Bioenergetics Corporation’s Breakthrough in Developing Commercial Scale Microalgal Production Facility in East China

Yubin Zheng, Ph. D,
Chief Technology Officer
Bioenergetics Co., Ltd
BioEnergetics Co. Ltd. (previously Jinjing Biotechnology Corp.) is a joint venture of Jinjing Group and ILB Corporation.

Jinjing Group (since 1904) focuses on the development, production, processing and marketing of glass, sodium carbonate and its augmented products and is marching toward fields of new solar materials and new energy-saving materials.
BioEnergetics founded on belief sustainable future begins with technology we choose to develop as a global community today. Vision to be world leader in research and development of sustainable sources of bioproducts; near-term mission to be industry pioneer in developing low-carbon technologies, specifically in utilization of microalgae, in the areas of human nutrition, animal feed, and biofuel.
- Glass expert
- Power plant
- Ci resource
- Non-arable land
- Seawater
- Greenhouse tech
- LED industry
WSU BBEL
Algal Biofuel & Bioproduct Research
Jinjing Biotechnology Co. founded BE-BBEL-TIB Lab

2012
2013

acre pilot-scale facility
Scale up to 2 acre demo
2015

10 acre commercial scale facility
Scale up to 25 acre
Target 30-50 dry ton H.P.
Strain Screening & Improvement
Photobioreactor Design & Deployment
Cultivation Strategy & Scale Up

- ca
  - e1/-
  - f1/k2
  - g1/ck2

- ga
  - e2/k3
  - f2/k2
  - g2/ck1

- gb
  - f3/-
  - g3/k1
CO2 Capture & Utilization

Figure 2.2. Closed-loop bicarbonate/carbonate recirculation for algae culture and carbon capture

Biomass Production
- Stirred w/ bicarbonate
- Sparging w/ bicarbonate
- Sparging w/ bicarbonate

CO2 Concentration

0 1 2 3 4 5 6
Culture Time (Day)

0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4
CO2 (g/L)

Transport Pipeline for Regenerated Carbonate
Transport Pipeline for Bicarbonate Solution

Flue gas
Carbon Capture
Bicarbonate Water Solution for Temporarily Storage
Alkaliphilic Cyanobacteria Culture
Harvesting & Processing
Contamination & Process Control

- Treatment
- Production
- Contamination

Cost

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Aquasynth successfully applied in commercial scale astaxanthin production by Haematococcus
Acknowledgement
Thank you!

Yubin Zheng (Technology & Production)
Bioenergetics Co., Ltd
E: zhengyubin@cnggg.cn
P: +86(536)5590507

Amos Chen (Marketing)
E: inquires@aquasynth.com
P: +1(509)4326188
A: 151 3rd Ave Suite 301, Seattle, WA 98101