

WASTEWATER TREATMENT PLANT REDUCES EMISSIONS WITH CUMMINS GAS SOLUTION



WHERE:
Syracuse, Utah (USA)

SUPPLY:
2 x C1100N6C QSK60G gas
generator sets

PURPOSE:
Upgrade outdated generators
and provide cogeneration
solution, meeting the
customer's detailed
specification.



CUMMINS PROVIDES COGENERATION SOLUTION AND SOLVES EXCESS GAS FLARE AT SEWAGE FACILITY

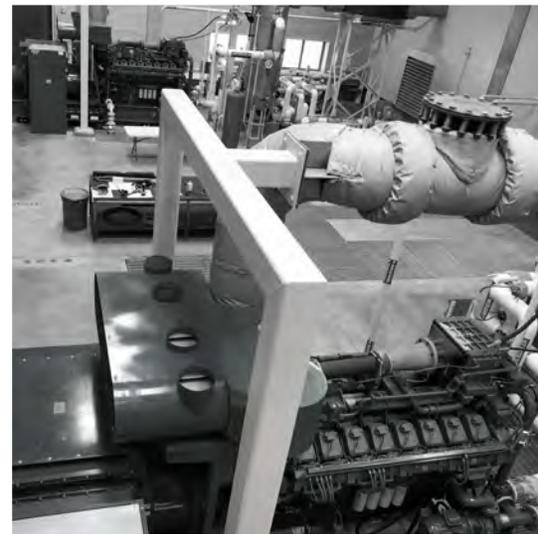
North Davis Sewer District (NDSD) collects and treats wastewater from around 80 square miles in North Utah, serving approximately 200,000 people. The district owns and operates around 100 miles of sewer collection lines delivering wastewater to the Syracuse, Utah, treatment facility, located near the shoreline of the Great Salt Lake. The facility has the daily capacity to treat around 34 million gallons of wastewater, therefore it requires reliable power.

The two previous generators ran for a combined average of 157,000 hours, producing high emissions readings and issues with flaring excess digester gas. The crucial requirements of this upgrade were to tackle the emissions and excess gas flare problems.

Upon the completion of the bidding process, Cummins Power Generation was selected to complete the project's installation due to the unit's ability to meet all desired requirements: a max speed of 1200 RPM, no excess gas flaring issues, and a turndown ratio option. In addition, the generators utilize lean-burn gas technology which provides low exhaust emissions. This meant the pre-existing high NOx emissions would be replaced with just 0.5g/hp-h. Cummins' ability to provide local support throughout the installation, as well as NDSD's proximity to a branch for future spare parts, cemented the selection.

“NDSD chose the two Cummins generator sets due to their ability to run at 1200 RPM and have the largest turndown ratio, while maintaining emissions. By converting from the older naturally aspirated gas engines, the District lowered its NOx emissions from 19g/hp-h to 0.5g/hp-h, allowing the facility to drop below the threshold to be considered a Title 5 Plant by Utah's Air Quality Requirements. Utah has struggled to meet Air Quality Requirements and the District feels it's doing its part with the conversion to these Cummins generators. ”

— Myron Bachman, NDSD Plant Superintendent





The QSK60G gas generator range offers a fully integrated power generation system which utilizes state-of-the-art technology to result in the optimum performance and efficient use of fuel needed for the facility's cogeneration needs. The treatment facility, as a by-product of its digestion process, produces approximately 300,000 cubic feet of methane gas per day. This excess gas is utilized to power the generators which, on average, supply 50-60% of the plant's electrical needs.

The excess heat is also harnessed to support the plant's daily activities, providing heat to the primary digesters as well as supplying the hydronic heaters used for all on-site buildings. The cogeneration solution creates considerable financial savings for NDSD as the digesters must be kept at a constant temperature of 95-100°F in order to maintain the biological digestion process.



Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

1-800-CUMMINS™ (1-800-286-6467)
cummins.com

Bulletin 5676462 Produced in U.S.A. 4/21
©2021 Cummins Inc.