



## TPI Polene Company Update

11 September 2023



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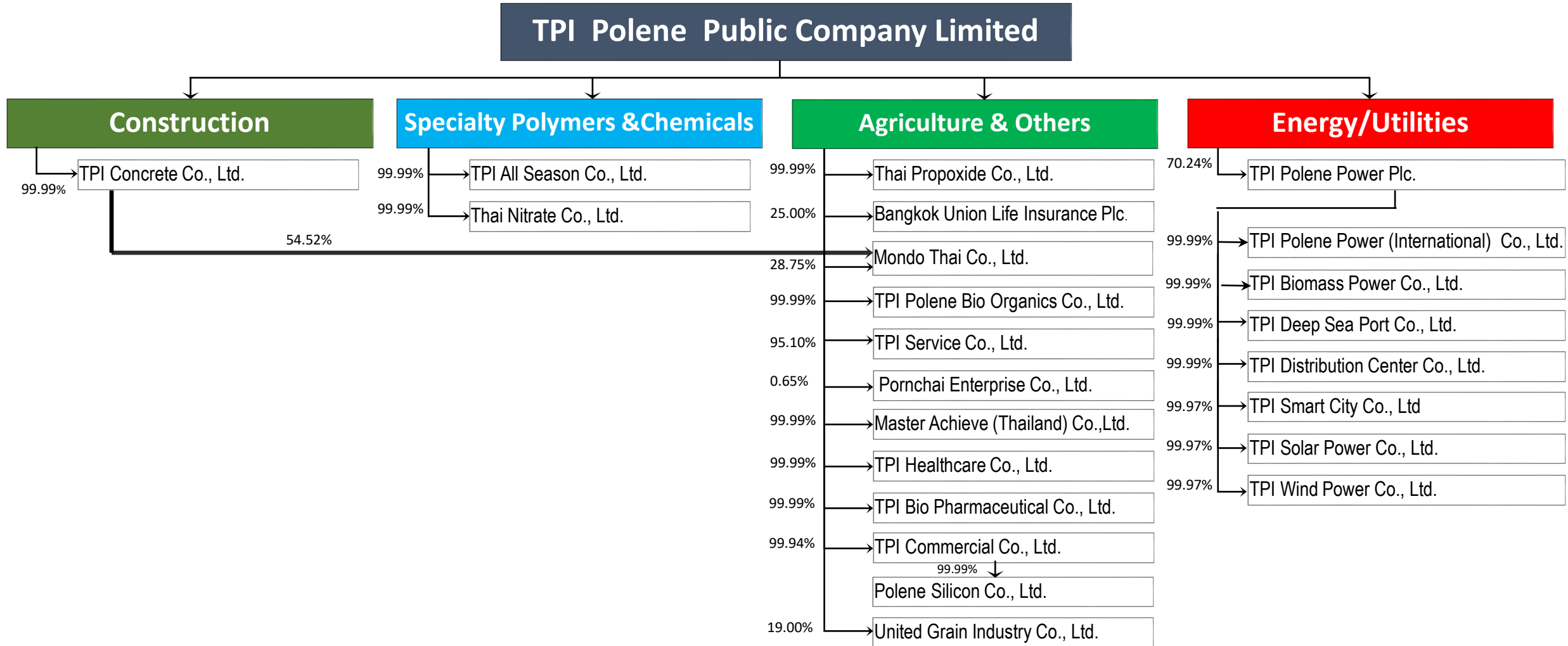
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# Topics

**Business Overview**  
**Financial Performance & Position**  
**Outlook and Guidance**  
**Sustainability and Other Matters**



# Key Assets and Features

## Construction Materials

- **Cement** - 4 lines totaling 13.5m tpy 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 tpy capacity
  - **Largest mortar producer** in Thailand
- **Ready Mix Concrete & Light Weight Concrete**
  - Leading with 3.9 million cubic meter RMC and 300K cubic meter Light weight
- **Concrete Roof Tiles**- 4m sq. meter or 45m pieces
  - customized with roofing system, **heat-resistant coating** etc.
- **Fiber Cement**- 380k tpy 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** – 158k tpy capacity
  - HVA, customized with in-house proven R&D
- **EVA Emulsion & Powder** – 20k tpy capacity
  - HVA, customized with in-house proven R&D
- **Nitrate**- 95k tpy Ammonium Nitrate & 24.5k tpy 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 20.1k tpy 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 2024-25**
- **Alternative Fuels MSW Power Plant** – 180MW
  - Largest in Thailand
  - 11 pre-sorting facilities in key provinces – 2,400 tpd capacity
- **Waste Heat Recovery Power Plant** - 40MW
- **Coal/MSW Power Plant** - 220MW
  - Target to 100% MSW by 2024/25
- **MSW power plant projects** – ~20MW, Songkhla (7.9MW) & Nakhon Ratchasima (9.9MW) - COD 2024
- **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

# Comprehensive and diversified product suite



## WE BUILD THE FUTURE.

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

> 5,000 SKUs



**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**

# Strong Innovation Culture – The Many Firsts In Thailand

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Diversify in all types of mortar (e.g. Non-shrink, sulfate-resistance and etc.)

One of the first hydraulic cement

First and only stucco wall producer

First and only cement producer that uses MSW as an alternative fuel

Linked quarry to production facility via conveyor belt saving 3.03m litres of diesel per year, and produce 1.07m kWh of electricity.

First power plant to use zero-waste policy (use up all incoming waste)

First power plant to use MSW (municipal solid waste), not only IW (industrial waste)

First and only WTE SPP (more than 10 MW capacity)

First and only producer to use fly ash to save cement in the process

First fire resistant fiber cement producer in Thailand

First and only furniture board and door frame producer from fiber cement

First and only fast drying and odorless paints for walling and other surfaces

**Bio Knox** is a high alkaline powder/drink that can stunt viral growth and propagation

**ProVita** is a probiotic drink (*Lactobaccillus paracasie*) produced with a in-house **probiotic microencapsulation technology (PET)** that prolongs the shelf life of the formulation for up to four months at room temperature

**Innovation creates competitive moats and better-than peers' margins**



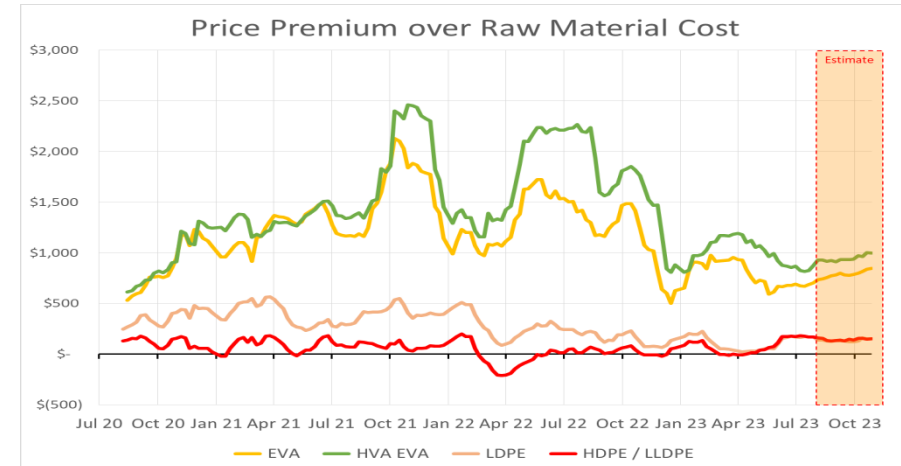
# EBITDA margin better; valuation cheaper relative to peers

## Peer comparison EBITDA margins

	1Q22	2Q22	1H avg	3Q22	4Q22	1Q23	2Q23
<b>ConsMat</b>							
Company 1	12.0%	9.8%	10.9%	7.7%	4.0%	9.5%	9.9%
Company 2	22.0%	25.0%	24.0%	13.0%	7.0%	15.2%	15.4%
<b>TPI Polene</b>	<b>13.0%</b>	<b>19.3%</b>	<b>16.1%</b>	<b>10.3%</b>	<b>8.7%</b>	<b>5.2%</b>	<b>11.7%</b>
<b>Petrochemical</b>							
Company 1 - operating only	6.7%	2.0%	4.4%	3.4%	-2.9%	5.2%	12.2%
Company 2 - polymers & chemicals	5.0%	9.0%	7.0%	10.0%	0.0%	8.0%	5.0%
Company 3 ** - value added PE	19.6%	17.3%	18.5%	15.4%	20.0%	16.9%	16.0%
<b>TPI Polene</b>	<b>36.0%</b>	<b>41.4%</b>	<b>38.7%</b>	<b>46.0%</b>	<b>28.0%</b>	<b>26.0%</b>	<b>28.8%</b>

\*\* FY ends in March. Source – SET, Companies MD&A

## Specialty Polymers' superior spread profile



## Comparative Valuation

Bloomberg code	Mkt cap (USDm)	Price (THB)	Avg T/O Mn Shrs	TP (THB)	Upside (%)	P/E (x)		P/B (x)		ROE (%)		Div Yield (%)	
						23E	24E	23E	24E	23E	24E	23E	24E
SCC TB	10,647	313	1.43	350.8	12.1	12.8	10.7	1.0	0.9	8.2	8.2	3.6	4.3
SCCC TB	1,153	136.5	0.05	151.3	10.9	13.4	12	1.2	1.1	8.9	10.2	5.6	6.1
PTTGC TB	4,665	36.5	11.53	43.4	18.8	17.4	10.1	0.6	0.5	2.2	5.2	2.7	4.6
EPG TB	492	6.2	1.41	8.8	41.5	13.1	11.7	1.4	1.3	10.8	11.5	4.5	5.1
<b>TPIPL TB</b>	<b>821</b>	<b>1.53</b>	<b>4.41</b>	<b>2.2</b>	<b>43.8</b>	<b>8.5</b>	<b>9.0</b>	<b>0.5</b>	<b>0.5</b>	<b>6.3</b>	<b>5.7</b>	<b>5.9</b>	<b>5.9</b>
GULF TB	16,297	49	11.78	59	20.4	37.5	29.6	4.6	4.4	13.8	15.7	1.5	1.8
BGRIM TB	2,660	36	8.72	43.7	21.3	39	32.1	2.2	2.1	6.6	7.3	1.2	1.5
TPIPP TB *	805	3.38	2.49	4.3	26.5	8.2	7.9	0.8	0.8	10.4	10.3	5.9	6.5

Note: \* Broker estimates, Closing price 21/8/23 Source: Bloomberg



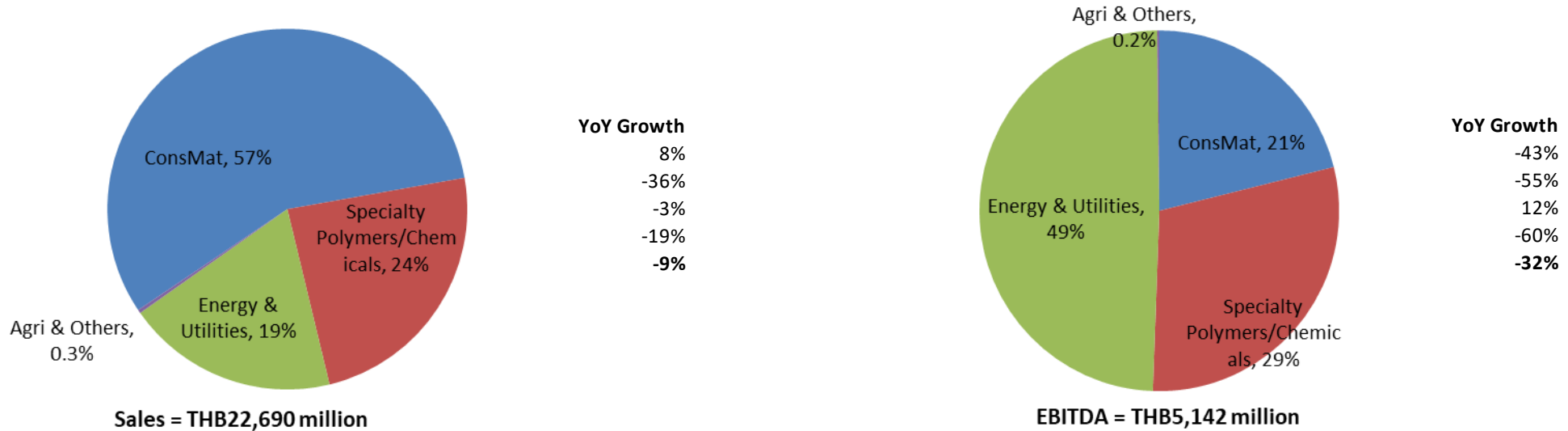


# Financial Performance & Position

# Segment performance 1H 2023



**ConsMat Division is 56% of TA, 57% of sales but 21% of EBITDA generation**  
**Specialty Polymer/Chemicals has small asset base but 2<sup>nd</sup> in sales and EBITDA generation**



