SSGE

Bio-Energy

Presentation to JBPF

September 18, 2025

Agenda

1. Background on Company
2. Black Pellet Production Process
3. Overview of Myanmar Plant
4. Key Features of EFB Based BioCoal
5. Progress on Malaysian Operations
6. Future Plans and Strategy
7. Questions

CM Yeung – Chairman and CEO

Sheldon Trainor – Executive Vice Chairman

Vincent Lai – CFO

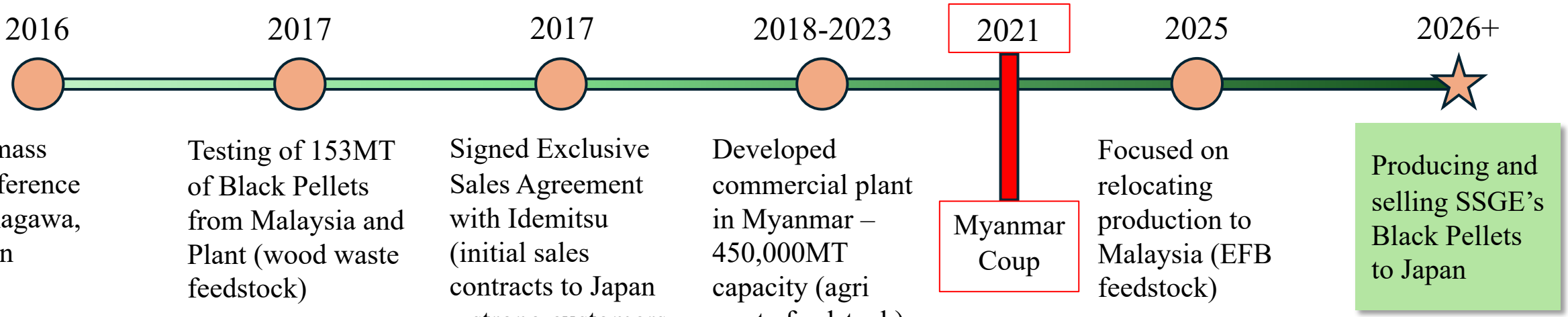
Fredrick Kwong – Sales Director

1. BACKGROUND ON COMPANY

Relationship with Japan

idemitsu

SSGE



SSGE Bio-Energy Overview

- Yeung Family (Hip Lik Packaging) has been developing Black Pellet technology for more than 13 years
- SSGE Bio-Energy established in 2019 in Hong Kong, taking over BioCoal operations from the Yeung Family
- SSGE is a leading BioCoal operator in Asia, with the World's largest Black Pellet production facility
- **Building a demo plant in Malaysia (8,000MT operational 4Q 2025)**
- **Currently relocating Myanmar plant to Malaysia (100,000MT operational 1Q 2026)**
- Our scope includes proprietary technology, operational design, manufacturing, technical support and more than 55 global patents (mostly focused on agri feedstock)

① In-House Manufacturing
In-House design, manufacturing, fabrication and assembly of both Pellet and Torrefaction Plants – proven technical team and capabilities

② World Class Technology
Proprietary and proven technology can operate on feedstocks both from agricultural and forest products waste – hydrophobic, safer, cheaper and modular

③ Existing Plant
Existing operations in Myanmar are being relocated to Malaysia and can quickly be placed into operations

