The Client
A beverage facility in the Northeast.

The Process
BIOBED® EGSB utilizes anaerobic bacteria, achieving high COD removals, with loading rates of up to 15-25 kg/m³/day. The COD is converted into biogas at low operational costs and with extremely small footprint.

The Benefits
▶ Reduction of natural gas consumption by approximately 10-15%.
▶ Significant reduction of the wastewater treatment carbon footprint compared to conventional activated sludge.

Context
A beverage producer wanted to eliminate one of their highly energy intensive waste processing steps, which would result in an increase in the COD load of the wastewater. The wastewater was being discharged to the local wastewater treatment plant which did not have the capacity to accept this extra load.

The customer has several other Biothane treatment systems in operation and knew that by treating their wastewater anaerobically they could reduce the load to the city, reduce their sewer charges and recover energy in the form of biogas which would then be used in the production facility boilers.

Technology Design Data
The anaerobic pretreatment plant was designed to treat a wastewater stream with a flow of 2.1 MGD (7,955 m³/d), a TCOD of 62,500 lb/d (28,400 kg/d), a SCOD of 53,100 lb/d (24,140 kg/d), a BOD of 36,250 lb/d (16,500 kg/d) and a TSS of 6,700 lb/d (3,045 kg/d).

Evaluation Boundaries
The system was designed to generate the maximum amount of biogas for use in the boilers. Another important design factor for the customer is that all critical equipment have a built in spare.

The entire plant is controlled through a SCADA system and all operating data is collected and maintained by the customer, who sends the data to their corporate office on a weekly basis.

The carbon footprint of the BIOBED® EGSB plant is significantly smaller when compared to wastewater treated aerobically. This is most pronounced in the amount of energy required to operate the plant when compared to an aerobic facility.

The production of a usable energy source, the biogas, only adds to positive carbon footprint for the EGSB system.
**Conclusions**

The BIOBED® EGSB reactors at this beverage plant in the Northeast have proven to be a success in treating its high strength wastewater. With the utilization of over 95% of the biogas, the owner is reducing their natural gas consumption by approximately 10 – 15%. After installing the BIOBED anaerobic treatment system and by utilizing the biogas in the plant boilers, the customer has significantly reduced its wastewater treatment carbon footprint compared to conventional activated sludge treatment.