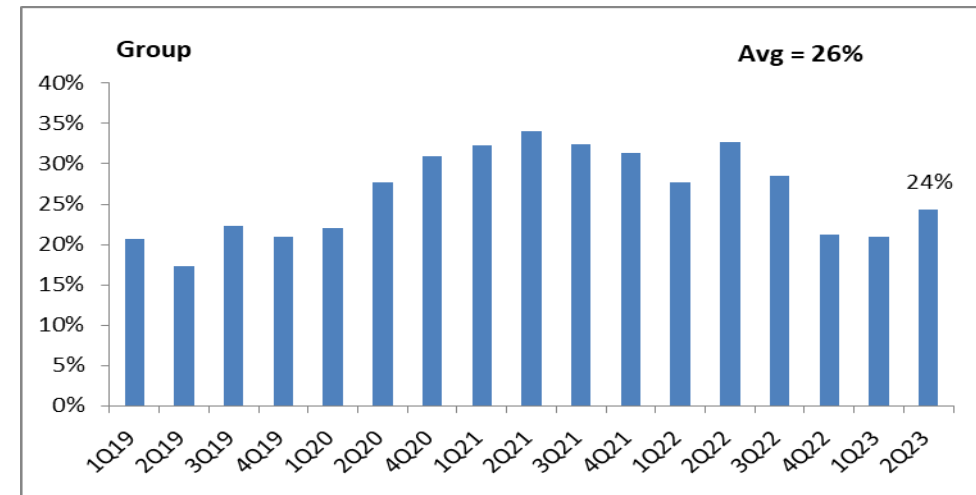
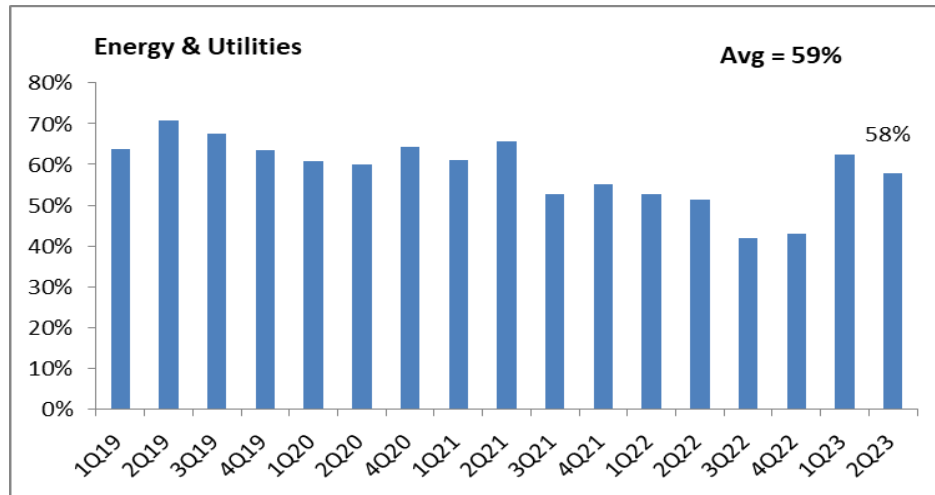
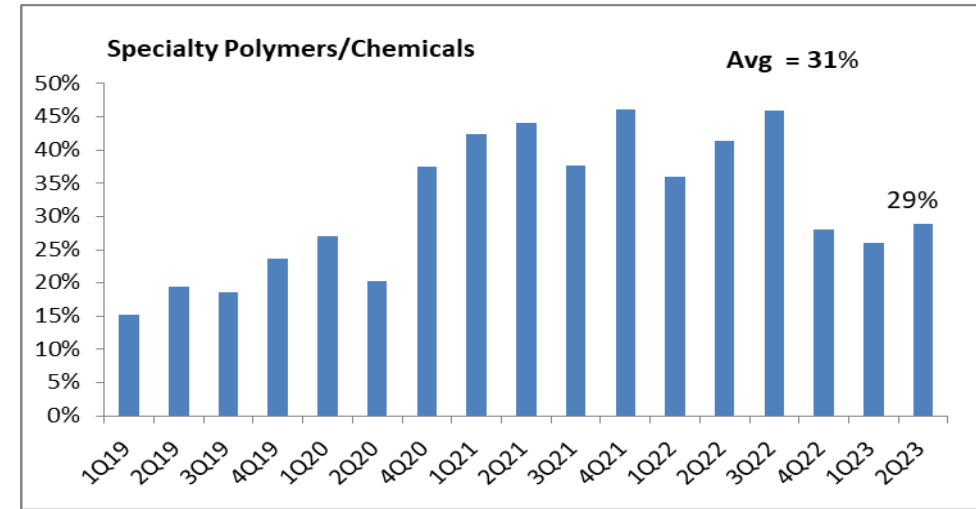
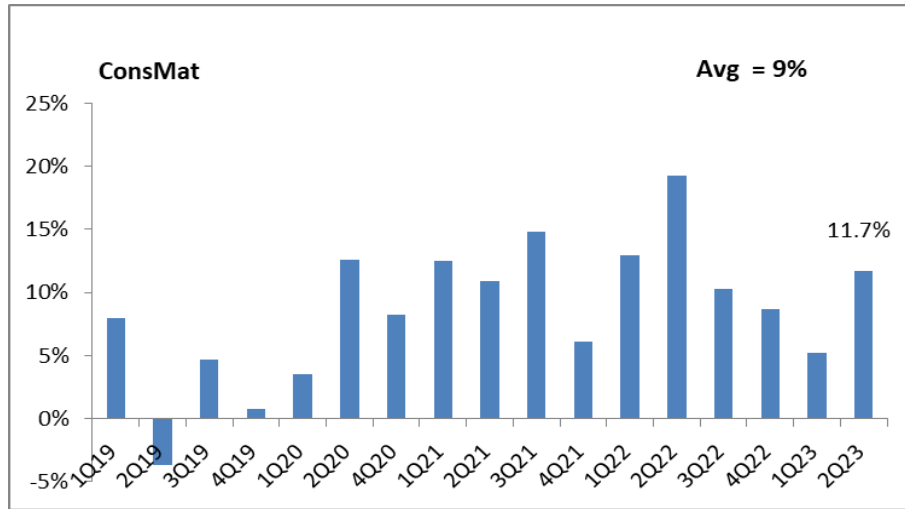
## Performance Profile 1H 2023

	Sales	YoY Growth	EBITDA	YoY Growth	EBITDA margin	Total Assets	YoY Growth
ConsMat	57%	8%	21%	-43%	8%	56%	-3%
Specialty Polymers/Chemicals	24%	-36%	29%	-55%	27%	7%	1%
Energy & Utilities	19%	-3%	49%	12%	60%	35%	8%
Agri & Others	0.3%	-19%	0.2%	-60%	17%	2%	-7%
<b>Total</b>	<b>22,690</b>	<b>-9%</b>	<b>5,142</b>	<b>-32%</b>	<b>23%</b>	<b>145,031*</b>	<b>1%</b>

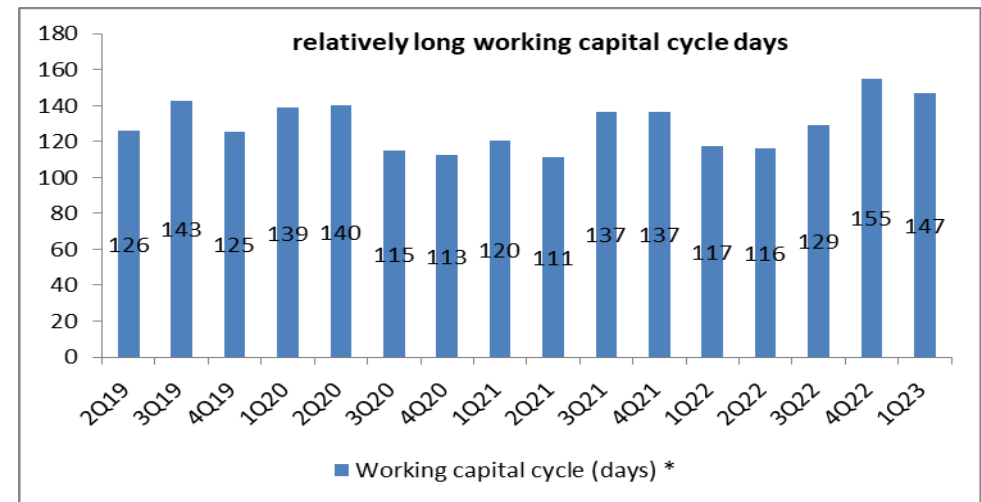
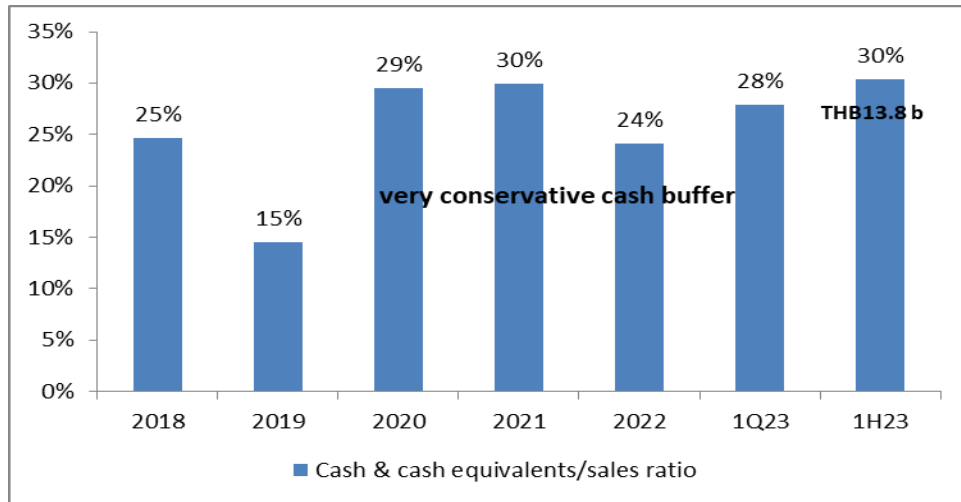
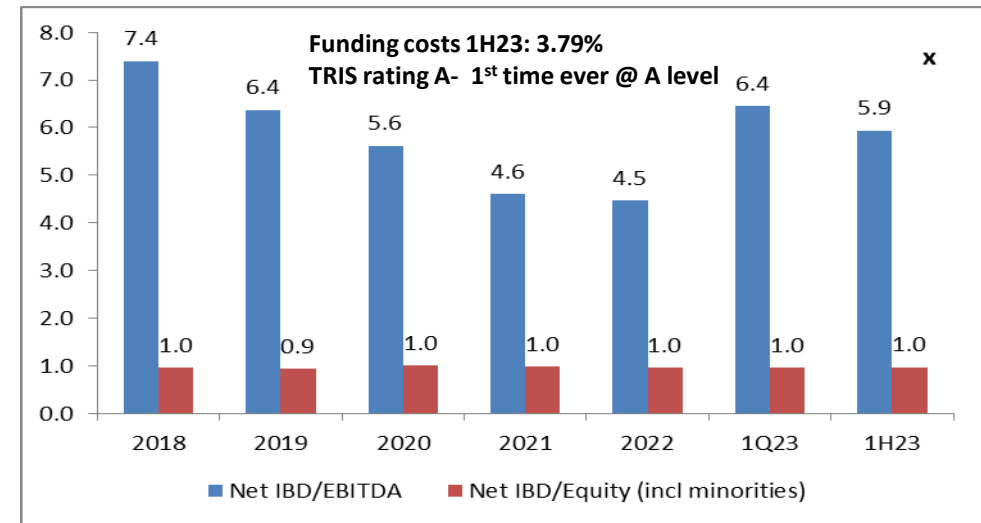
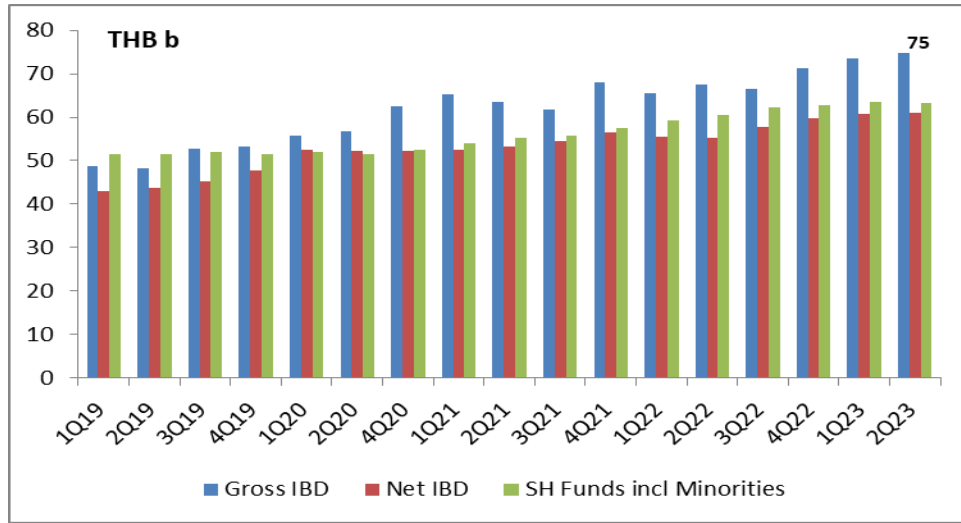
\* Not including unallocated and intragroup assets



