



TPI Polene Public Company Limited Opportunity Day – 3Q 2024 Performance

2 December 2024



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Topics

Background
Performance Review : 3Q and 9M 2024
Trends and Outlook
ESG & Sustainability

Construction Materials

- **Green Cement** - 4 lines totaling 10.8m tons clinker capacity 13.5m tons cement basis)
 - 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
- **Pyrolysis & WTE-MSW** – 14,400 tons per day
- **Adhesives-Paints**
- **Other Promising ventures**
 - **All Solid & Liquid waste disposal** including hazardous materials
 - **Life and Non-life Insurance**

ESG Ventures

Specialty Polymers/Chemical Products Bio-Organic Products For Agriculture /Livestock and Healthcare Products for Humans

- **Specialty Polymers** – 158,000 tons capacity
 - HVA, customized with in-house proven R&D
 - EVA Emulsion & powder – 25,000 tons capacity
 - **Nitrate** - 92,700 tons Ammonium Nitrate, 21,750 tons Nitric Acid
 - **Solar Sheets** - 10 lines with 20,100 tons capacity
- ### Food Safety and Food Security
- **Agriculture / Livestock/Aquaculture**
 - **Bio Organic** fertilizer & compounds for plants; **Wood Vinegar**- insect prevention liquid replacing chemical insecticides
 - **Probiotic & Synbiotics** for livestock farming and aquaculture to reduce Feed to Meat conversion ratios and methane gas emission from animals
 - **MicromKnox**, viruses killers of Foot & Mouth Disease and Bird Flu for livestock & poultry farming
 - **Wellness & Healthcare Products**
 - **Bio Knox** – RNA and DNA virus killer
 - **Bio San** – suppresses pathogenic bacteria, viruses and bad smell in the toilets and garbage piles
 - **Printemp Marie Rose Mouthwash** kills viruses and bacteria
 - **EESY Clean** dishwashing Liquid
 - **Drinking water**
 - **TPI Green** – fruit and vegetable cleanser
 - **Microme Knox solution** – bacteria and virus killer
 - **Provita** - Encapsulated probiotic drink to help digestive systems and suppress pathogenic E. coli bacteria to avoid food poisoning

Energy & Utilities

- **Current capacity 440 MW:** >65% Green power and target to **100% green by end 2025**
- **Alternative Fuels MSW Power Plant – 250 MW**
 - Largest in the World (privately-owned)
 - 15 pre-sorting facilities in key provinces
 - Nine new sorting facilities under construction
- **Waste Heat Recovery Power Plant - 40 MW**
- **Coal/MSW Power Plant – 150 MW**
 - Target 100% MSW by 2025; 1 broiler COD 8/24; Phase 1 will be online Jan-25
- **MSW power plant projects in two provinces** (under implementation)
- **Solar Farm – 73.216 MWdc** (61.226 MWac basis). 37.2MW online, completed by June 2025. PPA signed
- **5 MW solar roof capacity**
- **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 stations



WE BUILD THE ESG 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



TPI Super Special Armour Nano Paint



Concrete Roof Tile and Fiber Cement



TPI Healthcare Products



TPI Agricultural Products



TPI Livestock Products



TPI Aquaculture Products



2024 Initiatives

Green Cement

Green Building Products

Innovative Specialty Polymers

Bio-organic Products for Food Safety and Food Security

Green Energy

Power Capacity

Cost efficiency



2024: Initiatives – Sustainability Products

Green Cement/ Green Building Products*

TGO Certified

1	47.2 kgCO _{2e} /kg
2	59.9 kgCO _{2e} /kg
3	50.7 kgCO _{2e} /kg
4	47.2 kgCO _{2e} /kg
5	40.4 kgCO _{2e} /kg
6	50.1 kgCO _{2e} /kg
7	34.6 kgCO _{2e} /kg
8	40.4 kgCO _{2e} /kg
9	37.9 kgCO _{2e} /kg
10	30.1 kgCO _{2e} /kg
11	34.6 kgCO _{2e} /kg
12	7.03 kgCO _{2e} /kg

Synergistic VAE products: certified



- Corrugated paper
- Labels
- Furniture
- Paper core
- Parquet

Green Cement – basis for Green Building Products



Nearly 70% of segment sales

Green Innovation: HVA Products

TPI WOOD
ไม้สังเคราะห์จากไม้จริง

TPI MARBLE
สังเคราะห์เหมือนหิน

US Patent – US 11 739 026 B2 (29/8/23)

US Patent – US 11 739 026 B2 (29/8/23)

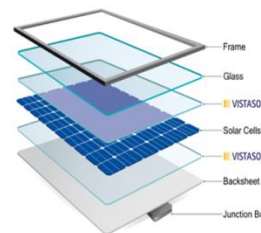
TPI Digital Printing Board

- Beautiful, Classy
- Able to use both indoors and outdoors
- Termites-free
- Water Resistance

Volume sales GR >10%, Q/Q, Y/Y

"Reduce the use of real wood And help deforestation"

VISTASOLAR EVA encapsulant for photovoltaic module (PV)



- VISTASOLAR:
- Improves module durability
 - Suitable for conventional PV panels & building integrated PV (BIPV) systems

glasstec 22-25 OCT | DÜSSELDORF | WE ARE 2024 | GERMANY | GLASS

VISTASAFE™ HIGH PERFORMANCE THERMOSETTING RESIN FOR ARCHITECTURAL AND DESIGN LAMINATION

VISTASOLAR™

Introduced to the market mid 3Q24

Food Safety/Food Security ...towards regenerative agriculture

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
- TPI Purple Fertilizer
- TPI Green Fertilizer
- Tham Khang khao bio-organic fertilizer
- TPI Hoof Guard
- TPI Bio Pets
- TPI Yellow Powder
- TPI Synbiotics and Probiotics
- TPI Bio San
- TPI Microme Knox

Segment sales +47% Q/Q, 24% Y/Y

* Launched June 2023



EBITDA margin comparable to peers; valuation cheaper

Peer comparison: EBITDA margin

	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	
ConsMat												
Peer 1 - Cement & Green Solutions on	12.0%	9.8%	7.7%	4.0%	13.8%	14.3%	8.5%	9.0%	16.8%	15.2%	11.9%	
Peer 2	22.0%	25.0%	13.0%	7.0%	15.2%	15.4%	17.7%	24.5%	24.0%	22.3%	21.4%	
TPI Polene	13.0%	19.3%	10.3%	8.7%	5.2%	11.7%	17.4%	9.1%	22.7%	17.9%	-3.3%	<i>Due to FX loss W/O FX = 11.5%</i>
Petrochemical												
Peer 1 - operating only	6.7%	2.0%	3.4%	-2.9%	5.2%	3.0%	5.0%	1.0%	3.0%	3.0%	3.0%	
Peer 2 - polymers & chemicals	5.0%	9.0%	10.0%	0.0%	8.0%	3.0%	10.0%	5.0%	8.0%	5.0%	8.0%	
Peer 3 ** - value added PE	19.6%	17.3%	15.4%	20.0%	16.9%	19.8%	18.2%	18.0%	13.3%	17.0%	16.4%	
TPI Polene *	36.0%	41.4%	46.0%	28.0%	26.0%	28.8%	28.3%	14.5%	16.5%	26.4%	10.5%	

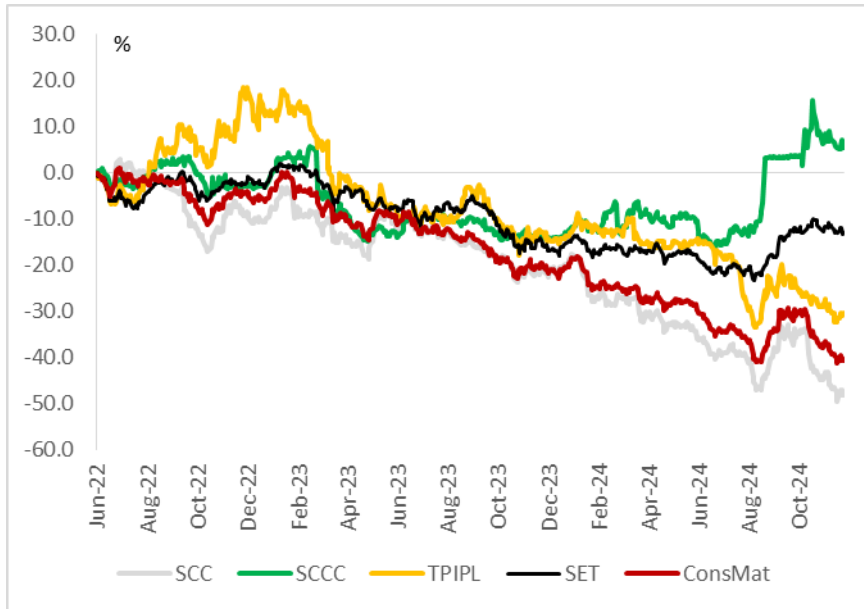
* Includes Nitrate ** Value Added PE, FY ends March so 2Q corresponds to 1Q of peers.

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 (THB)	Upside (%)	EPS grw. (%)		P/E (x)		P/B (x)		ROE (%)		Div yld (%)	
						24E	25E	24E	25E	24E	25E	24E	25E	24E	25E
SCC TB	7,517	192.00	2.9	225.00	17.2	-34.9	69.0	26.6	15.7	0.6	0.6	2.4	3.9	2.1	3.1
SCCC TB	1,396	162.00	0.2	180.00	11.1	45.6	8.2	12.6	11.7	1.4	1.3	11.5	11.7	6.8	6.8
PTTGC TB	3,358	25.75	21.1	26.00	1.0	-175.5	70.3	75.4	44.3	0.4	0.4	0.5	0.9	0.7	0.7
EPG TB	337	4.16	5.4	7.80	87.5	13.9	8.1	8.3	7.7	0.9	0.8	9.8	9.5	6.2	7.8
TPIPL TB	613	1.12	10.9	1.70	51.8	2.1	-1.4	6.6	6.7	0.4	0.4	5.8	5.6	8.7	8.6
GULF TB	21,719	64.00	25.3	64.00	0.0	14.0	2.6	42.1	41.0	6.1	3.7	15.8	12.5	1.5	1.5
BGRIM TB	1,591	21.10	18.3	24.00	13.7	-5.9	17.8	44.7	37.9	1.4	1.4	5.4	6.0	1.9	2.2
TPIPP TB	734	3.02	2.6	3.2	6.0	0.3	-26.7	7.0	9.5	0.7	0.7	10.4	7.4	7.1	5.3

