

Phase 1: Design & Construction of Bio-digester Plant

Planned Duration

18 Months

Activities

Phase 1: Scope

- Entering into predefined interface agreements
- Detailed Design and Permitting
- Demolition and decommissioning of old infrastructure
- Revamp and renovation of buildings
- Construction of new buildings
- Road works, fencing, paving
- Construction of waste receiving area and processing plant
- Construction of biogas and biomethane plant
- Connection of utilities
- Installation of electrical connection to Energy Systems and Solar PV roof mounted system
- Setting up composting yard
- Seeding of digesters
- Commissioning the plant
- Construction Health, Quality, Environmental and Safety compliance

Deliverables

Phase 1: Deliverables

- Interface contracts signed
- Detail design reviewed, HAZOPed, and approved
- Decommissioned incinerator and diesel tanks
- Revamped management office and main process building
- Constructed pump rooms, weighbridge office, control room etc.
- Roads and fences complete
- Waste receiving and processing plant implemented
- Digesters built
- Biogas plant equipment installed
- Upgrading plant installed
- BioCNG compressor and bus filling station installed
- Piping to Joburg Landfill Gas plant installed for heating
- Electrical connection complete
- Biogas vent and flare lines installed
- Digesters seeded
- Cold commissioning certificate
- Hot commissioning certificate
- Tests after completion & Handover

Form of Contract

NEC 3 Engineering and Construction Contract Option A

Performance Tests

TAC

Adjusted
Performance
Criteria

TDO 1

TDO n

TDO 36

Phase 2: Operations & Manitenance

36 Months

Phase 2: Scope

- Initiate engagement; support follow-up & correspondence with NERSA, DAFF and City power for permits.
- Manage the plant monitoring, operations and maintenance, accounting, invoicing, and reporting requirements for the facility.
- Operate and maintain the facility.
- Collect waste on a daily basis
- Dispose of excess or unused waste.
- Process waste adequately to produce biogas
- Produce biogas and biomethane for busses.
- Provide security 24/7
- Order and manage spares, consumables and chemicals stock
- Spread digestate liquid fraction on the landfill for dust suppression. Facilitate the use of it as fertiliser by JCPZ and others.
- Produce compost and facilitate collection of product.
- Spares and chemicals inventory monitoring
- Provide real-time access to operational process and performance data
- Operational health, quality, environmental, and safety assurance
- Training of CoJ staff to operate the plant before the end of the 3 years
- Accommodating of visitors and delegates
- Staffing of plant and management of HR
- Daily access and delivery/collections/filling monitoring and recording

Phase 2: Deliverables

- Monthly production and processing targets met
- Monthly performance reports
- Emergency maintenance and event reports
- Monthly SHEQ compliance report
- Monthly operations and maintenance reports
- NERSA gas trading license for the client and their facility
- Group 2 Compost registration for the digestate
- SSEG registration for the site with City Power

NEC Term Service Contract of April 2013 (including amendments)