

CH Four Biogas Drives Savings with Remote Construction Audits



Like so many other companies during the 2020 pandemic, CH Four Biogas® had to find an alternative means to get their job done where travel had been required to do so in the past.

CH Four, a leading producer of anaerobic digestion and alternative energy installations, turned to augmented reality smart glasses to assist field operators performing plant inspections remotely. They found this solution not only offered a cost effective way around travel restrictions, but also because a key component in supporting the company's commitment to scale their operations in North America.

Time and Labor Intensive Field Inspections

CH Four Biogas's plant construction operations require frequent site inspections to ensure both contractual obligations and building requirements are being met. It is a requirement to inspect and track progress throughout a site build to assure construction is done to code, but also to respond to any immediate needs that may arise due to unforeseen complications.

Prior to the pandemic, the company would travel to a given project site on average of four to five times per quarter to conduct these inspections, with much of this travel crossing between the U.S. and Canada. A typical trip traveling to a rural and in some cases quite remote job site could easily span 3-5 days, eating up a week's worth of time and resources for a single inspection. This time investment greatly limited the number of projects the company could take on, thus limiting the strategic growth potential to take on new clients.

Remote Support & Inspection

A typical installation project can take anywhere from 2-3 years, end to end, with construction lasting anywhere from 6-12 months. During this building cycle, an engineer is required to be on-site to audit the construction. Using Vuzix M400 smart glasses paired with a mobile wifi hotspot, costly on-site inspections can now be conducted remotely, enabling operators to utilize see-what-I-see technology and allow the remote inspector, often hundreds of miles away, to perform a precise and efficient audit.

Since critical payment milestones are often gated by an inspection phase, the smart glasses enabled some measure of security even during highly restrictive periods. Equipping the site manager with a pair of Vuzix M400 smart glasses, CH Four Biogas engineers can remotely inspect, perform commissioning, and troubleshoot on the spot, as needed.

"Describing something on a call or in an email can only go so far. Our engineers need to see what's going on in real time. Being able to walk the site and notice if something needs attention is something no one else but the design engineers can do, since we know the design better than anyone else. The see-what-I-see capability of the glasses meant we had eyes on the ground. Vuzix was the solution we needed to keep projects on schedule," said Lapointe.

Passing Along Cost Savings

With frequent, week-long travel to and from job sites for a visit that can be as quick as a few hours, Vuzix' solution offered significant cost saving benefits to the company. CH Four Biogas estimates a savings of \$70,000 USD related to travel during pandemic restrictions. Cost savings is not the only benefit. The company is now able to make better use of senior engineers' time. By keeping a pair of Vuzix M400 smart glasses

CH FOUR BIOGAS



at various remote sites, a senior engineer can virtually check in on multiple projects scattered across North America in the course of a single day. "We're able to better utilize our engineering staff. This means we can take on more work since we can support more projects simultaneously," said Lapointe.

In addition keeping projects on track and troubleshooting issues remotely, there's another benefit. Clients are typically responsible for the travel costs of CH Four Biogas engineers traveling to perform the site inspections. By eliminating the need to physically be on site, clients enjoy the savings as well.

Forward Looking for CH Four

Vuzix smart glasses solutions for remote plant inspections is only the start for CH Four Biogas. The time and travel savings supports the renewable energy company's strategic commitment to scaling their operations in North America, while eliminating the need to send inspectors to remote installations, thereby reducing overall carbon emissions in the process. "Vuzix gave us the ability to be in multiple places at once, and vastly extended the power of our limited staff. All these things help us to better support our partners, which is our number one priority," said Lapointe.