



# TPI Polene Public Company Limited SET Opportunity Day 1Q 2024



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# Topics

**Background**  
**Review on 1Q 2024**  
**ESG and Sustainability**

# Key Assets and Features

## Construction Materials

- **Cement** - 4 lines totaling 13.5m tons capacity
  - Largest single location Cement plant with **unmatchable cost advantage** due to scale
  - First **pioneer on Green Cement** path with using MSW as Fuel
- **Mortar** - 4 plants with 3m tons capacity
  - **Largest mortar producer** in Thailand
- **Ready Mix Concrete & Light Weight Concrete**
  - Leading with 3.9 million cubic meters RMC and 300K cubic meters LWC capacity
- **Concrete Roof Tiles**- 4m sq. meters or 45m pieces
  - customized with roofing system, **heat-resistant coating** etc.
- **Fiber Cement**- 380,000 tons capacity
  - Environmentally friendly and asbestos-free and **confirming international standards**, comprising of board sheets, **substitute for wood product category**, digital board and wall & floor decoration
- **Adhesives-Paints**

## Specialty Polymers/Chemical Segment

- **Specialty Polymers** – 158,000 tons capacity
  - HVA, customized with in-house proven R&D
- **EVA Emulsion & Powder** – 25,000 tons capacity
  - HVA, customized with in-house proven R&D
- **Nitrate**- 92,700 tons Ammonium Nitrate & 21,750 tons Nitric Acid for quarrying and cleaning solution for hi-tech gadgets, respectively. Subsidiary, Thai Nitrate, is the only nitrate producer in Thailand
- **Solar Sheets** - 10 lines with 20,100 tons capacity
  - Marketed under leading trade Names Polene Solar® and Vistasolar®
- **Agriculture**
  - **Bio Organic** fertilizer and compounds for Plants
  - Probiotic & Product for Livestock Farming and Aquaculture
- **Wellness & Healthcare Products**
  - Bio Knox – **natural calcium & Vitamin C**
  - Bio San –**suppresses** pathogenic bacteria, viruses & Bad smell in the toilets
  - Printemp Marie Rose Mouthwash **kills** Viruses and Bacteria
  - EESY Clean
- **Other Promising ventures**
  - All Solid and Liquid waste disposal
  - Drinking water, Packaging & Insurance

## Energy & Utilities

- **Total current capacity 440 MW** as below comprising >65% Green power and target to **100% green by end 2025**
- **Alternative Fuels MSW Power Plant – 250 MW**
  - Largest in Thailand
  - 11 pre-sorting facilities in key provinces – 2,400 tpd capacity
- **Waste Heat Recovery Power Plant - 40 MW**
- **Coal/MSW Power Plant – 150 MW**
  - Target to 100% MSW by 2024/25
- **MSW power plant projects** – ~30 MW, Songkhla (7.92 MW) Nakhon Ratchasima (9.9 MW) & Mukdahan (9.9MW): COD 2026
- **Solar Farm – 61 MW** - COD 2024
- **Wind Farm – 5 MW** – COD 2024
- **Owns over 15,000 rai of land in strategic locations** across the country that can accommodate **up to 4,000 MW solar farms**
- **Petrol and Gas stations** - 8 petrol, 1 gas and 3 combo-petrol and gas station

# Comprehensive and diversified product suite



**TPIPL**

**> 5,000 SKUs**

**WE BUILD THE SUSTAINABILITY FUTURE**

TPI Polene's policy is to manufacture high-quality products and cement that meet our customers' expectations and continuously improve our quality-control process.

**Cement Products**

**TPI Plastic Products**

**TPI Polene Power**

**Concrete Roof Tile and Fiber Cement**

**TPI Super Special Armour Nano Paint**

**TPI Healthcare Products**

**TPI Agricultural Products**

**TPI Livestock Products**

**TPI Aquaculture Products**

# Focus 2024: Green Cement & Building Products\*

TGO Certified

**TIPL** ได้รับการรับรองเครื่องหมาย  
**คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์**  
 (Carbon Footprint of Product - CFP) ภายใต้งาน Business to Customer (B2C)  
 ครอบคลุมการบริการตั้งแต่การให้คำปรึกษาจนถึง (ดูแล) การขนส่ง  
 ทั่วประเทศ 20 ผลิตภัณฑ์

5		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Super Portland Cement (Bag) 40 kg	40.4 kgCO <sub>2</sub> e	
6		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Portland Cement Type 3 (Bag) 50 kg	50.1 kgCO <sub>2</sub> e	
7		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Mixed Cement 50 kg (Bag) 50 kg	34.6 kgCO <sub>2</sub> e	
8		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Mixed Cement 25 kg (Bag) 25 kg	34.6 kgCO <sub>2</sub> e	

1		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ Hydraulic Cement Type 60 (TIPL Bag) 25kg (Bag) 50 kg	47.2 kgCO <sub>2</sub> e	
2		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ Hydraulic Cement Type 60 (TIPL Bag) 25kg (Bag) 1 ton	889 kgCO <sub>2</sub> e	
3		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Portland Cement Type 1 (Bag) 50 kg	50.7 kgCO <sub>2</sub> e	
4		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Portland Cement 1 ton	50.7 kgCO <sub>2</sub> e	

9		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Mixed Cement (Bag) 50 kg	37.9 kgCO <sub>2</sub> e	
10		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Super Mixed Cement (Bag) 40 kg	30.1 kgCO <sub>2</sub> e	
11		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ Adhesive Mortar for Flooring General Use 20kg (Bag) 20 kg	7.03 kgCO <sub>2</sub> e	
12		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ Adhesive Mortar for Flooring General Use 50kg (Bag) 50 kg	7.03 kgCO <sub>2</sub> e	

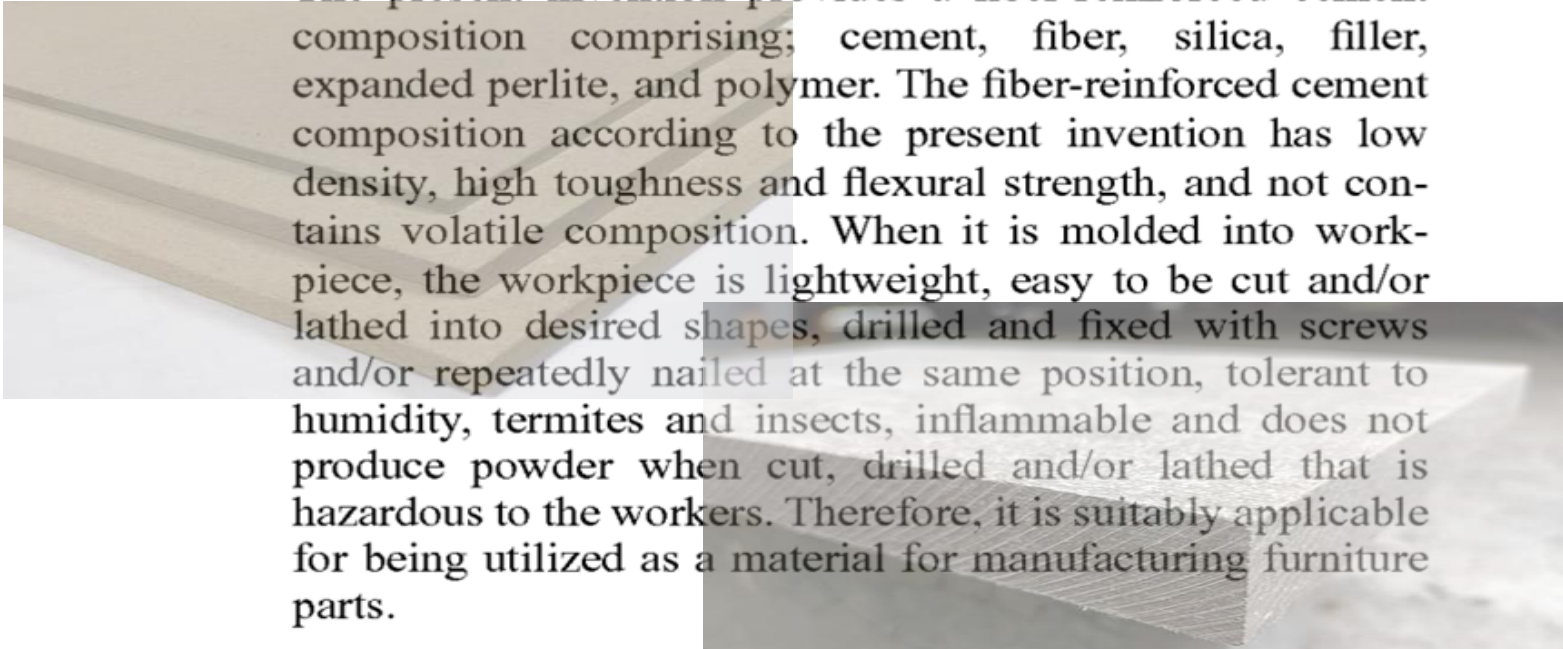
13		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Floor Board Water 50kg (Bag) 50kg	14.5 kgCO <sub>2</sub> e	
14		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Floor Board Water 50kg (Bag) 50kg	11.8 kgCO <sub>2</sub> e	
15		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL General Flooring Water 50kg (Bag) 50kg	13.1 kgCO <sub>2</sub> e	
16		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL General Flooring Water 50kg (Bag) 50kg	13.1 kgCO <sub>2</sub> e	

17		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Light Weight Block Mortar 50kg (Bag) 50kg	10.9 kgCO <sub>2</sub> e	
18		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Light Weight Block Mortar 50kg (Bag) 50kg	16.1 kgCO <sub>2</sub> e	
19		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Light Weight Block Mortar 50kg (Bag) 50kg	13.9 kgCO <sub>2</sub> e	
20		คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ TIPL Light Weight Block Mortar 50kg (Bag) 50kg	13.9 kgCO <sub>2</sub> e	

\* Official launch June 2023

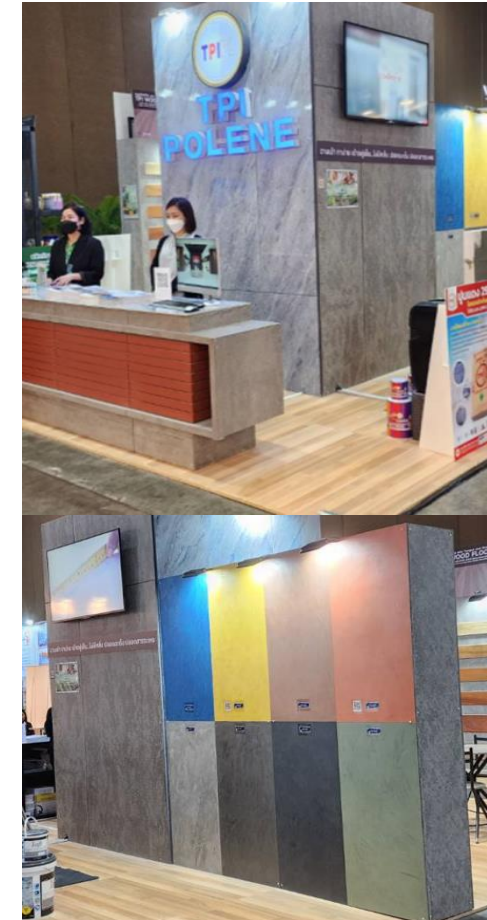
# Focus 2024: Reinforced Fibre Cement – Newly Patented Product

**Patent US 11 739 026 B2 Lightweight Fiber-Reinforced Cement Material**  
29-Aug-23



The present invention provides a fiber-reinforced cement composition comprising; cement, fiber, silica, filler, expanded perlite, and polymer. The fiber-reinforced cement composition according to the present invention has low density, high toughness and flexural strength, and not contains volatile composition. When it is molded into work-piece, the workpiece is lightweight, easy to be cut and/or lathed into desired shapes, drilled and fixed with screws and/or repeatedly nailed at the same position, tolerant to humidity, termites and insects, inflammable and does not produce powder when cut, drilled and/or lathed that is hazardous to the workers. Therefore, it is suitably applicable for being utilized as a material for manufacturing furniture parts.

The innovative products, could help TPIPL penetrate a wider market. According to IndustryARC's latest market research the fiber cement market is forecast to grow 6.2% pa reaching USD16.81 billion by 2030. [Link: https://lnkd.in/g/gh9vdUBq](https://lnkd.in/g/gh9vdUBq)





## VENDOR VIEW POINT



www.agribusinessreview.com

## BIO-ORGANICS & BIO-SYNTHETICS: A STEP CLOSER TO REGENERATIVE AGRICULTURE



Pakorn Leopaicut

By **Pakorn Leopaicut**, Executive Vice President – Sales & Marketing of TPI Polene Plc and President of TPI Polene Power Plc.

To reach our global goal of Food Safety and Food Security

The persistent problem of ever-growing household garbage (municipal solid waste MSW) garbage in Thailand is one that has yet to find a comprehensive solution or strategy. No audited data is available but some university studies report that household garbage is growing double digit per year and less than 50% is properly handled. Extracting calorific value from MSW is a part of the solution and our subsidiary TPI Polene Power operates the largest waste-to-energy (WTE) power plant fuelled with MSW. Handling the by-product of the extraction process has taken us to the realm of bio-organic compounds that become a springboard to organic and regenerative agriculture. We now have over 100 SKUs of products in this category. We have both the capability to customized size and volume according to customer's needs and the capacity to scale up operations.