# EBITDA margin sequentially better



# Financial – falling leverage ratio; defensive cash positioning



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

## Backdrop

- **CCM:** Volume sales in the CCM division rose by 1% YoY driven by strong sales in cement, hydraulic cement and mortar. However, on a QoQ basis volume sales declined slightly due to slowing sales of hydraulic cement and mortar. These short term trends were tied to holidays and election-related disruptions. The weak QoQ volume trend spilled into prices as is normal; ie pricing competition heats up when volume is weak. YoY prices are higher. Export volumes remain soft, down 30% YoY (whole country) and so did not help the situation. But, there are signs of improvement in 2Q23 (+4%QoQ – whole country). Offsetting the soft topline was the sequential drop in coal price.
- **EVA/N:** Our volume sales was lower YoY due to sluggish demand partly driven by the soft demand backdrop and inventory de-stocking. The anticipated recovery in manufacturing demand post-Covid still did not gain momentum mainly due to the visible slower-than-expected recovery in the Chinese economy. However, QoQ we see improvement as our domestic input supplier resumed operations post major maintenance. As for the Nitrate segment, volumes were marginally higher YoY, but lower QoQ.
- **Energy:** Power volumes were higher YoY and QoQ. Operating rate for our waste heat was low (tied to cement ops) but this was more than offset by improved rates in MSW and coal plants. The recently modified 70MW resumed operations while the operating rate of the coal fired plant was also higher. This quarter we see full impact of the adder expiry on two MSW. QoQ Ft was also lower. The average power price was lower QoQ, YoY

## Performance

- **CCM:** Weaker prices and softer QoQ volumes resulted in single digit QoQ contraction in sales. However, EBITDA improved sequentially on lower coal costs, partial switch to MSW in the clinker process and major push launch of “Green Cement and Building Products” in June.
- **EVA/N:** YoY the 2Q23 is weak just like in 1Q23. However, with input material availability normalizing sales allocation shifted back to higher margin EVA.
- **Energy:** The higher volume YoY was offset by expiry of loss of adder (YoY) and lower Ft (QoQ) muting sales growth and resulting in slight EBITDA contraction.
- **CCM** is the star in 2Q23. Its sequentially better EBITDA and margin drives both the Group’s EBITDA and profitability

# 1H23 Operating Backdrop On a Sequential Basis



## Backdrop

- In 1Q23 domestic cement sales growing positively QoQ; sales of mortar outperform, implying strong demand from small construction activities; selling price is up to offset higher costs. The export market improved QoQ but remained challenging due to excess supply in Vietnam and some dumping. In 2Q sales in the CCM division rose by slightly YoY but slowed slightly in hydraulic cement and turned negative in mortar. The slow down was tied to holidays and election-related disruptions. As volumes softened prices among low clinker products reduced as competition gets heated. Export is still soft but slight improvement has been seen starting late June.
- Specialty polymer sales volume were low in 1Q23 due to maintenance shutdown of main supplier this has normalized in 2Q. Prices started to drop later in 1Q but stayed mostly flat in 2Q on weak EVA demand especially for manufacturing as well as inventory de-stocking. The anticipated recovery in manufacturing demand post-Covid did not gain momentum due to demand destruction linked to inflation as well as slower-than-expected recovery in the Chinese economy. As for our Nitrate segment, volumes stayed at high levels. Our Nitrate products have been enjoying strong volumes since last year due to the disruptive Russia-Ukraine war that affected our competitors and resulting in higher market share for us.
- Power plant operations were normalizing as projects are getting completed, volume is up YoY, high single digit. The average selling price is helped by high Ft, offsetting the expiry of adder, average price was up QoQ, YoY. Power volumes were higher YoY, QoQ. Operating rate for our waste heat power plants was low (tied to cement ops) but this was more than offset by improved rates in MSW and coal plants. The recently modified 70MW resumed operations while the operating rate of the coal fired plant was also higher. This quarter we see full impact of the adder expiry on two MSW. QoQ Ft was also lower. The average power price was lower QoQ, YoY

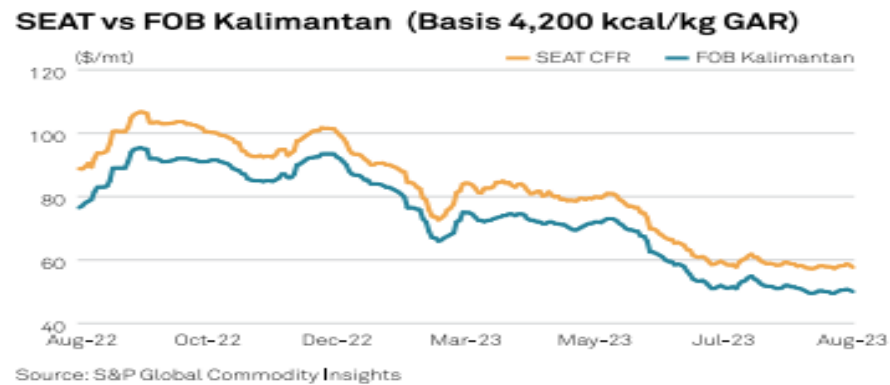


# Outlook and Guidance

# Variables to watch

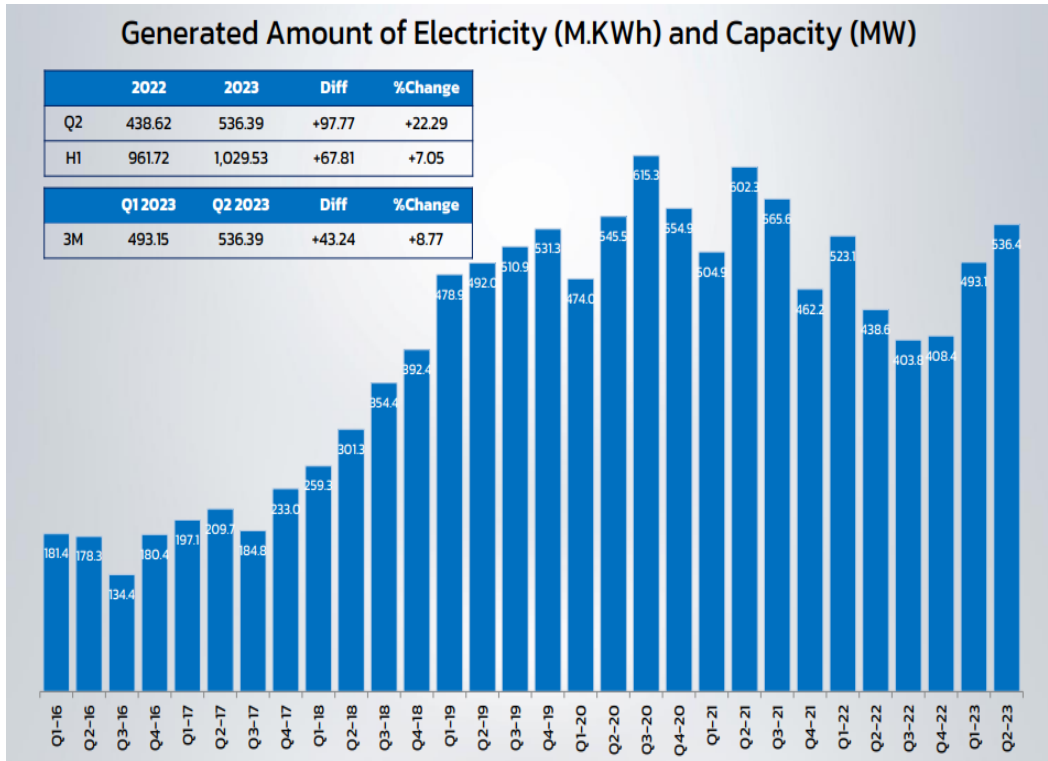
- **CCM:** Delay in the formation of the government has led to up to eight months delay in the approval of FY23/24 budget according to press reports and this sets a lackluster backdrop for public sector investment and infrastructure. Slower flow of Chinese tourists could dampen renovation market, but overall the private sector could be the bigger source of demand for the rest of the year. As this is an El Niño year, disruption from the monsoon rains could be less-than-norm. Export market is but it could improve if China rolls out its stimulus program and the property situation in Vietnam improves. In the 1H23 cement export volume contracted. Cheaper coal reduces cost of clinker while lower Ft reduces cost of cement
- **EVA/N:** Operating rates in China have begun to improve slightly and this time around the manufacturing sector is key to sustained price improvement. Typically, harvest season in 3Q and inventory re-stocking for the holiday production run tends to drive manufacturing activity starting in the 2H
- **Energy:** Operations of our MSW power plants are expected to be normal while the newly-revamped 70MW hybrid is expected to climb back to better operating levels. Operating rate remains the key. As for the coal power plant (150MW) it is now on its modification program (divided into three phases) so expect disruptions. Ft for Sep-Dec will sequentially reduce power tariff by nearly 6%