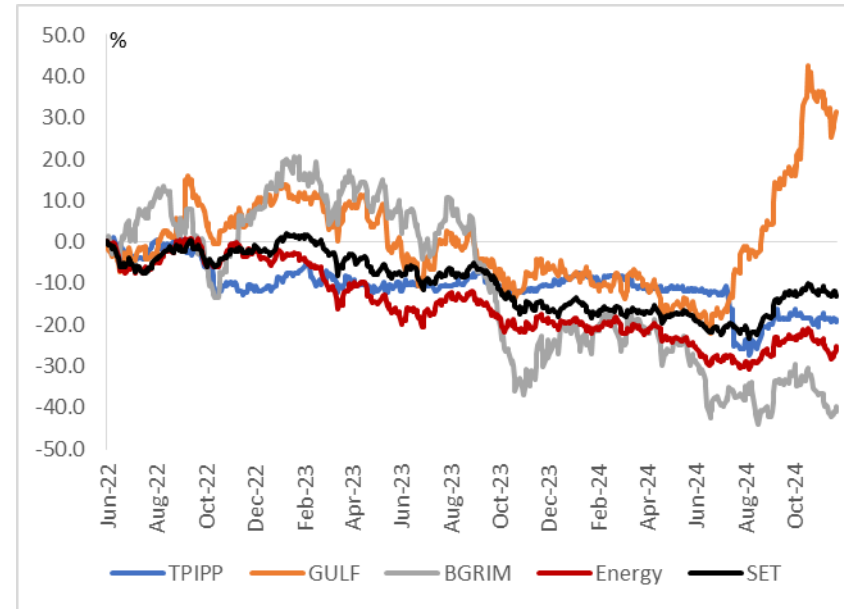
Closing price: 22 Nov 2024, Source: Bloomberg, Brokers, SET MD&A filing

Share Price Performance



High performing Siam City Cement starting to see profit taking

Siam Cement, TPI Polene dragged mainly by negative petrochem trends; but looks like negative news is priced-in



High performing GULF starting to see profit taking

Overall not attractive sector; low Ft

Delay in capacity bidding; lacking meaningful growth driver

Closing price: 22 November 2024 , Source: Bloomberg

Dividends Declared For The 1H 2024 Operations

	1H23 EPS	1H DPS	1H24 EPS	1H DPS
TPIPL				
EPS (THB)	0.10	0.03	0.07	0.02
DPR		31%		28%
Share price (29/8/24)				1.20
Prospective yield - not annualised				1.7%
TPIPP				
EPS (THB)	0.24	0.12	0.19	0.09
DPR		51%		49%
Share price (29/8/24)				2.94
Prospective yield - not annualised				3.1%

* 1H - interim; XD for 1H 2024 is 24 September



Performance Review: 3Q-9M 2024

3Q- 9M P&L Snapshot



THB million	9M 2024	9M 2023	% Y/Y	3Q /2024	2Q/2024	% Q/Q	3Q/2023	% Y/Y
Revenue from sale of goods	26,940	33,528	(20)	9,147	8,742	5	10,838	(16)
Cost of sales of goods	21,021	25,716	(18)	7,293	6,686	9	8,008	(9)
Gross Profit	5,919	7,813	(24)	1,854	2,056	(10)	2,830	(35)
SG& A	3,456	4,076	(15)	1,165	1,128	3	1,304	(11)
Finance cost	1,801	1,488	21	587	587	0.1	536	9
Tax income (expense)	(253)	(302)	(16)	(4)	(174)	(98)	(146)	(97)
Net foreign exchange gain (loss)	(281)	460	nm	(780)	99	nm	203	(484)
Normal operating profit	2,201	3,735	(41)	639	937	(32)	1,430	(55)
Profit attributable to owners of the parent	956	3,054	(69)	(393)	606	nm	1,237	(132)
Profit for the period	1,667	3,893	(57)	(145)	862	nm	1,487	(110)
EBITDA (including FX)	6,385	8,127	(21)	1,328	2,554	(48)	2,985	(56)

Common Size

Revenue from sale of goods	100	100		100	100		100	
Cost of sales of goods	78.0	76.7		79.7	76.5		73.9	
Gross Profit	22.0	23.3		20.3	23.5		26.1	
SG& A	12.8	12.2		12.7	12.9		12.0	
Finance cost	6.7	4.4		6.4	6.7		4.9	
Tax income (expense)	-0.9	-0.9		0.0	-2.0		-1.3	
Net foreign exchange gain (loss)	-1.0	1.4		-8.5	1.1		1.9	
Normal operating profit	8.2	11.1		7.0	10.7		13.2	
Profit attributable to owners of the parent	3.5	9.1		-4.3	6.9		11.4	
Profit for the period	6.2	11.6		-1.6	9.9		13.7	
EBITDA (including FX)	23.7	24.2		14.5	29.2		27.5	

Breakdown

Segment	3Q24 Sales	% Y/Y	9M24 Sales	% Y/Y	3Q24 EBITDA	% Y/Y	9M24 EBITDA	% Y/Y
ConsMat	58%	-12%	57%	-18%	-13%	-117%	30%	-11%
Specialty Polymers/Chemicals	20%	-36%	20%	-35%	14%	-76%	15%	-59%
Energy & Utilities	22%	2%	22%	-4%	97%	13%	55%	-4%
Agri & Others	0.4%	9%	0.4%	9%	1.9%	nm	0.4%	453%
Total (THB mn)	9,147	-16%	26,940	-20%	1,328	-56%	6,385	-21%

* Group basis

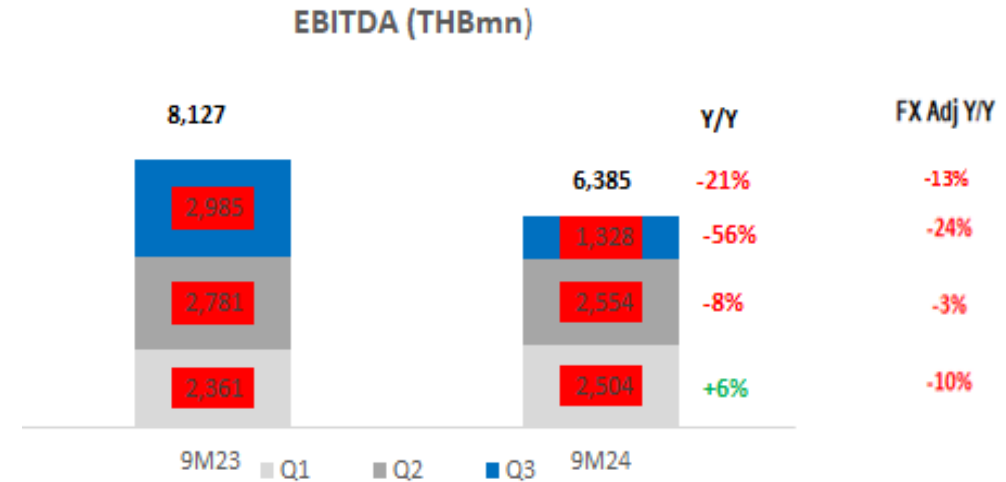
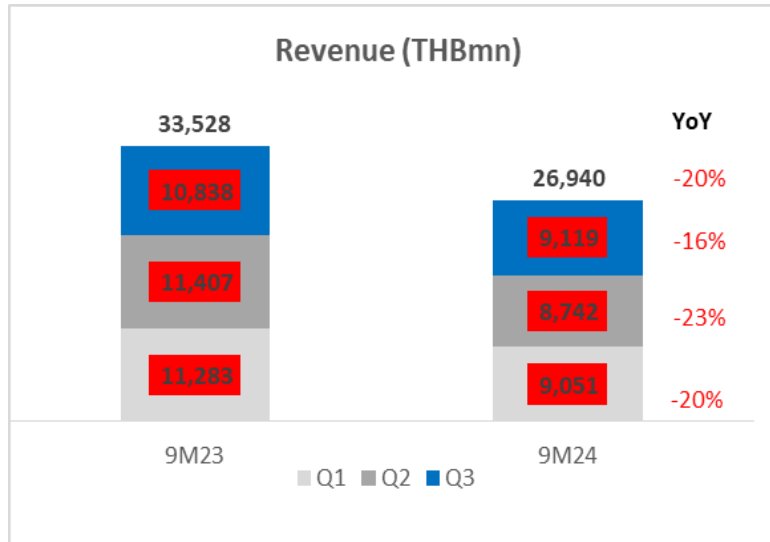
Sales takeaway :

- The composition of sales is similar in 3Q24 and 9M24 in that ConsMat division accounts for nearly 60% of sales.
- Although still small the Agri/Other division has marginal increase in contribution for the first 9M of 2024

EBITDA takeaway:

- In 3Q24 the ConsMat and Plastic EBITDA turned negative and this watered down its contribution into the 9M 2024 EBITDA generation; due to price dumping 1) **in the regional clinker market** by Vietnamese, Indonesian and Chinese manufacturers and 2) **in the regional polymer market** by South Korean, Chinese and Saudi Arabian manufacturers
- Due to the negative EBITDA in ConsMat, the contribution of Energy & Utilities division into the Group's EBITDA increased to nearly 100%

Quarterly Progression



Takeaways:

EBITDA in the 9M 2024 was down **21% Y/Y** dragged particularly by the sizable contraction in 3Q 2024 that in turn was due to large FX losses. Adjusting EBITDA for the forex element, the decline in the Group's EBITDA was only **13% Y/Y**. **The degree of resilience is commendable because this industry has a high operating leverage characteristic**

