Best of the Betters: 2020 Better Project and Better Practice Presentations

Wednesday, June 10
11:00 am-12:30 pm ET
Submit Questions

[www.slido.com](http://www.slido.com) event code #bbsummit
then go to room “Best of the Betters”
Indianapolis
Gatorade Cogen - Combined Heat and Power System

Project Designed to lower electricity costs and reduce greenhouse gas emissions – part of PepsiCo's Winning with Purpose initiative


Project Team consisting of PepsiCo corporate sustainability engineering, plant support, contractors

$6M Capital Project for Generators, Heat Recovery and Installation

$1.45MM Annual Utility Savings

$1.0MM Net Savings w/Maintenance Contract

35% Reduction in Greenhouse Gas Emissions – 6% of PepsiCo’s 2030 Goal

Project Startup – January 2019

Project Overview

- Three 1700hp natural gas engines turning 1.2MW electric generators – 3.6MW total output
  - Provides ~90% of plants electricity usage
  - Reduces peak demand

World Class Efficiency by Utilizing Heat Recovery

- Heat generated by engines (cooling and exhaust) utilized for Gatorade processing
  - Reduces load on natural gas boilers
  - Reduces overall utility costs
- System Efficiency to Approach 85%
  - Electrical Utility Efficiency ~35%
Project Details

Generators utilize a control system to produce electricity based on plant load.

Generators can efficiently run from 600kW to 1200kW.

Gatorade is thermally processed – provides large heat sink for engine cooling.

Engine cooling is mainly provided by transferring heat to Gatorade.

Gatorade can gain up to 40°F by utilizing the heat from the engines.

Engine Exhaust at ~700°F is used to make steam with a converted boiler for additional heat needed for processing.