## Energy prices are trending down – reference prices





# Operating rates of the power plant is key

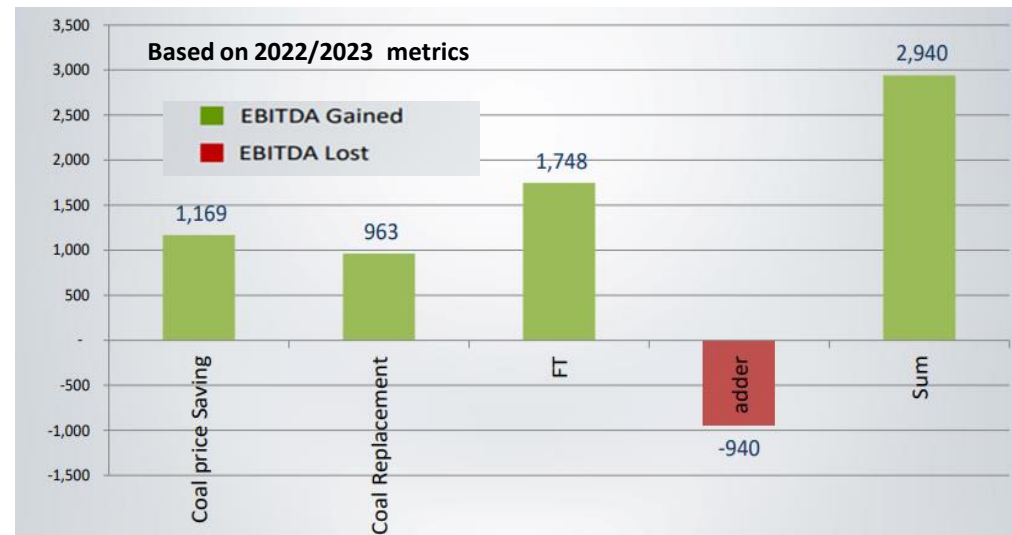
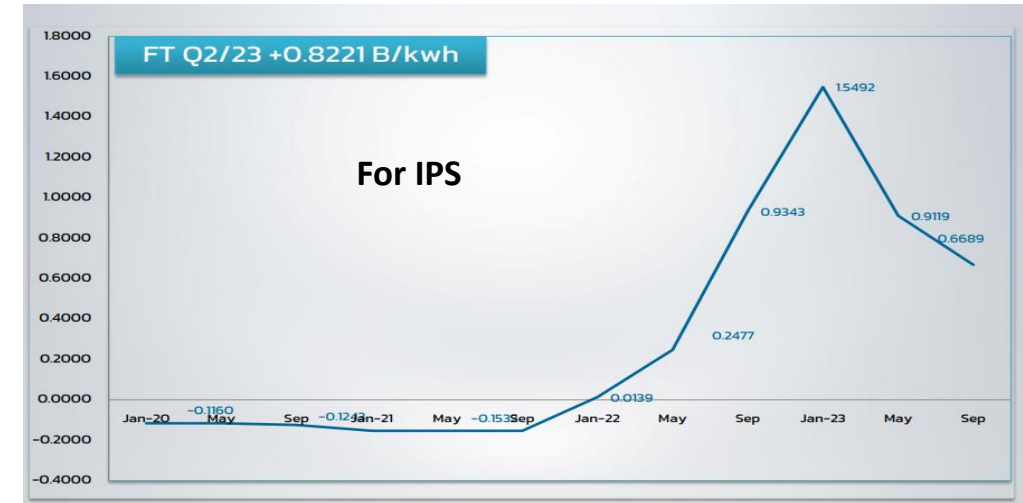
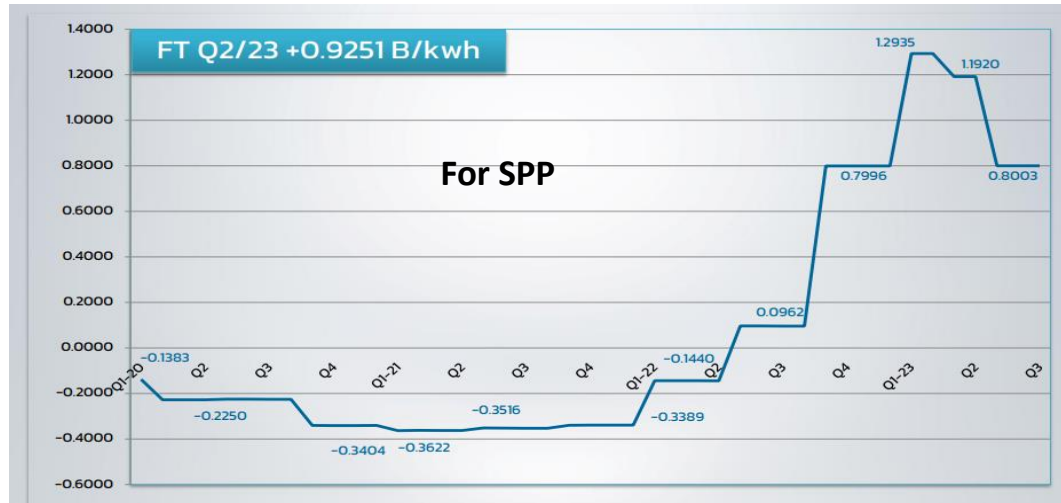


### Sale Price after ADDER Expired

	PPA	Adder Expired	2018 Lowest FT	2022 Low FT	2023 (Jan.-Aug.) High FT	2023 (Sept.-Dec.) Medium FT
SPP	18 MW	JAN 2022	6.2482	3.3089	4.0847	3.7518
SPP	55 MW	AUG 2022	6.2387	5.6288	4.1097	3.8365
SPP	90 MW	APR 2025	6.2433	6.7011	7.5823	7.2957
	163 MW		6.2423	6.0691	6.2586	5.8951
IPS	220 MW		2.9734	3.7224	4.4044	4.1500

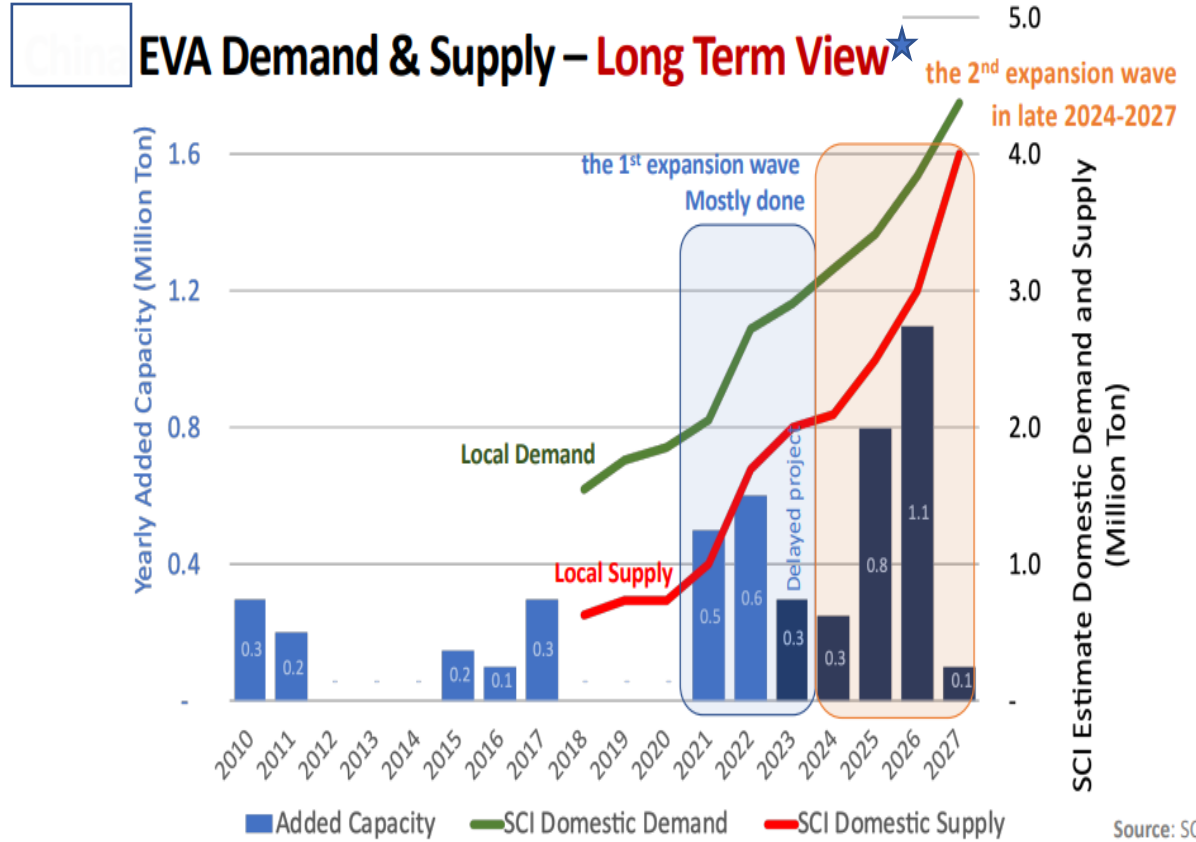
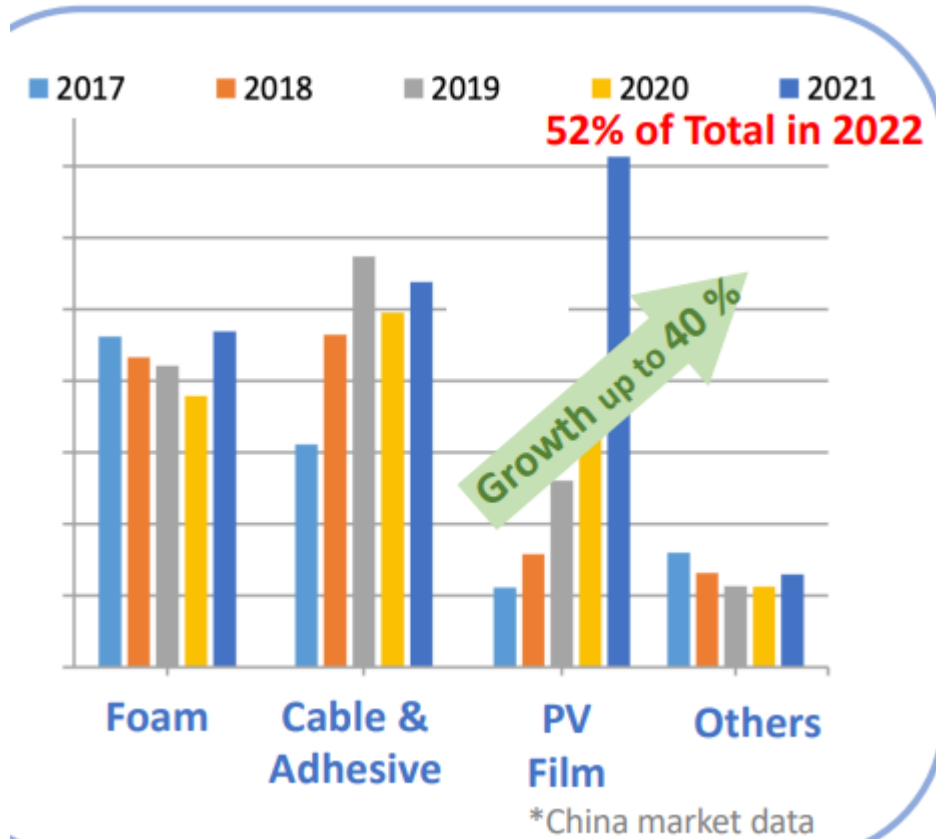
\* Adder expired August 2022

# Power pricing - higher Ft compensates for adder expiry \*



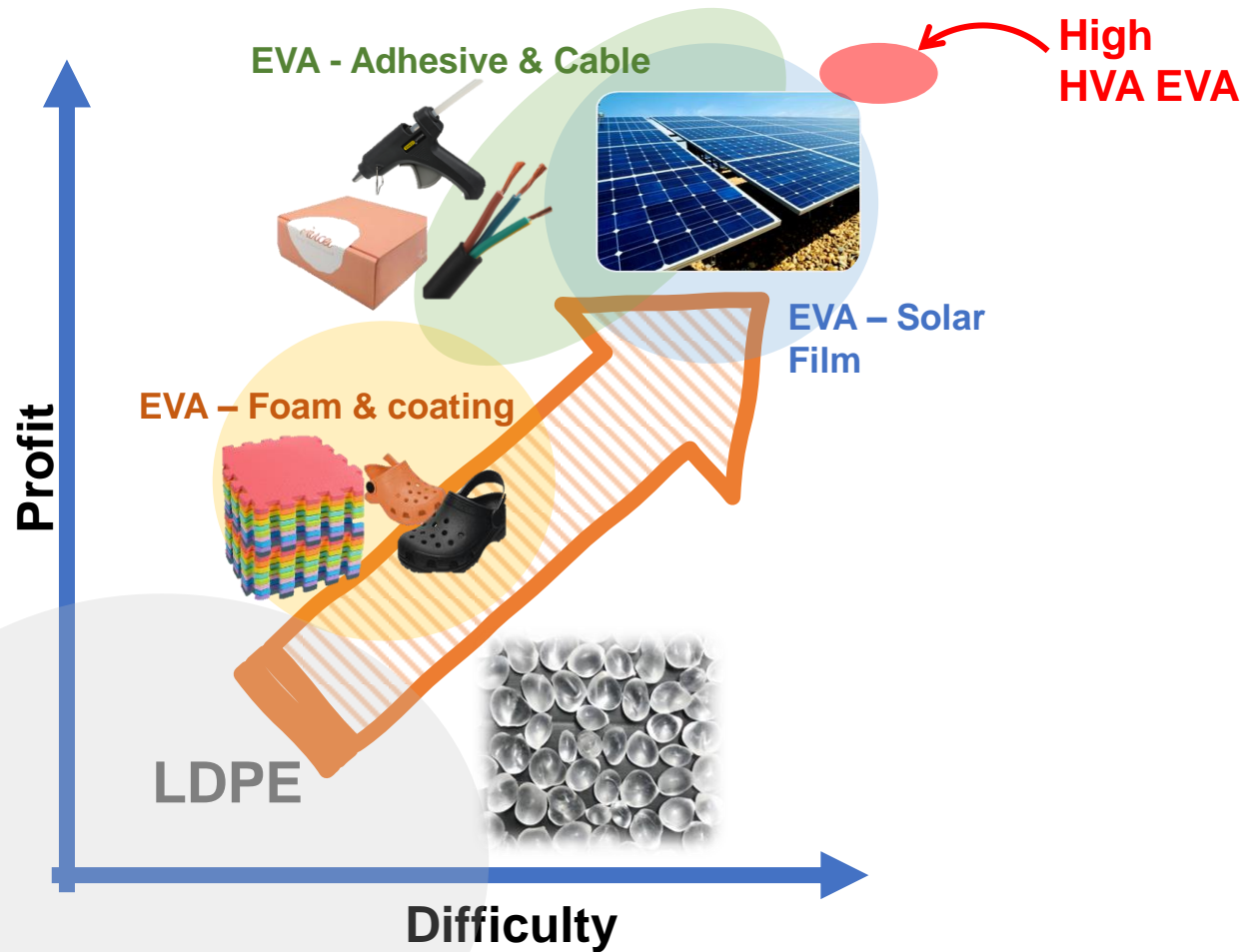
\* **Caveat:** Ft will be sequentially lower for the Sep-Dec tariff

