Innovation In the green Economy

Presenter: Thabo Brooms
Scientist/Assistant Plant Manager

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• Germany has 7000 plants in operation for biogas production.
• The biogas production generates ± 20% of Eskom's total generation capacity.
• When running engines (biogas as green technology), NO\(_2\) and CH\(_4\), which is about 320 and 25 times more disruptive than CO\(_2\).
Company Profile (Bronkhorstspruit Biogas Plant (BBP))

- 4.6 MW installed electrical capacity + 3MW of heat available for beneficiation.
- 375 tons of substrate deliveries mean per day (solids and pumpable liquids).
- Electricity sold to BMW in Pretoria (roughly 60km from the BBP).
- Total approximation of about 18500 m$^3$ of daily biogas production (With all 4 engines in operation) with average of 63% of CH$_4$ produced.
Why Biogas?

- Tried and tested
- Flexible energy
- Multifaceted solution
- Industry growth potential
SA Opportunities Regarding Green Technology

• SA has less than 10 vs 7000 Germany.

• Flexibility of biogas delivery and multi-stream benefits holds critical opportunities for SA.

• Bio2Watt aims at expanding Biogas Plants (Cape Dairy, Ivory Coast etc) in the next coming 2 years.
Significance of Daily Sample Analysis

• The following analysis are conducted on daily basis (on-site);
  • FOSTAC, pH, Chemical Oxygen Demand (COD) and metal ions (weekly)
  • Microbial Analysis (every 2 weeks for ensuring the good health of the digesters)
BBP Implementation Limitation(s)

• Barrier Implementation (Specific Hurdles);
  • High Project Development costs
  • License Approval Process
  • Feedstock Availability
  • Project Finance Requirement
Thank you