



TPI Polene Company Update

19 March 2024



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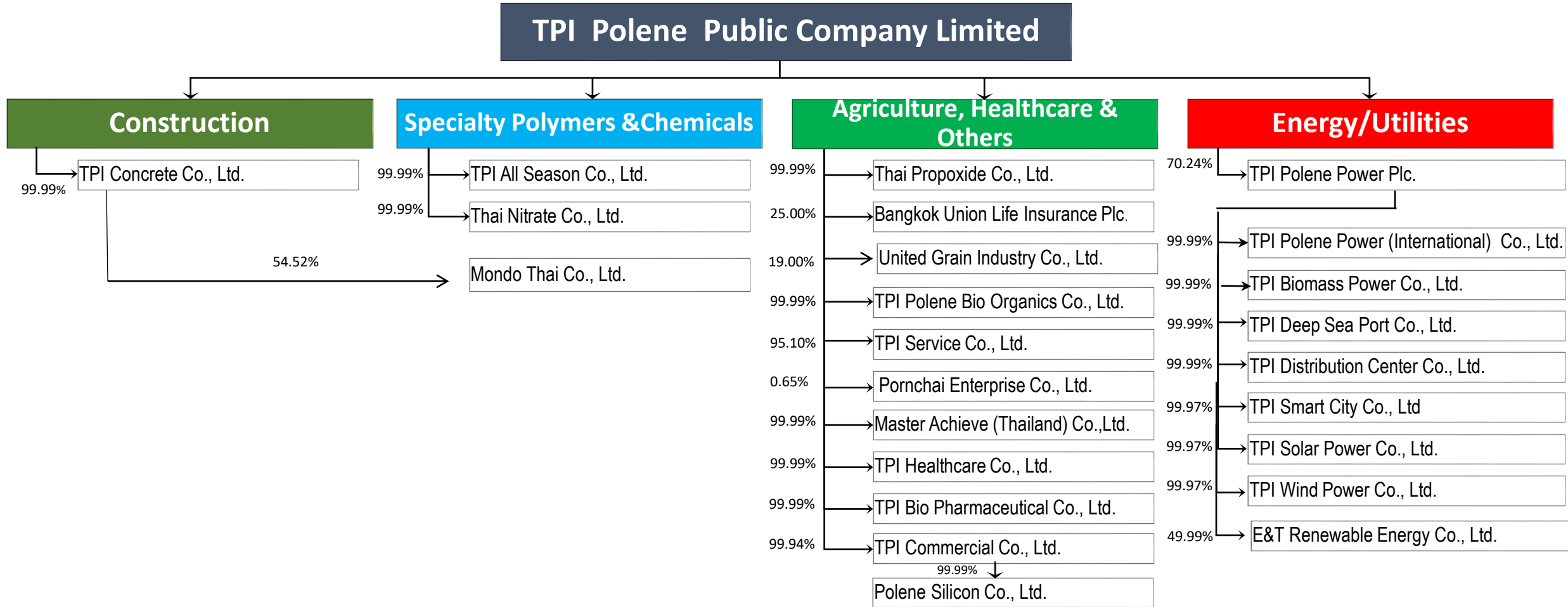
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Topics

Background
Financial and Outlook
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 - 40MW**
- **Coal/MSW Power Plant – 150 MW**
 - Target to 100% MSW by 2024/25
- **MSW power plant projects – ~20MW**, Songkhla (7.92 MW) & Nakhon Ratchasima (9.9 MW) - COD 20
- **Solar Farm – 61MW** - COD 2024
- **Wind Farm – 5MW** – 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
- **Two (2) new MSW projects in the North east** – best bidder

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

Green Cement & Building Products*

TGO Certified

TIPL ได้รับการรับรองเครื่องหมาย
คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์
(Carbon Footprint of Product - CFP) มาตรฐาน Business to Customer (B2C)
ตามเกณฑ์การประเมินคาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์
จำนวน 20 ผลิตภัณฑ์

5		TIPL Super Portland Cement (Bag) 40 kg 40.4 kgCO ₂ e	
6		TIPL Portland Cement Type 3 (Bag) 50 kg 50.1 kgCO ₂ e	
7		TIPL Mixed Cement 50 kg (Bag) 50 kg 34.6 kgCO ₂ e	
8		TIPL Mixed Cement 50 kg (Bag) 50 kg 34.6 kgCO ₂ e	

1		TIPL Hydraulic Cement Type 01 (50 kg Bag) 50 kg 47.2 kgCO ₂ e	
2		TIPL Hydraulic Cement Type 01 (1 Ton Bag) 2000 kg 889 kgCO ₂ e	
3		TIPL Portland Cement Type 1 (Bag) 50 kg 50.7 kgCO ₂ e	
4		TIPL Hydraulic Cement Type 01 (1 Ton Bag) 2000 kg 889 kgCO ₂ e	

9		TIPL Mixed Cement (Bag) 50 kg 37.9 kgCO ₂ e	
10		TIPL Super Mixed Cement (Bag) 40 kg 30.1 kgCO ₂ e	
11		TIPL Adhesive Mortar for Floor General Tile M500 (Bag) 20 kg 7.03 kgCO ₂ e	
12		TIPL Floor Drainage	

13		TIPL Floor Served Mortar M200 (Bag) 50 kg 14.5 kgCO ₂ e	
14		TIPL Floor Served Mortar M200 (Bag) 50 kg 11.8 kgCO ₂ e	
15		TIPL General Flooring Mortar M200 (Bag) 50 kg 13.1 kgCO ₂ e	
16		TIPL General Mortar	
17		TIPL Self-levelling Mortar for Floor General Tile M400 (Bag) 20 kg 10.9 kgCO ₂ e	
18		TIPL Lightweight Block Masonry Mortar M200 (Bag) 50 kg 16.1 kgCO ₂ e	
19		TIPL Lightweight Block Flooring Mortar M200 (Bag) 50 kg 13.9 kgCO ₂ e	
20		TIPL Mortar	

* Official launch June 2023

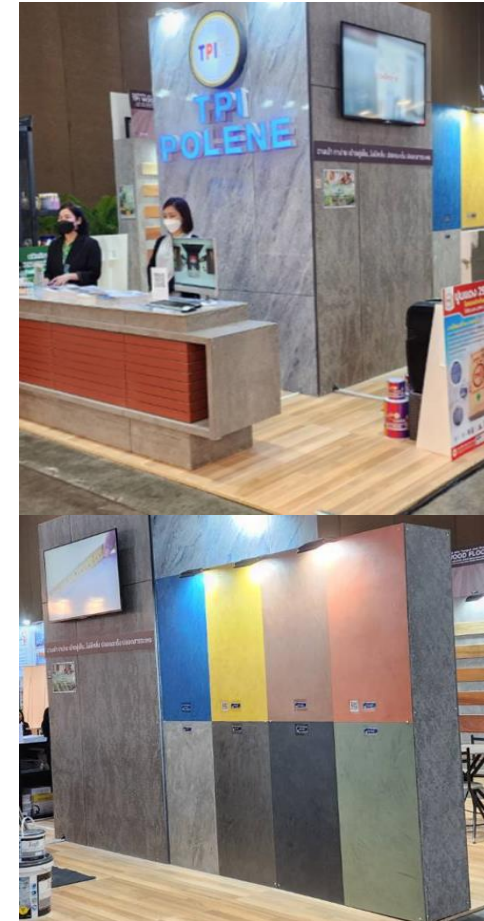


Reinforced Fibre Cement – Newly Patented Product

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)





EBITDA margin relatively better than peers; valuation cheaper

Local peer comparison: EBITDA margin

	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	8Q avg
ConsMat									
Peer 1	12.0%	9.8%	7.7%	4.0%	9.5%	9.9%	8.0%	9.0%	9.0%
Peer 2	22.0%	25.0%	13.0%	7.0%	15.2%	15.4%	18.0%	24.5%	18.2%
TPI Polene	13.0%	19.3%	10.3%	8.7%	5.2%	11.7%	17.4%	9.1%	12.3%
Petrochemical									
Peer 1 - operating only	6.7%	2.0%	3.4%	-2.9%	5.2%	12.2%	5.0%	1.0%	4.1%
Peer 2 - polymers & chemicals	5.0%	9.0%	10.0%	0.0%	8.0%	3.0%	10.0%	5.0%	6.3%
Peer 3 ** - value added PE	19.6%	17.3%	15.4%	20.0%	16.9%	16.0%	18.2%		17.7%
TPI Polene	36.0%	41.4%	46.0%	28.0%	26.0%	28.8%	28.3%	14.5%	32.0%

Comparative Valuation – TPIPL and TPIPP value not reflecting the better than peers' performance ratios

Bloomberg code	Mkt cap (USDm)	Price (THB)	Avg T/O Mn Shrs	TP Upside		P/E (x)		P/B (x)		ROE (%)		Div yld (%)	
				(THB)	(%)	23E	24E	23E	24E	23E	24E	23E	24E
SCC TB	10,869	284.00	1.67	326.78	15.1	13.6	12.4	0.9	0.8	6.4	6.8	3.1	3.7
SCCC TB	1,150	136.50	0.05	145.33	6.5	16.4	13.4	1.2	1.2	7.7	9.0	5.6	6.1
PTTGC TB	4,557	35.75	13.96	39.98	11.8	n.m.	15.1	0.5	0.5	-0.2	3.3	1.6	3.0
EPG TB	641	8.10	2.46	9.24	14.1	16.1	14.6	1.8	1.7	11.5	12.0	3.7	4.0
TPIPL TB	771	1.44	4.65	2.00	38.9	7.6	8.0	0.5	0.5	6.7	6.2	6.0	6.0
GULF TB	15,176	45.75	18.59	56.02	22.4	36.5	29.1	4.4	3.9	12.3	13.8	1.4	1.7
BGRIM TB	1,990	27.00	11.91	29.89	10.7	34.3	30.6	1.9	1.7	6.3	6.2	1.4	1.6
TPIPP TB	812	3.42	2.60	4.00	17.0	8.3	8.0	0.8	0.8	10.4	10.3	5.8	6.4