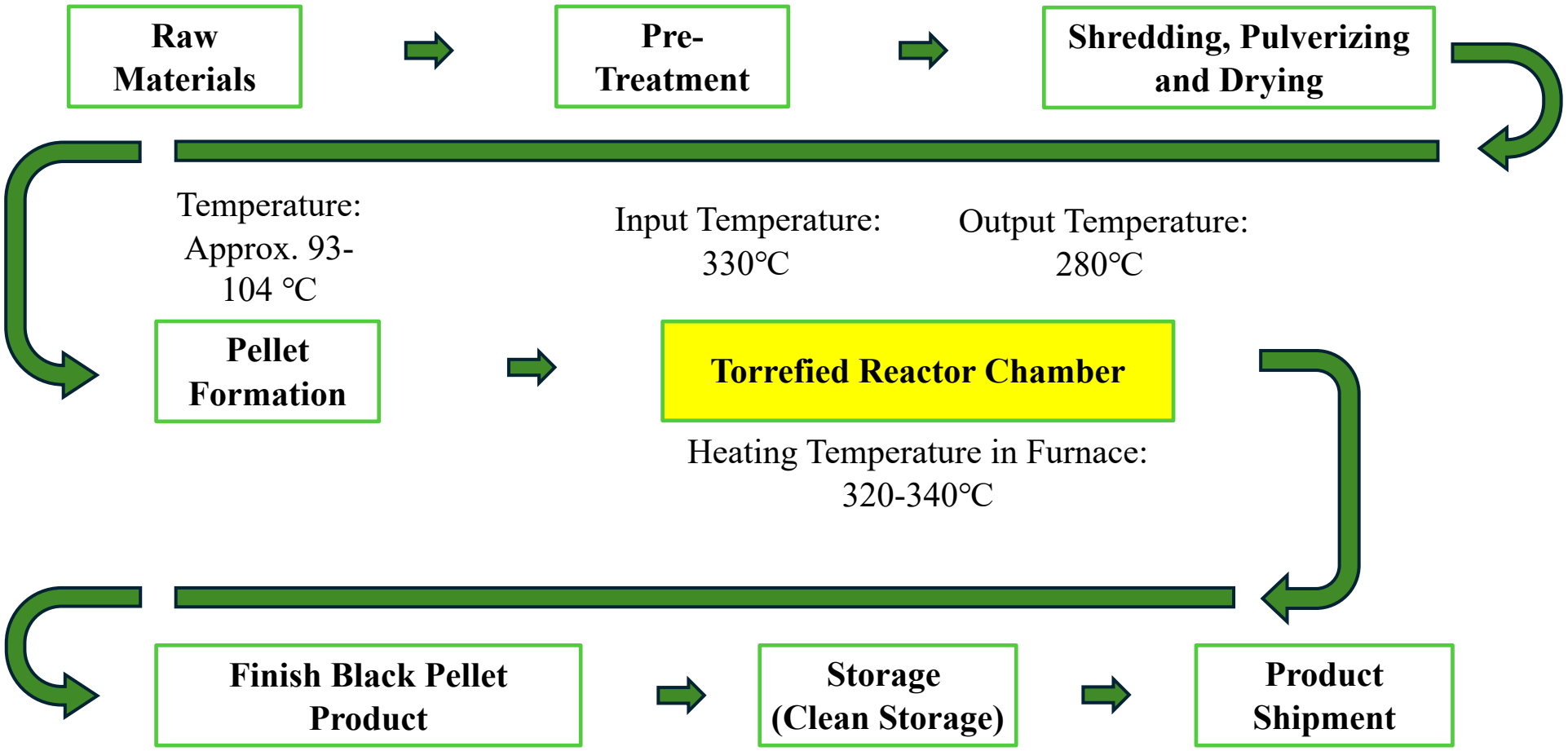
④ Customer Engagement
Customer traction in both Asia and Europe with on going technical and commercial validation for long term offtake contracts

Hip Lik Packaging – World's Largest Plastic Packaging Company

- **Industry Leader:** Operates a state-of-the-art factory in Shenzhen, China, producing up to 2 million plastic boxes per day
- **Business Scope:** World's largest production plant specifically designed for manufacturing clear packaging products
- **Advanced Technology:** The facility uses the latest, top-tier equipment and printing machines, including advanced techniques like hot and cold foil stamping
- **Patented Innovation:** Leads the industry with its patented soft crease technology and specialized automatic gluing equipment for plastic packaging

2. BLACK PELLET PRODUCTION PROCESS

SSGE: Torrefaction after Pelletization (TAP) Process



This technology is covered by SSGE's existing patents and can be used with more than 50 types of agri waste feedstock – technical details can be provided once an NDA is executed

SSGE: Next Generation of 15,000MT Torrefaction Plant

SSGE: EFB Feedstock to Black Pellet

- Significant supply of EFB feedstock available in Malaysia
- 434 palm oil mills (247 located in Peninsula Malaysia)
- In 2024 Malaysia had more than 74 million MT of palm oil waste (EFB, fibers and shell waste)

- SSGE's torrefaction process produces Black Pellets from agri waste equal to Black Pellets from wood waste
- Black Pellets product superiority to other types of pellets (hydrophobic)
- Ability to scale production and create reliable supply

Advantages of SSGE's Torrefaction Technology vs Steam Explosion Technology

① Energy Efficiency

- Lower temperatures (200–300°C) and no high-pressure systems → reduced energy demand

② Product Superiority

- Hydrophobic, stable, energy-dense (≈30%↑ vs. raw biomass), and coal-like grindability

③ Environmental Edge

- Minimal emissions; avoids acidic wastewater (unlike steam explosion's process water)

④ Feedstock Flexibility

- Works with diverse, high-moisture and high-alkali biomass (agricultural residues, waste fiber)

⑤ Simple Operation, Low-Cost Equipment

- Atmospheric pressure → simpler, lower cost equipment and maintenance

⑥ Scaled Projects

- Steam explosion plant cannot be modular (i.e., small size units)

⑦ Economic Benefits

- Lower operating costs (energy, drying) and higher market value (coal replacement premium)

⑧ Storage & Logistics

- Resists moisture/degradation → long-term storage and cost-effective transport

SSGE's Proprietary Torrefaction Technology offers a stable, energy-dense biofuel which is hydrophobic, has lower costs, has less environmental impact and has seamless integration into existing coal fired energy systems for either blending or replacing current coal usage