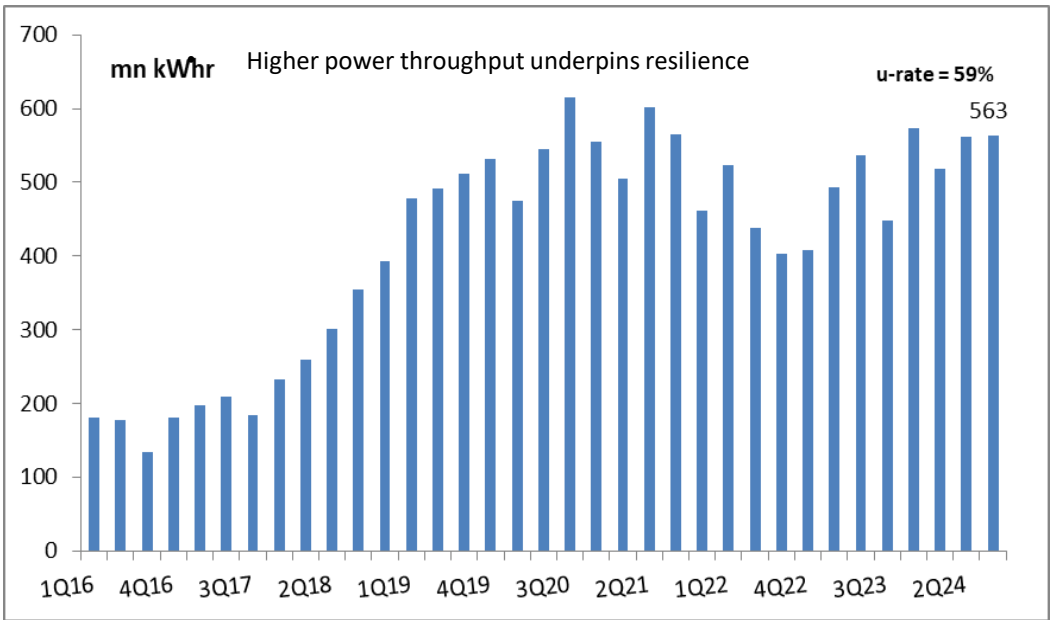
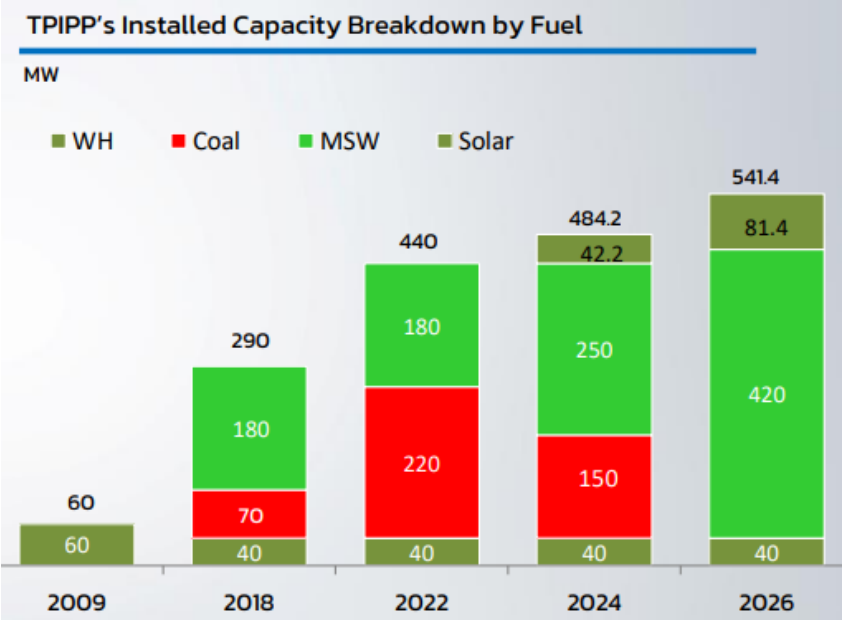
That the decline in FX adjusted EBITDA is much less than the decline of sales is due to **contributions** from the **ongoing efficiency improvements** and **cost savings measures** including the switch from coal to MSW in clinker production, switch from fossil fuels to electric power, and many other cost savings by improving processes including reduction of carbon emission to fulfill the requirements of COP29 for Thailand

Performance Snapshot

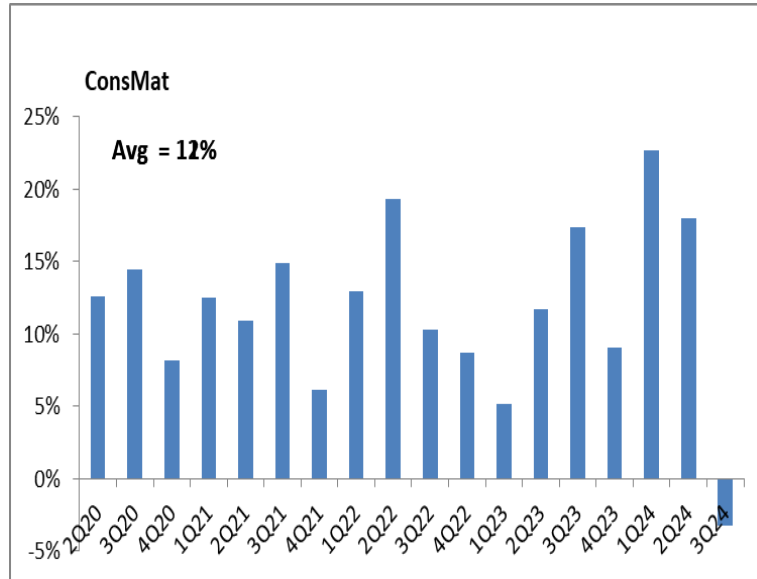


Performance Profile 9M 2024	% of Sales	% of EBITDA	EBITDA margin	Total Assets	Y/Y Growth	% of TA	EBITDA **/Assets	Continuous asset growth mainly on renewable power capacity and ESG related investments
ConsMat	57%	30%	12%	86,867	5%	51%	2.2%	Cumulative capex 2020-2024 (9M)=THB42.7B
Specialty Polymers/Chemicals	20%	15%	18%	16,003	52%	9%	6.0%	
Energy & Utilities	22%	55%	59%	63,721	24%	38%	5.5%	
Agri & Others	0.4%	0.4%	25%	2,542	0.2%	2%	1.0%	
Overall	26,940	6,385	24%	169,133 *	15%	3.8%		

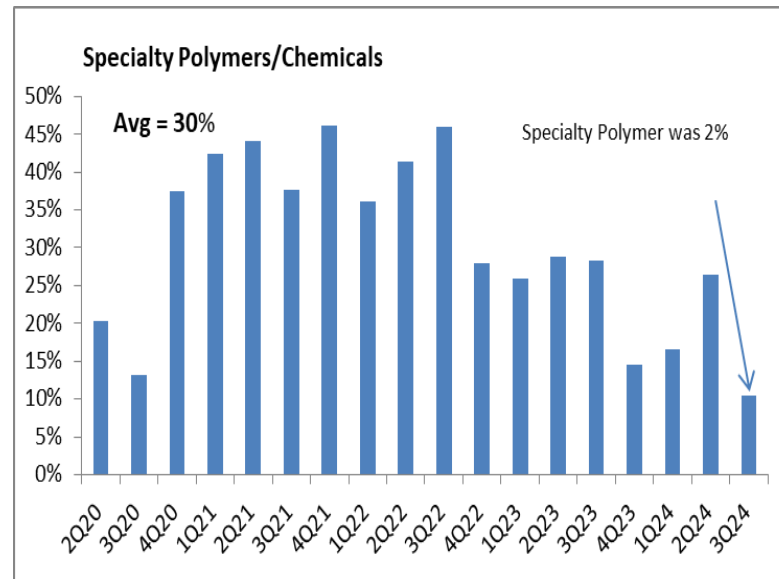
* Excluding unallocated & intragroup assets ** 9M only, not annualized



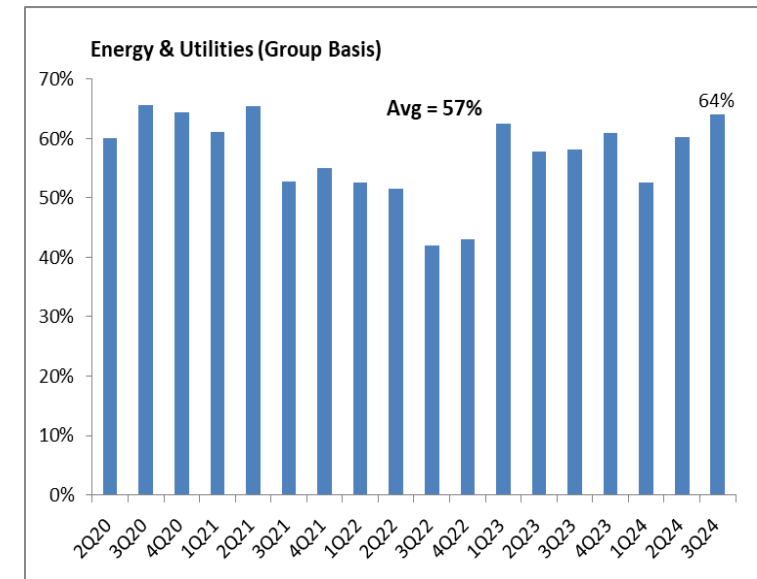
EBITDA margin quarterly



In 3Q24 ConsMat EBITDA margin was negative due to FX loss
 Without the loss EBITDA margin was positive (11.5%) but lower Q/Q (from 16.5%) due to higher unit cost relating to retrofitting shutdown in cement as well as lower price due to competition & price dumping
 CRT/FCB EBITDA was resilient Q/Q but participation is small

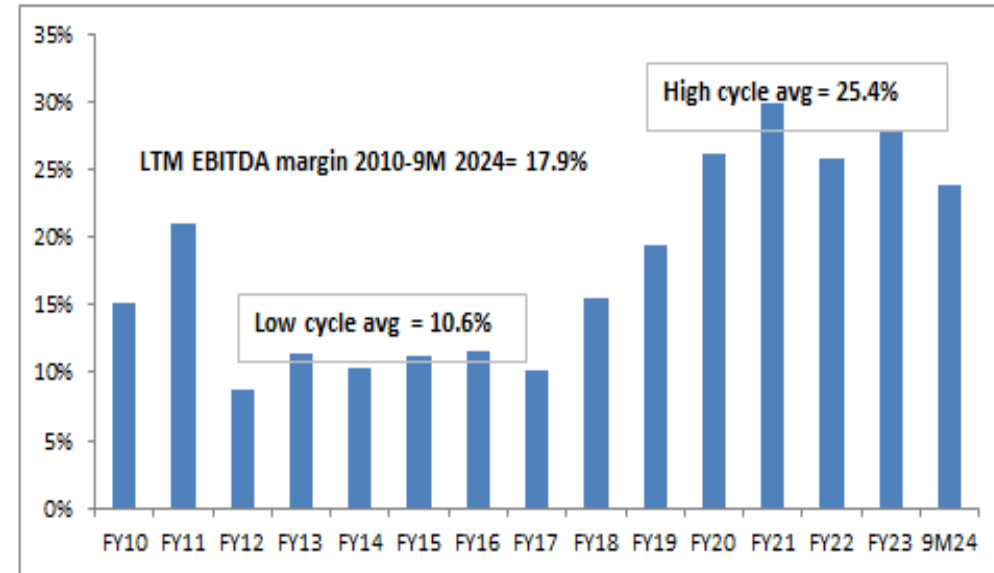
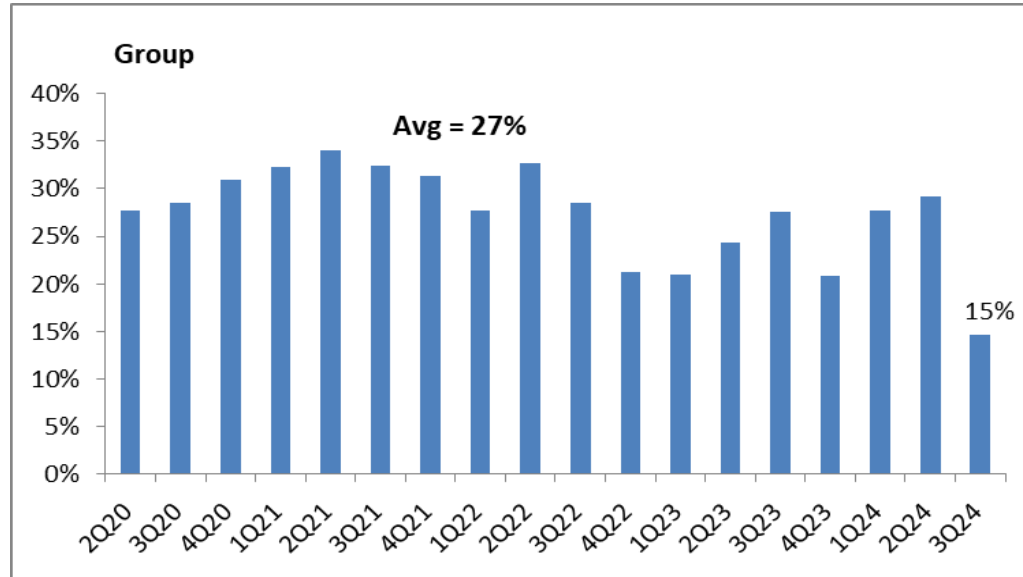