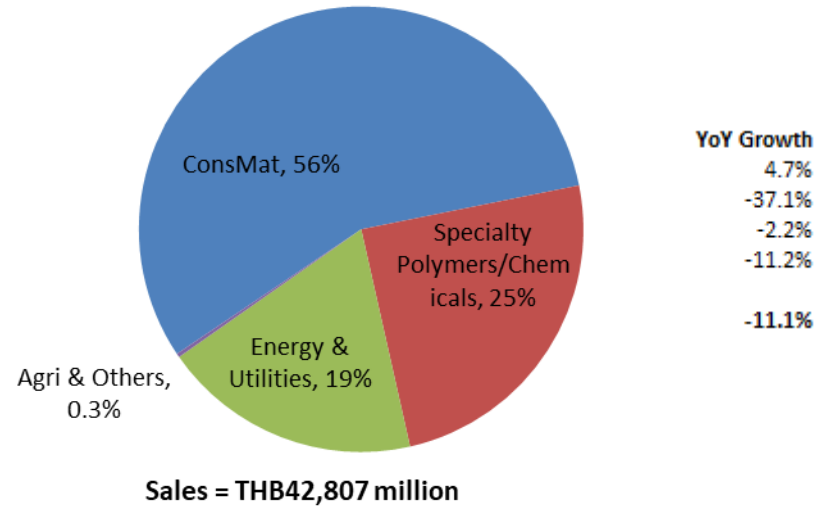
** FY ends March. Closing price: 8 March 2024

Source: Bloomberg, Brokers, SET MD&A filing

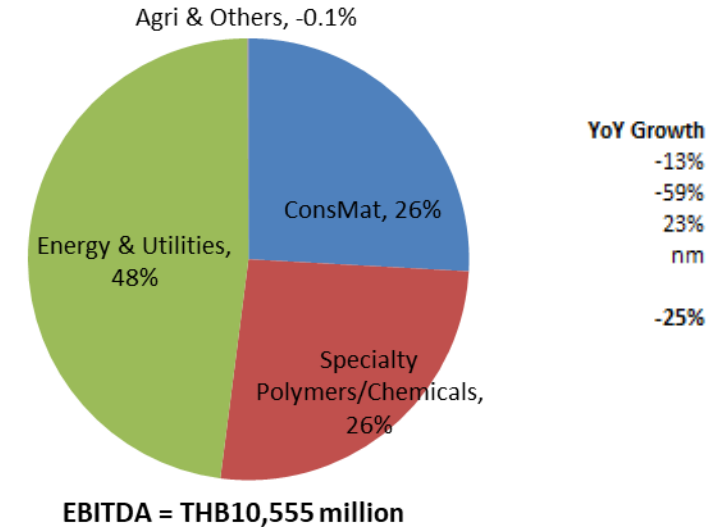


Financial and Outlook

FY 2023 performance



YoY Growth
4.7%
-37.1%
-2.2%
-11.2%
-11.1%



YoY Growth
-13%
-59%
23%
nm
-25%

In 2023 sales dropped 11% YoY while EBITDA generated was down 25% YoY

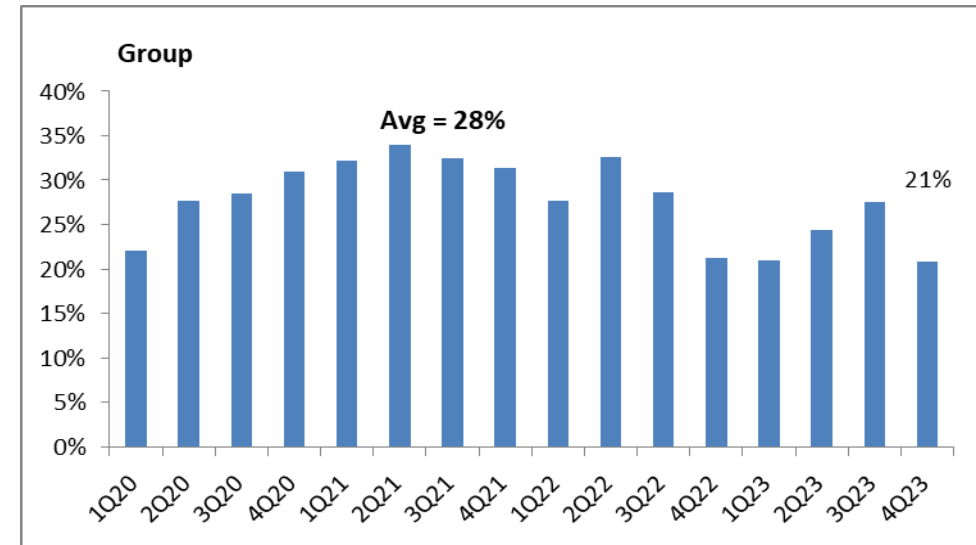
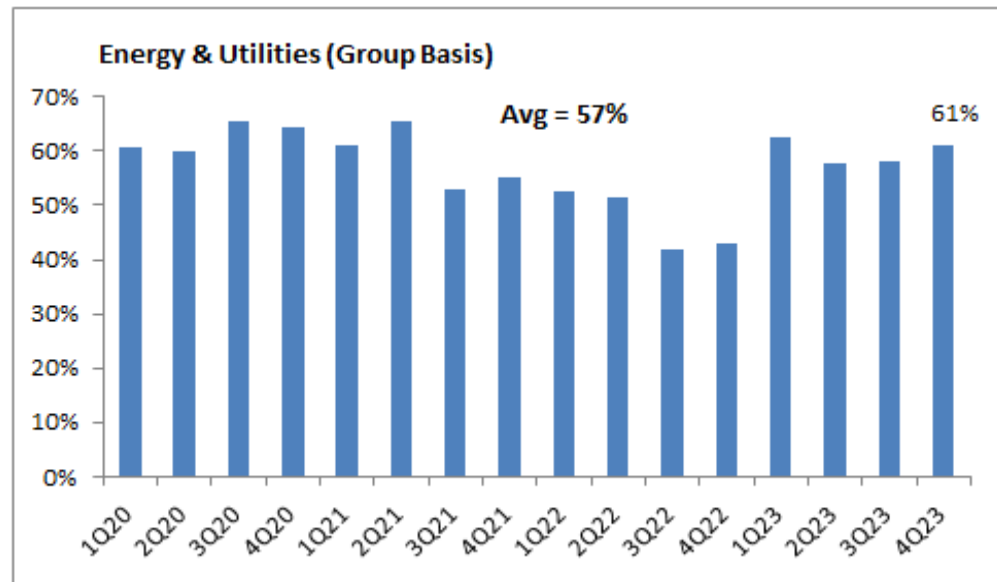
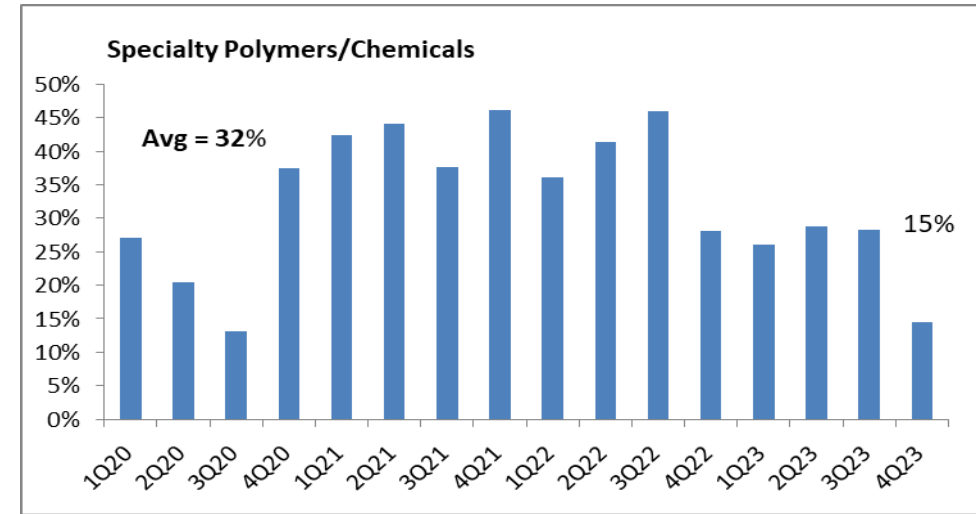
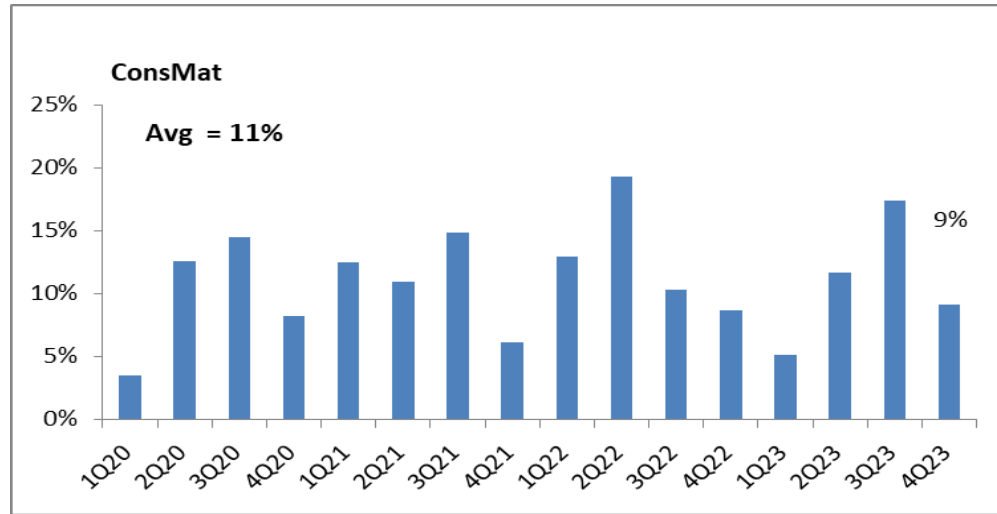
The biggest drop in sales was in the Specialty Polymer Division , down 37% YoY due to drop in product prices

The larger drop in EBITDA compared to the drop in sales is due to the high operating leverage nature of the industry, particularly in the Specialty Polymer business

As for ConsMat division the marginal growth in sales was watered down by the low volume in clinker exports