Our organic fertilizers such as the "bat cave fertilizer" pellets, "growth organic liquid fertilizer" and "humus fertilizers" prove to be very effective in promoting plant growth, increasing productivity as well as flavor and taste of edible vegetables, fruits, rice and maize.

Wood vinegar is another derivative of this fermented by-product that can control pests that infest plants including pomology fruits and flowering plants. The advantage of Wood Vinegar is that it is purely organic so does not pose health hazard while chemical insecticides have high carcinogen factor leading to high incidence in respiratory problems causing death to farmers. Once again, this will be very helpful for our farmers who tend to have limited knowledge on how to get rid of the insects without using harmful insecticides.

Our Hoof Guard is an acetic acid, the byproduct from our factories that can eliminate and control harmful bacteria and viruses infesting hoofed animals such as cattles, goats, horses, sheep, swine and many more.

### TPI Bio-Organics Agricultural Products

For plants and animals

**Stop Global Warming, Improve Quality of Food, Support Farmers with TPI Bio-Organics**

TPI Polene Bio Pharmaceutical is among the few companies in the world capable of halting Foot & Mouth Disease (FMD) & African Swine Fever (ASF) in pigs, Early Mortality Syndrome (EMS) in shrimps, and Avian Influenza (AI) in poultry: ALL antibiotic free

TPI animal probiotics - Disease-free, Chemical-free, Antibiotic-free - Promoting quality of life in animals

**TPI Wood Vinegar**

The only organic product in the world that can prevent and eradicate fungal, aphid, mite, and insects, without need for insecticides, and can treat plant from pests

- Keeps plants robust, the ability to absorb nutrients and water sprays is greatly increased
- Highly concentrated formula with added leaf adhesion agents for higher efficiency
- Suitable for use in residential buildings
- Does not contain toxic substances

**TPI Purple Fertilizer**

Contains phytohormones - auxin, gibberellin and cytokinin

- Accelerates Fruit Growth
- Boosts foliage, induce flowering and fruiting rising plant yield
- Keeps growth hormones
- Aids in nutrient assimilation
- Boosts yield and quality
- Extracted from natural, organic substances

**TPI Green Fertilizer**

Contains plant growth hormone auxin, gibberellin & cytokinin

- Formulas for soil enhancement
- Increasing plant nutrients extracted from natural, organic substances
- Enhances soil, which get bacteria helps remove heavy and toxic salt with organic matter
- Increases plant nutrient absorption
- Facilitates the growth of beneficial soil microorganisms
- Extracted from natural, organic substances

**Tham Khang khao bio-organic fertilizer**

Enhance the quality of nutrients in the soil

- Provides comprehensive plant nutrients - essential, secondary and trace elements
- Helps soil conditions to be loamy and moist, only water irrigation
- Promotes growth of roots
- Improves sturdy stems and branches especially among fruit trees

**TPI Hoof Guard**

- Eliminates external parasites from livestock farms
- Prevents harmful germs such as ticks and mites
- Prevents control specifically for animal husbandry

**TPI Bio Pets**

- Produced from natural organic ingredients
- Safe for both humans and animal
- Helps control undesirable odors in livestock

**TPI Yellow Powder**

- Dry powder form for easy application
- Sprinkle on manure to prevent infection
- Acts as a disinfectant against insects laying eggs in the manure
- Prevents harmful chemicals
- Reduces inflammation of tissues, preventing quick drying and healing

**TPI Synbiotics and Probiotics**

Immunity boosters for on animals, growth accelerator, promoting body waste elimination

- Accelerates animal growth, strength and vigor via high feed conversion ratio
- Improved nutrient absorption
- Boosts immune defenses, guarding against various infections
- Indigenous microorganisms work more effectively than imported ones
- Reducing odor and smells in the farm
- Enhances appetite, less digestive discomfort
- Decreases reliance on antibiotics and growth-promoting formulations

**TPI Bio San**

Biological microbe for odor control in livestock farm

- Eliminates odors, safe, and antibiotic-free
- A natural, environmentally friendly product
- Free from harmful chemicals
- Safe for humans and animals

**TPI Microme Knox**

Protects and eliminates viruses, bacteria and spores that can cause epidemic

Accelerates the healing of wounds in animals

One of the few products in the world that can suppress avian influenza, ASF, and various bacterial infection

- Effective against PRRS - porcine reproductive & respiratory syndrome
- Effective against ASF (African Swine Fever) in pigs and FMD (Foot & Mouth Disease) in cloven-footed animals
- Guards against and eradicates bacteria that cause diseases in poultry such as Avian Influenza, Fowl Cholera, Infectious Bronchitis and Pullorum

**Bio DOLOMITE**

A supplementary mineral for terrestrial animals

**Natu Piglet**

Powder to absorb moisture in piglet

**Natu Pab**

Mixed in poultry feeds for additional source of minerals

**Natu Chick**

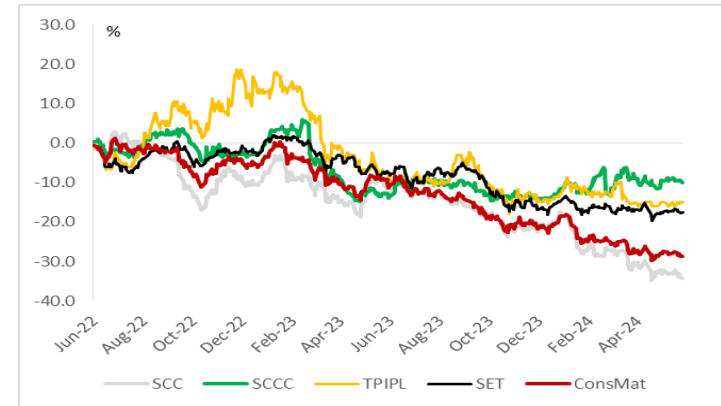
Neutralizes odors from animal waste and small pollutants in the farm



# EBITDA margin comparable to peers; valuation cheaper

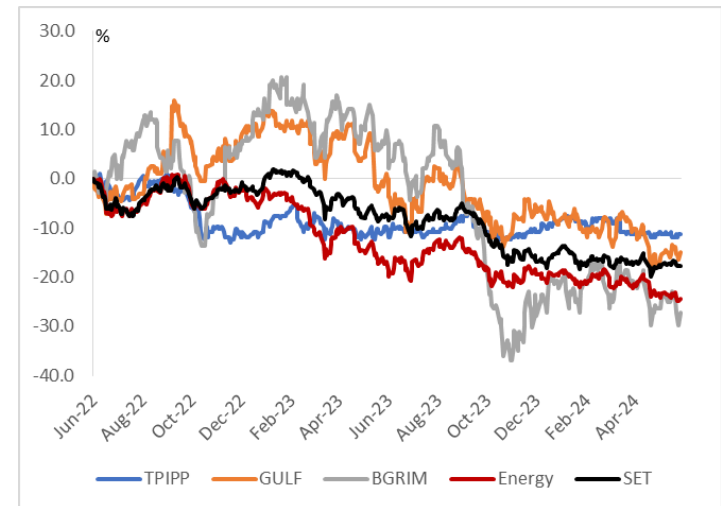
## Local peer comparison: EBITDA margin

	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24
<b>ConsMat</b>									
Peer 1	12.0%	9.8%	7.7%	4.0%	9.5%	9.9%	8.0%	9.0%	17.0%
Peer 2	22.0%	25.0%	13.0%	7.0%	15.2%	15.4%	18.0%	24.5%	24.0%
<b>TPI Polene</b>	<b>13.0%</b>	<b>19.3%</b>	<b>10.3%</b>	<b>8.7%</b>	<b>5.2%</b>	<b>11.7%</b>	<b>17.4%</b>	<b>9.1%</b>	<b>22.7%</b>
<b>Petrochemical</b>									
Peer 1 - operating only	6.7%	2.0%	3.4%	-2.9%	5.2%	12.2%	5.0%	1.0%	3.0%
Peer 2 - polymers & chemicals	5.0%	9.0%	10.0%	0.0%	8.0%	3.0%	10.0%	5.0%	8.0%
Peer 3 ** - value added PE	19.6%	17.3%	15.4%	20.0%	16.9%	16.0%	18.2%	18.0%	14.6%
<b>TPI Polene</b>	<b>36.0%</b>	<b>41.4%</b>	<b>46.0%</b>	<b>28.0%</b>	<b>26.0%</b>	<b>28.8%</b>	<b>28.3%</b>	<b>14.5%</b>	<b>16.5%</b>



## Valuation – TPIPL/TPIPP market value not reflecting the better than peers' EBITDA margin

Bloomberg code	Mkt cap (USDm)	Price (THB)	Avg T/O Mn Shrs	TP Upside (THB)		EPS grw. (%)		P/E (x)		P/B (x)		ROE (%)		Div yld (%)	
				(THB)	(%)	24E	25E	24E	25E	24E	25E	24E	25E	24E	25E
SCC TB	9,041	245.00	1.67	285.00	16.3	38.1	54.3	16.0	10.4	0.8	0.7	5.0	7.4	3.3	4.5
SCCC TB	1,129	139.00	0.05	165.00	18.7	25.2	5.7	12.6	11.9	1.2	1.2	9.8	10.0	6.5	7.2
PTTGC TB	4,609	37.50	13.96	33.00	-12.0	-392.3	41.0	28.3	20.1	0.6	0.6	2.0	2.8	1.8	1.5
EPG TB*	508	6.65	2.46	9.80	47.4	16.2	6.7	13.0	12.2	1.5	1.4	11.8	11.8	4.8	5.1
<b>TPIPL TB</b>	<b>707</b>	<b>1.37</b>	<b>4.65</b>	<b>1.70</b>	<b>24.1</b>	<b>2.1</b>	<b>-1.4</b>	<b>8.1</b>	<b>8.2</b>	<b>0.5</b>	<b>0.5</b>	<b>5.8</b>	<b>5.6</b>	<b>7.1</b>	<b>7.0</b>
GULF TB	13,033	40.75	18.59	57.00	39.9	12.8	8.9	27.1	24.9	3.9	3.7	15.6	15.8	2.3	2.5
BGRIM TB	1,748	24.60	11.91	28.00	13.8	9.4	20.7	28.5	23.6	1.6	1.6	7.3	7.7	2.2	2.4
<b>TPIPP TB</b>	<b>756</b>	<b>3.30</b>	<b>2.60</b>	<b>4.0</b>	<b>21.2</b>	<b>0.3</b>	<b>-26.7</b>	<b>7.7</b>	<b>10.4</b>	<b>0.8</b>	<b>0.8</b>	<b>10.4</b>	<b>7.4</b>	<b>6.5</b>	<b>4.8</b>



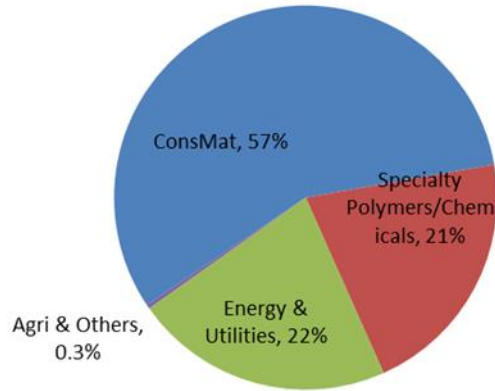
Closing price: 27 May 2024

\*\* Value Added PE \*FY ends March. Closing price: 24 May 2024

Source: Bloomberg, Brokers, SET MD&A filing



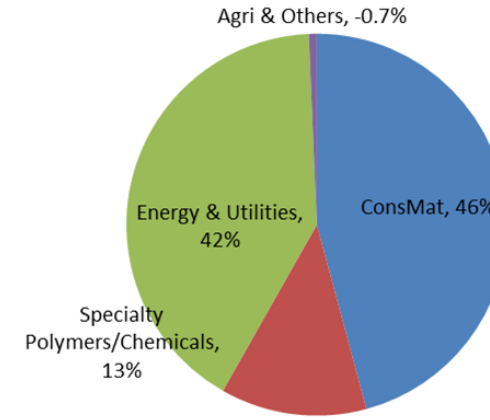
# Review on 1Q 2024



Sales = THB9,051 million

ConsMat - 21% lower  
 Specialty Polymers/Chemicals – 28% lower  
 Energy Utilities – 7% lower