In 3Q24 the EBITDA margin for Specialty Polymer was low single digit
 EBITDA margin from Nitrate supports the division's margin; it turned slightly negative by the end of September
 Nitrate EBITDA remains strong



In 3Q24 Energy & Utilities EBITDA margin was 64%, a Q/Q improvement
 On a stand alone basis 3Q24 EBITDA margin was 42%, flat Q/Q (see separate Opportunity Day presentation)
 Power sale to parent TPIPL is about 25% of sales in value terms, priced according to grid pricing

Group EBITDA Margin Quarterly and The Longer Cycle



Over the long term, the Group’s EBITDA margin has been rising since 2019 driven by :

- 1) Contribution from power
- 2) Contribution from cost efficiency, cost savings program, process & product innovation

Both drivers are still continuing; Ongoing capex becomes more focused in advancing the long term agenda ESG and Sustainability goals

TPIPL Carbon Neutrality Target = 2047

TPIPP Carbon Neutrality Target = 2037

LTM EBITDA margin – breaking out:

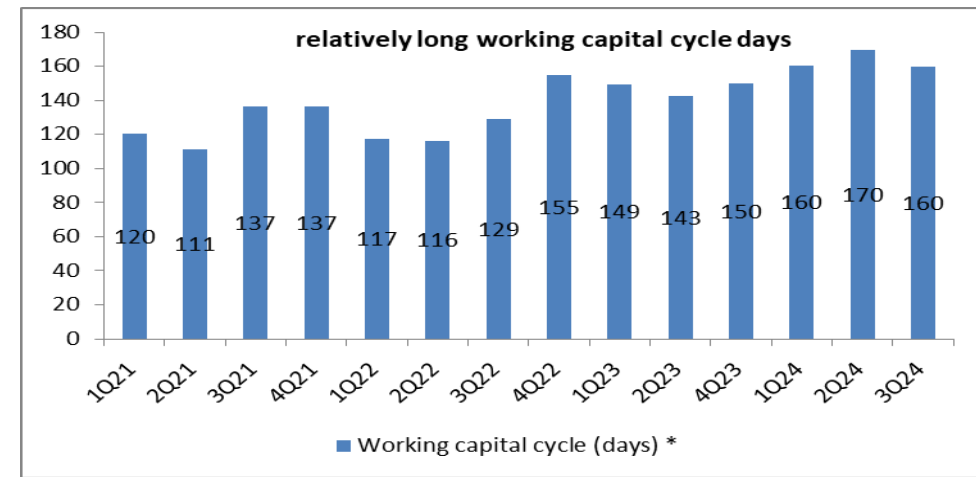
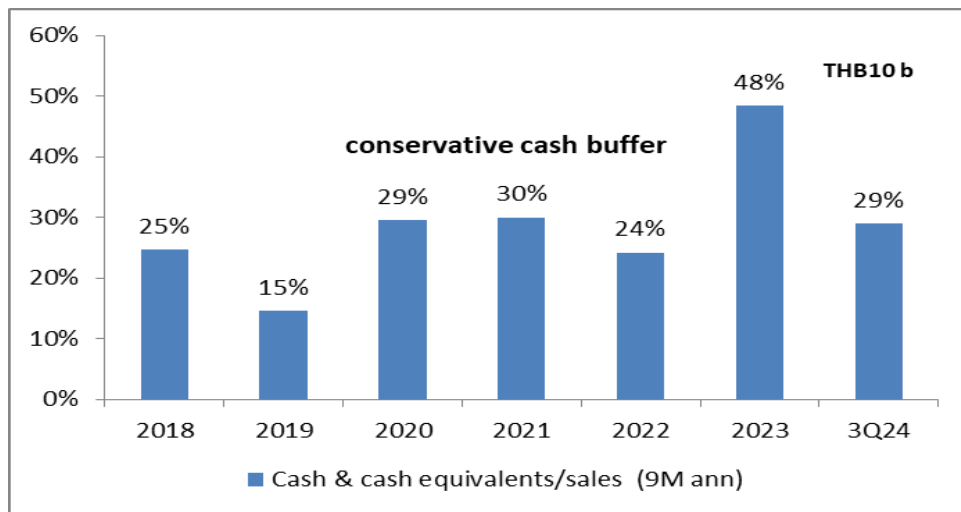
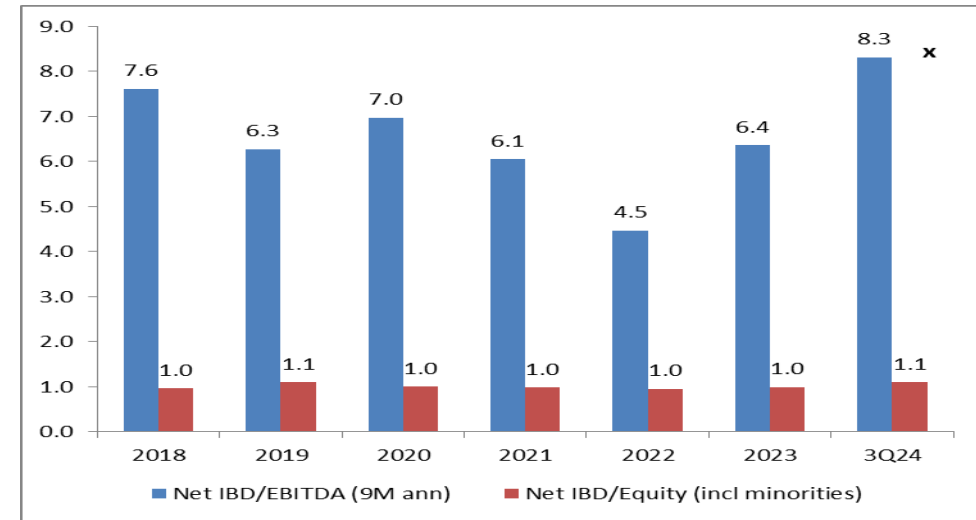
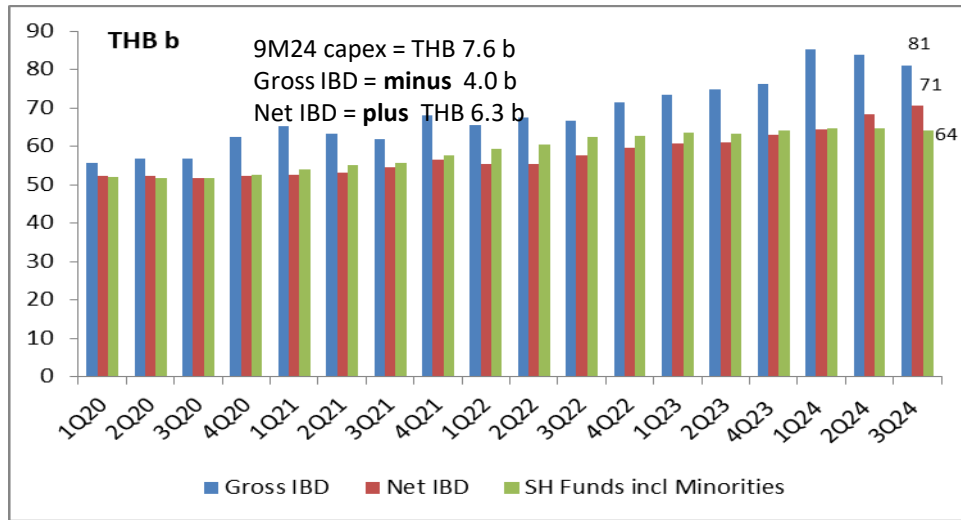


Long term mean = 17.9%

High cycle mean = 25.4%

Low cycle mean = 10.6%

Financial Conditions



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

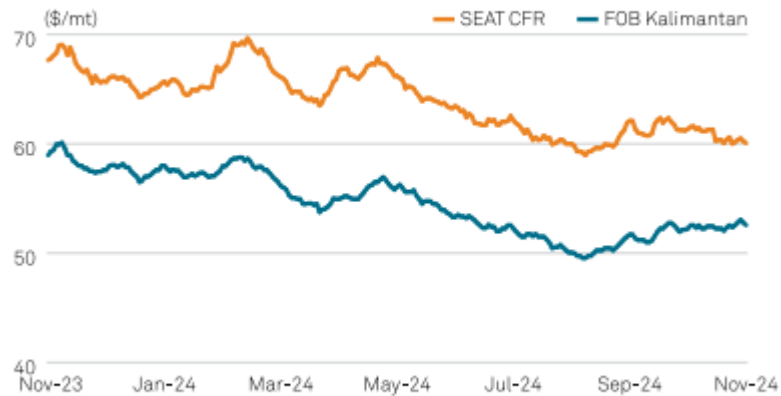


Trends

Trends – coal low, gas volatile

Coal prices off the 2021/22 highs...