3. OVERVIEW OF MYANMAR PLANT

Overview of Existing Myanmar Operations

- Project located in Southwest Myanmar
- Manufacturing facility is 40,000 sq. meters on 40ha site
- Plant established to show case SSGE‘s technological expertise and production processes to potential customers and partners
- Electricity is self generated with a 6MW biomass power station
- Over 5,000 local raw material collection stations/warehouses
- Annual capacity of 450,000MT of torrefaction black pellet production (limited commercial operations post 2021)
- Photo includes: biomass power station, pellet plant, torrefaction plant, port and related service functions

Myanmar coup in 2021 and related sanctions has created issues in selling and transporting black pellets to customers in Asia

Myanmar Plant

Steam Power Plant Cooling Tower for 6MW Biomass Power Plant

Electrical Control Center

Control and Operations Center

Myanmar Plant

Dry Kiln

Pelletizer

White Pellet Main Conveyor Belt

4. KEY FEATURES OF EFB BASED BIOCOAL

Product Specifications – SSGE EFB BioCoal

Product	SSGE EFB BioCoal	ISO17225-8	
		TA1	TA2
Total Moisture (TM) (%)	approx. 4 - 5	< 8%	< 8%
Calorific Value (NAR) (kcal/kg)	approx. 4,650 - 4,850	> 4,300	> 4,060
Hardgrove Grindability Index (HGI)	approx. 30 - 35	Value Should Be Stated	
Ash (ash) (%)	approx. 2.5 - 3.0	< 3.5%	< 7.1%
Volatile Matter (VM) (%)	approx. 72 - 74	Value Should Be Stated	
Fixed Carbon (FC) (%)	approx. 21 - 23	Value to Be Stated	
Bulk Density (kg/m^3)	approx. 650 - 670	> 650	>600
Real Density (kg/m^3)	approx. 1.15	No Required	
Mechanical Durability (%)	approx. 97	> 97.5	> 96
Amount of Fine (%)	approx. 1	< 2	< 4
Water Resistance	Hydrophobic	No Required	
Water Absorption (%)	approx. 15	Value Should Be Stated	
Post Immersion Durability Decrease (%)	< 1	Value Should Be Stated	
Self-Heating Wire Basket Test (UN Test N.4)	N (Negative)	No Required	
Leaching Test (COD) (ppm)	< 100	No Required	
Alkali Content (K + Na) (ppm)	500 - 1,000	No Required	

- ★ Hydrophobic
- ★ High Calorific Value
- ★ High Density
- ★ High Grindability
- ★ High Bulk Density
- ★ Low COD
- ★ Low Water Absorption
- ★ Low Fine Content
- ★ Low Alkali

** This quality represents a predicted value based on past experience and specifications of trial production using Myanmar EFB at the Myanmar commercial plant, and the representative quality will be revised after the operation of the sample plant*

Product Features – Third party analysis

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LABORATORIES
YOKOHAMA, OSAKA

NIPPON KAIJI KENTEI KYOKAI
LICENSED BY THE JAPANESE GOVERNMENT
NKKK
FOUNDED IN 1913

INTERNATIONAL INSPECTION & SURVEYING
INSPECTIONS REQUIRED BY REGULATIONS FOR DANGEROUS GOODS, SOLID BULK SUBSTANCES AND NOXIOUS LIQUID SUBSTANCES
MARINE SURVEY AND CARGO INSPECTION
MARINE CONSULTANT
NON-MARINE ADJUSTING
PETROLEUM AND CHEMICAL INSPECTION
LIQUEFIED GAS INSPECTION
CHEMICAL ANALYSIS
TANK CALIBRATION
SAMPLING AND TESTING
CARGO WEIGHING AND MEASURING

ORIGINAL

(Ref. MK)

Analysis Certificate

YOKOHAMA
Date : Feb. 14, 2025
Certificate No. MCO 569/24

THIS IS TO CERTIFY THAT the under mentioned sample was analyzed by us with the following results:

Applicant : SSGE BIO-ENERGY CO.,LTD.
Description of Sample : EFB Torrefied Pellet
Sample submitted by : The applicant
Remarks : None

Result of Analysis:

1. Moisture	As received basis (%)	Test method
Total Moisture	2.9	ISO 18134-1

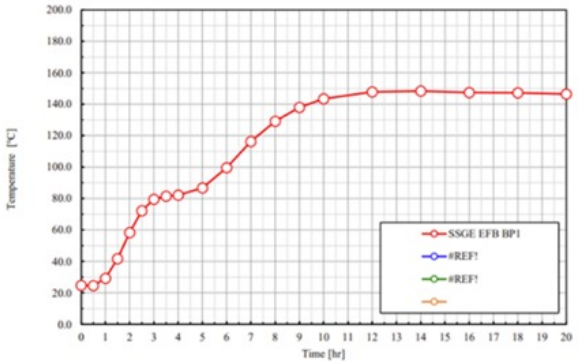
2. Proximate Analysis	As received basis (%)	Air dried basis (%)	Dry basis (%)	Test method
Inherent Moisture		3.1		ISO 18134-3
Ash@550 deg C	2.7		2.8	ISO 18122
Volatile Matter	72.9		75.0	ISO 18123
Fixed Carbon	21.5		22.2	ISO 17225-1