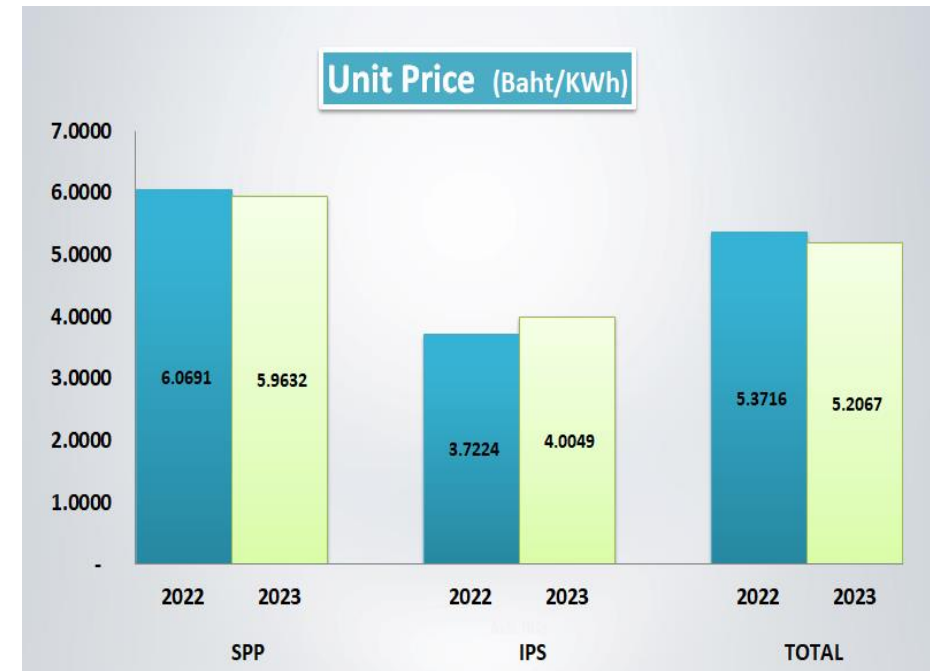
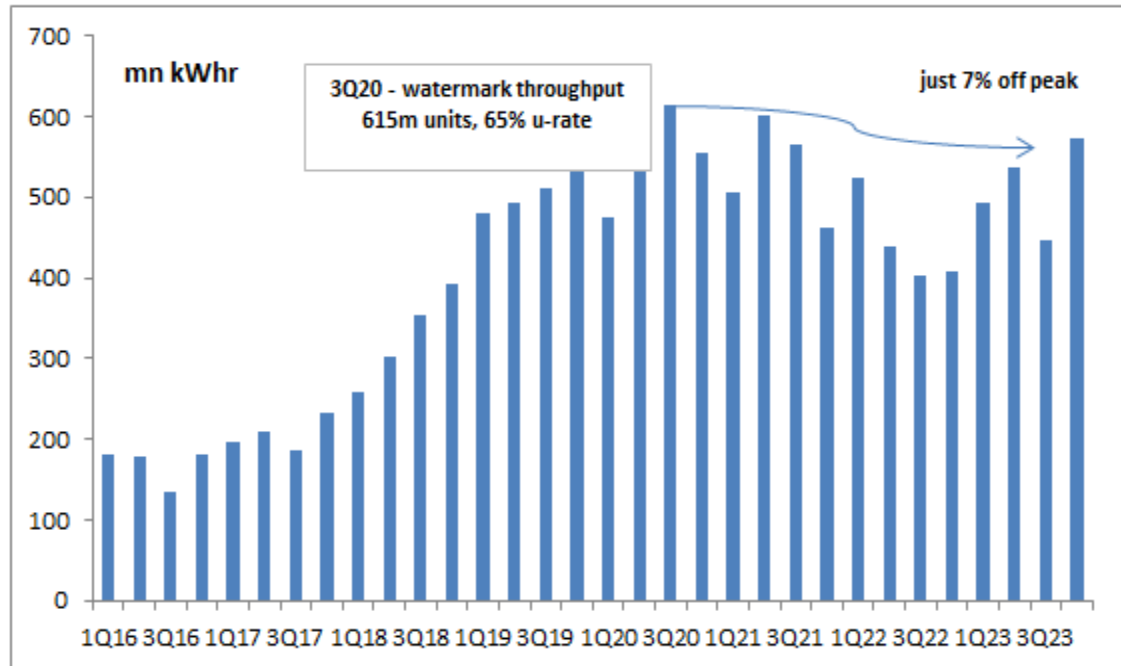


EBITDA margin resilient



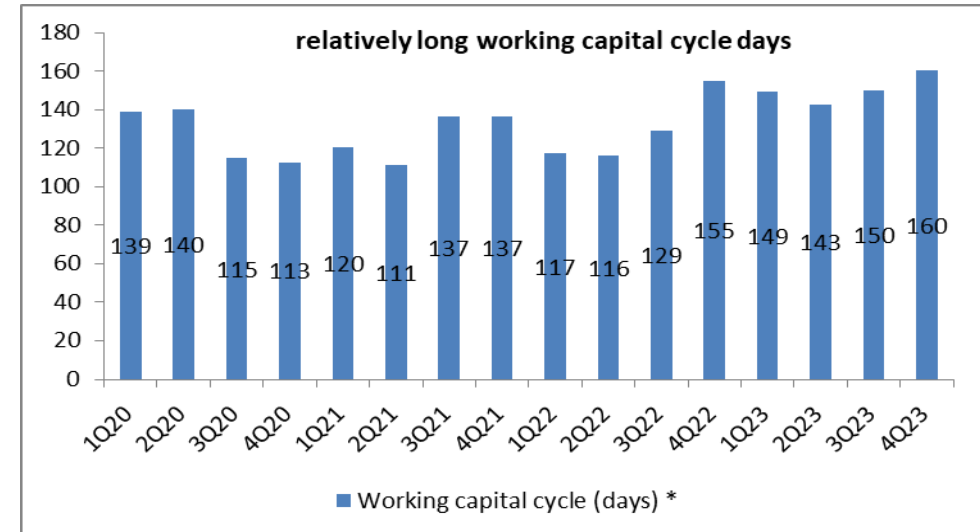
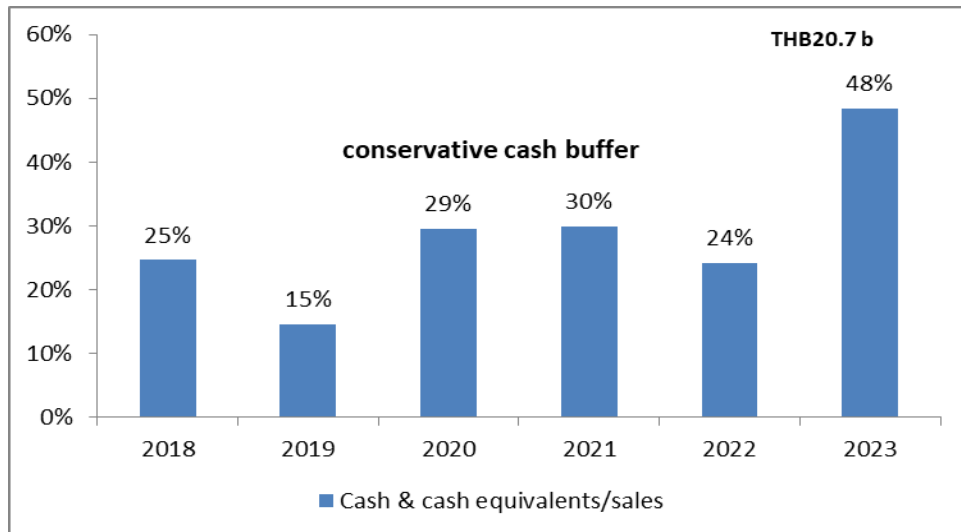
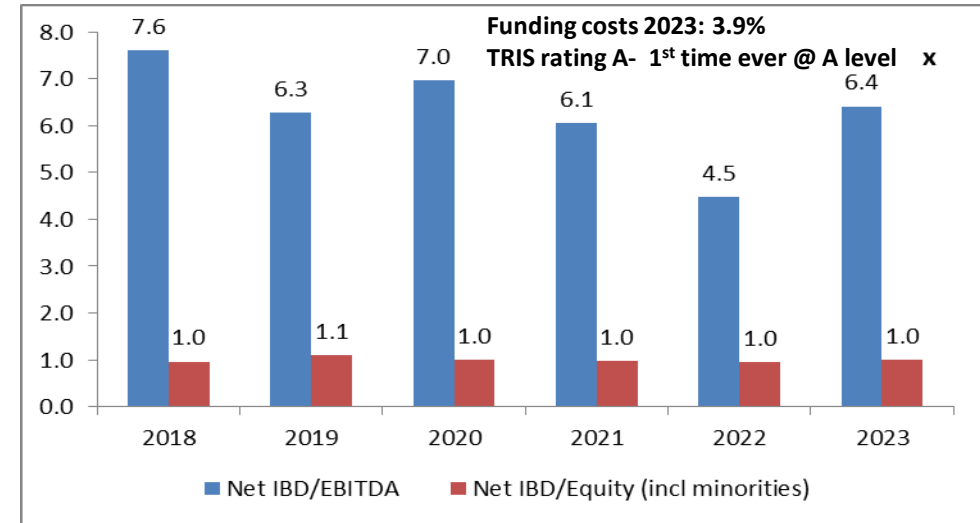
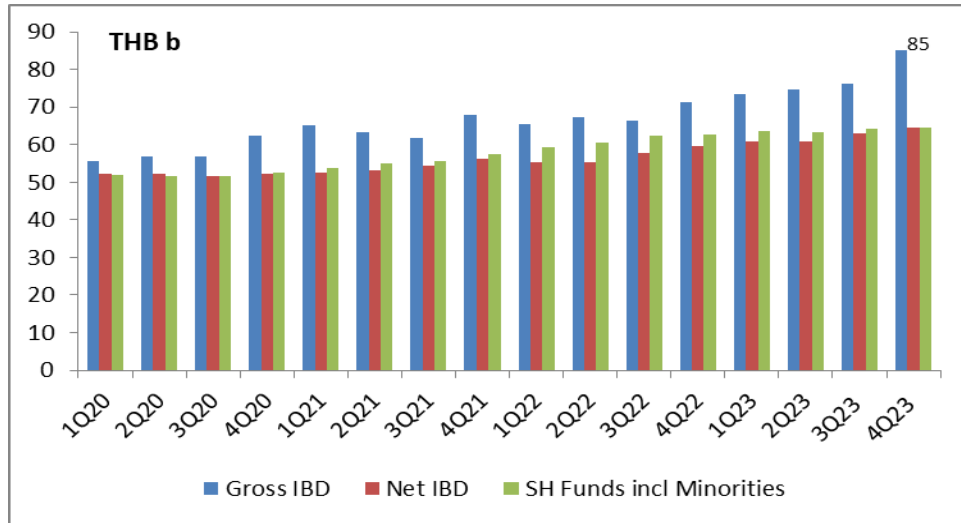


