NUCARBON
Technology

Where Innovation Leads Transformation

CPP5

The CPP5

A Completely Containerized Solution

Based in Botswana, Nucarbon Technology (NCT), manufactures containerized pyrolysis plants (CPP's) for sustainable energy and resource transformation. Our flagship plant will process 5 tons of poultry litter into higher value products and is engineered for flexibility, scalability, and profitability.

Packaged in a standard 12m ISO container format, it is compact yet powerful, providing industrial-grade performance in a modular system. This plug-and-play solution, thermo-chemically transforms organic residues into high-value products.

Model			CPP5	
Feed Rate (Poultry Litter)			5 Metric Tonnes / Day	
Production Desciption	Typical Yield			Application
	%	Production / Daily Output	Units	
Biochar	19%	0,85	ton	Organic fertilizer, carbon sequestration, livestock additive, renewable solid fuel
Electricity	31%	2198	kWh	Heat & power generation for CPP site & overflow to supplement electricity supply
Syngas		26505	MJ	
Pyrolytic Acid	10%	525	litre	Organic pesticide/fertilizer (growth enhancer) soil conditioner
Bio-Oil	40%	2222	litre	Heating fuel, refinery feedstock, HFO
Diesel	30%	1500	litre	Road fuel / heating fuel
LFO	9%	450	litre	Heating fuel

These are indicative values. A thorough assessment can be conducted based on specific feedstock and operational parameters, after which accurate figures can be provided.

How the CPP5 Works

- A Clean, Efficient System -

Pyrolysis - A thermochemical process that transforms organic material at temperatures above 500°C in an oxygen-deprived environment into renewable fuels and other valuable by-products with near-zero emissions.

The CPP5 process flow:

1 Feed & Drying : Poultry litter, crop residues, and other biomass enter the feed hopper. Material is dried to remove excess moisture.

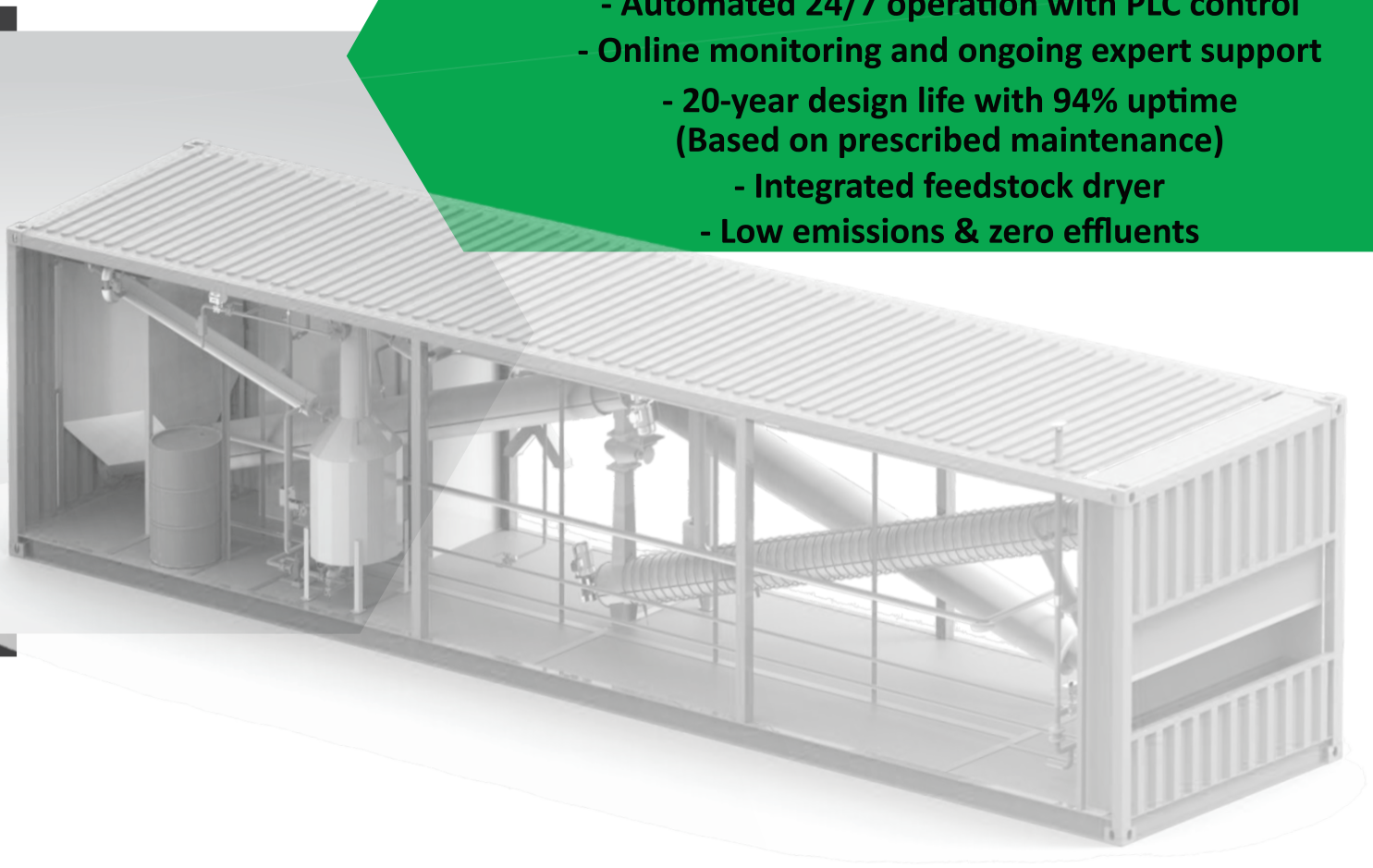
2 Reactor : Dried feedstock is heated above 500°C in an oxygen-depleted environment. Thermal decomposition converts biomass into char & volatile matter.