Overall = 20% lower



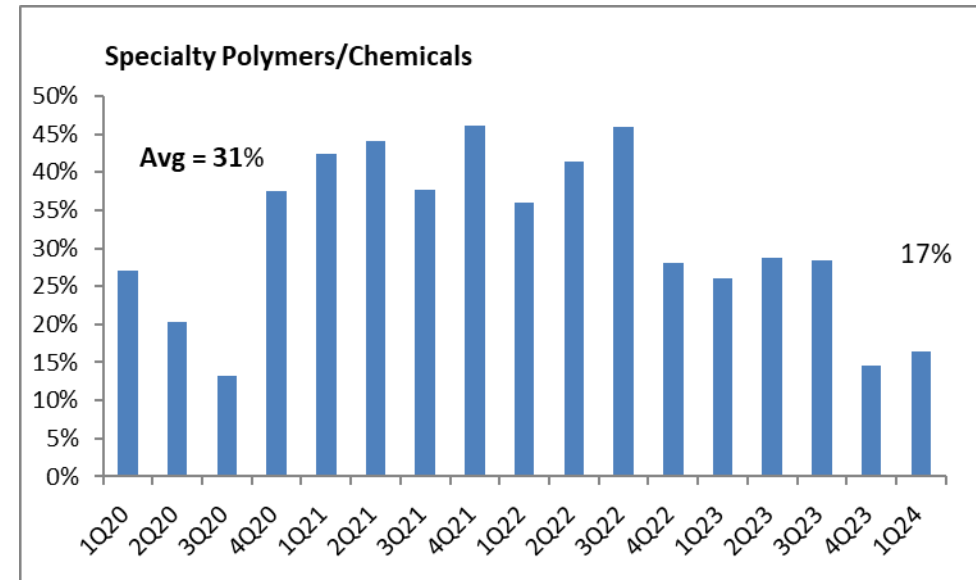
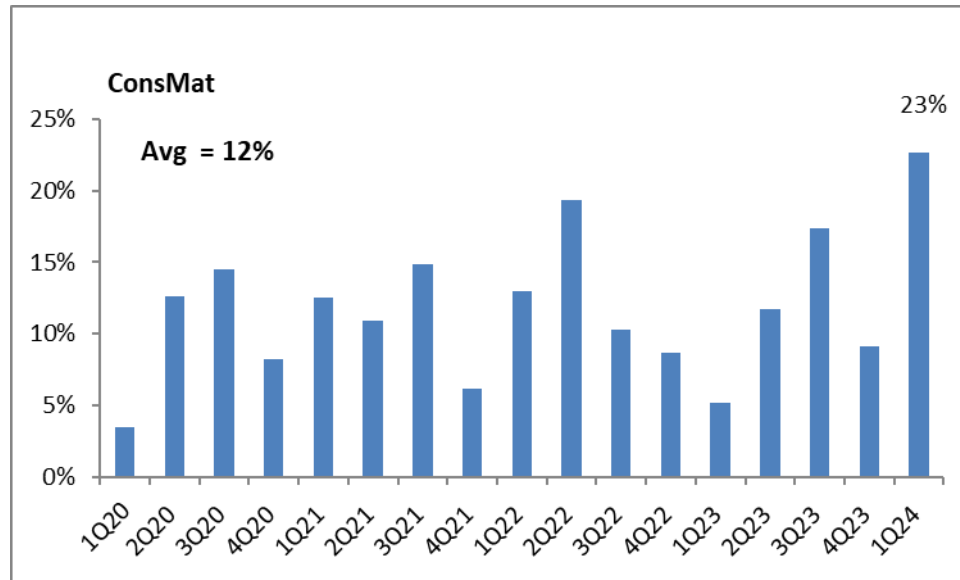
EBITDA = THB2,504 million

ConsMat – 248% higher  
 Specialty Polymers/Chemicals – 54% lower  
 Energy Utilities – 22% lower

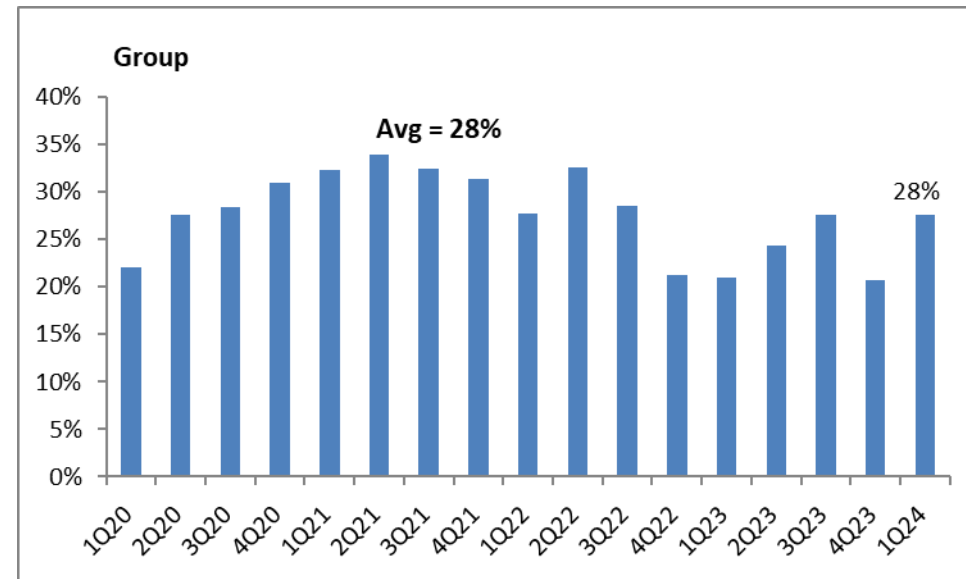
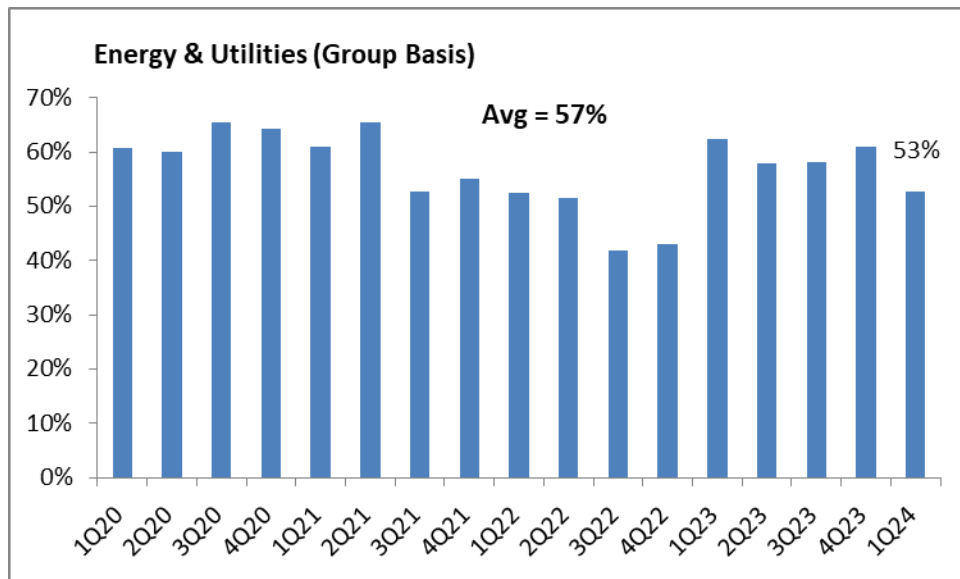
Overall = 6% higher

**Specialty Polymer was the biggest drag in EBITDA**  
**Power was relatively resilient despite lower Ft**  
**Operating EBITDA is slightly higher YoY partly due to FX gain**

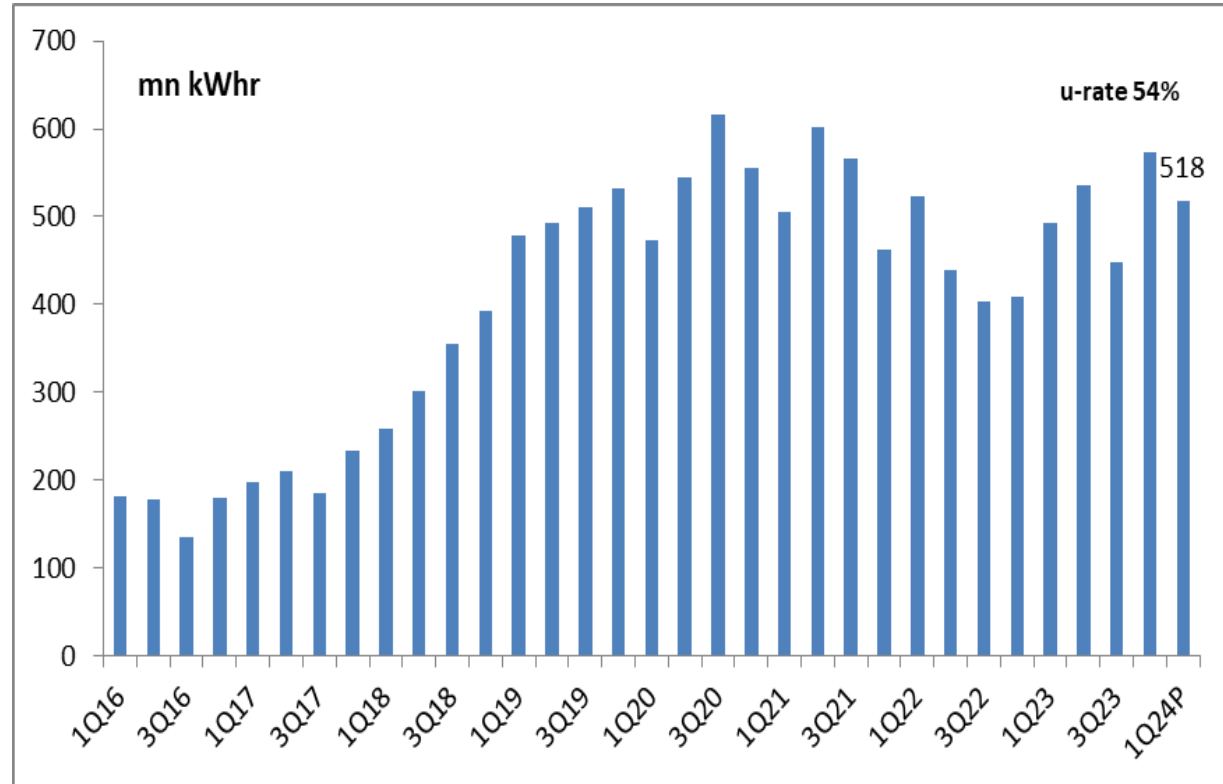
# Margin trends



# Margin trends

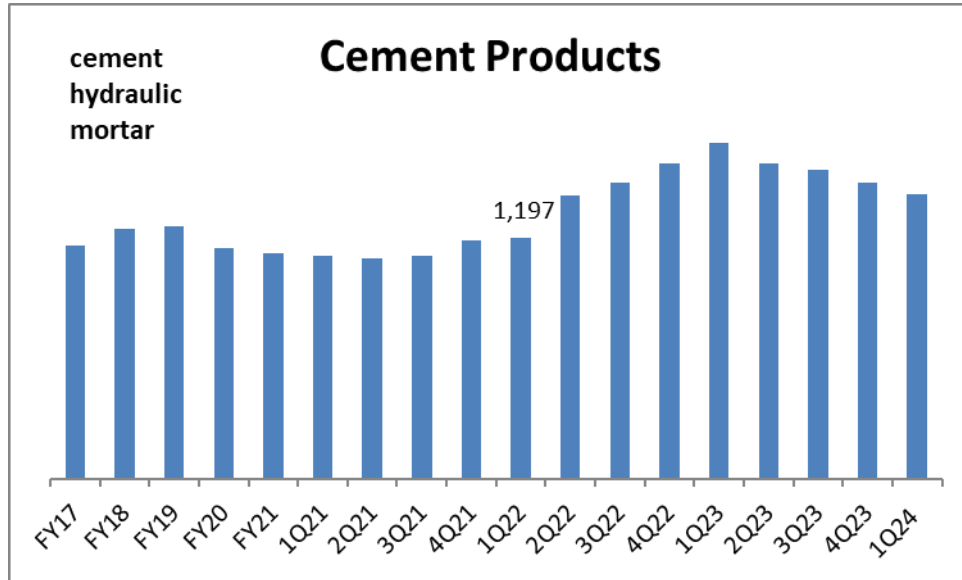


# Power EBITDA resilient

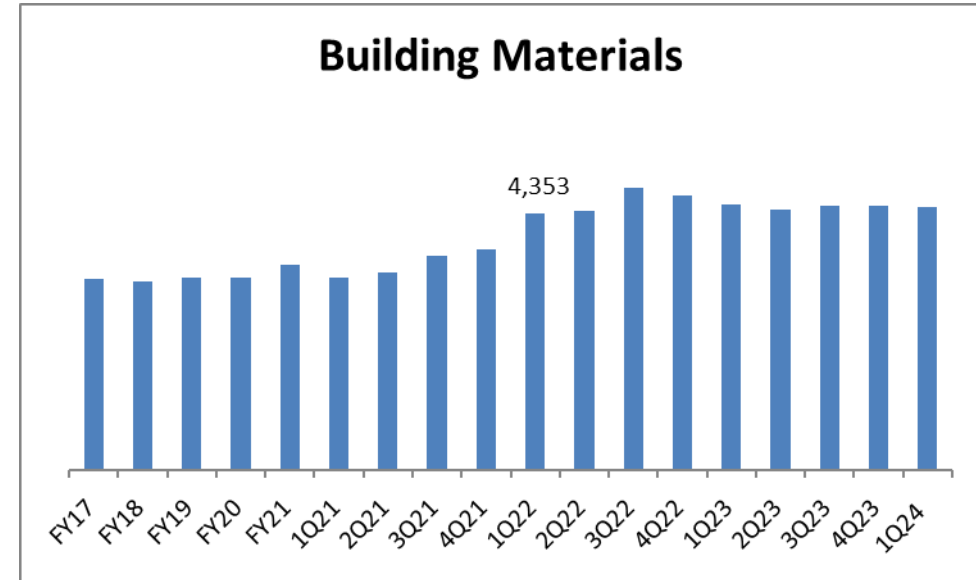


- Throughput higher YoY mainly because of TG7
- Lower QoQ because of technical issue at TG7 and lower throughput at WH as cement plants were on maintenance shutdown
- EBITDA higher QoQ but lower YoY due to lower selling price, Ft