3. Calorific Value	As received basis	Dry basis	Test method
Gross Calorific Value (J/g)	20,680	21,300	ISO 18125
Net Calorific Value @Constant Pressure (J/g)	19,400	20,050	
Gross Calorific Value (cal/g)	4,940	5,090	
Net Calorific Value @Constant Pressure (cal/g)	4,630	4,790	

4. Ultimate Analysis	Dry basis (%)	Test method
Carbon	52.8	ISO 16948
Hydrogen	5.73	
Nitrogen	0.48	
Total Sulfur	0.06	ISO 16994
Total Chlorine	0.003	
Oxygen	38.13	ISO 16993

Oxygen (Dry basis) =100 - Carbon - Hydrogen - Nitrogen - Total Sulfur - Total Chlorine -Ash@550 deg C

Wire Basket test



5. Trace element	Dry basis (mg/kg)	Test method
Na (Sodium)	210	ISO 16967 mod.
K (Potassium)	1,300	
As (Arsenic)	0.1	ISO 16968 mod.
Pb (Lead)	Less than 10	
Total Hg (Total Mercury)	Less than 0.01	
Cd (Cadmium)	Less than 0.5	
Cu (Copper)	Less than 10	
Zn (Zinc)	30	
Ni (Nickel)	Less than 10	

6. Composition of Ash @550°C	Result (%)	Test method
SiO_2	53.53	ISO 16967 mod.
Al_2O_3	3.78	
Fe_2O_3	7.89	
CaO	9.10	
MgO	8.60	
Na_2O	0.99	
K_2O	5.21	

7. Fusibility Temperature of Ash @550 deg C (Reducing atmosphere)	Result (°C)	Test method
Shrinkage starting temperature	1,110	ISO 21404 Ash preparation temperature : 550°C
Deformation temperature	1,160	
Hemisphere temperature	1,200	
Flow temperature	1,210	

8. Physical and Mechanical test	As received basis	Test method
Bulk density (kg/m^3)	670	ISO 17828
Fines content (%)	0.4	ISO 5370
Mechanical durability (%)	94.7	ISO 17831-1
Water sorption (Wsorp) (%)	13.7	ISO 23343-1
Post-immersion durability reduction (DURpi) (%)	0.1	
H.G.I.	29 *1	JIS M8801
T.T.B.G.I.	50 *1	Calculation

$T.T.B.G.I. = 0.8239 \times m_1 \div (m_1 + m_2) \times 100 + 0.5052$; Analysis method specified by the applicant.

m_1 is the total mass of the sieving fraction below 500 μm in g
m_2 is the total mass of the sieving fraction above 500 μm in g.

Product Hazard Identification – SSGE EFB BioCoal

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海洋运输危险性鉴定报告

Hazard Identification report in the Sea Transport

样品名称
Name of Sample EFB Torrefied Pellet

报告编号
Issued No MCHQD2500673-01A

申请单位
Client SSGE BIO-ENERGY (MALAYSIA) SDN. [illegible]

签发日期
Issue Date 2025 年 02 月 28 日

通标标准技术服务（青岛）有限公司
SGS-CSTC Standards Technical Services (Qingd

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海洋运输危险性鉴定报告
Hazard Identification report in the Sea Transport No. MCHQD2500673-01A

爆炸危险性 Hazard of Explosion	该物质不属于爆炸品。 The substance does not belong to Explosives.
氧化危险性 Hazard of Oxidation	该物质不属于氧化剂。 The substance does not belong to Oxidizing substances.
易燃危险性 Hazard of Flammability	该物质不属于易燃固体。 The substance does not belong to Flammable Solids.
腐蚀危险性 Hazard of Corrosion	该物质不属于腐蚀品。 The substance does not belong to Corrosive Substances.
毒害危险性 Hazard of Toxicity	该物质不属于毒害品。 The substance does not belong to Toxic Substances.
放射危险性 Hazard of Radiation	该物质不属于放射性物质。 The substance does not belong to Radioactive Material.
环境危险性 Hazard of Environment	该物质不属于危害环境物质。 The substance does not belong to environmentally hazardous substances.
	/

爆炸危险性、氧化危险性、腐蚀危险性、毒害危险性、放射危险性、环境危险性鉴定结果来源于公众信息的数据分类。
The identification results of hazard of explosion、corrosion、oxidation、toxicity、radiation、environment come from the data classification of public information.