3 Char Recovery : Solid char is cooled and discharged directly into final packaging. When used as biochar, it enriches soil, retains water and captures carbon.

4 Gas & Liquid Separation : Volatile matter is cooled and condensed into Bio-oil and Pyrolytic Acid (PA). The Non-condesable Syngas is piped away to fuel an integrated generator set, supplying the CPP and exporting the excess electricity.

Key Features:

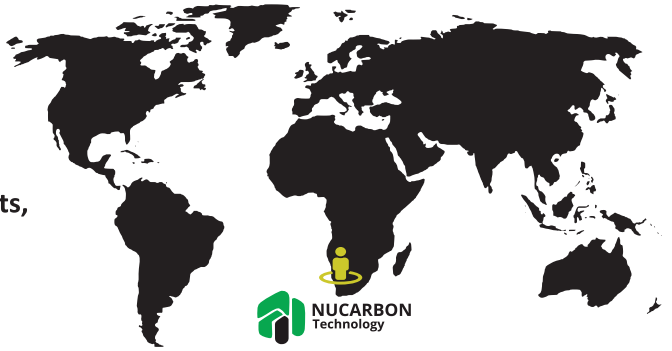
- **Modular ISO-container design faciltating multi-modal transport for deployment**
- **Automated 24/7 operation with PLC control**
- **Online monitoring and ongoing expert support**
- **20-year design life with 94% uptime (Based on prescribed maintenance)**
- **Integrated feedstock dryer**
- **Low emissions & zero effluents**



The CPP5 transforms poultry litter from “waste” into a portfolio of high-value products aligned with global sustainability markets.

Driving Profitable Sustainability, Globally

In a world being re-shaped by carbon markets, ESG targets, and green financing. The CPP5 empowers operators to achieve environmental responsibility with commercial success.



Why NCT's CPP5 ?

Environmental Impact:
Carbon-negative system supporting decarbonisation & ESG goals.

Economic Value:
Multi-product revenues & low OPEX reduces operational costs by up to 30%.

Technical Excellence:
Botswana-engineered, globally deployable, modular design.

Looking ahead, CPP5 will integrate seamlessly with bio-economy hubs, carbon markets, and green financing future-proofing your investment.

Where Innovation Leads Transformation

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