# Trends – price on per unit basis

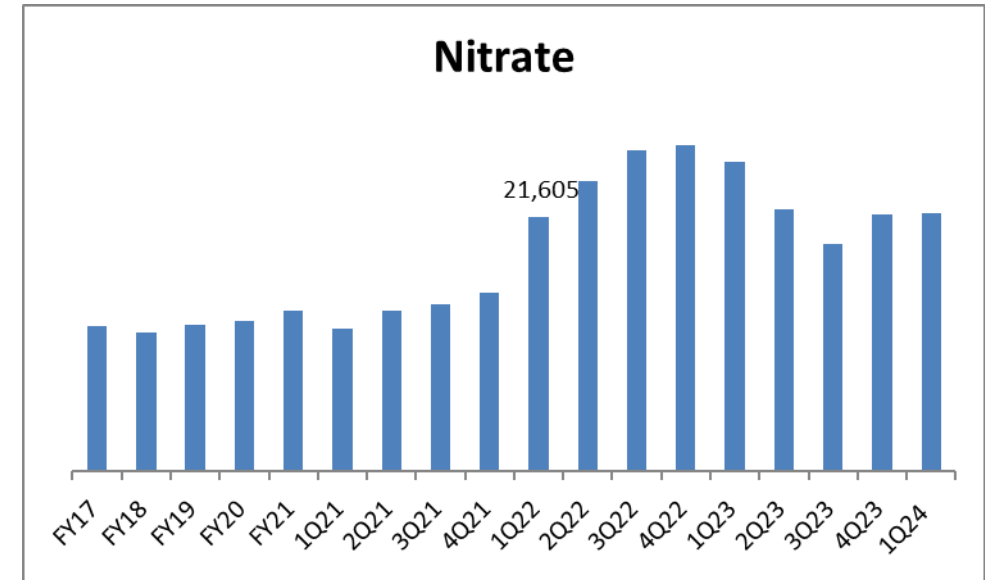
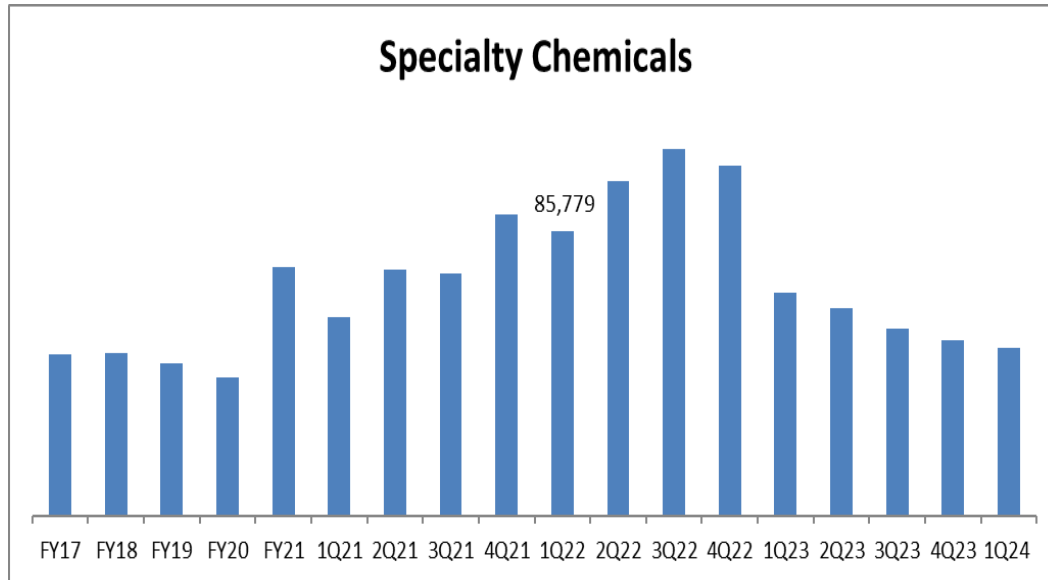


Lower prices YoY, QoQ in cement & hydraulic  
 Higher prices in mortar  
 Volume lower due to holidays and slow infra  
 roll-out, slow private sector esp residential



Largely stable  
 Volume softer due to holidays

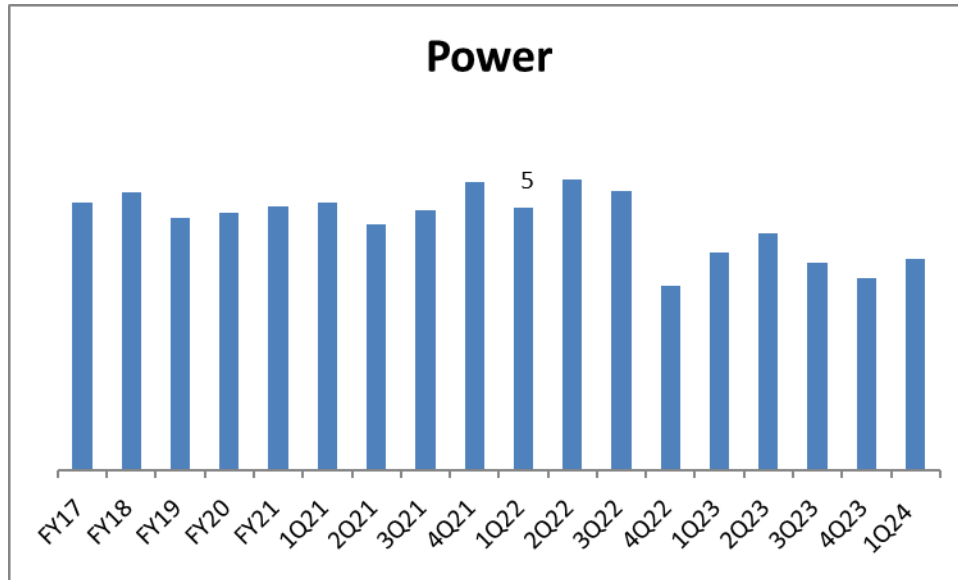
# Trends – price on per unit basis



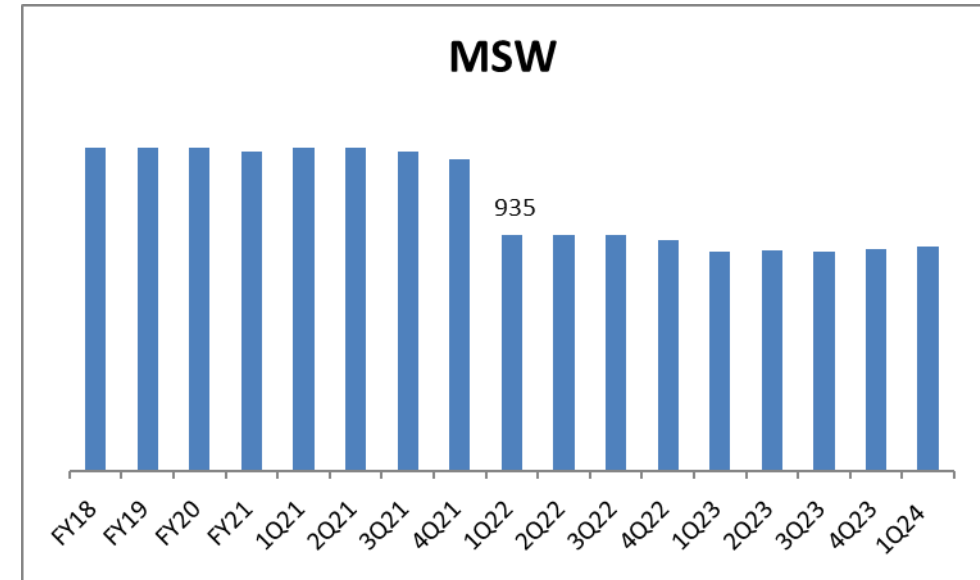
Mild recovery in prices 29 April 2024t the start of the quarter fizzled as utilization rate for EVA footwear slowed  
Volume steady

Prices holding steady  
Volume lower

# Trends – price on per unit basis

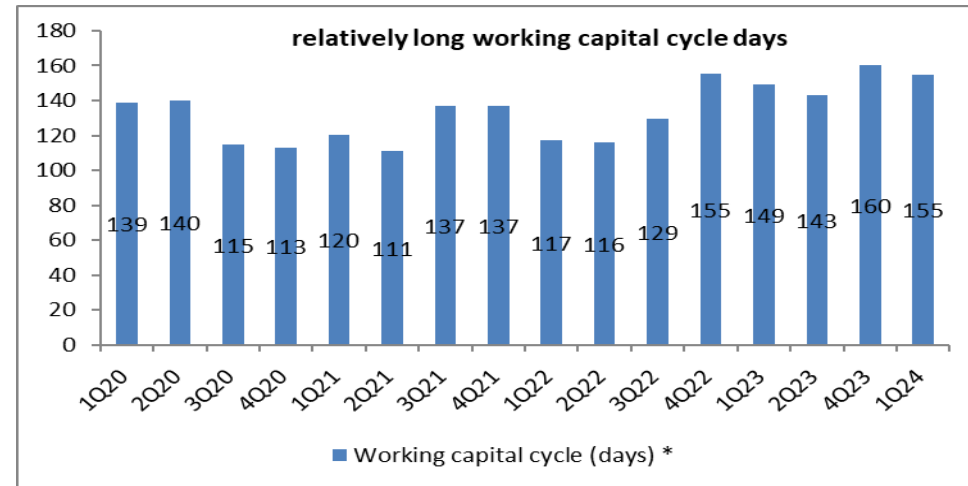
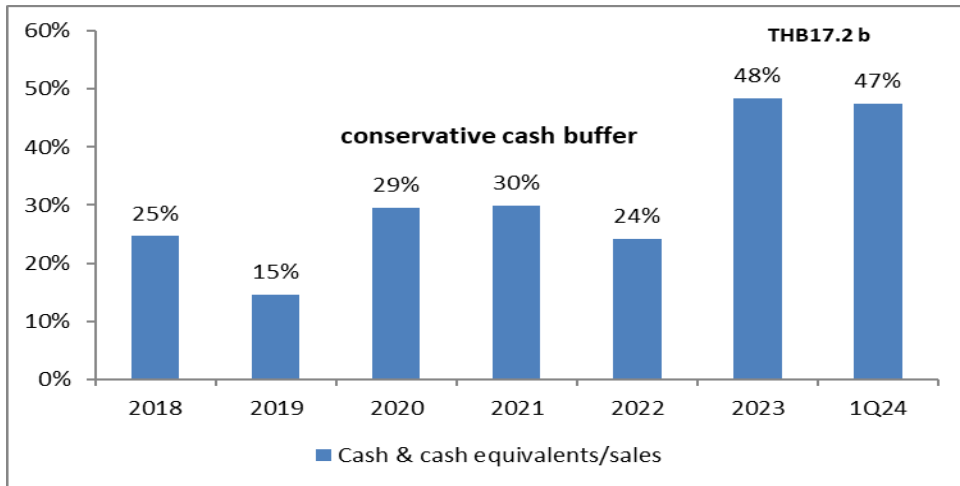
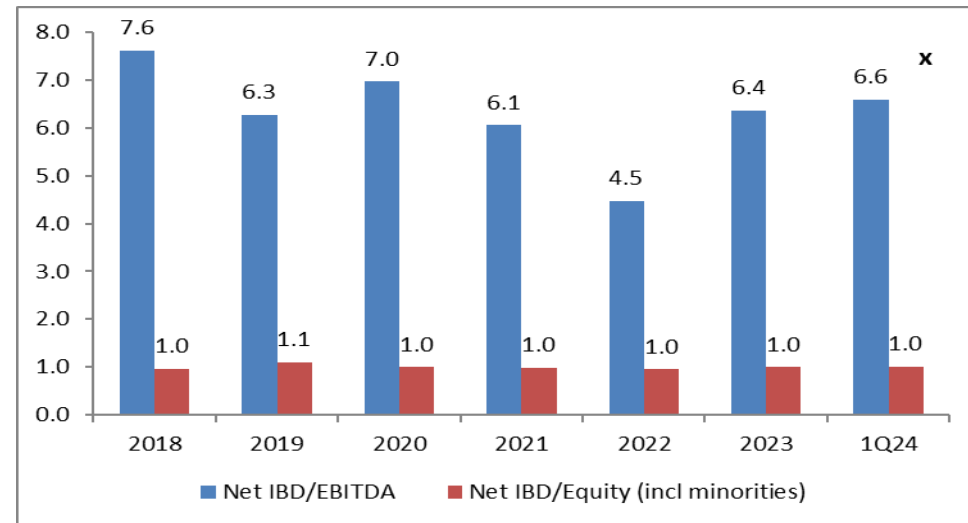
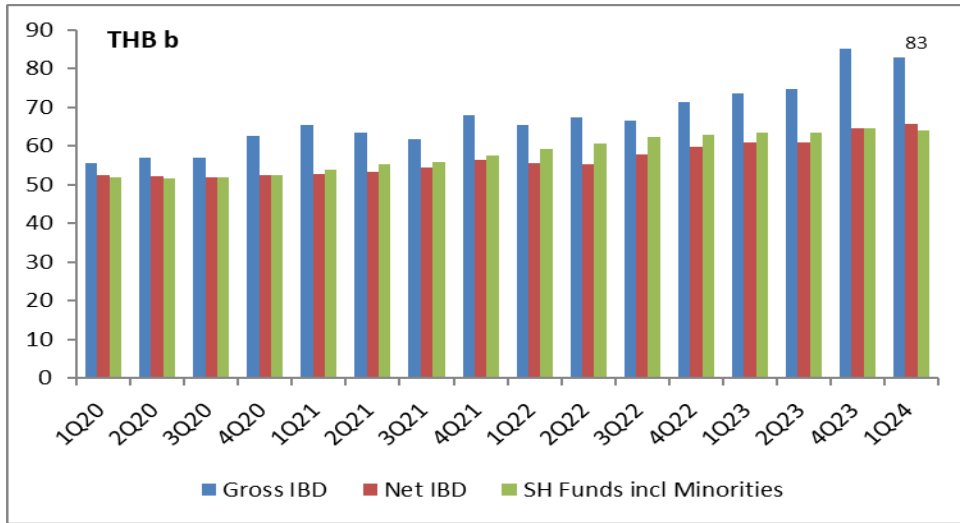