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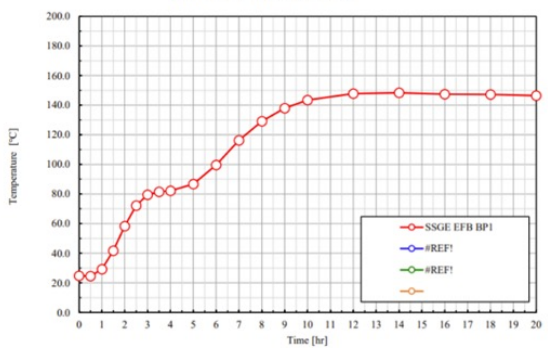
海洋运输危险性鉴定报告
Hazard Identification report in the Sea Transport No. MCHQD2500673-01A

申请单位 /Client	SSGE BIO-ENERGY (MALAYSIA) SDN. BHD.
申请单位地址 /Client Address	8-2, JALAN KUCHAI MAJU 11 KUCHAI ENTREPRENEURS PARK 58200 KUALA LUMPUR W.P. KUALA LUMPUR MALAYSIA
生产单位 /Manufacturer	SSGE BIO-ENERGY (MALAYSIA) SDN. BHD.
样品名称 /Sample Name	EFB Torrefied Pellet
样品别名 /Synonym	/
样品状态、颜色、气味 /Sample Physcal State、Color、Odor	/
委托方联系人 /Contact Person of Client	/ 委托方电话/Tel of Client / 委托方传真/Fax of Client /
备注 /Remark	以上为委托方提供的样品信息，委托方对样品资料的真实性负责。 The information of the chemical /sample submitted by client, the authenticity of which is obligated and guaranteed by the client.
鉴定依据 /Criteria	《国际海运危险货物规则》（2024 版） International Maritime Dangerous Goods Code, 2024 edition
鉴定结论 Identification Conclusion	1. 危险性识别：/ Hazards Identification: / 2. 按照《国际海运危险货物规则》（2024 版）办理的类别：不受本规则限制 Classification based on International Maritime Dangerous Goods Code, 2024 edition：Non-Restricted 3. 包装要求：/ Packaging Requirements: / 检验日期/ Inspection date：2025-02-28 有效期/ Date of expire：2026-02-27

授权签字人：
Authorised Signatory
日期/Date： 2025 年 02 月 28 日

Wire Basket test



Classification based on International Maritime Dangerous Goods Code (IMDG Code, 2024 edition)

Non-Restricted

Hazard of Explosion: Not classified.
Hazard of Oxidation: Not classified.
Hazard of Flammability: Not classified
Hazard of Corrosion: Not classified
Hazard of Toxicity: Not claasified

SSGE BioCoal can be transported as regular cargo without special hazardous material requirements

5. PROGRESS ON MALAYSIA OPERATIONS

Projects in Malaysia

	① Demonstration Plant	② Commercial Plant
Capacity	8,000 MT/p.a.	100,000 MT/p.a.
Operational Date	December 2025	February 2026
Location	Perak	Perak
Power Supply	Diesel (8 months) and turn On-Grid	Diesel/On-Grid
Port Access	Lumut Port / Port Klang	Lumut Port / Port Klang
Feedstock Supply	10 palm oil mills	30+ palm oil mills
Additional Capacity	20,000 MT/p.a. (1H 2026)	350,000 MT/p.a. installed during 2026

