Case Study
Oil and Gas | Retail
Lowering Carbon Intensity in Asset Care

Client Background

Shell is well known as one of the five major national suppliers of petroleum products. Shell supplies their fuel and convenience products through a vast network of retail and commercial sites across South Africa, with many assets in constant daily operation.

Shell contracted Pragma to conduct all maintenance activities at more than 400 retail sites nationally through the Facilities Management Centre (FMC). The partnership spans over 12 years.

As part of Shell securing its position as the leading global mobility retailer, they have several ambitions for 2025, including at least a 50% reduction in carbon intensity of Shell service stations and operations.

Key Challenges

- During the various phases of Shell retail sites' asset care, greenhouse gases are emitted. This includes emissions during travel and logistics on which this case study focuses:
  - Travel for contractors between their workshops and the sites to collect spare parts; and for FMC field engineers' site visits.
  - Importing or shipping assets internationally from the manufacturer or nationally to reach installers.
- These components are classified as large emissions due to:
  - Most assets for operational use at a service station are manufactured in other countries and imported for operation in the South African network.
  - The sizeable geographic spread of sites across the country.

> **A great start, and we look forward to working together and seeing more of this in the future.**

Pragma Intervention

- Reduction in technician travel was obtained by the FMC through spare parts optimisation, planning and scheduling and the smart bundling of work, which resulted in reduced travel by the L3 contractor.
- The customer service unit was redesigned for fit-for-purpose use and is now manufactured locally, eliminating the shipping of units from the previous manufacturer in Malaysia. The unit cost has also been halved, with a shorter lead time.
- A portion of fuel pump dispensers that are upgraded locally go through a green-certified rebuild process. These rebuild pumps are then installed on site. Irreparable components are recycled or disposed of in an environmentally friendly way. This process also removes the need to import new pumps from the Scotland supplier.

Value Add

- Assisting Shell to realise one of its 2025 ambitions.
- Rebuild and upcycle decommissioned assets while locally procuring components, reducing carbon emissions for transport, manufacturing and diverting materials sent to landfill (255 tons of CO_2).
- Phasing out all equipment using harmful HCFC refrigerants ensures ozone-friendly equipment is installed, thus reducing greenhouse gas emissions into the atmosphere and reducing energy consumption (210 tons of CO_2).
- Local manufacture of assets to eliminate the associated carbon emissions by importing or shipping assets internationally from manufacturer to installers (1.2 tons of CO_2).
- Replacement and upgrades of heating ventilation and cooling, refrigeration and food display assets - replacing old models with energy-efficient models relates to less carbon emitted (58.8 tons of CO_2).
- Establish contractors in remote locations to reduce travel to sites, optimising route planning and bundling of work orders have all resulted in fewer kilometres driven and fewer vehicle carbon emissions. (35 tons of CO_2)
- Approximately a total of 560 tons of CO_2 emissions have been reduced.
- The initiatives have the extended benefit of reducing maintenance costs.

Tools and Technology

- Spare parts administration
- Asset life cycle
- Project management
- Work planning and control
- Engineering design
- On Key Enterprise Asset Management System