Prices better QoQ but throughput lower



Stable

# Financial Condition – still conservative liquidity stance

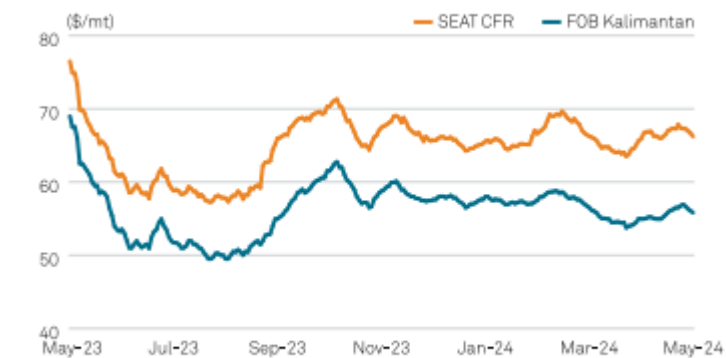


\* Based on 1) Accounts & other receivables + 2) Inventories - 3) Accounts & other payables

# Trends

Energy prices off the 2021/22 highs...

SEAT vs FOB Kalimantan (Basis 4,200 kcal/kg GAR)



Source: S&P Global Commodity Insights

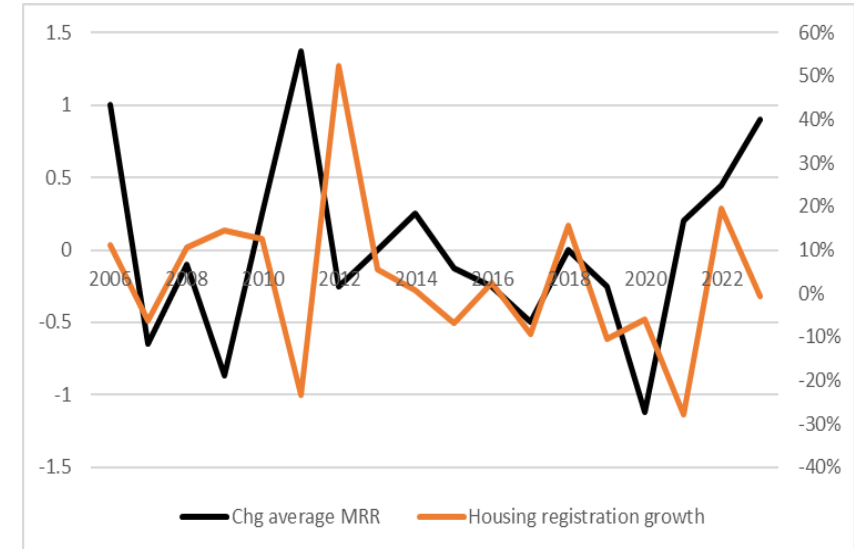
... and volatile in gas prices will influence Ft adjustments



# Variables to watch... private construction

## Residential Property Presales Lackluster

THBm	1Q23	4Q23	1Q24	YoY	QoQ	2024F	1Q24A to 2024F
ANAN	5,288	4,700	5,300	0%	13%	23,000	23%
LPN	2,786	1,978	1,858	-33%	-6%	10,717	17%
ORI	12,004	10,328	8,139	-32%	-21%	41,802	19%
SC	4,918	7,270	5,960	21%	-18%	28,000	21%
SIRI	8,089	11,891	9,548	18%	-20%	45,000	21%
AP	11,016	16,067	9,671	-12%	-40%	51,390	19%
SPALI	9,029	5,352	6,927	-23%	29%	33,159	21%
QH	2,048	1,200	1,700	-17%	42%	8,816	19%
PSH	4,466	4,300	3,370	-25%	-22%	20,591	16%
LH	4,800	8,350	5,700	19%	-32%	24,639	23%
<b>Total</b>	<b>64,444</b>	<b>71,436</b>	<b>58,173</b>	<b>-10%</b>	<b>-19%</b>	<b>287,114</b>	<b>20%</b>



Property stimulus has been announced so we wait and see if it can stimulate demand  
 Lower interest rate could support demand recovery

# Variables to watch... public construction

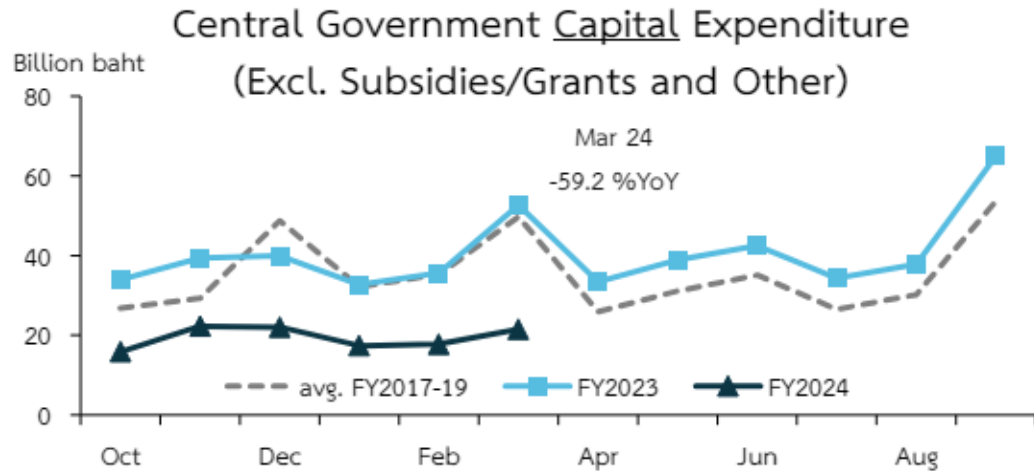
## New Contracts Public and Quasi Public Mostly Small Works

Signed Projects in 2023	CK	Signed	Project Value (MB)
1. Maintenance of Civil & Architectural, E&M System and Lift & Escalator (MRT Initial Blue Line)		April	480
2. Luang Prabang Hydroelectric Power		May	99,788
3. Maintenance of Civil & Architecture, E&M Systems, Lift & Escalator and Walk-through Metal Detector (The MRT Purple Line)		June	1,150
4. Highway No.118, Chiangmai - Chiang Rai Route, Mae Suai District Section - converge to Highway No.1, Section 3		August	747
5. Thonburi Wastewater Collection & Treatment System Plant		September	2,247
<b>Total</b>			<b>104,412</b>

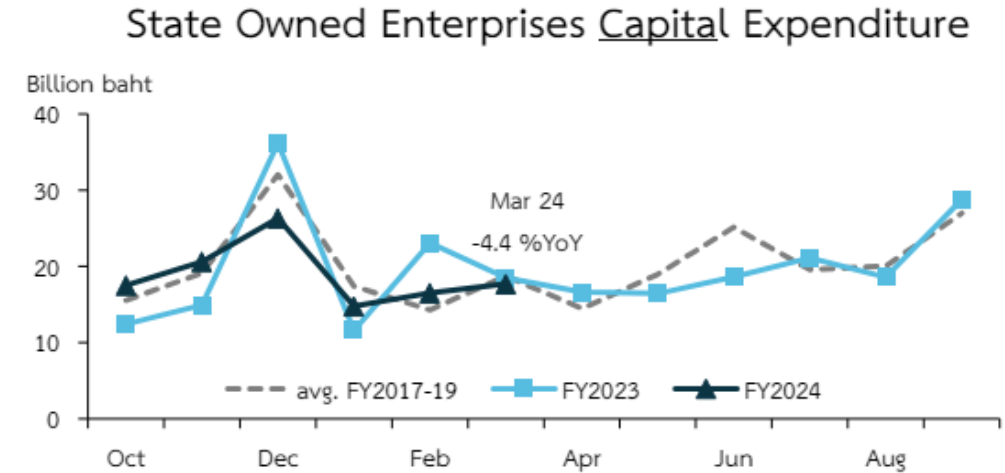
<b>Newly signed contract (2023)</b>		(THBmn.)
• VO & Others		5,905
<b>Active Major Projects</b>	<b>STEC</b>	<b>(THBmn.)</b>
• Yellow line, EBM		22,017
• Pink line, NBM		21,927
• Double track Denchai 2,3		17,370
• Purple line Contract 1&2 , MRTA		14,202
• Pluakdaeng power plant, GULF		9,481
• Morchit complex		8,553
• Hinkong power plant		9,826
• Double track Nongplalai-Huahin, SRT		7,028
• Manhole and ductbank – Pink, Yellow, MEA		6,818
• O&M Motorway M6, M81		6,459
• Govt. center zone C, Dhanarak		5,837
• Cable conversion for Pink, Yellow II, MEA		7,942
• Cable conversion for Pink, Yellow I, MEA		7,103
• Ayudhaya diversion canal, RID		3,429
• Thai Oil clean fuel		2,441

Newly signed projects in 2023 small in value, medium term implementation period

# Variables to watch... budget disbursement could boost demand



Source: Comptroller General's Department, Fiscal Policy Office, GFMS-SOEs and Bank of Thailand



Source: Comptroller General's Department, Fiscal Policy Office, GFMS-SOEs and Bank of Thailand

**Government's capex spending has gradually improved MoM** and could pick pace after budget approval in 26 April.

**Expedited construction activities** are likely given tight time frame because fiscal year 2024/25 budget will soon begin discussion; typical approval is mid 3Q

**Urgency will be compounded by the recent climate predictions** of a 60% probability that La Nina will develop and this could mean heavier rain during monsoon

**Government capex spending in the 1H of May increased** significantly compared to the spending in the months of March/April  
Approved capex budget for FY23-24 was THB689b, +12.67% YoY; and hardly any spending evidenced by the c.22% YoY drop in budget spending for 2Q of FY23-24.

# Variables to watch... construction overseas

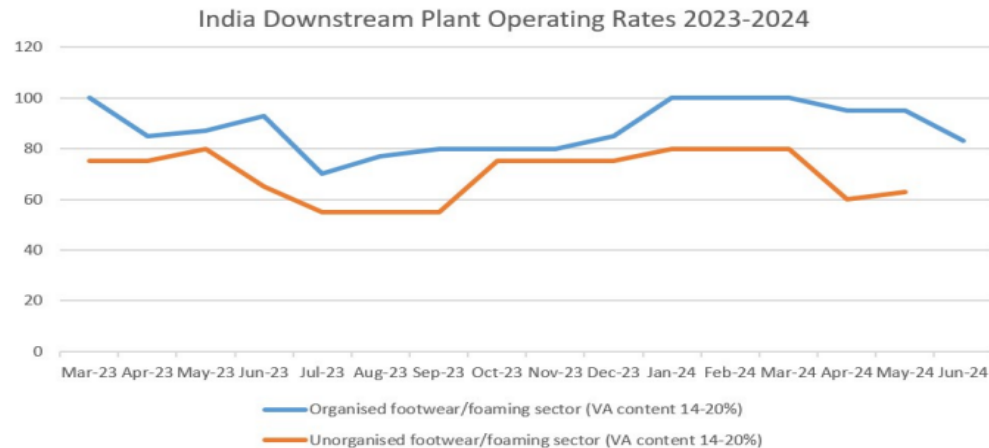
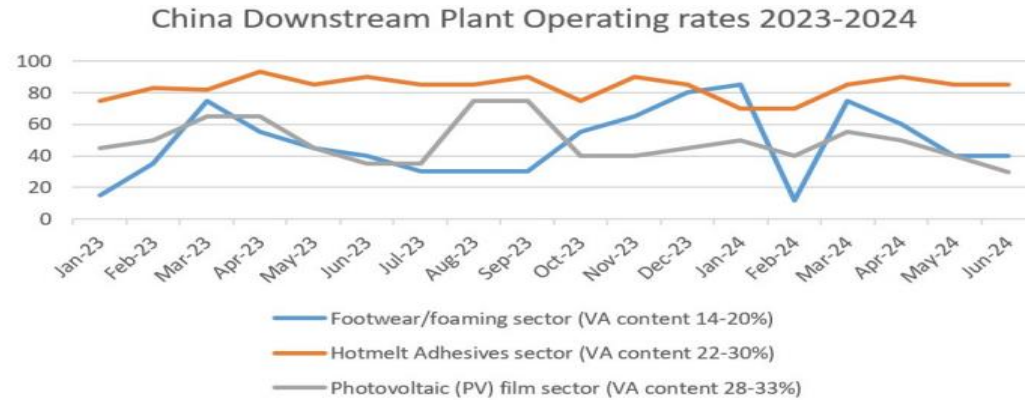
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## Short Term Potential Drivers : Cement Export Market