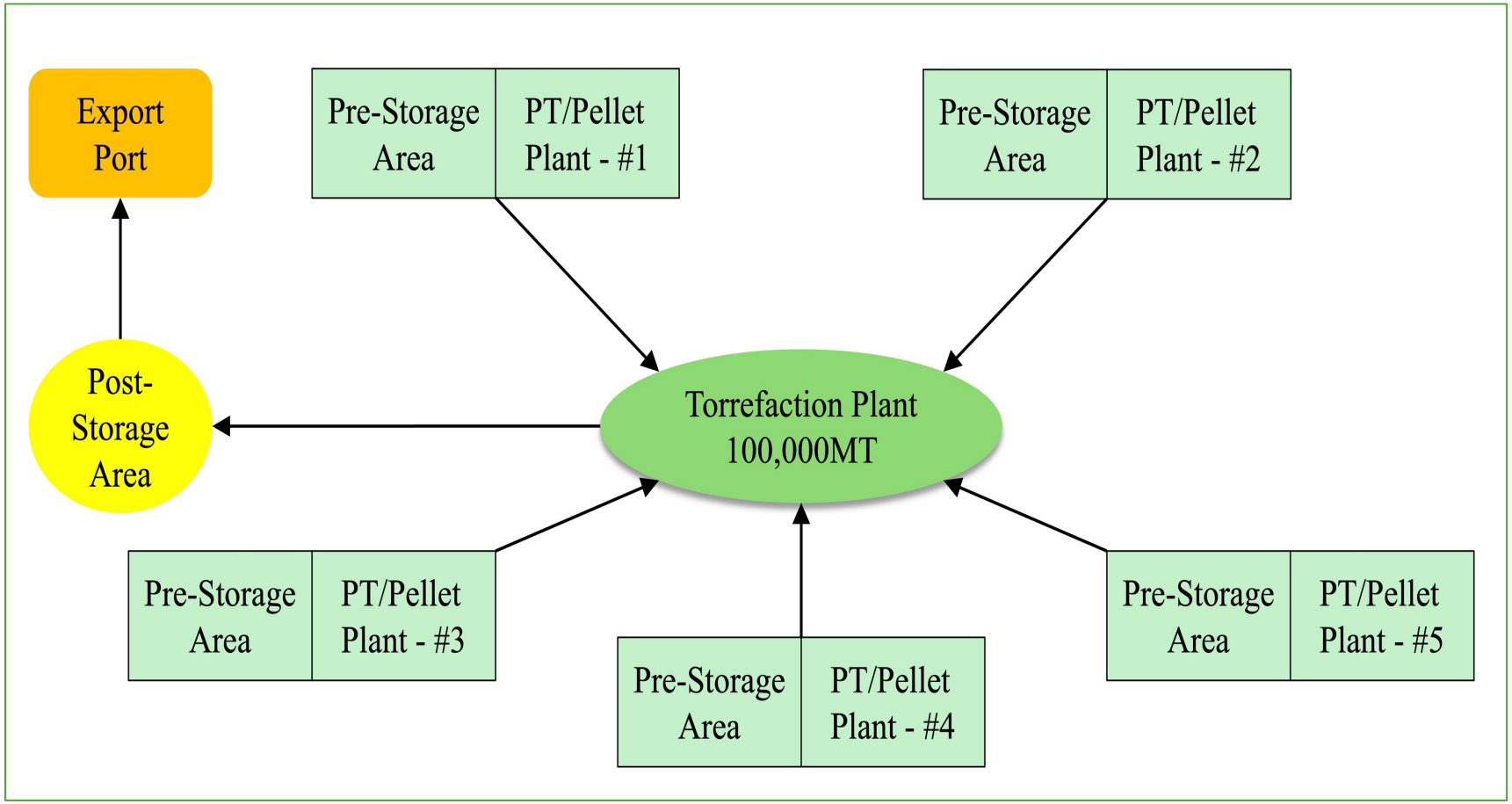
① Demonstration Plant

Pelletizing Unit for Demo Plant

MVR Evaporator for EFB Washing Water Recovery

② Commercial Plant: Hub and Spoke Clusters

- Tailored projects for individual customers:
  - product specifications
  - environmental requirements
  - logistics/shipping
  - surveillance/compliance
- Ownership of clusters
  - individual SPV
  - potential for partnership
- Offtake Arrangements
  - long-term offtakes
  - phasing of new capacity
  - options for supply management



Pre-Treatment and Pellet Plant capacity of 10,000-20,000MT and catchment area for each Torrefaction Plant is less than 50km ensuring access to EFB feedstock and optimized operating and transport costs

② Commercial Plant: 100,000MT Operating Metrics

	Pre-Storage Area	Pre-Treatment / Pellet Plant	Torrefaction Plant	Post-Storage Area
Total Area (m^2)	7,500	12,000	8,000	7,500
Hub/Spoke (Sites)	5-7	5-7	2	2
Capacity (MT)	N/A	10,000-20,000 (per site)	4 x 15,000MT 3 x 15,000MT	N/A
Electricity (MW)	N/A	4	1	N/A
Electricity Supply	N/A	① Diesel ② On Grid ③ Gasification	① Diesel ② On Grid ③ Gasification	N/A
Supply Radius (km)	<50	<10	<50	<10
Staff (per shift)	1-2	4	4	1-2

② Commercial Plant

Pre-Treatment and Pellet Plant

Torrefaction Plant

② Commercial Plant: Logistics & Shipping

Torrefaction Plant

Truck
50-100km

Central Destribution center
in Lumt Port

- ✓ Planned Capacity: Min 20,000MT
  (Secure space for 2 month of inventory)
- ✓ In-house Laboratory
- ✓ Dust Suppression Water Spraying System

Lumut Maritime Terminal (LMT)

- ✓ Maximum Vessel Size: Handy-size
- ✓ Max DWT & Draft : 80,000 DWT , -12m
- ✓ Loading Method : Grab Backet
- ✓ Shipping Conditions: WWD SHINC