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



Source: S&P Global Commodity Insights

... and volatile gas prices may influence Ft adjustments

Dutch TTF Natural Gas Futures ▶ 46.860 0.000 (0.00%)



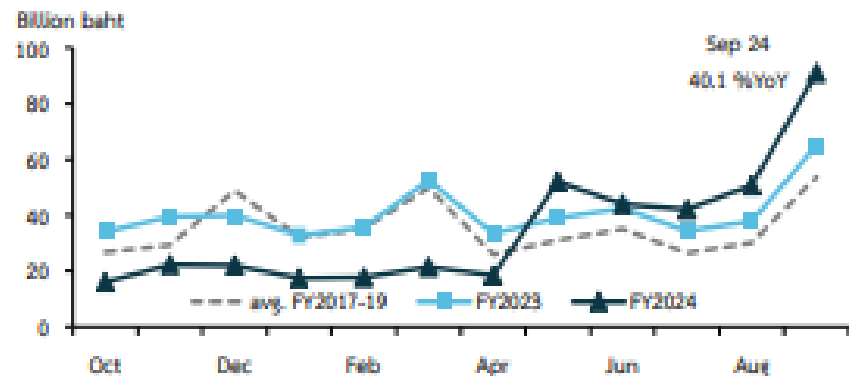
Source: Investing.com

Gas price trend is constructive to higher Ft but wholesale electricity pricing has been politicized and the formula may no longer work

Thus, higher gas prices could mean higher production cost for gas-based SPPs

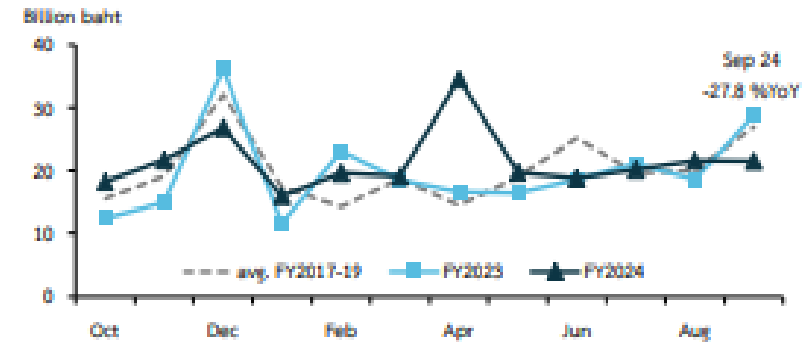
Variables to watch... capex budget disbursement

Central Government Capital Expenditure
(Excl. Subsidies/Grants and Other)



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

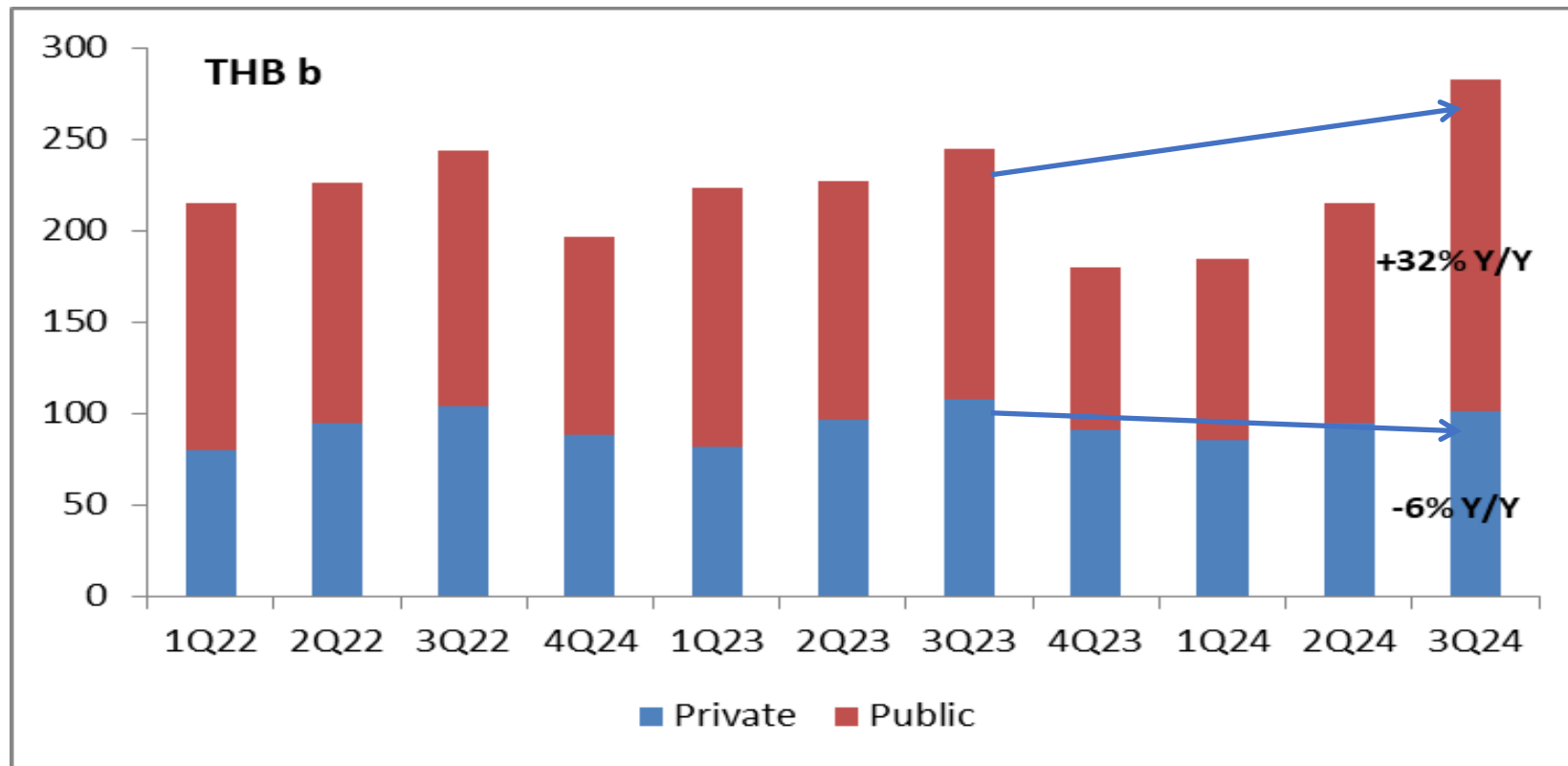
State Owned Enterprises Capital Expenditure



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

- Government's capex surged at the at the closing of the fiscal year – September
- However, SoE investments remain below trend
- Several public infrastructure projects have been announced, and roll out has begun
- As expected, La Nina brought floods but the flood season is over

Gross capital formation



Private activity sluggish

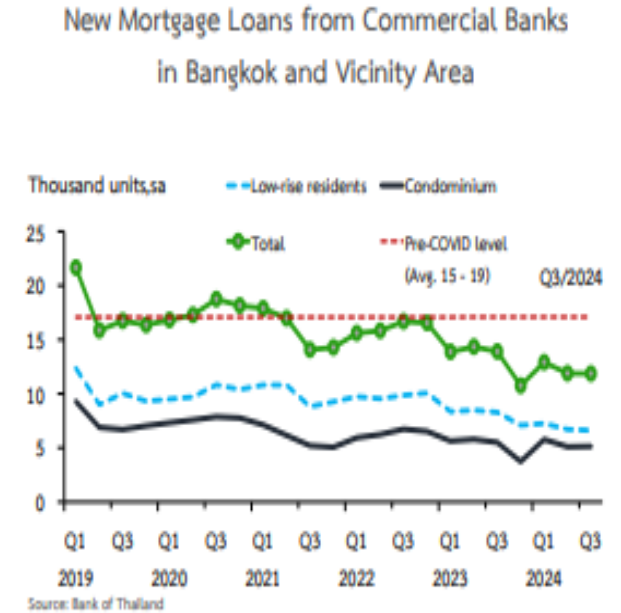
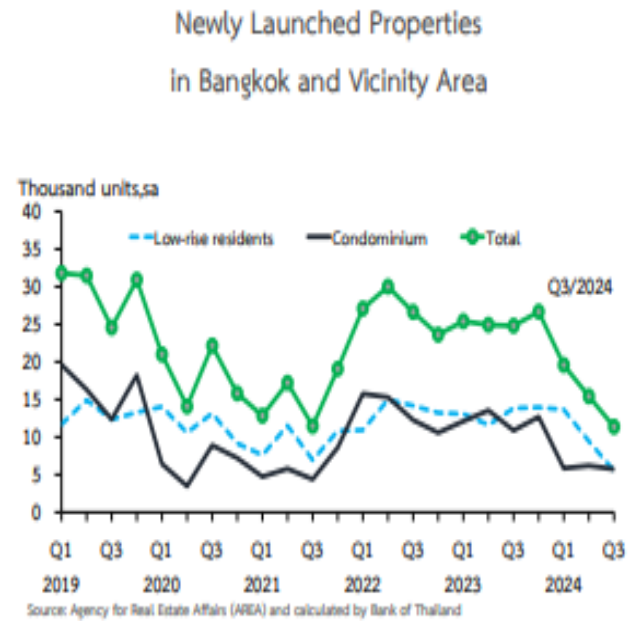
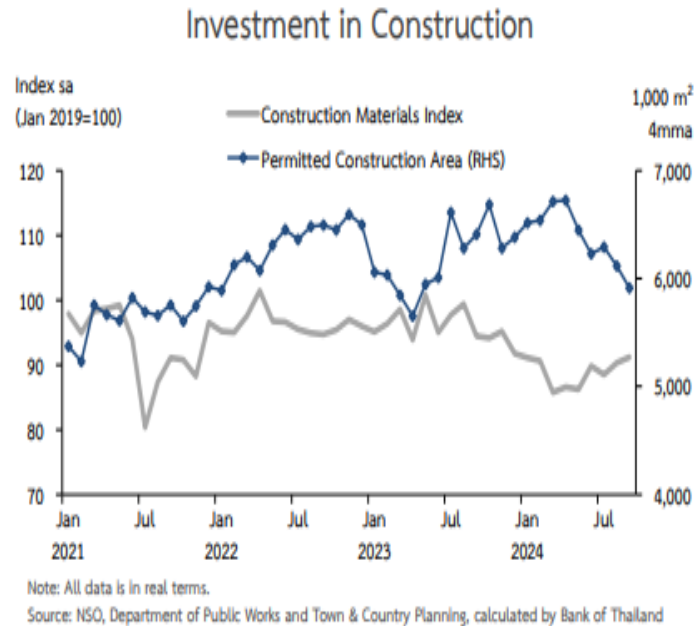
Strong rebound in public sector capital formation