- **Reconstruction from flood - Dubai** experienced major floods in succession & and the Palm Islands have begun sinking. This will add on to the planned megaprojects estimated to cost **USD 30 billion**
- **Seawall to save Jakarta from sinking** - Groundwater levels in the northern coast of Java have decline 1 - 25 cm per year while the sea levels rise 1-15 cm per year, causing tidal floods of c. 5-200 cm. The sea wall project also aims to address the water supply problem in Jakarta, which relies on groundwater extraction. The estimated cost is **USD50-60 billion**
- **Build Better More Program in the Philippines** – comprised of many projects including road networks, highways, mass transits is budgeted to cost PHP 9 trillion (**USD 16 billion**). Of particular interest is the Pan-Guimaras Bridge spanning over 30 kms, breaks ground in mid 2025 and scheduled to be operational by 2028 before Marcos' term is over. PH imports close to 7.0 million tons of cement and Vietnam is the largest supplier
- **Better US demand for 2024** is forecast to grow by as much as 4% (2023, +7% YoY), and this could be on the conservative side. Challenges in the housing market is again expected to be offset by demand relating to the USD1.5 trillion infrastructure bill and election-related spending (Nov-24). **In 2023 Vietnam has begun exporting to US West Coast. A stronger US market will help soak up excess supply in the Asian region and could ease price pressures.**

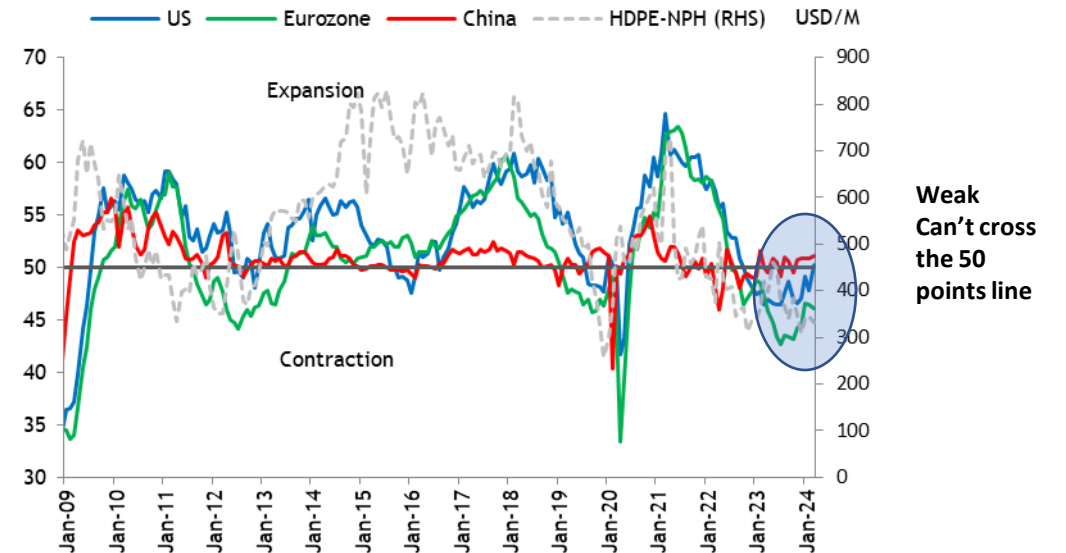
# Variables to watch... manufacturing

Operating rates forecast lowered due to weaker orders in footwear in China



\*Operating rate projections were based on updates from market sources.

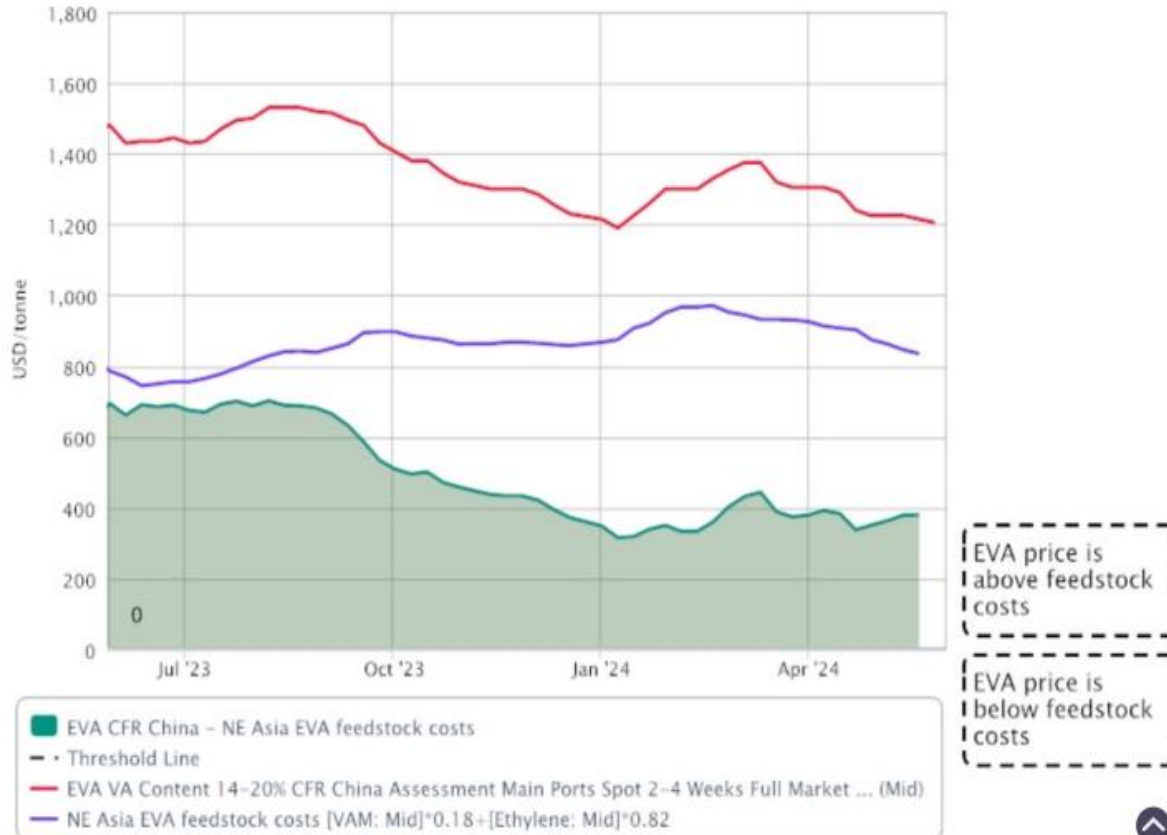
PMI data up to the end of Feb still indicate weak manufacturing activities globally and amidst 3-5% supply growth spreads \* of commodity grade petrochems have the tendency to go below conversion cost --- > drive to HVA is a must no longer an option



\* HDPE-NPH is proxy

# Variables to watch – manufacturing

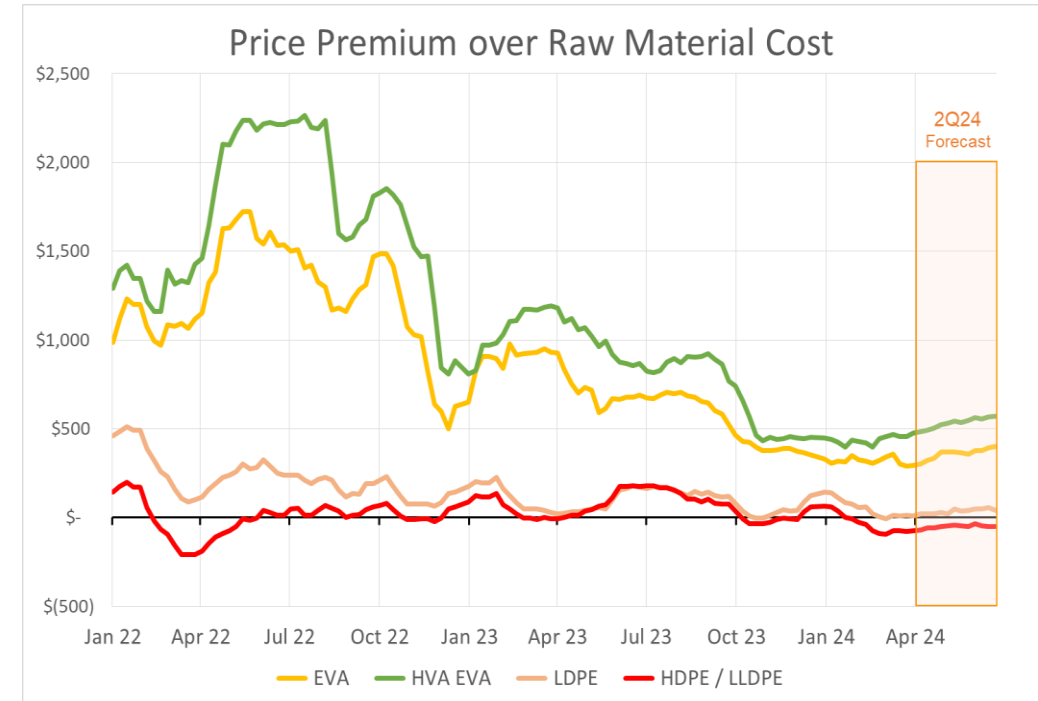
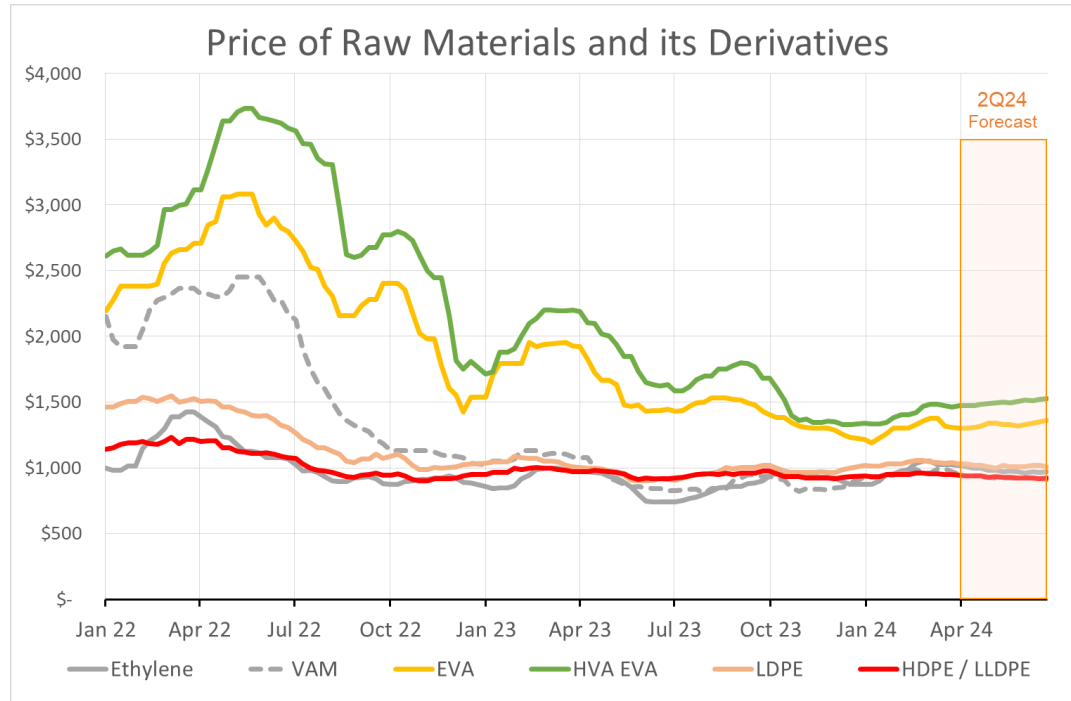
The rebound in spread fizzled as EVA price dropped more than VAM