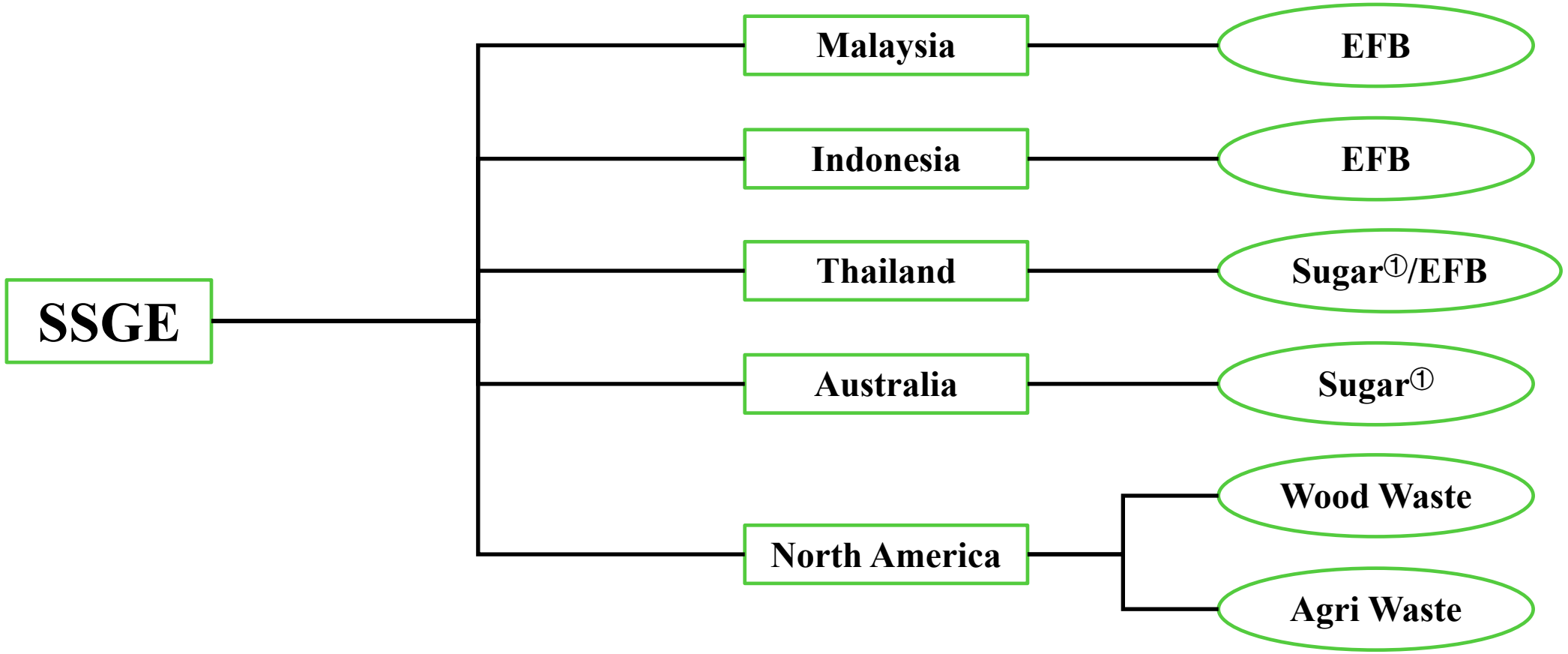
② Commercial Plant: Permits Required for 100,000MT Facility

Approvals of Required for Production	
Step	**Description**
1. Submit CF (Factory Layout Confirmation)	Submit CF layout to local council. Already submitted on Aug 8 and under discussion.
2. Business Registration Certificate	Certified
3. Obtain BOMBA (Fire Plan) Approval	Fire safety layout approval from BOMBA.
4. Obtain TNB (Electricity Supply) Approval	Submit power load and substation plan to TNB.
5. Indah Water (Sewage Plan) Approval	Approval of factory sewer connection plan.
6. DOE (Department of Environment) Approval	Environmental compliance for air/water/discharge.
7. DOSH (Safety & Health Dept.) Approval	Permit for pressure vessels, boilers, cranes etc.
8. Obtain Building Permit (Local Council)	Final construction permit from local council.
9. Start Construction Work	Commence minor civil work, utilities routing and structural renovation.
10. Install Equipment / Interior Work	Fit-out for machinery, office, ducting, electric wiring.
11. Obtain OC (Occupancy Certificate)	Final permission to operate factory legally.
12. Apply for MIDA Tax Incentives	Request tax benefits (Pioneer Status/ITA).
13. Water Supply Connection (e.g. SYABAS)	Formal connection of pipe to municipal system.

Approvals Required for Export	
Step	**Description**
1. Apply for Import/Export License (if needed)	Register for export with MITI/RMCD; get E-permit.
2. Obtain GGL & LC-GHG certificate	Sustainable certificate for Japanese FIT
3. Start Export Shipment	First overseas shipment based on trial production.