EBITDA margin resilient... High Contribution from Energy & Utilities



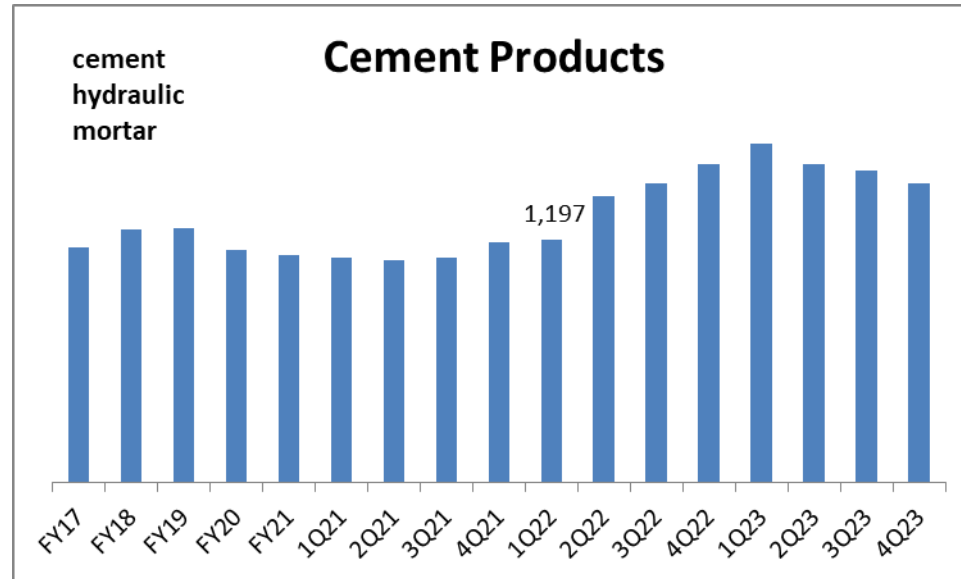
- * Higher throughput in 4Q23, FY volumes were up 14% YoY
- * FY23, the lower average price sold EGAT was partly offset by higher price sold to the parent

Financial – defensive cash positioning

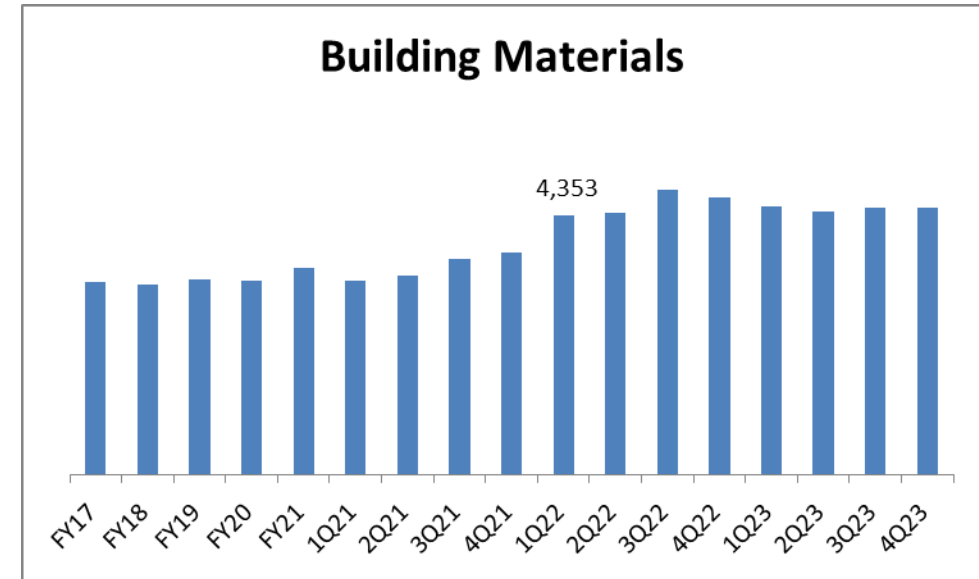


* Based on 1) Accounts & other receivables + 2) Inventories - 3) Accounts & other payables

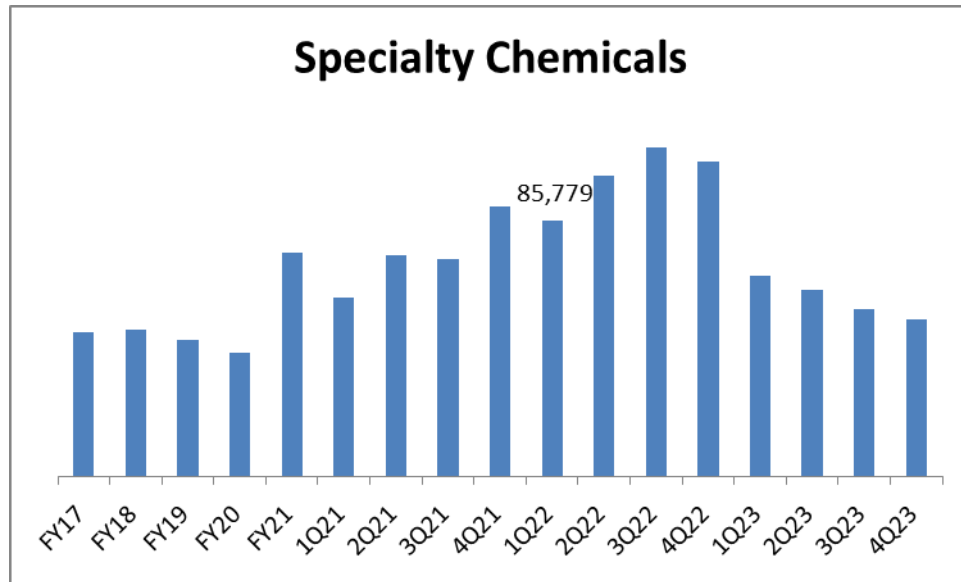
Price Trends – per unit basis



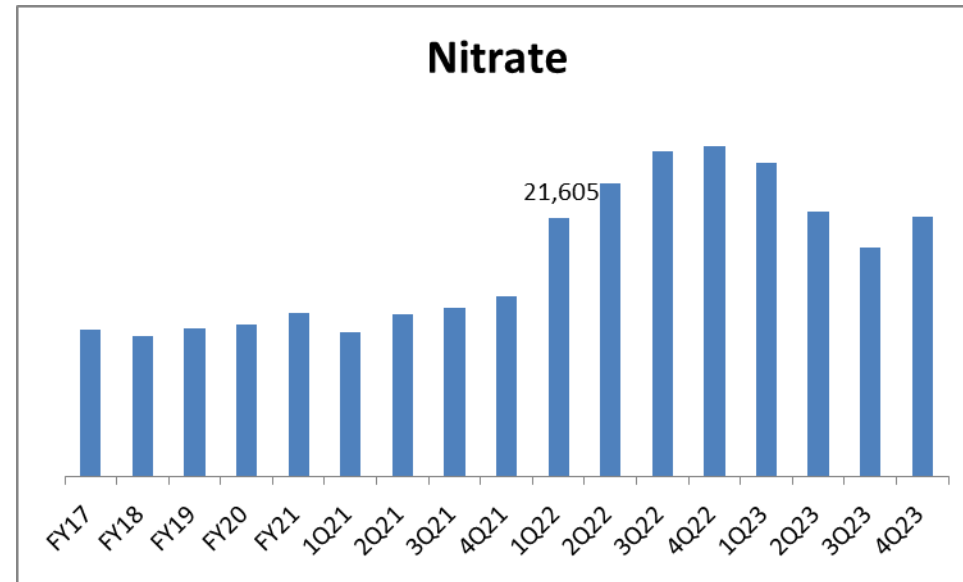
Price increases in some products
Price drops in others