Government must sustain higher gross capital formation capex to restore private sector confidence

Variables to watch... private construction

Residential Property Still Lackluster

Private sector gross capital formation was down 6% in 3Q24



Variables to watch... construction overseas

Short Term Potential Drivers To Help Absorb Excess Capacity In the Region

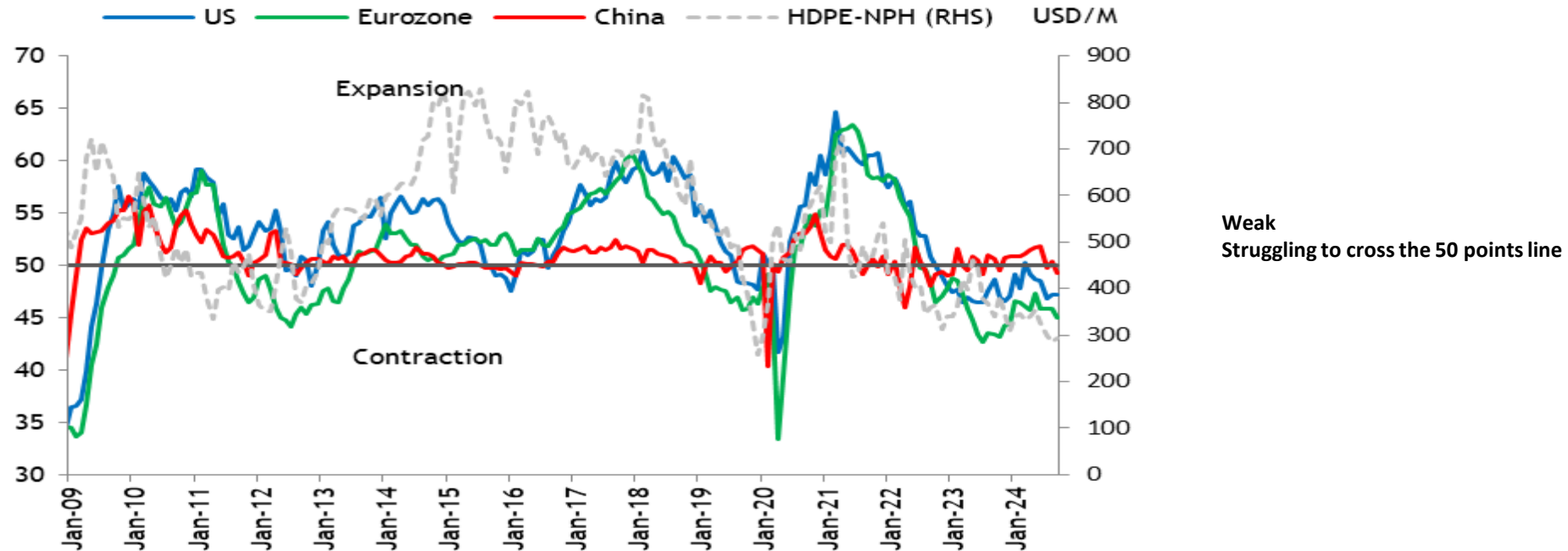
- **Reconstruction from flood - Dubai** experienced major floods in succession & and the Palm Islands have begun sinking. This will add on to the planned megaprojects estimated to cost **USD 30 billion**
- **Seawall to save Jakarta from sinking** - Groundwater levels in the northern coast of Java have 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**
- **New capital city Indonesia (Nusantara)** – currently on roll-out valued at USD35 billion though implementation is slowed as the government plans 80% funding by private sector
- **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

PH: Infrastructure Project List	No. of Projects	Indicative Project Cost PHP billion	Indicative Project Cost USD billion (@56.39)
Implementing Agency			
Department of Public Works & Highways (DPWH)	7	279.02	4.95
Department of Transportation (DOTr)	25	2,297.27	40.74
DPWH/Transportation Research Board (TRB)	5	96.72	1.72
Power Purchase Agreement (PPA)	2	20.41	0.36
University of the Philippines (UP)	2	22.23	0.39
Zamboanga City Special Economic Zone (ZCSE)	1	19.09	0.34
Total	42	2,734.74	48.50

Status	No. of Projects		
Approved for implementation			
For government approval	2	176.87	3.14
Ongoing	9	1,109.11	19.67
Pre-project preparation	19	1,231.73	21.84
Under project preparation	3	43.13	0.76
Total	42	2,734.74	48.50

Variables to watch... manufacturing

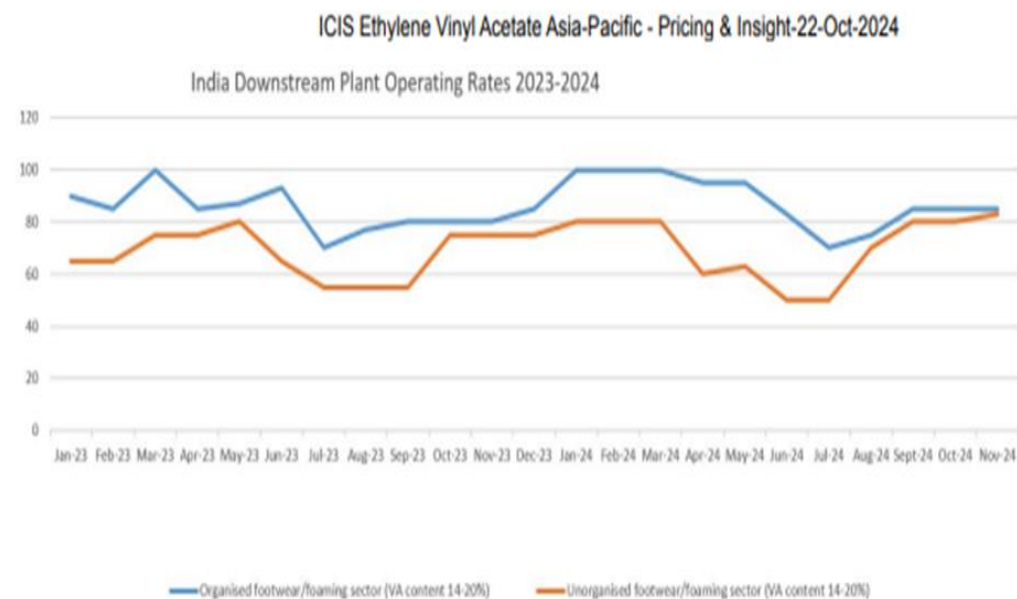
PMI up to the end of Sept show chronically weak manufacturing globally. Spread on polymers (HDPE-NPH proxy) indicates adverse price trend as the effect of weak demand is exacerbated by continuous influx of new supply



* HDPE-NPH is proxy for petrochemical trends

Variables to watch... manufacturing

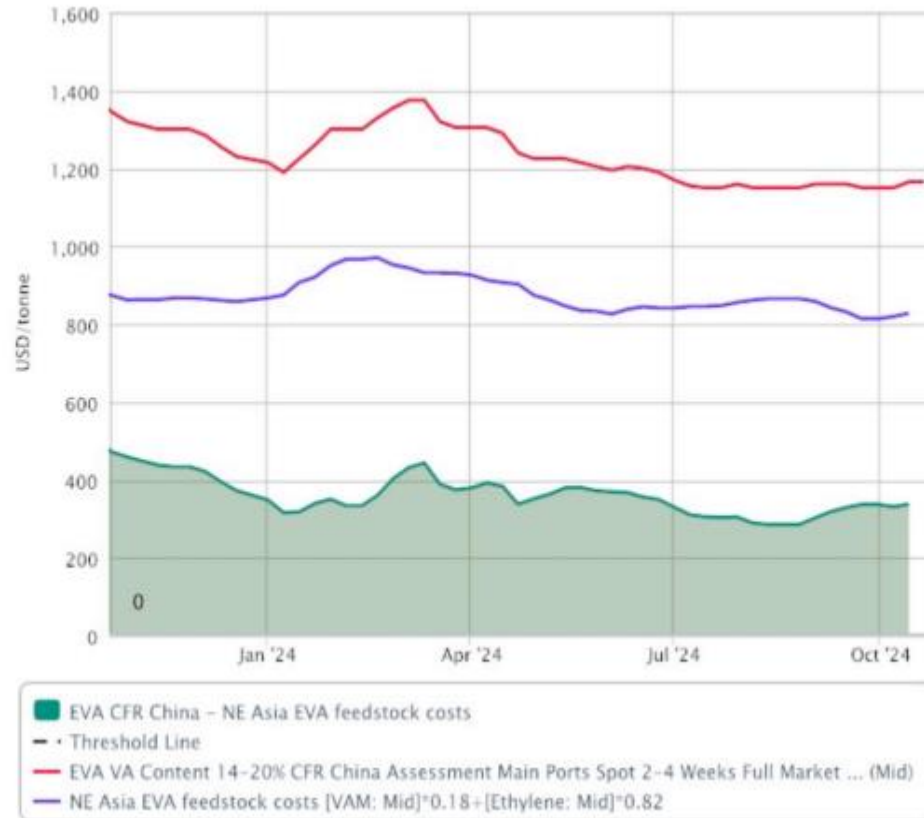
Improved operating rates high season arrives for low intensity manufacturing (proxy is footwear)



Operating rate projections based on update from market sources Source: ICIS

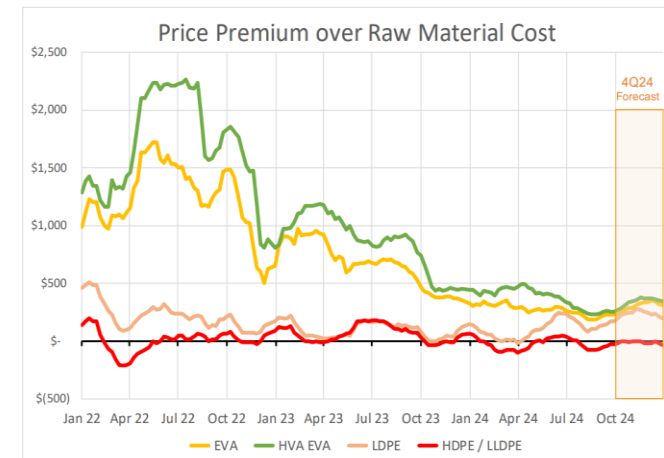
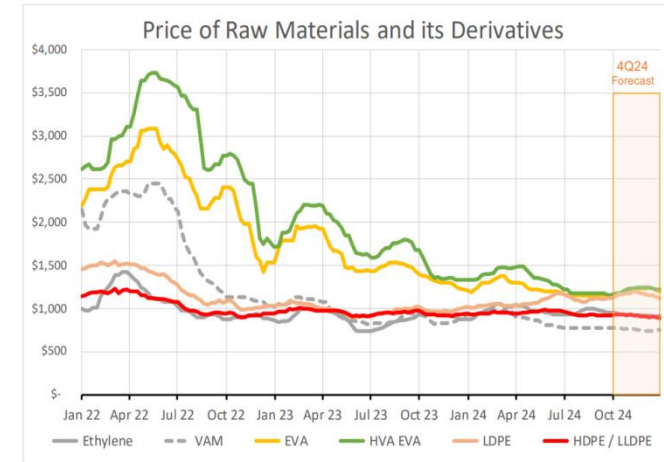
Variables to watch – manufacturing