*Dow CEO sees strong demand across several sectors – Bloomberg TV*

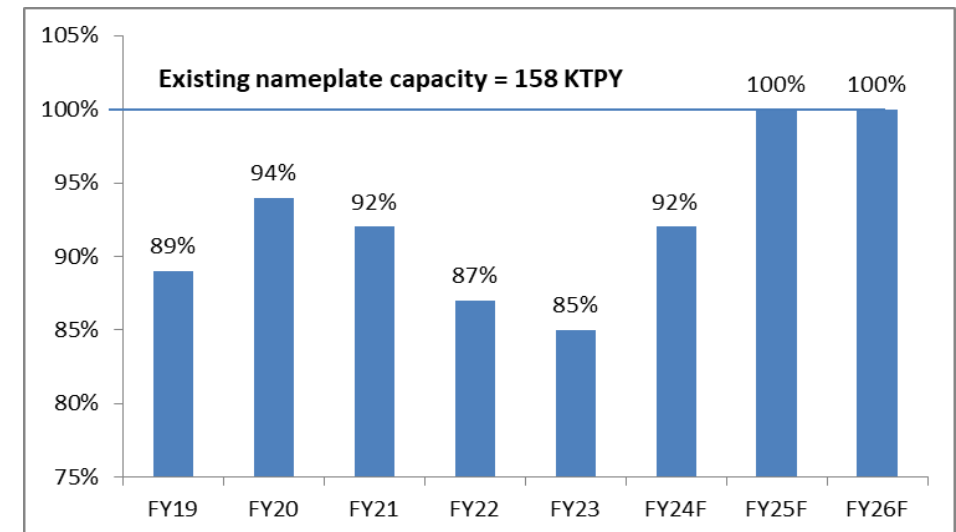
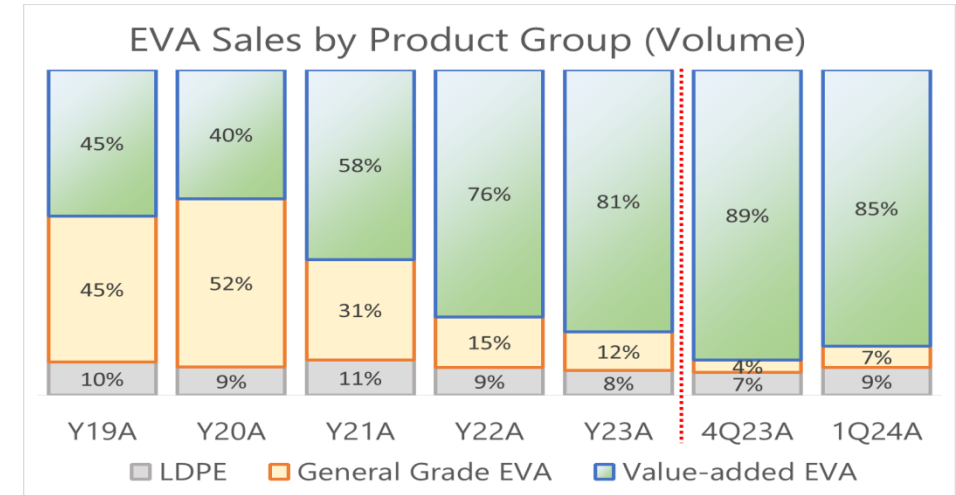
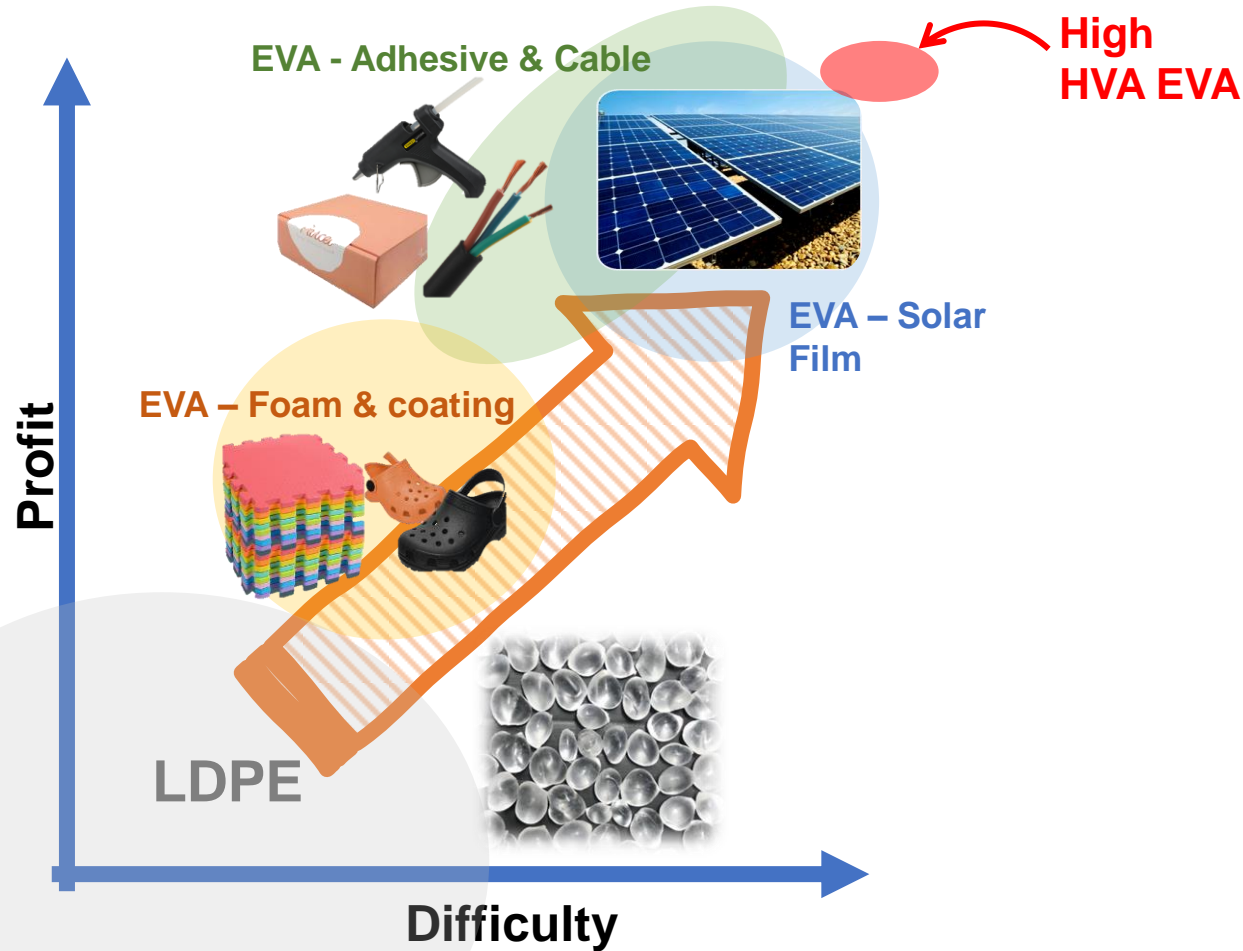
<https://youtu.be/vQf0GcvwCqU?si=sobUdEaseRjMfAtN>

# Variables to watch...manufacturing



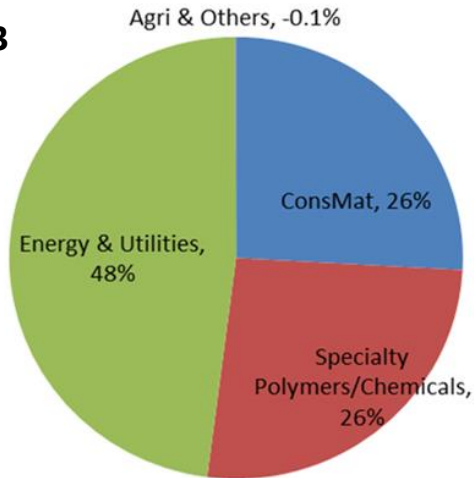
Source: ICIS

# TPIPL market position – High HVA is a bit ahead of the 80% FY target



# EBITDA and Capex – maintain guidance

2023



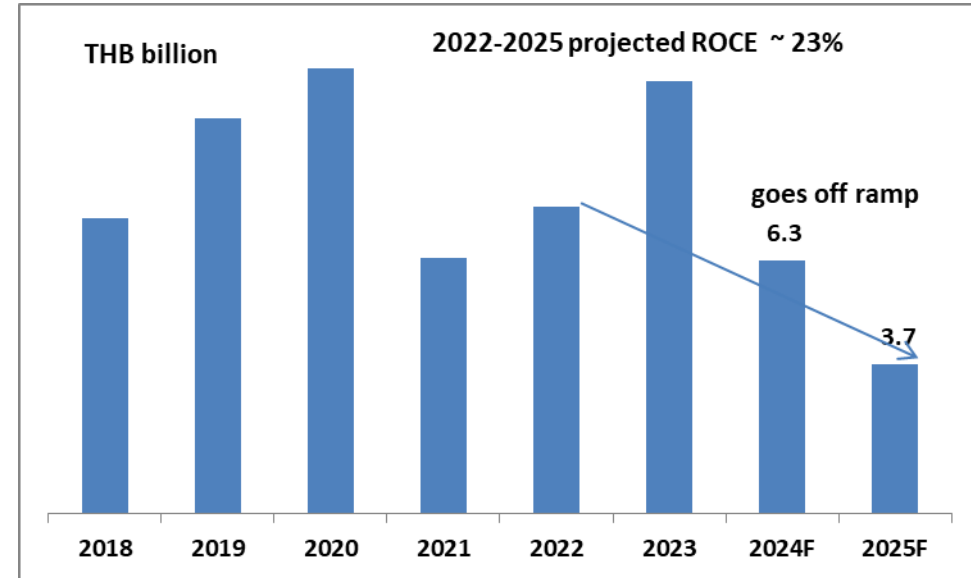
EBITDA = THB10,055 million

### EBITDA breakdown

- ConsMat
- Specialty Polymers/Chemicals
- Energy & Utilities
- Agri & Others

2024 P

- 38%
- 14%
- 48%
- 0.19%



- Achieved 2023 EBITDA was THB10,055 million hitting guided target
- Guidance for 2024 EBITDA is THB11,323 million, + 12.6% YoY
- 1Q24 EBITDA accounts for 22.2% of guidance

### Key drivers 2024:

- cost efficiency
- contributions from cost savings
- improved throughput in power
- some capacity addition

### Potential source of upsides:

- improvement in overseas cement market
- improved EVA spreads

### Capex – including advances paid for PPE

- Major capex continuing plant modification - 150MW coal-fired power
- Two new small MSW projects
- 1Q24 deployed capex was THB1,960 million, THB1,055 million is capex spending of TPI Polene Power



# Environment, Social and Governance (ESG)



# Carbon-Related Merits



## TIIPP – T-Ver Certificates

### Carbon Credit T-VERs Registered by TGO

MSW Received

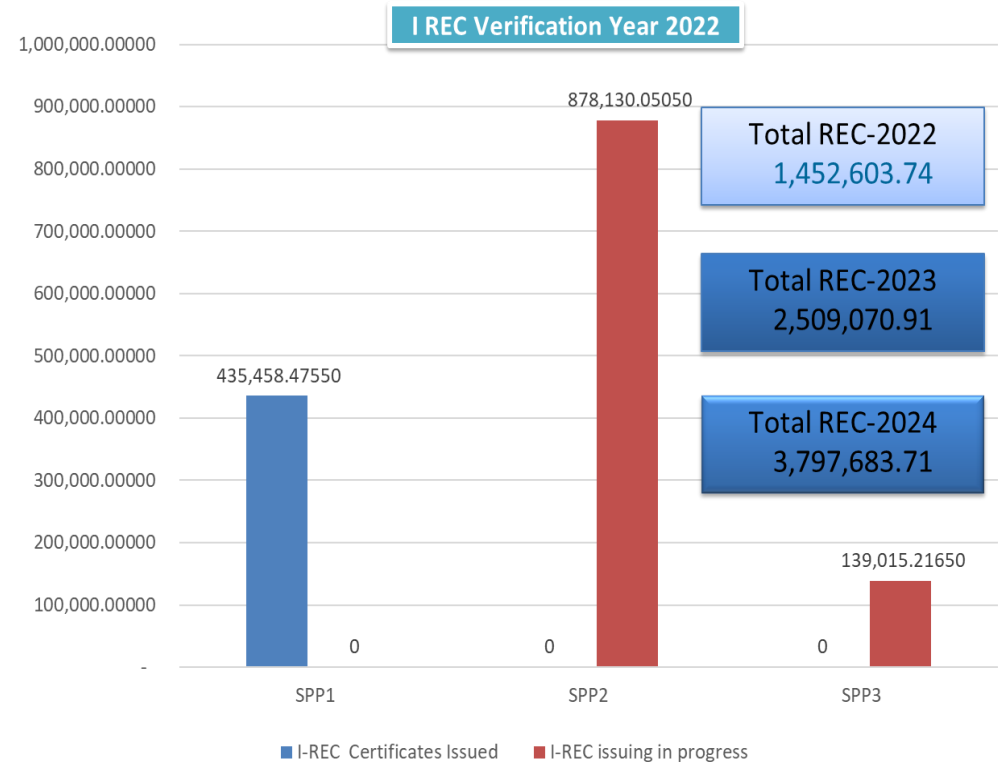
- 1. July 2015 - May 2016 13,483 tCO<sub>2</sub>eq
- 2. May 2016 – Apr 2017 68,573 tCO<sub>2</sub>eq
- 3. Sold out to Zukunft des Konzentoffmarktes - 82,056 tCO<sub>2</sub>eq
- 4. Remain 34,690 tCO<sub>2</sub>eq
- 5. Approval Credit 2022 47,366 tCO<sub>2</sub>eq
- 6. Approval Credit 2023 717,931 tCO<sub>2</sub>eq
- 7. In the certification process 793,932 tCO<sub>2</sub>eq