Largely stable

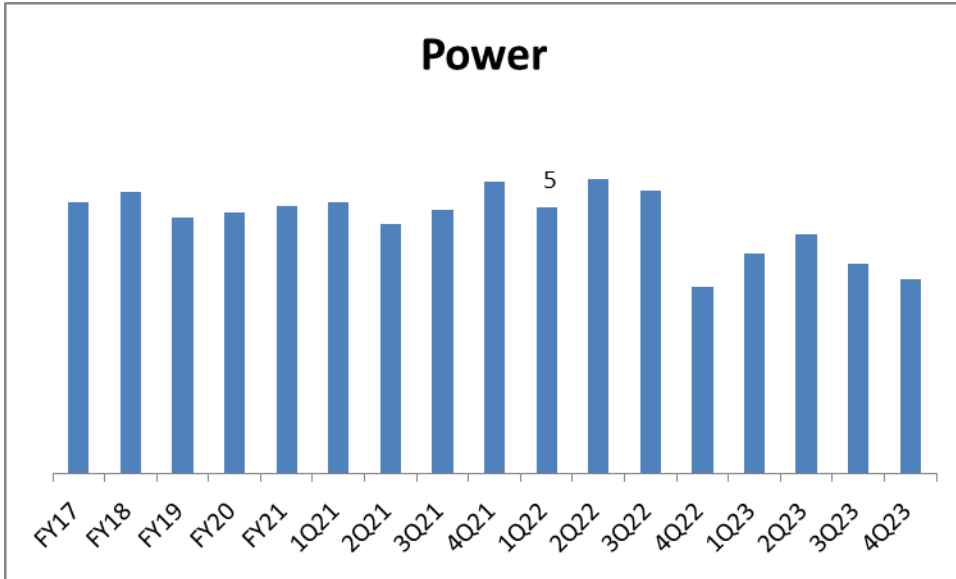


Price drop due to soft demand

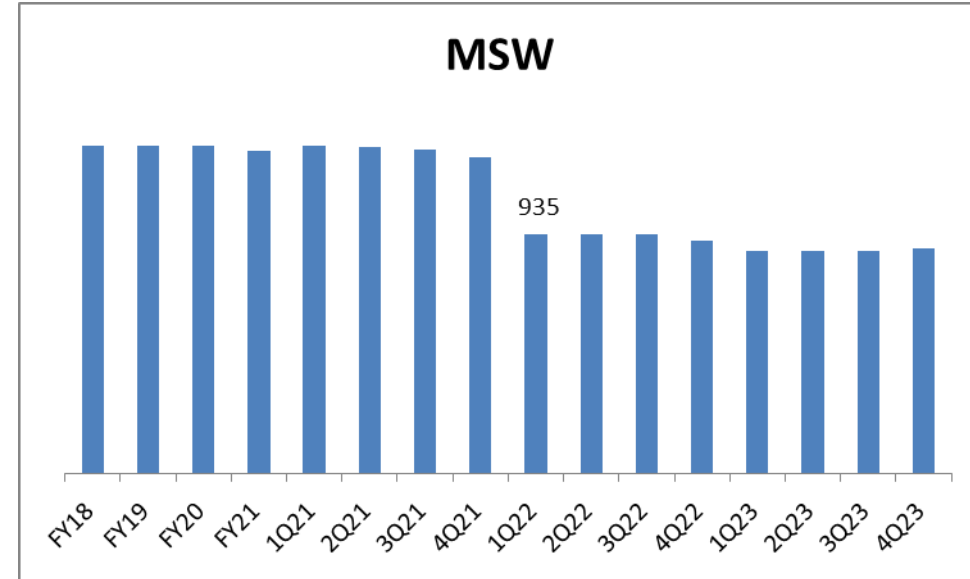


Benefits from logistics disruption

Price Trends



Variable due to Ft and social policy

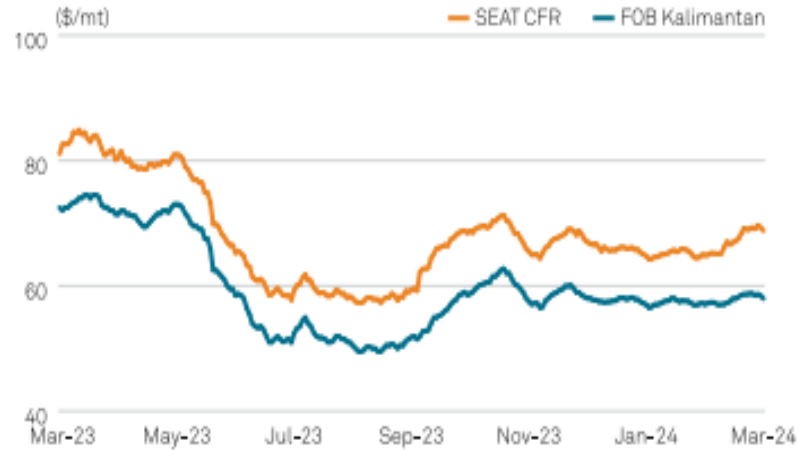


Stable

Price 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, +1% YoY for 10 companies

THB m	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	YoY	QoQ	2022	2023	YoY%
ANAN	2,191	3,910	4,101	7,349	5,288	4,362	5,163	4,700	-36%	-9%	17,551	19,513	11%
LPN	2,134	2,623	1,980	1,624	2,786	2,621	2,581	1,978	22%	-23%	8,361	9,966	19%
ORI	8,149	9,623	11,626	11,634	12,004	12,461	12,472	10,328	-11%	-17%	41,032	47,265	15%
SC	5,285	6,735	5,161	7,287	4,918	7,328	8,434	7,270	0%	-14%	24,468	27,950	14%
SIRI	5,982	7,324	15,337	9,807	8,089	10,022	7,579	11,891	21%	57%	38,450	37,581	-2%
AP	12,959	12,572	11,924	12,960	11,016	12,631	11,677	16,067	24%	38%	50,415	51,391	2%
SPALI	8,852	9,364	6,809	7,408	9,029	8,256	6,227	5,352	-28%	-14%	32,433	28,864	-11%
QH	2,035	2,084	2,146	1,734	2,048	1,872	2,464	1,200	-31%	-51%	7,999	7,584	-5%
PSH	5,300	6,342	2,858	2,470	4,466	4,650	5,125	4,300	74%	-16%	16,970	18,541	9%
LH	7,996	7,412	9,235	5,601	4,800	3,995	5,572	8,350	49%	50%	30,244	22,717	-25%
Total	60,883	67,989	71,177	67,874	64,444	68,198	67,294	71,436	5%	6%	267,923	271,372	1%

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
Total			104,412

<u>Newly signed contract (2023)</u>		(THBmn.)
• VO & Others		5,905
<u>Active Major Projects</u>	STEC	(THBmn.)
• 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

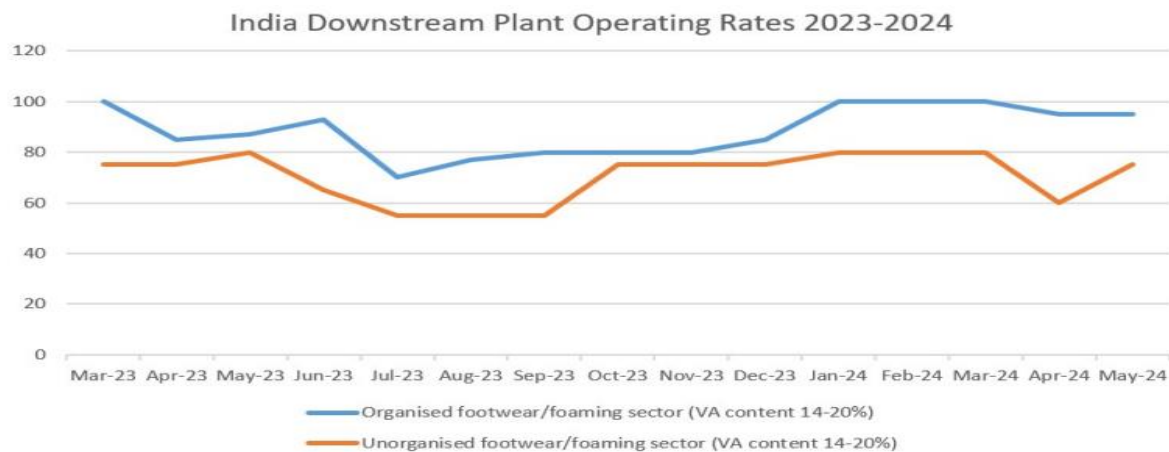
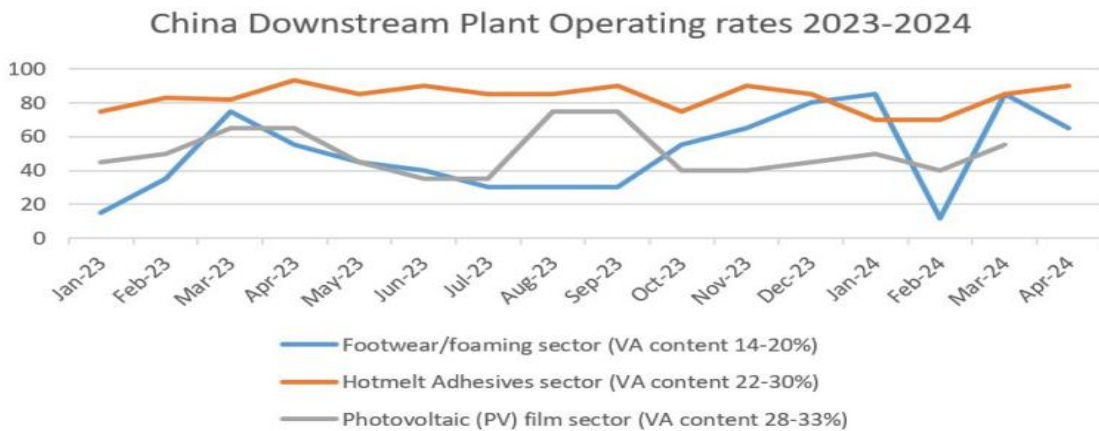
Variables to watch... construction overseas

Short Term Potential Drivers : Cement Export Market

- Reconstruction from flood - Dubai experienced its first major flood & 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). Off to a slow start in 2023 but expected to accelerate as funding becomes accessible. The country imports close to 7.0 million tons of cement and Vietnam is the largest supplier
- Cement demand for 2024 is forecast to grow by as much as 4%; challenges in the housing market is expected to be offset by demand created relating to the ramp up of the USD1.5 trillion infrastructure bill against the backdrop of the November 2024 Presidential election. A stronger US market will help soak up excess supply in the Asian region and could allow price to improve.

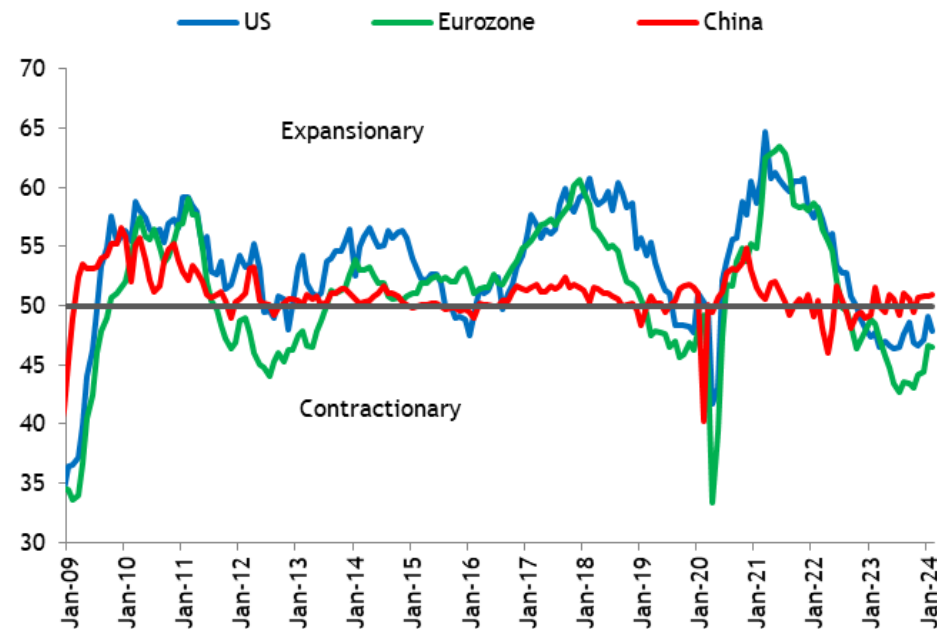
Variables to watch... manufacturing

Operating rates of key EVA conversion industries losing momentum



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

PMI data up to the end of Feb still indicate weak manufacturing activities globally. Euro Zone PMI has been improving