Some signs of minor improvement in spreads; could be beneficial to TPIPL's Specialty Polymer's Division



EVA price is above feedstock costs

EVA price is below feedstock costs



HVA EVA has higher price vs normal EVA but spread is about the same

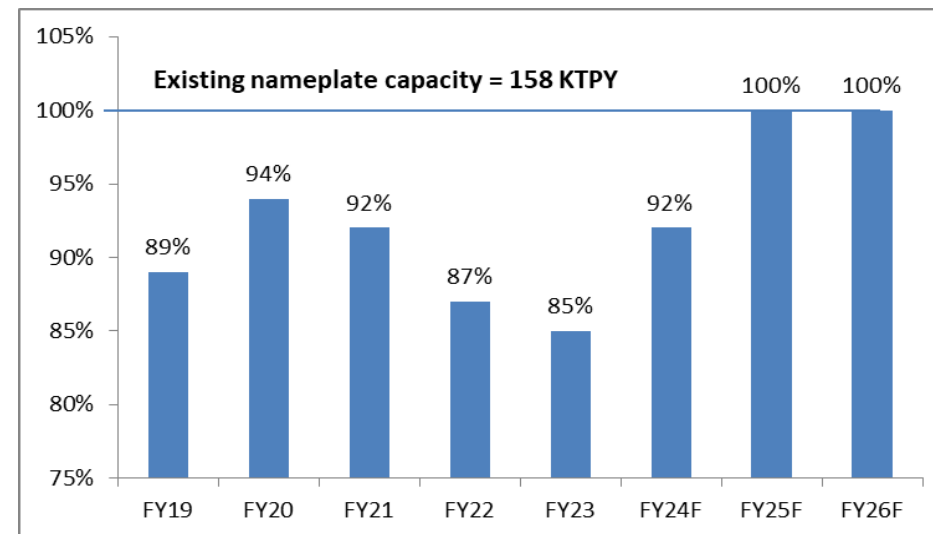
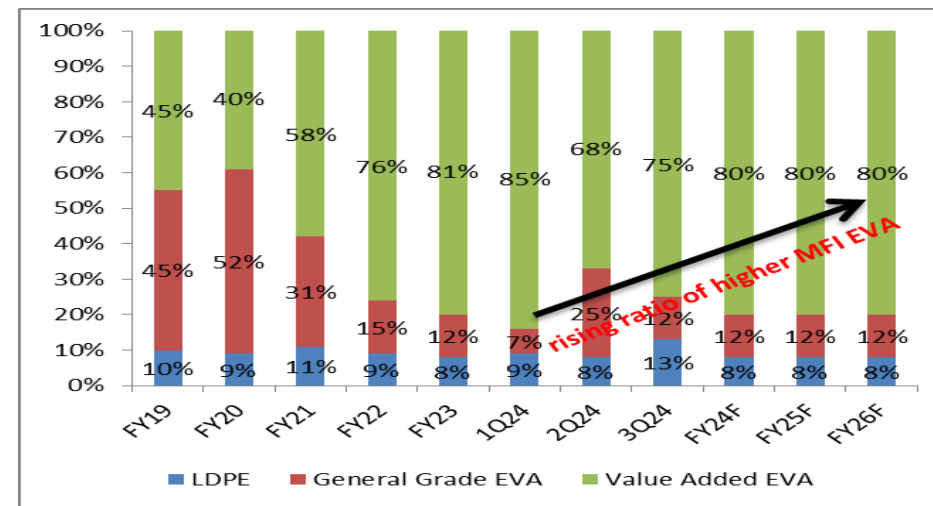
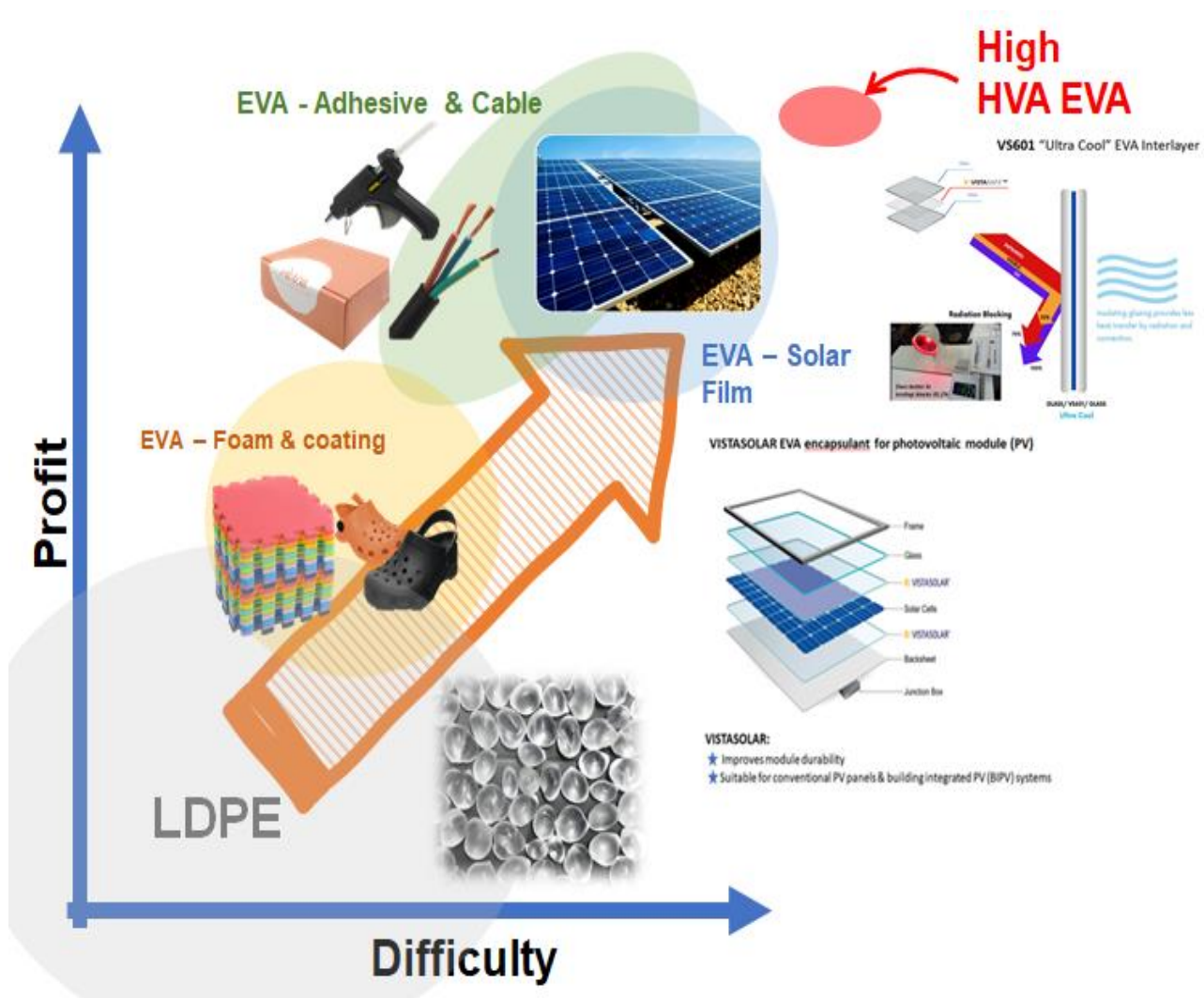
LDPE continues to have better spread than HD/LLDPE reflecting tight supply / better demand as producers out-migrated from LD to higher value HD/LLDPE

This could be interpreted as low-manufacturing seeing more resilient demand

A short term switchback will take two to three months

Source: ICIS

High HVA participation improved Q/Q





ESG and Sustainability

Validation and Corporate Merits

Others (Update on Pending Litigation)

On The Path To Net Zero In TPI Green Cement and Mortar

1. Use of Alternative Energy

- 1.1 uses 15-25% of alternative energy i.e. Municipal Waste to replace coal
- 1.2 uses of Municipal Waste to generate electricity
- 1.3 uses of solar cell to generate electricity
- 1.4 uses pyrolysis oil produced from waste tyres and rubber to replace coal/fuel oil

2. Use of decarbonized raw materials to reduce clinker factor and cement factor

- 2.1 uses copper slags, gypsum
- 2.2 uses of ashes from burning municipal waste boilers
- 2.3 uses of CDE limestone, sand, shale

3. Waste-heat-recovery (W-H-R) and improved efficiency measures

- 3.1 operates W-H-R to electricity
- 3.2 improves the heat recovery and filter systems

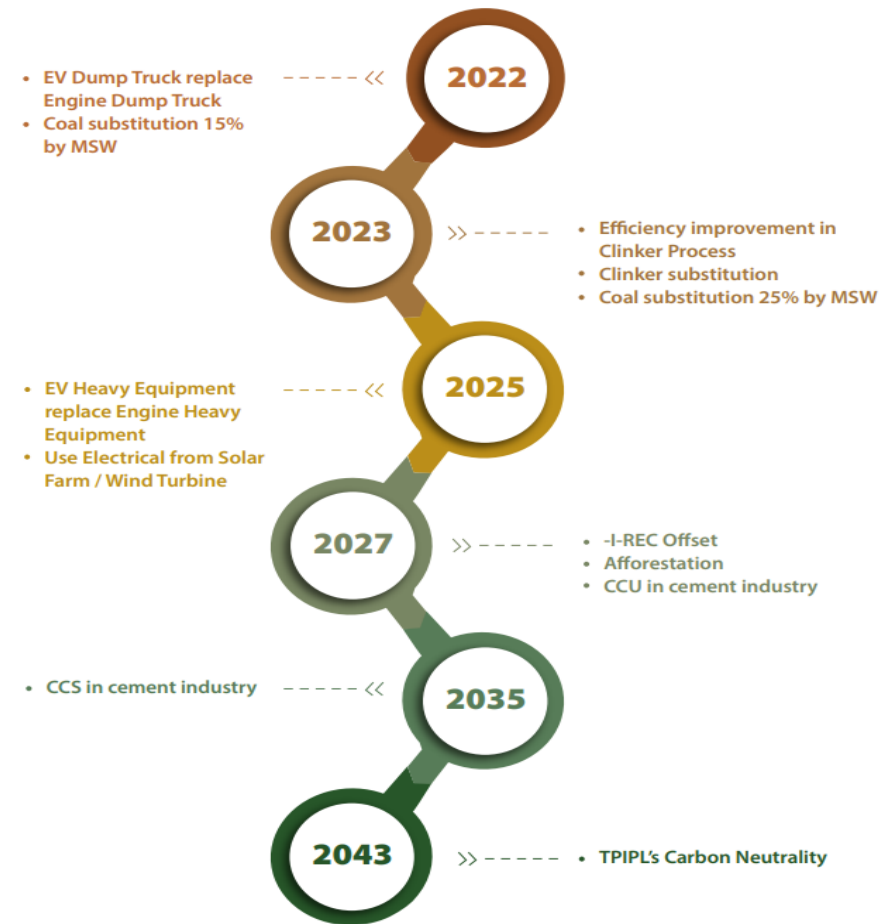
4. Increase the CO₂ capturing capacity of the environment

