

Project Details

Project name: **EMERGENCY PROCUREMENT AND INSTALLATION OF CUSTODY TRANSFER METERS ON CRUDE AND PRODUCT PIPELINES**

Client: Nigerian National Petroleum Corporation (NNPC), Abuja, Nigeria

Scope of works: Engineering Design, Manufacturing, Supply, Installation, Testing & Commissioning of 16 metering skids with PLC based control system, telemetry and SCADA system.

Period & Value: June 2019 - December 2023 ≈ US\$ 8.5 million

Project details: VAE CONTROLS was instrumental in a landmark project for the Nigerian National Petroleum Company (NNPC) Limited, deploying **15 state-of-the-art metering skids**. This comprehensive solution, complete with integrated control systems and SCADA, was designed, supplied, installed, tested, and commissioned across **11 different sites** throughout Nigeria.

This sophisticated upgrade significantly modernized NNPC's operations by enabling highly accurate measurement of crude oil and refined product transfers. Furthermore, it provides **real-time monitoring of product movement** across NNPC's extensive network of facilities, including refineries, storage sites, and pipelines, enhancing operational efficiency and accountability.

➤ End-to-End Project Delivery

Our comprehensive scope of work spanned the entire project lifecycle, guaranteeing technical integrity from initial concept to successful completion:

- **Precision Engineering & Fabrication:** Our expert engineering team designed state-of-the-art metering skids, precisely fabricated in our workshop to meet NNPC's extensive technical specifications.
- **Streamlined Supply Chain & Logistics:** Efficient management the entire procurement and delivery process, ensuring all necessary components arrived on time and within budget.
- **Seamless Installation & Commissioning:** Skillful execution of the installation, testing, and final commissioning of the system, ensuring flawless integration and optimal performance.



➤ The Client

Nigerian National Petroleum Company Limited (NNPC Ltd.) is Nigeria's state-owned oil company, It's the sole entity licensed for all petroleum operations in Nigeria, from exploration to refining and distribution. NNPC Ltd. revenues are a significant contributor to Nigeria's economy.

➤ Project Highlights and Impact

This successful project delivered an array of critical components, mainly:

- **Dual-Stream & Quadruple-Stream Custody Transfer Metering Skids (15 units):** Sizes ranging from 4" up to 14", each unit features high-accuracy FMC Technip Ultrasonic flowmeters, along with essential auxiliary measurements for temperature and pressure, actuated valves, filters, and all necessary piping and accessories.
- **High Precision Control System:** A cornerstone of this project - at nearly one quarter of the project cost - was the development of a dedicated Siemens SIMATIC PLC system for each location, for the provision of all control functions, and also a comprehensive oversight of overall pipeline parameters, ensuring optimal performance and highest reliability.
- **SCADA System:** a cutting-edge SCADA system based on the Siemens WinCC platform, fully configured and tailored to the specific installed technology, for enhanced visibility and control.

This initiative didn't just modernize NNPC's operational capabilities; it dramatically boosted efficiency, accuracy, and safety across their operations. VAE CONTROLS is proud to have delivered a solution that significantly strengthens Nigeria's vital energy infrastructure.

