SIAM YAMATO STEEL

Decarbonization Efforts and Challenges at Siam Yamato Steel – Thailand

6 February 2024

Overview

Siam Yamato Steel

- Established in 1992
- Registered Capital 3,000 MB
- Product: Hot-rolled Structural Steel
- Production Capacity: 1.1 million tons per year

Yamato Kogyo Co.,Ltd.

MITSUI&CO.

SIAM YAMATO STEEL

SCG

Sumitomo

SYS 1
Maptaphut Industrial Estate,
Rayong Province

SYS 2
WHA Eastern Industrial Estate
Rayong Province

BAN BUENG DISTRIBUTION CENTER,
Chonburi Province

SYS Products & Applications

H-BEAM

Use as construction work pillar, beam and truss structure

H100x50 – H900x300

CHANNEL

Use as a part of stair and purlin

C75x40 - C380x100

CUT BEAM

Use as truss

CT50x50-CT450X300

I-BEAM

Use as groove crane

I150x75 - I600x190

ANGLE

Use as the construction of transmission line towers and telecom towers

L75x75 – L250x250

SHEET PILE

Use as the construction of retaining walls for soil erosion and run off prevention

TYPE 2,TYPE 3, TYPE 3A,TYPE 4

New Growth Engine – Green Steel

Growth with "GREEN STEEL"

Green Certifications

EPD

World steel climate action

CFP

CE-CFP

Low-Carbon Steel

(from emissions reduction)

Near Zero Steel

(from emissions reduction +

Decarbonization Targets

40% GHG Reduction target in 2030

Carbon Neutrality by 2050

New Investment in Decarbonization Pathway

	2023	2024-2026	2027-2030
Scope1 40%	Low Carbon Fuel (Oxy-Burner)	Bio Coal	Regenerative Burner
Scope2 60%	Solar Floating	Furnace Improvement	Virtual Power Plant

RE50

Engage Key Regulators on Green Steel

1. Engagement with Thai regulators

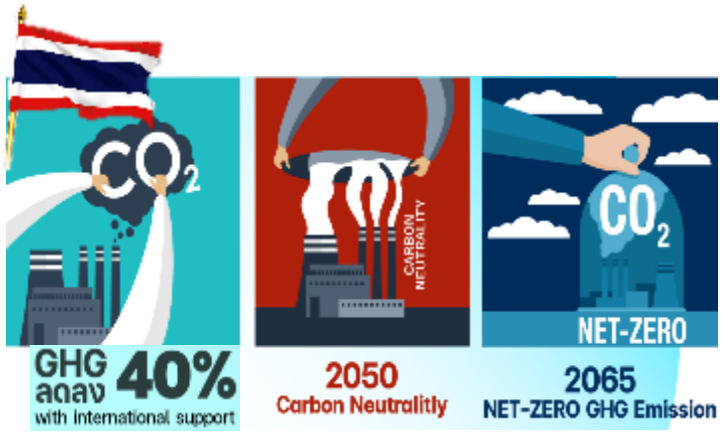
2. Alliance key consortiums/associations to build partnerships and leverage bargaining position

3. Proactively Differentiate with Green Standards

EPD (2023)

Carbon Footprint Reduction (Gold Label) (2025)

Drivers towards Steel Industry Decarbonization



Thai Government National Determined Contribution (NDC) to UNFCCC

Green Investment for Sustainability & Cost Reduction

Global Investment Fund

Green Customer Requirement

Public Sector Green Building

Electricity Generating Authority of Thailand(EGAT) Headquarter

LEED Platinum

TREES Platinum

Learning Exchange Building
King Mongkut's University of Technology Thonburi

TREES Platinum

Chaeng Watthana Government Complex Phase2

Summited for TREES

Green Building @ Office of Natural Resources and Environmental policy and Planning

Summited for TREES

Multi-purpose building @ Excise Department

Summited for TREES

Private Sector Green Building

Platinum

Park Ventures Ecoplex

IKEA Bang Yai

Gold

The Forest Pavilion

Samyan Mitrtown

Silver

Queen Sirikit National Convention Center (QSNCC)

Pepsico Beverage Production Phase 2

Decarbonization through Renewable Energy

Floating solar 12MWp

Target

Project Finish:Q2/2024

Benefit

-Green energy: 17 GWH/Y
-Reduce CO2: 8,000 TCo_2/Y
-Cost Saving: 5%
of Electricity Tariffs

Solar Farm 9.5 MWp (+Battery)

Project Study: Q2/2024

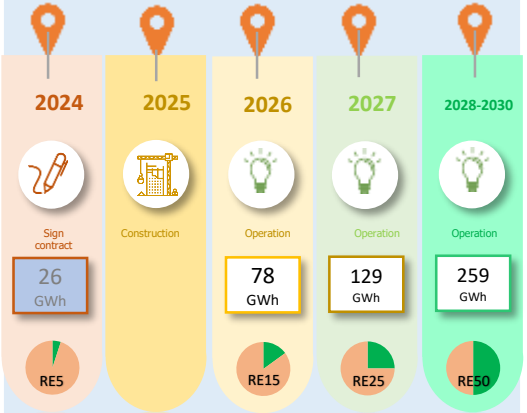
-Green energy: 14 GWH/Y
-Reduce CO2: 3,000 TCo_2/Y (50%)
-Cost Saving: 6%
of Electricity Tariffs
PPT-GC area nearly SYS's local substation 2

Solar Floating 6.5MWp (+Battery)

Project Study : Q3/2024

-Green energy: 9 GWH/Y
-Reduce CO2: 3,900 TCo_2/Y
-Cost Saving: 5%
of Electricity Tariffs
BST area nearly SYS' main substation

RE 50



Project Study: Q4/2024

-Green energy: 259 GWH/Y
-Reduce CO2: 120,000 TCo_2/Y
-Cost Saving: X%
of Electricity Tariffs

CSR

Hospital (100Kwp)

Installation: Q3/2024

-Green energy: 0.3 GWH/Y
-Carbon credit: 60 TCo_2/Y
-CSR

CP

Bio-Coke Substitution Project

Composition	Carbon Black (Granule)	Carbon Black (Powder)	Biochar	Torrefied Biomass	Biocoal	Coke Breeze
Fix Carbon (%)	> 75%	> 75%	80-82%	>60%	>70%	> 80%
Moisture (%)	< 5%	< 5%	<5%	<5%	<2%	< 2%
Sulphur (%)	< 5%	< 5%	<1%	<1%	<1%	< 1%
Size (mm)	10 mm	< 1 mm	<5 mm	1-5 mm	1-5 mm	1 – 3 mm
Density (g/cc)	0.55	0.55	0.20	0.20	0.20	0.85
Carbon emission (kgCO2e/kg)	2.42	2.42	-	-	-	3.1
	Waste tire		Wood chip			Anthracite

Key Challenges still remain

1. Cost of Green Electricity from implementation of **Utility Green Tariffs**
2. Effects from **Climate Change Act**, which should be coming out in mid-2024
3. **Third Party Access** for using national electricity grid for direct power purchase from private renewable energy power plants still uncertain
4. Access to incentives and source of funds from **Thailand Taxonomy**
5. **Support from Government** will be an important role to achieve Thailand GHG reduction target.

SIAM YAMATO STEEL

Q & A

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