# Specialty Polymer – Manufacturing is the main growth driver

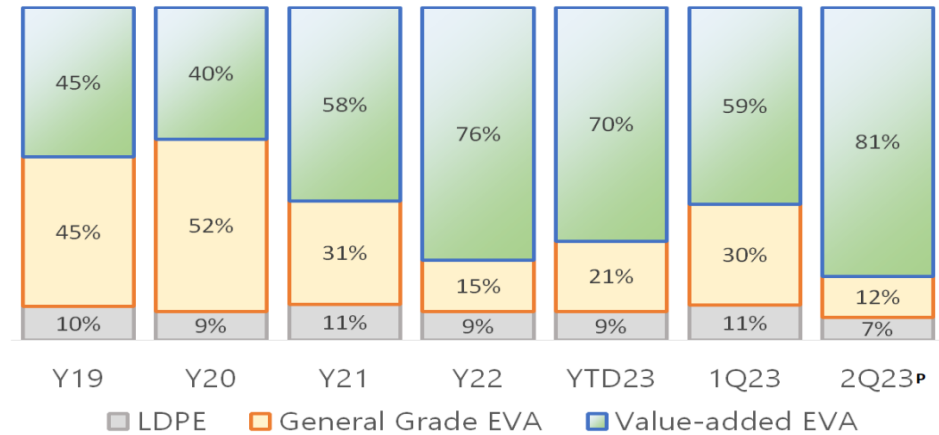


\* Note: China proxy of global demand and supply

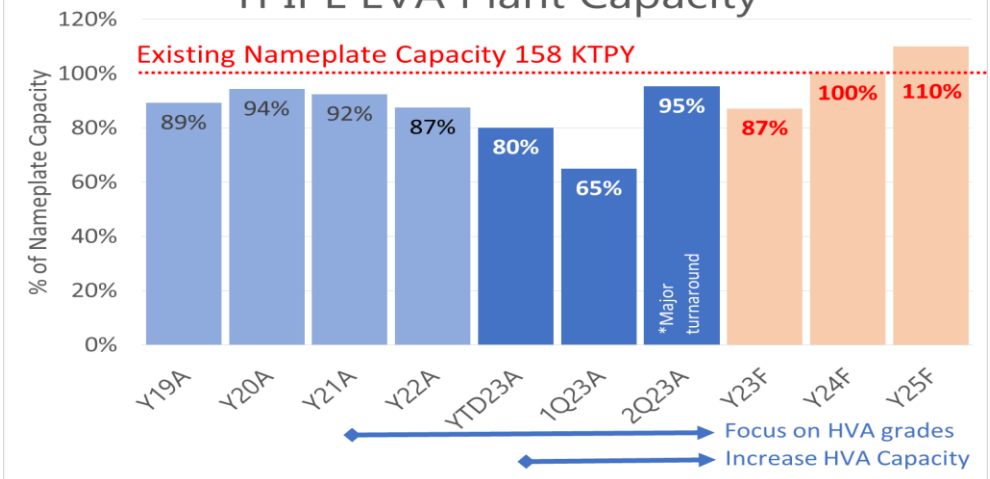
# TPIPL continues to push HVA limits



### EVA Sales by Product Group

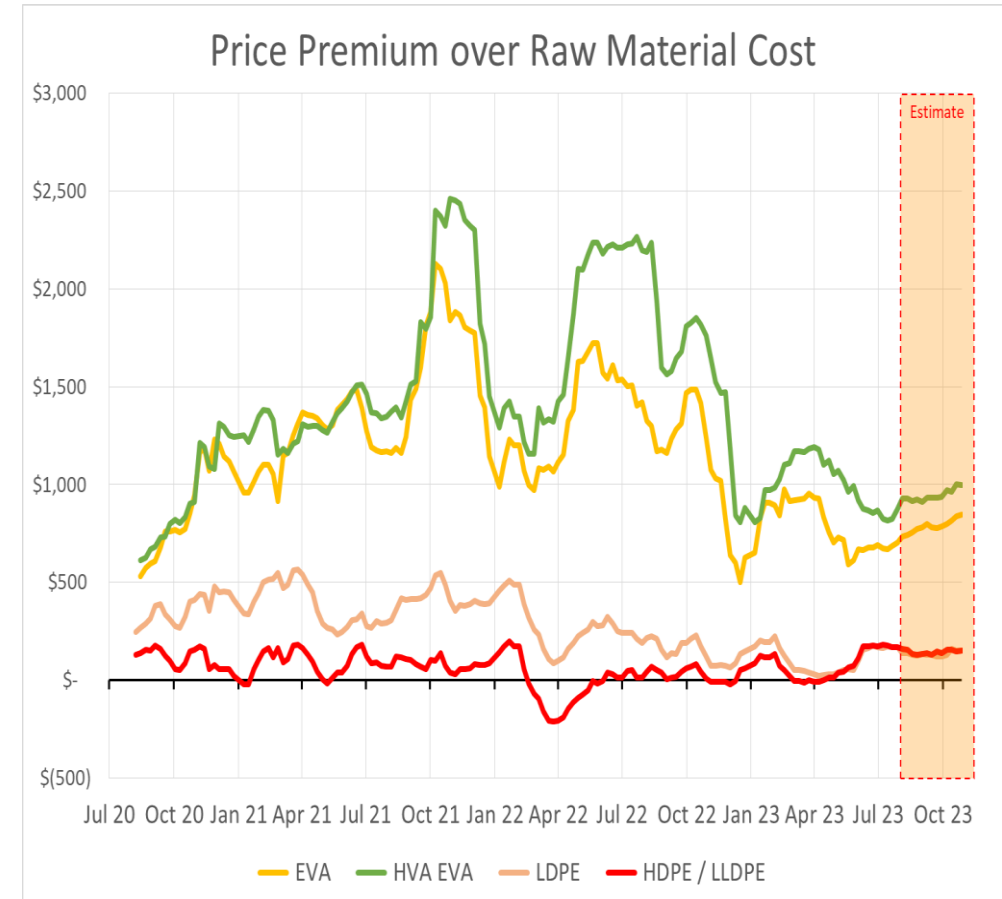
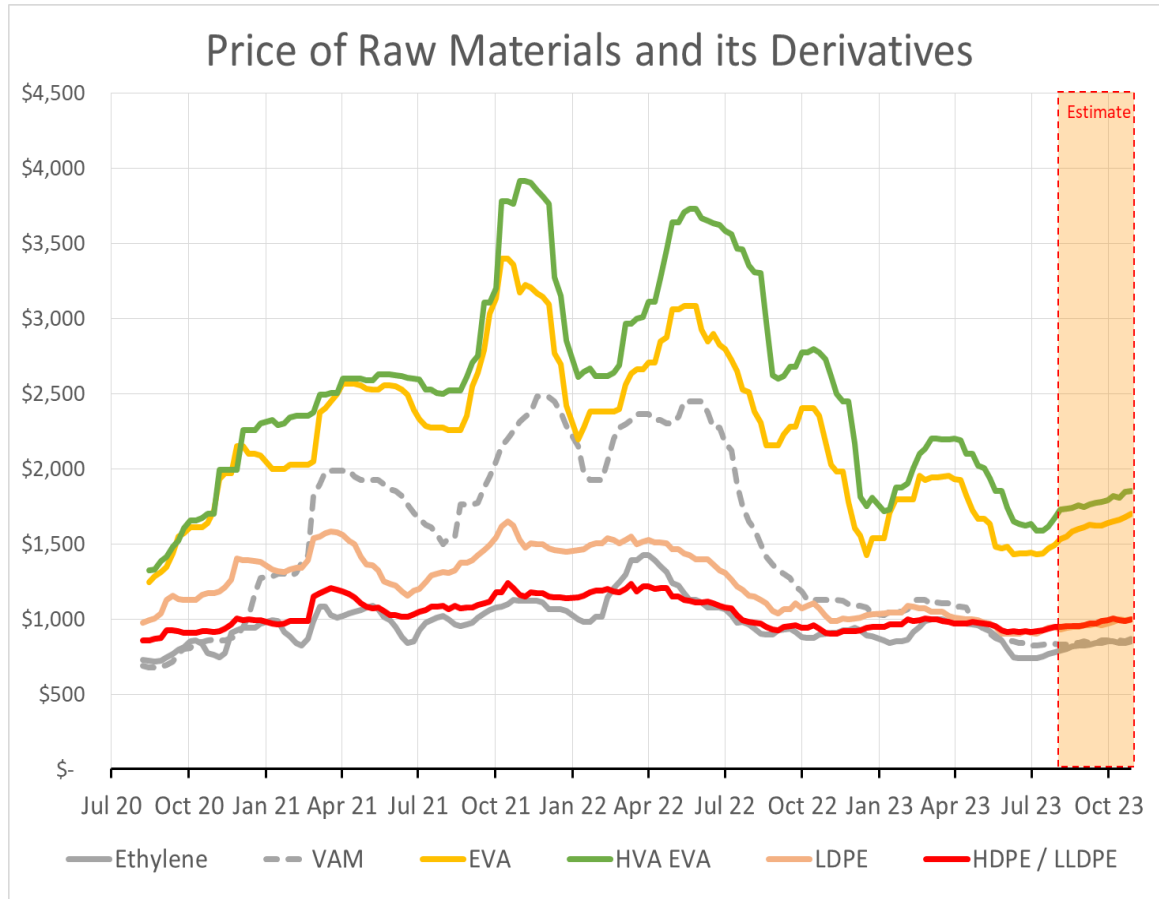


### TPIPL EVA Plant Capacity





# Polymer prices are still soft but improving



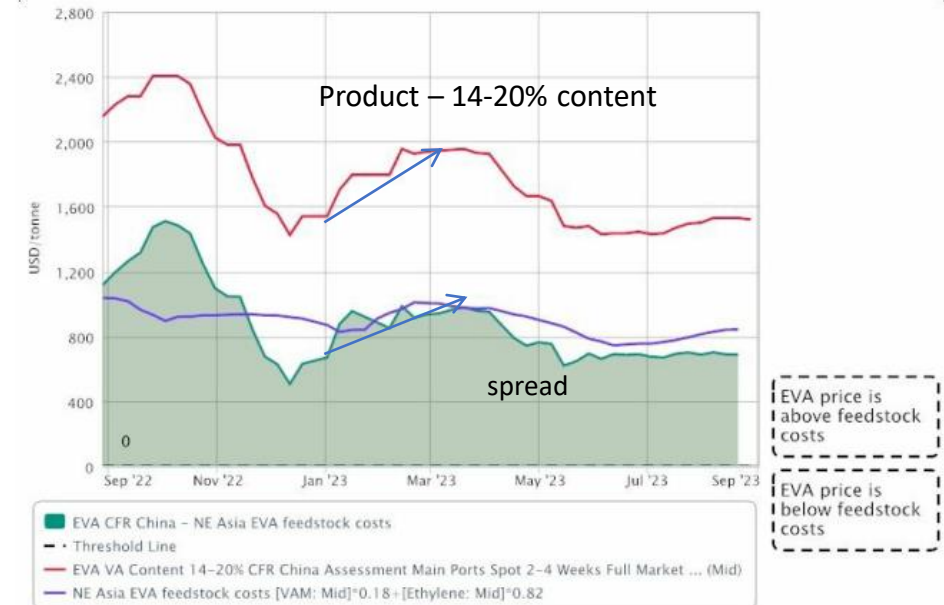
# Utilization rates in plastic conversion segment are improving

