



# NATIONAL WESTERN CENTRE, DENVER - WASTEWATER HEAT RECOVERY

## Overview

CenTrio, the largest core-competency pure-play district energy operator in North America, contracted Recirc Energy to act as technical experts for a wastewater heat recovery (WHR) scheme being included as part of the design of the National Western Center in Denver, Colorado. The \$250M development, which once complete, will be largest sewer-heat recovery system in North America, will source 90% of its heating and cooling from WHR. This enables the development to align the City of Denver’s goal of achieving an 80% carbon emissions reduction by 2050.

Recirc was tasked with peer reviewing designs and providing professional advice based on their extensive experience with WHR projects and operations in the United Kingdom. Recirc’s primary focus was on the flow capture and clog avoidance in the system’s wet well. The team used lessons learned to recommend alterations to the client’s design.

## Key Objectives

- Provide feedback to help guide the delivery of the screening/wet well design, optimise water flow capture and minimise maintenance issues.
- Peer review design drawings to identify any areas of potential performance risk or system downtime
- Provide preventative maintenance advice
- Support the client in the identification of CAPEX and OPEX savings



## The Recirc Solution

Following extensive review of CenTrio’s design, Recirc made a series of recommendations to maximise the operational effectiveness and efficiency of the system including:

- Installation of screening to remove wipes from the wastewater
- Running floor slope in the opposite direction to remove grit and solids, effectively preventing pump blockages
- Increasing the number of pumps to allow turndown of flow to match heating and cooling load
- Installation of a low-level floating switch to provide a failsafe alternative in the event of ultrasonic failure

“*With a proven track record, Recirc Energy is uniquely qualified to provide expert advice to developers, operators and engineers seeking to design, build and operate large scale wastewater heat recovery systems. They provided timely comments and recommended cost-effective strategies to improve the design and operability of our Sewer Heat Recovery project at the National Western Center in Denver Colorado.*”

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