6. FUTURE PLANS AND STRATEGY

Long-Term Production Plan: Toward 2035



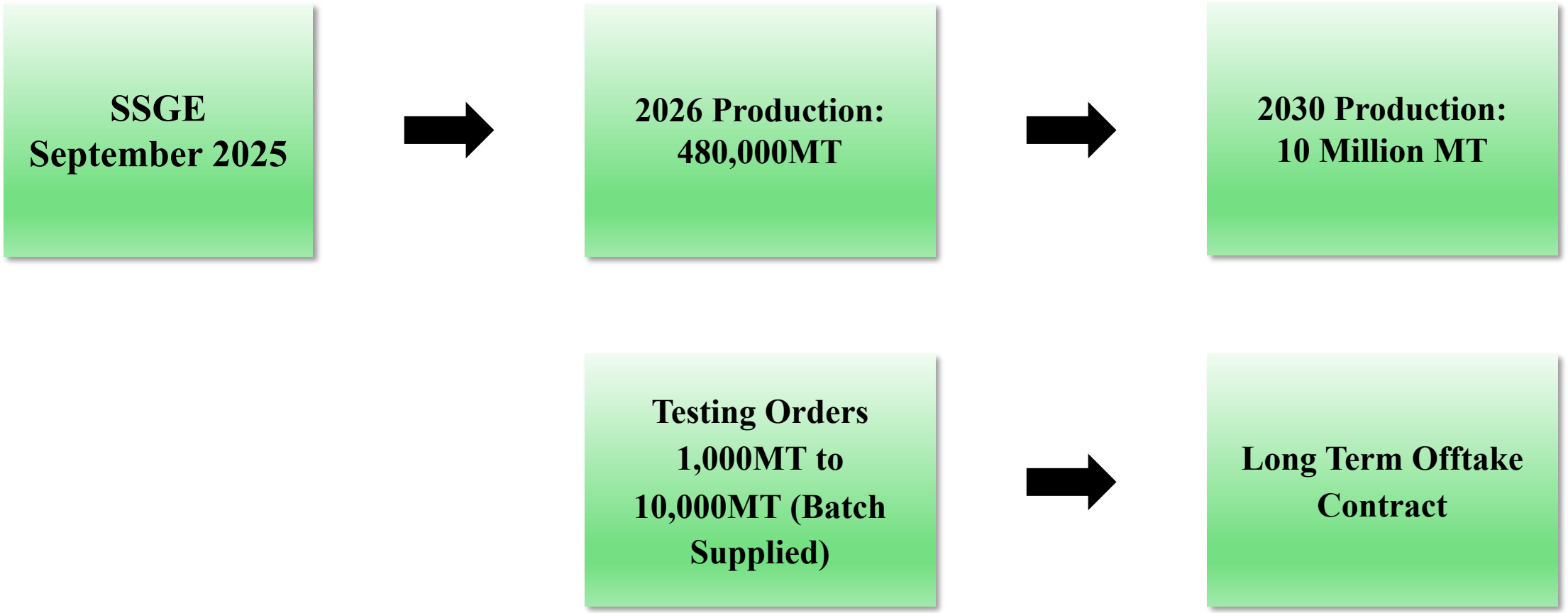
SSGE's Plans to develop a global production base to supply Black Pellets to customers in SAF, Green Steel and Coal-Fired Power generation in Asia, EU, UK and North America with a diversified feedstock of agricultural and wood waste

① *Represents waste from processing sugar cane (bagasse and tops trash)*

Long-Term Production Plan: Feedstock Availability

Global Waste Supply (Million MT)					
Waste Type	2020	2021	2022	2023	2024
Palm Oil Waste	161	169	167	174	178
Sugar Tops/Trash	262	265	269	272	275
Soybean Stem	494	543	526	553	600
Wood Waste	500	510	520	530	540
Cotton Stem	120	125	130	153	159
Peanut Shell/Stem	110	112	116	127	130
Total	1,647	1,724	1,728	1,809	1,882

Long-Term Production Plan: Next Steps



SSGE will expand production capacity of Black Pellets from 2026 through 2030 based on contracted long-term offtake contracts with global and Japanese customers – fixed price, fixed volume and tailored product specifications and delivery dates

Future Plans Strategy

① Vision
- BioCoal is a key decarbonization solution for the World (including Japan)
- Potential demand : 100 MM MT by 2035

② Industry Collaboration
- Partner with leading feedstock producers and Black Pellet customers
- Scale operations in both Asia and North America

World's leading bio-coal supplier
Supplying one-third of Japan's demand

③ Reliable Supplier
- Black Pellets are hydrophobic, safe, cheaper and can be produced in modular format
- Diversified feedstock can be agricultural or wood waste

④ Standardization of Quality
- Collaborate with all customers, including Idemitsu and JBPF members
- Common equipment standards, unified quality specifications and meeting environmental requirements

We seek long-term cooperation with JBPF members

Questions

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Thank You