CAC-Green Manufacturing

June of 2024

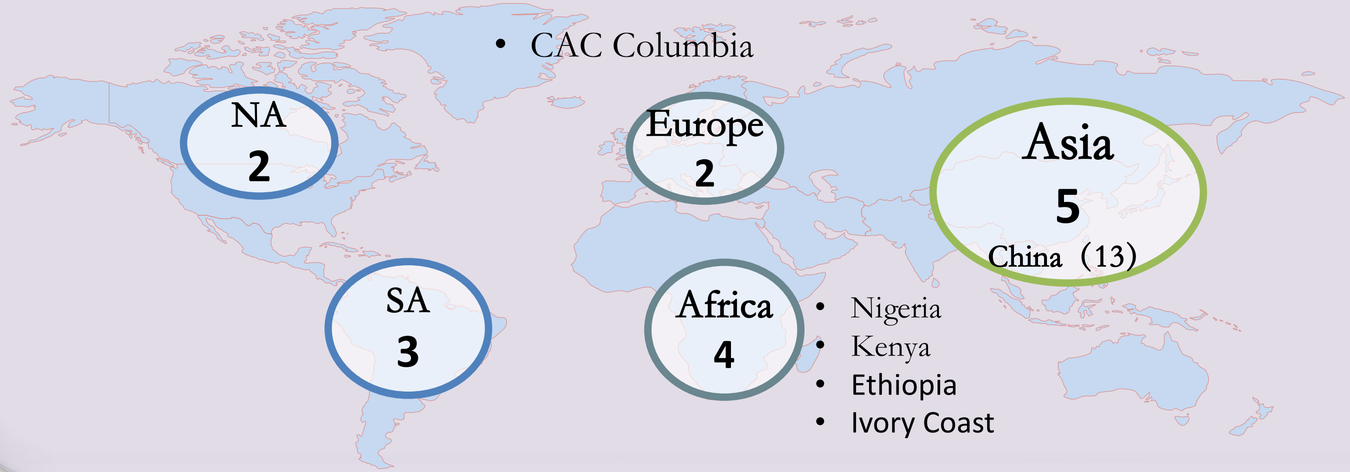
CAC International

International Manufacturing Group, headquartered in Shanghai, China

Focused on Crops Protection Products, Performance Chemicals, New Energy and New Materials business.

4 Manufacturing Bases | 2 R&D Institutes| 20 Overseas Sales Firms

- North America
  - CAC America
  - CAC Mexico
- South America
  - CAC Argentina
  - CAC Brazil
  - CAC Columbia
- Europe
  - CAC Germany
  - CAC UK
- Asia
  - CAC Philippine
  - CAC Pakistan
  - CAC Indonesia
  - CAC Cambodia
  - CAC India



- Nigeria
- Kenya
- Ethiopia
- Ivory Coast

- Market： global presence with 80% of sales revenue from overseas market
- Manufacturing： high-end manufacturing & five hidden champion products
- R&D： the combination of generic products development & new molecules creation

New Energy & New Materials Business

PV/Wind Power

- Increase the proportion of green electricity (PV & Wind farm) for production (Building PV/wind farm in Jiangxi base; Direct green electricity supply in Nantong plant & Rooftop PV for all plants)
- Green electricity to produce green Chlorine-alkali & hydrogen（water electrolysis）

Biomass supply & utilization

- Biomass to produce green steam and electricity
- Biomass gasification to produce Syngas for Bio-methanol / biofuel/SAF
- Biomass fermentation to produce bio-based chemicals(PDO/BDO, glycerin,acids)
- Integrated supply chain: Species selection, planting, Biomass supply & biomass utilization.

Low(Zero)-GWP Refrigerants& other chemicals

- Low-GWP innovative refrigerants blend (R475B)
- Building Low(zero)-carbon integrated chemical chain (Green Electricity/steam + Green feedstock+ Green refrigerants & other specialty chemicals)

CAC-On-going Green Projects

Green Electricity

Green Chlor-alkali

160 KT/y (Jiangxi)

Green Chlorine

Green Hydrogen +

Green Caustic Soda

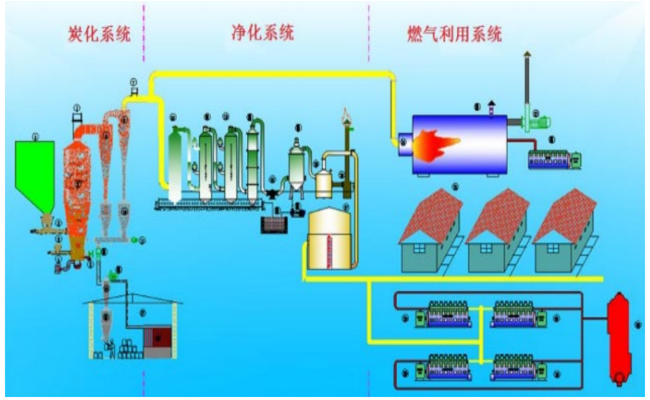
Green Ammonia

100 KT/y

Green Biomass Methanol

200 KT/y

Biomass Polygeneration System



Phase I:

- ◆ Biomass Steam
- ◆ Renewable electricity

Phase II:

- ◆ biomass (Rice Husk) to produce high purity silica sand and co-produce steam
- ◆ Biochar (Activated carbon)

- ➢ Green Methanol & Ammonia Project: In the process of feasibility analysis
- ➢ Implementing Biomass polygeneration project in Jiangxi & Jiangsu of China

Renewable Energy Solution

Key Drivers to Decarbonize-Renewable Energy

Wind & photovoltaic Power
LCOE(Levelized Cost of Energy)

- ✓ Wind power:~ 0.3 CNY/kWh
- ✓ PV: ~0.3 CNY/kWh

(Cost to decrease as it develops)

Traditional Coal Power
LCOE(Levelized Cost of Energy)

Coal Power: ~0.4 CNY/kWh
(It depends on the coal price)

Green Steam

- ✓ Biomass Steam
- ✓ Combined heat and power generation

Scope 2 Emission will be reduced by more than 85% based on renewable energy solution (Green Power and Green Steam).

Renewable Energy Solution- Jiangxi Biomass Project

On-going Biomass Steam Project in XinGan of Jiangxi
(Green Steam)

- Biomass gasification Poly-generation System in Jiangxi Xingan(Phase I to be completed by 2025):
  - Steam (300 KT/Y)
  - Power
  - Biochar
- Phase II: Using biomass (Rice Husk) to produce high purity silica sand and co-produce steam

Biomass Crop Research & Marketing

Super-biomass Project- Industrial Crop:

Four major industrial crops in EU & US: Switch grass, Sorghum, Castor, Giant Reed


Switch grass


Sorghum


Castor


Giant Reed

<u>Industrial Crop to secure the biomass supply</u>:

1) Breeding seed/ Species Selection
2) Biomass Planting
3) Saline-alkali Land(/other Marginal Lands) Improvement
4) Industrial Crop Production

<u>Establish Biosynthesis R&D</u>:

- Utilize biomass to develop more valuable green products

CAC Vision

Become the best-in-class enterprise that satisfies employees, society and shareholders.

Thanks

Q&A

CAC Mission

Create new chemistry

Create customer values

Create better life