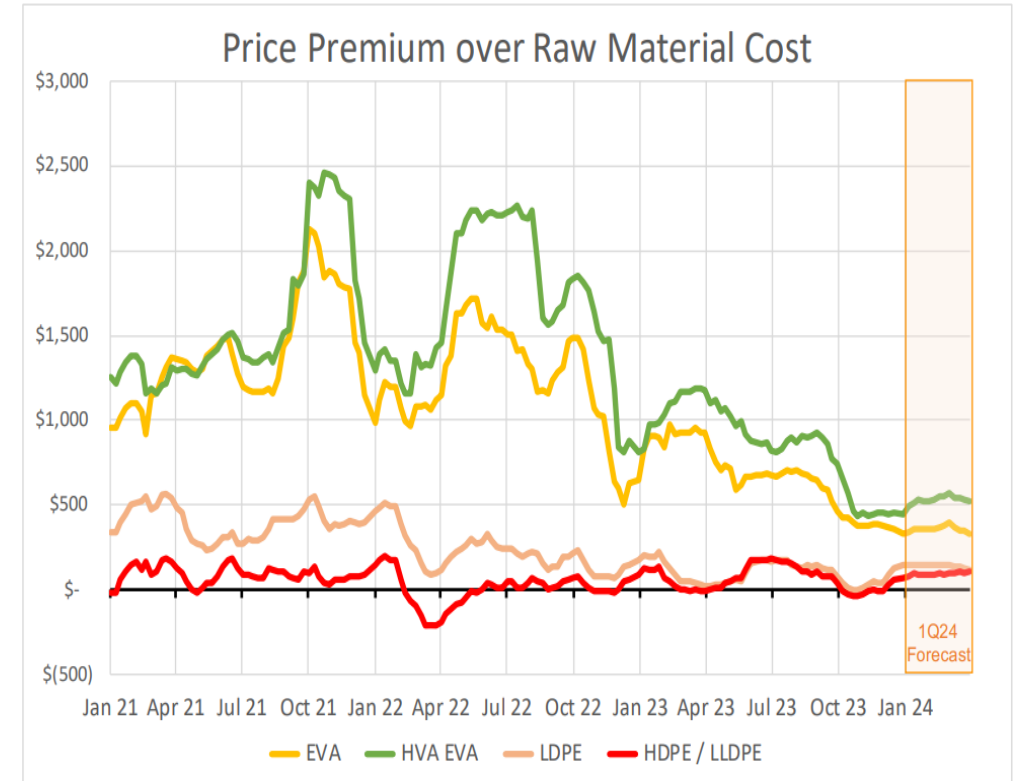
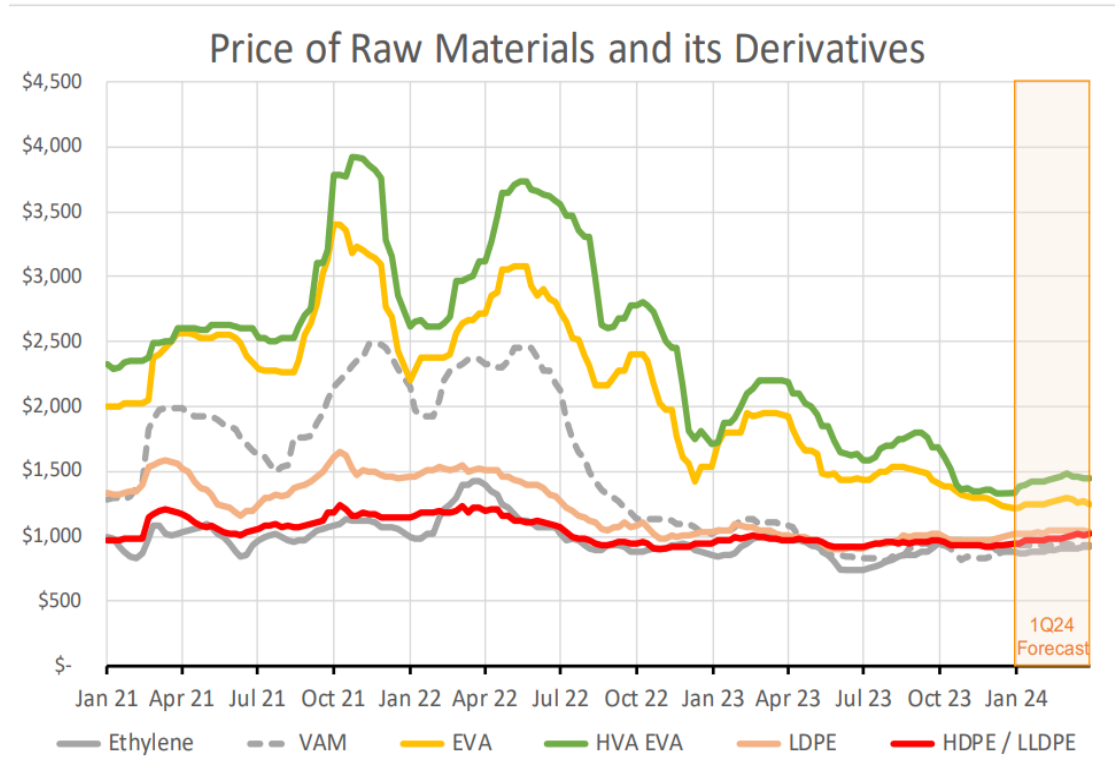
Variables to watch – manufacturing

Spread is improving as EVA price is catching up

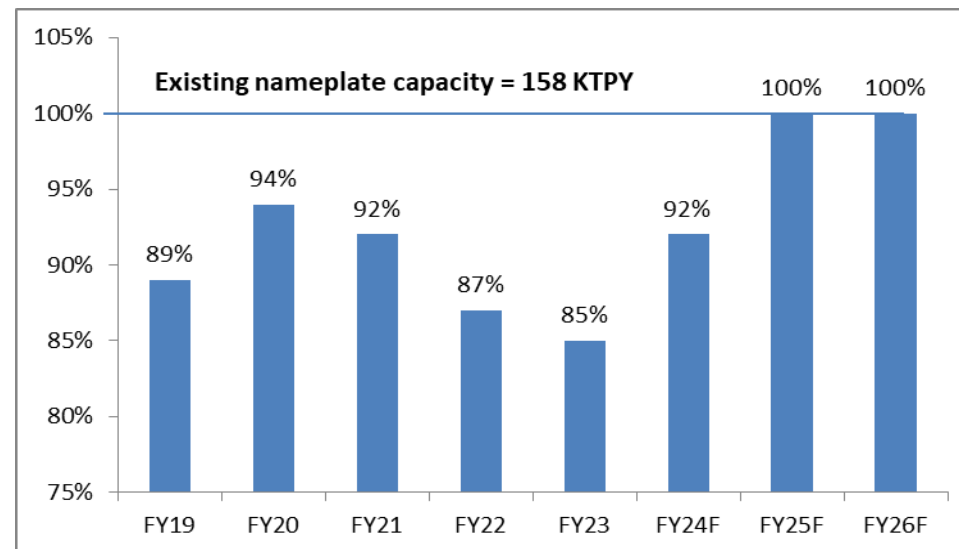
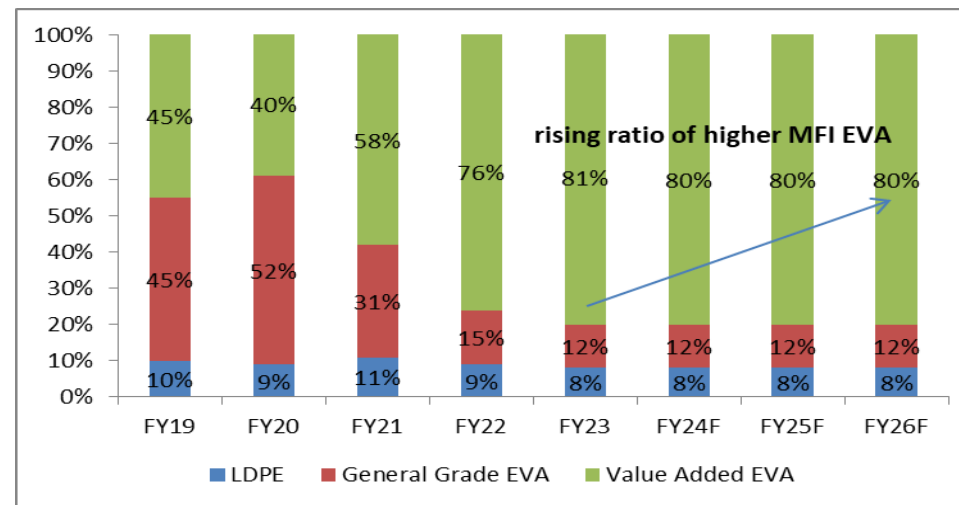
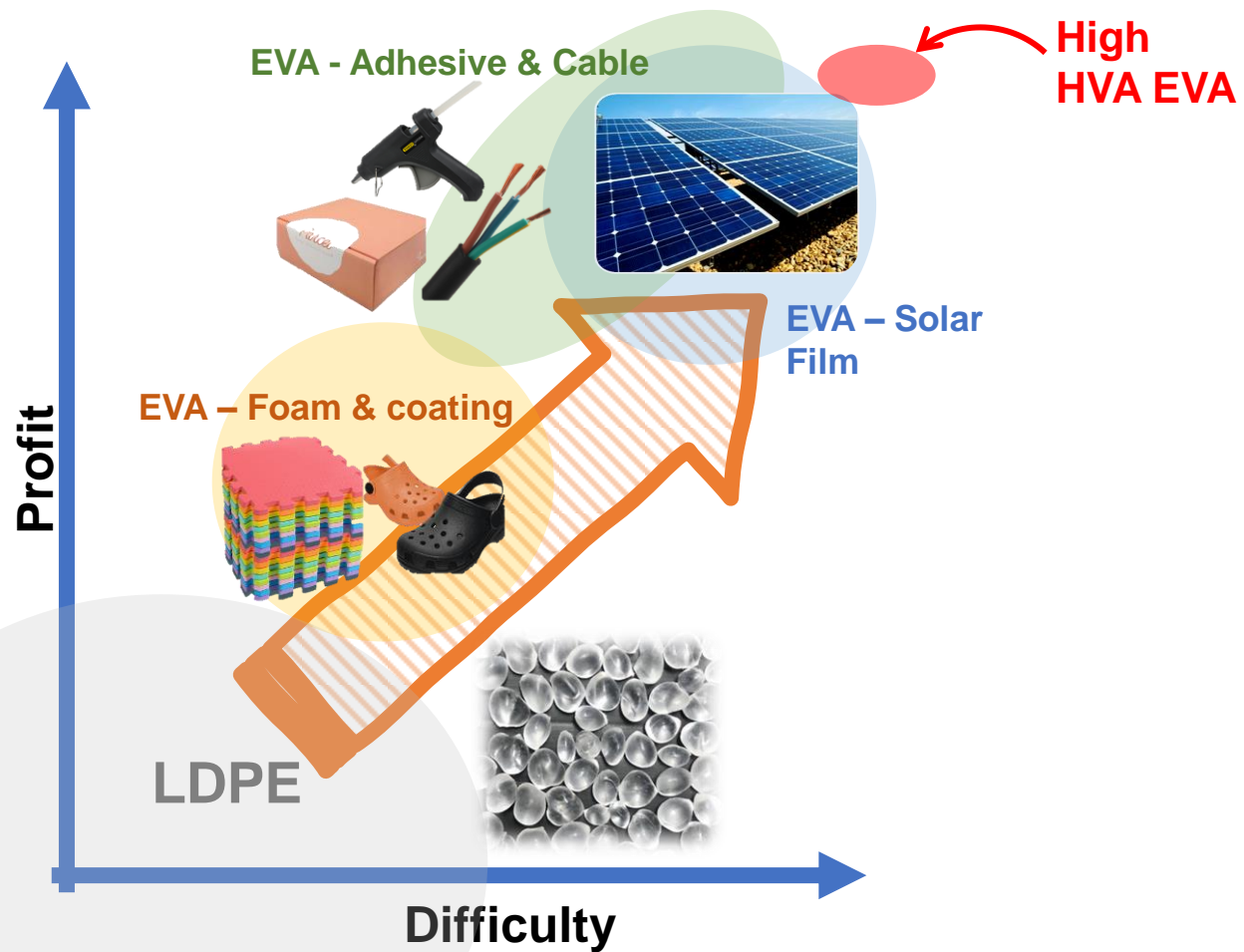
Feedstock costs - EVA northeast Asia