## Operating rates of conversion segment – China the proxy market

O/R projections in China *	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sept 2023
footwear/foaming sector (VA content 14-20%)	10-20%	30-40%	70-80%	50-60%	40-50%	Around 40%	Around 30%	Around 30%	30%
hotmelt adhesives sector (VA content 22-30%)	70-80%	Above 80%	Above 80%	Above 90%	80-90%	90%	80-90%	80-90%	90%
photovoltaic (PV) sector (VA content 28-33%)	40-50%	40-60%	50-80%	50-80%	40-50%	30-40%	30-40%	70-80%	70-80%

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

Feedstock costs - EVA northeast Asia

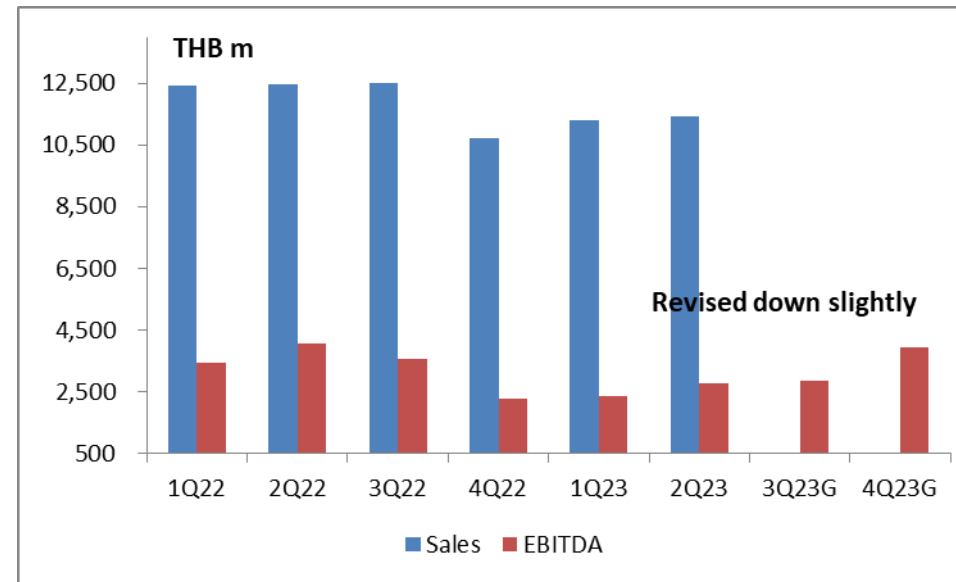


### Note:

- In the Jan-Mar spike in spreads, plastic conversion industry saw sequential rise in utilization rate especially footwear (proxy for manufacturing) rising from 10-20% to 70-80%
- The slight uptick in spreads currently is underpinned by better utilization rate in footwear and PV applications

# Baseline Assumptions – slight downside on Sales & EBITDA

Item	2023E
<b>Capacity</b>	
- Clinker (MMt)	10.96
- Specialty Chemicals (Kmt)	158
- Power (M MWh)	3.1
<b>Production</b>	
- Clinker (MMt)	9.50
- Specialty Chemicals (Kmt)	133
- Power (M MWh)	1.9
Coal Price (THB / Ton)	3,609
Exchange Rate (THB / USD)	33
Revenue (THB Bn)	51.3
EBITDA (THB Bn)	13.3
EBITDA Margin (%)	26.0
<b>Segment EBITDA (THB Bn)</b>	
Construction Material	4.6
Specialty Chemicals	3.6
Power	5.2



## Update:

1H23 sales is 44% of FY guidance

1H23 EBITDA is 39% of FY guidance

1H23 EBITDA margin was 23%, FY guidance 24-25%

cheaper coal

lower clinker cost

Green Cement & Clinker Products

Improved EVA spreads

1H23 Power EBITDA was 49% of FY guidance while production was 54% of FY guidance

Revised guidance (chart above) captures downside risk from softer 1H23

<sup>1</sup> lower utilization rate due to plant improvements replacing coal with MSW



## Operational strategic agenda: improving asset turnover

Asset turnover (x, annualised basis)	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23
Construction Materials	0.29	0.23	0.25	0.22	0.23	0.25	0.20	0.22	0.31	0.29	0.31	0.25	0.32	0.32
Specialty Polymer/Chemicals	0.91	0.76	0.81	0.96	0.92	1.02	0.97	1.02	1.27	1.45	1.54	1.35	1.02	1.07
Energy and utilities	0.22	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.19	0.19	0.17	0.17	0.17	0.17
Agriculture *	0.05	0.06	0.05	0.05	0.05	0.08	0.08	0.04	0.06	0.08	0.07	0.04	0.04	0.07
<b>Group basis</b>	<b>0.32</b>	<b>0.27</b>	<b>0.28</b>	<b>0.28</b>	<b>0.28</b>	<b>0.32</b>	<b>0.28</b>	<b>0.31</b>	<b>0.37</b>	<b>0.36</b>	<b>0.36</b>	<b>0.30</b>	<b>0.31</b>	<b>0.31</b>
EBITDA margin (%)	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23
Construction Materials	3%	13%	14%	8%	12%	11%	15%	6%	13%	19%	10%	9%	5%	12%
Specialty Polymer/Chemicals	27%	20%	13%	38%	42%	44%	38%	46%	36%	41%	46%	28%	26%	29%
Energy and utilities	61%	60%	66%	64%	61%	66%	53%	55%	53%	51%	42%	43%	62%	58%
Agriculture *	-4%	-11%	-43%	-19%	-16%	16%	53%	-207%	38%	31%	6%	-29%	19%	15%
<b>Group's EBITDA margin</b>	<b>22%</b>	<b>28%</b>	<b>28%</b>	<b>31%</b>	<b>32%</b>	<b>34%</b>	<b>32%</b>	<b>31%</b>	<b>28%</b>	<b>33%</b>	<b>29%</b>	<b>21%</b>	<b>21%</b>	<b>24%</b>
EBITDA on assets (% Annualised basis)	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23
Construction Materials	1%	3%	4%	2%	3%	3%	3%	1%	4%	6%	3%	2%	2%	4%
Specialty Polymer/Chemicals	25%	16%	11%	36%	39%	45%	37%	47%	46%	60%	71%	38%	26%	31%
Energy and utilities	13%	14%	15%	15%	14%	15%	12%	12%	10%	10%	7%	7%	11%	10%
Agriculture *	0%	-1%	-2%	-1%	-1%	1%	4%	-7%	2%	2%	0%	-1%	1%	1%
<b>Group basis</b>	<b>7%</b>	<b>8%</b>	<b>8%</b>	<b>9%</b>	<b>9%</b>	<b>11%</b>	<b>9%</b>	<b>10%</b>	<b>10%</b>	<b>12%</b>	<b>10%</b>	<b>6%</b>	<b>6%</b>	<b>8%</b>

Note: \* Agriculture+Others, Annualised in each quarter

### Strategic operational agenda:

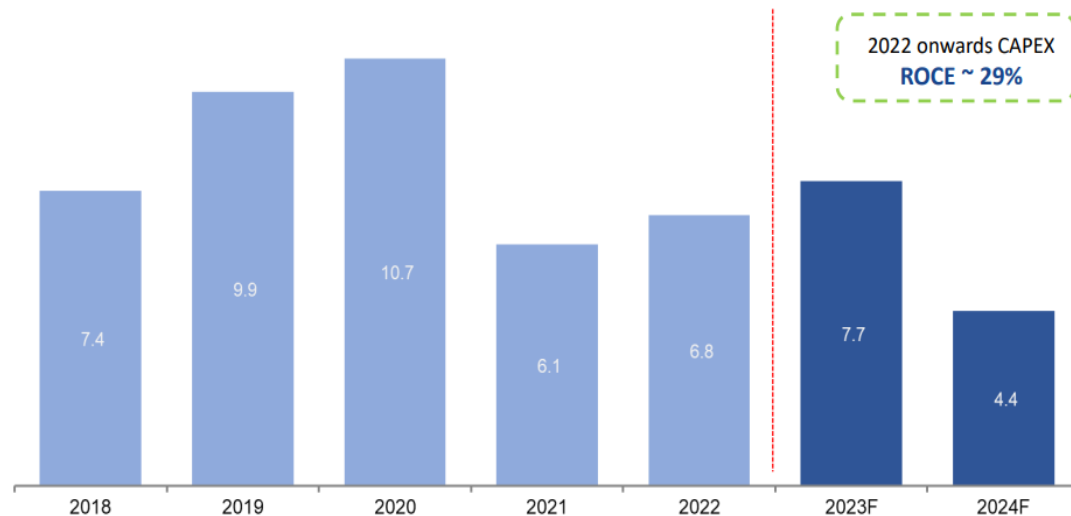
Apart from better than expected operations such as Specialty Polymers, higher utilization in power plants the other potential source of upside could come from:

- ConsMat is the division that can possibly bring higher EBITDA margin from cost efficiency and plant improvements resulting in better asset utilization rate
- Given the high operating leverage nature of the business the impact on cashflow and profits will be disproportionately higher than incremental efficiency gains
- The Agriculture division has multiple proprietary products and processes as well as high capability to scale up given high bio-compound volume as MSW handling rises



# Allocated capex 2023-2024

Group = THB12.1b  
\* mainly in power



TG 8	Modification	COD
Coal Replacement	Coal Replacement 1	November 2023
Coal Replacement	Coal Replacement 2	April 2025
Coal Replacement	Coal Replacement 3	June 2024

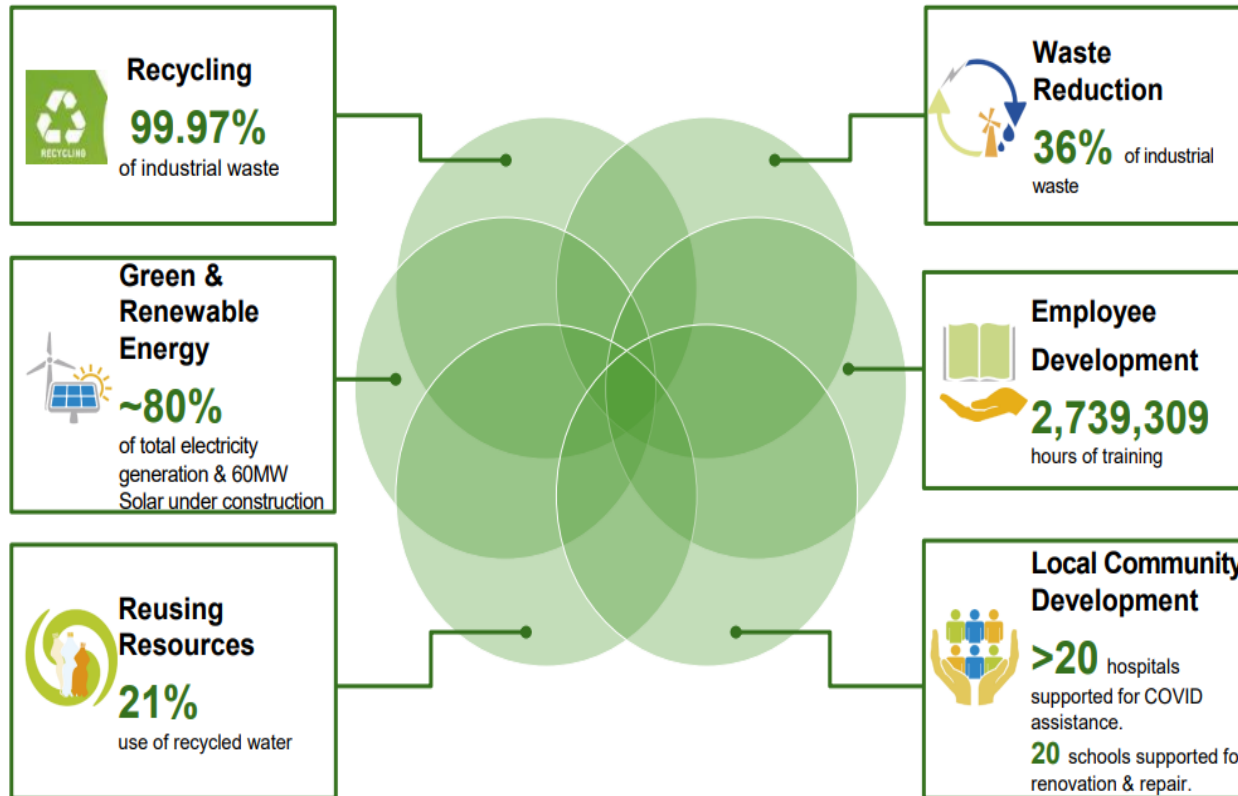
New	Installed	PPA	COD
3 Solar	79.23	66.9	2024
Wind	5.2	5	2024
Songkla	10	7.92	2024
Korat	10	9.9	2025