**Total Carbon Credit 2023 1,559,229 tCO<sub>2</sub>eq**

7. In the certification process 1,260,263 tCO<sub>2</sub>eq

**Total Carbon Credit 2024 2,819,492 tCO<sub>2</sub>eq**

## TIIPP – Renewable Energy Certificates





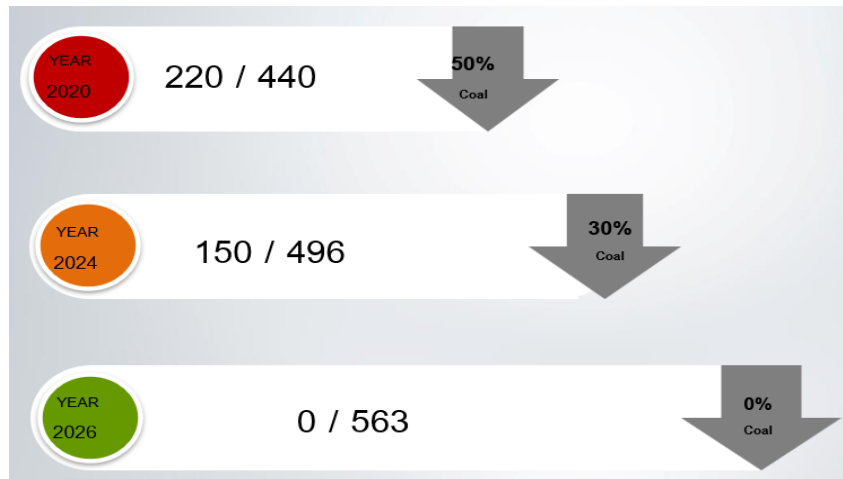
# Our Carbon Situation (Scope 1)



## MSW related carbon merits

Reduce MSW to Land fill in Year 2022		
8,500 Ton / Day	25 mil Ton / Year	5.8 mil Ton-CO <sub>2</sub>
Reduce MSW to land fill in Year 2026		
17,000 Ton / Day	5.2 mil Ton / Year	12.0mil Ton-CO <sub>2</sub>

## Fossil free by 2026

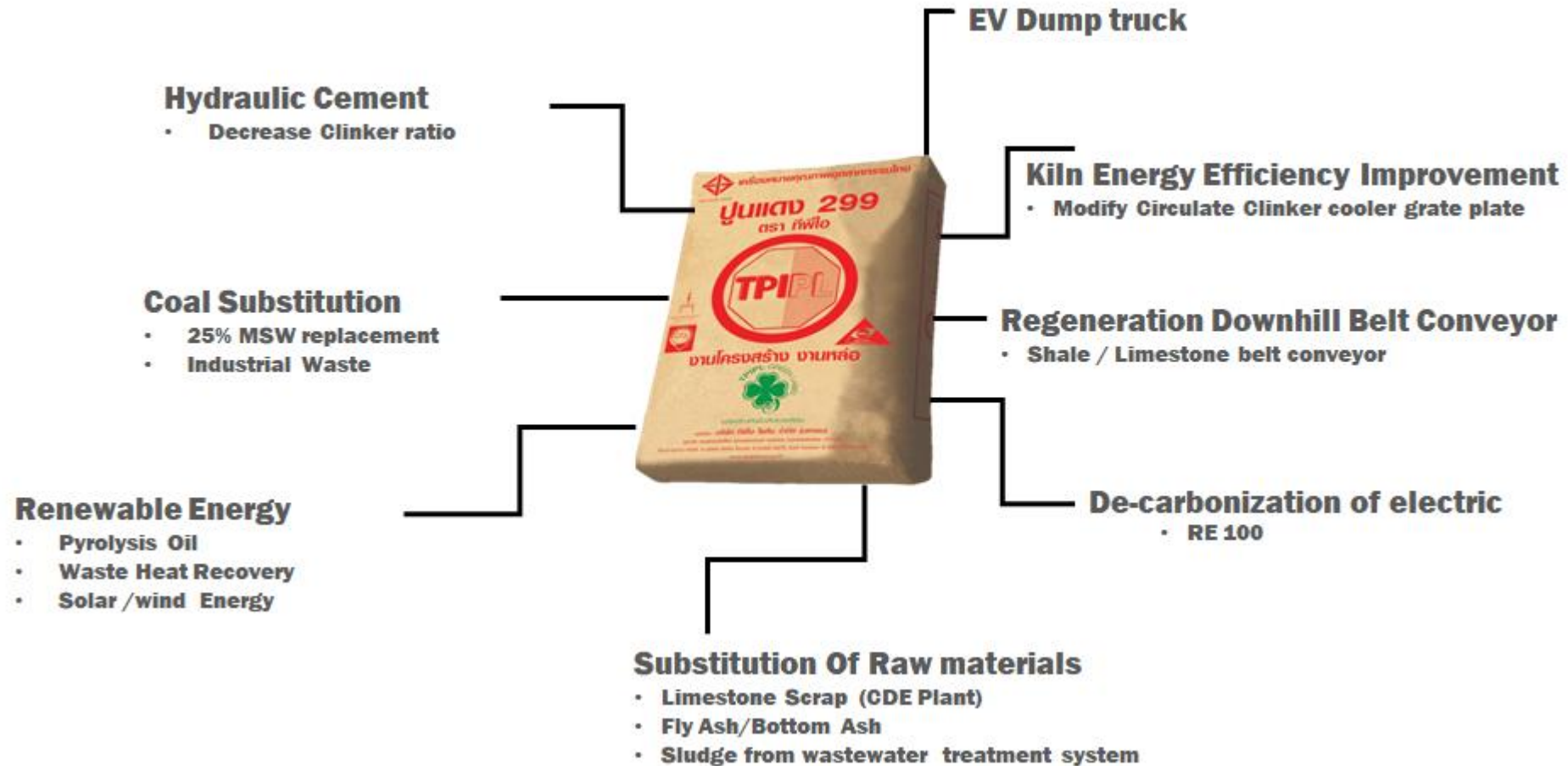


Source: TIIPP SET Opportunity Day Presentation

## EUA – Carbon Allowance Price



# Green Cement – basis for Green Building Products



# Replacing coal with MSW in the clinker production process \*



**For more details:**

Link [https://drive.google.com/file/d/1h3yYa8c2eoeSM7U2NZ-Ut\\_qmICfdJyU-/view?usp=share\\_link](https://drive.google.com/file/d/1h3yYa8c2eoeSM7U2NZ-Ut_qmICfdJyU-/view?usp=share_link)

\* Other local cement producers use IW – industrial wastes

# CDE for Limestone Scrap – reduce mineral waste



Home / About / Case Studies

**TPI**

Thailand

TPI achieves total utilisation of feed material with CDE wet classification technology. The 300tph solution is processing quarry by-product into valuable materials.

Tonnage  
300tph

Material  
Sand & Gravel, Quarry Waste, Crushed Rock, Manufactured Sands

Output  
0-0.6mm and 0.6mm-2.5mm Sand & C33 Man Sands | 2.5mm-5mm Aggregate | Filter Cake

End Use

For more details:

<https://www.cdegroupp.com/about/case-studies/tpi-thailand>

# EV Dump Trucks for Quarrying

2022 - 2023



**On April 7, 2023** Yutong officially shipped 10 YTK90E battery electric mining trucks, which will be delivered to TPI Polene Public Company Limited (TPIPL), the second largest cement producer in Thailand, for transporting stone between mines.

**For more details**

<https://www.yutongtruck.com/10-yutong-ytk90e-battery-electric-mining-trucks-delivered-to-thailand-drawing-up-a-new-blueprint-for-going-abroad/>



# Litigation Case – Pending At The Supreme Court

Case	Case Date	Plaintiff	Charge/ Offense	The Court ordered the Company by Environmental Acts B.E. 2535 to either		status
				Refill Rocks (Mil. Tons)	OR Pay (Mil. Baht)	
Sor Vor 4/2559	8/7/2015	Department of Primary Industry and Mines, Ministry of Industry (has no authority in Environmental Acts B.E. 2535)	The violation in mining activity (under Mineral Acts B.E. 2510 and Environmental Acts B.E. 2535)	31.52	4,047	Pending the Supreme Court Consideration
Sor Vor 5/2559	24/3/2016			12.48	1,603	Pending the Supreme Court Consideration
Sor Vor 6/2559	24/3/2016			2.45	314	Pending the Supreme Court Consideration
Sor Vor 1/2560	2/3/2017			1.22	326	Pending the Supreme Court Consideration
Sor Vor 2/2561	21/6/2018			0.25	67	Pending the Supreme Court Consideration
<b>Total</b>				<b>47.92</b>	<b>6,357</b>	<b>~THB0.34/shr; BVPS = THB3.38 (1Q24)</b>

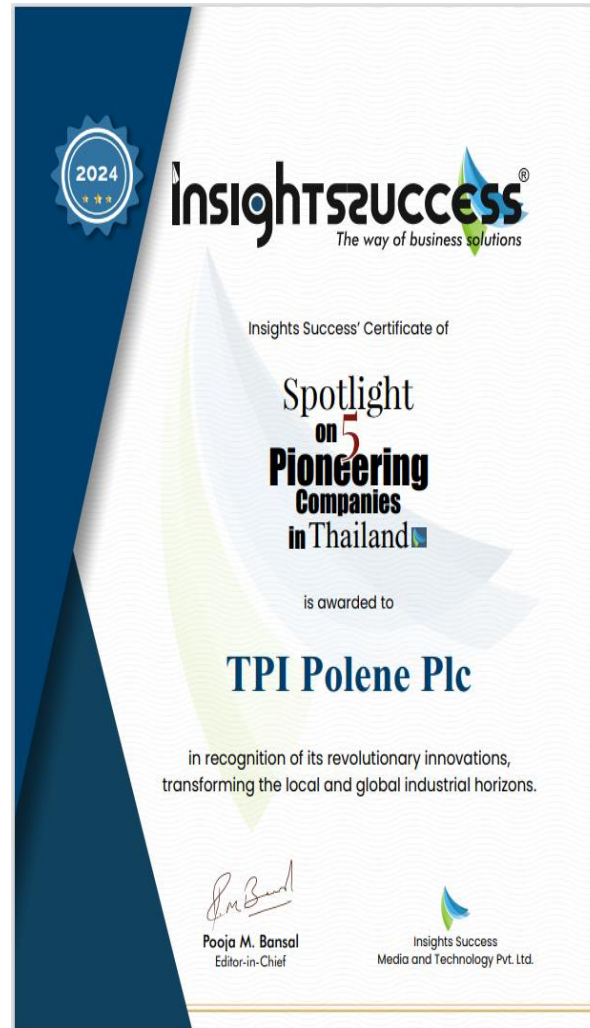
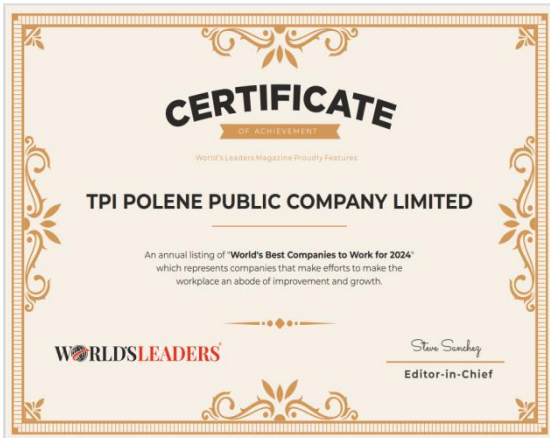
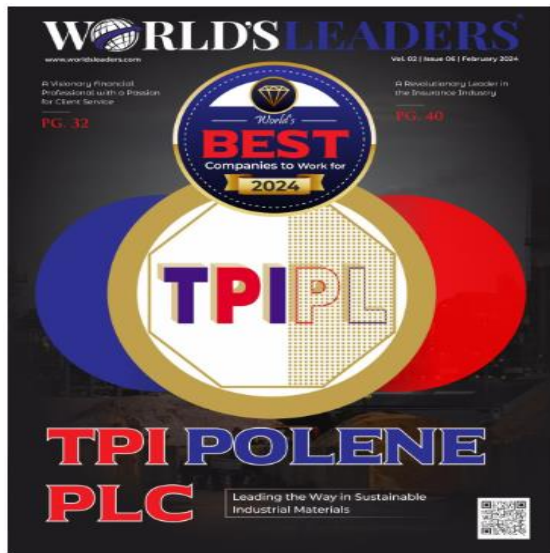
**Share price = THB1.37 (24/05/24)**

The Company did not commit any offense as accused by the Plaintiff and is of opinion that

- The disputed lands (buffer zones) sued by the Department of Primary Industry and Mines, Ministry of Industry, who has no authority in the Enhancement and Conservation of National Environmental Quality Act, B.E. 2535. (Environmental Acts B.E. 2535) were legally belonging to the Company as they were within concession areas, and there have been no claims for physical damages from anybody.
- The Company had approx. 600 million tons of industrial mineral rock in the concession area, and by the end of such concession period, the Company still had approx. 448.355 million tons of industrial mineral rock left to be surrendered to the Department of Primary Industry and Mines of the Ministry of Industry without any obligation to surrender such a big quantity or any quantity of minerals. Therefore, the Company had no reason to commit any illegal act as accused i.e. to steal 47.92million tons of rocks from the government in the disputed buffer zones and will give back 448.355 million tons of mineral rock to the government at the end of the concession period.
- At the moment, the concession for all these areas have been renewed including the disputed buffer zones.

From December 2021 until 1Q24, the Company has been granted new limestone and shale concession for the manufacturing of cement industry from the Department of Primary Industries and Mines, totaling 28 plots, with long-term concession period of 25-30 years for limestone, shale and soil-cement reserves total 448.355 million tons (averaging 16.3 million tons /year). If TPIPL needs more limestone, the company can apply for additional limestone concession in the future.

# Validation of Our ESG and BCG Efforts





**End of Presentation**

**Q&A**

**Thank You**