Variables to watch...manufacturing

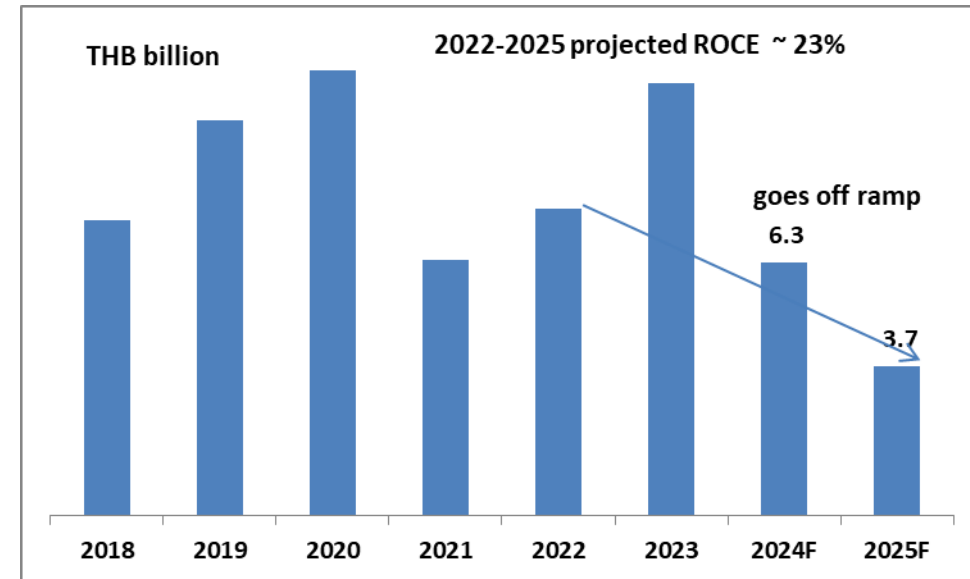
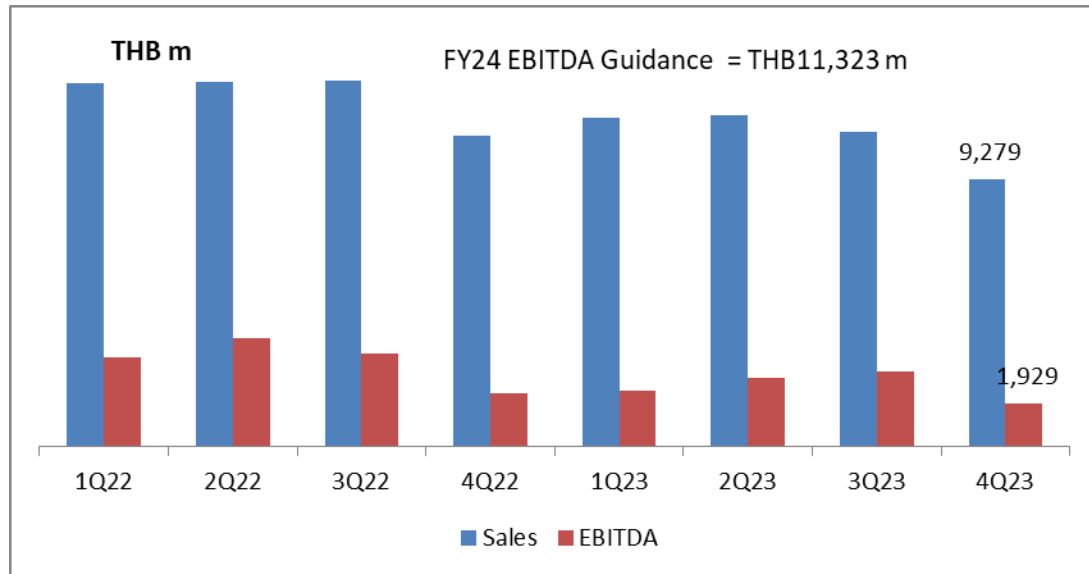


TPIPL position in the market





EBITDA and Capex - Guidance



- Achieved 2023 EBITDA was THB10,055 million hitting guided target
- Guidance for 2024 EBITDA is THB11,323 million, + 12.6% YoY

Key drivers:

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

- Peaked in 2023 and goes off ramp going forward
- Major undertaking continuing plant modification of the 150MW coal-fired power plant
- Two new small MSW projects



Environment, Social and Governance (ESG)



Carbon-Related Merits



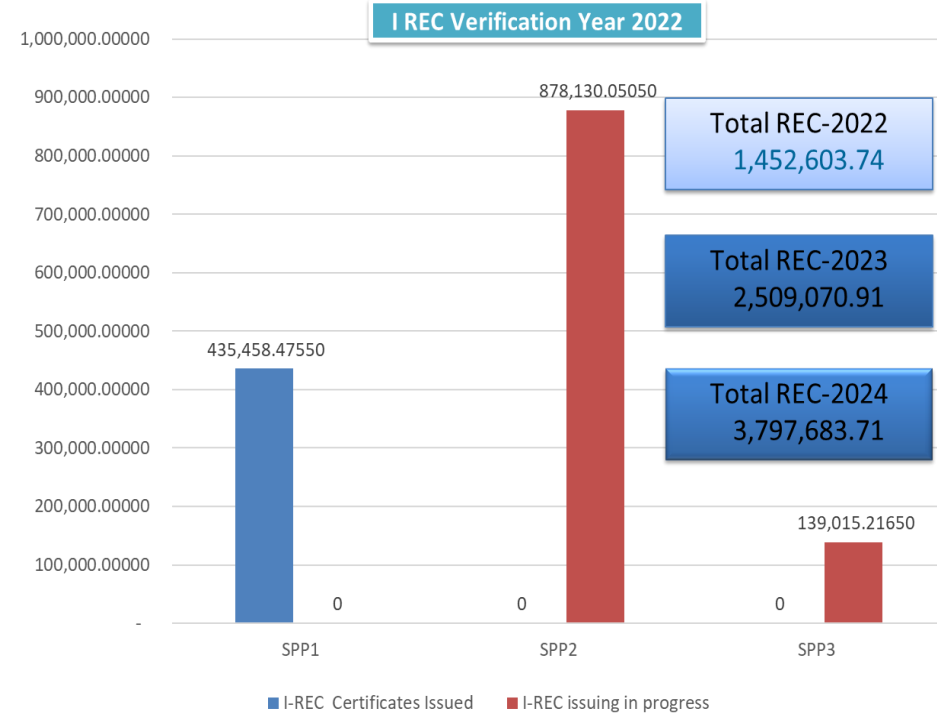
TIIPP – T-Ver Certificates

Carbon Credit T-VERs Registered by TGO

MSW Received

1. July 2015 - May 2016	13,483 tCO ₂ eq
2. May 2016 – Apr 2017	68,573 tCO ₂ eq
	82,056 tCO ₂ eq
3. Sold out to Zukunft des Konzentoffmarktes -	34,690 tCO ₂ eq
4. Remain	47,366 tCO ₂ eq
5. Approval Credit 2022	717,931 tCO ₂ eq
6. Approval Credit 2023	793,932 tCO ₂ eq
7. In the certification process	1,260,263 tCO ₂ eq