# Sustainability and Other Matters

# Sustainability Scorecard

## Highlights of 2022



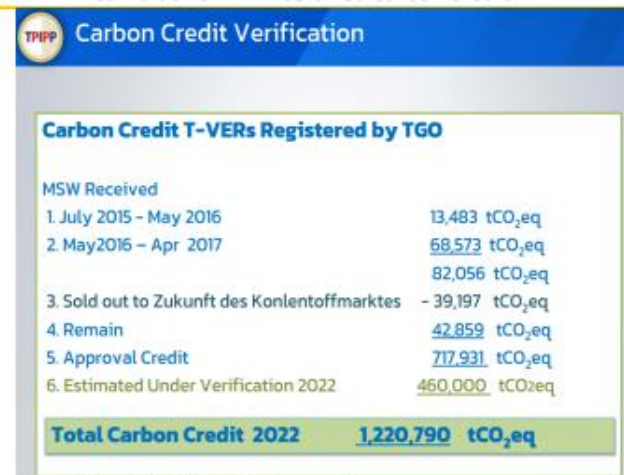
Note: as of Dec 2022

## Scorecard 1H 2023

Units	1H 2023		Remarks
	Units	%	
<b>Environmental Management</b>			
WTE replacing coal	207,049	14.86%	% of total
60-ton EV trucks	10		new delivery
Energy consumption reduction (GJ)	638,593	3.56%	YoY increase
GHG reduction (cement plants)	714,488	13.72%	YoY increase
Recycle water	592,324	47.48%	% of total
Recycling industrial waste	2,831	99.46%	% of total
<b>Corporate Responsibility</b>			
Donations (products) for public benefits	26		million baht
<b>Employment Opportunities</b>			
New jobs	464		
Seniors	56		
Human rights violations	zero		
<b>Disposal of industrial wastes</b>			
Hazardous	20,269		
Non-hazardous	7,412		

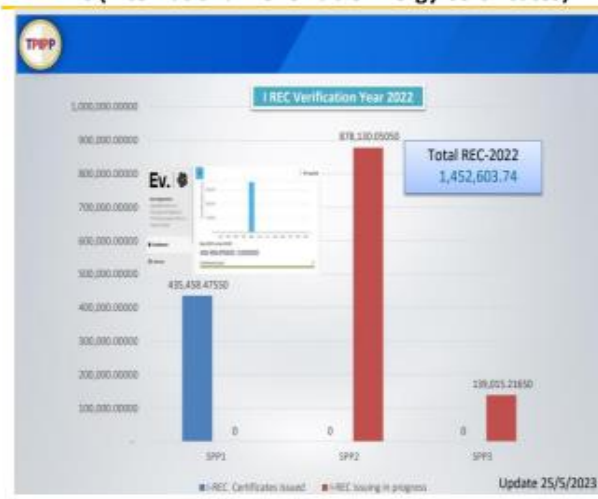
# Our Carbon Situation (Scope 1)

## TPIPP – cumulative T-VER certified carbon credit

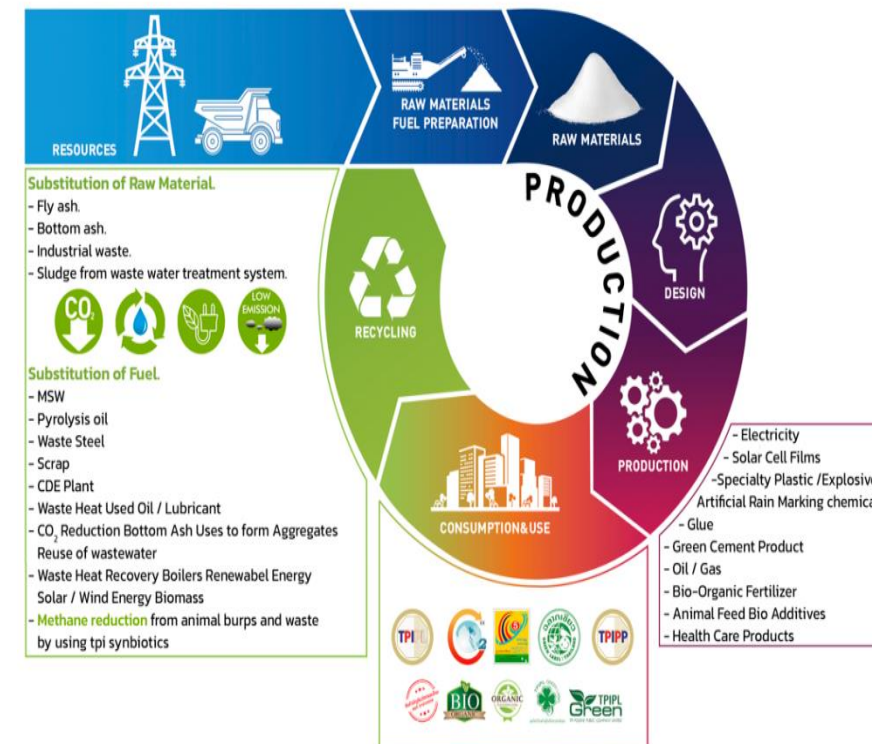


Source: TPIPP Digital Roadshow Presentation

## ... I-REC (International Renewable Energy Certificates)



## TPI Group Net Zero by 2030

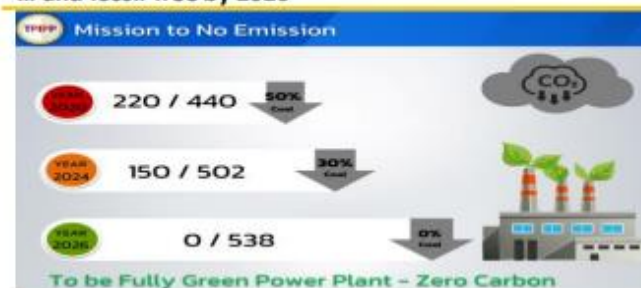


## TPIPP – profile of carbon merits

Reduce MSW to Land fill in Year 2022		
8,500 Ton / Day	2.5 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>

Source: TPIPP Digital Roadshow Presentation

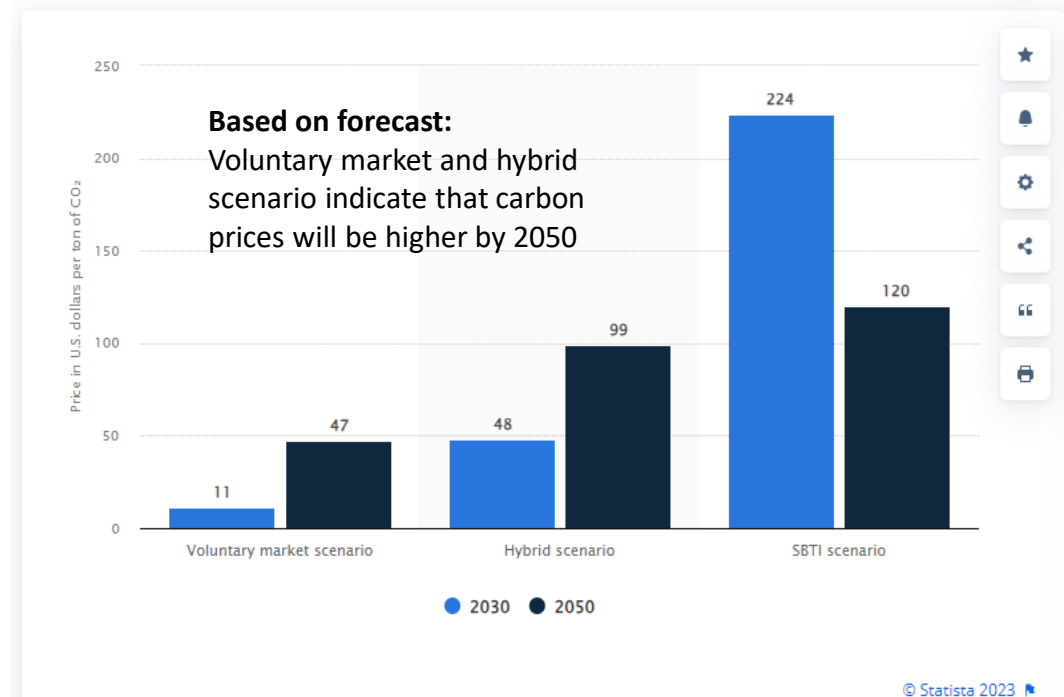
## ... and fossil-free by 2026



# Carbon price trends



Forecast carbon offset prices in 2030 and 2050, by scenario  
(in U.S. dollars per ton of carbon dioxide)



*Note: SBTi requires that companies set targets based on emission reductions through direct action within their own boundaries or their value chains.*

# Proud Moments That Validates Our ESG and BCG Efforts

## Recognitions in 2022



Inclusion into Thailand Sustainability Investment (THSI) 2022



ESG Gold level by Thaiptat Institute (2022)



Inclusion into ESG Emerging list of 2022



Corporate Governance Report 2022 – Very Good



"Most Socially Responsible Conglomerate – Thailand 2022" by Global Economics Magazine



"Most Innovative Green Practices Towards ESG – Waste Management" Thailand 2022 by International Finance Magazine



"Best Product Innovation for Sustainable Development in Thailand 2022 by Global Economics



Asia's Greatest CEO 2022-2023 by AsiaOne Magazine



Asia's Greatest Brands 2022-2023 by URS Media Consulting International

## Recognitions 1H 2023

TPIPP received "3G Environmental Responsibility" from The 3G Committee in 2023.  
Organized by Cambridge IFA, based in London, UK.

TPIPP received "International Diamond Prize for Excellence in Quality" from The 3G Committee in 2023.  
Organized by ESQR, based in Lausanne, Switzerland.

# New Initiatives – Hinges on Strong R&D Capabilities



Diversify in all types of mortar (e.g. Non-shrink, sulfate-resistance and etc.)

One of the first hydraulic cement

First and only stucco wall producer

First and only cement producer that uses MSW as an alternative fuel

Linked quarry to production facility via conveyor belt saving 3.03m litres of diesel per year, and produce 1.07m kWh of electricity.

