BEST PRACTICES FOR THE DESIGN OF CO2 GAS METERING SYSTEMS

TONY MANNION

EMERSON

Accurate flow measurement is key in custody transfer applications. To ensure reliable measurement during energy transactions, it is necessary to incorporate state-of-the-art technologies into engineered solutions. Consistent and reliable integration of all systems' components for accurate measurement, despite changing operating conditions and demanding environments, is the goal when engineering these measurement systems. This can only be achieved by following the best practices and recommendations at the early stage of projects to ensure optimized design and configuration of the Gas Metering Stations.

When it comes to CO2, measurement can be even more difficult, but it must remain reliable in order to meet Federal Regulations under Section 45Q, Tax Credit for Carbon Sequestration. Operational challenges occur as the flow measurement of CO2 is in or near supercritical phase. Additionally, obtaining accurate density measurement for proper flow calculation can become difficult due to phase instability.

This session will cover best practices when designing gas metering systems, and more specifically, providing insight into overcoming some of the challenges related to CO2 measurement. Plantweb Optics will also be introduced as a viable method to help increase operating margin and Carbon Intensity Credits.