energy conservation
- Energy reduction
- Engineered solutions
- Industry energy services
- Turnkey energy services
- Utility reduction
- Utility management

MEASURES

- High Pressure Condensate Return System

Cargill Meat Solutions Beardstown, Illinois



UNIQUE VALUE TO CUSTOMER

ADI Energy was retained by Cargill Meat Solutions to design and install a customized solution that returns high pressure hot condensate from its rendering plant located in Beardstown, Illinois to the facility's boilers. The existing system failed due to age and 100% of the high pressure condensate was being lost to the drain.

ADI Energy provided Cargill Meat Solutions with an installation plan that reduced operating costs at the facility through energy savings and maintenance avoidance, while significantly improving the quality of the facility's current condensate systems. Services were provided on a turnkey basis. Cargill Meat Solutions reviewed and approved all stages of this project specified by ADI Energy installation.

The project solution included the design of two packaged high-pressure condensate return skids (one for each of the rendering operation's cookers) with a total capacity of 50,000 pounds per hour. Condensate is now captured by the system and returned directly to the boiler feed water header, some 700 feet across the complex, via existing condensate piping that was repurposed by this project. The condensate return system also includes an innovative turbidity sensing capability to continuously monitor condensate for contamination, and automatically open a dump valve, alert operators, and prevent contaminated condensate from damaging the boilers.