- 4.1 manufactures FCB to replace wood and eventually increases the capacity to absorb more CO₂ by increased forest area
- 4.2 produces organic fertilizer to accelerate the plant growth thus increasing the CO₂ capturing capacity of the environment
- 4.3 produces symbiotic for animals to reduce the waste from animal turning the animal feeds to meat reducing the methane gas from fermentation of the waste
- 4.4 produces Biosan to reduce fermentation of waste into a bad smell of CH₄ and sulfide

5. Electrification to replace fossil fuel vehicles

- 5.1 Changes to conveyor belt to replace trucks, and
- 5.2 Charges from fossil fuel trucks and mining equipment, forklifts to electric motor-driven trucks, equipment, cranes, etc

TPIPL's (Cement) GHG Reduction Strategies



TPIPL's Task Force on Climate-Related Financial Disclosure 2023



ESG Strides in 9M 2024 – TPIPL

TPIPL

Environment

	1H 2024 % of Total		9M2024	% of Total	2023	2022
Waste fuel replacing coal (tons)	140,659	12.9%	185,046	12.1%	361,827	360,675
Reduction of GHG (tons CO ₂ e)	833,313	18.5% Y/Y	1,100,219	-17.16% Y/Y basis	975,510	1,010,336
Recycled effluents via re-filter process (cum)	498,311	45.2%	911,104	57.8%	1,362,200	967,395
Recycled Industrial Waste from Cement Production (tons)	2,459	99.8%	2,282*	99.81%	6,122	10,034
Disposal of Hazardous Industrial Waste (tons)	15,234		24,664			
Disposal of Non-Hazardous Industrial Waste (tons)	10,994		16,998			

* change in accounting

Green Technology in Value Chain:

Green Mining / Green Quarry: Replaced Drill Trucks, Loaders Dump Truck, Excavators with Electric Cars

Green Cement Process: Used waste as fuel to replace coal

Green Logistics: Converted diesel-fuel trucks into electric trucks to transport cement and ready-mixed concrete

Green Manufacturing: Produce environmentally friendly construction materials to help reduce global warming

Green Marketing/Management: Use electric trains for sales and marketing operations, EV cars for executives

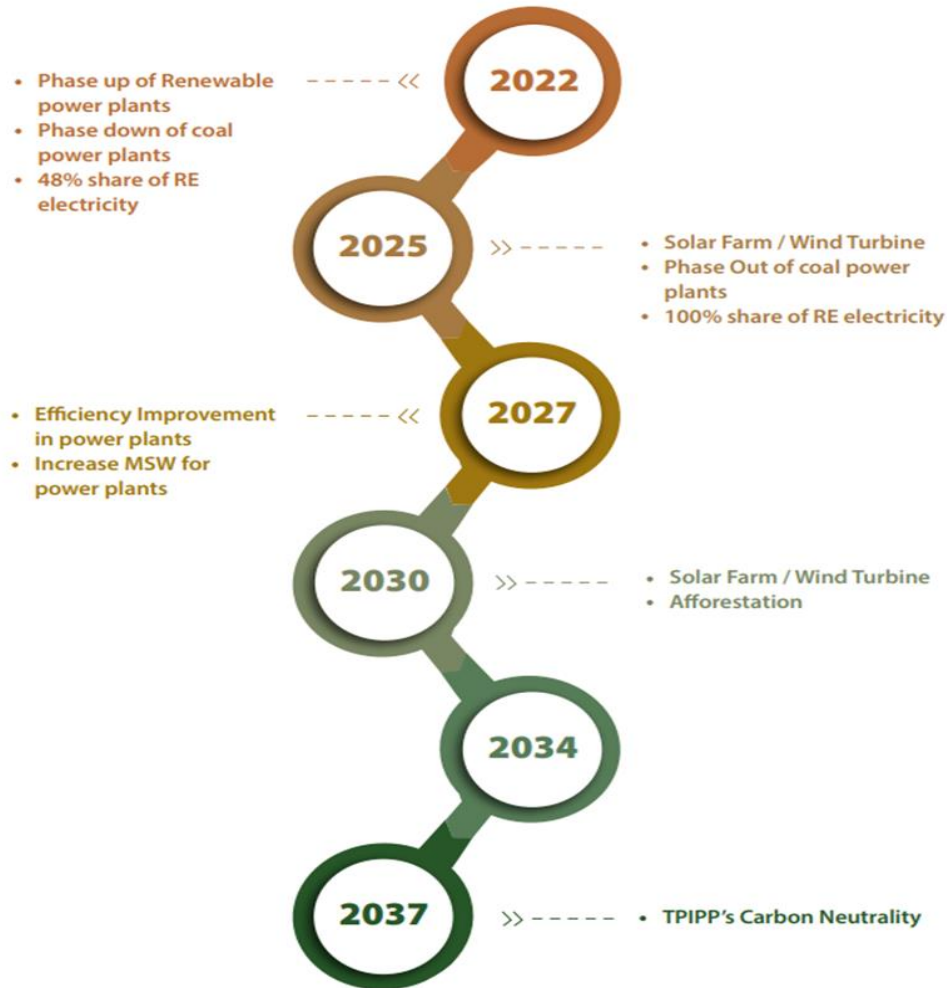
Green Packing Line/Warehouse: Now 100% electric forklift

Corporate Social Responsibility

Projects for public benefit (THB million)	15.7	52.3
New Hiring (head count)	470	497
General	361	361
Senior	67	67
With Disabilities	42	43
Human Rights Violation Complaints	zero	zero
Fatal Occupational Injuries	zero	zero
Occupational Injuries (High Impact Jobs)	zero	zero
Occupational illnesses (employees and contractors)	zero	zero

On The Path To Net Zero: TPIPP

TPIPP's GHG Reduction Strategies



TPIPP – T-Ver Certificates

Carbon Credit T-VERs Registered by TGO

MSW Received

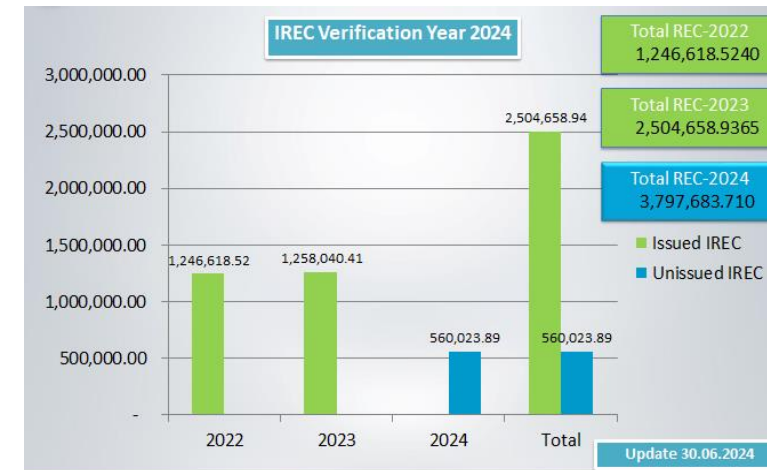
1. July 2015 – May 2016	13,483 tCO ₂ eq
2. May 2016 – Apr 2017	68,573 tCO ₂ eq
	82,056 tCO ₂ eq
3. Sold out to <u>Zukunft des Konzentoffmarktes</u> -	34,690 tCO ₂ eq
4. Remain	47,366 tCO ₂ eq
5. Approval Credit 2022	717,931 tCO ₂ eq
6. Approval Credit 2023	793,932 tCO ₂ eq

Total Carbon Credit 2023 **1,559,229 tCO₂eq**

7. In the certification process 462,351 tCO₂eq

Total Carbon Credit 2024 **1,921,580 tCO₂eq**

TPIPP – Renewable Energy Certificates



Validation and Corporate Merits

Multiple citations for its innovative, pioneering products/processes leveraging on homegrown R&D talents

For its engagement in deploying of advanced and high technologies:

TPI Polene CEO receives the highest order of decoration for a civilian from the King of Belgium





Validation and Corporate Merits

30 Fabulous Companies of the Year SR 2024

The Silicon Review®



Innovating the Future: TPI PL is Reshaping Industries, Enhancing Lives, and Paving the Path to a Greener Tomorrow in Thailand and Beyond



Validation and Corporate Merits

TPI Polene Group Helping Raise Awareness On Pathway(s) to a Low Carbon Society



Afforestation – Is Part of the Way of Life



To encourage the Thai society to be aware of low carbon society, TPI Polene Plc and TPI Polene Power Plc undertake afforestation. This is a continuing effort. In 2023, the Group planted 3,000 saplings of Lagerstroemia (*Lagerstroemia indica*), Teak (*Tectona grandis*) and Neem (*Azadirachta indica*) in a 100 rai (16 hectares) area. All these tree species produce beautiful, scented flowers that can support many insect populations especially bees and can be harvested for lumber.

TPIPP received six awards from the Foundation of Thai Society; two of which are individual honors for the "Organizational Leader of the Year" and the "Creative Thinking & Innovation of the Year" presented to Mr. Prachai Leophairatana, Chairman of TPI Polene Power Plc. The four other awards are organizational honors: Goodness Award, Creative Thinking & Innovation of the Year, Service of the Year, and the Company of the Year.

Validation & Corporate Merits



"Top Agri Biotech Company in Thailand 2023"



Best Corporate Governance Company in Thailand 2023
International Business Magazine





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 = THB3.38 (3Q 2024)

Share price = THB1.12 (22/11/24)

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 2Q24, 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.