TIIPP – Renewable Energy Certificates





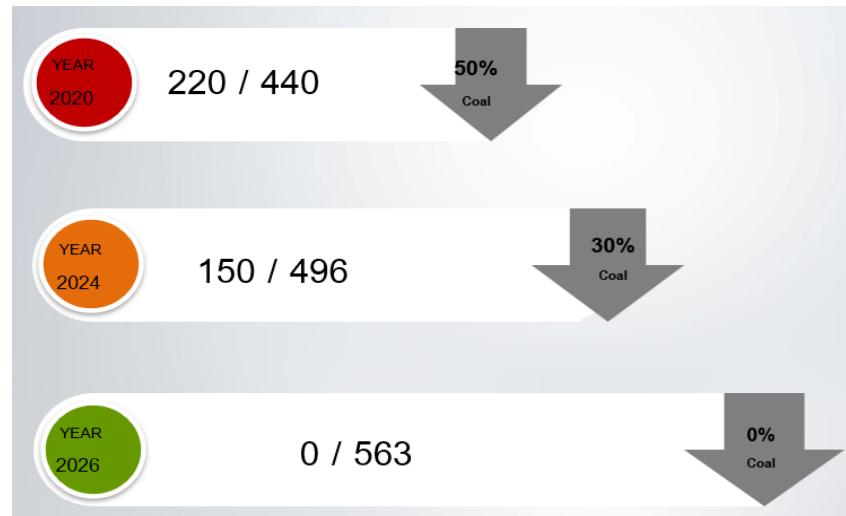
Our Carbon Situation (Scope 1)



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 ₂
Reduce MSW to land fill in Year 2026		
17,000 Ton / Day	5.2 mil Ton / Year	12.0mil Ton-CO ₂

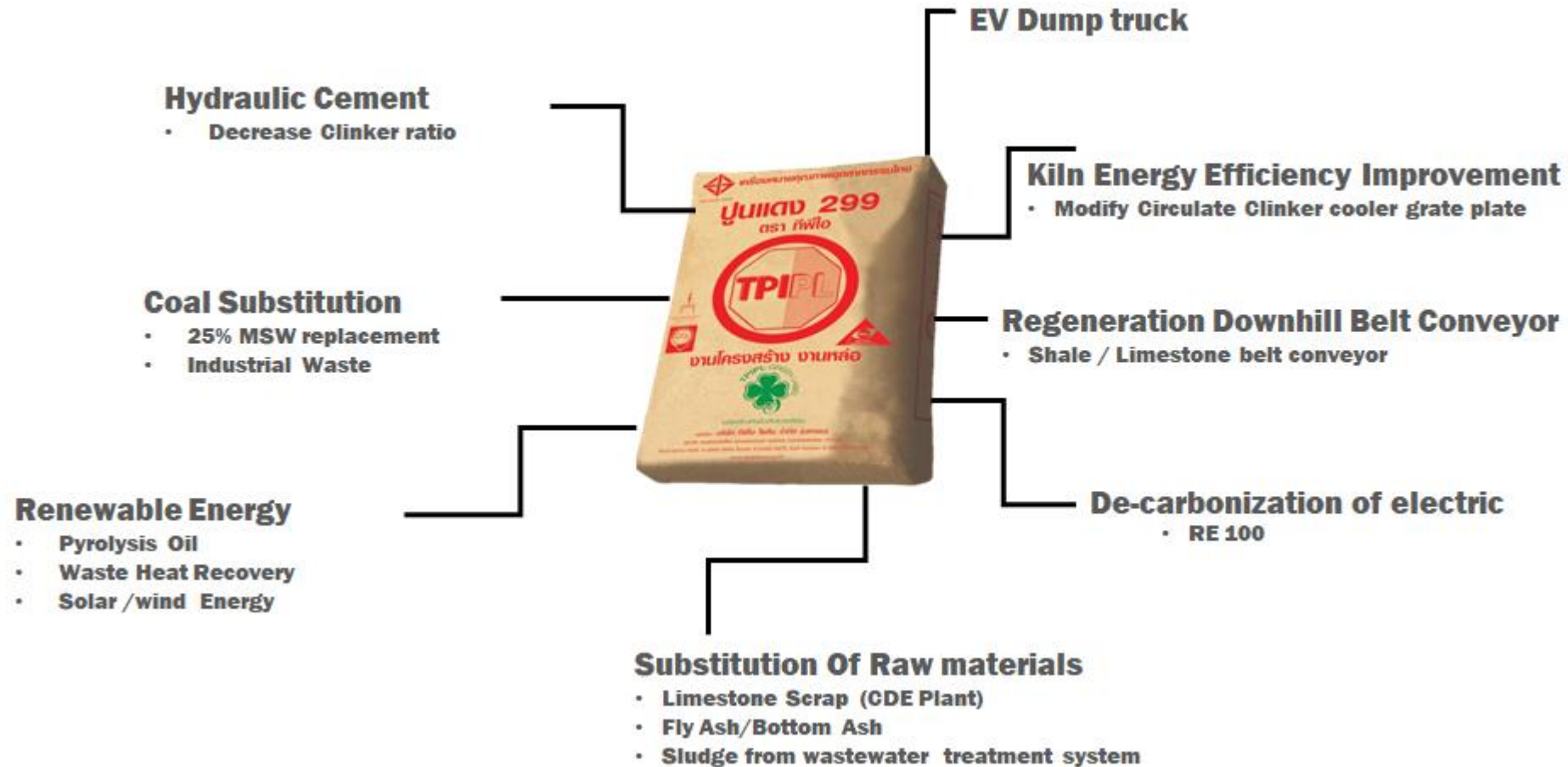
Fossil free by 2026



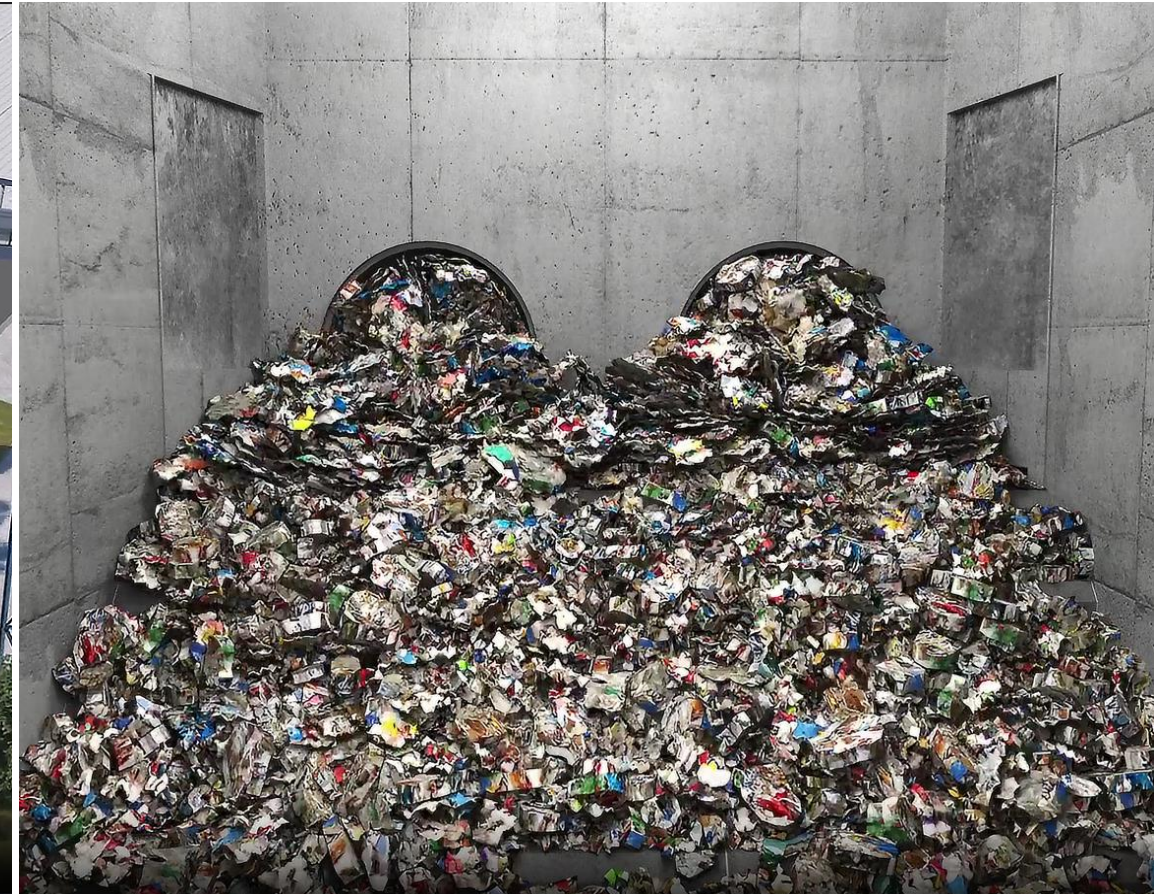
EUA – Carbon Allowance Price



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

* Other local cement producers use IW – industrial wastes

CDE for Limestone Scrap – reduce mineral waste



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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
Total				47.92	6,357	~THB0.34/shr; BVPS = THB3.41 (YE23)

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

Share price = THB1.44 (8/03/24)

- 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. 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 YE 2023, 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

TPIPL: Best Sustainable Development 2023



Global Business Review Magazine

3G Excellence Awards - CSR Activities 2023



3G - Global Good Governance

Most Innovative Industrial Materials Conglomerate 2023



Brands & Business Magazine

Best Corporate Governance Company in Thailand 2023



International Business Magazine



International Finance Magazine

TPIPP 3G Excellence Awards – Environmental Responsibility

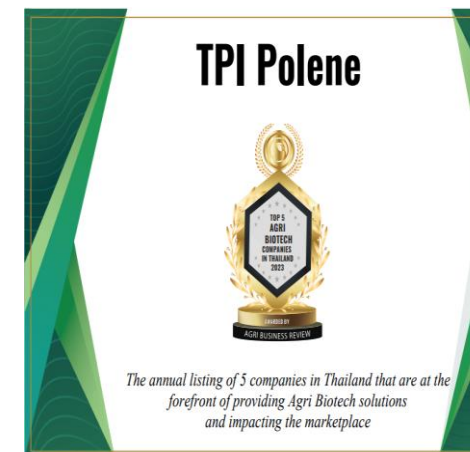


3G - Global Good Governance

International Diamond Prize for Excellence in Quality



ESQR – European Standard for Quality Research





End of Presentation

Q&A

Thank You