First and only producer to use fly ash to save cement in the process

First fire resistant fiber cement producer in Thailand

First and only furniture board and door frame producer from fiber cement

First and only fast drying and odorless paints for walling and other surfaces

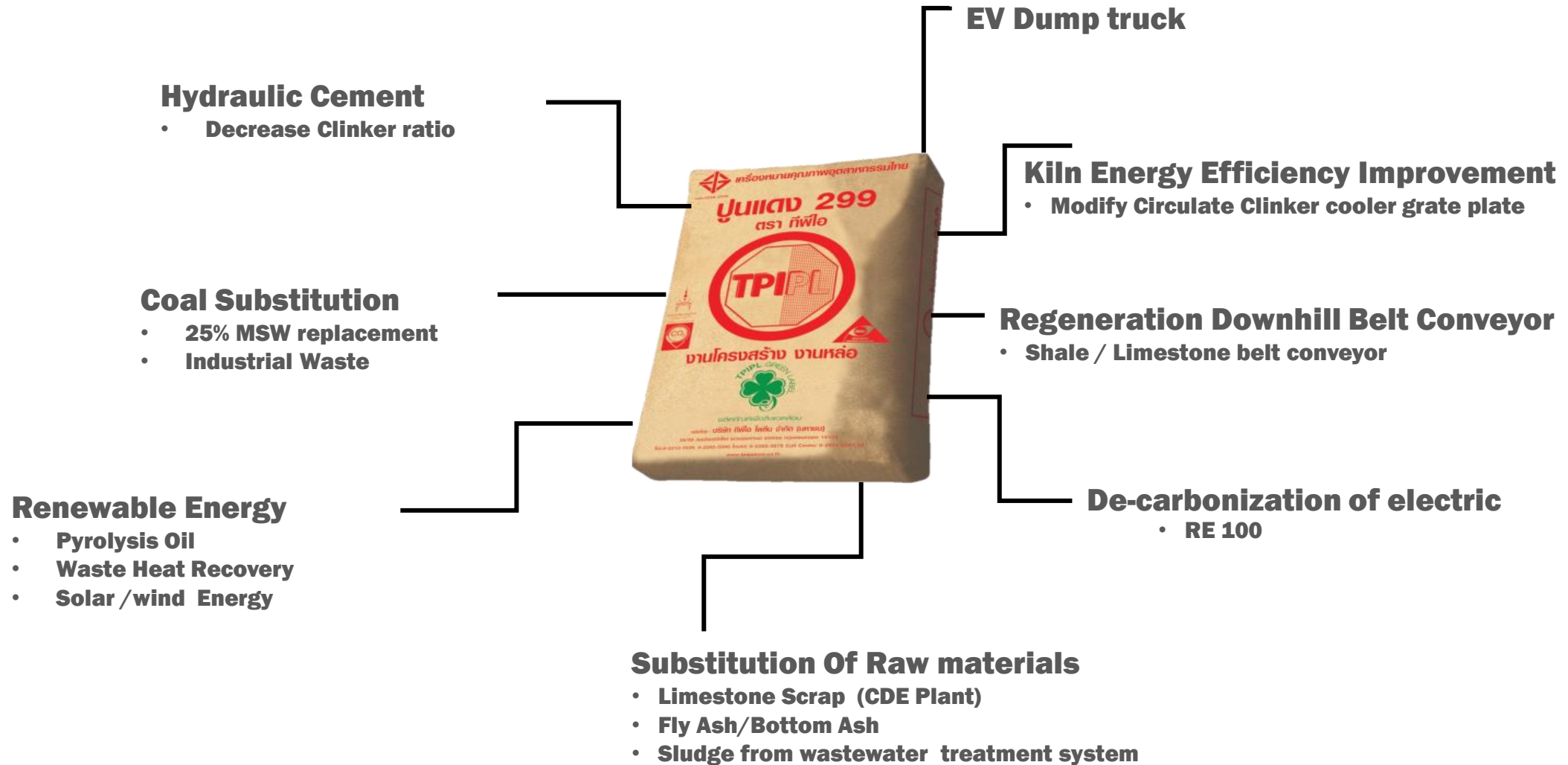
First power plant to use zero-waste policy (use up all incoming waste)

First power plant to use MSW (municipal solid waste), not only IW (industrial waste)

First and only WTE SPP (more than 10 MW capacity)

**Innovation creates competitive moats and better-than peers' margins  
TPIPL builds-up from in-house R&D capability; no bolt-on acquisitions**

# Green Cement (Low CO<sub>2</sub> Emission)



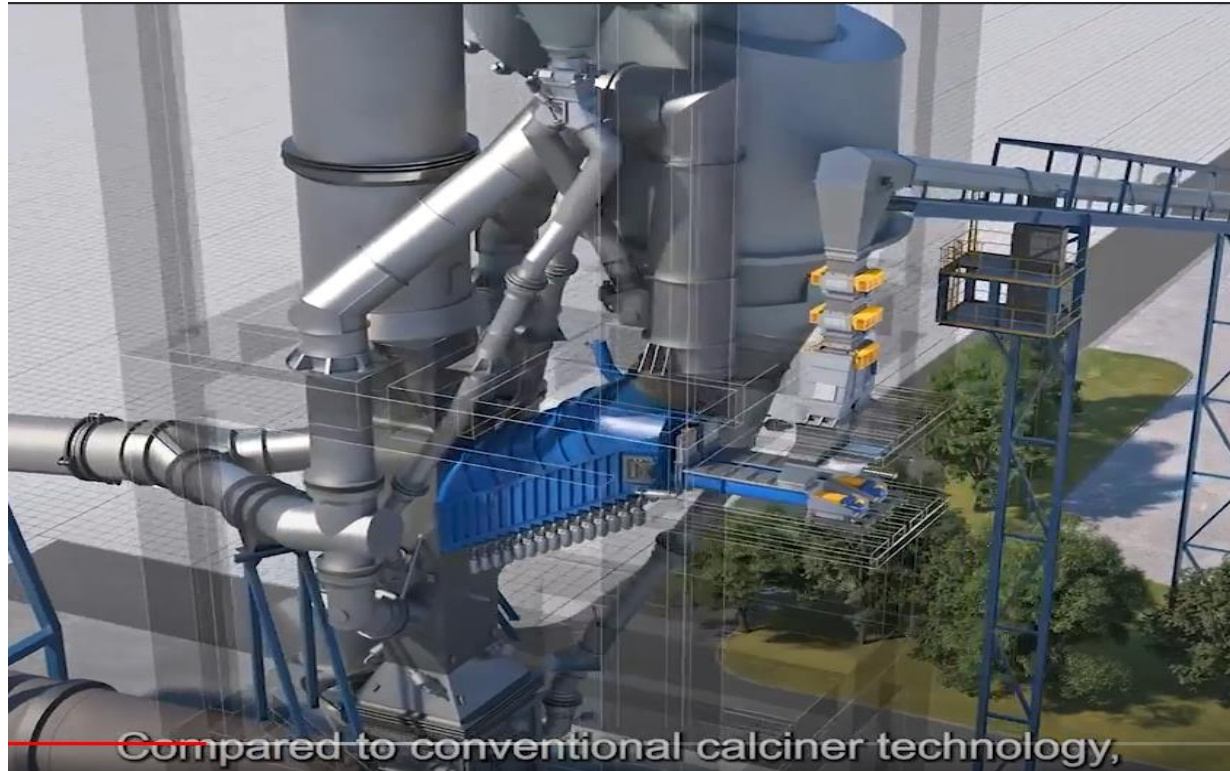


## Conveyor Belt – Quarry to Facility



Linked quarry to production facility via conveyor belt saving 3.03m litres of diesel per year, and produce 1.07m kWh of electricity.

# MSW in Calciners



**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)

# CDE for Limestone Scrap



[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



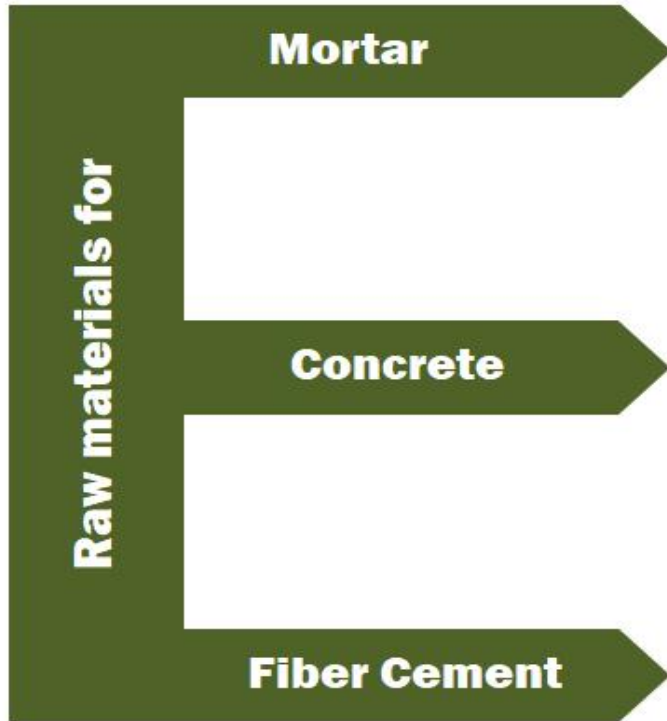
**On April 7, 2023** Yutong officially shipped 10 YTK90E battery electric mining trucks, which will be delivered to TPI Polene Public Company Limited (TPIPL), the second largest cement producer in Thailand, for transporting stone between mines.

**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/>

# TPI Green Products (Low CO<sub>2</sub> Emission)

## Green Cement



## Green Mortar



## Green Concrete



## Green Fiber Cement



Visit our website:  
[www.tpipolene.co.th](http://www.tpipolene.co.th)



# Green Cement – TGO Certified

**TPIPL** ได้รับการรับรองเครื่องหมาย  
**คาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์**  
 (Carbon Footprint of Product : CFP) มาตรฐาน Business to Customer (B2C)  
 ตามเกณฑ์การประเมินคาร์บอนฟุตพริ้นท์ของผลิตภัณฑ์ (ฉบับปรับปรุง)  
 ปีพ.ศ. 20 มิ.ย. 65

1		Hydraulic Cement Type 01 (TPI) Bag 25kg (Bag) 50 kg	47.2 kgCO <sub>2</sub> e
2		Hydraulic Cement Type 01 (TPI) Bag 25kg (Bag) 1 ton	889 kgCO <sub>2</sub> e
3		TPI Portland Cement Type 1 (Bag) 50 kg	50.7 kgCO <sub>2</sub> e
4		TPI Portland Cement Type 1 (Bag) 1 ton	507 kgCO <sub>2</sub> e
5		TPI Super Portland Cement (Bag) 40 kg	40.4 kgCO <sub>2</sub> e
6		TPI Portland Cement Type 3 (Bag) 50 kg	50.1 kgCO <sub>2</sub> e
7		TPI Mixed Cement (Bag) 50 kg	34.6 kgCO <sub>2</sub> e
8		TPI Mixed Cement (Bag) 1 ton	346 kgCO <sub>2</sub> e
9		TPI Mixed Cement (Bag) 50 kg	37.9 kgCO <sub>2</sub> e
10		TPI Super Mixed Cement (Bag) 40 kg	30.1 kgCO <sub>2</sub> e
11		Adhesive Mortar for Fixing General Tile M500 (Bag) 20 kg	7.03 kgCO <sub>2</sub> e
12		TPI Tile Grout (Bag) 20 kg	7.03 kgCO <sub>2</sub> e

13		TPI Floor Board Mortar M400 (Bag) 50 kg	14.5 kgCO <sub>2</sub> e
14		TPI Floor Board Mortar M400 (Bag) 50 kg	11.8 kgCO <sub>2</sub> e
15		TPI General Plastering Mortar M210 (Bag) 50 kg	13.1 kgCO <sub>2</sub> e
16		TPI General Plastering Mortar M210 (Bag) 1 ton	131 kgCO <sub>2</sub> e
17		TPI Light Weight Block Mortar M400 (Bag) 20 kg	10.9 kgCO <sub>2</sub> e
18		TPI Light Weight Block Mortar M400 (Bag) 50 kg	16.1 kgCO <sub>2</sub> e
19		TPI Light Weight Block Plastering Mortar M210 (Bag) 50 kg	13.9 kgCO <sub>2</sub> e
20		TPI Light Weight Block Plastering Mortar M210 (Bag) 1 ton	139 kgCO <sub>2</sub> e



# Litigation Cases – Still 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 = THB3.36 (2Q23)</b>

**Share price = THB1.57 (7/9/23)**

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. 400 million tons of industrial mineral rock left and forfeited. 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 return 431 million to the government later . At the moment, the concession for all these areas have been renewed including the disputed buffer zones.

From December 2021 until 2Q 2023, the Company has been granted limestone and shale concession for the manufacturing of cement industry from the Department of Primary Industries and Mines, totaling 24 plots, with long-term concession period of 20-30 years for limestone and shale reserves total 431.06 million tons (averaging 15.97 million tons /year). If TPIPL needs more limestone, the company can apply for additional limestone concession in the future.



End of Presentation

Q&A

Thank You